#### THREE

# **Designing Transparency Policies**

#### IMPROVING ON-THE-JOB SAFETY: ONE GOAL, MANY METHODS

Federal and state governments in the United States have grappled with the problem of occupational safety and health in various ways for more than a century. As far back as 1916, John R. Commons, one of the first social scientists to study and help design workplace regulations, commented:

Prominent among the problems which the Industrial Revolution brought in its wake is that of maintaining safety and health in workplaces. As long as industry was chiefly agricultural, or carried on about the family hearth, with tools relatively few and simple, the individual laborer might control the physical conditions under which he worked.<sup>1</sup>

The range of government responses to the problem of safety in the newly industrialized workplace has made this area a kind of real-world laboratory in which differing policy approaches to the same broad objective may be observed and compared. These include, most recently, targeted transparency.

Early factory laws in the United States, beginning with one enacted by Massachusetts in 1886, created dedicated agencies to reduce the toll of workplace fatalities and serious injuries. These early regulatory systems relied on enforcement of specific safety standards (such as requirements for safety shields on machinery or limits on the amount of dust in the air). They also raised questions about regulatory design that have long since become familiar to policymakers and the general public – questions like these:

- What safety standards should be adopted to improve workplace conditions?
- How many inspectors should be hired, and what skills and training do they need?

- To which industries and workplaces should inspectors be sent, and what should they do once there?
- What penalties should be assessed when violations are detected?
- How should repeat offenders be treated?

As workplace health and safety problems persisted, legislators devised additional regulatory approaches to augment standards-based systems. The most striking example was workers compensation insurance, adopted first by Maryland in 1902 in the form of a cooperative insurance law covering a narrow set of industries. Workers compensation systems provide benefits to injured workers by requiring companies in specified industries to pay into a common insurance fund. Premiums paid into the system by firms varied both by industry and by the employer's prior injury performance. This system of "experience rating" was intended to create financial incentives for employers to improve safety practices.

The workers compensation insurance premium serves as a kind of "injury tax" on employers. As Commons noted, linking safety outcomes to private financial interests dramatically changed the dynamic of regulation: "State agencies can order the application of mechanical safeguards. . . . But their inspectors can do but little in comparison with what the employer and employee can do, under the stimulus of an adequate compensation system."

Not surprisingly, workers compensation raised a new set of regulatory design questions that differed considerably from those required for standards-based systems. For example:

- For the purpose of setting insurance premiums, how should an injury event be defined?
- How can accurate reports of injuries by employers be ensured?
- How should the profile of insurance premium rates change with different injury levels?
- How should the inherently variable and partially random nature of injuries and fatalities be managed? For example, how should premiums be set for a very small employer whose injury rate may vary widely from year to year?

Consider now the use of targeted transparency to reduce workplace injuries and illnesses. The earliest factory safety legislation included requirements that employers maintain and disclose information on injury rates. However, the audience for this information was the government, not the workforce. Thus, true targeted transparency didn't become part of the workplace safety toolkit until 1983. In that year, OSHA promulgated workplace

hazard reporting that sought to reduce workers' exposure to dangerous chemicals by providing them with information about those chemicals.<sup>3</sup> Once again, a new approach raised a new set of design questions. For example:

- What specific information on chemical risks should employers be required to provide? How often should this information be updated and how should it be presented?
- How can employees' receipt and comprehension of relevant risk information be ensured?
- What sanctions should be administered if employers fail to provide material information in a timely, accurate fashion?
- Since government does not play a direct role as enforcer of specific chemical exposure rules in a targeted transparency regime, instead leaving that role to workers informed by disclosure about workplace hazards, which parties should be vested with responsibility for seeing that health risks decline?

The story of government efforts to improve workplace health and safety illustrates two important points about the design of targeted transparency policies. First, those policies build on and often complement prior regulatory efforts in an area of public concern. Workplace hazard disclosure does not replace workers compensation or OSHA standards but potentially extends the reach of both to new types of health problems.

Second, just as market-based intervention raises distinctive design questions, targeted transparency policies also share a common set of design features. These common features underlie our conclusion that targeted transparency represents a coherent system of government intervention.

In this chapter, we will review the architecture of targeted transparency, starting by comparing it with other policies that also draw on information. We will then lay out the five common features shared by the transparency systems studied in this book. Finally, we will compare targeted transparency with traditional standards-based and market-based forms of regulation. Understanding the architecture and distinctive character of targeted transparency provides a basis for understanding where and why policies succeed or fail, the focus of Chapters 4 and 5.

### DISCLOSURE TO CREATE INCENTIVES FOR CHANGE

Targeted transparency represents a distinctive category of public policies that, at their most basic level, mandate disclosure by corporations or other

actors of standardized, comparable, and disaggregated information regarding specific products or practices to a broad audience in order to achieve a public policy purpose.

Thus, targeted transparency does not require specific technologies, performance targets, or taxes. Instead, it relies on thousands of individual choices by information disclosers and users who interact to establish acceptable risk levels or improve organizational performance.

Targeted transparency policies represent a subset of transparency measures, as that term is commonly used. We can distinguish the various types of information disclosure that are often lumped together as transparency measures by their purposes, the kind of information they provide, and the role played by government in disclosure.

Voluntary disclosure by businesses and other organizations involves no direct government intervention. Firms and other institutions have incentives to provide factual information to customers, employees, and investors voluntarily through advertising, reports, labels, or public relations efforts. Such information often has value for the public. Liability laws can increase the incentives for firms to voluntarily disclose risk information to consumers, workers, or potential investors. Publicized crises, shifts in public attitudes, and competitive dynamics can further augment incentives. Yet as the literature on the economics of information discussed in Chapter 2 makes clear, the quantity and quality of information that a company voluntarily provides is often inadequate for informed decision making by the public. In targeted transparency, then, policymakers push organizations to reveal more than they otherwise would choose to do.

As noted in Chapter 2, *warnings* represent a second form of transparency.<sup>5</sup> Here, government requires auto companies, cigarette makers, and other organizations to provide specific, prescriptive instructions for consumers, motivated by a clear regulatory intent – usually to prevent or curtail a specific type of behavior by information users. For example, provisions in the Child Safety Protection Act of 1994 require labels on packages of balls, balloons, marbles, and other toys and games intended for children at least three years of age, warning against choking hazards.<sup>6</sup> Other familiar governmentmandated warnings caution auto passengers to fasten their safety belts, parents to keep household chemicals out of the reach of their children, and consumers that smoking may prove harmful to their health.

Like targeted transparency, warnings leave decisions about what actions to take to information users – that is, there is no enforcement mechanism to insure that parents keep balloons or toys out of reach of their children; the label itself is regarded as sufficient to achieve the public purpose. However,

warnings, unlike targeted transparency, omit factual information to enable users to make informed choices. Instead, government experts make judgments based on some unseen body of information and provide a prescriptive admonishment to consumers.<sup>7</sup>

Compared with warnings, the information conveyed by *right-to-know* policies is typically more complex and less focused. As discussed in Chapter 2, right-to-know policies attempt to improve public awareness about the activities, financial flows, or decision-making processes of government agencies and other institutions as an end in itself, rather than attempting to achieve specific risk-reducing or service-improving objectives. Thus, for example, the Freedom of Information Act provides citizens with access to government documents that show how decisions were made or reveal factual information gathered by a particular agency.

Targeted transparency differs from warnings and right-to-know policies. Whereas warnings provide information that is simple and prescriptive, targeted transparency provides information that is complex and factual. Whereas warnings urge users to take a particular course of action, targeted transparency encourages users to make reasoned judgments of their own. And whereas right-to-know policies aim to generally inform public discourse, targeted transparency aims to influence specific choices.

#### WHAT TARGETED TRANSPARENCY POLICIES HAVE IN COMMON

Disclosure of information to the public is often thought to be a simple matter, especially compared to the complexities of other forms of government intervention. But just as traditional regulatory systems require policymakers to develop legal standards, inspection protocols, and penalty procedures, targeted transparency policies are characterized by a distinctive and demanding architecture. Such policies share five basic design features that distinguish them from other forms of regulation. All five are needed to translate a general policy purpose into a specific transparency requirement for disclosers and users to act upon:

- a specific policy purpose
- specified discloser targets
- a defined scope of information
- · a defined information structure and vehicle
- an enforcement mechanism.

Some of these design features, like a defined policy purpose and an enforcement mechanism, are basic to any system of regulation. Others are

distinctive and present design challenges quite different from those that characterize conventional regulation.

## **Policy Purpose**

Targeted transparency policies are designed to change the behavior of information users and/or disclosers in specified ways. Their particular aims vary widely. But in general, the regulatory rationale for transparency presupposes the existence of some type of information asymmetry between disclosers and users. The aim of government intervention is to provide the public with adequate information to make more informed and more socially beneficial decisions. Information asymmetry alone is not sufficient to trigger government intervention, however. The cases we have analyzed suggest that government intervenes when such gaps create one of four public problems.

First, government intervenes when information imbalances substantially increase the risks borne by the public. For example, Enron's failure to reveal its enormous losses in off-balance sheet entities substantially increased risks faced by its investors. Likewise, manufacturers' exclusive knowledge of hazardous chemicals in the workplace and toxic pollutants emitted into surrounding communities left workers and neighborhood residents exposed to hidden health risks.

Second, government intervenes when lack of information seriously impairs the quality of critical services provided by public or private organizations. For example, as long as public schools kept confidential student test scores, attendance and failure rates, teacher qualifications and achievements, and other measures of performance, families could not judge the relative quality of available schools. Likewise, hospitals' exclusive knowledge of the prevalence of medical errors has prevented patients from choosing relatively safe facilities. Thus, targeted transparency policies can provide organizational "report cards" to enhance performance. People with more complete performance information can better match the benefits and costs of public services as they decide where to live and work.

Third, government intervenes when information imbalances perpetuate unacceptable patterns of discrimination or other social inequities. Unfair practices that are hidden can deny social benefits to some people. So long as the number and size of mortgage loans made by local banks, savings and loans, and other lending institutions to inner-city residents, minorities, women, and other groups were not made public, neighborhoods experiencing systematic discrimination in lending could not fight back. Similarly,

the inability of workers or state and local officials to find out about pending plant closures or large-scale layoffs kept them from either attempting to contest closure decisions or adequately preparing for their impacts.<sup>10</sup>

Fourth, government intervenes when information imbalances allow corruption to persist in important institutions that serve the public. For example, the inability of union members to find out about governance practices or financial spending by their elected leaders reduced the pressure on union officials to be responsive or in some cases to act with integrity. Likewise, confidentiality of campaign contributions prevents voters from judging whether candidates are beholden to well-heeled interests.

## **Specified Targets**

Targeted transparency policies designate specific organizations that are viewed as responsible for some public risk or performance problem (and therefore have unique access to information about it) as disclosers. As in other areas of government intervention, the designated disclosers are frequently businesses. For example, corporate financial disclosure targets companies that issue securities in public capital markets where the "lemon problem" (adverse selection), described in Chapter 2, may lead to distortions in the signals capital markets send to investors. Toxic pollution disclosure targets large manufacturers and users of toxic chemicals to reveal their emissions. Mortgage lending disclosure targets banks to disclose the demographics of their lending.

Other transparency policies target disclosers that are not-for-profit or public organizations. Thus, drinking water safety reporting targets both public and private water authorities, campaign finance disclosure targets candidates for national public office, school performance report cards focus on public schools, and patient safety reporting targets hospitals.

Defining who must disclose is almost always politically controversial. For example, nutritional labeling requirements exempted fast-food outlets and full-service restaurants even though U.S. consumers spend about half of their food budgets there. Political attempts to limit the universe of disclosers can persist over time. Early versions of toxic pollution reporting exempted power plants and mining operations despite their release of significant amounts of toxic chemicals. The pollution reporting requirement also initially exempted firms that used less than ten thousand pounds or produced less than twenty-five thousand pounds of listed chemicals in a year. <sup>11</sup> In 2005, the Bush administration attempted to reduce the frequency, depth, and scope of reporting for many firms. <sup>12</sup>

Although targeted transparency policies specify classes of disclosers, they do not usually define intended information users. In fact, most policies describe potential users in the most general language. For example, campaign finance reporting legislation in 1971 defined the audience for disclosure as the electorate. Most often, users are defined simply as "the public." As a result, actual users in most cases are self-selected by their own interests.

Not specifying users makes policies adaptive to changes in the makeup of user groups. However, it may also keep policymakers from assuring that policies are designed for easy use by diverse audiences.

Sometimes intermediaries – community groups, environmental advocates, or political parties, for example – act as agents for users, translating complex information into metrics for diverse audiences. In corporate financial disclosure, mortgage lending disclosure, and toxic release reporting, for example, intermediaries played a pivotal role in the effectiveness and long-term development of transparency systems. However, the conditions under which such groups form and become engaged as agents of information users are often very demanding and may be governed by factors outside legislators' control. <sup>14</sup> We examine such conditions in Chapter 5.

## **Defined Scope**

Targeted transparency policies specify the universe of practices, substances, activities, or other information that must be disclosed. The content of disclosure – what information must be released – relates to the character of the information imbalance that the policy seeks to redress. Investors need reliable information to be able to assess financial risk; parents need information about school performance in order to select a community or school for their children. Targeted transparency policies therefore explicitly specify the boundaries of disclosure – never a simple matter.

In defining what must be disclosed, targeted transparency policies sometimes require organizations to provide information that is already available to the discloser, typically data generated for internal purposes or for experts or other limited classes of users. For example, financial disclosure required companies to make available to the public information created for managerial decision making and for specific investor groups. Disclosure of the current address of released sex offenders mandated by state-level Megan's Laws required local police departments to provide information to state agencies – and ultimately to the public – that many departments already collected on a regular basis as part of other law enforcement activities.

In other cases, the mandated scope of information may require disclosers to generate new data that are not readily available to the organization.

Businesses may be forced to establish new systems of monitoring, measuring, review, and reporting. Toxic chemical reporting, for example, required companies to establish systems to measure and track and add up, often for the first time, the quantity of toxic pollutants released by plants.<sup>15</sup> In such instances, disclosers may change their practices in response to new knowledge as well as to public pressure.

Whether they require organizing and sharing existing information or generating new information not formerly collected, design decisions regarding the scope of information impose costs – often very significant costs – on disclosers. As a result of these costs, the boundaries of disclosure often become a focal point for intense political wrangling. In the passage of a targeted transparency policy, efforts by potential disclosers to limit the scope of what must be disclosed quickly become a second line of defense once the political will to require disclosure has become clear. The recent battle over expanding the scope of corporate executive compensation disclosure is typical. Despite long-standing requirements that companies provide information on compensation, efforts to include information on stock options and on the compensation of the five highest-paid executives quickly became contentious.

## Structure and Vehicles for Information

In order to make the information comparable from product to product and institution to institution, transparency policies specify a framework that standardizes content and format. This framework generally standardizes information formats to ensure comparability among products or practices. It also specifies the time, place, and means by which information will be provided. Thus, the transparency framework always specifies metrics, frequency of disclosure, and a communication vehicle.

First, policies specify what quantitative or qualitative *metrics* must be used and what level of accuracy in those metrics is required. Specific disclosure metrics for toxic pollution reporting are quite narrow: annual reports of the amounts (measured in pounds) of specific chemicals released by each covered facility into air, water, or ground. The law does *not*, for example, require manufacturers to characterize the toxicity, exposure, or relative risks created by different chemicals or to provide information on the pathways by which chemicals could infiltrate surrounding communities. The requirement allows companies to employ a variety of estimating techniques to determine pollution quantities. In the past, companies' changes in estimating techniques sometimes led to sudden drops in reported pollution levels that were not necessarily associated with true reductions. <sup>16</sup>

Second, policies specify the *frequency* with which disclosers must update information. In principle, the frequency of updates should coincide with changes in the underlying conditions of policy concern, and many policies do require periodic provision of new information in reports to the public. For example, corporate financial reporting and restaurant hygiene disclosure are updated multiple times during the year, as is consistent with the volatile nature of financial risks or hygiene practices. In other cases, policies require less frequent updates. School report cards are typically updated each academic year, and auto rollover reports are updated for each model year. However, reporting can lag months or years behind changes in risks or service quality.

Finally, policies specify the *vehicles* to be used in communicating information. These vary widely, from public announcements via the news media (as with the Department of Homeland Security's terrorist threat alerts) and information postings directly on products (as with nutritional labels on foods and rollover ratings on new-car stickers) or in places where services are provided (as with restaurant hygiene report cards) to printed materials available upon request (as with material data safety sheets that describe workplace hazards) or Web sites (as with hospital safety reports and campaign finance disclosure). The vehicles of disclosure are more than administrative details. They have profound impacts on policy effectiveness because they determine when a user encounters information that influences decision making.

Cognitive psychologists and behavioral economists have shown that people's ability to use information varies according to its presentation. For example, in a wide-ranging set of studies, Daniel Kahneman and Amos Tversky showed that people tend to make decisions that minimize their exposure to losses, even if this minimization requires reduction of significant upside gains (a phenomenon that they called, not surprisingly, "loss aversion"). Loss aversion, coupled with another widely shared trait – that people tend to want to keep what has been given them ("endowment effects") – means that manipulation of signals to individuals regarding the potential of losses can have significant effects on behavior. This research suggests that how information is presented can have as much influence on people's behavior as the factual content of the data. 17 François Degeorge, Jayendu Patel, and Richard Zeckhauser document a striking example of the impact of cognitive biases on corporate financial disclosure. Reviewing quarterly financial performance data, the researchers found a much larger than expected incidence of zero reported earnings in a sample of publicly traded companies. They also found almost no cases of small losses relative to reported instances of small positive earnings. These skewed results reflected corporate accounting decisions that allowed companies to show zero or slightly positive returns to deal with investors' loss aversion and the consequent negative market consequences of reports of even trivial earnings losses. <sup>18</sup> Not surprisingly, structural features of disclosure are a frequent source of tension between disclosers and users and are an important part of the ongoing politics surrounding targeted transparency policies.

#### Enforcement

Although some advocates suggest that transparency policies eliminate the need for costly efforts to ensure compliance that are typical of traditional regulation, in practice targeted transparency policies do not work unless they are enforced. Monitoring nonreporting or misreporting and then levying penalties for those who violate disclosure requirements remain essential. In economic terms, disclosers' assessments of costs and benefits from transparency policies include expected costs of noncompliance – that is, the costs associated with failing to report accurately, factoring in the likelihood of getting caught.

In a few policies, enforcement is simplified because a public entity itself gathers and posts information. Thus, the terrorism threat alerts draw on information collected and disclosed by the federal government. Autorollover rankings are generated and posted by the National Highway Traffic Safety Administration. In Los Angeles County, restaurant hygiene grades are formulated as part of the public health inspection process.

Most policies, however, rely on data generated and posted by disclosing organizations. As a result, the government must develop methods to monitor compliance with disclosure requirements. Enforcement of campaign finance reporting, for example, includes substantial civil and criminal penalties for failing to disclose contributions or disclosing inaccurately. The McCain-Feingold amendment to campaign finance disclosure approved in 2002 attempted to close reporting loopholes that allowed candidates and their supporters to use "soft money" to circumvent campaign spending limitations. Under that policy, anyone who "knowingly and willfully" violates disclosure provisions could face a maximum penalty of five years in prison. <sup>19</sup> Failure to provide accurate corporate financial information similarly results in substantial civil and criminal penalties. Under the plant closure disclosure system, the penalties facing companies that fail to provide advance notice of closure or major layoffs include compensating affected workers with back pay for the period of time when notice was not provided as well as

paying fines of up to five hundred dollars for each day of violation.<sup>20</sup> Under sex offender disclosure rules, released offenders risk felony charges if they do not apprise police officials of their current residences or provide advance notice when they move.<sup>21</sup>

By contrast, there is no systematic mechanism for auditing the toxic pollution data provided by companies, although the nominal penalties for failing to disclose are significant (twenty-five thousand dollars for each violation of reporting requirements). Thus, while estimated compliance is fairly high, the pressure to file accurate reports is less acute. Inforcement of union financial practices was similarly weak until recently. Although the disclosure law included significant penalties for failing to file reports and for misreporting, in practice the U.S. Department of Labor reviewed the accuracy of only a small percentage of reports and imposed only modest penalties. The result was a high rate of late filings and incomplete reporting. The George W. Bush administration substantially augmented enforcement, however, by increasing resources for the division of the Department of Labor in charge of the policy.

The structure of enforcement has important consequences for both the effectiveness and the improvement of policies over time, as we will see later.

# STANDARDS, MARKET INCENTIVES, OR TARGETED TRANSPARENCY?

Policy discussions often describe two broad means of government intervention to encourage private and public organizations to further public priorities. The first relies on government-promulgated standards enforced by inspectors. Those standards are traditionally thought of as prescribing particular technology- or design-based solutions to public policy problems, but they may also be based on broader performance goals that regulated parties must attain. A second category constructs market-based incentives to compel organizations to move in desired directions by means of either carrots (e.g., subsidies) or sticks (e.g., taxes or trading regimes). As we saw with the example of workplace safety, legislators have often used a combination of these tools over time. <sup>26</sup>

In our view, targeted transparency policies represent a distinctive third form of government intervention to further important public priorities. Just as standards- and market-based tools have certain preconditions for success, transparency policies rely on users and disclosers of information, as well as government officials, to fulfill distinct roles in order to improve chances of success. Our classification differs from that of others who have

tended to describe transparency policies as a subset of financial incentive—based approaches.<sup>27</sup> It also differs from the approach of scholars who have focused on the importance of transparency-based systems as responses to particular categories of policy problems.<sup>28</sup> Finally, our analysis contrasts with those that view transparency policies as examples of the more general trend toward deregulation.<sup>29</sup>

Targeted transparency differs from standards- and market-based approaches in two major respects. First, it uses a broader set of pathways to affect the behavior of targeted organizations, and second, it uses communication as a regulatory mechanism.

Most regulatory systems work through economic pathways. Standards-based approaches aim to change the behavior of targeted organizations by requiring that they adopt certain practices or attain certain goals. If they fail to comply, organizations face civil and/or criminal penalties that take an economic toll.<sup>30</sup> Market-based systems work by connecting behavior explicitly to economic incentives via performance-linked taxes or subsidies. Economic pathways are also important to the operation of many targeted transparency systems. Restaurant hygiene disclosure, auto rollover rankings, and nutritional labeling operate by providing consumers with information that can inform and change product choices and in turn alter the incentives faced by the businesses providing those goods and services.

However, *political* pathways are also important to many of the policies we review. For example, mortgage lending and toxic pollution disclosure help empower community organizations to press disclosers to improve practices. Similarly, parental pressure on school systems is critical to the success of school performance disclosure systems. Frequently economic and political pathways are intertwined – for example, as community pressure translates into reputational damage. Several studies document how community pressure to reduce toxic pollution can become economic pressure exerted through capital markets.

Targeted transparency policies also differ from the other forms of government intervention in the combination of signals they send to disclosing organizations and the latitude of responses available to those organizations. The differences between regulatory interventions in this respect are captured in Figure 3.1.

Standards-based interventions – whether they require specific practices ("design standards") or mandate particular regulatory goals ("performance standards") – provide the targets of regulation with guidance that defines acceptable behavior. For example, under the Occupational Safety and Health Act, company managers know whether or not they have complied with

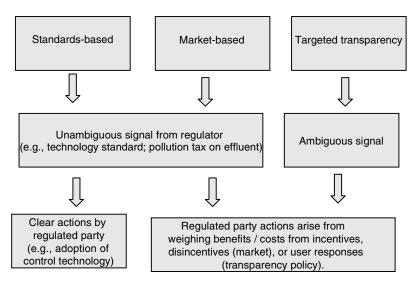


Figure 3.1. Standards-Based, Market-Based, and Transparency Signals and Responses

workplace safety requirements regarding practices such as machine guarding. Performance standards, while providing greater latitude to organizations to decide *how* to achieve a target, stipulate that goal clearly and gauge performance according to it (e.g., reduction of auto safety risks to certain targeted levels). Similarly, when government employs market-based policies using taxes, subsidies, or trading regimes to regulate business behavior, it also specifies clear outcomes. For example, the system of sulfur dioxide (SO<sub>2</sub>) trading devised to reduce acid rain, created under the Clean Air Act Amendment of 1990, requires the establishment and careful monitoring of emission goals.<sup>31</sup>

Unlike these regulatory approaches, targeted transparency policies employ communication as a regulatory mechanism and send more ambiguous signals to target organizations regarding whether they are behaving satisfactorily. Signals arise from changes in consumer, investor, or employee behavior as they respond to new information. Although regulators may have some preexisting belief about how people will respond to new information, those reactions – and the ability of disclosers to perceive those reactions – are never assured.

Targeted transparency systems resemble market-based regulatory systems (and systems employing performance-based standards) by providing choices to targeted organizations. Under systems that set overall performance goals and rely on market-based incentives to achieve those goals,

targeted organizations enjoy wide latitude in choosing what actions to take. Under the SO<sub>2</sub> trading system, utilities know how many allowances they need to purchase in order to meet maximum emission levels, how much they will be willing to pay to purchase allowances given those targets, and the value of selling allowances given a decision to reduce emissions below prescribed levels.<sup>32</sup> With this information, they can make their own decisions about the course of action to follow. By contrast, under design- or technology-based standards, firms receive very clear guidance regarding actions they should take. Manufacturers and utilities under the original Clean Air Act Amendments of 1970 were required to adopt certain types of "scrubber" technology to remove effluents from smokestacks.<sup>33</sup> Many of the original workplace safety standards promulgated by OSHA required adoption of particular technologies, work practices, or worker protection accessories.<sup>34</sup>

Targeted transparency policies provide even broader choice. Both users and disclosers are free to take no action at all. In contrast to performance-or market-based systems, target organizations receive their signals from the behavior of users rather than the actions of regulators or financial incentives from markets. That means that signals may work through a wide variety of pathways: through consumer purchasing patterns; via capital markets; or through organized political activity of users or their agents, for example. Therefore, predicting those pathways is more complicated than predicting the pathways through which compliance- or market-based interventions work.

Targeted transparency therefore represents a distinctive form of government intervention. As we have seen, it is characterized by unique design features. Furthermore, its reliance on signals sent by users via market, political, organizational, or combined pathways makes its operation far more complex than perceived by the public or even its proponents.