



Research Publication No. 2003-08
11/2003

Information Quality and the Law, or, *How to Catch a Difficult Horse*

Urs Gasser

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Information Quality and the Law, or, *How to Catch a Difficult Horse*

Some Observations on the Emergence of U.S. Information Quality Law

Urs Gasser*

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* lic.iur. (St. Gallen), Dr.iur. (*id.*), LL.M. (Harvard), Attorney-at-Law. Executive Manager Research Center for Information Law, University of St. Gallen, St. Gallen (Switzerland). Research and Teaching Fellow at the Berkman Center for Internet & Society, Harvard Law School, Cambridge/MA (USA). I owe thanks for comments on an earlier draft to HERBERT BURKERT, JEAN NICOLAS DRUEY, and MARTIN EPPLER. Special thanks are due to VIKTOR MAYER-SCHÖNBERGER for ongoing support. Thanks also to JAMES THURMAN for insightful editorial comments and other efforts. This article was written as part of a research project on Information Quality sponsored by the HOLCIM Stiftung zur Förderung der wissenschaftlichen Fortbildung. Comments are welcome at urs.gasser@unisg.ch. – All websites last visited on October 29, 2003.

I. Introduction

While in Europe legal problems related to information quality have been primarily of academic interest,¹ a publicly recognized² debate on information quality, which is also relevant for legal practice, has emerged in the United States.³ The origin of this discussion was the enactment of section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, better known as the *Federal Data Quality Act*,⁴ and its implementing *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies*, issued by the Office of Management and Budget (OMB). In essence, the Act and OMB Guidelines are intended to ensure and maximize the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies. Agencies, in turn, were required to issue their own implementing guidelines by October 1, 2002.⁵

This essay seeks to provide, first, a brief overview over the genesis and content of the Federal Data Quality Act and the implementing OMB Guidelines. Second, against this background, the article examines this set of rules and regulations from the viewpoint of what—at least in the European context⁶—is termed *information law*. It may be of interest to compare the U.S.’s attempt at a functional and open regulation of information quality by law with earlier contributions of European theorists to this area of law.

1 See, e.g., DRUEY, *Information als Gegenstand des Rechts* (1995/6), 66-71; GASSER, *Zu den Möglichkeiten einer rechtlichen Erfassung von Medien- und Informationsqualität*, ZSR 119 II 2000, 379-412; WEBER, *Information und Schutz Privater*, ZSR 118 II 1999, 41 *et seq.*; ZULAUF, *Informationsqualität* (2000).

2 See, e.g., RANEY, *Questions About Online Data*, *The New York Times*, June 3, 2002.

3 For a good introduction to the US discussion visit the website of the Center for Regulatory Effectiveness at <http://www.thecre.com/quality/index.html>, where one can find various materials, documents, and further references.

4 Public Law 106-554; H.R. 5658; also referred to as “Federal Information Quality Act.”

5 A remark on terminology: In this article, I use the term “Information Quality Law” as a reference to both the Data Quality Act and the OMB Guidelines. The term “Information Quality Regulation,” by contrast, additionally includes the individual Agency’s Guidelines. However, the term “Regulation” in this expression is not used technically; the legal force of an Agency’s Guidelines is still unclear (*see* Part III.3.a).

6 From a transatlantic perspective, *see* MAYER-SCHÖNBERGER, *Informationsrecht als Gestaltungsaufgabe: Eine transatlantische Begegnung*, in: SCHWEIZER/BURKERT/GASSER (Hrsg.), *Festschrift für Jean Nicolas Druey* (2002) 853-868.

II. Information Quality Law

1. Rationale for Information Quality Law

To understand the legislative history of U.S. regulation of information quality it is essential to recognize the prevailing factual circumstances surrounding its promulgation. Information disseminated by Federal agencies has increased in its importance—both quantitatively and qualitatively—with respect to decision-making processes within the public and private sector as a consequence of the enhanced use of digital technology in general and the *Internet* in particular.⁷ With this increase of the amount of information disseminated on the one hand, and the enormous expansion of the potential audience (i.e. visitors of a Federal department’s website) on the other hand, the previous and, foremost, the current Administration became aware of prominent cases of the past demonstrating quality problems with regard to information collected, used and published by Federal agencies (at this point in time, of course, published by traditional means like photocopy).⁸ However, since the Federal Data Quality Act was connected with an Appropriations Bill, it passed the Congress without attracting public attention, and was—as a so-called rider⁹—enacted without any public debate or scrutiny.¹⁰ Therefore, only some information on the rationale and even less on the factual background leading to the legislation is available today.

2. Federal Data Quality Act

a) Starting point: Paperwork Reduction Act

The origin of the Federal Data Quality Act goes back to the Paperwork Reduction Act (PRA).¹¹ This Act establishes, among other issues, information dissemination requirements. According to section 3501(2), one purpose of the relevant subchapter is to “ensure the greatest possible public benefit from and maximize the utility of information ... disseminated by or for the Federal Government.” Section 3501(4), then, refers explicitly to *information quality* by stipulating that an additional purpose is to “improve the quality and use of Federal information to strengthen decisionmaking, accountability, and openness in Government and society.” Another express purpose is to

7 See GRAHAM, OMB’s role in overseeing Information Quality. Remarks to the Public Workshop on Information-Quality Guidelines (March 21, 2002), at http://www.whitehouse.gov/omb/infoeg/info-quality_march21.pdf

8 See *id.* with examples.

9 This term is used for a certain piece of typically unrelated legislation added to other legislation (often Appropriations). Riders can largely escape the normal review and assessments process that usually accompanies legislation developed through congressional committees.

10 This lack of debate has been criticized, see, e.g., MORRISON’S statement on Workshop # 3 on Ensuring the Quality of Data Disseminated by the Federal Government (May 30, 2002), at http://www7.nationalacademies.org/stl/DQ_Workshop.html.

11 44 U.S.C. Chapter 35—Coordination of Federal Information Policy.

“ensure the integrity, quality, and utility of the Federal statistical system” (§3501(9)). The legislative report accompanying the relevant RPA Amendments summarizes the rationale of the law as follows: The Amendments “promote ... the theme of improving the quality and use of information to strengthen agency decisionmaking and accountability and to maximize the benefit and utility of information created, collected, maintained, used, shared, disseminated, and retained by or for the Federal Government.”¹²

b) Stopover: Report Language for Data Quality

Part of the genesis of the current law is a Conference Report Joint Explanatory Statement accompanying the Fiscal Year 1999 Omnibus Appropriations Act. In this report, some of the language set forth in House Report 105-592 and Senate Report 105-251 was incorporated in the conference agreement on the Treasury and General Government Appropriations Act 1999. The relevant House Report 105-592 urged “the Office of Management and Budget (OMB) to develop ... rules providing policy and procedural guidance to Federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies, and information disseminated by non-Federal entities with financial support from Federal government...”¹³

c) Final destination: Appropriations Act for FY 2001 (Section 515)

However, the actual starting point for development of uniform guidelines establishing quality standards for information disseminated by Federal agencies came about three years later when section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001—the Federal Data Quality Act—was enacted. The relevant section reads as follows (emphasis added):

- (a) In General. – The Director of the Office of Management and Budget shall, by not later than September 30, 2001, and with public and Federal agency involvement, issue guidelines under sections 3504(d)(1) and 3516 of title 44, United States Code, that provide policy and procedural guidance to Federal agencies *for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies* in fulfillment of the purposes and provisions of chapter 35 of title 44, United States Code, commonly referred to as the Paperwork Reduction Act.
- (b) Content of Guidelines. – The guidelines under subsection (a) shall –
 - (1) apply to the sharing by Federal agencies of, and access to, information disseminated by Federal agencies; and
 - (2) require that each Federal agency to which the guidelines apply –

12 House Report No. 104-37, 35.

13 Note that this language required the adoption of government-wide *rules*, while the current law—at the insistence of the OMB—directs the Office for government-wide *guidelines*.

- (A) issue guidelines *ensuring and maximizing the quality, objectivity, utility, and integrity of information* (including statistical information) disseminated by the agency, by not later than 1 year after the date of issuance of the guidelines under subsection (a);
- (B) establish *administrative mechanisms* allowing affected persons to seek and obtain correction of information maintained and disseminated by the agency that does not comply with the guidelines issued under subsection (a); and
- (C) report periodically to the Director –
 - (i) the number and nature of complaints received by the agency regarding the accuracy of information disseminated by the agency; and
 - (ii) how such complaints were handled by the agency.

3. OMB Information Quality Guidelines

a) Initial Steps

After some drafts¹⁴ and rounds of public and interagency review, the Office of Management and Budget (OMB) has issued the final *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies*—hereafter: OMB Guidelines—on February 22, 2002.¹⁵ The Federal agencies were required to issue their individual implementing guidelines by October 1, 2002.¹⁶ Agency guidelines have, among other issues, to define how each agency complies with the Information Quality Law, and must include administrative mechanisms allowing affected persons to seek and obtain correction of information maintained and disseminated by the agency that does not comply with the guidelines.

b) Scope of Applicability of OMB Guidelines

According to section 515 of the Federal Data Quality Act, the OMB Guidelines apply to all Federal agencies that are subject to the Paperwork Reduction Act (PRA).¹⁷ With this description, however, the scope of applicability of the guidelines is not pre-

14 Drafts published in 66 Fed. Reg. 49,718 (Sept. 28, 2001), and in 67 Fed. Reg. 369 (Jan. 3, 2002).

15 Final Version published in 67 Fed. Reg. 8,452 (Feb. 22, 2002), available at <http://www.whitehouse.gov/omb/fedreg/reproducible2.pdf>.

16 The OMB noted that its guidelines were intended to allow agencies to incorporate their existing practices in a “common-sense and workable manner.” The Guidelines acknowledge, for example, that under OMB Circular A-130, agencies already have in place data quality standards and administrative mechanisms. Under the OMB Guidelines, the agencies are obligated, however, to ensure that their own guidelines are consistent with these Guidelines, and “then ensure that their administrative mechanisms satisfy the standards and procedural requirements in the new agency guidelines.” See OMB Guidelines, 67 Fed. Reg. 8,453 (Feb. 22, 2002).

17 44 U.S.C., chapter 35.

cisely clear: According to the Federal Data Quality Act, the OMB Guidelines do apply only to *information that is disseminated* by Federal agencies subject to the PRA. Thus, with regard to definition of applicability the question arises how, precisely, *information* on the one hand and *dissemination* on the other hand have to be defined. A controversy has arisen regarding the meaning of the term “dissemination” in particular.¹⁸ The OMB Guidelines define the term in paragraph V.8. as follows:

“Dissemination” means agency initiated or sponsored distribution of information to the public (see 5 CFR 1320.3(d) (definition of “Conduct or Sponsor”). Dissemination does not include distribution limited to government employees or agency contractors or grantees; intra- or interagency use or sharing of government information; and responses to requests for agency records under the Freedom of Information Act, the Privacy Act, the Federal Advisory Committee Act or other similar law. This definition also does not include distribution limited to correspondence with individuals or persons, press releases, archival records, public filings, subpoenas or adjudicative processes.

With this definition, OMB Guidelines do obviously *exclude* certain types and categories of publicly disclosed Federal agency information (e.g. press releases).¹⁹ A legal opinion issued by the Center for Regulatory Effectiveness (CRE) concludes that the OMB lacks authority to create such exemptions. This opinion is based on the argument that both the relevant statutory text and the legislative history demonstrate congressional intent that the OMB Guidelines apply to “any and all information” that Federal agencies have in fact made public. According to the legal memorandum, there are no statutory exemptions from the RPA’s information dissemination requirements (by contrast, the RPA’s collection of information requirements knows certain exemptions).²⁰ It seems noteworthy that the exemptions set up in the OMB Guidelines were not only adapted by most of Federal agencies, but even expanded.²¹ This fact has been—based on the arguments previously mentioned—heavily criticized by the CRE.²²

c) Summary of Content

The OMB Guidelines first repeat OMB’s mandate and responsibility as defined in the Federal Data Quality Act, and recapitulate the implementing obligations of Federal agencies. In paragraph III of the OMB Guidelines, one can find detailed require-

18 For further discussion of the term “information,” see Part III.2.a).

19 See also Part III.2.a).

20 See Legal Memorandum on Federal Authority to Create Exemptions from the Data Quality Guidelines (May 29, 2002), at http://www.thecre.com/pdf/20020529_cre-legalopinion.pdf.

21 See, e.g., Workshop # 3 on Ensuring the Quality of Data Disseminated by the Federal Government (May 30, 2002), at http://www7.nationalacademies.org/stl/DQ_Workshop.html, and OIRA Review of Agency Draft Information Quality Guidelines. See also Part II.3.d).

22 Cf. CRE Generic Comments to all Federal Agencies related to Data Quality Guidelines, at http://www.thecre.com/pdf/20020531_cre-generic.pdf.

ments and standards in order to ensure and maximize information quality. The relevant *rationale* is described in paragraph III.1. of the OMB Guidelines:

Overall, agencies shall adopt a basic standard of quality (including objectivity, utility, and integrity) as a performance goal and should take appropriate steps to incorporate information quality criteria into agency information dissemination practices. Quality is to be ensured and established at levels appropriate to the nature and timeliness of the information to be disseminated. Agencies shall adopt specific standards of quality that are appropriate for the various categories of information they disseminate.

Paragraph III.2. requires—as a matter of good and effective management of the resource “information”—that Federal agencies shall develop a pre-dissemination *review process* of the quality of information. The objective to ensure information quality shall include every step of agencies’ information processing activities, i.e. must be established at the level of information creation, collection, maintenance, and dissemination. The review process applies, chronologically speaking, to information that has been disseminated on or after October 1, 2002, regardless of when the agency first disseminated the information.

The OMB Guidelines specify in paragraph III.3. the obligation set up in the Federal Data Quality Act. Under this paragraph, individual Federal agencies are directed to establish *administrative mechanisms* allowing affected persons to seek and obtain timely correction of information maintained and disseminated by Federal agencies, but which does not comply with the regulation. Further, the OMB Guidelines define the procedural requirements for petitions submitted by affected persons. Administrative mechanisms must be flexible and appropriate to the nature and timeliness of the disseminated information. Moreover, these mechanisms have to be incorporated into an agency’s information resources management and its administrative practice. Federal agencies have to specify in their Agency Guidelines appropriate time periods for agency decisions on requests made by affected persons, and must ensure that affected persons are notified of potential corrections. If the petitioner who requested a correction disagrees with an agency decision, she must have the opportunity to appeal this decision. Therefore, OMB Guidelines require Federal agencies to establish an *administrative appeal process* in order to reconsider initial decisions.

Other provisions of the OMB Guidelines cover organisational requirements. Paragraph IV.1., for instance, requires that agencies have to appoint a *Chief Information Officer* who takes responsibility for the agency compliance with OMB Guidelines. In Paragraph IV.2., OMB Guidelines define procedural requirements with regard to complaints (e.g. duty to respond to complaints in a matter appropriate to the nature and extent of the complaint). In this connection, the Guidelines specify agencies’ *reporting obligations*. According to paragraph IV.6., for example, each agency must—beginning on January 1, 2004 and afterwards on an annual fiscal-year basis—submit a report to the Director of the OMB. The report has to provide quantitative and qualitative information on the number and nature of complaints, how complaints were resolved, etc.

Paragraph V. of the OMB Guidelines provides both important and, from the perspective of information law, interesting *definitions* of key terms like “information,” “quality,” “utility,” “objectivity,” and “integrity,” etc. Both definitions and quality criteria will be discussed in greater detail in Part III of this essay.

d) Agency Guidelines

As noted above, the Federal Data Quality Act, implemented through the OMB Guidelines, requires individual Federal agencies to issue their own guidelines by October 1, 2002 in order to ensure and maximize information quality. The final Guidelines of the Federal departments and agencies are available now. It would exceed the purpose of this essay to discuss these Guidelines in detail. Hence, this essay makes (only) specific references to particular Agency’s Guidelines or provisions in the footnotes where fruitful for the purpose of analysis. However, both for illustration and for further analysis it would be worthwhile to read, for instance, the “Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Environmental Protection Agency (EPA Information Quality Guidelines - IQG).”²³

The following *topics* produced intense public discussion and may at least illustrate some crucial issues in the context of implementing guidelines.

- Applicability of the Guidelines: The definition of “scope of applicability” raised some problems, as noted earlier. One particular controversy concerned the question if, and to what extent, individual agencies have the power to establish additional exemptions with regard to the application of the Guidelines. In this context, for instance, it was discussed whether information originally submitted by third parties (e.g. states or private entities) and later disseminated by agencies can globally be exempted from the information quality requirements defined in the Act, and its implementing Guidelines.
- Petition rules: Additional subjects of debate were the procedural rules of petition processes. What, for example, is the appropriate deadline for deciding a petition or an appeal? Who decides the initial petition? Must the Agency correct information when it agrees with a petition submitted by an affected person? etc.
- Definitions: The definition of terms constituted another field of tension. Opinions on the question, for instance, of what an “affected person” is were diametrically divided. Naturally, conflicting interests existed in the context of terms where the individual agency had some discretionary powers to define or specify them (for instance, regarding the term “influential information”).

23 67 Fed. Reg. 63,657 (Oct. 15, 2002), available at <http://www.epa.gov/oei/qualityguidelines/EPA-OEI-IQG-FINAL-10.2.pdf>

- Legal implications: Another issue up for discussion was whether guidelines are legally binding or not, and whether they create new legal or judicial review or not.
- Quality principles of SDWA²⁴: The specification of adoption or adaptation of the quality principles for risk assessments established in the Safe Drinking Water Act was another complex and controversial issue discussed during the public review period.

Both drafts and final versions of agencies' guidelines are available on the websites of the Office of Budget and Management²⁵ and the Center for Regulatory Effectiveness;²⁶ the relevant guidelines can also be found on the websites of the individual agencies.²⁷ The Office of Management and Budget provides furthermore an interesting chart comparing the draft and final guidelines generated by a wide variety of agencies and departments.²⁸ OMB compared the different versions with respect to several categories and characteristics (e.g. definitions, timeliness requirements, responsibilities, etc.).

III. An Analysis from the Perspective of Information Law

The information quality provisions described in the previous section might be analysed—to a good extent abstracted from the specific U.S. context—from the perspective of *information law*. The following observations are based on an approach to information law which has been developed at the Research Center for Information Law at the University of St. Gallen (Switzerland).²⁹ A specific theoretical foundation for the following (only punctual) remarks can be found in a recently published article that ana-

24 See Part III.2.b)(iii) for further discussion.

25 http://www.whitehouse.gov/omb/inforeg/agency_info_quality_links.html.

26 <http://www.thecre.com/quality/agency-database.html>.

27 Agencies are requested to use their websites to keep the public informed about information quality. Therefore, each agency is asked to establish an information quality site on its website. See OMB Memorandum for the President's Management Council, September 5, 2002, Attachment "Information Quality Guidelines – Principles and Model Language," section "Use of Websites."

28 <http://www.ombwatch.org/rtk/dataqualitytable.pdf?PHPSESSID=d90b0ebf37bab072672a051af03eacfl>.

29 For the groundbreaking work on this subject see DRUEY, *supra* note 1. For further details on the emerging "St. Gallen Approach to Information Law," see BURKERT, *Internetrecht – Informationsrecht. Vom zwar Nützlichen aber eher Zufälligen zurück zum möglicherweise Wesentlichen?*, in: SCHWEIZER/BURKERT/GASSER (Hrsg.), *Festschrift für Jean Nicolas Druey zum 65. Geburtstag* (2002), 693-714; BURKERT, *Von künftigen Aufgaben des Informationsrechts*, in: MEIER-SCHATZ/SCHWEIZER (Hrsg.), *Recht und Internationalisierung, Festgabe der Juristischen Abteilung der Universität St. Gallen zum Juristentag 2000* (2000), 155 *et seq.*, and, *in English*, GASSER, *What is Information Law – and what could it be?*, in: GASSER (Ed.), *Information Law in eEnvironments* (2002), 7-24. In the context of the present analysis, see BURKERT, *The Information Law Approach: An Exemplification*, in this volume.

lyzes some fundamental problems arising when law aims to regulate information quality.³⁰

The following analysis focuses on three layers: the concept layer, the content layer, and the layer of effects. With regard to the *concept layer*, the paper seeks to evaluate the underlying model of communication upon which the information quality legislation is based. The same subsection discusses the problem of quality norms. Thereafter, the essay focuses on two regulatory problems on the *content layer*: First, the problem of defining the subject of regulation, i.e. “information,” and second the question of legally relevant information quality criteria. Finally, on the *layer of effects*, the article examines certain (possible) consequences of information quality regulation in general³¹ and specific information quality legislation in particular.

1. Concept Layer

a) Model of Communication

Regarding the question of what kind of model of communication underlies the information quality legislation,³² one has to go back to the Paperwork Reduction Act (PRA), which is—as noted above—relevant because the Federal Data Quality Act refers expressly to its purpose. In this context, the previously mentioned §§3501(2) and 3501(4) are of particular importance. In these provisions, one can find an implied causal connection with regard to information: The legislator suggests a causal relationship between the “public benefit” and the “utility of information” on the one hand, and between improvement of information quality disseminated by Federal agencies and the quality of decision-making as well as accountability and openness in Government and society on the other hand. In this sense the legislator suggests a regularity, according to which a *high-quality stimulus* (i.e. useful and qualitatively high-graded information disseminated by a Federal agency) leads to a “*better*” *effect* (i.e. strength of decision-making, accountability, openness, ...).³³ Consistent with that, both the Paperwork Reduction and the Federal Data Quality Act as well as the implementing OMB Guidelines focus on the *sender of information*, i.e. the Federal agency, in order to ensure and maximize information quality. In sum, this indicates that a classic *sender-receiver-model of communication*—in the tradition of mathematical oriented models³⁴—underlies the information quality regulation described above. Such models do charac-

30 See GASSER, Variationen über Informationsqualität, in: SCHWEIZER/BURKERT/GASSER (Hrsg.), Festschrift für Jean Nicolas Druey zum 65. Geburtstag (2002), 727-754.

31 For a complementary approach, see MAYER-SCHÖNBERGER, Quality Denied: The Pitfalls of Extra-legal Processes, in this volume.

32 See BURKERT, *supra* note 29, in this volume.

33 Although it is commonly assumed that such a connection exists, a detailed analysis shows that such assumptions of direct causal connections in the context of information exchange are highly problematic. Moreover, the closer one seeks to illuminate the causation of information, the more unclear the relevant cause-effect-relation becomes. For further discussion, see GASSER, Kausalität und Zurechnung von Information als Rechtsproblem (2002).

34 For an overview see GASSER, *supra* note 33, 54-55 with further references.

teristically focus on the quality of the *source* or *sender* and, eventually, on the transmission process (i.e. quality of transmitter), but not—or at least much less—on the performance of the recipient, or on context. Such a linear and simplified model of communication seems, however, generally problematic when it is applied to human communications, as research in communication and media theory demonstrate.³⁵

Current models of communication are more complex in their design and have, among other issues, radically changed our understanding of informational cause-and-effects-relationships. Despite the diversity of approaches and theories, a broad consensus exists that information effects are not exclusively—not even dominantly—determined by sender and transmitter, but do depend to a crucial degree on multi-step and complex selection processes of the recipient, her prior knowledge, and the communicative environment surrounding the particular information exchange.³⁶ Against this background, convincing reasons exist that information quality should be designed as a *complex network* of references to objects, subjects, and contexts, in which the informational behavior of the sender is regarded, accordingly, only as one parameter.

As a consequence of this complexity, information quality regulation by law (as well as information regulation generally) that addresses—one might say, by nature—senders only is *not predictable* in its *specific* effects. Although the regulation of the sender's informational behavior may (at least potentially) increase information quality, it is unclear what additional benefit this regulation creates for its recipient, or—in the aggregate of the individual effects—what “public benefit” results. The achievement of the Data Quality Law's intent is a much more complex matter than its drafters envisioned.³⁷

b) Quality Norms

Let us now examine how the requirements concerning sender's informational behavior as stipulated in the relevant information quality legislation look. (Note that these obligations are specified in greater detail in the implementing Agency guidelines; we focus here, for practical reasons, on the Federal Data Quality Act and the OMB Guidelines only.) Of particular interest is the nature of these requirements. At first glance, the Federal Data Quality Act and the OMB Guidelines state *content-based requirements*—Information disseminated by Federal agencies has to be objective, useful,

35 See for further discussion the following small selection of books and articles written from different perspectives: WATZLAWICK, BEAVIN, AND JACKSON, *Pragmatics of Human Communication, A Study of Interactional Patterns, Pathologies, and Paradoxes* (1967), 28 *et seq.*; GAUNTLETT, *Moving Experiences: Understanding Television's Influences and Effects* (1995); GAUNTLETT, Ten things wrong with the 'effects models,' in: DICKINSON *et al.* (eds.), *Approaches to Audiences – A Reader* (1998), 20 *et seq.* In German see, e.g., MERTEN, *Wirkungen von Kommunikationen*, in: MERTEN/SCHMIDT/WEISCHENBERG (Hrsg.), *Die Wirklichkeit der Medien* (1994), 296 *et seq.*; BURKART, *Kommunikationswissenschaft*, (3 ed. 1998), 62 *et seq.*; BOMMERT/WEICH/DIRKSMEIER, *Rezipientenpersönlichkeit und Medienwirkung*, 2.A. (2000), 188.

36 See, e.g., GASSER, *supra* note 33, 57-72 with further references.

37 See also Part III.3.a).

and secure. We will discuss these quality criteria in greater detail later on,³⁸ already in this connection, however, I would like to draw the reader's attention to the remarkable circumstance that some of these content-based requirements can be re-conceptualized as procedural requirements. Objectivity as a genuine content-based requirement, for instance, can be replaced by (external) peer reviews, i.e. by procedural arrangements, for certain categories of information.³⁹

Furthermore, the enactments define *institutional settings* which have to be implemented by agencies. Besides the agencies' obligation to issue appropriate information quality guidelines one can assign the duty to designate a Chief Information Officer to this class.⁴⁰ As a separate category of these institutional requirements—i.e. as genuine *procedural requirements*—we can identify the agencies' obligation to implement a continuous quality review process, and the obligation to establish administrative mechanisms allowing affected persons to seek and obtain correction of information maintained or disseminated by the agency.⁴¹

In sum, the informational behavior of the sender—i.e. each Federal agency subject to the Paperwork Reduction Act—is regulated by a set of norms which are either content-related, have an organizational-institutional dimension, or are procedural in nature.

It must also be noted that quality norms may emerge from other sources as well. To the extent agencies enact independent norms within their information quality guidelines, for instance, the regulation described above is supplemented with a *standard setting process* in the form of self-regulation. Moreover, the sender's *factual informational and interactional behavior*, for instance in connection with the response to complaints, might develop as another, interaction-born source⁴² of quality norms.⁴³

2. Content Layer

a) "Information" as Subject of Regulation

First, the question arises as to what *subject* the quality norms described in the previous section basically refer to. The answer seems to be obvious: to *information*. With this response, however, we have not gained much ground. Indeed, this answer—faced as we are with the ambiguous and obscure term "information"—raises new ques-

38 See Part III.2.b).

39 See paragraph V.3.b.i of the OMB Guidelines.

40 See *supra* Part II.3.c).

41 See *supra* Part II.3.c).

42 For a more detailed description of the different categories of quality norms, see GASSER, *supra* note 30, 748-753 with further references.

43 The emergence of norms out of interaction is—as a *general concept*—described in WEBER, *Rechtssoziologie* (1969), 63 *et seq.*; GEIGER, *Vorstudien zu einer Soziologie des Rechts*, 4.A. (1987), 54 *et seq.*; LUHMANN, *Rechtssoziologie I* (1972), 40 *et seq.*; BERGER/LUCKMANN, *The Social Construction of Reality* (1966). See also KÖNDGEN, *Selbstbindung ohne Vertrag* (1981), 167 *et seq.* For detailed discussion in the *specific context* of information law, see DRUEY, *supra* note 1, 156 and, with further references, GASSER, *supra* note 29, 22 *et seq.*

tions with regard to the subject of regulation.⁴⁴ Nevertheless, I suggest that this question of definition is crucial with regard to legal regulation of information phenomena in general and with regard to regulation of the quality of “information” in particular.⁴⁵ For illustrative purposes, let us suppose that a law requires that disseminated information must be presented in a *complete* manner.⁴⁶ If we understand the term information in its *syntactic dimension*, i.e. as an amount of signals (“data”), law can set—with reference to technical measurements and defined technical standards, for example—comparably precise requirements in order to define what one has to understand by the criterion “complete information.” In the case of a telephone conversation over a fiber optic cable, for instance, technicians may measure the input signal quantity on the receiver side, compare these data with the output on the sender side, and put these results in relation to certain defined technical standards. By contrast, if we understand information as significance, or meaning (*semantic dimension* of the term), or focus on its *pragmatic dimension* (effects of information), the intellectuality (“Geistigkeit”) and individuality of these phenomena⁴⁷ make it impossible for the law to define what the quality requirement “complete information” precisely is.

While the Federal Data Quality Act simply introduces the relevant terminology (“information (including statistical information)”), the OMB Guidelines provide a legal definition of it. According to this definition, information means “any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numeric, graphic, cartographic, narrative or audiovisual forms.”⁴⁸ This definition is broad in the sense that a broad understanding of the term and concept “information” seems to underlay the relevant description. With its reference to “data,” “communication,” and “representation of knowledge,” the syntactic, semantic, and pragmatic dimension of information can equally be subsumed under the definition. Second, the definition is remarkably broad because information is both detached from the medium carrying it and from its appearance. Nonetheless, the emphasis on the formulation “... such as facts or data ...” makes it clear that the definition refers—*basically*, at least—to *factual information*. This reference finds its clearest expression in paragraph V.5. of the OMB Guidelines (emphasis added): “This definition includes information that an agency disseminates from a web page, but does not include the provision of hyperlinks to information that others disseminate. This definition *does not include opinions*, where

44 See GASSER, *supra* note 30, 734-736 with further references.

45 With regard to the problem of defining the term “information” in the context of law see, e.g., and with further references, DRUEY, *supra* note 1, 3-28; MAYER-SCHÖNBERGER, *Information und Recht. Vom Datenschutz bis zum Urheberrecht* (2001), 10-22, and GASSER, *supra* note 33, 39-44. With an attempt to systematize and clarify the various meanings of the term, see SPINNER, *Information oder Wissen – eine Alternative für die Geisteswissenschaften?*, in: HUBER/LAUER (Hrsg.), *Nach der Sozialgeschichte* (2000), 390 *et seq.*

46 In the context of the information quality legislation described, this criterion is part of the (broader) quality requirement “objectivity,” see paragraph V.2.a. of the OMB Guidelines: “‘Objectivity’ includes whether the disseminated information is being presented in an accurate, clear, *complete*, and unbiased manner.” (emphasis added).

47 Intellectuality (“Geistigkeit”) as a limitation of law is described by DRUEY, *supra* note 1, 77-84.

48 Paragraph V.5. of the OMB Guidelines.

the agency's presentation makes it clear that what is being offered is someone's opinion rather than fact or the agency's view." Although the intention of this particular paragraph seems reasonable, doubts arise from the viewpoint of information law with regard to the question of whether these exemptions shall be integrated into the definition section of the Guidelines. Indeed, there is no convincing reason (and, beyond that, it is counter-intuitive) to distinguish, for instance, third party opinions from "information." Generally speaking, it seems more appropriate to limit the applicability of the Guidelines in connection with the definition of scope rather than in the context of definition of terms.⁴⁹

Despite the comparably detailed definition of the term information, one can still diagnose a certain degree of *uncertainty* with regard to the normative description of the subject of regulation from reading the OMB Guidelines. Even though the description quoted above introduces "information" as a generic term, the OMB Guidelines establish, for instance, at least partially different quality requirements for "data" or "information."⁵⁰ Elsewhere in the OMB Guidelines, by contrast, these categories are no longer maintained.⁵¹ These remarks may illustrate that the definition of the subject referred to is—both from a practical and a theoretical perspective—a key problem in the context of the formulation of statutory or regulatory quality norms concerning "information."⁵² In order to master this problem, it seems crucial to define terms very carefully and necessary to use the terminology introduced within a statute or regulation coherently.

b) Quality Criteria

In scholarly contributions as well as in practice different criteria have been suggested to define, conceptualize, and evaluate information quality.⁵³ In addition to the question of what distinctions (e.g. correctness, accuracy, clarity, usefulness, etc.)⁵⁴ should find entry into law,⁵⁵ complex conceptual questions arise in this context. One basic problem, which is particularly acute in the context of legal regulation of informa-

49 In the case of the OMB Guidelines for instance in connection with paragraph V.8; *see supra* Part II.3.b).

50 *See* paragraph V.3.b.i. of the OMB Guidelines.

51 *See, e.g.*, paragraph V.3.b.ii. of the OMB Guidelines.

52 For a more detailed discussion *see* GASSER, *supra* note 30, 734-736.

53 An extensive description and analysis of different approaches is provided by EPPLER, The Concept of Information Quality: An Interdisciplinary Evaluation of Recent Information Quality Frameworks, in: *Studies in Communications Sciences* 1 (2001), 167-182, with further references. For a groundbreaking, most comprehensive study on information quality, *see* EPPLER, *Managing Information Quality* (2003).

54 From the legal point of view, *see, e.g.*, GASSER, *supra* note 30, 742 *et seq.*; DRUEY, *Verträge auf Informationsleistung*, in: FORSTMOSER/TERCIER/ZÄCH (Hrsg.), *Innominatverträge, Festgabe Schluop* (1988), 163; WEBER, *supra* note 1, 41 *et seq.*; ZULAUF, *supra* note 1, 99 *et seq.*; GASSER, *supra* note 1, 399 *et seq.* *See also* WEBER, *Governance of Information Quality in Enterprises*, in this volume.

55 The Federal Data Quality Act and the OMB Guidelines define three basic criteria, which are in turn part of the generic term "Quality": "Utility," "Objectivity," and "Integrity;" *see supra* Part II.3.c) and the following text above.

tion quality, results from the genuine *relational nature* of quality criteria.⁵⁶ The criterion “correctness,” for example, refers to the relationship between the information and the underlying facts and its context, while “completeness,” for instance, addresses the relation of information to its overall topic on the one hand, and the particular recipient on the other hand. “Conclusiveness,” to use a third example, brings information into a relation with a specific purpose of use.⁵⁷ In sum, the relational nature of information quality criteria demonstrates that a substantive definition of many quality criteria requires reference to individual communication parties (recipients in particular) and a particular informational context.⁵⁸ The Federal Data Quality Act and the OMB Guidelines illustrate these interrelations, as the following discussion will demonstrate.

(i) Utility

The quality criterion of *utility* as stated in the information quality law, refers to “the usefulness of the information to its intended users, including the public.”⁵⁹ The crucial and exemplary problem resulting from the relational nature of this criterion is that any adequate legal judgment asks for a previous inquiry of the involved senders and recipients as well as the surrounding informational context of communication.⁶⁰ Both practical and theoretical problems of fact-finding and of generalization of communicative relationships are associated with this inquiry. These problems are unlikely to be solved under the communicative conditions we are dealing with, i.e. in situations where one sender (here: a Federal agency) is confronted with a multitude of recipients within many different informational environments.⁶¹ A quality standard defined by highly relational elements, when applied in the sort of communicative conditions as described, seems therefore principally *not capable of juridical review*.⁶² However, such

56 Another key problem—which, however, is not a subject of this paper—arises with regard to the *Internet* medium: Information on the Internet is (generally speaking) *globally accessible*. As a consequence, information standards defined in one jurisdiction may have a different meaning in another jurisdiction (this, again, illustrates the information-inherent problem of contextuality). This *lack of uniform standards* is considered, for instance, in the context of networked health information, *cf.* KELTNER, Networked Health Information: Assuring Quality Control on the Internet, in: 50 Fed. Comm. L.J. 417, 433.

57 *See*, for further discussion, GASSER, *supra* note 30, 745-746.

58 *See, e.g.*, DRUEY, *supra* note 1, 243 *et seq.*; WEBER, *supra* note 1 43 *et seq.*, and GASSER, *supra* note 1, 399 *et seq.*

59 Paragraph V.2. of the OMB Guidelines.

60 Utility refers not only to the specifics of the transmitted information as such, but also to the evaluation of information with regard to “ihrem Auftreten auf eine Situation beim Empfänger,” DRUEY, *supra* note 1, 246. Hence, the focus is on the pragmatic dimension of the term information, and the context in which the recipient communicates plays a particularly important role; *cf.* WEBER, *supra* note 1, 45; GASSER, *supra* note 30, 744.

61 *See* GASSER, *supra* note 30, 745-746.

62 Interestingly, however, the utility criterion has been invoked in the first court complaint under the Federal Data Quality Act: Competitive Enterprise Institute vs. Bush and Marburger, *available at* <http://www.cei.org/pdf/3595.pdf>. By claiming the inaccuracy of the data gathering processes, the plaintiff gives a different meaning to the utility criterion from that suggested in the OMB Guidelines—which focus on effect and audience rather than information production.

a highly relational criterion may fulfill programmatic purposes.⁶³ These insights are probably reflected in the OMB Guidelines, when we read in paragraph V.2.: “In assessing the usefulness of information ... , the agency needs to consider the uses of the information not only from the perspective of the agency but also from the perspective of the public.”

Although the quality requirements are implemented through Federal agencies now,⁶⁴ the contour of the utility-criterion remains vague. Hence, each agency must consider the utility of the information on an abstract level from its own perspective as well as from the viewpoint of the public in order to take this criterion into account adequately.

(ii) Integrity

A much more precise and concrete criterion within the OMB Guidelines is that of *integrity* of information. However, this quality standard does not refer to the genuine quality of the information as such as one might think, but refers to *protection* of the information from unauthorized access or revision. Viewed in this light, then, the criterion is not related to information itself, but to its medium, or, more precisely, to the *data medium* in which information is stored or carried.⁶⁵ Accordingly, the implementing guidelines of the Federal departments and agencies refer predominantly to computer software and secure hardware systems in order to guarantee “integrity of information.”

(iii) Objectivity

A highly interesting aspect of the OMB Guidelines, from the viewpoint of information law, is the criterion of *objectivity* of information. This is a well-known quality standard already, which has found entry into law and legal practice, for instance, in the context of media regulation.⁶⁶ However, also with regard to this quality criterion we reach the limits of (information) law when interpreting it in a *substantive manner*.⁶⁷ With this limitation in mind, an analysis of the relevant provisions of the OMB Guidelines proves particularly interesting. The starting point of our analysis is the finding that the OMB Guidelines use objectivity to address two elements. On the one hand, the criterion refers to the presentation of information, and on the other hand, it refers to the substance of information, i.e. its *content*. Concerning the (more problematic) content-

63 In this sense see also OIRA Review of Information Quality Guidelines drafted by Agencies, paragraph III: “Each agency, in structuring its information quality guidelines, must state the agency’s information quality criteria (as defined in the OMB and agency guidelines) *as performance goals* that the agency seeks to attain.” (Emphasis added).

64 See *supra* Part II.3.d).

65 See paragraph V.4. of the OMB Guidelines.

66 For instance in Switzerland; see, e.g., ZULAUF, *supra* note 1, 77 *et seq.* and GASSER, *supra* note 1, 393 *et seq.*, both with examples and further references.

67 For a more detailed discussion see GASSER, *supra* note 1, 399 *et seq.*

related reference, the OMB Guidelines make it clear that objectivity involves “a focus on ensuring accurate, reliable, and unbiased information.”⁶⁸ These substantive requirements are specified for certain informational contexts. With regard to a scientific, financial, or statistical context, paragraph V.3.b.i. of the OMB Guidelines requires that the original and supporting data must be generated, and the analytic results shall be developed, using “sound statistical and research methods.”

It is furthermore remarkable, from our perspective, that the OMB Guidelines state a *presumption of acceptable objectivity* (in the sense of a factual presumption), insofar as data and analytic results have been “subjected to formal, independent, external *peer review*.”⁶⁹ This presumption is, by definition, rebuttable; this is also clarified in the OMB Guidelines now. What matters from the viewpoint of information law is that the genuine substantive requirement “objectivity”—as a major content-based characteristic of information quality—is transformed into a procedural requirement (i.e. peer review) with regard to certain specified and important fields of application. This *proceduralization* of the objectivity requirement might be interpreted as a basic strategy of law to deal with the problem of the relational nature of quality criteria (as described above).⁷⁰ Reflexively, however, the question of the *quality of procedure* arises. The comments accompanying the OMB Guidelines present the review process used by scientific journals as an example of a formal, independent and external peer review process from which, if established, the presumption of objectivity is drawn. However, if agency-sponsored peer review is employed in order to help satisfy the objectivity requirement, “the review process employed shall meet the general criteria for competent and credible peer review” as officially recommended.⁷¹ Beyond that, certain agencies have developed and introduced detailed peer review policies, which are (still) part of the quality ensuring process.⁷²

With regard to *presentation*, the OMB Guidelines state that information has to be presented “in an accurate, clear, complete and unbiased manner.”⁷³ Moreover, it is required that information be presented within a proper *context*. Here, the Federal agency might have an obligation—if the particular type of primary information requires it as established by the OMB Guidelines—to disseminate additional information in order to fulfill this standard. In a scientific, financial, or statistical context, in particular, the agency needs to disseminate the supporting data and models, and additional information (e.g. data documentation, error sources, etc.) if appropriate. These *disclosure standards* are designed to allow the public to assess the objectivity of information.

68 Paragraph V.3.b. of the OMB Guidelines.

69 Paragraph V.3.b.i. of the OMB Guidelines (emphasis added).

70 For further discussion see GASSER, *supra* note 1, 403.

71 Paragraph V.3.b.i. of the OMB Guidelines with reference to www.whitehouse.gov/omb/inforeg/oira_review-process.html.

72 See, e.g., EPA’s Peer Review Policy articulated in Peer Review and Peer Involvement at U.S. Environmental Protection Agency, June 7, 1994 (available at <http://www.epa.gov/osp/spc/perevmem.htm>) and EPA’s Peer Review Handbook, 2nd Edition, U.S. EPA, Science Policy Council, December 2000 (available at <http://www.epa.gov/osp/spc/prhandbk.pdf>).

73 Paragraph V.3.a. of the OMB Guidelines.

For some types of information, however, the OMB Guidelines define a higher standard. If an agency is disseminating *influential* scientific, financial, or statistical information, i.e. when the dissemination of the information will have or does have a clear and substantial impact on important public policies or private sector decisions, the Federal agencies' guidelines must include a high(er) degree of *transparency about data and methods* in order to "facilitate the reproducibility of such information by qualified third parties."⁷⁴ In this connection, the OMB Guidelines define specific transparency standards with regard to original and supporting data as well as to analytic results related thereto. Further, agencies have to "adopt or adapt" specific quality principles pursuant to the Safe Drinking Water Act (SDWA) Amendments of 1996⁷⁵ with regard to analysis of risks to human health, safety and the environment maintained or disseminated by the agencies.⁷⁶ The SDWA places emphasis on peer-reviewed science and supporting studies and asks for detailed information about the risk being examined. It seems likely that such peer review satisfies the objectivity standard established in the OMB Guidelines.

In this context, one should note that *private institutions* are, in particular instances, also obligated to disclose research data. OMB Circular No. A-110⁷⁷ states uniform administrative requirements for grants and agreements with institutions of higher education, hospitals, and other non-profit organizations. According to subsection 35(d)(1), a private or public organization receiving financial assistance from Federal agencies to carry out a project or program must provide—in connection with a previous Freedom of Information Act (FOIA) request—the research data relating to published research findings produced under the award, if these findings were used by the Federal Government in developing an agency action that has the force and effect of law. Some voices have expressed concern that industry would, for instance, request the underlying data from studies carried out by universities in order to suppress critical research that might lead to regulation by Federal agencies.

From the perspective of information law, the preceding discussion suggests the *conclusion* that a good part of the design of objectivity standards set forth in the OMB Guidelines is *adequate*, because the OMB Guidelines do not only rely on, broadly speaking, some ambiguous content-based criteria, but focus on more precise procedural

74 Paragraph V.3.b.ii. of the OMB Guidelines.

75 42 U.S.C. 300g-1(b)(3)(A)&(B).

76 See paragraphs V.3.A, B, C. of the OMB Guidelines. These SDWA quality principles are adopted or adapted by many Departments and Agencies (e.g. Council on Environment Quality, Department of Agriculture, Department of Commerce, Department of Health and Human Services, Food and Drug Administration, etc.). Some departments, however, do not mention whether the principles are adapted / adopted or not (e.g. Department of Defense, Nuclear Regulatory Commission; State Department). Other Guidelines state, e.g., that it is not necessary to address this question right now, but that the agency will adopt or adapt if the occasion arises (e.g. National Science Foundation), or adapt the principles for certain units only (e.g. Department of Labor). By contrast, the guidelines of the Environmental Protection Agency (EPA), e.g., provide *detailed information* about the adaptation of the quality principles found in the SDWA. Furthermore, EPA's Guidelines clarify the adapted principles extensively.

77 <http://www.whitehouse.gov/omb/circulars/a110/a110.html#53>.

standards, which could be subject to judicial review.⁷⁸ Therefore, it seems also appropriate to formulate some minimal requirements with regard to the relevant procedures. In this context, however, certain *problems of practicability* remain. It seems, for instance, challenging—both from the viewpoint of agencies’ knowledge and organization—to filter “influential information” based on the terms used in the relevant definition.⁷⁹ Viewed from this angle, it is interesting to compare the different approaches underlying the relevant provisions of the Agency Guidelines.⁸⁰

3. Layer of Effects

a) Effects on Information Quality

The actions taken and the standards defined in the information quality regulation are likely—as far as applicable, naturally—to ensure and promote (even maximize?) a high(er) level of information quality. This effect on information quality results, on the one hand, because *preventive* actions take place (*ex ante* perspective): As noted above, Federal agencies are directed to implement a review process in order to ensure information quality before information is disseminated. Information quality management, then, becomes part of processes on all levels and in every step of agencies’ information activities (creating, storing, maintaining, etc.). Additionally, many tailored requirements (transparency requirements, objectivity standards, etc.) are likely to have an impact on agencies’ informational behavior before disseminating information. Peer reviews might play a particularly important role in order to ensure information quality.⁸¹

On the other hand, information quality law creates a basis for a *review* of information *subsequent to dissemination* (*ex post* perspective). One important element in this context is the implementation of an *administrative mechanism*⁸² allowing affected persons to seek and obtain correction of information that does not comply with the OMB Guidelines. Additionally, it does not seem impossible that the OMB Guidelines have implications for *judicial review* of agency actions. However, the question whether an agency’s refusal to correct information is subject to further challenge in Federal

78 See also Part III.3.a).

79 See paragraph V.9. of the OMB Guidelines. See in this context ASHBY’S remarks in context of Workshop # 3 on Ensuring the Quality of Data Disseminated by the Federal Government (May 30, 2002), at http://www7.nationalacademies.org/stl/DQ_Workshop.html.

80 Only a few *examples* in this context: The Department of Commerce Guidelines, for instance, use a “*balancing process*” in order to define “influential,” and state that the department’s operative units have defined the term appropriate to mission and activities. Other departments use a *standard definition* established in the OMB Guidelines (e.g. National Science Foundation), some other Guidelines establish a *narrower definition* (e.g. Environmental Protection Agency with 3 classes of information given as types that count as influential, and an additional possibility of case-by-case evaluation; Department of Agriculture with a monetary criterion for rulemaking information and two criteria for non-rulemaking information; etc.).

81 Potentially quality-increasing, indirect effects, for instance, occur if the author of a study knows in advance that the study will be subject to peer review.

82 See *supra* Part II.3.c).

Courts has not been answered yet. Some Agency Guidelines make a clear statement that the guidelines are not legally binding and do not create new legal or judicial review,⁸³ while industry lobbyists suggest that the mechanisms for error correction and the appeals process establish new legally reviewable responsibilities. A recent decision of the United States Court of Appeals for the District of Columbia Circuit,⁸⁴ however, might offer a significant expansion of judicial review with regard to regulatory science, and the OMB Guidelines can be read as an acknowledgment of the need for enhanced review of scientific decisions⁸⁵ (the OMB, however, has taken no position on the issue of reviewability). In August 2003, the Competitive Enterprise Institute, a group lobbying against regulation, filed the first lawsuit under the Data Quality Act with the U.S. District Court for the District of Columbia against the White House Office of Science and Technology, challenging the climate change report “National Assessment of the Potential Consequences of Climate Variability and Change.”⁸⁶ The complaint was filed when the agency did not respond to the Institute’s request for consideration within 60 days. Obviously, this is an “extremely important information case even if CEI does not succeed in getting the global warming report de-published. If the court allows the case to go forward, determining that the Data Quality Act is judicially reviewable, then federal agencies may lose their flexibility to freely discuss breaking issues and concerns without unwarranted censorship.”⁸⁷

It remains an open question, however, to what extent the *overall purpose* stated in the Paperwork Reduction Act (RPA)—i.e. that the improvement of quality and utility of Federal information strengthens decisionmaking, accountability, and openness in Government and society—can be fulfilled. This essay suggests that the effects of information on its recipient are, from a qualitative perspective and as a consequence of the uncertainty of causality of information, not predictable; and, furthermore, confronted with the freedom of thought, these effects may not be determined by law.⁸⁸

83 In the guidelines of the Environmental Protection Agency (EPA), for instance, one finds a statement that the guidelines are not intended to constitute a set of legally binding requirements. It reads as follows: “Our Guidelines reflect EPA’s best effort to present our goals and commitments for ensuring and maximizing the quality of information we disseminate. As such, they are not a regulation and do not change or substitute for any legal requirements. They provide non-binding policy and procedural guidance, and are therefore not intended to create legal rights, impose legally binding requirements or obligations on EPA or the public when applied in particular situations, or change or impact the status of information we disseminate, nor to contravene any other legal requirements that may apply to particular agency determinations or other actions.”

84 *Tozzi v. Department of Health and Human Services*, 271 F.3d 301 (D.C. Cir. 2001), available at <http://pacer.cadc.uscourts.gov/common/opinions/200111/00-5364a.txt>.

85 Cf. RAUL/ZAMPA, *Deeper Judicial Scrutiny needed for Agencies’ Use of Science*, in: WLF Legal Backgrounder Vol. 17, No. 7 (2002), available at <http://www.thecre.com/pdf/LegalBackgrounder012502.pdf>.

86 The complaint is available at <http://www.cei.org/pdf/3595.pdf>.

87 OMB Watch: *First Data Quality Lawsuit Filed*, at <http://www.ombwatch.org/article/articleview/1733/1/1/>. Remarkably, the plaintiff later amended its lawsuit adding violations of two other statutes, most likely as a precaution against immediate dismissal if the guidelines are not deemed reviewable. Cf. OMB Watch, *id.*

88 See previous paragraph.

Hence, the outcomes of information regulation by law remain also with regard to quality concerns uncertain: Even high quality information is, from this viewpoint, only (but at least) a “Wert-Chance,” but not a value itself.⁸⁹

b) Effects on Interactions

An analysis from the perspective of information law suggests that information quality regulation as described in this article does not only have impacts on the quality of information itself, but produces *broader effects*. One might observe, for instance, some alterations with regard to individuals and/or organizations involved in information processes, the modalities of information exchange, and content of information. In view of the fact that the question of content is closely related to quality issues, the following remarks focus on the other two issues.

(i) *Effects on modalities*. I suggest that the information quality regime outlined in this essay does influence the modalities of information exchange. One modality, for example, is the *point of time* when a particular piece of information is used or made available to the public. The quality requirements established in the OMB Guidelines are likely to slow down information exchange in the sense that information—certain types of it, at least—will inevitably be used or published by an agency *at a later date* than would be the case where information quality is not (or less stringently) regulated. A request for correction of information contained in EPA’s Atrazine Environmental Risk Assessment filed by the Center for Regulatory Effectiveness (CRE), the Kansas Corn Growers Association, and the Triazine Network may provide practical illustration of this effect.⁹⁰ In this Data Quality Act Petition, the petitioners requested corrections to influential information in the EPA’s “Final Registration Eligibility Science Chapter for Atrazine: Environmental Fate and Effects Chapter.” This document states that Atrazine, among the nation’s most widely used herbicide, causes endocrine effects in various organisms including frogs. The petitioners, however, challenged this statement with the argument—among others—that it does not meet the Data Quality Act’s reliability, reproducibility and utility standards because there are no validated tests for determining whether Atrazine causes environmental endocrine effects. While the petition focused on a particular set of tests, “the likely goal is not just to discredit or remove this one study but to establish the argument that without validation protocols no endocrine study, for atrazine or any other suspected endocrine disruptor can be considered reliable – no matter how peer reviewed or how many times the study has been reproduced. This would eliminate the EPA’s ability to protect the public and the environment from any chemicals that act as endocrine disruptors until the agency could finalize protocols to validate related studies.”⁹¹ Regardless how this particular request may be answered, this

89 DRUEY, *supra* note 1, 73-74.

90 <http://www.thecre.com/pdf/petition-atrazine2B.pdf>.

91 OMB Watch: Data Quality’s First Test (Dec. 9, 2002) at <http://www.ombwatch.org/article/view/1210>; *see also*, DAVIS, Industry Test-Fires New Secrecy Weapon, in: Metcalf Institute for Marine

example illustrates how quality requirements may have an *ex ante* effect on the timing of information use and dissemination.

(ii) *Individuals and/or organizations involved in information processes.* This paper suggests that information quality requirements, as implemented through the OMB Guidelines, have implications with regard to the question of who communicates with whom, and may influence the relationship between pre-existing interaction partners. Let us consider the latter question first. If we take, for instance, the viewpoint of an agency, we become aware of the fact that this agency is likely to be a collector and generator, a recipient, a user, as well as a conduit of information.⁹² It is an interesting research question as to which of these interaction relationships are touched in what manner by the information quality regulation. Most obviously, the new standards might have a substantial impact on the relationship between agencies and *external parties* providing information voluntarily or under statutory mandates: If an agency disseminates information prepared by an outside party “in a manner that reasonably suggests that the agency agrees with the information, this appearance of having the information represent agency views makes agency dissemination of the information⁹³ subject to the OMB Guidelines. Hence, agencies are obligated to implement strategies in order to ensure the quality of information from external sources,⁹⁴ and this, in turn, is likely to influence *pre-existing* relations between these interaction partners.

Beyond these alterations, information quality regulation may create *novel communicative relationships*. With regard to reporting obligations, for example, it is interesting to study how communications between various agencies and the Office for Management and Budget, i.e. *inter-agency* exchange will develop. But also *intra-agency* information exchange is likely to be influenced by the information quality regulation, insofar as an enhanced internal information exchange system is a prerequisite to fulfill the pre-dissemination review standards established in the OMB Guidelines. Furthermore, the implementation of administrative mechanisms increases the amount of interactions between a particular *agency and information users* (“affected persons”). Today, it is an open question what other communication relations will emerge on the basis of information quality regulation. Another subject for further studies in this context is, for instance, to what extent communications between different regulators (or regulatory forces) will evolve.

& Environmental Reporting (Dec. 17, 2002), at http://www.environmentwriter.org/resources/articles/1202_dataquality.htm.

92 See, e.g., the description in: Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Environmental Protection Agency, 5-8.

93 OMB Guidelines, 8454.

94 This was questioned during the period of public review; see *supra* Part II.3.d).

c) Side Effects

It remains to note that quality regulation might cause *side effects*. With regard to the information quality regime discussed in this essay, the following phenomena provide some examples of potential side effects.

- *Costs*: The information quality law imposes, like other laws, different types of costs. Because most of these costs are unwanted, they can be described as side effects. Such costs might include, for example, the costs of implementing new functions (e.g. designation of Chief Information Officer; expenses for expert opinions, etc.) and processes (e.g. pre-dissemination review processes; administrative mechanisms, etc.).⁹⁵
- *Shift in control over information*: Information quality regulation may lead to a shift in control over information production, use, and dissemination. Regarding the standards established in order to ensure and maximize the quality of influential information on human health, safety and environment, one can already identify certain attempts to reallocate the previous forces controlling information dissemination.⁹⁶
- *Strategic behavior*: This issue is related both to costs and to the problem of information control. Strategic behavior describes the situation in which an interested party (mis)uses information quality standards in order to achieve his or her own ethically questionable interests. Industry groups, for instance, began to use the new information quality legislation to suppress the availability of particular, from their point of view, harmful health information releases.⁹⁷ Generally speaking, information quality regulation can be used to promote interests other than quality concerns, i.e. to pursue the economic interest of particular industry groups.⁹⁸
- *(Over-)restrictive information policy*: Demanding quality requirements may, under certain circumstances, lead to unintended informational behavior on the part of information producers and distributors. The threat of claims, lawsuits,

95 See, e.g., MORRISON and GARRISON on Workshop # 3 on Ensuring the Quality of Data Disseminated by the Federal Government (May 30, 2002), at http://www7.nationalacademies.org/stl/DQ_Workshop.html.

96 See next paragraph for references.

97 See DAVIS, *supra* note 91.

98 A producer of barium chemicals, for instance, submitted an information quality challenge to the EPA on information about barium in the agency's Integrated Risk Information System, which is an important health effects database. Based on the argument that two EPA offices came to different conclusions based on the same study, the company asked the EPA to withdraw the oral reference dose for barium from its database and replace it with a *much larger* oral reference dose that has been subject to peer review by a non-profit corporation; cf. <http://www.ombwatch.org/article/articleview/1231/1/4>.

negative reputation, follow-up costs, etc. may set negative incentives for information production and/or a restrictive information dissemination policy.⁹⁹

These few examples also illustrate that regulation of information *quality* is, in fact, *information* regulation. In this way, quality cannot be separated (but, of course, analytically distinguished) from content. Accordingly, one needs—out of consideration for freedom of information as a normative purpose—a convincing justification for legal intervention.

IV. Conclusion

This paper was intended to offer some observations on the emergence of information quality law. The subject of the analysis has been the Federal Data Quality Act and its implementing Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, recently issued by the Office of Management and Budget (OMB). The analysis has been carried out from the perspective of information law and has proceeded on the basis of previous writings. From this analysis, the following conclusions can be drawn:

As an initial starting point, the analysis documented the rationale for the information quality regulation.¹⁰⁰ Although one cannot refer to an extensive legislative history, it seems likely that the legislation is related to the qualitatively and quantitatively increased (and increasing) importance of information disseminated by Federal agencies, which—in turn—is connected with an enhanced use of digital technology in general and the Internet in particular. At this time, it is still an open question if this development can be read as a precursor of a more general shift from historical access concerns towards future quality concerns in a digitally networked environment.

Furthermore, the analysis illustrated that law may focus on the quality of the source of information, or its sender in order to regulate information quality. More precisely, information quality regulation is likely to establish standards with respect to the informational behavior of a particular sender (in casu the Federal agency). In this context, one can distinguish analytically between content-based, institutional, and procedural requirements.¹⁰¹ In this connection, we outlined the problem of uncertainty of information causality. Communication and media theory, for instance, teach that a linear causal relationship between stimulus and effect does not exist. A sender does not, in fact, determine information effects. Thus, an assumption that high-quality stimuli lead *volens volens* to “better effects” (e.g. “public benefit”) is inadequate in light of the complexity of the phenomenon. By contrast, information quality should be re-

99 Part of the problem is the so-called “incommensurability” of certain quality criteria; *see, e.g.*, EPPLER, *supra* note 53, 174.

100 *See supra* Part II.1.

101 *See supra* Part III.1.

constructed as a complex network of references to content, communicating subjects, and contexts.¹⁰²

Furthermore, the analysis demonstrated that one major practical and theoretical problem while regulating information quality results from the ambiguity of the term “information” as a subject of regulation. Therefore, this paper suggests that definitions of terms should be made very carefully, and that the defined terminology should be used consistently within the regulation.¹⁰³ But, the definition of the obscure term “information” is not the only troublesome one that one encounters in the attempt to regulate information quality. As illustrated, the definition of quality criteria—at least from a legal perspective—is problematic, too. Criteria which are highly relational in nature (e.g. completeness, utility, etc.) and are used in open communicative environments (e.g. multitude of recipients), for instance, are principally not judicially reviewable but may fulfill, however, programmatic purposes.¹⁰⁴ Proceduralization as one possible strategy to cope with this problem was described with reference to the OMB Guidelines’ objectivity standard.¹⁰⁵

With regard to effects, the analysis identified several reasons why the actions taken and standards defined are—in general—likely to increase the quality of information disseminated by agencies.¹⁰⁶ However, this positive effect is, for the reasons mentioned, not predictable in detail. Beyond that, the paper brought other potential implications to light. First, the analysis suggested that the information quality regulation in question not only has quality effects, but effects on information flow itself (e.g. influence on timing of information dissemination, on pre-existing relations between interacting partners, etc.).¹⁰⁷ Second, the relevant regulation is likely to have unwanted effects. Information quality law not only imposes costs, for instance, but may also lead to strategic behavior, to a restrictive information policy, and a shift in control over information.¹⁰⁸

Broadly speaking, the analysis of the relevant regulation also demonstrated that regulation of information quality is, in fact, regulation of information itself (including regulation of its flow). On the flip side, however, the paper illustrated that law shall and does have only limited access to the phenomenon “information” in general and “information quality” in particular. This limitation of law is—normatively—a consequence of the freedom of information and—factually—a result of the intellectual and subjective nature of the information phenomenon.

102 See *supra* Part III.1.a).

103 See *supra* Part III.2.a).

104 See *supra* Part III.2.b).

105 See *supra* Part III.2.b)(iii).

106 See *supra* Part III.3.a).

107 See *supra* Part III.3.b).

108 See *supra* Part III.3.c).