March 1992

The Electronic Agency and the Traditional Paradigms of Administrative Law

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THE ELECTRONIC AGENCY AND THE TRADITIONAL PARADIGMS OF ADMINISTRATIVE LAW

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INTRODUCTION

Electronic information technology will change administrative agency structures and application of traditional administrative law concepts.[1]

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1. The phenomenon is not limited to administrative agencies. *See generally* James I. Cash & Benn R. Konsynski, *IS Redraws Competitive Boundaries*, 63 HARV. BUS. REV., Mar.-Apr. 1985, at 134 (penetration of information systems into internal business processes); Benn R. Konsynski & F. McFarlan, Information Partnership: Scale Without Ownership (HARV. BUS. SCH. Case N1-191-023) (information technology allows enterprises to cooperate in new ways). Private sector organizations draw their boundaries so as to minimize the transaction costs of production and coordination. Costs of production are minimized by vertical integration when firms can realize Minimum Optimal Scale within the firm. Minimum Optimal Scale (MOS) is the smallest size of a production unit at which all of the economies of scale can be realized. They buy from other firms when their own needs are not sufficient to utilize fully an MOS-size operation for that factor of production. MIT Sloan School Professor Thomas Malone calls transaction costs outside the firm "coordination costs."

Historically, coordination costs were relatively high and remained high as improved technology reduced production costs. This created an incentive to move more and more production activities within the firm; in other words it created incentives for more vertical integration.

Now, technological innovation promises greater rewards with respect to coordination costs than to production costs. Computer and digital communications technologies now make feasible various forms of electronic coordination, particularly electronic contracting and its close cousin Electronic Data Interchange (EDI). As EDI is introduced more widely, the expectation is that economically rational firms will draw in their boundaries, reducing the average size of firms. In other words, more economic activity will occur in the marketplace rather than within vertically integrated firms.

These ideas cannot be applied directly to governmental entities. Governmental entities exist for purposes other than production efficiency. Agency survival and growth is determined by factors other than market share and profit. Accordingly, there is no reason to

Governments are increasing their use of digital electronic information technologies to acquire information from private entities, to process it internally, and to disseminate it to the public. Interest in electronic forms of public information is growing rapidly,[2] as the SEC, the IRS and the federal tariff agencies begin to require electronic filings; as more government information is available for release to the public in electronic form; and as agency management practices change because of electronic mail and electronic records management.

This article assesses the impact of electronic information technology on three traditional goals of administrative procedure: efficiency, participation, and formality (judicial reviewability). It concludes that adoption of electronic information technology for rulemaking, adjudication, internal management, and delivery of services advances virtually all of the traditional goals of administrative law.

1. Electronic information technology increases efficiency by permitting mechanical functions to be automated.

2. In the long run, adoption of information technology systems designed for flexibility can blur the boundaries between citizen and agency and between agency and court, furthering participation and individual dignity goals.

3. Blurring of these boundaries may necessitate rethinking the definitions of some of the basic events that define the administrative process, public participation and judicial review. Ultimately a balance must be struck between pursuit of participation goals and formality.

4. Electronic information technology can be implemented so as to make administrative procedure inflexible, but inflexibility can be avoided by proper system design.

5. Barriers to wider adoption of information technology result from misapplication of legal concepts and failure to appreciate the adaptability of the technologies to policy decisions about the goals of the administrative process.

In assessing the connection between electronic information technology and administrative law issues generally, it is useful to have a concrete idea of how a government agency might function once it takes full advantage of electronic information technology now available or reasonably expected to be available within five to ten years. Sketching the hypothetical uses of technology not only identifies problems for traditional paradigms of government and of information management, but also shows a mode of

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conclude, based on the Williamson and Malone propositions, that digital electronic technologies will cause agency boundaries to contract. Greater use of the technologies can reduce external coordination costs, however, and it is external coordination costs that are involved in assessing efficiency of administrative procedure involving private parties.

2. *See generally* Administrative Conference Recommendation 88-10, 1 C.F.R. § 305.88-10 (1989) (recommending, among other things, experimentation with electronic rulemaking and adjudication).

governmental functioning that enhances citizen participation in governmental decisionmaking.

The hypotheticals involve four categories of agency decisionmaking: adjudication, rulemaking, management of agency resources, and delivery of services. The use of electronic information technology is somewhat different in each category. Adjudication involves the application of a pre-existing rule to a particular case. Rulemaking involves the formulation of new standards for application in later adjudications as pre-existing rules. There is a loose correspondence between the categories of adjudication and rulemaking in administrative law, and the categories of contract administration and contract formation in contract law. Rulemaking and contract formation define a relationship, establishing standards for the first time. Contract administration, like adjudication, applies the standards to particular conduct.

After the first step of defining the hypothetical applications, the second step is to identify any mismatches between these applications and existing administrative law concepts. Then, third, one can consider what legal paradigms should be modified to permit this kind of operation. The modifications may involve changes in statutory law, or simply changes in the way one thinks about applying existing statutory law. Fourth, one should consider what changes in the paradigms are undesirable for policy reasons. Fifth, one should consider the degree to which the technology can be adapted to the legal paradigms that would remain or would be created for policy reasons. Sixth and finally, one should consider whether what remains of the technology after its adaptation to the policy-based paradigms is worth implementing.

STATE OF THE ART

The four visions of agency technology sketched in this article are not fanciful. Many aspects of the visions have been put in place, and certain policy and legal issues already have gained prominence.

A number of agencies have committed themselves to large-scale electronic filing programs. These programs encourage or require private entities to submit material to the agencies in electronic form. The Securities and Exchange Commission's EDGAR system is a prominent example. EDGAR, by the time it is fully implemented in about 1993, will require all public corporations subject to the federal securities laws to file their quarterly and annual reports and their prospectuses with the SEC in electronic form. The SEC provides two streams of access to the database resulting from the electronic filings, one on an unrestricted basis to the SEC analysts, and the other on a more restricted basis to the public via a number of competing value-added information retailers. The Internal Revenue Service now is processing more than two million individual income tax returns filed electronically by third-party preparers under the IRS's Electronic Filing

Project. The three federal tariff agencies—the Federal Maritime Commission, the Interstate Commerce Commission, and the Department of Transportation—have committed themselves to electronic filing of freight and passenger tariffs. The Energy Regulatory Commission requires that certain applications and evidence be filed electronically.[3] The Coal Commission required electronic filing of comments.[4] While these programs are different from each other in the data structures used, the statutory authority involved, and the implementation schedule, all involve some of the issues addressed in this article.

Perhaps the most interesting model of future relationships is represented by the approach taken by the Department of Transportation to airline tariffs. Under the DOT approach, airlines, which are required to file tariffs with DOT and make them available to the public, can satisfy these requirements by affording to DOT and to the public electronic access to a database in an airline-controlled computer.[5] This initiative is a clear example of how boundaries between agency and regulator, and agency and public can be blurred by electronic technology.

VISIONS OF THE FUTURE

Electronic Adjudication and Enforcement

In electronic adjudication, hearing and pretrial procedures would all be electronic. Recordkeeping and filing obligations imposed in aid of enforcement[6] also would be electronic as in EDGAR and the IRS Electronic Filing Project. The rare exception would be a contested matter in which the credibility of witnesses is at issue. Even videotaped depositions could be taken in advance, digitized, and presented to the administrative law judge through hypermedia electronic filing and database techniques.[7] For ease in discussion, the computer systems for electronic adjudication can be called the Adjudication Management System (AMS). A case would be started by a private party by filing a complaint in electronic form in an electronic mailbox, the number and address of which would be posted in an electronic directory. The initial complaint might be structured according to an EDI-

3. 18 C.F.R. § 154.1–.310 (1991) (FERC filing requirements).

4. *See* Meeting Notice, 55 Fed. Reg. 33,390 (1990) (submissions to Advisory Commission on United Mine Workers Retiree Health Plans (Coal Commission) required to be on floppy disk unless hardship shown). The author was Vice Chairman of the Coal Commission.

5. 14 C.F.R. §§ 221.251, 389.20 (1991) (rule permitting airlines to file passenger fare tariffs electronically).

6. Recordkeeping and filing (reporting) are grouped with adjudication because all three involve individual compliance with pre-existing rules. Recordkeeping and filing produce raw materials from which adjudicatory enforcement proceedings may spring.

7. These techniques permit information of different kinds, in significantly different formats, to be linked together. Thus, a voice recording, a full-motion video image and a textual discussion could be combined.

like transaction set[8] so that preliminary processing steps could be taken without human intervention: setting up a docket entry, sending notices to opposing parties, and classifying the type of case involved. If the government commences the proceeding, it would give notice by sending an electronic citation to the published electronic mailbox address of the respondent. Regulatees might be obligated to have electronic mailboxes, much as corporations presently are required by state law to have agents for service of process.

Proof of service of the private complaint or government citation would be automatic when the respondent retrieves it from the respondent's mailbox. Any further pleading stages would occur electronically. As a new fact is asserted, AMS would open a new record in a table of a database devoted to the matter in adjudication. AMS would prompt the respondent for answers to newly asserted facts and would set the value of fields in the appropriate records according to the respondent's position. There is no reason that discrete pleading events need be defined as in the past (complaints, answers, and new matter); facts could be asserted seriatim and answered seriatim within certain time limits. As Harvard Business School Professor Benn Konsynski cautions, the new technology should not be used simply to "speed up the mess."

As pleading proceeds, the AMS would automatically identify facts as to which there is dispute and those that are established by the pleadings. Discovery would proceed as to disputed facts. Each interrogatory would open a new database record, much as a newly pleaded fact opens a new record. Responses to interrogatories would set values of fields in the appropriate records. To the extent that interrogatories are framed in a yes or no or multiple choice format, the answers would be machine-processible. AMS would prepare a pretrial memorandum for the hearing officer automatically, listing the disputed facts. Proffers of evidence would be submitted in a structured form so as to fill fields in records identified with the particular factual issue. If live testimony is taken either before the ALJ or in a deposition, an electronic transcript would be prepared and scanned (necessitating some human intervention) to disaggregate the transcribed testimony of each witness into the factual issues to which it pertains. As multimedia technologies develop further, deposition videotapes could be digitized and placed in the same database in the same fashion.

Tentative legal conclusions could be drawn automatically on some issues by rule-based software that "knows" what facts must be established to establish a valid claim under the applicable statute. Counsel could have notice of impending legal conclusions automatically, much as counsel have notice of proposed Findings of Fact and Conclusions of Law before they become

8. Electronic Data Interchange (EDI) is the practice of exchanging contractual documents in electronic form. An EDI "transaction set" is a data structure or template for an electronic contract form like a purchase order.

final under judicial procedural rules[9] and practice in most courts. This notice would be given automatically and electronically. All of this could occur wherever counsel and witnesses are located, with no need for counsel, witnesses, and hearing officer to be in the same place at the same time. They would communicate and exchange information via electronic links.

Rulemaking

Automating the rulemaking category of government decisionmaking has even greater potential to change the way in which government operates because rulemaking as a quasi-legislative process is concerned with policy making and is supposed to involve whatever public is concerned with a particular policy. Electronic information technology greatly facilitates timely public involvement and reduces burdens on agencies affording that involvement.

An agency would commence a rulemaking by publishing a notice in an electronic federal register. The electronic federal register would not be set up chronologically like the paper *Federal Register*; it would be a database organized rather like a modern-day regulatory agenda by topic within the jurisdiction of the different agencies. When an agency envisions a change in policy, it would post a notice under the appropriate topic in the electronic *Federal Register*. Agencies would structure their proposals so as to identify discrete issues on which comments are to be received, and the database would be organized accordingly. Interested parties could begin to comment immediately, by sending electronic messages to the database.[10] Their messages would be structured according to an EDI-like transaction set, identifying the particular issue commented on, the author of the comment, and the interest represented. To the extent that issues are framed by the agency in terms that could be answered yes or no or answered by choosing one of several discrete choices, comments could be processed automatically and tallied automatically. Free-form comments also would be accommodated. As comments are received, the agency could post notices responding or raising new questions. The electronic rulemaking would be a kind of running dialogue among an agency and interested parties.

When a decision is made, that decision would appear in the database and the Rulemaking Management System (RMS) would apply electronic delegations of authority to ensure that the purported decisionmaker has the requisite authority. The RMS database would ensure that the decision is automatically communicated[11] to the compilers of annotated codes, such as WESTLAW and LEXIS.

Proposals or petitions for rulemaking activity would be submitted elec-

9. *See* FED. R. CIV. P. 53 (providing for notice of master's proposed findings and conclusions).

10. The electronic interface with the database would be an electronic bulletin board, accessible through dial-up telephone links and modems.

11. The text envisions an object-oriented approach in which the object "final rule" would, when activated, trigger various electronic publication procedures.

tronically and posted in the appropriate database table of the electronic regulatory agenda. Requests for interpretation of regulations similarly would be submitted and posted electronically, with agency responses posted in the same place. Thus, a citizen wishing to find agency rules on a particular subject simply would retrieve the material from the regulatory agenda database by topic and would see not only the text of the regulation, but also pending regulatory action and interpretations of existing regulations.

The electronic record of a particular rulemaking decision would be all of the entries in the appropriate table of the RMS database. The record on petition for judicial review would be a set of electronic pointers to appropriate places in the table.[12] A reviewing court simply would access the appropriate table through the pointers.

Internal Agency Management

Internal agency management can be automated by integrating database and electronic mail technologies, making both easily accessible on desktop computers for all agency personnel. Electronic management[13] would relax the need for official paper documents to record and communicate instructions and decisions to lower levels in the organization. Rather than signing a new delegation of authority, a memorandum making a change in organization structure, or a directive reallocating enforcement resources, an agency head would post a notice directly from his or her desktop workstation, electronically changing a database record. The state of the organization, of delegations of authority, and of resource allocations would be defined officially by the state of the database.

Delivering Services

The fourth electronic vision is that of electronic delivery of governmental services, such as electronic dissemination of public information, and electronic transfers of money in connection with public welfare and subsidy programs. Electronic food stamps, direct deposit of social security checks, and electronic management of Medicare and Medicaid benefits are all examples. Such electronic information technology applications use well-proven electronic funds transfer techniques, combining them with EDI standards in the case of Medicare reimbursement.

The electronic food stamps program is worth considering in some detail. The Electronic Benefit Transfer (EBT) Alternative Issuance Demonstra-

12. The component of the database associated with a particular rule could be thought of as a record. As one considers adding more and more to the file for a particular rule, however, it may be more appropriate to think of the file for a particular rule as a table containing many records, in which case the regulatory agenda for a particular agency would be a database composed of many tables.

13. One could view management of agency resources as a weak form of rulemaking and adjudication, not involving the same degree of legal formality aimed at ensuring political accountability, but involving the same types of decisionmaking processes.

tion Project was developed by the USDA in July of 1983.[14] The program was developed to test the application of electronic funds transfer technologies to the delivery and control of food stamp benefits. Pilot testing began in October 1984 within a limited area of Reading, Pennsylvania, and presently is continuing on an expanded basis through 1992.

EBT is aimed at eliminating paper food stamps, relying instead on electronic transfer of benefits to recipients and redemption for retailers. Eligible households are issued uniquely identified access devices resembling credit-type cards in lieu of food coupons. At a store the beneficiary pays for eligible food items at the point of sale by electronically transferring program benefits from the participant's food stamp account to the retail grocer's credit. The participant's account is automatically debited by the amount of the purchase made.

Varying means of recipient identification are being considered under proposed systems, all of which use a Personal Identification Number (PIN), which the recipient would enter on a number pad at the point of sale.[15] The recipient must establish that he or she is entitled to the benefits and the retailer will be responsible for denying purchases if this cannot be established.[16]

Recipients can obtain their account balances any time of the day by calling a local number and entering their case number and PIN. A synthesized voice then provides the household's account balance in either English or Spanish, depending on the arrangement made with the state agency. In addition, following each purchase, households receive a receipt that documents the purchase amount and the account balance after the purchase. Households receive detailed training on these and other aspects of the new system prior to or at the time of their initial certification. Follow-up training is also available for those having problems with any system feature.[17]

USDA demonstration projects continue under varying contractor and federal/state partnerships.[18]

Electronic dissemination of public information is another type of government-service delivery worth discussing in some detail because of a relatively mature debate and a number of issues that involve blurring of traditional institutional boundaries.

The increasing availability of government information in electronic form, whether because it is filed that way or because agencies create and maintain it that way, has stimulated interest in releasing that information to the public in electronic form. The electronic filing and dissemination programs described earlier in this article are examples. In addition, some fifty agency

14. General Notice, 48 Fed. Reg. 31,431 (1983).
15. Households select their own PINs to facilitate easy recall. (The PIN may be any combination of four alphanumeric characters.)
16. 48 Fed. Reg. 31,433 (1983).
17. Amended General Notice, 49 Fed. Reg. 33,153 (1984).
18. Meetings Notice, 55 Fed. Reg. 49,661 (1990).

bulletin boards have been established to provide public access to agency information on a dial-up basis.[19] The American Library Association is promoting an initiative for an electronic network to distribute the contents of the *Federal Register* and the Congressional Record to libraries in electronic form.

The Fit Between Technology, Law, and Policy

The different reactions of people who read an earlier version of this article that presented the hypotheticals, or participated in a faculty seminar about it at the Center for Business and Government at the Harvard Kennedy School on November 15, 1990, were interesting. The economists (who dominated the Harvard seminar group) had two main concerns. First, they instinctively doubted the utility of formal procedures and thus liked any move toward greater informality. But they also were skeptical about the capacity of digital electronic technologies to provide the informality. They thought that there would be many cases in which an electronic form for adjudication, or an electronic template for rulemaking, would be unable to accommodate the real positions or arguments of the parties or to match these with considerations the agency ought to take into account.

Some of the lawyers felt it was too cold-blooded and neglected the dignity values associated with due process concepts. The lawyers also thought the earlier version was too cavalier in suggesting that the hallmarks of formal procedure might be changed by changing technologies.

The paper discussed at the Harvard seminar focused exclusively on efficiency and judicial review criteria embedded in the traditional model of administrative law. Lawyer reaction makes it appropriate to consider, in addition to the issues raised in that paper, procedural fairness in terms of dignity values as well as in terms of accuracy and efficiency values; and to probe more deeply the implications of choosing between formal and informal processes. On the one hand, shifting to digital electronic technologies makes administrative processes more formal because it limits the kinds of information that can be expressed and processed. A user cannot send information not accommodated by the electronic format, which may limit free-text expression just as paper forms with blanks and boxes to be checked limit expression. Conversely, shifting to digital electronic technologies may permit procedures to be less formal because it blurs the boundaries of agencies.

The distinction between formal and informal processes is hardly new. Professor Michelman, in his oft cited *Nomos* chapter,[20] addressed the distinction. He concluded that formal processes are aimed primarily at permitting post-decisional review by higher authority, while informal proc-

19. The text accompanying note 76 discusses Administrative Conference and ABA policy guidelines for electronic dissemination.

20. Frank I. Michelman, *Formal and Associational Aims in Procedural Due Process*, 18 NOMOS 126, 127–29 (J. Roland Pennock & John W. Chapman eds., 1977).

esses are aimed at promoting other values, generally falling into the dignity classification in more recent due process literature. Computer representation of information is generally thought to require greater formality in linguistic expression, but this does not necessarily mean more formality of procedure in the Michelman sense.

The following parts of the article revisit basic legal models of administrative law and consider how the visions of electronic agency methods sketched in the preceding section fit with the legal models.

Models of Administrative Law

Recent scholarship and case law emphasize three major goals for administrative procedure: formality, efficiency, and participation. Formality, aimed at facilitating judicial reviewability, is the major contribution of the New Deal formalist school.[21] Efficiency is the Supreme Court's major contribution in *Mathews v. Eldridge*.[22] Participation has received increased emphasis through broadened standing, increased use and scrutiny of notice and comment rulemaking, and scholarly emphasis on the dignity value in due process.

Formality and judicial reviewability ensure compliance with three subordinate goals, one of which replicates the participation touchstone.[23] First, administrative agencies should act only within authority delegated to them by the legislature.[24] Second, the public is entitled to participate.[25] Third, administrative agency decisions should be rational.[26] The requirement for decision rationality ensures agency faithfulness to relevant statutory norms

21. Judicial reviewability is the major artifact of the delegation doctrine. Delegation of legislative authority is constitutional as long as the Congress gives standards to guide exercise of the delegated authority that can be applied as meaningful constraints by the courts.

22. Mathews v. Eldridge, 424 U.S. 319, 347–49 (1976). *See also* Nixon v. Administrator of Gen. Servs., 433 U.S. 425, 529 n.23 (1977) (Burger, J., dissenting) (the goal of administrative efficiency cited in *Mathews* is not the only consideration); Dixon v. Love, 431 U.S. 105, 114 (1977) (administrative efficiency and public interest in safe drivers permit suspending drivers license without prior hearing, citing *Mathews*, 424 U.S. at 347–49); Wilkerson v. Sullivan, 904 F.2d 826, 851 (3d Cir. 1990) (citing *Mathews* in support of observation that a certain number of errors must be tolerated in large and complex systems of claims adjudication).

23. Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402 (1971), broadly represents the need for judicial review in order to police agency decisionmaking.

24. A.L.A. Schechter Poultry Corp. v. United States, 295 U.S. 495 (1935) (finding the National Industrial Recovery Act unconstitutional). *See also* Panama Refining Co. v. Ryan, 293 U.S. 388 (1935) (also finding the National Industry Recovery Act unconstitutional).

25. As noted in the discussion in the text, the goals of formality, efficiency and participation are not entirely independent. Each supports the others to some degree.

26. Professor Jerry L. Mashaw recently restated the dominant administrative law model as serving two major purposes: keeping administrators within their jurisdiction and faithful to the values and purposes expressed in legislation, and protecting, through procedural entitlement, participation in the "micropolitical processes" of administration. (The legislative and electoral processes are "macropolitical.") *See* Jerry L. Mashaw, *Explaining Administrative Process: Normative, Positive, and Critical Stories of Legal Development*, 6 J.L. ECON. & ORG. 267, 271–72 (1990). Judicial review is the lynchpin of the whole arrangement. *Id.* at 274.

and evidence of record.[27] Rationalizing decisions in terms of statutory norms ensures faithfulness to legislative policy. Rationalizing decisions based on evidentiary records ensures meaningful participation. To allow decisions to be based on matters not in the record risks making participation a sham.[28] Thus the rationality, delegation and participation principles converge.

Judicial review necessitates a "record" of agency decisionmaking. The boundary between judicial review and original agency decisionmaking is represented by two related rules: administrative remedies must be exhausted[29] and courts review only final agency actions.[30] The record, exhaustion, and final-agency-action requirements link judicial reviewability with procedural formality.

The efficiency goals largely determine adjudication and rulemaking requirements, although the participation goal also is an important constraint.[31] Efficiency includes two sub-goals: accuracy in fact-finding,[32] and cost-effective resource allocation.[33]The *Mathews v. Eldridge* formula evaluates adjudicatory entitlements by the marginal improvement in fact-finding accuracy resulting from each additional procedural ingredient and weighs this against the cost in agency resources of adding the step, taking into account the magnitude of the individual deprivation resulting from an error in the decisional process. The accuracy criterion is a gloss on the rationality requirement.

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27. *Id.* at 274.

28. *See* Home Box Office v. FCC, 567 F.2d 9, 54 (D.C. Cir. 1977) (limiting ex parte contact in rulemaking).

29. Federal Trade Comm'n v. Standard Oil Co., 449 U.S. 232, 243 (1980) (denying judicial review of nonfinal order despite exhaustion of administrative remedies; considering difference).

30. 5 U.S.C. § 704 (1988) (providing for judicial review of final agency action).

31. Goldberg v. Kelly, 397 U.S. 254 (1970) (procedures for contesting welfare termination violated procedural due process). Although *Goldberg* involved constitutional due process scrutiny of a welfare rights case, more broadly it stands for the need for certain minimal procedures in adjudication. The detailed adjudication requirements under the Administrative Procedure Act (APA) reflect constitutional due process concepts. *Compare* Henry J. Friendly, *Some Kind of Hearing*, 123 U. PA. L. REV. 1267 (1975) (constitutional procedural process) *with* 5 U.S.C. §§ 554–57 (1988) (statutory adjudication procedures). Rulemaking has more flexible procedural requirements. The rationality principle is applied to rulemaking through the arbitrary and capricious standard for judicial review. Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 844 (1984); Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Ins. Co., 463 U.S. 29, 41 (1983). Participation in rulemaking can be ensured in a variety of ways practically aimed at giving the public notice of an intended policy change and an opportunity to comment. Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978) (courts may not impose procedures on agencies beyond those required by Administrative Procedure Act).

32. Accuracy in fact-finding is essentially the same goal as rationality.

33. *But see* Paul R. Verkuil, *The Emerging Concept of Administrative Procedure*, 78 COLUM. L. REV. 258, 279–87 (1978) (emerging judicial support for a spectrum of procedural alternatives to serve values of fairness, efficiency, and satisfaction). Professor Verkuil's efficiency value considers only deciding cases cheaply and quickly. *Id.* at 280 n.113. His satisfaction value is close to the dignity value considered in the text. *Id.* at 280 n.3. His fairness value apparently takes into account accuracy. *But see id.* at 283 (quoting Frankfurter as endorsing fairness and satisfaction values, "feeling . . . that justice has been done").

The participation goal has emerged as a separate consideration relatively recently. Critics of the formality and efficiency goals urge giving greater emphasis to participation as a goal with greater utility than facilitation of judicial control.[34] They suggest reference to political science, which offers a more flexible perspective that acknowledges the role of political deals and unintended consequences.[35]

A recently developed branch of political theory, based loosely on public choice, argues that administrative law is structured to permit winning political coalitions to enforce the bargains they persuaded legislatures to enact.[36] This model emphasizes legislative control more than judicial control.[37] The desire for legislative control combines with a desire to minimize transaction costs, to cause legislators to structure programs to empower others (usually the members of the winning political coalition) to monitor and enforce the bargain against the agencies.[38] This of course leads back to judicial review, because the courts are the usual instrument of enforcement. Congressional micromanagement of procedure, especially when it is aimed at limiting executive branch control, is evidence in favor of the public choice model.[39] Judicial control of course predominates, and to this extent the political science view overlaps the traditional formalist view.[40] The emergence of negotiated rulemaking as a new pattern of agency decisionmaking reflects the political science view of administrative law,[41] placing participation at the center of rulemaking procedure. The legitimacy of negotiated rulemaking derives from effective participation by affected parties in developing rules.[42]

Critical legal studies, while suspicious of all models, emphasizes a particular aspect of the participation goal: human dignity.[43] Critics urge, rather vaguely, efforts aimed at liberation, enhancing human freedom, and reor-

34. Mashaw, *supra* note 26, at 286; Richard Stewart, *The Reformation of American Administrative Law*, 88 HARV. L. REV. 1667 (1975) (interest representation model). *See also* Gerald E. Frug, *The Ideology of Bureaucracy in American Law*, 97 HARV. L. REV. 1277, 1297–1355 (1984) (criticizing formalist (delegation), expertise, and judicial review models).

35. Sunstein recharacterizes Mashaw's idealist view as a simple interpretive view, not one aimed at predicting. *Cass Sunstein, Political Economy, Administrative Law: A Comment*, 6 J. L. ECON. & ORG. 299, 303 (1990).

36. Mashaw, *supra* note 26, at 279-81. *See generally* Cass Sunstein, *Paradoxes of the Regulatory State*, 57 U. CHI. L. REV. 407 (1990) (describing paradoxes; discussion suggests they arise because of unanticipated detriments to regulatory efficiency).

37. Mashaw, *supra* note 26, at 283.

38. Mathew D. McCubbins et al., *Positive and Normative Models of Procedural Rights: An Integrative Approach to Administrative Procedures*, 6 J.L. ECON. & ORG. 307, 313–14 (1990).

39. Mashaw, *supra* note 26, at 289.

40. *Id.* at 292–93.

41. Administrative Conference Recommendation 85–5, 1 C.F.R. § 305.85–5 (1989) (encouraging agencies to use negotiated rulemaking).

42. *See* Henry H. Perritt, Jr., *Negotiated Rulemaking before Federal Agencies: Evaluation of Recommendations by the Administrative Conference of the United States*, 74 GEO. L.J. 1625 (1987).

43. Critical legal studies attacks all conventional models on the grounds that they are mechanisms for deception. By legitimating bureaucratic control, they frustrate broad reformation of society. Frug, *supra* note 34, at 1379–81. The critics argue that any effort to develop models of administrative law is futile. *Id.* at 1381.

dering American society through forms of organization transparently open to transformation.[44]

While there are dissenters from the view emphasizing the dignitary value,[45] advancement of dignitary goals is a concern both of political science pluralist models and the critical legal studies movement.[46]

There is wide recognition of a dignity basis for due process, as well as the accuracy basis recognized in *Mathews v. Eldridge*.[47] One of the most cited formulations of a dignity basis is Mashaw's,[48] and one of the most quotable is Tribe's:

> Among the formal procedural safeguards ordinarily held to be required by due process, perhaps the two most striking—the right to be heard and the right to hear why—are ultimately more understandable as inherent in decent treatment than as optimally designed to minimize mistakes. When God asked Adam if he had eaten of the tree of life, the Midrash explains, the point of the exchange was less to minimize the risk of divine error than to afford Adam a moment to regain his composure.[49]

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44. *Id.* at 1295–96.

45. Wesley A. Magat & Christopher H. Schroeder, *Administrative Process Reform in a Discretional Age: The Role of Social Consequences*, 1984 DUKE L.J. 301, 317–18 nn.64–65 (1984).

46. *See* Jerry L. Mashaw, *Administrative Due Process: The Search for a Dignitary Theory*, 61 B.U. L. REV. 885 (1981) [hereinafter *Administrative Due Process*] (dignitary approach has merit but should place only modest additional demands on procedures necessary to assure rationality in efficiency context).

47. *See* Lister v. Hoover, 706 F.2d 796, 801 (7th Cir. 1983) (due process did not require written reasons for denial of request for in-state tuition) (Swygert, J., dissenting) (the Constitution recognizes higher values than speed and efficiency, citing Martha I. Morgan, *The Constitutional Right to Know Why*, 17 HARV. C.R.-C.L. L. REV. 297 (1982); Robert S. Summers, *Evaluating and Improving Legal Processes—A Plea for "Process Values,"* 60 CORNELL L. REV. 1 (1974)); ROBERT COVER ET AL., PROCEDURE 126–27 (1988) (explaining dignity basis for procedure, but acknowledging that limits of procedural entitlements cannot be defined only in terms of what is satisfactory to claimant).

48. Jerry L. Mashaw, *The Supreme Court's Due Process Calculus for Administrative Adjudication in* Mathews v. Eldridge: *Three Factors in Search of a Theory of Value*, 44 U. CHI. L. REV. 28, 50 (1976) [hereinafter *Due Process Calculus*]. Mashaw explains the limits of the utilitarian approach in *Mathews* and explains how consideration of other values, including individual dignity, equality, and tradition, would improve the acceptability of limits on procedural entitlements. He acknowledges that the additional values would not have led to a different outcome in *Mathews* and that techniques for limiting procedural entitlements under the dignity value have been unsatisfactory. *Id.* at 58. *See also* Stephen LaTour, *Determinants of Participant and Observer Satisfaction with Adversary and Inquisitorial Modes of Adjudication*, 36 J. PERS. & SOC. PSYCH. 153 (1978) (empirically showing that adversarial procedures are favored because they give disputants more "process control"); Richard B. Saphire, *Specifying Due Process Values: Toward a More Responsive Approach to Procedural Protection*, 127 U. PA. L. REV. 111, 117, 163 (1978) (importance of personal and oral participation to serve dignitary value of procedure not given enough weight by utilitarian approach); Robert S. Summers, *Evaluating and Improving Legal Processes—A Plea for "Process Values,"* 60 CORNELL L. REV. 1, 20–21 (1974); Michelman, *supra* note 20, at 127–28 (due process vindicates values of "participation," noting the psychological importance of "the participatory opportunity," regardless of result).

49. LAURENCE TRIBE, AMERICAN CONSTITUTIONAL LAW § 10-15 at 744 (2d ed. 1988). Frank I. Michelman says it this way:

> [T]he individual may have various reasons for wanting an opportunity to discuss the decision with the agent. Some pertain to external consequences: the individual might succeed in persuading the agent away from the harmful action. But again a participatory oppor-

The next section of this article considers the impact of shifting to digital electronic technologies on the dignity value.

Despite the criticisms of the traditional formalist model, and its evolution to encompass political participatory and dignatory goals as much as anti-delegation and judicial reviewability mechanisms, it still is the most familiar conceptual framework for thinking about administrative law. The traditional model is the one taught in most law schools. It is the model used by most lawyers to make arguments attacking and defending agency decisions and by most judges to scrutinize agency action and to justify judicial decisions. Accordingly, this article uses the traditional model to assess the attractiveness of electronic methods, while also asking whether electronic methods enhance or diminish participation, the concern of the political scientists, and whether electronic methods worsen or ameliorate the mismatch between legal models and reality, a major concern of critical legal studies adherents. Necessarily simplifying the ongoing effort to identify and to distinguish the values served by administrative law, the article uses formality, efficiency, and participation goals as reasonable proxies for more sophisticated paradigms. The article asks, changing the order of the questions, whether electronic technologies improve efficiency in terms of accuracy of fact-finding and use of agency resources, whether they enhance participation in terms of interest group politics and control and human dignity, and whether they can ensure the formality necessary for effective judicial review.

The next sections argue that the electronic methods used in the ways sketched here advance virtually all of the traditional goals of administrative law, while also lessening the gap between legal models and reality—a major concern of critical legal studies. Special attention is given to the softer[50] form of the participation goal, the feeling that one needs flesh-and-blood attention to the human dimensions of one's problem. One of the author's colleagues[51] said on reviewing an earlier draft of this article, "This is too cold-blooded for me." The following analysis considers whether an electronic agency is necessarily more cold-blooded than a nonelectronic one.[52]

ARE TECHNOLOGY AND POLICY-BASED PARADIGMS RECONCILABLE?

Assessing the fit between information technology and the three paradigms of administrative law—formality, efficiency, and participation—

tunity might also be psychologically important to the individual: to have played a part in, to have made one's apt contribution to, decisions which are about oneself may be counted important even if the decision, as it turns out, is the most unfavorable one imaginable and one's efforts have not proved influential.

Michelman, *supra* note 20, at 127-28.

50. *See* TRIBE, *supra* note 49, § 10-13 at 717 (*Mathews'* utilitarian calculus tends to dwarf soft variables, quoting *Due Process Calculus*, *supra* note 48, at 48).

51. Catherine Lanctot, Associate Professor of Law, Villanova University School of Law.

52. The question of whether electronic methods make administrative procedure more or less cold-blooded implicates the argument over whether formal procedure serves only accuracy-enhancing goals, or whether it also serves dignitary and participation goals.

benefits from a comparison of two technologies: telephony and digital electronic technologies.

Just because technologies exist does not mean they replace previous methods. The telephone, for example, is more than a century old, but telephonic communication plays only a supporting role in adjudication and rulemaking.[53] Telephonic hearings are used occasionally, but the practice is seen as novel and controversial.

Digital electronic technologies already are playing a more central role than telephony. No one seriously would consider permitting, let alone requiring, corporate reports to be made to SEC by telephone; yet EDGAR requires that they be made by digital electronic communication. Digital electronic technologies are becoming common methods of disseminating public information. Voice telephone is used relatively rarely for this purpose.[54]

There are two conceivable reasons for the reluctance to make wider use of telephone technology: the need for a record of the communication, which is not provided by a telephone conversation; and a psychological reluctance to substitute telephone communication for face-to-face contact. The first reason, the need for a better record than is provided by telephone technology, should not be a barrier to acceptance of digital electronic technologies more than telephone technologies. The text accompanying notes 81–83 explains the ways of ensuring an adequate record of digital electronic communications, which, despite limitations and uncertainties, are better means for ensuring a record than telephone contact. Even though telephone conversations can be recorded, organizing the recorded material for later retrieval is insuperably burdensome for large quantities of material.

The second possible reason, psychological or cultural reluctance to substitute any kind of technology for face-to-face contact, is a bigger problem. In most cases, however, the substitution contemplated by the hypotheticals is a substitution of digital electronic technology for paper, not for face-to-face contact.

This part of the article assesses the four basic hypothetical technology uses in terms of their impact on the three goals for administrative law. This part develops the following arguments:

Digital electronic information technologies advance efficiency goals and also can advance participation goals, thus mitigating the tension that most commentators have believed is unavoidable between efficiency and participation goals such as personal dignity.

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53. The role of telephonic communication is greater in internal agency management.

54. Hybrid technologies, using digital electronic technologies to organize and permit retrieval of prerecorded voice segments, are employed in some cases for electronic dissemination. A prominent example is the Internal Revenue Service Taxpayer Assistance System. Under this system, a taxpayer desiring brief instructions on how to prepare income tax forms dials a number and then selects particular instructions by entering responses on a touch-tone phone to prerecorded menus.

Electronic information technologies can increase fulfillment of participation goals even more than may be desirable because they reduce the need for intermediaries and reduce the barriers of geographic distance.

At some point, increasing fulfillment of participation goals begins to conflict with fulfillment of the formality (judicial reviewability) goal because the administrative process becomes too informal.

Impact on Efficiency

The Supreme Court, in *Mathews v. Eldridge*, enshrined one purpose of administrative process: promoting accuracy in fact-finding while minimizing the burden on agency resources. This represents an efficiency approach to designing administrative process. All four hypothetical uses of electronic technologies further this goal, although the cost of electronic food stamps may compare unfavorably with conventional techniques. This section reviews the efficiency implications of each of the hypotheticals.

Electronic adjudication would provide a more complete and much more accessible record of adjudications than paper processes. Because of the basic similarity of the adjudication process regardless of agency, formats and software could be standardized, making it easier for adjudication records to be transferred among agencies and the National Archives. Appellate review of agency adjudications would be facilitated by development of judicial capacity to handle the standardized formats.

Two other efficiency-enhancing aspects of electronic adjudication are worth thinking about. First, in order for the processing of litigation information to be automated, it must be more structured and stylized than is the case under current practice. The effect would be rather like filling out a preprinted form rather than writing a free-form complaint and other pleadings and memoranda. The benefit would be to reduce the burden on counsel and decisionmaker of managing mounds of paper and of spending hours to locate particular documents or passages in transcripts. The Administrative Procedure Act (APA) already permits the use of forms.

Second, the need for live proceedings would be diminished but not entirely extinguished. The shift from oral exchanges to electronic exchanges may present some difficulty. The received legal tradition places much weight on live credibility determinations by the fact finder. On the other hand, the preference for live presentation of testimony already has been weakened somewhat with the acceptance of videotape depositions and their use for a wide variety of purposes in lieu of live testimony.[55] There is no reason that a digitized videotape segment should be less acceptable than an analog videotape, assuming that the potential for tampering with content is reduced.

The concern with electronic signatures on adjudicatory pleadings is a red herring. A variety of techniques for authenticating electronic documents exist that are as good or better than traditional handwritten signatures. The

55. See TAX COURT RULE 81 (providing for videotape depositions).

need to authenticate documents, to detect or prevent forgeries, and to detect or prevent data loss or corruption in the filing process is common both to electronic adjudication and to electronic contracting. The private sector has moved aggressively in recent years to embrace electronic contracting under the umbrella of a set of format standards developed by American National Standards Institute (ANSI) Accredited Standards Committee X12 and loosely called EDI, and conceptually similar standards developed separately for electronic funds transfer. These electronic contracting practices offer potential efficiencies to the governmental procurement process, and the General Services Administration and the Defense Department have committed to use EDI. As this possibility becomes known to government lawyers, they struggle to decide if signature requirement and the requirement for a "writing" under the governmental Statute of Frauds[56] can be satisfied by electronic messages instead of physical writings. There is growing agreement among lawyers knowledgeable about electronic contracting that authentication and signature concerns can be addressed by existing legal concepts in conjunction with adequate audit and record keeping controls.[57]

Electronic rulemaking has efficiency implications essentially similar to those for the vision of electronic adjudication: a more complete and more easily accessible record, and the likelihood of some degree of format standardization for economic reasons.

Rulemaking notices must be reasonably calculated to inform the general public under the basic concepts enshrined in section 553 of the Administrative Procedure Act.[58] Practically, posting something on an electronic bulletin board organized by topic may be better notice than publishing something in the *Federal Register* because it is instantaneously accessible by anyone who can communicate with the bulletin board.[59] Electronic information formats have the potential to permit enhanced public access even as the volume of information grows because of the potential for better indexes that are computer searchable and the possibility of free-text search.

On the other hand, changing the state of a table in a rulemaking database does not necessarily alert all users of the database that there has been a change. Even if it did, alerting everyone in the country to every regulatory or policy change would overwhelm all users of the system. In order to satisfy the requirement for notice, it may be necessary to develop electronic "filters"

56. 31 U.S.C. § 1501 (1988).

57. *See* MICHAEL BAUM & HENRY H. PERRITT, JR., ELECTRONIC CONTRACTING, PUBLISHING AND EDI LAW §§ 6.5–6.32 (1991); Electronic Messaging Services Task Force, *The Commercial Use of Electronic Data Interchange—A Report and Model Trading Partner Agreement*, 45 BUS. LAW. 1645 (1990).

58. 5 U.S.C. § 553 (1988) (providing for notice and comment rulemaking).

59. The rapid spread of desktop computer modems into individual businesses and homes and into public libraries means that almost anyone has the technological means to access electronic bulletin boards.

that citizens can tailor to alert them to changes or potential changes in rules they want to know about.

The concept of "actual notice" would work much better with electronic rulemaking than with conventional technology. The RMS would set a flag[60] as soon as a particular user reads or otherwise accesses a particular notice.

The formats for public comments can be sufficiently flexible to permit affected citizens to comment as they wish. There is, however, a tension between additional structure, desirable to facilitate machine processing of comments, and flexibility, desirable to allow commenters to say whatever they wish. One attractive possibility, mitigating the tension, is to construct an interactive electronic form. The blanks on the form would correspond to the issues raised by the agency in the electronic notice of rulemaking. An unsophisticated commenter simply would fill out the form on his or her PC.

The advantages of expanding electronic methods for internal agency management are greatly reduced transaction costs for making managerial decisions, advancing the efficiency goal.

Electronic delivery of services offers faster availability of funds and improved ability to audit, also advancing the efficiency goal. EBT improves accountability and security. Cash change for purchases is not necessary. Unused recipient benefits remain stored, awaiting the next purchase.[61]

Cost of some early systems are a problem, however. EBT administrative costs were substantially reduced from approximately $27 per case month to approximately $9 per case month but stayed about three times higher than the costs of a coupon system.[62] System improvements were implemented to minimize the chance for recurrence of problems that occurred during early stages of the test.[63]

Virtually no one questions the efficiency-enhancing value of electronic methods for disseminating certain types of government information.

Impact on Participation and Individual Dignity

All models of administrative procedure accept participation as a goal. Participation serves pluralist political purposes and also advances dignity goals. Administrative procedure is closely modeled on due process requirements, at least those parts of administrative procedure that are adjudicatory. Accordingly, the justifications offered for due process are appropriate justifications for administrative adjudicatory procedure. The Supreme Court, in *Mathews v. Eldridge*,[64] enshrined one aspect of the efficiency goal

60. "Setting a flag" is a kind of electronic checkmark.
61. 49 Fed. Reg. 33,154 (1984).
62. 55 Fed. Reg. 49,661 (1990).
63. *Id.*
64. 424 U.S. 319 (1976).

in due process: promoting accuracy in fact-finding. But there are other, "softer" goals that frequently escape notice.[65]

Because automation intuitively enhances efficiency more than it enhances participation and human values, it is important to evaluate the impact on dignity of moving to digital electronic technologies. This section considers each of the hypothetical uses of technology in terms of the impact on participation generally and on dignity more specifically.[66] It starts with electronic rulemaking because there, the potential impact is greatest.

The dignity value should be served better by using electronic technologies for rulemaking, because it would give a wider variety of citizens real access to the rulemaking activity, at least if the percentage of the population with desktop computers continues to increase rapidly, or if appropriate networks are constructed to permit ordinary citizen access to electronic rulemakings through public library desktop computers.

Intuitively, using digital electronic technologies for adjudication seems to reduce the dignity value. In order for the processing of the litigation information to be automated, it must be more structured and stylized than is the case under current practice. Requiring litigants to fill out preprinted forms rather than writing free-form complaints increases formality and reduces flexibility to tailor the procedure to the circumstances of an individual case.[67] The dignity value could be disserved if the digital electronic technologies increase the proportion of cases in which a decisionmaker says in effect, "I would like to help you but the rules do not permit me to do so." This may be an even more serious blow to legitimacy and the dignity value than reducing face-to-face contact. Automation frequently involves a special kind of codification of rules, a codification that, absent some special precautions, can make the rules very difficult to apply flexibly and difficult to change without a score of programmers and a year and a half. While technology has the capacity to make government more flexible and adaptable, it also may make it less adaptable.[68] User-friendly electronic forms could reduce the need to access agencies only through counsel, thereby enhancing individual participation and dignity, but system designers must seek to design such forms into the public interfaces of electronic systems. System designers also must emphasize user-friendly computer interfaces.

Objections to electronic adjudication can be anticipated, expressing

65. Professor Frank I. Michelman divides explanatory procedures into formal and nonformal procedures. Michelman, *supra* note 20.

66. *See Administrative Due Process*, *supra* note 46, at 903–04 (exploring relationship between participation and dignity values; noting they are not the same).

67. Sometimes organizations destroy or ignore information nuances in order to facilitate processing. JAMES BENIGER, THE CONTROL REVOLUTION: TECHNOLOGICAL AND ECONOMIC ORIGINS OF THE INFORMATION SOCIETY 15 (1986) (commenting on impact of paper forms in bureaucracy; arguing that efforts to retain control through information processing play a central role in social development).

68. *See generally* SHOSHANA ZUBOFF, IN THE AGE OF THE SMART MACHINE: THE FUTURE OF WORK AND POWER (1988) (case studies contrasting automation strategies that enlarge the human role from those that diminish the human role).

antipathy for assembly line or mechanical justice. Agencies using electronic adjudication would be attacked for failing to give case-by-case attention to the facts of a particular case. Individual claimants or respondents would never "get their day in court," critics would say, because they would never be able to tell their stories to a human being. These expressions reflect valid concerns, recognized in the dignity goal of procedure, but an idealized vision of administrative reality. The present day reality is that most administrative adjudication is of the assembly line variety, and almost no individual participants get to tell their stories at leisure. The burden of the case load and the economics of dealing with it already have created assembly line justice. The new technologies simply would cause the assembly line to work better.

The dignity value would be reduced by electronic adjudication for the actual parties only to the extent that under present systems they have face-to-face contact with decisionmakers rather than working entirely through counsel and the use of digital electronic technologies would eliminate this face-to-face contact.

Some automation initiatives have been well received on the dignity dimension. The electronic food stamp evaluation reports indicated that participant groups preferred the EBT system to coupons.[69] Retailers and banks expressed their pleasure regarding the time and effort saved by not having to process coupons.[70]

Separate from the dignity concern is another participation-linked concern: the question of whether it is an undue burden to impose electronic filing requirements on a broad-based group of regulatees. Closely associated with this question is the nature of the data structures required to be filed and the availability of inexpensive hardware and software to translate information formats likely to be possessed by the filer into the formats required by the agency. These questions essentially are the same ones that have so far blocked most electronic filing with federal courts, except under a few relatively narrow pilot projects. The solution lies in standard procedures and data structures embodied in user-friendly commercial software.

The most profound implications for participation and dignity goals arise from the idea that the rulemaking process might become less discrete and more in the nature of a dialogue.[71] The interactive capability could blur the distinction between incomplete and complete rulemaking decisions. The technology permits a dialogue between regulator and regulatee, reducing the need for communications between the two to occur by means of formal written documents in the form of petitions, comments, and final rules. The electronic dialogue approach to regulation and policymaking strongly resembles the relational contract view of contract formation and modification in the private sector; the relationship between the parties evolves

69. 55 Fed. Reg. 49,661 (1990).

70. *Id.*

71. The author thanks David R. Johnson of Wilmer, Cutler & Pickering for first suggesting the implications of this possibility.

over time rather than arising from discrete decisions and documents.[72]

Electronic agency management also would tend to increase fulfillment of dignity goals for agency personnel, by making it easier for any agency employee to communicate with higher authority.[73]

Dissemination of government information inherently relates to dignity and participation goals. Participation is more effective when the participant is well informed, so electronic delivery of services in the form of information services promotes participation goals. The possibility of access to electronic information raises a number of questions under the Freedom of Information Act (FOIA), including whether information in electronic form is an "agency record," whether the FOIA access requirement covers software as well as raw data, and whether it obligates agencies to release information in the formats requested or only in the formats chosen by the agency.[74]

Two of the sharpest controversies to date with respect to agency use of electronic information technologies have involved a blurring of the boundary between public and private sector action in disseminating information and a blurring of the boundary between access and dissemination.[75] In 1986, the Federal Maritime Commission (FMC) began to modernize ocean shipping tariffs by converting to an electronic database format. As a part of this conversion, the FMC intended to provide direct public access through dial-up telephone lines to the new tariff database. The electronic information industry objected strenuously, led by vendors of private ocean shipping tariff databases. In the end, a compromise was reached, which limited public dial-up access to the Federal Maritime Commission database.[76]

The blurring of the distinction between access and dissemination collapses an important legal distinction made between creating a record and providing access to existing records. Only the latter is required under the FOIA. Dissemination with paper technologies involves the agency in affirmatively preparing material for publication and then arranging for printing and distribution, activities involving much greater commitment of agency resources than simply providing access on request. When electronic tech-

72. *See* BAUM & PERRITT, *supra* note 57, at § 6.4 (explaining relational contract theory).

73. Dignity of agency personnel is not a traditional concern of administrative law, but Frug's assessment of dignity includes large organization employee perspectives. Frug, *supra* note 34.

74. *See* Henry H. Perritt, Jr., *Federal Electronic Information Policy*, 63 TEMPLE L. REV. 201 (1990) (analyzing application of FOIA to electronic formats).

75. The literature distinguishes access, disclosure, and discrimination in terms of how much initiative the government takes to propagate the electronic information. Access is the most passive role for the government, involving release of information only on request. Dissemination is the most active role for the government, involving affirmative steps to publish information. Disclosure is an intermediate level of government activity, involving the placement of the information in a place and in a form that makes it easy for interested persons to retrieve it. *See generally id.* at 203 n.9.

76. *See* 55 Fed. Reg. 42,416 (1990) (extending comment period on advance notice of proposed rulemaking); *id.* at 31,199 (soliciting public comment on proposed Automated Tariff Filing and Information System).

nologies are used, the distinction between access and dissemination is blurred. Making a database available for dial-up access gets it in the hands of an outside party just like dissemination does; yet the initiative for obtaining a copy of the material is with the private citizen rather than the agency.

The problem with the indistinct lines between electronic access and publishing is that an apparently sensible step to provide electronic access may put the agency in competition with private sector publishers. This was the source of controversy with the FMC system. Whether the government should engage in electronic publishing of its information raises a number of policy questions that are less narrowly focused than the electronic FOIA question. The electronic publishing questions mainly involve the questions of competition between public and private sectors and the degree to which the government should rely on the private sector to distribute public information electronically. The questions involve a conflict between participation and efficiency goals. Relying on the private sector may be more efficient, but may reduce participation because government information may cost more.

The debate over the government's role in electronic dissemination focuses on disseminating or releasing at lower levels of added value to electronic information. At one extreme, the government could withhold everything except raw data in electronic form, leaving to the private sector the tasks of adding value in the form of retrieval software, sophisticated data structures and formats, and indexes. At the other extreme, the government could make its entire information systems available online through sophisticated telecommunication systems. Obviously, permitting private citizens simply to plug into the internal agency information system represents a dramatic erosion of the boundary between agency and public.

Both electronic access and electronic dissemination are the subjects of policy guidelines from the American Bar Association.[77] The electronic access guidelines urge agencies, and the Congress if necessary, to recognize electronic formats as covered by the Freedom of Information Act, and to allow FOIA requesters to specify whether they want paper or electronic formats when an agency has both. The dissemination guidelines recognize that it is appropriate for agencies to act affirmatively in certain cases to disseminate information electronically, and recognize the need for certain value-added features to be part of any government electronic dissemination program, including appropriate electronic indexes, templates, and search tools. The guidelines articulate a presumption that electronic information developed with public money to serve internal agency needs, including value-added retrieval features, should be made available to the public. Affirmative

77. Electronic FOIA guidelines were adopted by the ABA Board of Governors in its winter 1990 meeting. The author of this article drafted electronic dissemination guidelines for the ABA Section on Administrative Law and Regulatory Practice, approved by the Section's Council at its mid-winter 1991 meeting and adopted by the House of Delegates of the ABA in August 1991.

programs of electronic dissemination can save agencies and requesters the costs of making and responding to ad-hoc requests under the Freedom of Information Act, and further the policies of that act by anticipating likely requests. The guidelines recognize the importance of diversity in electronic information sources and advocate that agencies encourage multiple sources of public information and experimentation with different information features. This means respecting the need for private sector incentives, while avoiding government created or supported monopoly. The guidelines recognize the important role that depository libraries and other public and private libraries should play in assuring a diversity of electronic information products and distribution channels. They discourage tying up public information, and associated retrieval features, with intellectual property rights.

Impact on Formality

The possibility of regulation or policymaking occurring through dialogue, using the mechanism of electronic rulemaking, raises some profound legal and institutional issues, among other things, because it would blur the concept of a "record" of a particular proceeding and would erode the final decision concept. Existing administrative law paradigms require discrete events, primarily "final decisions" by administrative agencies, to permit the judicial scrutiny that is the mainstay of political accountability in administrative law.

The problem for law is to decide how to ensure accountability in the electronic dialogue approach to policymaking. This is not a problem, of course, as long as both parties to the dialogue agree with each other. Law rarely is difficult when there is harmony, but governmental decisionmaking presupposes instances in which citizens must comply with decisions with which they do not agree. In a democratic society, this necessitates some mechanism for challenging the decision and obtaining review of it by higher political authority. If the challenger cannot identify the particular decision he seeks to have reviewed, accountability is diminished. The final decision requirement serves two purposes. It reduces party, agency and judicial resources required for multiple appeals of agency decisions; and it minimizes intrusion of the judicial branch of government into an agency's domain by permitting an agency to moot an otherwise objectionable preliminary decision.

Whether the final decision requirement should be diluted in electronic rulemaking should depend on the degree to which the efficiencies available from electronic rulemaking overcome the costs to efficiency and comity resulting from its relaxation or dilution.

Formality in decisionmaking and in presenting positions intended to influence decisionmaking has advantages. For one thing, it ensures that the decisions and positions are institutional ones rather than personal ones. It

may be, of course, that emerging technologies for "groupware"[78] may permit internal clearances to be obtained automatically as a prerequisite for a decision or a position being filed. Even if such techniques are developed and accepted, however, the result would be somewhat more formality and less of a dialogue than has been suggested for the Rulemaking Management System.

The opportunities and problems associated with an electronic dialogue as the predominant rulemaking process are essentially the same as those associated with negotiated rulemaking.[79] The decisionmaking agency has better awareness of party needs, problems and interests because of more informal communications. The informal communication is feasible because the time lags associated with each communication event are much smaller. To some extent, the electronic rulemaking approaches are easier to square with traditional administrative procedure concepts because it is not as hard to reconstruct the record of an electronic rulemaking as it is to reconstruct the record of a negotiated rulemaking. On the other hand, exchanging electronic messages is certainly not the same thing as face-to-face group discussion in terms of nuances of oral expression and body language.

The electronic agency management hypothetical presents some risks, primarily by undermining formality. There might be a greater likelihood of premature or whimsical decisions without adequate consultation,[80] and the possibility that changes in instructions to lower levels of the organization would go unnoticed. Both of these disadvantages could be mitigated by the same approaches used to ensure adequate consultation in electronic rulemaking and to ensure that interested persons are alerted to changes that affect them.

The formality-related problems to be solved for electronic delivery of services are those of electronic contracting and electronic funds transfer generally: potentially increased risk of forgery.[81]

EBT creates a complete audit trail and facilitates reconciliation and reporting capabilities. EBT eliminates or significantly reduces many of the opportunities for fraud existent in the paper system. Only those members of households to which the benefit card and PIN are issued may use the benefit device. Food stamp coupons contain no household identifying information to permit enforcement of this use limitation.

The solutions to the risk of forgery problems are the same ones being developed for authenticating electronic messages used in electronic

78. Groupware is a kind of software for electronic mail and word processing that permits many people to participate electronically in drafting, editing and commenting on a single document. *See generally* MICHAEL SCHRAGE, SHARED MINDS: THE NEW TECHNOLOGIES OF COLLABORATION (1990).

79. *See supra* notes 41–42.

80. This is the same difficulty with personal as opposed to institutional decisions noted in the discussion of electronic rulemaking.

81. Forgery, broadly conceived, involves misrepresenting the author of a message and also involves unauthorized alteration in the contents of a message.

contracting and electronic funds transfer in the private sector. There is no reason to believe that these problems are particularly difficult to solve with appropriate understanding of legal concepts and auditing techniques.

ADAPTING THE TECHNOLOGY

Two policy-based paradigms associated with the formality goal seem to require particular efforts to maintain in an electronic environment. The first is the need for a certain degree of formality in agency, and possibly party and agency statements. The second is preservation of a record of what statements were made. It is not difficult to adapt a technology to the first of these. The same human and organizational procedures that prevent submitting official statements on paper without appropriate authorization can prevent unauthorized electronic submissions. These traditional techniques depend on human compliance with rules. They can be supplemented in an electronic environment by technical means. For example, it would be relatively easy to design the rulemaking or adjudication systems so they accept only those submissions accompanied by a password-like token that can come only from the person with authority to approve the submission. In networked computer systems, the approval token could be generated automatically when the authorized person reads the proposed submission and signifies approval by checking a box or making a menu selection on his or her screen. There is a trade-off between complex authentication procedures built into an electronic system and system cost and performance. It always is important not to overdesign security systems out of proportion to the risks involved.[82] The problem, of course, is deciding how much formality is desirable. There is a tension between the dignity value and most types of formality.[83]

Preserving Formality

Pervading all four visions are two threats to short-term and long-term public access to the record of agency decisionmaking. The first threat is technological obsolescence, the possibility that by the time someone wants to read the electronic file, computer hardware and software capable of reading the information in the file will not be available. This problem can be solved, under recommendations developed for the Administrative Conference of the United States by the author of this article,[84] by developing appropriate standards for information exchange, so that information

82. OFFICE OF MANAGEMENT AND BUDGET, A FIVE-YEAR PLAN FOR MEETING THE AUTOMATIC DATA PROCESSING AND TELECOMMUNICATIONS NEEDS OF THE FEDERAL GOVERNMENT II-40 (Nov. 1990).

83. *See* Frug, *supra* note 34, at 1276.

84. Recommendation 90-5, 55 Fed. Reg. 53,269 (1991) (to be codified at 1 C.F.R. part 305); HENRY H. PERRITT, JR., REPORT AND RECOMMENDATIONS ON FEDERAL AGENCY ELECTRONIC RECORDS MANAGEMENT AND ARCHIVES TO THE ADMINISTRATIVE CONFERENCE OF THE UNITED STATES (Aug. 1990).

in today's formats can be converted to tomorrow's formats.

The second threat is the possibility that specific messages representing preliminary decisions, notices, party positions, applications for benefits or evidence may be integrated into databases as a proceeding goes forward, losing their discrete character. This problem also exists in electronic contracting, and the same methods for preserving an audit trail for individual messages in electronic contracting are appropriate to preserve an electronic record of agency decisionmaking.

Good electronic record systems design ensures that archives and records retention needs are designed into the system. While such design features may be difficult to incorporate in PC-based systems, the communications link for the adjudication and rulemaking systems is an obvious and fail-safe point of capture for maintaining a comprehensive record of adjudication and rulemaking electronic submissions. Technical means could ensure that nothing gets into the system without being entered in a docket and having an archival copy made. The integrity would be greater than that achievable with human- and paper-based systems.

Preserving the Dignity Value

The discussion of the impact of electronic methods on the dignity value noted that the risk is that codifying procedural rules in computer programs can make the rules for citizen/agency interaction more rigid and difficult to change. Electronic methods of adjudication, rulemaking, agency management, and delivery of services should provide appropriate rule-modifiablity by ensuring that electronic systems are accessible and user friendly. An electronic form or template should always permit inclusion of information that does not fit predefined categories or fields and should permit use of the electronic channels for a free-form dialogue with a real person, if only for assistance in filling out electronic forms. Failure to offer such channels might be a basis for invalidating decisions reached through the electronic systems.

CONCLUSION

Adoption of information technology in connection with rulemaking, adjudication, internal management, and service-delivery advances traditional goals of administrative procedure in both the short and long run. Efficiency is advanced, participation increased, and necessary formality can be assured in properly designed systems.

Barriers to wider adoption of information technology result from misapplication of legal concepts and the absence of widely acceptable format standards for value-added information. There is no reason that existing concepts for signatures and document authentication cannot be adapted easily to electronic formats. The necessary analytical work is well underway in support of electronic contracting in the private sector. As this article suggests, no

changes in the Administrative Procedure Act or its underlying concepts should be necessary to permit electronic adjudication, electronic rulemaking, electronic agency management, or electronic dissemination of information.

In the long run, adoption of information technology will blur the boundaries between citizen and agency and between agency and court. Blurring of these boundaries may necessitate rethinking the definitions of some of the basic events that define the administrative process, public participation and judicial review. Blurring boundaries between agency and court through relaxation of the final decision rule can be handled by comparing costs and benefits of interlocutory electronic review versus maintaining a defined point at which an agency decision is subject to review. Blurring of the boundary between citizen and agency does raise somewhat more difficult questions relating to institutional versus personal expression and accountability.