CODE

and other laws

of cyberspace

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what things regulate

JOHN STUART MILL WAS AN ENGLISHMAN, THOUGH ONE OF THE MOST INFLUENTIAL political philosophers in America in the nineteenth century. His writings ranged from important work on logic to a still striking text, *The Subjection of Women*. But his continuing influence comes from a relatively short book titled *On Liberty*. Published in 1859, this powerful argument for individual liberty and diversity of thought represents an important view of liberal and libertarian thinking in the second half of the nineteenth century.

"Libertarian," however, has a specific meaning for us. It associates with arguments against government.[1] Government, in the modern libertarian's view, is the threat to liberty; private action is not. Thus, the good libertarian is focused on reducing government's power. Curb the excesses of government, the libertarian says, and you will have ensured freedom for your society.

Mill's view was not so narrow. He was a defender of liberty and an opponent of forces that suppressed it. But those forces were not confined to government. Liberty, in Mill's view, was threatened as much by norms as by government, as much by stigma and intolerance as by the threat of state punishment. His objective was to argue against these private forces of coercion. His work was a defense against liberty-suppressing norms, because in England at the time these were the real threat to liberty.

Mill's method is important, and it should be our own. It asks, What is the threat to liberty, and how can we resist it? It is not limited to asking, What is the threat to liberty *from government?* It understands that more than government can threaten liberty, and that sometimes this something more can be private rather than state action. Mill was not so concerned with the source. His concern was with liberty.

Threats to liberty change. In England norms may have been the problem in the late nineteenth century; in the United States in the first two decades of the twentieth century it was state suppression of speech.[2] The labor movement was founded on the idea that the market is sometimes a threat to liberty—not just because of low wages, but

also because the market form of organization itself disables a certain kind of freedom.[3] In other societies, at other times, the market is the key, not the enemy, to liberty.

Thus, rather than think of an enemy in the abstract, we should understand the particular threat to liberty that exists in a particular time and place. And this is especially true when we think about liberty in cyberspace. For my argument is that cyberspace teaches a new threat to liberty. Not new in the sense that no theorist has conceived of it before. Others have.[4] But new in the sense of newly urgent. We are coming to understand a newly powerful regulator in cyberspace, and we don't yet understand how best to control it.

This regulator is code—or more generally, the "built environment" of social life, its architecture.[5] And if in the middle of the nineteenth century it was norms that threatened liberty, and at the start of the twentieth state power that threatened liberty, and during much of the middle twentieth the market that threatened liberty, my argument is that we understand how in the late twentieth century, and into the twenty-first, it is a different regulator—code—that should be our concern.

But it is not my aim to say that this should be our new single focus. My argument is not that there is a new single enemy different from the old. Instead, I believe we need a more general understanding of how regulation works. One that focuses on more than the single influence of any one force such as government, norms, or the market, and instead integrates these factors into a single account.

This chapter is a step toward that more general understanding.[6] It is an invitation to think beyond the narrow threat of government. The threats to liberty have never come solely from government, and the threats to liberty in cyberspace certainly will not.

A   D O T ' S   L I F E

There are many ways to think about constitutional law and the limits it may impose on government regulation. I want to think about it from the perspective of someone who is regulated or constrained. That someone regulated is represented by this (pathetic) dot—a creature (you or me) subject to the different constraints that might regulate it. By describing the various constraints that might bear on this individual, I hope to show you something about how these constraints function together.

Here then is the dot.

How is this dot "regulated"?

Let's start with something easy: smoking. If you want to smoke, what constraints do you face? What factors *regulate* your decision to smoke or not?

One constraint is legal. In some places at least, laws regulate smoking—if you are under eighteen, the law says that cigarettes cannot be sold to you. If you are under twenty-six, cigarettes cannot be sold to you unless the seller checks your ID. Laws also regulate where smoking is permitted—not in O'Hare Airport, on an airplane, or in an elevator, for instance. In these two ways at least, laws aim to direct smoking behavior. They operate as a kind of constraint on an individual who wants to smoke.[7]

But laws are not the most significant constraints on smoking. Smokers in the United States certainly feel their freedom regulated, even if only rarely by the law. There are no smoking police, and smoking courts are still quite rare. Rather, smokers in America are regulated by norms. Norms say that one doesn't light a cigarette in a private car without first asking permission of the other passengers. They also say, however, that one needn't ask permission to smoke at a picnic. Norms say that others can ask you to stop smoking at a restaurant, or that you never smoke during a meal.

European norms are savagely different. There the presumption is in the smoker's favor; vis-à-vis the smoker, the norms are laissez-faire. But in the States the norms effect a certain constraint, and this constraint, we can say, *regulates* smoking behavior.

Law and norms are still not the only forces regulating smoking behavior. The market too is a constraint. The price of cigarettes is a constraint on your ability to smoke. Change the price, and you change this constraint. Likewise with quality. If the market supplies a variety of cigarettes of widely varying quality and price, your ability to select the kind of cigarette you want increases; increasing choice here reduces constraint.

Finally, there are the constraints created, we might say, by the technology of cigarettes, or by the technologies affecting their supply.[8] Unfiltered cigarettes present a greater constraint on smoking than filtered cigarettes if you are worried about your health. Nicotine-treated cigarettes are addictive and therefore create a greater constraint on smoking than untreated cigarettes. Smokeless cigarettes present less of a constraint because they can be smoked in more places. Cigarettes with a strong odor present more of a constraint because they can be smoked in fewer places. In all of these ways, how the cigarette *is* affects the constraints faced by a smoker. How it is, how it is designed, how it is built—in a word, its *architecture*.

Thus, four constraints regulate this pathetic dot—the law, social norms, the market, and architecture—and the "regulation" of this dot is the sum of these four constraints. Changes in any one will affect the regulation of the whole. Some constraints will support others; some may undermine others. A complete view, however, should consider them together.

So think of the four together like this:
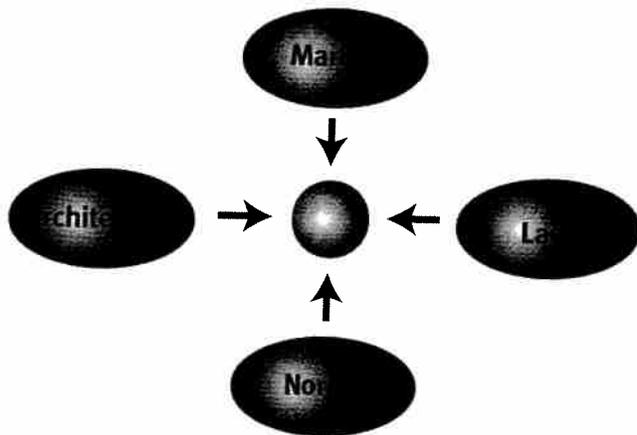
In this drawing, each oval represents one kind of constraint operating on our pathetic dot in the center. Each constraint imposes a different kind of cost on the dot for engaging in the relevant behavior—in this case, smoking. The cost from norms is different from the market cost, which is different from the cost from law and the cost from the (cancerous) architecture of cigarettes.

The constraints are distinct, yet they are plainly interdependent. Each can support or oppose the others. Technologies can undermine norms and laws; they can also support them. Some constraints make others possible; others make some impossible. Constraints work together, though they function differently and the effect of each is distinct. Norms constrain through the stigma that a community imposes; markets constrain through the price that they exact; architectures constrain through the physical burdens they impose; and law constrains through the punishment it threatens.

We can call each constraint a "regulator," and we can think of each as a distinct modality of regulation. Each modality has a complex nature, and the interaction among these four is hard to describe. I've worked through this complexity more completely in the appendix. But for now, it is enough to see that they are linked and that, in a sense, they combine to produce the regulation to which our pathetic dot is subject in any given area.

The same model describes the regulation of behavior in cyberspace.

Law regulates behavior in cyberspace. Copyright law, defamation law, and obscenity laws all continue to threaten *ex post* sanction for the violation of legal rights. How well law regulates, or how efficiently, is a different question: in some cases it does so more efficiently, in some cases less. But whether better or not, law continues to threaten a certain consequence if it is defied. Legislatures enact;[9] prosecutors threaten;[10] courts convict.[11]

Norms also regulate behavior in cyberspace. Talk about democratic politics in the alt.knitting newsgroup, and you open yourself to flaming; "spoof" someone's identity in a MUD, and you may find yourself "toaded";[12] talk too much in a discussion list, and you are likely to be placed on a common bozo filter. In each case, a set of understandings constrain behavior, again through the threat of *ex post* sanctions imposed by a community.

Markets regulate behavior in cyberspace. Pricing structures constrain access, and if they do not, busy signals do. (AOL learned this quite dramatically when it shifted from an hourly to a flat rate pricing plan.)[13] Areas of the Web are beginning to charge for access, as online services have for some time. Advertisers reward popular sites; online services drop low-population forums. These behaviors are all a function of market constraints and market opportunity. They are all, in this sense, regulations of the market.

And finally, an analog for architecture regulates behavior in cyberspace—*code.* The software and hardware that make cyberspace what it is constitute a set of constraints on how you can behave. The substance of these constraints may vary, but they are experienced as conditions on your access to cyberspace. In some places (online services such as AOL, for instance) you must enter a password before you gain access; in other places you can enter whether identified or not.[14] In some places the transactions you engage in produce traces that link the transactions (the "mouse droppings") back to you; in other places this link is achieved only if you want it to be.[15] In some places you can choose to speak a language that only the recipient can hear (through encryption);[16] in other places encryption is not an option.[17] The code or software or architecture or protocols set these features; they are features selected by code writers; they constrain some behavior by making other behavior possible, or impossible. The code embeds certain values or makes certain values impossible. In this sense, it too is regulation, just as the architectures of real-space codes are regulations.

As in real space, then, these four modalities regulate cyberspace. The same balance exists. As William Mitchell puts it (though he omits the constraint of the market):

> Architecture, laws, and customs maintain and represent whatever balance has been struck [in real space]. As we construct and inhabit cyberspace communities, we will have to make and maintain similar bargains—though they will be embodied in software structures and electronic access controls rather than in architectural arrangements.[18]

Laws, norms, the market, and architectures interact to build the environment that "Netizens" know. The code writer, as Ethan Katsh puts it, is the "architect."[19]

But how can we "make and maintain" this balance between modalities? What tools do we have to achieve a different construction? How might the mix of real-space values be carried over to the world of cyberspace? How might the mix be changed if change is desired?

ON GOVERNMENTS AND WAYS TO REGULATE

I've described four constraints that I've said "regulate" an individual. But these separate constraints obviously don't simply exist as givens in a social life. They are neither found in nature nor fixed by God. Each can be changed, though the mechanics of changing each is complex. Law can have a significant role in this mechanics, and my aim in this section is to describe that role.

A simple example will suggest the more general point. Say the theft of car radios is a problem—not big in the scale of things, but a frequent and costly enough problem to make more regulation seem necessary. One response might be to increase the penalty for car radio theft until the risk faced by thieves made it such that this crime did not pay. Life in prison for radio theft. If radio thieves realized that they exposed themselves to a lifetime in prison each time they stole a radio, it might no longer make sense to them to steal radios. The constraint constituted by the threatened punishment of *law* would now be enough to stop the behavior we are trying to stop.

But changing the law is not the only possible technique. A second might be to change the radio's architecture. Imagine that radio manufacturers program radios to work only with a single car—a security code that electronically locks the radio to the car, such that if the radio is removed, it will no longer work. This is a *code* constraint on the theft of radios; it makes the radio no longer effective once stolen. It too functions as a constraint on the radio's theft, and like the threatened punishment of life in prison, it could be effective in stopping the radio-stealing behavior.

Thus, the same constraint can be achieved through different means, and the different means are differently costly. The threatened punishment of life in prison may be fiscally more costly than the change in the architecture of radios (depending on how many people actually continue to steal radios, and how many are caught). From this fiscal perspective, it may be more efficient to change code than law. Fiscal efficiency may also align with the expressive content of law—a punishment so extreme would be barbaric for a crime so slight. Thus, the values may well track the efficient response. Code would be the best means to regulate.

The costs, however, need not align so well, in this example or in others. Take the Supreme Court's hypothetical example of life in prison for a parking ticket.[20] It is likely that whatever code constraint might match this law constraint, the law constraint would be more efficient (if reducing parking violations were the only aim).

There would be very few victims of this law before people conformed their behavior appropriately. But the "efficient result" would conflict with other values. If it is barbaric to incarcerate for life for the theft of a radio, it is all the more so as a penalty for a parking violation. The regulator has a range of means to effect the desired constraint, but the values that these means entail need not align with their efficiency. The efficient answer may well be unjust—that is, it may conflict with values inherent in the norms, or law (constitution), of the society.

Law-talk typically ignores these other regulators. It typically ignores how law can affect their regulation. Many speak as if law must simply take the other three constraints as given and fashion itself to them.[21]

I say "as if" because today it takes only a second's thought to see that this narrowness is absurd. There were times when these other constraints were treated as fixed—when the constraints of norms were said to be immovable by governmental action,[22] or the market was thought to be essentially unregulable,[23] or the cost of changing real-space code was so high as to make the thought of using it for regulation absurd.[24] But we see now that these constraints are plastic.[25] That they are, as law is, changeable, and subject to regulation.

The examples are obvious and many. Think first about the market: talk of a "free market" notwithstanding, there is no more heavily regulated aspect of our life.[26] The market is regulated by law not just in its elements—it is law that enforces contracts, establishes property, and regulates currency—but also in its effects. The law uses taxes to increase the market's constraint on certain behaviors and subsidies to reduce its constraint on other behaviors. We tax cigarettes in part to reduce their consumption, but we subsidize tobacco production to increase its supply. We tax alcohol to reduce its consumption. We subsidize child care to reduce the constraint the market puts on raising children. In many such ways the constraint of law is used to change the constraints of the market.

Law can also change the regulation of architecture. Think about the Americans with Disabilities Act (ADA).[27] Many of the "disabled" are cut off from access to much of the world. A building with only stairs is a building that is inaccessible to a person in a wheelchair. The stairs are a constraint on the disabled person's access to that building. But the ADA in part aims to change that constraint by requiring builders to change the design of buildings so that the disabled are not excluded. Here is a regulation of real-space code, by law, to change the constraint that real-space code creates.

Other examples get even better.

- Some of the power of the French Revolution derived from the architecture of Paris: the city's small and winding streets were easily barricaded, making it possible for revolutionaries to take control of the city with relatively little absolute strength. Louis Napoleon III understood this, and in 1853 he took steps to change it.[28] Paris was rebuilt, with wide boulevards and multiple passages, making it impossible for insurgents to take control of the city.

- Every schoolchild learns of Lafayette's design to make an invasion of Washington difficult. But more interesting is the placement of the White House relative to the Capitol. The distance between them is one mile, and at the time it was a mile through difficult terrain. (The mall was a swamp.) The distance was a barrier meant to tilt the intercourse between Congress and the president by making it marginally more difficult for them to connect—and thereby more difficult for the executive to control the legislature.
- This same idea has influenced the placement of constitutional courts in Europe. Throughout Europe constitutional courts were placed in cities other than the capital. In Germany the court is in Karlsruhe rather than Berlin; in the Czech Republic it is in Brno rather than Prague. The reason again is tied to the constraint of geography: placing constitutional courts far away from legislatures and executives was meant to minimize both the pressure the latter two bodies could place on the court and reduce the court's temptation to bow to it.
- The principle is not limited to high politics. Designers of parking garages or streets where children may play place speed bumps in the road so that drivers must slow down. These structures have the same purpose as a speed limit or a norm against driving too fast. But they operate by modifying architecture so that architecture regulates.
- Neither is the principle limited to virtuous regulation: Robert Moses built bridges on Long Island to block buses, so that African Americans, who depended primarily on public transportation, could not easily get to public beaches.[29] That was regulation through architecture, invidious yet familiar.
- Nor is it limited to governments. A major American airline noticed that passengers on early Monday morning flights were frustrated with the time it took to retrieve bags from the plane. They were much more annoyed than other passengers, even though it took no longer than average to retrieve the bags from these flights. The company began parking these flights at gates farther away from baggage claim, so that by the time the passengers arrived at baggage claim, their bags were there. Frustration with the baggage handling system was eliminated.
- A large hotel in an American city received many complaints about the slowness of its elevators. It installed mirrors next to the elevator doors. The complaints ended.

In each example, a constraint of architecture is changed so as to realize a collective or social end. As a sign above one of the portals at the 1933 Chicago World's Fair put it (though it was speaking of science): "Science Explores: Technology Executes: Man Conforms."[30]

Law can change social norms as well, though much of our constitutional jurisprudence seems dedicated to forgetting just how.[31] Education is the most obvious example. As Thurgood Marshall put it, "Education is not the teaching of the three R's. Education is the teaching of the overall citizenship, to learn to live together with

fellow citizens, and above all to learn to obey the law."[32] Education is, in part at least, a process through which we indoctrinate children into certain norms of behavior—we teach them how to "say no" to sex and drugs. We try to build within them a sense of what is correct. This sense then regulates them to the law's end.

Plainly, the content of much of this education is regulated by law. Conservatives worry, for example, that by teaching sex education we change the norm of sexual abstinence. Whether that is correct or not, the law is certainly being used to change the norms of children. If conservatives are correct, the law is eliminating abstinence. If liberals are correct, the law is being used to instill a norm of safe sex. Either way, norms have their own constraint, and law is aiming to change that constraint.

To say that law plays a role is not to say that it always plays a positive role. The law can muck up norms as well as improve them, and I do not claim that the latter result is more common than the former.[33] The point is just to see the role, not to praise or criticize it. The aim is descriptive; the normative comes later.

In each case, the law chooses between direct and indirect regulation. The question is: Which means best advances the regulator's goal, subject to the constraints (whether normative or material) that the regulator must recognize? We can represent the point through a modification of the second figure:
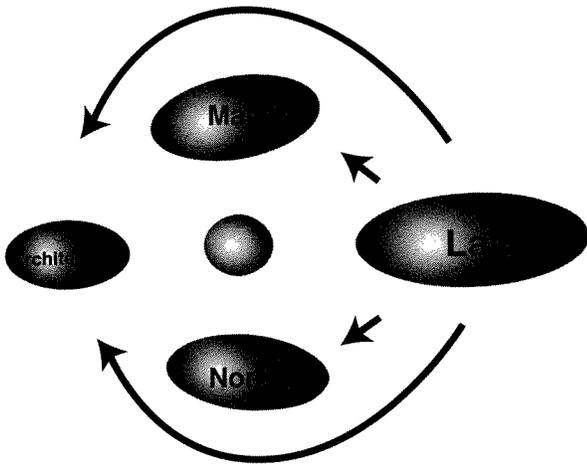
The point should be familiar, and the examples can be multiplied.

Seatbelts: The government may want citizens to wear seatbelts more often.[34] It could pass a law to require the wearing of seatbelts (law regulating behavior di-

rectly). Or it could fund public education campaigns to create a stigma against those who do not wear seatbelts (law regulating social norms as a means to regulating behavior). Or it could subsidize insurance companies to offer reduced rates to seatbelt wearers (law regulating the market as a way of regulating behavior). Finally, the law could mandate automatic seatbelts, or ignition-locking systems (changing the code of the automobile as a means of regulating belting behavior). Each action might be said to have some effect on seatbelt use; each has some cost. The question for the government is how to get the most seatbelt use for the least cost.

Discrimination against the disabled: The disabled bear the burden of significant social and physical barriers in daily life.[35] The government might decide to do something about those barriers. The traditional answer is law regulating behavior directly: a law barring discrimination on the basis of physical disability. But the law could do more. It could, for example, educate children so as to change social norms (regulating norms to regulate behavior). It could subsidize companies to hire the disabled (regulating the market to regulate behavior). It could regulate building codes to make buildings more accessible to the disabled (regulating "natural" or real-space codes to regulate behavior). Each of these regulations would have some effect on discrimination and would have a cost. The government would have to weigh the costs against the benefits and select the mode that regulates most effectively.

Drugs: The government is obsessed with reducing the consumption of illicit drugs. Its main strategy has been direct regulation of behavior through the threat of barbaric prison terms for violation of the drug laws. This policy has obvious costs and non-obvious benefits. But most interesting for our purposes are the non-obvious costs. As Tracey Meares persuasively argues, one effective structure for regulating the consumption of illegal drugs is the social structure of the community in which an individual lives.[36] These are what I've called social norm constraints: standards of appropriate behavior enforced by the sanctions of a community—whether through shame, exclusion, or force.

Just as government can act to strengthen these social norm constraints, it should be obvious that government can also act to weaken them.[37] One way to do this is by weakening the communities within which these norms operate. This, says Meares, is what the extreme sanctions of the criminal law do.[38] In their extremity and effect, they undermine the social structures that would support this social policy. This is an indirect effect of the direct regulation of law, and at some point this effect may overwhelm the effect of the law. We might call this the Laffer Curve for criminal law.

The net effect of these different constraints cannot be deduced a priori. The government acts in many ways to regulate the consumption of drugs. It supports extensive public education campaigns to stigmatize the consumption of drugs (regulating social norms to regulate behavior). It seizes drugs at the border, thereby reducing the supply, increasing the price, and presumably reducing demand (regulating the market to regulate behavior). And at times it has even (and grotesquely) regulated the "code" of drugs (by, for example, spraying marijuana fields with paraquat), making

them more dangerous and thereby increasing the constraint on their consumption.[39] All of these together influence the consumption of drugs. But as advocates of legalization argue, they also influence the incidence of other criminal behavior as well. The policy maker must assess the net effect—whether on the whole these regulations reduce or increase social costs.

Abortion: One final example will complete the account. Since *Roe v Wade,* the Court has recognized a woman's constitutional right to an abortion.[40] This right, however, has not stopped government from seeking to eliminate or reduce the number of abortions. Again, the government need not rely on direct regulation of abortion (which under *Roe* would be unconstitutional). It can instead use indirect means to the same end. In *Rust v Sullivan,* the Court upheld the power of the government to bias the provision of family planning advice by forbidding doctors in "government-funded" clinics from mentioning abortion as a method of family planning.[41] This is a regulation of social norms (within the social structure of medical care) to regulate behavior. In *Maher v Roe,* the Court upheld the right of the government selectively to disable medical funding for abortion.[42] This is the use of the market to regulate behavior. And in *Hodgson v Minnesota,* the Court upheld the right of the state to force minor women to wait forty-eight hours before getting an abortion.[43] This is the use of real-space code (the constraints of time) to regulate access to abortion. In all these ways, *Roe* notwithstanding, the government can regulate the behavior of women wanting abortions.

In each of these examples, law functions in two very different ways.[44] When its operation is direct, it tells individuals how to behave and threatens punishment if they deviate from that behavior. When its operation is indirect, it aims at modifying one of the other structures of constraint.[45] The regulator selects from among these various techniques according to the return from each—both in efficiency and in the values that each might express.

When we see regulation in this more general way, we can see more clearly how the unregulability of cyberspace is contingent. We get a stronger sense of how the state could intervene to make regulation work. And we should also get a sense of the increased dangers presented by this more expansive sense of regulation. In particular, we should have a stronger sense of the danger it presents to constitutional values. The next section considers one such threat.

THE PROBLEMS OF INDIRECTION

In 1985, after years of inaction, Congress passed the Low Level Radioactive Waste Policy Amendments Act to deal with the problem of nuclear waste.[46] Someone needed to take and store nuclear waste. After sufficient prodding by the government, a number of states formed a compact, which Congress then ratified, implementing

a number of requirements and incentives for states to deal with the nuclear waste they produce.

The details of the overall plan are not important here. It is enough to focus on just one part. To induce states to follow federal guidelines for regulating nuclear waste, Congress gave them a choice: either enact certain regulations or "take title" to the spent nuclear fuel. This was a "your money or your life" regulation, for the fuel to which the states would take title was not an asset but a great liability. In a very heavy-handed way, Congress was essentially forcing states to pass the regulations it wanted.

The Supreme Court struck down this part of the law. In effect, the Court held, Congress was commandeering the state legislatures to enact Congress's law. Congress itself, of course, had the power to enact those regulations directly. But it did not have the power to order states to enact laws. Indirection here was not allowed.

This case—*New York v United States*—does not stand for the broad principle that government must regulate only directly, or even for the principle that indirect regulation generally is disfavored. The case was focused quite narrowly on the question of indirection as it involved the states. The most *New York* stands for is the idea that states, as independent sovereigns deserving of special constitutional respect, cannot be co-opted to the federal government's ends—that when the federal government has a program it wants to carry out, it must put its own name behind it.

But while *New York* doesn't establish a general constitutional principle, it does suggest why indirection should be a more general concern. And this general concern is my focus here.

Indirection misdirects responsibility. When a government uses other structures of constraint to effect a constraint it could impose directly, it muddies the responsibility for that constraint and so undermines political accountability. If transparency is a value in constitutional government, indirection is its enemy. It confuses responsibility and hence confuses politics.

Such misunderstandings are possible in other contexts as well. Think again about the case of *Rust*. The federal government helps to fund family planning clinics. ("Helps" fund, not completely funds.)[47] Before 1988 these clinics gave advice on a wide range of birth-related topics, including abortion. Doctors in family planning clinics would advise their patients about abortion whenever they felt such advice was proper.

The Reagan administration wanted to change that. So it ordered (the details of how are not important here) doctors in those clinics to not discuss abortion as a method of family planning with their patients. If asked, the doctors were to say, "The project does not consider abortion an appropriate method of family planning."[48]

The aim of this regulation was clear: to reduce the incidence of abortion. It did this by using doctors to steer patients away from abortion. A doctor has a great deal of power over a patient in a context like this; the patient would most likely understand the doctor to be recommending against abortion.

But notice the technique. The federal government could have stated its own position about abortion. It could have put up posters and billboards saying that abortion is wrong, or it could have used space in its clinics to advertise its view. But it chose instead to bury its policy choice in the words of doctors. It thereby could trade on the professional authority of the doctors to advance its own ends. It could regulate abortion indirectly by regulating the doctors directly.

Just as it tried to use the authority of the states to effect its ends in *New York*, the government trades on a misrepresentation in *Rust*. But worse than in the federalism context, the victim of the misrepresentation here does not even realize that the misrepresentation is a policy choice. The patient is unlikely to hear the doctor's statement as political broadcast from the government. She is most likely to hear it as a medical opinion. Not only is there a confusion about who is responsible for the opinion expressed, but there is also confusion about whether it is an opinion at all.

Rust v Sullivan is one of the great embarrassments of the Supreme Court; the case proving Justice Scalia's rule that any issue gets distorted once it gets near the question of abortion.[49] But my argument here doesn't depend upon whether *Rust* was right. My aim is to bring out a certain sensibility about regulation; *Rust* simply points the way.

Consider a third case. Until 1948 deeds could include covenants (promises) that the property covered by the deed could not be sold to people of a particular race. The purpose of these provisions was clear: to effect and preserve segregation. Their use was extensive. It was estimated, for example, that when *Shelley v Kraemer*[50] struck these provisions down as unconstitutional under the equal protection clause, 25 percent of the properties in south Chicago had been prohibited from sale to African Americans.[51]

As awful as such provisions were, they had a certain integrity. They clearly stated their purpose and were transparent about the values they affirmed. No one could pretend that the segregation they effected was somehow an accidental by-product of decisions made elsewhere. Although they were private covenants, they were enforced by the state and, indeed, derived their meaning from the state. They said: this society is racist.

When the Court struck these provisions down, however, the question became what would replace them. Few expected that the attitudes behind these covenants would suddenly disappear because of a single court judgment. So when the Court ended direct segregation, we should have expected indirect segregation to emerge to replace it.

Sure enough, after 1948 local communities shifted their technique for preserving segregation. Rather than covenants, they used architecture. Communities were designed to "break the flow" of residents from one to another. Highways without easy crossings were placed between communities. Railroad tracks were used to divide. A thousand tiny inconveniences of architecture and zoning replaced the express preferences of covenants. Nothing formally prohibited integration. But informally, much did.[52]

Local governments thus did something very much like what the federal government did in *Rust* and tried to do in *New York:* no longer able to effect segregation directly, they used zoning laws—geographical architecture, or real-space code—to effect it indirectly. They built their communities and designed their streets to make it hard for integration to occur. The tiny inconveniences of zoning regulations succeeded in keeping communities separate.

What is most significant is that now, even more than with *Rust,* it becomes very difficult to see the link between the regulation and its consequence. The continuing segregation of these communities is described as the product of "choice." Individuals choose to live in one neighborhood rather than another. In a strict sense, that is correct, but their choices are made in the face of costs that the state has imposed. It is easier to remain segregated, so people choose to do that. But it is only easier because government has moved mountains to make it that way.

Here the government is regulating indirectly, by using the structures of real-space code to effect its ends, but this regulation, again, is not seen as regulation. Here the government gets an effect at no political cost. It gets the benefit of what would clearly be an illegal and controversial regulation, that is, without even having to admit any regulation exists.

In all three cases, the government is commandeering the power of another modality—another structure of constraint—to effect its own ends.[53] This in itself is not necessarily improper. There are plenty of examples that anyone would consider proper. A requirement that streets be well lit, for instance, is a regulation designed to reduce crime; it does so indirectly, by regulating the architecture of streets. No one would think that regulation improper. Nor does all such regulation hide its pedigree. Think again about speed bumps. They are examples of indirect regulation. Like a winding road, they use the code of streets to keep down the speed of a car. But no one is fooled about the source of this regulation; no one believes the bumps are accidental.

Thus, the point is not against indirect regulation generally. The point is instead about transparency. The state has no right to hide its agenda. In a constitutional democracy its regulations should be public. And thus, one issue raised by the practice of indirect regulation is the general issue of publicity. Should the state be permitted to use nontransparent means when transparent means are available?

WHERE THIS LEADS

After I published an essay in *The Industry Standard,* arguing that "code is law,"[54] the following letter was sent to the editor:

> Typical for a Harvard Law Professor. . . . Lessig misses the entire forest while
> dancing among the trees. . . . While his riff on West Coast Code (from Silicon

Valley Programmers) vs. East Coast Code (from government lawyers) is very cleverly crafted, it completely avoids the real difference between the two.

The good professor seems to apply the word "regulation" equally to the efforts of private enterprises to *control the behavior of their customers through market mechanisms and* the efforts of government agencies to *control the behavior of all citizens through force of law.*

So long as the creators and purveyors of West Coast Code (no matter how self-ish, monopolistic, demonic or incompetent they may be) do not carry guns and badges, I will choose them over the enforcers of East Coast Code any time.[55]

Whether or not I've missed the "real difference" between code and law, the ge-nius in this letter is that its author clearly sees the real similarity. The author (the president of an Internet-related business) understands that "private enterprise" tries to "control the behavior of their customers." He writes of "market mechanisms" to achieve that control. (Technically, I was speaking about architectures to achieve that effect, but never mind. Whether markets or architectures, the point is the same.) He therefore sees that there is "regulation" beyond law. He just has his own favorites (corporate executive that he is).

What this author sees is what we all must see to understand how cyberspace is regulated, and to see how law might regulate cyberspace. I've argued in this chapter that government has a range of tools that it uses to regulate. Cyberspace expands that range. The code of cyberspace is becoming just another tool of state regulation. Indirectly, by regulating code writing, the government can achieve regulatory ends, often without suffering the political consequences that the same ends, pursued di-rectly, would yield.

We should worry about this. We should worry about a regime that makes invis-ible regulation easier; we should worry about a regime that makes it easier to regu-late. We should worry about the first because invisibility makes it hard to resist bad regulation; we should worry the second because we don't yet—as I argue in part 3—have a sense of the values put at risk by the increasing scope of efficient regulation.

But the power that government has over cyberspace hangs on an important fea-ture of cyberspace that I have not yet described. We can no longer take that feature for granted—either in this argument or in the world. One feature of the code determines much about the power of government. It is the topic of the chapter that follows.