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Information, Policy, and Power in the Informational State

The question asked at the beginning of this book was, What are we doing to ourselves? That question has unfolded into several others:

- ***What are the trends in information policy, and what are their effects on society?***
- ***How do the interactions between and combined effects of these legal trends—policy precession—affect the identity, structure, borders, and change of U.S. society from the state down to the individual level?***
- ***Given that the effects of information policy are constitutive in nature, how do these legal trends influence how we interpret and act upon constitutional information policy principles?***
- ***What do the exemplars of policy trends discussed here tell us about information policy itself?***
- ***What are the relationships between social theory and information policy?***

The first of these is discussed in the detail of leaving the detail of developments within specific areas of the law to chapters 5 through 8. This concluding chapter reviews what we have learned in each of the other four areas. It begins by identifying the overarching conclusions that can be drawn regarding the combined effects of information policy trends on the nature of society and on the informational state. It goes on to summarize how these developments reflect and influence our interpretation and application of the twenty information policy principles in the U.S. Constitution. The third section reviews what we have learned about information policy itself. And the fourth looks at the different strategies of policy-makers as they make use of, or ignore, dominant themes in contemporary social theory. Together, these analyses provide a picture of what makes the informational state distinct as a political form that specializes in the use of informational power.

The Social Impact of Information Policy Trends

Throughout much of this book, developments dealing with social, technological, and informational systems have been treated separately, reflecting their isolation from each other in legacy law and in order to heighten sensitivity to the multiple causal relations among the three. A warning bell that these cannot be empirically separated, however, has also been rung loudly and often. To gain the broadest view in these concluding remarks, therefore, the combined effects of developments in information policy across these different systems as well as across bodies of legacy law will be discussed as a whole, just as we experience them.

The informational state knows more and more about individuals, while individuals know less and less about the state. The model of representative democracy requires individual knowledge of the processes and activities of government, and at least enough government knowledge about citizens to apportion representation and resources. With the bureaucratic welfare state, the informational requirements of the nation-state increased in order to have in hand the knowledge of particular individuals, groups, and communities needed to implement policy. In the decades following the establishment of regulatory agencies and safety net programs, laws and regulations were also put in place that increased the symmetry between citizen knowledge of the state and state knowledge of the citizen. Of course there was never either absolute symmetry or complete transparency in either direction, for the need to protect national security has always kept some critical information about government out of citizens' hands and privacy laws protected some personal information from the eyes of government. With the informational state, however, the capacity of the state to gather and process information about its citizens and about the resources and activities within its space is growing by orders of magnitude. At the same time, the ability of citizens to learn about what the government is doing is declining.

In the informational state, the panspectron has replaced the panopticon. The concept of the panopticon refers to surveillance practices in which the individual subject of surveillance is first identified and then multiple techniques and technologies of observation are directed upon the subject. The use of surveillance techniques as a means of control under modernity is often described as panoptic, and this accurately sum-

marizes the cumulative effect of many of the practices of the bureaucratic state. In the informational state the panopticon has been replaced with the panspectron, in which information is gathered about everything, all the time, and particular subjects become visible only in response to the asking of a question. The panspectron is also a control mechanism, with the additional features that it can manage many more subjects at once, and that the subjects of surveillance never know when, how, or why they might become visible on the panspectral screen.

There is a gap between the identity of the informational state as perceived by those in government and as perceived by citizens. Constitutional provisions regarding relationships and communications between citizens and the government suggest that a shared vision of the identity of the state was an ideal. Today, however, the informational state described earlier means the self-perception of the state through its proprioceptive mechanisms is growing distant from the identity of the United States as understood by its citizens. This trend may well generate what is described within complex adaptive systems theory as a deviation-amplifying process in which government and polity grow increasingly distant from each other, decreasing the stability of the system as a whole.

The use of digital technologies may actually decrease, rather than increase, the possibilities of meaningful participatory democracy. When the most important information technologies for political practice were oral conversation and written text, achieving classical literacy was sufficient for access to the knowledge and discourses upon which political decision making was based. Now that highly complex digital technologies provide most of the knowledge input into political decision-making, access has become restricted to very few for a complex of reasons. So, too, has much of the critical discourse that is pertinent, for that conversation now revolves around the technological issues involved in the collection and processing of information to be used for political purposes and is also not now generally accessible. The result is a citizenry that is less and less capable of participating in decision-making that can be meaningfully described as democratic. Schudson's concept of the monitorial citizen, therefore, does accurately describe the kinds of knowledge necessary to be an informed citizen in the twenty-first century, but it is overly optimistic about—indeed, does not actually deal with—the logistical barriers to actually achieving that situation under contemporary

conditions. We have not yet developed either the educational systems, or the modes and venues of appropriate public discourse, for political participation that must start with design of the structures of technological systems rather than engaging with the constitutionally designed political processes of the social system. The participatory design practices mentioned in this book are the first steps in this direction.

While digital technologies could have expanded possibilities for public participation in voting via referenda, the technologies of today's electronic voting machines reduce the confidence of individual voters that their votes will be accurately recorded and remain unmanipulated. Today's electronic voting machines introduce uncertainty at several stages of the voting process, from the actual recording of the vote by individuals to statistical treatment of the vote at various levels of government once an election is over. Habitual conceptions of mobilization of political power rest on assumptions about the validity of the voting record. With that assumption gone, the vote itself can become a meaningless exercise or worse—the very fact of a vote can be used to justify political decisions, even though the statistical outcomes have been manipulated.

The individual disappears in the informational state into a probability. While statistical portraits can provide some useful information about individuals—*if* valid and reliable—the picture they provide is partial at best, and distorting or false at worst. Yet the use of statistical approaches to legal treatment of the individual, from sentencing in the courtroom to identification as a surveillance target, to consideration of immigration requests to, again, the possibility that electronic vote results may be manipulated, all reflect the disappearance of the individual human into probabilities. The human cost of this change can go well beyond the results of inaccuracies: Statistics do not have either human rights or civil liberties.

Access to information is used by the informational state for proactive persuasive purposes. In a series of steps over the last few decades, the U.S. government has mandated a shift to the Web in access to government information and has simultaneously increased its control over what information is presented, and how, and even what data is collected by "independent" agencies. Historical revisionism is of course easier in

the digital environment, because changes can be made globally much more easily than could be accomplished in a print context in which individual copies of items must be removed from shelves, institution by institution.

The clarity with which those within the United States have understood whether they are, or are not, citizens has given way to uncertainty regarding both that identity and what it means in terms of rights and responsibilities. The creation of the category of hybrid citizenship; the threat that it may soon become possible to lose one's citizenship due to actual or imagined speech and behavior that fell within the pale in the past; the extension of the border exceptions to U.S. law throughout the country's geographic space; the need to struggle for sustenance of due process; and the growing realm of secrecy in government operations all combine to undermine the confidence in one's identity as a U.S. citizen.

Information policy responses to the fact that all three types of systems have been characterized by fluidity, experimentation, and sometimes turbulence as a result of the use of meta-technologies have varied from efforts to enforce rigid structures to exempting activity from rules altogether, depending upon the goals of the government. The overarching tendency within the last few years has been toward increasing use of structural regulation. However, in simultaneous pursuit of particular goals, such as promoting technological innovation, exemptions from structural regulation are granted. In domains in which there is a great deal of variance and continued experimentation, decisions are often made on a case-by-case basis rather than via generally applicable rules.

Theoretical difficulties distinguishing types of information processing present legal problems. At least two examples of this type of legal problem have been discussed here. Difficulties determining prior art in patent law highlight the inadequacy of our ability to theorize differences in types of information processing for legal purposes. And the problem of drawing lines between different informational goods and services for accounting purposes has been the most difficult to resolve in the development of the new NAICS. The same problem underlies, or contributes to, a number of the other issues discussed here, such as disagreements regarding exactly when a communication constitutes association, or to what extent constitutional protections apply to interactivity per se.

Because the technologies that shape social and informational structures are increasingly mathematical in nature, new regulatory tools that are also mathematical in nature are being developed. And because those tools come in a form over which property rights may be asserted, the privatization of formerly public power is exacerbated in the informational state. In our image of democratic decision-making, the same techniques for developing positions and acting on them were available to all groups of stakeholders involved in any given issue. And while there may have been differences in resources from one group to another, every political party could get together, debate, exchange information, and organize to try to pass or change laws in the same ways. Now that modes of organizing, organizational structures, and transactional processes can all be patented, the situation has changed. In some cases government use of computer programs to accomplish regulatory ends may generate a dependency upon private sector entities that shares some similarities with but is also different in kind from the long-standing informational dependency of regulatory agencies upon corporations in the industries they are regulating. In other cases reliance upon such programs creates a de facto privatization of some forms of previously public power. For citizens, the political playing field has become more uneven since there are now ways of engaging in political discussion and acting on decisions made through such discourse that are available to some groups of stakeholders, but not to others.

Though the borders of the state were never purely material or cleanly drawn, today more than ever before they are conceptual in nature and their extent and shape varies with the type of informational or other activity involved. In the past, geopolitical borders were often contested, but demarcations of their locations as claimed could be mapped geographically and as defined they were clean and bright lines. Current research shows that, particularly in a globalized world, the concept of the border can be replaced with the notion of border zones of varying width if one is talking about the cultural, social, and economic experience of boundaries between states. More important, however, is the appearance of a number of additional borders that are not geographic in nature but, rather, map onto technological systems and informational systems. When personal information of those who would like to enter the United States is examined in foreign countries at the point of embarkation, on the one hand, and exemptions from U.S. law at the border can be practiced within the country anywhere there are functional border

equivalents, on the other, it becomes clear that the borders of technological and informational systems that do not map onto geopolitical borders are being put to use in support of the latter. The expansion of the boundaries of the informational state beyond its geopolitical borders has been used by the United States to justify interventions anywhere in the world even without referring to extraterritoriality based on the right to define injuries and articulate chains of causation that can be the basis of action where none existed before.

The informational state has much more knowledge about forces simultaneously interacting across the globe in the present than it does about history. The memory of the informational state—knowledge of genetic change, in systems theory terms—is fragmented, incoherent, and often nonexistent. Awareness of current conditions—epigenetic change—is much greater. The political consequences of this are significant, for knowledge of the past provides insight into the causal forces that have created present circumstances, providing valuable input into future planning. Knowledge of the present serves control purposes but unless archived and made accessible, does not support the planning function. While the combination of knowledge of the past and of the present would be ideal, and knowledge of the past as analyzed through a variety of theoretical lenses is invaluable to decision-makers, knowledge of the present alone creates a planning environment subject to the whims of those in a position to manipulate stories told about the past.

The informational state has a better data, visual, and, increasingly, sensory memory than it does a narrative memory. The sensory range of digital intelligence, in terms of scale and scope, and in terms of the types of data collected, keeps increasing. Current experimentation with microscopic intelligent sensors capable of self-organizing into networks for the exchange of information has brought the possibility of ubiquitously blanketing the globe with data-gathering equipment. We create our world, however, not through data but through the collaborative development of the narratives by which we live our lives. In the terms of complex adaptive systems theory, healthy social change requires narratives that are themselves complex and open to adaptation through mutual interaction. The informational state in its current incarnation, however, is driving toward narrative simplicity, even as the data upon which state narratives are placed become more diverse and complex.

U.S. information policy regarding treatment of change is confused, self-contradictory, and in many ways self-defeating. The rhetoric of participatory democracy continues to be used but, at least for the moment, change in only one direction is being tolerated. The goal of retaining technological leadership is still espoused, but a number of policies are in place that are making it difficult, if not impossible, to hold that spot. Similarly, while knowledge production remains a part of the informational state's mission, many laws and regulations discourage the processes involved by inhibiting the efforts of researchers, preventing the diffusion of knowledge throughout society so that it can be used, and declining to use the results of research as inputs into public decision making.

Information policy tools have been particularly effective as enablements of the trend away from evidence-based policy-making. A key characteristic of the modern nation-state since its inception has been its reliance upon evidence about actual social conditions as inputs into decision-making. This feature first appeared in the late eighteenth century as a pragmatic consequence of the French government's post-revolution interest in serving the people, and it only became stronger as research methods became more sophisticated, computing capacity and speed increased, and the services of the nation-state in its bureaucratic form became even more dependent upon data for their provision. The move to downsize government and reduce its paperwork that began in the late 1970s has combined with other trends—such as the progressive, conservative, and religious versions of belief in post-normal science—in a turn away from evidence-based decision-making. Information policy tools, such as those used by the OMB to intervene in agency information collection, processing, and distribution practices, are a key means by which this change in political stance has become embedded in the law.

The range of types of threats to freedom of speech is expanding. Traditional threats to freedom of speech remain in the twenty-first century environment through both direct censorship and indirect chilling effects. New issues have also arisen, including importantly the removal of constitutional protections from speech that is defined as information processing rather than communicative activity, and efforts to assert property rights in storylines and plots. Replacement of action with purported intention and association as justifications for alleging criminality also restricts speech rights.

Informational rights are becoming commoditized. One of the reasons today's economy is described as an information economy is that many types of information never before commoditized have become so. Trends reported upon here expand upon that insight with details about how informational rights are also becoming commoditized. The right to privacy provides a premiere example: While in the past one could assert a right of privacy to repel unwarranted invasions of privacy in the courts, today one must either purchase the education needed in order to protect the privacy of one's space and communications technologically, or purchase the software and technologies needed to do so from others.

The Current Status of Constitutional Information Policy Principles

Another way of thinking about the ways in which the transition to an informational state has affected how we live is to look at the impact of recent trends on interpretation and implementation of each of the information policy principles in the U.S. Constitution. Most of the effects briefly summarized here have been explored in earlier chapters, with some of the themes cross-cutting material oriented around more than one of the specific issues addressed. The status of each constitutional principle for information policy, in the order in which they were introduced in chapter 2, is reviewed here for completeness and as a stimulus to further research.

Information collection by the government Operationalization of the constitutional mandate for a census appears to be self-contradictory today, for the government has chosen to *not* maximize its ability to achieve the kinds of statistical accuracy that would ensure fairness in use of census statistics while it *is* maximizing its ability to collect information about individuals.

Open government The decades-long trend toward increased access to government information, theoretically made much easier with the use of digital technologies, has been reversed via expansion of the definition of the types of information use of which may threaten national security.

Free speech within government Though the free speech of government officials is constitutionally protected, current administration officials have accused members of Congress who express concern about the

impact of the PATRIOT Act and related changes in the law since 9/11 of treasonous behavior, chilling political discourse.

Federal government control over currency As the virtual economies of game environments increasingly intersect with the "real" economy, the constitutional right of the government to control currency may provide a new justification for intervention into the content of popular culture.

Universal access to an information distribution system This constitutional principle could be used to support efforts to achieve universal access to the Internet, but so far has not. Instead, the current Bush administration has attempted to use the U.S. agreement with the WTO regarding trade in services to dismantle the U.S. Postal Service, and the universal access provisions of the Telecommunications Act of 1996 are being undercut by both private and public sector reluctance to enforce the rules.

Intellectual property rights Both the ability to access and manipulate intellectual property owned by others and the ability to monitor the use of content have increased in the electronic environment. The constitutional rubric for intellectual property rights remains in place, but extension of the duration of copyright, and expansion of the domain of patentable material and uses interpreted as infringing, have significantly reduced the social goals of this constitutional principle, while strengthening the ability of dominant players to extract profit from control over these informational resources.

Restriction of civil liberties during time of war This principle is being heavily relied upon.

Treason The definition of treasonous speech and activity has broadened, and government capacity to discern when potentially treasonous communications and behaviors take place has increased.

Freedom of opinion In the past, we needed protections for freedom of opinion as expressed publicly. Today, we need protections for opinions expressed privately, or never communicated at all.

Freedom of speech Several trends are combining to chill free speech in today's environment, including the fact that very little speech, if any, can

be conducted in private, the compactness of the range of ideas in mass discourse relative to the possible terrain of points of view, the heavy weighting of the national security side of the scale when balanced against civil liberties, and expanded notions of just what might threaten that security.

Freedom of the press While the good news is that new forms of journalism are developing involving many more people than ever before, the bad news is that the current trend is away from providing many of today's most widely used news providers, including bloggers and groups described as "independent media," with First Amendment protections because those involved are not members of a formally recognized "press."

Freedom of assembly The extension of freedom of assembly to include association has become even more important, and even more threatened, in the electronic environment.

Freedom to petition the government for change This right is under threat in the Homeland Security environment, because concern about the impact of antiterrorism measures on civil liberties has itself been defined as unacceptable.

Protection against unlawful search/privacy While the right to privacy remains intact in theoretical terms, pragmatically it is next to impossible to achieve in today's technological environment. Under Homeland Security policies, the balance between the right to privacy and the claimed need of the government to surveil has tipped heavily in the latter direction.

Protection against self-incrimination Post–9/11 changes in the law, the use of statistical profiling based on data gathered from many different public and private databases, and ambiguous, even often secret, definitions of what constitutes "terrorist" activity make it possible to identify oneself as a subject of surveillance completely unwittingly. Because evidence of state of mind and purported intentions to engage in certain activity, rather than actual behaviors, are now used for criminal justice purposes, it is even possible to incriminate oneself unknowingly and irrespective of actual intentions and behaviors. And because evidence acquired in the course of a search authorized by the PATRIOT Act need not be presented to a defendant in court, it is possible to be convicted of

a crime without even knowing what the evidence considered incriminating was.

Due process The War on Terrorism is being used to justify changes in legal procedure that some believe abrogate the protections of due process. The question of the constitutionality of these practices is still being contested in the courts. First Amendment due process was explicitly retained as a feature of the PATRIOT Act.

Rights beyond those enumerated Articulation and protection of rights in addition to those implied by, but not specifically identified in, the Constitution or its amendments depend upon interpretations by the courts. Such rights are likely to receive less protection, or to be rejected altogether, should the current replacement of traditional criteria for judicial appointments with ideological and religious standards be successful in the long term.

Incorporation This principle has not been affected.

The right to receive information The combination of a vastly increased ability to track the information that individuals choose to receive with the use of profiling methods to determine intention and state of mind seriously threatens the right to receive information.

The Nature of Information Policy

At another level, the material presented here can be read for what it tells us about the nature of information policy itself and about its relationship to the informational state.

Information policy tools are interchangeable for the informational state, even though the impact of different tools on individuals, and the social and cultural effects of the use of different tools, vary significantly. To the state, supplying programming capacity via the domestic educational system or by importing skilled labor from elsewhere on special visas yields the same result, though the impact on U.S. citizens and on the intellectual capital of society as a whole are quite different. Achieving transparency in the exchange of commercial information with other countries via arms control agreements, as opposed to via international

trade law, achieves the same end for the state, but doing so in the military arena simplifies the conversation by excluding many parties from the table and reducing the range of values that will be brought into the negotiations.

Information policy is the self-reflexive organ of the informational state. Information policy is self-reflexive in three ways. First, it appears at the boundary between incremental and radical change. Reliance upon legacy law in information policy involves using the parameters of existing legal structures and processes to design parameters for new structures and processes. Second, as described in the language of complex adaptive systems theory, the transformation from a bureaucratic state to an informational state is a point of bifurcation at which political choice has particular impact, because policy, like technological development, is path-dependent—decisions made at one point determine the range of possible further options available. And third, information policy affects the nature of facticity, meaning the ways in which data treated as "facts" are created, perceived, and incorporated into decision-making.

Policy-making is no longer a matter of intentional and procedural design that is social in its goals and human in its processes. Today, policy-making is a matter of emergent parametric change to the nature and conditions of agency, conducted for a social, technological, and natural environment via a human-technology collaboration. A combination of empirical and perceptual factors has changed the nature of even the formal policy-making processes of government. The norm of intentionality in policy-making remains in place, but the reality is that the appearance of policies is just as likely to be emergent. We continue to think that we are designing specific rules, institutions, and programs when we create laws and regulations, but the biggest impact from interventions in the information environment is to alter the very conditions and possibilities of agency. The procedures of policy-making are being used to effect parametric change to the very political system itself. The environment for which policy is made now includes the natural and machinic worlds as well as the social, and policy for the human world is increasingly likely to be made by various forms of electronic intelligence. And while we continue to use the language of facts, their role in policy-making is more likely to belong to the rhetoric of decision-making processes rather than their content.

The process of regime formation is still under way for the informational state. Although the events of 9/11 and their aftermath provided a shock to the state that brought a period of experimentation to a close, negotiation over the information policy regime continues. Another insight from complex adaptive systems theory is that an equilibrium is not necessarily stable—complex systems can oscillate between two (or more) conditions, an equilibrium can dissolve into turbulence again, or a complex adaptive system like the state can destroy itself. The possibility of successful self-organization and morphogenetic change does not mean that either is necessary or inevitable.

It is important to recall what has been learned about the processes by which the information policy regime is being formed. Several elements of the regime being put in place have not yet been fully actualized. Key regime features are not always visible, particularly when cast within the terms of legacy law. Policy *for* the infrastructure helps *create* that infrastructure. The emergent regime presents challenges to the very nature of governance, by use of contract law and national security to "deputize" private sector institutions, moving critical decision-making into venues not touched by democratic principles, and suggesting financial stakeholding as a criterion of standing in political decision-making bodies. Meanwhile, the legal infrastructure itself is expanding as a result of the emergence of the information policy regime, through a deepening of private regulation and the contracting out of regulatory responsibilities, a broadening of governmental activities on an ad hoc basis, and an expansion of the governmental features of private sector entities. However, the role of procedural constraints upon decision-makers is diminishing in the processes of information policy regime formation. While all of these processes interact, they do not proceed at the same pace. And even though the emphasis in this book has been on policy innovations, there are both continuities and discontinuities with the past.

Policy and Social Theory

This book's exemplars reveal diverse strategies for the use (or rejection) of social theory in information policy:

• ***Though identity is now understood to be conceptual, fluid, socially constructed, and often multiple, contemporary information policy treats identity as fixed, empirically based, and quantifiable. This approach is***

a denial of theory and a rejection of the results of social science research.

- ***Efforts to treat structures as fixed, enduring, and inevitable are falling away in the face of experience with changing forms and the inability of policy to keep up with those realities despite efforts to reassert rigid structural lines. This is rearguard and self-contradictory action undertaken as one among many techniques used by players who understand very well the degrees of freedom made possible by the use of metatechnologies as described by theorists, and who simultaneously take advantage of the opportunity to manipulate structures when doing so more successfully achieves particular goals.***
- ***The flexibility and conceptual foundations of contemporary treatment of the many different kinds of U.S. borders is in line with contemporary social theory regarding the nature of border regions.***
- ***Contemporary information policy practices dealing with change are so diverse and often self-canceling that it cannot be said that in this area there is any strategy at all.***

The Future of the Informational State

In his seminal work of more than twenty years ago, Ithiel de Sola Pool correctly predicted that as the regulatory systems for print, broadcasting, and telecommunications converged, the resulting legal framework would be shaped by the most restrictive—rather than the least restrictive—elements out of all of those available. What Pool was not able to predict was the way in which this change in the legal system would ultimately produce a new political form: the informational state.

While the trends reported upon here have been long developing, we can say that there has been a change of state in complex adaptive systems terms over the last few years, because the U.S. government has become much more aware of the utility, range, and power of informational policy tools at its disposal and is using those tools much more systematically and broadly. From a systems theory perspective, periods of turbulence such as we have experienced in recent decades can lead to a range of possible outcomes. They may resolve into a new and stable equilibrium that can be expected to have a long life. They may lead to oscillating equilibria, a condition in which the social system snaps back and forth between two extremes. Or what appears to be an end to turbulence may be only another period of experimentation in an adaptational process that is still under way.

Whether or not the informational state as it is currently shaped is the only political form available with the current policy tools of informational power, we do not yet know. Certainly the conclusion of the current U.S. political story has yet to be reached. Within the broad legal field, drawing upon all the tools of governance and governmentality as well as government, there are sites where political activity may still effectively take place: where there are lags among the rates at which diverse processes unfold, where a simple narrative can be made complex, where lost memory can be regained, where knowledge can be collocated with power, where awareness of indeterminacy and nonlinearity expands our sense of what might be determinate, and where small actions can have large effects.