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Article: Electronic Democracy as a Multi-Dimensional Praxis

Oren Perez

I. Introduction

E-democracy is proclaimed as the next thing. It is taken as one of the most efficient avenues through which modern democracies can enhance their participatory profile. This assertion is driven by a broadening dissatisfaction with the state of "modern democracy." Our democratic institutions are unable, so the critics argue, to produce the kind of legitimacy necessary for the institution of governance. They do not do a good enough job, both in terms of producing broad consent and in terms of adequately controlling those in power. This critique portrays the problem of

1 Ph.D., London School of Economics and Political Science, 2000. Lecturer, Bar Ilan University, Faculty of Law, Israel. E-mail: perezo@mail.biu.ac.il. This article develops ideas that were introduced in "Global Governance and Electronic Democracy: e-Politics as a Multidimensional Experience," a paper given by the author in the conference "Prospects for Electronic Democracy," September 20–21, 2002, hosted by the Community Connections Project of the Institute for the Study of Information Technology and Society, H.J. Heinz III School of Public Policy and Management, Carnegie Mellon University. That paper is scheduled to be published in an edited collection.

2 This dissatisfaction applies both to the transnational level, e.g., with respect to key institutions such as the World Trade Organization (WTO) or the International Monetary Fund (IMF) and to national practices, e.g., the Bush versus Gore saga. See, e.g., Joshua Rosenkranz, Barred from the Booth, BOSTON REVIEW, Oct./Nov. 2001, http://bostonreview.mit.edu/ndf.html#Ecodemocracy; JOHN GRAY JOHN, FALSE DAWN: THE DELUSIONS OF GLOBAL CAPITALISM (1998). One of the more important indicators for this social mood was the anti-globalization movement. For a detailed chronicle of the "Anti-Globalization" protests, see the special globalization report at the Guardian website: http://www.guardian.co.uk/globalisation.

3 This critique is based on a procedural understanding of legitimacy. It associates the legitimacy of a certain governance regime with the nature of the process that led to its creation and the public accountability of those who control it. Other accountants of legitimacy (sometimes termed substantive or non-procedural), associate legitimacy with a certain understanding of the common
"legitimacy" as a problem of institution-design: creating institutional structures that will allow the public to take part in a meaningful way in the game of governance, whether this game is played at the national or global level.

This article explores whether the Internet, as a new kind of communicative arena, can contribute to the development of more inclusive decision-making structures. One feature of the Internet commonly mentioned in this context is its capacity to substantially reduce the transaction costs associated with off-line participatory schemes such as public meetings, solicitation of written comments, referendums, and voting. Arguably, this cost-reduction feature should enable more extensive use of these participatory schemes. While this is a valid point, it overlooks one of the key ways in which the Internet, as a new realm of communication, can change the way in which we participate in and experience politics.

The revolutionary potential of the Internet is a product of one specific feature of the Internet: its multi-dimensionality. This term captures the ability of the Internet to simultaneously support multiple forms of deliberation and decision-making structures through various and rapidly changing technologies. The multi-dimensionality of the Net opens new possibilities for structuring political interactions. To appreciate these possibilities, this article reviews and criticizes contemporary democratic practices with a particular focus on their procedural uniformity. This uniformity, which permeates both the legal and philosophical discourse of democracy, is not compatible with the reality of social and individual pluralism that characterizes contemporary society. In addition, such uniformity could lead to the exclusion of certain worldviews and personality types. To the extent that democracy is understood as an attempt to forge a legitimate system of governance for a pluralistic society, this result seems unacceptable.

The main argument of this article is that the Internet can extend the universe of our democratic practices by enabling the development of multiple forms of deliberation and decision-making. The main problem with this view is that it depends on the existence of an agreed-upon definition of the common good. Without a shared understanding of the common good, commonly missing in pluralistic societies, it is hard to achieve legitimacy in that sense.
making. Thus, the introduction of the Internet can do more than improve our existing political structures by reducing the various transaction costs that go with political interactions. Indeed, it will be argued that many contemporary projects of e-democracy miss this unique potential of the Internet by simply copying off-line democratic practices (as-is) into the Internet. Section II of this article reviews and criticizes the uni-dimensional structure of our contemporary democratic institutions as it is reflected in contemporary political thinking and in the actual practices of Western democracies. This critique leads to a first formulation of the multi-dimensional thesis. Section III develops and extends the article's general argument with respect to the multi-dimensional potential of the Internet. Several practical examples demonstrate what a multi-dimensional democratic process should look like and how the Internet can contribute to the design of such a process. Section IV considers several objections to the article's general argument.

II. A Critique of the Uni-Dimensional Model

A. The Uni-Dimensionality of Contemporary Democratic Thinking

To understand the article's multi-dimensional thesis it is important to trace the ideological and physical constraints that shaped contemporary off-line democratic institutions and influenced their uni-dimensional character. This section starts with a portrait of this uni-dimensionality. It then proceeds to offer a critique of this practice. This critique serves as the basis for the multi-dimensional thesis. Before proceeding with the argument, it is important to clarify the target of this thesis. This thesis does not claim that governance processes—internationally or nationally—are completely uni-dimensional. Rather, it focuses on certain

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4 This section critiques the ideological constraints, while section III(A) discusses the physical constraints.
5 Thus, for example, one can refer to the following elements in any governance/rule-making regime: the election of legislators, the lobbying of legislators, the independent work of administrative agencies endowed with
particular aspects of the democratic process (e.g., voting, public participation in rule-making) that are fundamental to the democratic project as a whole.

Democracy, as a social institution, is commonly viewed as based on two key notions: autonomy and equality. The notion of equality requires that each member of the community be given an equal opportunity to participate in a meaningful way in the decision-making process that produces the norms by which the community is governed. The notion of autonomy, or freedom, requires that any such process enable the participants to express their independent and un-coerced judgment over the debated issue. It is the translation of these two ideals into concrete

certain powers by the legislating body (which are again subject to lobbying), the work of advisory committees, processes of public notice and comment on draft rules, and judicial review of rules and their application. Note, however, that to the extent these elements create a multi-layered system of governance, they make up a system that spreads across differentiated points in time and space.

6 This is one of the key elements of Robert Dahl's famous concept of "procedural democracy." Political equality, Dahl argues, implies that "any putatively democratic government ought to be evaluated according to the extent to which the preferences of every member of the demos are given weight in collective decisions, particularly on matters members think are important to them." Robert A. Dahl, On Removing Certain Impediments to Democracy in the United States, 92 POL. SCI. Q. 1, 11 (1997).

7 In Robert Dahl's notion of procedural democracy, the criterion of autonomy is captured by the dual requirements of effective participation and enlightened understanding. Id. at 11–12. Effective participation requires that every member of the demos should have equal and unconstrained opportunities for expressing preferences. Id. Enlightened understanding implies that each member of the demos should have adequate and equal opportunities for discovering and validating what his preferences are on the matter to be decided. Id. For the linkage between autonomy and equality in the definition of democracy, see Jurgen Habermas, Habermas on Law and Democracy: Critical Exchanges: Habermas's Proceduralist Paradigm of Law: Paradigms of Law, 17 CARDOZO L. REV. 1771, 1777 (1996).

8 The ideas of equality and autonomy play a key role in our existing democratic practices. A good example is voting, which still constitutes the principal form of collective decision-making in today's democracies. Stephen Ansolabehere, in a recent paper on new voting technologies, argues that a reliable voting technology needs to satisfy two main conditions to fit into the constitutional order of a democratic regime: voter autonomy and voter equality. Stephen Ansolabehere, The Search for New Voting Technology: Changing the Way We
institutional practices, both in theory and in practice, which transforms the democratic act into a uniform procedural order and raises doubts about the fairness or legitimacy of this process.\textsuperscript{9}

The practical uniformity noted above characterizes both the writings of eminent political theorists such as John Rawls and Jurgen Habermas and our actual democratic practices. Consider, first, the theoretical domain. John Rawls’ narrative of the original position, which was first introduced in his famous \textit{Theory of Justice}, could be instructive in this context.\textsuperscript{10} This narrative remains an important focal point in the continuing debate over the nature of democracy.\textsuperscript{11} Rawls uses this narrative as an analytical device to formulate a political conception of justice for a

\begin{quote}
\textit{Vote Is More Urgent and Less Complicated than You Think}, \textsc{Boston Review}, Oct./Nov. 2001, available at http://bostonreview.mit.edu/ndf.html\#Ecodemocracy. These conditions require that “votes reflect voters’ independent, un-coerced judgments, and that all votes are weighted equally.” One of the ways the law can guarantee voter autonomy is by ensuring the secrecy of the voting act. “[W]hen the ballot is secret, you cannot prove whom you voted for; and in the absence of proof, it is less likely that parties or candidates will try inappropriately to influence your judgment or offer to purchase your vote.” The equality requirement means, quite simply, that “every vote should count the same.” To achieve this simple condition, the voting system should ensure that “all legitimate votes be counted, and that they not be diluted by fraudulent ballots cast by others.”
\end{quote}

\textsuperscript{9} This translation is usually the business of constitutional law. For a detailed account of United States constitutional law, see, \textit{e.g.}, \textsc{William Cohen \& David J. Danelski}, \textit{Constitutional Law: Civil Liberty and Individual Rights} (4th ed. 1997). Constitutional arrangements exist also in the case of international organizations. Although, in the case of international organizations, the collective decision-making mechanism is usually different; it does not include private individuals as voters, just the nation-states which are members of the organization. \textit{See, e.g.}, the account of the constitutional structure of the WTO in \textsc{John H. Jackson}, \textit{The World Trade Organization: Constitution and Jurisprudence}, \textsc{Chatam House Papers} (1998).

\textsuperscript{10} \textsc{John Rawls}, \textit{A Theory of Justice} 136 (1971).

\textsuperscript{11} In the \textit{original position} the parties to the dialogue are situated behind a veil of ignorance with respect to their true identities on the real world. This, Rawls argues, provides the basis for a collective agreement on “just” principles. The “ignorance” generated by the original position nullifies the “effects of specific contingencies which put men at odds and tempt them to exploit social and natural circumstances to their own advantage.” \textit{Id.} at 136.
democratic regime. Rawls argues that a conception of justice *(justice as fairness)*, which will be accepted by persons in the original position, could serve also as a reasonable basis for a constitutional democracy. In other words, his thesis is that the principles of such a *derived* conception of justice also should be endorsed by real citizens operating in an environment of social pluralism and assumed to be free and equal, reasonable and rational.

In the original position, the participants make a collective decision in a completely uniform fashion. This uniformity refers both to the external features of the decision-making situation and to the internal frame of mind of the actors. External features refer to several things: the way the various alternative theories of justice are presented to the participants; the form in which the participants are expected to reflect and decide on these alternatives, such as a requirement of unanimous agreement; and, presumably, the spatial and temporal boundaries in which the deliberation takes place. Internal features refer to the actors’ cognitive capacities, reasoning mode, and cultural and ethnic profile, which in Rawls’ narrative are presumed to be identical.

13 In that sense, the “original position” is used to formulate a conjecture that must be checked “against the fixed points of our considered judgments at different levels of generality.” *Id.* at 139.
14 *Id.*. Rawls contends that his conception of political liberalism leaves untouched the comprehensive religious, metaphysical, and moral doctrines that might coexist in society. Any postulated political framework should, therefore, be endorsed “by all reasonable comprehensive doctrines that exist in a democracy regulated by it.” *Id.* at 133–34.
15 See *RAWLS*, supra note 10, at 136–50.
16 This is a result of Rawls’ famous “veil of ignorance.” Rawls interprets the veil of ignorance to mean that “no one knows his place in society, his class position or social status; nor does he know his fortune in the distribution of natural assets and abilities, his intelligence and strength and the like.” *Id.* at 137 “Nor, again, does anyone know his conception of the good, the particulars of his rational plan of life, or even the special features of his psychology such as his aversion to risk or liability to optimism or pessimism.” *Id.*
Jurgen Habermas' concept of public discourse, while somewhat richer and less restrictive, is similarly uni-dimensional. First, Habermas presupposes the existence of a common discourse through which any collective dispute could be resolved, either substantially as by reaching an agreement on a single best normative arrangement, or procedurally, as by resorting to a principle of tolerance. This is a product of Habermas' unique theory of communication. Second, Habermas' model envisions a

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17 For a detailed elaboration of the differences between Habermas' and Rawls' models, see the exchange between the two authors in the Journal of Philosophy. See Rawls, supra note 12; Jurgen Habermas, Reconciliation Through the Public Use of Reason: Remarks on John Rawls's Political Liberalism, 92 J. OF PHIL. 109, 109-31 (1995).

18 Habermas insists that tolerance, like substantial agreement, requires rational justification. From the perspective of a sociological observer, tolerance is a diminishing resource. As a result, the expectation of tolerance itself requires a normative justification to a growing degree. And this justification must satisfy the claim that the legal protections governing the peaceful coexistence and mutual integrity of forms of life are fair—i.e. are rationally acceptable to all sides.

19 Habermas' argument builds on the assumption that by participating in a communicative interaction, any participant implicitly acknowledges his/her belief in the possibility of an ideal speech situation in which actors are motivated solely by the force of the better argument. This assumption is deeply problematic. See Rawls, supra note 12, at 137; Michael K. Power, Habermas on Law and Democracy: Critical Exchanges: Law's Reconstruction, Justification, and Application: Habermas and the Counterfactual Imagination, 17 CARDOZO L. REV. 1005, 1005–27 (1996). While Rawls does not accept Habermas' discursive theory, he seems to assume, similarly, the existence of a super-discourse through which citizens holding different worldviews can reach an agreement on political principles. Thus, he argues that the possibility of an overlapping consensus on the political conception of justice depends on the existence of "sufficient reasons for proposing justice as fairness (or some other reasonable doctrine) which can be sincerely defended before others without criticizing or rejecting their deepest religious and philosophical commitments." Rawls, supra note 12, at 146. To the extent that these "reasons" exist, they must come from a common discursive resource, which, by assumption, must enjoy a superior status over any other discourse.
deliberating community whose members, despite their various
cultural and psychological differences, enjoy similar capacities for
engaging in rational discourse. In other words, while Habermas
insists that his model pertains to "real people," he nonetheless
presumes that each of the participants exhibits a similar aptitude to
access and to invoke this common discourse, and has similar
access to the various resources (e.g., cognitive, informational,
symbolic, economic, or temporal) necessary for truly equal
participation. In addition, Habermas does not define the spatial
and temporal characteristics of the public-space, which should host
the political deliberation. However, by emphasizing the equality
of the deliberative process, that is, the right of each citizen to
participate in "political communication," Habermas seems to
presuppose a public-space highly uniform in terms of its spatial
and temporal attributes.\footnote{In contrast to Rawls' "artificial creatures." \textit{Id.} at 137.}

Finally, similar uniformity also characterizes contemporary
democratic practices. Consider, for example, the act of voting.
Voting takes place in strictly uniform spatial and temporal
conditions. Citizens vote at a specified time interval, identical for
all, in highly comparable spaces such as voting booths, and in a
similar fashion (i.e., voting technology).\footnote{See, e.g., Habermas, \textit{supra} note 7, at 776. For a similar critique of Habermas'
model of the public sphere, \textit{see} \textsc{John B. Thompson, Social Theory and the
Media, in Communication Theory Today} 42 (D. Crowley & D. Mitchell
sphere is based on the image of "dialogical conversation in a shared locale." \textit{Id.}
This image, Thompson notes, is based on the assemblies of classical Greek city-
states and the salons and coffee-houses of early modern Europe. \textit{Id.} However,
it disregards the fact that new communication technologies, particularly mass
media, have "created a new kind of public sphere which is de-spatialized and
non-dialogical in character." \textit{Id.}}

This procedural
uniformity is a reflection of well-established constitutional
doctrines. For example, the Fifteenth Amendment to the \textit{U.S.
Constitution} provides that the "right of citizens of the United States
to vote shall not be denied or abridged by the United States or by

\footnote{The term "voting technology" refers to the way in which the various
alternatives are presented to the voter, the method in which she is supposed to
cast her vote, and the way in which the votes are counted.}
any State on account of race, color or previous condition of servitude." This negative formulation of the right to vote reflects a highly formalistic interpretation of equality, which leads to a uniform design of the voting act.\textsuperscript{23} It is difficult to interpret this provision as imposing an obligation on the government to provide U.S. citizens with truly equal conditions for voting, for instance, in terms of their ability to cast an informed vote.\textsuperscript{24}

B. The Multi-Dimensional Thesis: Democracy as Multi-Form Experience

The procedural uniformity, which permeates both the legal and philosophical discourse of "democracy," is not compatible with the reality of social and individual pluralism that characterizes the modern society. This incompatibility undermines the capacity of our contemporary democratic institutions to offer a fair system of collective governance. The notion of social pluralism designates two types of diversity, or double-diversity: the first at the level of society, the second at the level of the individual. The first type of diversity is based on a vision of society as an amalgam of multiple discourses, none of which enjoys a privileged status. This vision puts in doubt the capacity of a democratically governed community to reach an agreement through rational deliberation. If the participants of a collective conversation can invoke different, but equally valid discourses—each employing different criteria for validation—it is not clear on what basis they can reach an agreement.\textsuperscript{25}

\textsuperscript{23} However, U.S. law allows the States, within these formalistic boundaries, to experiment with different voting technologies. See Ansolabehere, \textit{supra} note 8.

\textsuperscript{24} The right to cast an informed vote is interpreted, not as a constitutional right, but as a "social right," such as the right to education. Social rights are still seen as an inferior category of rights. For a more detailed treatment of the right to vote and the issue of social rights under U.S. law, see \textit{Cohen and Danelski, supra} note 9, at 1073–144, 1172–94. For a critique of the American democracy, see Dahl, \textit{supra} note 6.

The second type of diversity postulates the demos as a highly diverse group by depicting people as having distinct innate structures. This diversity has many features. It refers to cultural imprint (baggage), cognitive capacities, psychological profile, level of interest in public activities and concerns, and financial resources. These differences influence the way people respond to external pressures and signals and, more generally, influence the way they lead their lives.26

In the context of the Internet, these personality variations can influence the ways people react to the Internet. Psychologists have only recently begun to investigate these political influences. One such influence concerns individuals’ differing needs for “closure.”27 People who have a high need for closure are motivated to avoid uncertainties. They tend to “freeze” the epistemic process. People with a low need for closure, in contrast, cope better with multi-choice and uncertain situations.28 This difference can influence the way these distinct types of people react to the structure of websites. “[P]eople who have a high need for closure, namely, a need to have a structured and defined

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27 Amichai-Hamburger, supra note 26, at 6.

28 Id.
process of decision making, will find the mass of hyperlinks distracting and unnecessary; whereas those people with a low need for closure will feel better in an Internet environment surrounded by hyperlinks." Other personality traits that can influence Internet use, and thus contribute to the exclusion of some user-types, are gender differences, levels of extraversion and neuroticism, capacity for innovation, locus of control, and attitudes toward risk.

If this two-fold diversity of the human society is taken seriously, then the taken-for-granted uniformity of the democratic process should be reexamined. If people have diverse capacities and, further, can invoke distinct and equally valid discursive modules, there is no reason to assume that they could be subjected to a uni-dimensional decision-making order. A decision to adopt an invariant decision-making framework is, therefore, necessarily discriminatory. Such a decision will usually have the effect of favoring a particular discursive perspective, and a particular citizen profile.

To the extent that equality is interpreted as an instrument for constructing a fair system of governance, it should not lead to an identity of form, but rather to a diversity of deliberative or decision-making structures. Only by constructing governance as a multi-form experience can we hope to create the conditions for fair participation, which will enable the members of a community, despite their innate differences, to participate in the joint-management of their lives. Creating fair conditions for

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29 Id.
31 Amichai-Hamburger, supra note 26, at 6–8.
32 For an empirical analysis of patterns of exclusion in a real-world e-participation scheme, see Dahlberg, supra note 30.
33 Robert Dahl's notions of effective participation and enlightened understanding reflect similar concerns. See Dahl, supra note 6, at 11–12.
participation is an essential step in the attempt to achieve legitimate governance.\footnote{34}

This argument exposes a dialectical tension between the ideas of autonomy and equality. To respect the autonomy of one's fellow citizens means to accept them as potentially different. A strict interpretation of equality in the context of democratic procedures is inconsistent with this requirement, as it does not allow one's fellow citizens to express themselves as fully autonomous members of the community. For these reasons, a formalistic understanding of equality could lead to a de facto denial of autonomy.\footnote{35}

III. The Internet as a Multi-Dimensional Medium

A. Internet and Democracy: Introductory Comment

To the extent that democracy is understood as an attempt to forge a legitimate system of governance for a pluralistic society, it should be able to deal fairly with the multiplicity of personalities and worldviews that co-exist within that society. Achieving this requires a multi-dimensional framework of deliberation and decision-making that will go beyond our traditional democratic institutions. The principal thesis of this article is that the Internet constitutes a space in which this multi-dimensional vision can be

\footnote{34} As will be indicated in section III, however, creating fair conditions does not guarantee legitimacy.  
\footnote{35} See Daniel R. Ortiz, Democratic Values? A Response to the Search for New Voting Technology, BOSTON REVIEW, Oct./Nov. 2001, http://bostonreview.mit.edu/ndf.html#Ecodemocracy. The debate about the proper place and interpretation of the idea of equality is an old debate and has been examined in numerous articles. See, e.g., Christopher J. Peters, Equality Revisited, 110 HARV. L. REV. 1210, 1210–64 (1997); Kenneth W. Simons, The Logic of Egalitarian Norms, 80 B.U. L. REV. 693, 693–771 (2000). This article does not review the various manifestations of this debate. However, it might be worthwhile to note briefly in what way the perspective of this article differs from the traditional frame of this debate. The question of equality is usually invoked in the context of the distribution of treatments or resources within society. In this article, the argument focuses on what is usually considered an unproblematic application of the notion of formal equality: the homogenous structure of the procedures of democracy.
realized. This argument seeks to go beyond current uses of the Internet, which merely copy off-line democratic practices onto the Internet.

The thesis of this article is based on a comprehensive conception of democracy in which democracy is envisioned as a comprehensive political framework that permeates all aspects of governance. Election-based democracy does not fit this definition because its principal participatory mechanism, election for office, does not offer the citizenry a real opportunity to influence the day-to-day administration of governance. A comprehensive political regime should offer its citizenry more than a right to influence the composition of certain decision-making bodies; it should incorporate its citizenry into the multiple decision-making structures through which political power is realized. Citizens should have an opportunity to take part in important policy decisions, decisions over resource-allocation, and the legislation of new norms. Indeed, if democracy is interpreted merely as giving the public an opportunity to elect certain office-holders, there is not much room for variation at the user-interface level because there are not many ways to present a choice between several candidates.

How does the Internet fit into this democratic vision? It is possible to distinguish in this context between three different forms of electronic democracy. The argument with respect to the multi-dimensional potential of the Internet applies to each of these

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37 The question of user-interface should be distinguished from the question of counting or preference-aggregation. Even in the simple case of voting on candidates, which is simple in the sense of being a highly structured choice-dilemma, there are many ways of aggregating voters’ choices, including plurality voting, Borda counting, Condorcet’s pair ranking, and others. See Jonathan Levin & Barry Nalebuff, An Introduction to Vote-Counting Schemes, 9(1) J. OF ECON. PERSP. 3, 6–18 (1995). The problem of aggregation becomes more difficult as the choice-dilemma becomes less structured. This question is re-addressed in section IV below.
different forms. First, the Internet constitutes an efficient means to achieve transparency. Transparency is a necessary condition for the evolution of meaningful deliberation. Second, a political agency, whether a national government or international organization, can use the Internet to elicit public comments or votes on its normative output. Here, the Internet is used to facilitate uni-directional communication, where the political agency at the receiving end is responsible for collecting, interpreting and judging the comments of the public, or for aggregating the public votes in the case of voting. The deliberation/voting process is controlled by the political agency. Finally, the Internet also can be used to facilitate wide-ranging dialogue between the institution and the public, and within the public, generating multi-directional communication. In a multi-directional setting, none of the communicators has exclusive control over the timing and content of communications. Only this last option comes near the ideal picture of directly-deliberative democracy.

B. A Focus on the Multi-Dimensional Argument

The procedural uniformity of contemporary democratic institutions is not just a product of ideological choices. It is also a reflection of certain spatial and temporal constraints. Using multiple formats of voting or deliberation can be highly demanding in terms of spatial and temporal resources. To understand these limitations, consider the following example. Imagine that in the pluralistic society of Ersilia half the community can think freely only when they are surrounded by green walls, while the other half can function properly only in an environment of total whiteness. To fulfill the special needs of the citizens of Ersilia, the elections would have to be conducted in parallel buildings, half of them painted in green, half painted in white. And if these distinct individual types are equally distributed across Ersilia, this unique demand will require either a doubling of voting space, or conducting the voting in a sequential order (e.g., in two days) and changing the voting space color overnight. However, since time and space are scarce resources, this solution could be highly
expensive. Thus, if the green-types do not constitute half of the community but instead constitute a minority group, it might be tempting to succumb to the taste of the majority by leaving all rooms white and hoping that the green-types could somehow cope. This social scarcity in time and space has influenced the design of democratic practices both in theory and in practice.

The emergence of the Internet frees us, to some extent, from these limitations. It allows us to simultaneously offer multiple forms of deliberation and decision-making structures that could cater to different personality profiles and utilize varied discursive frameworks. Thus, the Internet can allow us simultaneously to maintain and operate different voting environments (e.g., different colors) that might appeal to different voters (as long as these voters can be identified, for example, through a process of self-selection).

Note that this argument...

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38 The case of blind voters creates a similar dilemma. Is it enough just to grant blind citizens the right to be assisted in voting by someone of their choice, or should society develop voting technologies that will enable them to vote without help? The second option seems to fit better with the interpretation of equality and autonomy suggested above. In the U.S., many jurisdictions believe that providing blind people with assistance exhausts their equality obligations to the blind and they make no effort to support technologies that would enable blind people to vote in secret without assistance. Ortiz, supra note 35. Would we accept such a position if the blind were not such a small minority? This dilemma raises interesting questions with respect to the proper scope of the Americans with Disabilities Act. See, e.g., id.

39 Another example concerns the difficulty of holding elections in a multi-linguistic society. Cf. id. (the argument in this paper is based on Ortiz’s work). Under the Voting Rights Act, every jurisdiction in the U.S. must make voting materials available in the appropriate language to any language minority group that comprises at least five percent of the jurisdiction’s voting-age population. This law means that highly pluralistic counties have to provide voting materials in a large number of languages. Ortiz notes, for example, that in the next decade the Los Angeles County will have to provide voting materials in more than ten different languages. This problem has clear technological implications. Traditional and optically-scanned paper ballots make satisfying this requirement very difficult. If all ballots and supporting materials have to be printed in more than ten different languages, the expense quickly becomes unaffordable and paper management becomes highly complicated. In view of this problem, Los Angeles and Riverside Counties, which are both linguistically diverse, have chosen to use punch card machines and direct recording electronic devices. Neither requires expensive preparation of physical materials to make the ballot...
applies equally to each of the three forms of e-democracy. The Internet can support multiple formats of presentation, and thus cater to different types of users (transparency). In the case of unidirectional communication, the Internet can support multiple forms of soliciting comments from the public (a detailed example is given in section B(3) below). Finally, the Internet can support varied environments for multi-person conversation.

Note that the thesis presented here is more far-reaching than the argument that the Internet is a flexible mechanism for information provision. The latter argument sees the primary advantage of the Internet in that it allows planners to tailor the information delivery to the special needs of each user. This article argues that the Internet’s inherent flexibility should be used not just to improve the ability of the public to obtain certain public-related information (e.g., information about the environment), but, more importantly, to change the way in which society makes collective decisions (e.g., decisions about the environment). Unlike the off-line world, construction of these multiple formats does not depend on scarce spatial resources (e.g., meeting halls) since the Internet, being a highly malleable medium, can be divided into distinct forums at a much lower cost. Furthermore, the Internet allows us to operate these diverse political forums or decision-making structures simultaneously. In contrast, constructing pluralistic procedures in the off-line world would

accessible to language minority groups. Id. Internet voting could allow similar flexibility.

For example, Mordechai Haklay argues in a recent paper discussing the provision of environmental information on the Web that designers and maintainers of Public Environmental Information System should respond to the diversity of the user audience by providing flexible information systems without attempting to provide ‘one size fits all’ solutions. Such systems should target different users groups and provide useful and easily accessible information. This can be done through personalizing and customizing the information system . . . , or by re-thinking delivery and communication in such ways that are effective for important channels such as the media, NGOs, local activity groups or other information intermediaries.

require either expansive investment in spatial or other tangible resources, or a sequential use of the same spatial resource. Therefore, the Internet enables us to bring the democratic process to a conclusion at a single, common point in time in spite of any procedural diversity.

To appreciate the foregoing argument, it is useful to give two examples of contemporary e-democracy initiatives that overlook the Internet’s multi-dimensional potential. The first example concerns a Canadian e-consultation initiative known as “Consultations with Canadians.”41 This is a project of the Department of Foreign Affairs and International Trade ("DFAIT"), which is part of a larger federal government initiative called Government On-Line.42 The goal of the DFAIT initiative is to provide an “opportunity for Canadians to send their comments on Canada’s trade policy agenda, on an ongoing basis, and stay informed of specific consultation initiatives launched by the Government of Canada.”43 The central Web page of the project offers a list of current and previous consultations.44 Recent consultations dealt with the Canada-Andean Countries Free Trade Discussions, Strategic Environmental Assessment of the new World Trade Organization (WTO) Negotiations, Canadian Citizens’ Views on Trade with Least Developed Countries, and a Canadian Perspective on the Precautionary Approach/Principle.45 Each consultation includes a short description of the subject of the consultation, some background information, and an address,

41 See Canada’s Department of Foreign Affairs and International Trade, It’s Your Turn, at http://www.dfait-maeci.gc.ca/tna-nac/consult-e.asp#Other (last updated Apr. 17, 2003).
42 See Government of Canada, Serving Canadians Better, at http://www.ged-gol.gc.ca/index_e.asp (last updated Dec. 11, 2002). The goal of the Government On-Line project is to make government services and information available online to all Canadians by 2005. Id.
43 See Canada’s Department of Foreign Affairs and International Trade, supra note 41.
44 On November 6, 2002 there were twenty-one current consultations, two of which were still open for comments, and seven previous consultations. Id.
45 Id.
including e-mail, to which the comments may be sent. Participants are not offered an opportunity to view other participants’ comments during the consultation phase.

The presentation is prominently textual and offers a homogenous experience to all users. No attempt has been made to cater to people with various levels of knowledge on the debated issue or to offer different commenting modules. Furthermore, the website is overburdened with hyperlinks, which might deter those individual types with high need for closure. Another possible barrier for wide participation is the use of an open and unstructured commenting form, which might deter people with poor expressive capacities.

46 Thus, for example, the website describes “Strategic Environmental Assessment of the new World Trade Organization (WTO) negotiations” in the following way: “The Government of Canada is conducting an environmental assessment of the new World Trade Organization (WTO) negotiations launched at Doha in November 2001, and invites all interested parties to submit their comments on the likely and significant environmental impacts on Canada of these negotiations by July 31, 2002.” Canada’s Department of Foreign Affairs and International Trade, It’s Your Turn: Current Consultations, at http://www.dfait-maeci.gc.ca/tna-nac/consult1-en.asp (last updated Apr. 17, 2003). The background material included two references. The first is a reference to another web page that lists several documents and five links under the heading “Framework for Conducting Environmental Assessments of Trade Negotiations.” The second is to a page that included general information on Canada and the WTO.

47 Indeed, looking into the background documents for the “Strategic Environmental Assessment of the new World Trade Organization (WTO) negotiations” consultation suggests that the consultation was meant primarily for experts on the field. This impression is confirmed by what seems like a low submission rate. The site offers these details only with respect to one consultation, Canadian Citizens’ Views on Trade with Least Developed Countries. The Report on Submissions Received notes that the government received thirty-eight submissions during the consultations. The Report does not indicate whether these submissions were received through the website or through other means, so the actual number of on-line submissions could be even lower. A more accurate evaluation of the participation rate would require access to the submission database for all consultations. The Report is available at Canada’s Department of Foreign Affairs and International Trade, It’s Your Turn: Canadian Citizens’ Views on Trade with Least Developed Countries, at http://www.dfait-maeci.gc.ca/tna-nac/consult1-en.asp (last updated Apr. 17, 2003).
Similarly disappointing are websites such as vote.com by Dick Morris and Eileen McGann. Vote.com is presented by its founders as “a fully interactive web site designed to give Internet users a voice on important public issues and other topics.” This is achieved by giving the visitors to the site an opportunity to vote on a given issue by choosing between two competing answers to a question posed by the site managers. Some questions recently debated included George Bush’s attendance at the Earth Summit in Johannesburg, whether there should be mandatory limits on greenhouse gases, and whether the state of Florida should repeal the law that bans gays from adopting children. The voters are offered a short exposition (40-50 words) of two competing views on the debated question and are asked to cast their votes for one of the offered views. This scheme merely copies the usual polling technique onto the web. It offers a uniform experience to all its users.

It should be emphasized that the argument concerning the multi-dimensional capacity of the Internet holds true, even if the assumption of double-diversity is relaxed. Thus, even if one believes in the existence of a common discursive framework, which could ensure that any public debate will be resolved through rational deliberation (thus rejecting the thesis of discursive multiplicity), one might still find the multi-dimensional thesis appealing. This will be the case if one accepts the argument that a uniform decision-making/discursive framework necessarily discriminates against certain individual types due to cultural, psychological, or other personal differences (remember Ersilia). Thus, even if there is social agreement on the substantive criteria that should guide the decision-making endeavor, a strong argument can be made for the need for multi-dimensional decision-making

49 A detailed description of the debates and their results can be found by searching the site. The Earth Summit debate was posted on August 15, 2002. The debate on mandatory limits on greenhouse gases was posted on June 04, 2002. The debate on the Florida statute was posted on March 26, 2002.
schemes. This argument is made more explicit in the following section.

**C. A Concrete Example: Environmental Impact Assessment as a Collective Endeavor**

It is useful at this point to give a concrete example of a possible multi-dimensional process. The administrative process of environmental impact assessment (EIA) provides a good illustration for the potential benefits of the multi-dimensional approach. The term EIA denotes the collective process by which the environmental effects of a proposed project are evaluated. As a decision-making tool, the EIA should allow the decision-maker to select the option that is least harmful to the environment and to the social community in which the project is proposed to be built. From a democratic perspective, the community hosting the project should have some voice in the design and ultimate fate of the project. This viewpoint rejects the tendency to view the EIA process as a technocratic process that should be governed and managed by experts alone.

As a collective endeavor, the EIA process should be designed in a way that would encourage and facilitate constructive dialogue among all stakeholders. In a pluralistic society, this may prove difficult. To understand the nature of this problem, one must take a closer look into the analytic structure of EIA. Evaluating a project requires the decision-maker to go through several stages. First, the decision-maker has to collect baseline data that will include information about the ecosystems and the community hosting the proposed project. At this stage, information should also be collected about the distinct alternatives that are available for consideration (e.g., different locations, different designs for the project). Then a decision must be made about the criteria for evaluating the project and about the ranking of these criteria. Finally, the project and its various alternatives should be assessed according to these criteria. In most cases this evaluation will be

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somewhat speculative because it deals with the future impact of a hypothetical project.

Constructing a dialogical EIA process in a pluralistic society poses two different challenges. The first challenge involves the existence of multiple discourses. The lack of metadiscourse means that there could be deep disagreement about both the criteria for evaluating the project and their relative rankings. Imagine the difference between economic-oriented criteria, socialist evaluation, and evaluation guided by the principles of deep ecology.\(^5\) The disagreement about criteria could also influence the seemingly neutral stage of information gathering, because the process of fact-finding (observation) is structured by the fact-finder's (observer's) worldview (e.g., by determining the field in which he will look for data and the methodology that will guide that search).

A second challenge involves the question of user interface. Even if there is a complete social consensus about the criteria that should guide the EIA process, constructing an inclusive and fair process in a world with multiple individual types could require pluralistic procedures. To understand this second challenge, consider a typical EIA statement. It is usually a lengthy document, written in technical language concerning emission standards, concentrations of various substances, and so forth, and using non-friendly textual devices for presentation.\(^5\)\(^2\) A specific example may be seen in a recent World Bank project in India, the Karnataka State Highways Improvement Project. The project involved the upgrading and major maintenance of 2490 kilometers of existing state highways and major district roads. According to its Operational Guidelines,\(^5\)\(^3\) the World Bank has recommended that a

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\(^5\)\(^1\) In practice, these disputes are usually resolved through political negotiation or by the authority of law (as a result of adjudicative processes) and not through rational argumentation. See, e.g., Ron Janssen, *On the Use of Multi-Criteria Analysis in Environmental Impact Assessment in the Netherlands*, 10 J. MULTI-CRITERIA DECISION ANALYSIS 101, 106–08 (2001).


Sectoral Environmental Assessment be carried out. The goal of this assessment was to evaluate the probable impacts of the proposed works on the environment and the communities near the road. This assessment process has produced ten documents of varied lengths so far. The basic document, Sectoral Environmental Assessment volume 1, is a 220-page report with twenty-six tables and twenty-seven figures. The report was available online, but its 10.2 megabyte size has made it, in effect, inaccessible to people without a fast connection to the Internet.

These common features of EIA statements (EIS) pose several barriers for potential participants. First, appreciating the content of an EIA could require a substantial investment in time. Second, its technical language could discourage non-experts. Finally, its non-user-friendly mode of presentation could deter those individual types (e.g., high need for closure) whose cognitive apparatus does not allow them to cope well with complex data-frames. Thus, even if there is a social agreement with respect to the criteria that should guide the EIA process, accompanied by a rudimentary participatory framework, the format in which the technical data is presented to the public can operate as a barrier for wide participation, creating a de facto condition of experts' governance.

One way to resolve this problem is to follow in the footsteps of Dick Morris' vote.com and adopt a uniform but highly simplified choice scheme. This strategy is equally problematic, however, because it also fails to cater to the needs of some parts of the community, and, in that sense, it may forego some of the


problem-solving capacity of the community. The multi-dimensional thesis suggests a different approach. The moderator of the EIA process can use the Internet to offer different participatory modules. The various modules can be designed to respond to distinct discursive perspectives and to different individual types. These modules can offer varied descriptions of the project and alternative participatory formats. For example, different participatory paths can offer varied modes of presentation (e.g., text, graphical or oral presentations) building on new technologies such as Geographic Information Systems and Voice-on-the-Net. Further, the different paths can offer different levels

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56 Geographic Information System (GIS) is a computer system capable of assembling, storing, manipulating, and displaying geographically referenced information, i.e., data identified according to their locations. The graphic capabilities of this system enhance the abilities of users to extract and analyze spatial-related information. See, e.g., USGS: GEOGRAPHIC INFORMATION SYSTEMS, http://www.usgs.gov/research/gis/title.html (last visited Oct. 25, 2002) (on file with the North Carolina Journal of Law & Technology); UNIVERSITY OF EDINBURGH: GIS WWW RESOURCE LIST, http://www.geo.ed.ac.uk/home/giswww.html (last visited Oct. 25, 2002) (on file with the North Carolina Journal of Law & Technology). More recent developments incorporate GIS with software that enables the user to construct and observe 3-D images. One such tool-kit is web-based and thus enables the 3-D images “to be built, visualized, interacted with and deployed all on the Web.” See Bo Huang et al., An Integration of GIS, Virtual Reality and the Internet for Visualization, Analysis and Exploration of Spatial Data, 15 INT’L J. GEOGRAPHICAL INFO. SCI. 439, 439 (2001). For empirical evidence on the varied preferences of Web-users with respect to the way in which they would like environmental information to be presented on the Internet, see Haklay, supra note 40, at 22–23. The term “Voice-on-the-Net” refers to technologies that enable surfers to engage in oral conversation through an Internet connection. Together with software that automatically transforms text to spoken language, this technology offers users new ways of retrieving data and interacting with other people through the Internet. This technology was introduced to the market by an Israeli company called VocalTec Communications in 1995 and has since dispersed widely. Business Week estimated in an article from 2000 that Voice-on-the-Net, which accounted for less than one percent of global telecom traffic in 1999, is expected to surge to seventeen percent by 2003 and more than thirty percent by 2005. Steve Rosenbush & Bruce Einhorn, Special Report: The Talking Internet, BUSINESSWEEK, May 1, 2000, at 174, available at
of detail (short/long EIS), distinct modes of commenting (from general yes/no questions relating to the entire project or certain aspects of it, to detailed evaluation of the project), and different discursive perspectives (e.g., economic, ecological, etc.). At the beginning of the process, interested parties will be given the opportunity to self-select which participatory path they prefer, such as mode of presentation, time they want to invest, or the aspect of the project on which they want to comment.57

IV. Potential Objections to the Multi-Dimensional Vision

This section considers several potential objections to the thesis of the article. The first objection has to do with the question of manageable. This problem is an inevitable result of the compartmentalization of the decision-making process. It is clear that if we want to achieve some level of functional efficiency, the decision-making scheme cannot be left completely unstructured. The question becomes how to construct a pluralistic, multi-dimensional decision-making scheme without completely sacrificing our functional needs. To achieve this, one must construct a system that will be able to absorb or process multiple points of view, and to produce both a map of the distribution of opinions within the relevant community and, if necessary, a binding decision. Establishing a functioning system of governance, however, requires us to give up some of our pluralistic sensitivities.

Two possible mechanisms that could offer a path for transforming the pluralistic aspiration into a practical system of governance are self-selection and multiple criteria evaluation. The idea of self-selection means that any participant should be able to select, at the beginning of the process, the participatory path in which she is interested.58 This means that at this stage participants


57 See infra Section IV for a more elaborated discussion of the idea of self-selection.

58 Some participants might not be aware of certain features of their personality that make them suitable for a particular participation format. Psychologists can
must also be aware of the counting method by which their opinions would be aggregated. To give one simple example, consider again the issue of an EIA. The coordinator of the EIA process can offer the participants two participation paths. The first and lengthier can involve a review of the complete EIS, allowing the participant to comment on various aspects of the project. A second, shorter process can involve only a short review of the EIS, allowing the participant to offer his view on the project as a whole or only on a single aspect of it (e.g., its ecological impact). Participants can choose between the two paths according to their willingness to invest time in studying the implications of the proposed project and by matching the selected path to their cognitive-cultural capabilities.

The method of multiple criteria decision analysis (MCDA) is a decision tool that was developed explicitly to deal with decision environments that involve multiple worldviews (or criteria). One of the main advantages of MCDA is that it can “provide information on tradeoffs by displaying how options perform on the various criteria.” By clarifying the tradeoffs between different values (e.g., the ecological and economic impacts of a certain project), MCDA can facilitate reflexive deliberation and support a negotiated solution between different stakeholders, utilizing joint interests and downplaying ideological differences. Furthermore, the method of MCDA provides various algorithms for aggregating preferences that are cast under diverse participatory structures and use distinct, even
design short questionnaires that can help users to pick a participatory format that is most suitable to them. See Amichai-Hamburger, supra note 26. Furthermore, the initial choice of the participatory path does not need to be final. The participant could experiment with a certain path, and if she does not like her initial choice, could choose another one. The choice that is made at the beginning thus may not be the path that is ultimately followed in the end.


60 For the value of MCDA as a communication tool, see Janssen, supra note 51, at 107–08.
incommensurate, criteria. Because the main purpose of MCDA is to create a decision environment that will be sensitive to various criteria, it can also allow the participants to refer in their reaction only to one aspect of a certain choice-dilemma—what they perceive as salient (e.g., the ecological impacts of a certain project, but not its economic and social implications). Of the various MCDA methods, the method of multi-criteria approval proves especially appealing for application in a pluralistic setting. First, it offers a simple and transparent algorithm for preference-aggregation, and second, its information requirements are quite minimal. These dual features make multi-criteria approval suitable for implementation in a setting that involves both experts and laymen.

The existence of deeply contested worldviews could also prevent an agreement about the method of aggregation. As was noted above, this problem is not seen as a barrier for experimenting with MCDA—only as a reminder of the deep problems posed by living in a world that requires intensive coordination.


The method of multi-criteria approval requires two things: first, a determination of the alternatives and the criteria under which they will be compared; second, decision-makers need to rank the criteria by their importance. While there must be an agreement over the list of criteria, the method can be applied using various rankings, displaying various results. This is a common practice in EIA. See, e.g., Janssen, supra note 51, at 104. The next step is to determine which of the alternatives will be approved for each criterion. This is done by defining where the border between approval and disapproval regarding each criterion lies. Thus, for example, if participants need to rank an alternative (relative to a particular criterion) using a "verbal scale such as Excellent, Good, Average, Passable, Poor," the final judgment of approval/disapproval of the alternatives will be formed on the basis of the combination of the individual judgments. Thus, an alternative which is at least average for all (or majority of) decision-makers will be approved. Laukkanen et al., supra note 62, at 130. Approval can also be determined by evaluating the alternative against some quantitative benchmark. The aggregation is then achieved by comparing the
Self-selection and multiple criteria decision tools provide, then, possible paths for implementing the multi-dimensional vision. An attentive observer could, however, raise the following question: does not the fragmentation of the decision-making process raise a risk of distortion? Consider, for example, the kind of distortions that could accompany the translation of a lengthy Environmental Impact Assessment Report into a short, graphic statement. Such distortion, however, is an inevitable side effect of picking a particular viewpoint (prism). From a democratic perspective, it becomes a problem only when the structure of the augmented decision-making process is determined by a central authority—which might be motivated by a desire to preserve its power, leading to a strategic structuring of the decision making scheme—and not by a sense of respect to the value of pluralism.\(^{64}\)

There are several possible responses to this objection. First, in terms of functionality there may be no choice but to delegate the task of designing the multiple participatory scheme to a single authority (e.g., in the context of EIA, to the responsible environmental agency), since leaving the decision-making process completely unstructured could jeopardize the functional need of reaching a binding decision within a reasonable time. Delegating the design task, as well as the operating responsibilities, to some central authority has the advantage of accomplishing a reasonable approval rates of the different alternatives across the different evaluative criteria. Thus, for example, a unanimous vote for a specific alternative means that this alternative has been approved with respect to all criteria and no other alternative has been approved with respect to all criteria. As Laukkanen, *supra* note 62, at 134, notes, multi-criteria approval is “highly suitable for situations where information . . . is difficult or expensive to obtain” or is of “low quality,” since it does not require the decision-maker to make a detailed assessment of each alternative—he can use rough verbal ranking or even just a simple binary choice (approved/disapproved). For a general discussion of this method, see Laukkanen, *supra* note 62; Fraser & Hauge, *supra* note 62.

level of certainty with respect to the structure of the decision-making process and its ability to produce binding decisions.

This means, however, that the risk of strategic distortion cannot be completely eliminated. In response to this concern, three observations may be made. First, the danger of distortion is not unique to multi-dimensional schemes. As was noted above, the procedural homogeneity of our contemporary democratic institutions creates similar distortions, both by discounting certain world-views, and by disregarding the needs of various citizen profiles. The difference between these two forms of unfairness is primarily a matter of custom or habit; we have become blind to the latter form of unfairness because it has been around for such a long time.

Second, the diversification of the decision-making process carries with it another implicit benefit. This discussion began with the assumption that we live in a pluralistic society, and that this fact should entail a certain level of tolerance. But this fact is not self-evident. Indeed the procedural homogeneity of our current democratic practices suggests otherwise. Enhancing the universe of our democratic procedures should make people more attentive to the diversity of the community in which they are members by allowing them to experience this plurality in practice—not just through abstract theorizing. In other words, it would cause us to reflect more seriously on the way in which we operate as observers in society, the way we invoke certain distinctions and discursive frames, and why we do so. This effect should be expected even

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65 This dilemma cannot be resolved by subjecting this newly empowered center to some meta-normative order because this higher-level order will be faced, once again, with the challenge of monitoring itself.

66 This potential capacity of the Internet was overlooked by many observers who have argued that the Internet is likely to decrease the pluralism of civil society. Thus, for example, Peter Levine explains this prediction by what he sees as the domination of the Web by “consumerism,” which hinders the capacity of Internet users to invoke other, more civic oriented “roles.” See Peter Levine, *The Internet and Civil Society: Dangers and Opportunities*, IMP MAGAZINE (May 2001), available at http://www.cisp.org/imp/may_2001/05_01levine.htm (on file with the North Carolina Journal of Law & Technology).

67 As Niklas Luhmann notes, one of the attributes of self-reflection is the ability to ask “how am I operating as an observer and why do I make distinctions in this
if the diversification of the decision-making process would be influenced by some strategic considerations. Finally, admitting the risk of distortion does not mean that we should remain indifferent to it. One possible response is reflexive law, which could ensure that any distortion or frame will not be immune to change. Designing reflexive legal structures should allow the law to respond quickly to technological changes and experimental failures or successes.68

The link between multi-dimensional procedures and legal reflexivity points to another possible objection to the argument of this article. Reflexivity, especially in the sense of allowing greater flexibility or ambiguity in the decision rules by which society is governed, has its costs—an enhanced level of anxiety and uncertainty over the future. It may be that in some fields such as electing the basic political bodies of the nation, society might prefer stability over pluralistic sensitivity. However, governance is not exhausted by these rare moments of collective decision-making. Modern governance is composed of continuous and wide-ranging decisions, which require extensive input from the public. Even if society is not willing to give up stability in the context of these basic decisions, it can nonetheless incorporate the plurality stance at the micro level of governance.


68 A good example of a reflexive legal instrument is the Montreal Protocol. The drafters of the Protocol included in its provisions three reflexive proponents. The first was an institutional structure that included, alongside the usual treaty bureaucracy (meeting of parties, secretariat, and implementation committees), expert advisory bodies (three technological assessment panels). This institutional structure allowed the treaty to adapt quickly both to changes in the scientific understanding of the ozone problem and to the creation of technological solutions. The second was the requirement of periodic treaty re-evaluation based on new knowledge. The third reflexive element was the authorization given to the parties to change the treaty without the requirement of its changes being ratified. For a detailed assessment of the role of one of these advisory panels in the evolution of the Ozone regime (the Technology and Economic Assessment Panel), see Penelope Canan & Nancy Reichman, Ozone Connections: Expert Networks in Global Environmental Governance (2002). For an analysis of the institutional structure of the Montreal Protocol, see id., at 38–60.
V. Conclusion

Is it possible to design a decision-making scheme that will be pluralistic, in the procedural sense suggested in this article and, at the same time, produce binding and unqualified decisions (without which no society can function)? These conflicting demands—functionality and pluralistic sensitivity—create a difficult dilemma. If the decision-making scheme utilizes different discursive frames, each employing different evaluative criteria, it is not clear on what basis the decision-maker, whether a community or a single agent, can reach a decision in those cases in which the distinct criteria conflict. Designing a process that would be both fair in terms of its sensitivity to various discourses and individual types and reasonably efficient in terms of its ability to generate conclusive results might be an impossible task. Indeed, this argument reflects general skepticism about the ability of a pluralistic community to govern itself in a truly democratic fashion (i.e., to reach an agreement about issues of public concern through free deliberation).^69

However, the fact that a complete solution to the tension between functionality and pluralistic sensitivity is probably not attainable does not mean that the effort to improve our constitutional arrangements should be abandoned. Rather, a different constitutional strategy is called for that will replace the search for unitary governing structures with a polycentric and experimental approach.\textsuperscript{70} The pluralistic thesis thus calls for a reorientation of our democratic intuitions, exchanging the aspiration for consensual co-existence with a more modest hope to build a society that can accommodate perpetual disagreements.\textsuperscript{71}

\textsuperscript{69} See Dahl, supra note 64.
Achieving this accommodation requires imagination, willingness to experiment, and an attitude of tolerance toward one another.

The argument of this article has followed this path; it did not offer a complete resolution to the challenge of legitimate governance. Rather, it sought to offer new paths for experimentation, by focusing on the unique capacities of the Internet as a political medium. In particular, it was argued that the Internet could expand our democratic horizon by enabling the development of multi-form decision-making structures, which are more suitable to the reality of social pluralism. This multi-dimensional vision is lacking in many contemporary e-democracy projects, which merely copy off-line democratic practices into the Internet. Accepting this vision does not require one to denounce our existing constitutional frameworks; the multi-dimensional vision could be implemented without changing the basic structure of the political regime by applying it to the level of micro-fabrics of governance. A good example is the administrative process of environmental impact assessment.

Using the Internet as a political medium opens new paths for thinking about democracy. Utilizing these paths requires us, however, to refrain from transplanting the practices of the off-line world (as-is) onto the Internet.

we, as observers, live “in many different, equally legitimate, but not equally desirable, explanatory realities, and that in it an explanatory disagreement is an invitation to a responsible reflection of coexistence, and not an irresponsible negation of the other.” Maturana, supra note 25, at 31–32.