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ARTICLE

ON THE CENTRALITY OF INFORMATION LAW: A RATIONAL CHOICE DISCUSSION OF INFORMATION LAW AND TRANSPARENCY

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For the civil authority being more visible, and standing in the clearer light of natural reason, cannot choose but draw to it in all times a very considerable part of the people . . . .

—Thomas Hobbes, Leviathan

I. INTRODUCTION

The existence of a Computer and Information Law Journal presupposes the existence of information law. Information law, in turn, rests upon two premises. The first of these premises is that information is a legally cognizable concept — that it can be framed in legal terms and has legal significance. The second is that there exists a rationale for government regulation and provision of information, either explicitly (through legislation) or implicitly (through adjudication). This Article addresses those two premises in the context of official transparency, which is,
roughly speaking, a term referring to governmental openness and provision of information on government operations to the general public. In so doing, it explores the significance of transparency and information law to ordered society, broadly outlining why information law and, in particular, transparency are so worthy of serious scholarly consideration, both within this Journal and elsewhere.

This Article begins by looking at the nature of information. In doing so, it reviews the literature available from the developed field of information theory, as well as from the somewhat younger field of information law. This review produces a reasonable working definition of "information" in a legal context. This is followed by a similar review of transparency, drawn from a wide assortment of scholarly disciplines.

Next, this Article applies rational choice approaches to the issue of government regulation of information. Rational choice theory, drawn from the fields of economics and political economics, supposes that people act rationally in their best personal and strategic interests. Given the breadth of this subject, however, this Article focuses on one area of government regulation—that of requirements on governments to provide information to the public. Market failures related to inherent qualities of the marketplace for information provide a strong rationale for a policy of high official transparency. In addition, transparency is a vital response to certain problems of the political economy of government functioning. The centrality of transparency and information law to broad democratic participation in the ordering of public life flows naturally from these observations.

It is also important to note what this Article does not attempt to do. In focusing on the development of standards of official transparency as governmental regulation, it does not address rationales for governments to regulate information provision, content, or flow with respect to non-governmental sources. This is not because such issues are unimportant, but because this Article's purpose is to demonstrate the importance of developing official standards and policies for information disclosure regarding governmental operations. Nor does it establish a complete argument on all the social, economic, and political values inherent in governmental regulation of information—such an effort must await a much longer and comprehensively interdisciplinary work on this subject.

1. "I mean by 'rational choice theory' the . . . claim that, regardless of what sort of ends people pursue, they do so through strategic, instrumentally rational behavior." JAMES W. FRIEDMAN, GAME THEORY WITH APPLICATIONS TO ECONOMICS 2 (1986); see also KENNETH J. ARROW, SOCIAL CHOICE AND INDIVIDUAL VALUES (1963). But see Steven Shulman, What's so Rational about Rational Expectations? Hyperrationality and the Logical Limits to Neoclassicism, 20 J. POST KEYNESIAN ECON. 135 (1997). "Rational expectations is an example of 'hyperrationality,' a term Jon Ester has coined to describe an 'irrational belief in the omnipotence of reason.'" Id. at 29 (citation omitted).
In short, this Article is about rationales for and the centrality of information law with respect to government operations and it seeks no more than to stake a claim for the fuller study of transparency and information law.

Despite what this Article will argue is a fundamental role for transparency, and hence for information law, in governance of a healthy body politic, there has been very little written about transparency in legal scholarship in the United States. In the course of writing this and related scholarship, the author and his researchers have uncovered only a few dozen works in English over the past twenty years that deal with transparency in more than a cursory fashion. The large majority of those works have been produced by international organizations or have been books or conference proceedings, often published outside the United States. Others deal with very narrow aspects of transparency and law.

On the premise that United States law review articles provide a rough measure of the level of contemporary scholarship on a subject, it is worth noting that the author has identified only a small handful of law review articles dealing seriously with any aspect of transparency. There has

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been an extensive non-law literature dealing with information and transparency, but legal scholarship appears to have lagged. A purpose of this Article is begin to rectify that oversight.

II. WHAT IS INFORMATION?

"Information," even to information theorists, is a problematic term. The word as used in normal English parlance is hardly precise. Within the scholarly information theory literature, there appear to be two or three major approaches to the meaning of "information."

One major approach traces to Kenneth Arrow, the 1972 Nobel Laureate in Economics, who wrote that "[t]he meaning of information is precisely a reduction in uncertainty." This approach looks at information as something – anything – that alters the awareness of the recipient and makes that recipient perceive the world as a different place than it was before. What is clear from Arrow’s remark, even at first reading, is that there must be some interaction between the potential information and a recipient in order for the potential to become actual information. There must be some party whose uncertainty is reduced.

An interesting question is whether something that increases the recipient’s uncertainty constitutes information. Consider an example to clarify this problem. Reports of Galileo’s observations of four moons circling the planet Jupiter would, for many devout Catholics of his day, have introduced doubt into their worlds – doubt about the certainty of


the church’s scientific teachings. Would this mean that those reports were not information, since they did not bring about a reduction, but rather an increase in uncertainty?

Clearly, few people would now argue that reports of Galileo’s observations were not information at the time they were published. This is not simply a matter of judging the existence of information only after a few hundred years have passed. Nor is this judgment based upon the subsequent confirmation of Galileo’s observations by centuries of observation and decades of spacecraft. It would be foolish and unworkable to define information only in terms of what is later determined to be true or accurate. Would Galileo’s reports have been any less “information” had he been mistaken in what he reported? In contemporary terms, is a fresh UFO sighting “information”?

To avoid unworkable judgments about the verity of the supposed information, some scholars working within this first approach have taken the position that information is something that signals to the recipient some altered state of probability about the state of the world. Acknowledging that nobody knows the true state of the world, but that everyone manages to live within a broadly defined probability function encompassing all plausible states of the world, this group of theorists means by information anything entering a person’s consciousness in such a manner as to change that person’s probability estimates of the world’s state. In less technical terms, information is anything that changes how people view the world, however slightly.

The second major approach to defining information diverts focus away from the effect of the information on the recipient towards some inherent quality of data itself. One scholar chooses to measure information in units called infons, which is something like a quantum particle of information, just as a photon is a quantum particle of light. Given that economists, not particle physicists, have written most of the accessible literature on information, infons unsurprisingly bear a strong resem-

10. See generally Buckland, supra note 8, at 3-4. Buckland argues that truth is irrelevant, largely on the basis that it is unknowable. Id.

11. “In general, we could say that an information structure contains three elements: the set of possible states of the world, the set of possible signals, and the probability that a signal is observed given that a state prevails.” Louis Philips, The Economics of Imperfect Information 2 (1988).

12. Keith Devlin, Logic and Information (1991). In what is perhaps a scientifically-phrased reference to Arrow’s remark about information as that which reduces uncertainty, Devlin also remarks that information may be related in some fundamental way to entropy. See id. Entropy, a term from physics, including the Second Law of Thermodynamics, can be understood as an information concept as well, since information is, in some sense, a measure of the degree of order of any system. A completely random system — chaos — contains no information, whereas a system that is somewhat ordered contains some observable information.
In response to the old question about whether a falling tree in an unpopulated forest makes a sound, such theorists would give a resounding “yes.” Some authors suggest definitions of information as data and one even goes so far as to call information an intrinsic quality of the universe, ignoring altogether the role of human recipients.

A third major approach looks at information as process – one stage in the rendering of raw observation or data into intelligible or even meaningful messages to particular or generic observers. Thus, one author identifies information as the second stage of the sequence from data to information to knowledge to wisdom. Another, after a review of the relevant literature, notes that “a multitude of management textbooks refer to ‘information’ as being ‘data which has been processed in order to make it useful.’” A third argues that the word information refers to no object, just as there is no tangible correlative to the word “walk.” This scholar proposes instead that information is anything that informs. “Information is an activity of change” — revealing the process approach as being very similar to the position that information is that which reduces uncertainty.

One scholar neatly sums up these three possibilities by providing names to what he sees as the principal uses of the term “information”:

- “Information-as-process” – the act of informing.

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13. Utiles are the fundamental unit of utility employed by economists to permit them to apply uniform logical and mathematical functions to the broadly-ranging sets of preferences that particular actors may have when confronted with choices of goods or actions. In effect, utiles render preferences discrete and comparable.

14. See generally Jim Gilligan, Patterns on Glass: The Language of Games of Information, in PHILOSOPHICAL ASPECTS OF INFORMATION SYSTEMS 65 (R.L. Winder et al., eds., 1997). Gilligan notes that the equation of information with data that brings about a change in the subject raises and fails to resolve these tree-in-forest questions. Id. at 67.

15. See, e.g., ROGER G. NOLL, THE ECONOMICS OF INFORMATION: A USER’S GUIDE 26-27 (Institute for Information Studies 1993). Noll identifies three types of information: (i) “facts about reality”; (ii) some objective fact or conceptual model that reduces uncertainty about how the world works, perhaps by improving human decisions”; and (iii) communication that is value by the sender or receiver, perhaps exclusively as an end in itself.” Id. See also Gilligan, supra note 14. Gilligan offers that data and information are synonymous in some scholars’ works, but rejects this view as too narrow. Id. at 66.


19. See Gilligan, supra note 14. Thus, “walking” has meaning in referring to a particular type of action, but “walk” as a noun has no referent in reality and is merely a grammatically convenient restructuring of “walking.” Id.

20. Id.

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- "Information-as-knowledge" – that which is communicated by the act of informing, and
- "Information-as-thing" – the objects capable of providing knowledge through the application of process.

The definition this Article shall adopt will be narrower than, but consistent with, this range of scholarly usage. As this Article is, ultimately, about the provision of access to official information for social, political, and economic functioning\textsuperscript{22} – transparency – this Article defines information as that processed data which bears a reasonable possibility of altering the world perception of someone receiving the data.

For present purposes, this definition has several merits. First, it falls within the mainstream thinking of information scholars, in its use of modification of an observer's consciousness as one major definitional element. It does not, however, require an actual observer before dignifying data with the name of information, so long as data is of the type that could reasonably alter an observer's perception of the world. The need to identify actual observers would prove unnecessarily burdensome in developing a policy of prospective provision of official information to the public.

Second, this definition does not identify raw data as information, but requires some element of processing. Some element of thought is necessarily implicated in the processing, whether with respect to the data itself or in order to create a processing template for this sort of data. Within the context of transparency, raw (unprocessed) data presents too chaotic and burdensome a variant of information to provide material for effective social, political, and economic discourse.\textsuperscript{23}

Third, this definition introduces an element of "reasonable possibility." Unlike many more technical works in information theory,\textsuperscript{24} this Article is attempting to confront a real-world problem\textsuperscript{25} – exploring whether and why information about official actions and functions should

\textsuperscript{22} "The seeking, the acquiring, and the supplying of information is best understood as an economic and political activity . . . ." Id. at 127.

\textsuperscript{23} "Perhaps information is best described in terms of organization, implying that organization per se is the intellectual effort that manufactures information out of such raw material as observation. The more the organization, the higher the level of information. In contrast, where there is total disorder there is no information." Lucky, supra note 17, at 20.

\textsuperscript{24} It is worth noting, however, Buckland's remarks about "Information-as-thing": "[T]he term information is commonly and reasonably used to denote some population of objects to which some significant probability of being usefully informative in the future has been attributed." Buckland, supra note 10, at 51-52. Thus, for Buckland, our operating definition of information forms a portion of his fuller definition.

\textsuperscript{25} Schiller, supra note 8, at 29, notes that early information theorists encountered difficulties in applying their work to actual social situations, due to the excessively rigid formalisms required by the "rigorous codifications" of the theory.
be provided to the public. In a world of limited budgets and practical needs, reasonableness is an important constraint on any call for official action.

In defining information as that processed data which bears a reasonable possibility of altering the world perception of someone receiving the data, this Article is making no claim to present an exclusive definition. That is, more expansive definitions such as those discussed earlier are completely consistent with this definition and, in other contexts, are certainly more appropriate. That this definition falls comfortably within those other definitions allows this Article to address its narrow field of concern more concisely, yet without losing the benefit of the many insights that more encompassing theorists have achieved.

Such a definition is consistent with use of the term “information” in legal literature. Most recently, draft Article 2B of the Uniform Commercial Code attempted to make such a definition. In that draft, section 2B-102(22) defined “information” as follows:

(22) ‘Information’ means data, text, images, sounds, and works of authorship, including computer programs, databases, literary, musical or works, audiovisual works, motion pictures, mask works, or the like, and any intellectual property or other rights in information.

Note that this draft definition encompasses raw data which has been processed and embodied in some medium. What is unclear is whether the final “or other rights in information” goes beyond this embodiment requirement and renders the definition significantly broader than the working definition embodied in this Article. In a related provision, section 2B-103(c), the draft states that:

If a transaction involves both information and goods, this article applies to the information and to the physical medium containing the information, its packaging, and its documentation . . . .

This suggests that the drafters were making a distinction between the information embodied in some form and the embodiment itself. Such a distinction is, once again, consistent with the working definition used in this Article, even though the Article 2B definitions leave aspects of the definition uncertain.26 In this regard, Article 2B is not unlike the broad range of federal statutes seeking to deal with information.27 Even in

26. "In all, the Article 2B debate is remarkably thoughtful, and yet, like most discussions about information policy, uses language about 'information,' the 'network,' and a 'digital economy' as if these words refer to something already well understood." Peter Lyman, The Article 2B Debate and the Sociology of the Information Age, 13 BERKELEY TECH. L.J. 1063, 1067 (1998).

27. "Statutes restricting public access to information, the author argues, suffer from a legislative failure to define 'information.' The government's resulting vacillation between controlling information content and controlling information carriers leads to inconsistent . . . enforcement of, and confusing modifications to, these statutes." Korell, supra note 8, at 29. Similarly, "the author discusses impediments to the creation of effective legislation to
New Zealand, a country which has a strong history of information legislation, the term has been problematic:

In 1987, the public sector coverage of the [New Zealand Official Information] Act was extended in the Local Government Official Information and Meetings Act . . . to include all local authorities. . . . The word 'information' is not defined in either Act but is meant to be interpreted in its broadest sense. Indeed, the Danks Committee [on Official Information] intended 'information' to include not only recorded data, but also knowledge of a fact or state of affairs by officers of an agency in their official capacity.28

III. WHAT IS TRANSPARENCY?

An increasingly important term in information theory and law is "transparency."29 Transparency appears as a term of art in the scholarly literature of many fields30 – corruption,31 disarmament and arms control,32 economic development,33 environmental protection,34 financial
markets, governance, international organizations, political economy, regulation, and trade. A review of how transparency is de-


39. E.g., Asian Development Bank, 1997, supra note 4 (analyzing the regulatory approaches to utilities in developing Asian economies); Chayes, supra note 3 (noting international regulatory agreements); Mestmacker, supra note 6 (discussing regulation of natural gas pricing in Europe).

fined and used across this spectrum of disciplines will both enlighten this Article and demonstrate why there is a need for a coherent analytical framework for considering information law, in general, and transparency, in particular.

There are several elements to how the relevant literature treats transparency. The first element is that transparency arises in the context of governmental and organizational action. Thus, the term may arise in relation to governments and government officials, international/intergovernmental organizations, or private bureaucracies or corporate enterprises working under government programs or supervi-

41. Rekosh, supra note 30 at 1, notes that the term “transparency” “has taken on a particular meaning with respect to law-making bodies, where transparent procedures are necessary to ensure the political accountability of those enacting legislation.” Id. The 1997 GATT Appellate Body decision regarding US restrictions on imports of cotton and man-made fiber underwear from Costa Rica, WT/DS24/AB/R (Feb. 10, 1997), stressed the importance of transparency with respect to “governmental acts”:

Article X:2 [of the General Agreement on Tariffs and Trade] may be seen to embody a principle of fundamental importance—that of promoting full disclosure of governmental acts affecting Members and private persons and enterprises, whether of domestic or foreign nationality. The relevant policy principle is widely known as the principle of transparency and has obviously due process dimensions. The essential implication is that Members and other persons affected, or likely to be affected, by governmental measures imposing restraints, requirements and other burdens, should have a reasonable opportunity to acquire authentic information about such measures and accordingly to protect and adjust their activities or alternatively to seek modification of such measures.

Id. See Ernst-Ulrich Petersmann, How to Promote the International Rule of Law: Contributions by the World Trade Organization Appellate Review System, 1 J. INT’L. ECON. LAW 25, 45 (1998). See also Pillai, supra note 3. Likewise, Pillai talks of transparency with respect to “government policy,” id. at 36, and “public officials, including local authorities,” id. at 37 (both statements of law professor Shad Saleem Faruqi, of the Mara Institute of Technology in Malaysia), and of starting with “the top, with the authorities.” Id. at 113 (statement of Mr. Azzat Kamaluddin, a member of the Securities Commission of Malaysia). United Nations, supra note 32, addresses the transparency regarding military matters [¶ 14, p. 4], a central governmental activity. Similarly, ASIAN DEVELOPMENT BANK, 1998, supra note 2, addresses transparency as “a requirement of regulators,” id. at 21, and ASIAN DEVELOPMENT BANK, 1997, supra note 4, points out that transparency is necessary “to increase confidence in the legitimacy of a government.” Id. at 34 (quoting Ms. Ruth Richardson, former finance minister of New Zealand).

42. Chayes, supra note 3, looks at “the policies and activities . . . of any central organs of the [treaty] regime, in addition to those of the parties to the treaty.” Id. at 135. Similarly, IMF Study Group 1998, supra note 37, considers the transparency of procedures of the IMF.

43. Cross, supra note 3, reviews the transparency of both state and private sector development agencies operating under a variety of South African government programs.
Given the bureaucratic involvement in all these uses of "transparency," the focus of this Article on governmental provision of information is within the range of professional discussion of official activity.

The second element that is common to the diverse literature on transparency is that it involves the availability of information. Sometimes, this is expressed as a duty to make information available to those who seek it or a general requirement of visibility of information. In other sources, a more active stance is described. This commences with a concern for information processing.

The third element involves the audience for or recipients of the information provided or made available. Often, the referent group is the pub-

44. For example, the design of a computer-based trading system for investment derivatives involves having a self-regulatory private bureaucracy design a transparent system of reporting about "open or unexpected orders and completed transactions" that is capable of satisfying regulatory authorities. INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS, supra note 35, at 8. Similarly, Mestmäcker, supra note 6, at 748, considers the price transparency requirements that are appropriate to place upon natural gas providers under European Community regulatory structures.

45. Chayes, supra note 3, defines transparency, in part, as "the availability and accessibility of knowledge and information . . . ." Id. at 135. CROSS, supra note 3, talks of transparency as having "access to information." Id. at 3. INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS, supra note 35, states that "[t]he term 'transparency' refers to the extent to which relevant information is available in the system . . . ." Id. at 8.

46. See generally O. Long, PUBLIC SCRUTINY OF PROTECTION: DOMESTIC POLICY TRANSPARENCY AND Trade Liberalization (1989). According to Long, transparency "refers to the visibility of effects . . . ." Id. at 14, p.4. Mestmäcker, supra note 6, talks about "the obligation on the part of undertakings to make known the prices they charge in certain transactions." Id. at 748. Similarly ASIAN DEVELOPMENT BANK, 1998, supra note 2, inquires into whether major regulatory decisions and reasonings are published, not merely made available to those who inquire about them, id. Annex 1, at 2-3, and describes "a requirement on regulators to explain their decisions and processes." Id. at 21.

In other cases, parties with a defined relationship to the information are those for whom transparency is sought. Sometimes, a more generic term is used for interested parties with informational interests.

The fourth element of "transparency" involves fundamental accuracy and clarity. This may take the form of concern over the presentation of data. It may be expressed in broad requirements that information be, for example, "observable and comprehensible" and "readily understandable," or by reference to its "quality and completeness" or "essential meaning." Alternatively, this element may be expressed with reference to its effect upon those who receive the information, in terms of their ease of understanding or the ability of the target audience to make use of the information, particularly in holding government officials accountable.

49. Cross, supra note 3, writes of "the principle that the development process should be open and public," id. at 14, and describes the proper beneficiaries of transparency as "community members." Id. at 3. OECD, supra note 2, refers to "the general public" as the intended audience for "external transparency." Id. at 10. Similarly Asian Development Bank, 1998, supra note 2, asks whether documents are "in the public domain." Id. Ann 1, at 2. Pillai, supra note 3, inquires about the information available to citizens: "How is a citizen expected to know what laws bind him, what procedures apply to him unless the existence of the laws is known and their availability assured?" Id. at 37 (statement of law professor Shad Saleem Faruqi, of the Mara Institute of Technology in Malaysia).

50. In interpreting the transparency principle of GATT Article X:2, the 1997 GATT Appellate Body decision regarding US restrictions on imports of cotton and man-made fiber underwear from Costa Rica, supra note 41, expressed concern for the informational interests of GATT "Members and other persons affected, or likely to be affected, by governmental measures...." Id. See Petersmann, supra note 41, at 45. In a similar functional vein, OECD, supra note 3, states, "Internal transparency refers to the quality and completeness of information available to decision-makers within governments ... ." Id. at 10.

51. Thus, the IMF Study Group, supra note 37, refers to the transparency interests of "stakeholders." Id. at 5.

52. See, e.g., Nam, supra note 40, at 65. "The form in which data is presented should be chosen to maximize its informational value." Id.

53. Id. at 66.

54. Pillai, supra note 3, at 114 (statement of Mr. Azzat Kamaluddin, a member of the Securities Commission of Malaysia).

55. OECD, supra note 2, at 10. Similarly, Pillai, supra note 3, states: "Transparency, as I understand it, connotes clarity, ease of understanding and recognition and, most important of all, to my mind, the quality of being candid, open or frank." Id. at 114 (statement of Mr. Azzat Kamaluddin, a member of the Securities Commission of Malaysia). Readers may find interesting in this remark the descriptive blending of the effect of transparency on the recipient and the essential character of the presenter of information.


57. Long, supra note 46, defines "domestic transparency" as "procedures that provide for public scrutiny ... and that promote domestic understanding ... ." Id. at 21 (emphasis added).

58. Rekosh, supra note 30, states that "transparent [legislative] procedures are necessary to ensure the political accountability of those enacting legislation." Id. at 1.
“[g]reater transparency often makes information more accurate and more symmetric; therefore it reduces or even eliminates some transaction costs.”

What is common among these uses of the term “transparency” is instructive and provides a working definition of transparency that will enlighten this Article’s rational choice discussion of information law:

*Transparency is a measure of the degree to which the existence, content, or meaning of a law, regulation, action, process, or condition is ascertainable or understandable by a party with reason to be interested in that law, regulation, action, process, or condition.*

This Article deals with official laws, regulations, actions, processes, and conditions: collectively, official activity. A simple, but fair approximation of the definition of transparency already given would adopt this linguistic shortcut and place the definition in the context of information:

*Transparency is a measure of the degree to which information about official activity is made available to an interested party.*

With this definition in mind, this Article may now turn to the task of identifying rationales for transparency.

### IV. THE INFORMATION MARKETPLACE

#### A. Market-Failure Analysis

1. *Information as Commodity*

Information is an odd sort of product:

Is the economic value of information that of a commodity, something produced for commercial purposes, or is it better understood as a raw material? If it is not a commodity, is it better conceived of as a flow, a service, or a utility? Does information itself add value, or is it the innovative use of information that is the origin of economic value? If so, how might this change the relative position of producers and consumers of information property in an information economy?

A review of the unusual economics of information will elucidate why traditional conceptions of markets fail to deal properly with the informational needs of society.

With information, there is always an initial cost, which includes both the acquisition of data and its organization into useful information. In effect, there is a substantial cost in producing the first copy of the organized data – the information – and it should come as no surprise that this is called a “first copy cost.” Once a first copy has been made, there are dissemination costs associated with producing and distributing


60. Lyman, *supra* note 26, at 1069.

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additional copies of the same information. However, the medium of the additional copies is usually a fairly minor cost in comparison to the first copy cost—witness the costs of computer disks as compared to computer programming, paper and printing as opposed to original writing, and photoreproduction as opposed to painting the Mona Lisa. Furthermore, it is the informational content, not the physical medium in which it is carried, that most interests the consumer. Ironically, however, one can duplicate the information merely by reproducing the exact state of the physical medium. Even with respect to the Mona Lisa, approximate reproduction of the canvas and paint through photoreproduction will convey enough of the original information content of the painting to satisfy most casual art lovers.

The sale of information fails to impose a normal cost upon the seller. The sale of an ordinary good deprives the seller of its use: one who sells a car to her neighbor no longer has the right to drive it when she pleases. With information, however, this is not so: one who provides a friend with a duplicated audiocassette can still listen to the original copy and one who copies a computer program need not remove it from her own computer. There is essentially no loss of utility to an information supplier, unless it relates to the exclusiveness in using the information, as with a trade secret.

A consumer of information incurs additional costs subsequent to acquiring the information-in-a-medium. In order for the consumer to use the processed data (in the hope of altering her perception of the world), she must internalize the materials by reading, contemplating or otherwise utilizing them. Thus, the real cost to the consumer includes not just the money to purchase the information, but the time and bother of using it, which is often far greater. For most readers, the time opportunity cost in reading War and Peace is far greater than the cash cost of purchasing a copy of the novel. In a real sense, the cost to acquire the information is typically only a small portion of the cost of using the information. However, producers do not profit from consumers' costs to use

62. Id.

63. Given DaVinci's broad genius, the intellectual opportunity costs of his time and effort in painting the Mona Lisa were enormous!

64. "Processing ordinarily converts old materials into new. Information processing, however, can create new information while leaving the old information intact." Buckland, supra note 21, at 11.

65. "One important characteristic of information is that it necessarily requires time and effort to internalize, whether the purpose of using it is pure consumption, an increase in production efficiency, or improved decision making." NOLL, supra note 15, at 29.

66. According to Adam Smith, "[t]he real price of everything, what everything really costs to the man who wants to acquire it, is the toil and trouble of acquiring it." Adam Smith, quoted in Buckland, supra note 21, at 129. See also NOLL, supra note 15, at 28-29.
information, beyond acquisition costs, since none of the consumer's costs to use information returns to the producer.

Thus, one of the defining characteristics of most commerce in information is the low cost of per-unit reproduction and dissemination compared to first production. Another is that the producer will not profit from the non-monetary aspect of the consumer's cost to locate, acquire, and use the information. These are, of course, related phenomena, and are very familiar in the context of movies, music, and software. The per-unit cost of placing the appropriate laser-readable pattern on a compact disk and packaging it for consumers is inconsequential compared to the cost of creating and recording the initial video, audio, or programmatic information. Furthermore, any consumer with a minor investment in equipment is fully capable of producing another copy for a friend at almost no cost.

This description, of course, is the cottage industry end of piracy, which cumulatively costs the industries involved billions of dollars each year in lost revenues. The technological battles to prevent this practice and the legal issues of intellectual property rights for information products are fascinating. They are also beyond the scope of this Article, which must content itself with recognizing the essential economics and public policy concerns of information marketplaces. It is enough to say that there are often insufficient means available for a producer to obtain compensation for an initial investment in an information product, despite what may be substantial market demand for the product. There are likely to be many potential consumers who are willing to pay the per-unit distribution costs for their copies, but are unwilling to pay any or a significant portion of the first-copy costs.67

Where there is substantial demand and no workable means to ensure a worthwhile return to anyone producing goods to satisfy the demand, there exists a problem known by the generic term "market failure." More particularly, this type of market failure is referred to as the failure of the "commons" or the problem of a "public good."68 "Commons" refers to an old practice of some western European communities of providing an area of common grazing land for livestock belonging to local residents. Fortunately, this clever example of early community planning failed miserably, leaving economists with a wonderful model for market failure: everyone used the common grazing area first, until it became worthless.69 Since nobody owned the property, nobody had an incentive

67. NOLL, supra note 15, at 33-35.
68. NOLL, supra note 15, at 36; see Buckland, supra note 10 at 133-135; Perelman, supra note 9, at 186 (including Arrow and Hayek references).
69. This can be analyzed in terms of the prisoner's dilemma. Garrett Hardin, The Tragedy of the Commons, Science 162:1244 (1968). See also ELINOR OSTROM, GOVERNING
to keep it up or add to it. On a considerably greater scale, this was also the problem with upkeep of productive property in Soviet countries. That which is owned by all is cared for by none.

From this historical example, one can observe that the essential qualities of a public good are those of a desirable product that nobody has a particular incentive to produce because there is no way to limit, allocate, or regulate its availability. In effect, everyone wants someone else to produce it, so that they can consume it without significant cost — the "free rider" problem. The cost structure of information, including the ease of reproducing it and the fact that it is not lost to a transferor, makes most forms of information public goods and threatens to make free riders of most information consumers.

Public goods have certain characteristics. Without means to recover creation and production costs, they are underproduced. With insignificant costs to the consumer to acquire or use them, public goods are overconsumed. Taken together, these two characteristics describe a market out of equilibrium, where the forces of supply and demand have not balanced out. Adam Smith's invisible hand has let public goods, such as information, slip through its fingers.

B. MARKETING INFORMATION PRODUCTS

With any public good, a question exists as to how to supply enough of the product to begin to satisfy the unmet demand. Along with this goes the companion problem of identifying a mechanism, through price or otherwise, that will facilitate distribution of the product.

Begin with a model that only slightly deviates from reality. Consider valuable information, like an important database, located on a computer in someone's home. It is possible to provide someone else with a full copy of that information in an essentially cost-free manner through modems and subscriptions to unlimited access Internet provider packages. Accepting that approximation as a reality, look at the supply, pricing, and distribution issues surrounding an information product with high first-copy costs and zero dissemination costs.

No economically sensible party will assume the risks and other costs of producing a product which has no prospect of repaying those costs upon sale. Therefore, unless sale of copies of the database will provide enough revenue to cover the costs, nobody will undertake the data gathering and processing needed to create the first copy of the information. But who will pay the price?

THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (1990); Chayes, supra note 3, at 147(discussing both works).

70. For discussions expanding upon the remarks in this paragraph, see NOLL, supra note 15, at 30-40; Buckland supra note 10 at 133-135; Perelman, supra note 9, at 186.
Once the database is sold to the first consumer, a problem arises. Subsequent consumers can argue, reasonably, that they should be able to obtain the information free of charge, assuming that there is no competitive or social reason to keep the information confidential. Why? If it does them good to receive the database, costs nothing to obtain it, and does not deprive any other party of the equivalent opportunity to use the information, then free distribution of the product will actually advance social welfare. This logic, of course, applies equally to the first consumer receiving the already-made information from the originator. Furthermore, what first consumer would be willing to pay all of the first-copy costs of the information, knowing that other consumers should (and likely will) receive the same product free?

The result of this analysis, of course, is that there will be no consumers willing to buy the information. Even if a seller re-instates a modest distribution cost for the information, essentially the same result occurs. There are still no consumers willing to bear any part of the first-copy cost, only consumers willing to bear the distribution costs for their own copies. "If I give you a blank disk, will you give me that computer game?"

The last remark, and the analysis that led up to it, does not reflect the entire reality of information marketing, but is a testament to government intervention, including transparency about government operations. Governments provide a variety of supports and protections for information industries, including substantial intellectual property protection. Through various devices, including patents and copyrights, creators of intellectual property are given the right to increase the copying costs by third parties substantially - pirates must calculate lawsuits and

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71. For example, if the database consists of the entire list of corporate customers, sorted by income and buying preferences; or a list of private parties ordering from a pornographic magazine; or a list of overseas foreign operatives, there are clear reasons for keeping the database confidential. Buckland, supra note 10, notes that:

There may be an advantage in a competitive situation if others remain ignorant or misinformed. Trade secrets, military intelligence, and advance market information can be beneficial to those privileged to know them. . . . Such knowledge is a valuable asset and the expression of the knowledge in the form of information is a valuable commodity when all of the following conditions are met: there is a competitive situation, the information is instrument (useful for some purpose), and the information is scarce in the sense of being restricted.

Id. at 135.

72. "[I]f the cost of transmitting a given body of information . . . were zero, then optimal allocation would obviously call for unlimited distribution of information without cost . . . . [A]ny information . . . should, from the welfare point of view, be available free of charge (apart from the cost of transmitting information)." Arrow, supra note 1, at 614-616, as quoted in Perelman, supra note 9, at 189.

criminal prosecutions in with the cost of the computer disk. Government enforcement of such artificial devices as “shrink-wrap” licenses provides software producers with additional, contractual means of altering the dynamics of the marketplace for certain types of information.74 Even with these interventions, however, distribution-cost software and music tapes abound.

Government support of one form or another is an economically appropriate response to market failures of this sort. Few would argue that production of patentable items would not suffer if the patent laws were repealed. Another government response to this market failure has been to support research and development efforts – in effect, subsidizing the first-copy costs of information. This policy has been most successful when it has resulted in sale of the information at a price reflecting distribution costs only. Such is the case with the Internet, which began life as a government-subsidized communication system for a handful of university researchers. Where subsidized research and development has led to a product that is also protected by patents or other intellectual property monopolies, consumers have had to pay twice – through the subsidy and through being charged for the never-incurred first copy costs of the product. It is the failure to follow through with the marketing logic of government support, not the support itself, that is the problem in those instances.

In sum, the first rationale for government involvement in providing information lies in the nature of information as a commodity. With high initial costs and very low distribution costs, there are inherent market failures built into the information marketplace. Where the information begins as data generated by governmental operations and held in government files, the argument for government underwriting of the first copy costs is undeniable. If such information is to enter the world at all, it must do so at government expense. One logical consequence of the market’s failure to handle information rationally is that governments need to counteract these market failures. This is especially true where the government itself creates or initially possesses the information, thus providing a fundamental rationale for transparency.

Please note that this is not the same as espousing a policy of freedom of information, such as is embodied in the United States Freedom of Information Act.75 The policy underlying that act is one of reactive sharing of information, whereby a government has the responsibility to provide

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information in government hands to those who request it (except with respect to specified exceptions). The policy discussion in this Article is significantly broader than that – that there is a governmental responsibility to be proactive in providing society with substantial information about its own, and the society’s, functioning. Although the full scope of what information should be provided must await a longer and more thorough work in this area, it would be fair to compare the approach of FOIA to the fuller and more proactive stances of the environmental impact statement required under the National Environmental Policy Act\textsuperscript{76} or the prospectus requirements on corporate issuers of securities under the Securities Act of 1933.\textsuperscript{77} In fact, the scope of governmental provision of information argued for in this article goes beyond these two examples, in that they require information to be provided whenever certain actions are contemplated, whereas the policy consequences of the arguments made in this Article would require provision of information in government hands merely because it is in government hands and is of value to society – transparency in government operations.

V. POLITICAL SIGNALING ANALYSIS

A second rationale for governmental transparency lies in the signals such a policy sends to the world. This section considers the concept of signaling, with heavy reliance upon the work of game theorists who have analyzed this concept, and addresses the relationship of signaling to official policies of transparency.

Signaling is a term that has found currency in rational choice analysis based upon mathematical game theory. As this Article’s author has discussed at length in an earlier work,\textsuperscript{78} signaling describes the transmission of information from one party to another in conditions where various players in a competitive game must operate in conditions of less than full knowledge. Examples of signaling include bidding in bridge,\textsuperscript{79} bluffing in poker,\textsuperscript{80} and finishing a degree in job hunting.\textsuperscript{81} In each case,

\textsuperscript{76} National Environmental Policy Act, 42 U.S.C. § 4321 (1994).
\textsuperscript{79} \textit{John Von Neumann \& Oskar Morgenstern, Theory of Games and Economic Behavior} ¶¶6.4.2, 6.4.3, at 52-55 (1953) (noting general discussion of signaling in both bridge and poker). It is assumed throughout this article that readers are familiar with bridge and poker. For those readers who are not familiar with these games, however, a basic discussion of the fundamental concepts can be found in EDMOND HOYLE, HOYLE’S RULES OF GAMES: DESCRIPTIONS OF INDOOR GAMES OF SKILL AND CHANCE, WITH ADVICE ON SKILLFUL PLAY 1-33, 34-63 (Albert H. Morehead & Geoffrey Mott-Smith eds., 2d ed. 1983) (discussing the rules of bridge and poker, respectively).
\textsuperscript{80} Von Neumann, \textit{supra} note 79, at 188-189 (analyzing of signaling in the context of bluffing in poker).
the party taking the action does so with the intent of conveying some information, whether true or not, to others involved in the communal activity.

A closer look at these three examples will reveal some useful concepts.

In bridge, every bid—say by the person sitting as East—conveys information to the other three people, sitting as East’s partner, West, and as East’s opponents, sitting as North and South. Within a game theoretic analysis of a bridge game, one can say that East-West is one “player” with two personae, competing against a similarly bifurcated North-South “player.” Because the two human halves of each player do not share all their knowledge with each other, it becomes necessary to hold an “internal” conversation that can be overheard by the opponent. Without such a conversation, the East-West player cannot know what bridge contract holds the greatest promise for scoring points. Clearly, there are times when such an internal conversation is highly valuable for producing consistent and rewarding behavior. Indeed, management theory includes analyses of methods of achieving worthwhile information flows within organizations.82

In poker, each person is a distinct player, with rather immediate financial conflict with each other player. Because of the betting element of poker, each player necessarily engages in a formalized conversation with all other players—a conversation that reveals, or purports to reveal, something about the quality of the player’s hand. If a player actually wished to reveal the true quality of her hand, she could simply (and unconventionally) show all the other players her cards. Obviously, this naive approach is not a winning poker strategy. Instead, the informational aim of the communications made during betting includes misdirection. Without bluffing, strong bets would indicate strong hands. It is only by bluffing, or engaging in false signaling, that the information content of a betting pattern can be obscured sufficiently to make the game of poker strategically interesting and the winning of large pots possible.

It is well established that college graduates can expect, on average, significantly higher lifetime earnings than those without college degrees. Indeed, there are many jobs that are only open to college graduates. What is intriguing about these statistics is that, broadly speaking, it does not matter what a graduate’s major was, either in lifetime earnings

81. See infra note 83.

82. See Michael L. Tushman and David A. Nadler, Information Processing as an Integrating Concept in Organizational Design, 3 Acad. of MGMT. Rev. 213 (1978) (applying information processing analysis to the question of appropriate organizational structure); Roland Kempe Hope, Sr., Development in the Third World: From Policy Failure to Policy Reform 147 (1996) (discussing of the informational role of feedback in administrative reform).
or in landing that first job. What appears to matter is simply that the job applicant finished college. This implies that the actual studies undertaken are seen by employers as largely irrelevant, so long as the applicant has demonstrated the intelligence and perseverance to complete a college degree. That is to say, the act of obtaining a college diploma is a signal to potential employers, independent of any information about actual courses taken. College graduates put themselves through four or more years of hard work, at significant expense and opportunity cost, largely for the sake of distinguishing themselves from their less intelligent or less dedicated counterparts among high school graduates.

The stability of this signaling pattern reveals it as what is referred to by economists and game theorists as a separating equilibrium, involving the use of a signal to distinguish oneself from those for whom the signal is too onerous to send.

Bridge, poker, and the education-employment link reveal three very useful aspects of information and signaling: internal signaling, false signaling, and signals as separating equilibria. All three of these bear upon the issue of governmental transparency.

In today's world, governments are responsible for a wide array of regulatory functions. In order to perform such functions in a proper and consistent manner, different branches of government need to share information with each other. The grand experiment of centralized planning begun with the Russian revolution ended in administrative failure because, at least in part, of the inability of the Soviet bureaucracy to keep up with its own information needs.

Information flow from each corner

83. Much of this paragraph is based upon an analysis of the separating equilibrium function of higher education set forth in Phlips, supra note 7, at 123-128 and Michael Spence, Market Signaling: Informational Transfer in Hiring and Related Screening Processes (Harvard U.P. 1974).

84. Unfortunately, financial capacity varies among high school graduates, too, so that the signal is clouded somewhat: failure to obtain a college degree may relate to access to capital rather than lack of characteristics that employers would deem desirable. In game theoretic terms, this would be a major argument in favor of broadly available student loans and grants - to clarify the educational signal for the after-degree marketplace.

85. See Phlips, supra note 7 (dealing with separating equilibria in chapter five).

86. Consider: Tushman, supra note 82, writing of the needs of organizations, including governments, for good internal flows of information:

[A] critical task of the organization is to facilitate the collection, gathering, and processing for information about how different components of the organization are functioning, about quality of outputs, and about conditions in external technological and market domains. In short, organizations must develop information processing mechanisms capable of dealing with both external and internal sources of uncertainty.

Id. at 614, and Asian Development Bank, 1998, supra note 2, writing of the information flow within certain types of governments: "In centrally-planned economies, and also in heavily corporatist systems found in some developing Asian economies, economic regulation is carried out by Ministries. . . . The key point about such regulatory systems is their
of the government is important both for the potential utility of the information itself and as an internal signal to other branches of government that they can expect informational cooperation. If any branch hesitates to share its information with other branches of government, this internal signaling has significance not just for the information given or not given, but for the uncooperative attitude that other branches can expect to see in the future.

Many people do not trust governments, in general, or their own governments, in particular. Whatever they hear from governments is suspect and is viewed with little more credence than the bids of a poker player might be viewed. In order to prevent government communications from being dismissed as mere false signaling, a consistent pattern of credible signaling must be established by the government. Both bad decision-makers and conspiracy theorists thrive under conditions of inadequate information. The best way to combat suspicion of false signaling is to provide a consistent record of information flow.

A consistent pattern of government provision of information also serves to separate open governments from those unwilling to be open with their people. In a government riddled with autocracy, corruption, or incompetence, an open information policy would be unwelcome. A strong flow of information about government operations would undermine the government's pattern of operation by creating public pressure for democracy, integrity, and efficiency. In effect, the cost to government officials of open information would be too high for them to want to provide it. Since only governments that are already essentially democratic, honest, and efficient can afford to provide open access to information about government operations, the act of providing such information necessarily separates such governments from those lacking these features.

The need for transparency and open information policies is not limited to the executive branch of a government. Without the clarity of transparent opinions, courts would not be trusted.\footnote{87} Legislatures must

\footnote{87} "[The] Court was faithful to the democratic tradition [when it] wrote in words that all could understand why it did what it did. That is vital to the integrity of the judicial process." W. Douglas, Stare Decisis: Eighth Annual Benjamin N. Cardozo Lecture to the
operate openly, to command respect and obedience for the laws they produce. In sum, transparency about government operations serves three important signaling functions. Internally, transparency signals that interdepartment cooperation may be expected and strong and cooperative results obtained from government operations. Externally, transparency undercuts public fears of false signaling and distortion, thereby limiting conflict between the government and the public. Finally, transparency serves to separate essentially sound governments from those which cannot afford to provide transparency about government operations.

VI. POLITICAL ACCOUNTABILITY ANALYSIS

The third rationale for government involvement in providing information – for governmental transparency – lies in the need for political accountability of governments. Transparency separates sound governments from those that are less sound. Not only does a policy of transparency identify those governments with sound policies, but such a policy also serves to keep those governments accountable and productive.

Transparency about government operations and the finances of government officials is a primary means of deterring corruption and of uncovering it when it occurs. “Corruption can undermine the effectiveness of institutions. Implementation [of policies] will improve if procedures are transparent, opportunities and incentives for fraud are reduced, and officials are held accountable.”

It is no accident that a major non-governmental organization in the global fight against official corruption is


88. Rekosh, supra note 30.


90. Boeninger, supra note 31, at 284.
called Transparency International. In the United States, such laws as the Freedom of Information Act, the federal lobbying act, and the acts and practices requiring disclosure of the private finances of public officials, all speak to this truth. Similarly, the New Zealand Official Information Act is an example of a statute embodying a degree of official transparency regarding governmental operations. This link between increased transparency and decreased corruption is true throughout the world:

Advisor to the Prime Minister Khalid Anwer of Pakistan raised a significant problem largely undisussed in the morning presentations: the presence of corruption and graft as an impediment to economic development and prosperity, a growing problem in a number of the countries of the region. He related the problem of corruption and graft directly to a lack of transparency in legal and governmental processes, arbitrary official behavior, and unstructured governmental processes.

Even more broadly, transparency has value in preventing and revealing rent-seeking. Bribery is, in a sense, only the unacceptable end of an entire spectrum of lobbying activities, all of which are forms of rent-seeking and none of which is truly productive for society.

In economic terms, “rent” is the excess benefit available from inefficiencies or structural problems in the marketplace. Thus, an unregulated monopolist is able to charge a “monopoly rent” to its customers at a level just low enough to prevent a new market entrant from disturbing

91. Transparency International is an international NGO dedicated to the elimination of corruption in developing countries through encouragement of principles of transparency and the components of effective national systems for governmental integrity. Transparency International has a home page at <http://www.is.in-berlin.de/Service/ti.html>, and its “corruption perceptions index” also appears on the World Wide Web at <http://www.uni-goettingen.de/~uwvw/icr.htm>.

97. Dixit, supra note 38:

Where degrees of freedom are available for normative use, policymakers should try to put in place, and facilitate the operation of, various “coping mechanisms.” They should reduce informational asymmetries and improve mechanisms that can control opportunism. Conversely, they should try to avoid policies that create new transaction costs or increase existing ones. Policies like import quotas and price controls, which create artificial rent and then lead to political games to capture and perpetuate these rents, are particularly pernicious in this regard. Of course, many actors in the political process are trying to achieve exactly the opposite, namely, to create rents that they can then appropriate for their private needs regardless of the social costs.

Id. at 148.
its monopoly. A shift to government auctioning of radio frequencies is a move to capture for government use the rents associated with the fact that radio frequencies are not infinitely divisible, making a radio oligopoly inevitable. In some instances, lobbying takes the form of efforts to create special market conditions that create rent capturable by the lobbying interests – for example, arguments that industry crises exist that require special government appropriations in support of members of the industry.

All such effort to locate and obtain rent – rent-seeking – is allocative rather than productive. In other words, such activity concerns itself with getting a bigger slice of the pie rather than with increasing the size of the pie. In that sense, rent-seeking, although often beneficial to the one engaging in the practice, is unproductive for society as a whole. For example, official corruption increases opportunities for rent-seeking behavior by market participants.

Although transparency cannot eliminate rent-seeking, it can moderate it. This Article has already mentioned one way in which it does so – by revealing and thereby suppressing bribery and related forms of official corruption. But it can also moderate rent-seeking which is less

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99. “Similar ‘market failure’ arguments hold more generally for spectrum. . . . In the absence of public intervention, interfering signals would compromise operators’ capability to use scarce spectrum frequencies. Moreover, being a scarce resource, it is reasonable that the public owner would derive an appropriate economic rent from its use.” Maria Vagliasindi & Pietro Vagliasindi, The Economics of Auctioning and Related Regulatory Issues: The Economic Viability of the Auction Provision of the Bill and Alternatives for Direct-to-Home Licenses, 5 CARDOZO J. INT’L & COMP. L. 467, 469-470 (1997).

100. See Dixit, supra note 97. But see Pablo T. Spiller, Politicians, Interest Groups, and Regulators: A Multiple Principles Agency Theory of Regulation, or ‘Let Them be Bribed,” 33 J.L. & ECON. 65 (1990), for an argument proposing Congressional recapture of rents that regulated industries are willing to provide to regulators for favorable exercises of discretion as a socially desirable alternative to prohibiting regulated industry influence on regulatory action.

101. It is, in fact, also unproductive for any unsuccessful rent-seeker, who will have expended rent-seeking resources without a corresponding increase in governmentally-allocated rents. Interestingly, this all-or-nothing aspect to rent-seeking (as compared to more directly productive activity) is an incentive for any lobbying group to spend rather more on their lobbying activities than strictly necessary, as a kind of insurance against losing the entire lobbying investment through slight underspending.

102. Hope, supra note 82: “Finally, corruption yields effects on administrative development. . . . It has been found that corrupt bureaucrats and leaders export their corrupt activities to other institutions by exerting influence and pressure on other public officials as a means of sustaining rent-seeking opportunities.” Id. at 137-38 (citing to David J. Gould & Jose Amaro-Reyes, The Effects of Corruption on Administrative Performance: Illustrations from Developing Countries, World Bank Staff Working Paper no. 580 (Washington, D.C.: World Bank 1983), pp. 27-35).
crude and more legal. At its purest and most legal, rent-seeking takes the form of lobbying through argument, political special-pleading. Here, too, transparency has value.

Political argumentation typically takes the form of saying that “X (which happens to be good for me) is good for society as a whole.” Although one may be suspicious of the speaker’s altruism in proposing X, such a statement is not necessarily false and may provide a valid rationale for government action. The challenge, therefore, is to distinguish true from false instances of such claims. “With perfectly informed citizens, elected officials would not be subject to the blandishments of lobbyists, since the constituents would then know if their interests were betrayed and defeat the unfaithful representative at the next election.”

Similarly,

The political system is convulsive; it acts when the electorate perceives that a crisis exists . . . Hence, when it is faced with an aroused public, time is not available to . . . perform a careful analysis pointing toward an optimal policy response . . . The information used to formulate a policy response in such cases is usually produced by agencies with related responsibilities and by lobbyists who support a particular decision.

Second, broad governmental transparency will allow the merits of the argument that X is good for society to be judged by the broadest possible swath of society. Several studies by international organizations have addressed this issue directly and have pressed governments to adopt strong transparency measures. In 1974 and again in 1992, the United Nations studies declared transparency in international arms traffic essential to controlling the illicit and dangerous spread of arms and arms technology.

In 1983, the Organization for Economic Cooperation and Development identified transparency as an structural requisite for positive adjustment to trade pressures. In 1985, the report of a GATT study group headed by Fritz Leutwiler, former president of the Bank for International Settlements, identified transparency as one of the key elements in countering domestic pressures for trade protectionism. Four years later, a report produced under the chairmanship of Oliver Long, GATT’s Secretary-General from 1968 to 1980, repeated that point and devoted itself to identifying the essential elements of the design of domestic administrative agencies with the mandate of providing effective transparency to debates over trade protection and subsidies.

103. Mancur Olsen, quoted in Long, supra note 46 at 8 and fn. 1.
105. United Nations, supra note 32.
106. OECD, supra note 2.
107. Leutwiler, supra note 40.
108. Long, supra note 46.
In 1987, UNCTAD's seventh session discussed the establishment of national transparency measures to balance protectionist pressures.\textsuperscript{109} In 1997 and 1998, reports from the Asian Development Bank identified transparency as an essential element of participatory governance.\textsuperscript{110}

With the political benefits of official transparency come also the economic benefits:

Transparency and Predictability are important as more rapid economic development is possible when the private sector can operate within a set of stable, predictable 'rules of the game' that facilitate investment decision-making and promote investor confidence. It is in this area that the need for an efficient legal system is most apparent. Well-developed laws, which are not subject to arbitrary change, an independent judiciary, and a minimum level of technical competence within the judiciary, are essential for ensuring predictability in business relations. Without such predictability, transaction costs may be so high that economic activity is stifled.\textsuperscript{111}

Transparency – a legal infrastructure of openness about official information and part of a good pattern of information law and policy – thus has ramifications for political participation, honest governance, and sound economic development.

VII. RULE OF LAW ANALYSIS

Political participation, honest governance, and sound economic development are all hallmarks of societies living under the Rule of Law. This Article’s final point is that information law and transparency are fundamental to the Rule of Law – fundamental to ordered society and central to ordered public life.

The Rule of Law is said to apply to any socio-legal system in which "state power, in so far as it affects individuals, is to be exercised according to binding general rules made and known in advance, and of sufficient specificity to allow individuals to know with tolerable certainty their rights, obligations, and liabilities."\textsuperscript{112} A clear prerequisite of such individual knowledge is government provision of information about regu-

\textsuperscript{109}. Long, supra note 46, at 19-30.


\textsuperscript{112}. D.J. Galligan, \textit{Discretionary Powers: A Legal Study of Official Discretion} (1986); Asian Development Bank, supra note 2, at 1, identifies transparency as one of the four essential elements of good governance, in addition to accountability, predictability, and participation.
lation—transparency about the law. Closely allied to this requirement for the Rule of Law is the legitimacy of the law-making process. 113 Parliaments lacking transparency will fail in establishing the Rule of Law. 114 “[A] community is defined as having a corpus of rules which it seems to be legitimate and by having agreed on a process that legitimizes the exercise of authority, one which conduces to the making of fair rules and fair allocations.” 115 Finally, the Rule of Law requires an open and accountable enforcement of law, both in regulatory administration 116 and in adjudication. 117

Indeed, public accountability is impossible without transparency. 118 Accountability is the principle that decision-makers, including regulators, be given a stake in the reasonableness and honesty of their actions. 119 With elected executives and legislators, this may mean political accountability, where voters know of the legislators’ stands and reward

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113. “Transparency is a flexible concept used in a variety of contexts, from financial disclosure requirements to anti-corruption measures. Yet, it has taken on a particular meaning with respect to law-making bodies, where transparent procedures are necessary to ensure the political accountability of those enacting legislation.” Rekosh, supra note 30, at 1.

114. Rekosh also states:
Transparency is especially important, however, to ensure that elected representatives are genuinely accountable to their constituents. . . . Although most citizens may take little interest in the day-to-day mechanics of parliamentary exercises, the existence of a free press and citizen groups ensures that information about parliamentary activities can be properly digested by the general public.

Id. at 2.

115. Franck, supra note 56.

116. See Galligan, supra note 112, at 4-6 (discussing accountability, in political and legal senses). “The most rudimentary requirements of political morality are that in exercising discretionary powers, officials should comply with standards of rationality, purposiveness, and morality . . . .” Id. at 2.

Better governance, as we are now recognizing, requires efficient and honest institutions staffed with well-trained people, enforcing the rule of law impartially and effectively. In order to have honest agencies that serve the public interest, transparency is crucial (including collection and dissemination of much fuller information, and a free press).

Nelson, supra note 48, at 292-293.

117. Goldstein, supra note 87.

118. See generally Rekosh, supra note 30. “[A]ccess to information is vital to guaranteeing accountability for all aspects of government decision-making.” Id. at 6. “By accountability (or answerability) is meant having to answer for, or render account of, the way one carries out his official tasks.” Pillai, supra note 3, at 4. “Where acts of administration affect individual rights or interests, accountability requires that appropriate compensation be given to the victims of illegal action or maladministration.” Id. (remarks of Shad Saleem Faruqi, a Senior Lecturer of the School of Law of the Mara Institute of Technology in Malaysia).

119. “[A]ccountability was defined as ensuring that decision makers are responsible, either personally or institutionally, for the consequences of their decisions.” IMF Study Group, supra note 37 at 5.
or punish them by voting accordingly. With unelected bureaucrats, accountability may mean the possibility of court review of administrative actions or political review of unpopular initiatives. With judges, accountability may mean that litigants have the right to take the case to a higher court or to legislators for reversal. All such government officials may be held accountable in criminal law and through dismissal for corrupt actions. "Information is the key to accountability and in matters of government policy, accountability is strengthened by provisions for access to information or 'open government', as it is weakened by their absence."  

Transparency of government operations makes accountability possible.

Examples of transparency will reveal even more clearly the links between transparency, accountability, and the Rule of Law. Under the terms of the United States Administrative Procedure Act, any federal agency considering the adoption of a new regulation must publish the proposed regulation, allow public comment, and consider the public comment before issuing a final regulation.  

Similarly, the voting records of all federal legislators are published in a full and timely manner. Likewise, all federal trial courts maintain transcripts of trial proceedings and make them available to litigants contemplating appeals. By contrast, the official reports of the Malaysian national ombudsman were, until 1991, treated as official state secrets and the lack of transparency and accountability in some African nations is so severe that it has been held directly responsible for the deplorable modern history of economic development in those nations.  

Lack of transparency can be as simple as

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120. Pillai, supra note 3, at 36.
122. This is a Constitutional mandate:

Each House shall keep a Journal of its Proceedings, and from time to time publish the same, excepting such Parts as may in their Judgment require secrecy; and the Yeas and Nays of the Members of either House on any question shall, at the Desire of one fifth of those Present, be entered on the Journal.

UNITED STATES CONSTITUTION, ART. I, SEC. 5, CL. 3.

124. Pillai, supra note 3, at 4 (statement of Shad Saleem Faruqi, a Senior Lecturer of the School of Law of the Mara Institute of Technology in Malaysia).
125. Consider:

An effective rule of law is as fundamental for a free market as it is for the effective exercise of human rights. The rule of law assures that governments are truly accountable. Y.R. Barongo makes the point that when there is no way to enforce accountability, the result is autocracy and widespread corruption. Similarly, Mkandawire warns that the lack of accountability is at the center of the failure of the African states to chart viable paths for development.

Boeninger, supra note 31, at 278 (citing Y.R. Barongo, Innovations in Systems of Governance in Africa: The Resistance Councils Experiment in Uganda (1990); Thandika
the use of inadequate forms in official transactions:

For example, in cases of rejection [of an application for citizenship] where they should appeal within a certain number of days to a higher authority, they are not told what is the address of that authority and so on. If you look at a standard form anywhere else in the world, you may observe this, but in Malaysia the forms have become very simplified. The simplification process has taken away anything that is helpful.\textsuperscript{126}

A full exposition of the nature and benefits of the Rule of Law is beyond the scope of this Article. The central thesis of this Article is that information law and transparency are essential elements of ordered society and thus worthy of further study and serious scholarly discussion among legal theorists, as they have been discussed among scholars of other disciplines. For this purpose, it suffices to acknowledge that the Rule of Law is impossible without transparency and the accountability it makes possible and to recognize that transparency is, at heart, an information concept. This is not to say that transparency and a sound information policy are sufficient to create an open and ordered society,\textsuperscript{127} but that such a society is impossible without strong official transparency.\textsuperscript{128}

\section*{VIII. CONCLUSION}

In the broadest sense, transparency is coming to be recognized as essential to good governance and to establishment of the rule of law within ordered societies. Such a view follows naturally from earlier comments about the role of transparency in establishing non-corrupt legal

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126. \textsc{pillai, supra} note 3, at 49 (statement of K. Pathmanaban about the lack of accountability and transparency in immigration issues).
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127. "In order to secure 'rule of law', legal systems and rules must meet certain minimum standards of substantial and procedural justice, such as transparency, legal consistency, 'completeness' of the rules (i.e., no no-law situations, prohibition of \textit{non liquet}), democratic legitimacy and enforceability of the rules." Petersmann, \textit{supra} note 37, at 26.
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128. This is not to say that there are not some voices of caution or concern about the role of transparency in governance. Diouf, \textit{supra} note 36, writing of international aid agencies and their interest in transparency among aid-receiving nations, writes: "[t]hus they define governance in general terms: accountability, efficiency, transparency, and so on. But identifying the attributes of a subject effectively defines it. The form of governance that the Bretton Woods institutions are encouraging looks suspiciously like a pluralistic democratic system that de Tocqueville would not find distasteful." \textit{Id.} at 322. Landell-Mills has a similar observation: "[t]hus, while it can be argued that freedom of expression, institutional pluralism, transparency, accountability, and the like (all seen as key ingredients in the process of democracy) are important aspects of good governance, there is no convincing evidence that multiparty democracy, which is being urged on developing countries by some donors, is necessary for social and economic development." \textit{Id.} at 305.
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and bureaucratic regimes, and from transparency's role in establishing political accountability:

Transparency is a flexible concept used in a variety of contexts, from financial disclosure requirements to anti-corruption measures. Yet, it has taken on a particular meaning with respect to law-making bodies, where transparent procedures are necessary to ensure the political accountability of those enacting legislation.\textsuperscript{129}

Better governance, as we are now recognizing, requires efficient and honest institutions staffed with well-trained people, enforcing the rule of law impartially and effectively. In order to have honest agencies that serve the public interest, transparency is crucial (including collection and dissemination of much fuller information, and a free press).\textsuperscript{130}

In other words, effective policies of governmental transparency not only promote, but are essential to good governance, including citizen participation, official accountability, clean government, and the rule of law. Such policies promote the most effective and inclusive debate on issues of public significance, and ensure that chosen policies are carried out in a manner that reflects the public consensus.

The purpose of this Article has been to establish the importance of information law and to encourage its further study. By using insights from information theory, economics, political economy, and other disciplines,\textsuperscript{131} this Article has sought to demonstrate the centrality of information law to open societies.

Information is a difficult concept to grasp, and a commodity unlike traditional goods. The unusual economics of the information marketplace and its role in regulating governance structures through preventing corruption, providing political accountability, and generating economic development demonstrate that the evolving discipline of information law will have an increasing importance in legal scholarship in years to come. This Article has attempted to begin the process of incorporating non-legal disciplines into this study, to establish information law's rightful place in legal scholarship, and to point out some directions for future scholarly efforts, particularly in the area of transparency.

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\item \textsuperscript{129} Rekosh, \textit{supra} note 30, at 1.
\item \textsuperscript{130} Nelson, \textit{supra} note 48, at 292-293.
\item \textsuperscript{131} See Mock, \textit{supra} note 78, for the application of game theory to information law.
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