

# Understanding the Code of Codes: On the Prospects for Legislation in the Digital Age

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## Introduction

This paper explores the iconic implications of the materiality of law's "embodiment" as digital (versus printed) text in the age of electronic communication. I want to demonstrate how an approach to the production and dissemination of legislation which is "sensitive to the form and imagery of legal texts can illuminate both the meaning and force of the law."<sup>1</sup> Framing the issue of law's expression in this way puts the medium through which legal norms are communicated before the articulation of the norms themselves in what can prove to be a highly illuminating way. My argument is that the implicit normativity of Internet communication has already had a profound impact on the form in which legislative activity is conceptualized and received by those whose behaviour it is intended to govern.<sup>2</sup> The technological and software protocols of the Internet have

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<sup>1</sup> Desmond Manderson, *Songs Without Music: Aesthetic Dimensions of Law and Justice* (Berkeley: University of California Press, 2000) at ix.

<sup>2</sup> Thus, the network of computer networks commonly referred to as the Internet is said to have created a new global interactive space which has no regard for national borders. In this space, the citizens of nation states become "netizens." How is this new space to be governed? Some netizens, anxious to preserve what they perceive to be the intrinsically libertarian qualities of the Internet, caution against the extension of domestic laws to cyberspace, and even argue that cyberspace cannot legitimately be controlled by any existing sovereign state because of its transborder character. Internet proponents have also proposed various alternative models of governance, such as a private contract regime in which authority is polycentric and the result of individual agreement on open protocols, in an effort to forestall state regimes from imposing their own legislated solutions to problems of collective action.

become the code of codes in the digital age. Increasingly in the future, the legitimacy of legislative activity will depend on the extent to which it can be perceived to fit within the norms dictated by the infrastructure of Internet communication. Interactivity and polycentricity would then take precedence over stability and generality as criteria of legislative validity.

By way of illustration, consider the very different understanding of authorship and authority which digital texts can be seen to body forth compared to printed texts. Digital texts have the potential to be interactive, whereas there is no back and forth between sender and receiver with printed texts. This makes the former appear more collaborative than “authoritative” (in the conventional unidirectional sense that a printed text displays). How much does our common sense notion of the (top down) authority of legislative texts depend on their form as printed texts? To what extent are the conventional legislative values of, for example, relative stability, generality and non-contradiction, a simple reflection of the implicit normative structure of a print-based legal and political order (or typodemocracy) and not therefore suited to an electronic order (or cyberdemocracy) where fluidity rather than stability, and rerouting rather than non-contradiction, would tend to figure as norms?

This paper begins with a brief survey of some of the dominant developmental trends of cyberspace—most notably, interactivity, accessibility and convergence (or multi-sensoriality)—all of which may be summed up by reference to the notion of “secondary orality” (defined below). The paper then traces the implications of these transformations and trends for the future of the legislative process.

### **Charting Cyber trends**

The Internet is becoming an increasingly enveloping environment, or “world unto itself.” For instance, the members of a so-called virtual community may be widely dispersed geographically and yet enjoy instant communication due to the collapsed space-time of the Internet. Furthermore, the body image which a user presents in cyberspace need in no way correspond to his or her actual physical body. The virtual identities of cyberspace allow people to escape the particular physical and cultural conditions of their embodied realities and reconstitute themselves as whomever and whatever they wish. Cyberspace is thus a realm of virtual selves as well as communities.

At the same time, computer use is becoming increasingly integrated with everyday life, or part of a “seamless web.” The integrative character of web-based existence can be illustrated by considering briefly how the interactivity, accessibility, and sensoriality (or convergence) of electronic media have been evolving in recent years.

The transition from mainframe to personal computers, and from computing being the preserve of technical experts, such as engineers and software programmers, to it figuring centrally in many peoples’ work and/or leisure activities, has had a major impact on the common sense understanding of the role of computers in society. Computers have become quotidian devices, and they have facilitated a qualitatively new form of sociality. This new form of sociality is grounded in technologically mediated interactivity.

One of the earliest (and still among the most popular) embodiments of this new sociality is the network of on-line news/discussion groups known as Usenet, where users are able to post, read, and respond to messages pertaining to a specific topic area, and a record or “thread” of all past discussions on the topic is maintained that can be consulted by new or on-going participants. Multi-User Domains (MUDs) and MUD Object-Oriented (MOOs) represent another early example of the new sociality. These consist of large-scale, collaboratively constructed, on-line environments, where:

“participants enter textual descriptions of imaginary places that others can visit, and of objects and robotic characters that populate those places, awaiting scripted interaction with future visitors. The underlying software ties all the description and scripts together to create a single, continually evolving environment and provides an opportunity for [the user] to meet and interact with other participants in that environment.”<sup>3</sup>

MUDs and MOOs constitute virtual environments which are evidently quite literary, or text-based. However, it is instructive to consider how the

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<sup>3</sup> William Mitchell, “Replacing Place” in Peter Lunenfeld, ed., *The Digital Dialectic: New Essays on New Media* (Cambridge: The MIT Press, 1999) at 114.

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textuality of these virtual worlds contrasts with the textuality of, for example, a novel. Like a novel:

“they textually construct complex places where the lives of many characters simultaneously unfold and interact, but they are collaboratively authored rather than the work of one person, and they are indefinitely in progress and constantly being extended—not closed and complete like a novel. Instead of turning pages, [the user] explores them by typing commands or pointing-and-clicking to move around and evoke responses.”<sup>4</sup>

The heavy dependence on text and typed commands of these early virtual environments has been augmented and/or supplanted by graphic interfaces, as well as by sound and synchronization, and most recently by 3D shared-space (i.e. virtual reality) technology as the field of “interactive digital entertainment” has attracted increasing capital investment and development.<sup>5</sup> The many diverse projects on which engineers and programmers in this field are now working include developing “Intelligent”, sensorially aware virtual beings and creating interactive cyber movies in which viewers can participate as actors and direct the plot.<sup>6</sup>

Another growing trend is that of ubiquitous computing. This term is used to mean that computing will take place not only within the personal computer as we know it today but in many objects of everyday life, significantly augmenting accessibility. For example, a major Canadian communications company has developed an interactive telephone device, which comes with a small display screen, that permits the residents of a model “wired” community (Stonehaven West) to access a sort of “electronic mall” where they can “pay bills, do their banking, view advertisements, compare prices, order prescriptions, make purchases, and even read news headlines without ever leaving the house or turning on

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<sup>4</sup> Ibid.

<sup>5</sup> Ibid at 115-27.

<sup>6</sup> Gloriana Davenport, “Your Own Virtual Storyworld” (November 2000) 283, 5 *Scientific American* 79 (hereinafter “Virtual Storyworld”)

their personal computer.”<sup>7</sup> Of course, the telephone is a rather obvious instrument of commercial and informational exchange. Hence the current drive to enlist all sorts of other, less obvious home appliances for this purpose: one computer company recently unveiled a microwave oven which can support e-mail and electronic banking.<sup>8</sup>

The goal of the ubiquitous computing movement is for houses to contain extensive interactivity programs, thereby making the home into a computer and completing the revolution which began with bringing the personal computer into the home. To this end, thin holographic monitors placed on the wall or in windows could allow inhabitants to enter cyberspace from many different locations in the house. This would be done through simple cues such as voice commands or even a glance, which could be registered and interpreted by a sensing device.<sup>9</sup> Ubiquitous computing, then, will eventually make every physical surface into a potential electronic interface, or Internet access node.

In addition to the multiplication of devices and surfaces in the physical world which can serve as Internet access points, there has been an extraordinary proliferation in the range and nature of sites which Internet users can visit. Not only commercial institutions, but governmental and non-governmental organizations, as well as countless individuals, have been caught up in the rush to create on-line identities in the form of Web pages which disseminate information and/or offer access to services. New norms of accessibility have emerged in the process, and appear to be reshaping not only what it means to be a consumer (as in the whole “electronic mall” or e-commerce phenomenon) but also what it means to be a citizen in liberal democratic society. For example, there is a growing demand for governments to ensure universal Internet access for their citizens on the assumption that meaningful participation in public life is dependent on access to the informational resources of the Internet, and enabling such access would of itself suffice to overcome the inequities in

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<sup>7</sup> Darin Barney, *Prometheus Wired: The Hope for Democracy in the Age of Network Technology* (Vancouver: UBC Press, 2000) at 170 (hereinafter *Prometheus Wired*).

<sup>8</sup> W. Wayt Gibbs, “As We May Live” (November 2000) 283, 5 *Scientific American* 36

<sup>9</sup> *Ibid.*

the distribution of information and income that currently stand in the way of full civic participation.<sup>10</sup>

One image of how the new norms of accessibility supported by network technology are fueling new forms of civic participation is the image of the homeless man at a computer terminal in a public library writing an e-mail to his local member of parliament. Another image is the model of “keypad democracy” which Lawrence Grossman champions in *The Electronic Republic*. According to Grossman, the obstacles of scale which have tended to thwart strong democratic participation in the past are being overcome by recent developments in network technology: “Using a combination telephone-video screen computer, citizens will be capable of participating in audio- and videophone calls, teleconferences, tele-debates, tele-discussions, tele-forums and electronic town meetings.”<sup>11</sup> Time and distance will thus cease to figure as factors limiting participation. Given that the consent of the governed can be measured every minute by electronic plebiscite rather than having to wait three to four years for a general election, some thinkers have begun to question whether representative democracy might have lost its *raison d’être* and should not be replaced by direct (electronic) democracy.<sup>12</sup>

A third major trend, which was already touched upon in the discussion of interactivity and accessibility above, is that of convergence. This term refers to the way in which digitization is facilitating the transformation of previously distinct media, such as music, movies and video games, into a single medium that delivers high resolution audio and video content that is also interactive.<sup>13</sup> This transformation, which began in the mid-1990s, has enabled Internet users to construct and access virtual environments which are infinitely more engaging than the MUDs and

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<sup>10</sup> On the presumed association between connectivity and democracy see Barney, *Prometheus Wired* at 172-73.

<sup>11</sup> Lawrence K. Grossman, *The Electronic Republic: Reshaping Democracy in the Computer Age* (New York: Viking, 1995), p. 148.

<sup>12</sup> Andrew Shapiro, *The Control Revolution* (New York: Public Affairs, 1999) at 155.

<sup>13</sup> Peter Forman and Robert Saint John, “Creating Convergence” (November 2000) 283, *5 Scientific American* 50

MOOs discussed earlier because, in lieu of strictly text-based applications, they contain text, sound and graphic as well as moving image applications.

There is no reason the merging of media that is unfolding presently should stop at audio and video content, however, for “digitization establishes the means for translating and reintegrating [all] the senses”<sup>14</sup> In other words, while cyberspace may be a multimedia environment today, it promises to become a multi-sensory surround tomorrow. Technology has already been developed which will allow the sensations of smell and touch to be transmitted electronically. An odour synthesizer has recently been put on the market which can be attached to computers to transmit odours. The synthesizer consists of a small black box with tiny vials of scent inside. When a message is received the machine blends a selection of basic essences and then blows the required scent out through an air vent. Such olfactory signals could accompany movies, advertisements and electronic books, or could be sent by e-mail.

There are a number of haptic devices being developed and currently in use which make it possible to transform electronic messages into tactile sensations. A typical haptic device is a computer-controlled glove which, when worn, gives users the sensation of holding and feeling computer-generated objects. Researchers look ahead to the creation of a “haptic suit” which would enable users to feel computer-generated sensations all over their bodies.<sup>15</sup>

The invention of a haptic suit gives new meaning to McLuhan’s slogan, “the medium is the message.” This development also points to how, with the arrival of the secondary oral culture supported by network technology, the separation of the senses and privileging of vision as *the* information sense in chirographic (writing-) and typographic (print-based) cultures is now being reversed. As Ong has observed, in primary oral cultures words are dynamic and are always accompanied by sensations in other modalities (kinaesthetic, olfactory, etc.) because of the co-presence of speaker and listener, whereas “writing moves words from the sound

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<sup>14</sup> Cathryn Vasseleu, “Virtual Bodies/Virtual Worlds” in David Holmes, ed., *Virtual Politics: Identity and Community in Cyberspace* (London: Sage, 1997) at 50.

<sup>15</sup> David Pescovitz, “Getting Real in Cyberspace” (November 1999) 282, 5 *Scientific American* 48.

world to a world of visual space,” turning words from events into mere representations, and “print locks words into position in this space,” heightening the perception of the fixity and closure of the text.<sup>16</sup> There is an emotional as well as sensory cost to the transition from the spoken to the written or printed word as the modal medium of communication in a culture, according to Ong, because of the way writing “separates the knower from the known and thus sets up conditions for ‘objectivity’ in the sense of personal disengagement or distancing.”<sup>17</sup> In oral cultures, memory is everything (there is no separation between the knower and the known), and the stress is on empathy, or “feeling along with,” rather than objectivity.

It will be appreciated how the drive to converge diverse media, and the reintegration of the proximity senses of touch and smell, into the communication process will have the effect of uniting what writing and print tended to split asunder and of exciting passions which were formerly suppressed.

In closing this brief survey of cyber trends, a further word is in order about the word. In the digital age, words no longer stand still the way they were forced to do in the age of print. Printed texts are fixed but digital texts are fluid. Indeed as Bellantoni and Wollman relate:

“The historical evolution of two-dimensional, static letterforms arranged and fixed in a horizontal string is shifting course. Type is no longer restricted to the characteristics found in the medium of print such as typeface, point size, weight... Letterforms with behavioral, anthropomorphic and otherwise kinetic characteristics; text that liquefies and flows; three-dimensional structures held together by lines, planes and volumes of text *through* which the reader may travel—these are only a few examples of the impact digital technology is having on the once simple letterform.”<sup>18</sup>

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<sup>16</sup> Walter J. Ong, *Orality and Literacy* (London: Methuen, 1982) at 121.

<sup>17</sup> *Ibid* at 46.

<sup>18</sup> Bellantoni and Woolman, *Type in Motion* (New York: Rizzoli, 1999) at 9.



In short, digitization has heightened the expressive potential of words, such that now they can change colours, or burst into song or dance before one's eyes.

### **Digital Law-making**

Most of the books and articles regarding law and cyberspace are concerned with how existing legal rules may be adapted to suit the particular features of the Internet.<sup>19</sup> The assumption throughout this literature is that, while modified legal forms may be required to regulate the Internet, standard forms of legislation will continue to hold in the "real world." Those who take this assumption for granted, however, seriously overlook the influence that Internet use will likely have on ways of thinking about government and the law even outside cyberspace.

In what follows a series of reflections will be offered concerning what the implicit normative structure of Internet communication may entail for everyday thinking about the present practice and future prospects of governance and legislation in liberal democratic society. In attempting to model what the future holds, however, my approach will be to seek guidance from the past, for the advent of digital technology is reversing many of the distinctions and assumptions which print technology introduced and thus recreating an oral world. It is to the example of primary oral cultures that I therefore propose to turn for instruction in what the emergent forms of law will be in the secondary oral culture of the 21<sup>st</sup> century.

Up to now legal codes have had the characteristic of being printed texts. The textual form of their conveyance contributed to their authority. What is written down has traditionally seemed final and inalterable in Western culture. As Constance Classen notes in "Literacy as Anti-Culture": "One cannot engage a book in dialogue. A book never changes

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<sup>19</sup> See e.g. Michel Racicot et al., *The Cyberspace is Not a "No Law Land": A Study on the Issues of Liability for Content Circulating on the Internet* (Ottawa: Industry Canada, 1997)

its mind, it always affirms what it affirms whether one agrees with it or refutes it.”<sup>20</sup>

This textual basis of knowledge in literate Western society contrasts with that of oral societies where the absence of written documents may allow for a more fluid and interactive mode of transmitting information. As Classen documents, one of the most striking aspects of the cultural encounter of Europe and the Americas in the sixteenth and seventeenth centuries was the clash between the European textual understanding of knowledge and authority and the Amerindian oral understanding of the same.

From the perspective of the latter, the European reliance on books appeared rigid, autocratic and life-denying, for the indigenous cosmos was dynamic and personal, ordered and animated by a continuous flow of oral interchange. The European cosmos, by contrast, appeared to be silent, still and impersonal, ordered by a realm of written documents.

The advent of electronic communications has ushered in a culture of “secondary orality”, meaning that while electronic messages may take a written form, the interactive, dialogical character of Internet communications makes it as if they were oral in nature. Internet culture is thus in many ways an oral culture with a number of the distinct traits which characterize oral cultures: synthetic, personal, dynamic, reciprocal. The cultural clash of the future in terms of modes of communications and the social models with which they are associated, therefore, may be between adherents to the old print-based models of culture and law and participants in the new electronic model of social interaction and organization.

It might be argued that the social models of traditional oral societies could only work on a small, “tribal” scale and thus can have little relevance to the large scale societies of cyberspace. Yet not all oral societies were small-scale. The Inca Empire in South America, for example, consisted of some ten million people who were organized and ruled without the aid of writing. In such cases each small community is integrated into the larger society through an extensive and dynamic

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<sup>20</sup> Constance Classen, “Literacy as Anti-Culture” in *Worlds of Sense: Exploring the Senses in History and Across Cultures* (London: Routledge, 1993), p. 110

network of oral communications. In the example of the Inca Empire, the empire (and also the cosmos) was conceptualized as a living body which required the participation and cooperation of all members in order to survive.<sup>21</sup>

Organic models, such as that of the body, may ironically also work well to organize and animate the ostensibly inorganic realm of cyberspace. Corporeal models have the advantage of relating what might otherwise seem to be purely an abstract creation of bureaucracy or technology to the more personal and appealing notion of a living organism with natural structures and functions—an organism in which each individual plays a vital role and serves as a model for the whole. Among the Incas, for instance, employing body models meant that each person could relate to the structures and functions of society and the cosmos from the basis of his or her own personal corporeal experience.

Current developments in interactive computer technology do in fact point to possibilities for more organically-based models for ordering and interacting in cyberspace. One example is a program called Happenstance. This is described as an “ecological interface [which] translates common computer activities, such as conducting Internet searches, into movement through the landscape.”<sup>22</sup> Happenstance uses an image of a garden as a model for accessing and conveying information:

“If you decide, for instance, that you’re hungry for Chinese food, you could type a query that gets attached to an icon of a tree seed. You could then plant the seed in the cybergarden of Happenstance to begin a search for nearby restaurants. Today’s Internet browsers would list the query results as hyperlinked blocks of text, but inside Happenstance the results appear as leaves sprouting on a tree.”<sup>23</sup>

As non-linear, non-textual models for the organization of information, like Happenstance, become popular through Internet use,

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<sup>21</sup> Constance Classen, *Inca Cosmology and the Human Body* (Salt Lake City: University of Utah Press, 1993)

<sup>22</sup> Davenport, “Virtual Storyworld” at 81.

<sup>23</sup> Ibid.

existing forms of inscribing and communicating legal codes may come to seem as unwieldy and out of date as Moses' stone tablets. A case in point would be the fragmentary state of public access to primary legal materials in electronic form in Canada. The fragmentation is caused by the uneasy juxtaposition of print-based and digitized models of law. It might be thought that the federal and provincial governments should collaborate to make authoritative up-to-date versions of statutes and regulations available on-line in a unified (or at least harmonized) searchable database which the public could access for free. Instead there exists a patchwork of sites, which are mostly only searchable by the title of the statute (i.e. alphabetically) and in all cases contain disclaimers directing users to rely upon "official" print versions.<sup>24</sup> Not only is this hybrid (semi-digitized) "system" unwieldy, it is unworkable.

The idea of print versions being authoritative (and their digital counterparts not) is one of the fictions which governments will have to abandon if they are to face up to the implications of digitization for the dissemination of legislation. For in cyberspace all texts are equal—and interchangeable on account of the desubstantiating, fluid character of code:

"Digital text is fluid because, taking the form of codes, it can always be reconfigured, reformatted, rewritten. Digital text hence is infinitely adaptable to different needs and uses, and since it consists of codes that other codes can search, rearrange and otherwise manipulate, digital text is always open, unbordered, unfinished and unfinishable, capable of infinite extension."<sup>25</sup>

What then are the implications of code for codification—or in other words, of digitization for legislation? I would like to describe four main ones, borrowing from the rhetorician Richard Lanham's discussion of the implications of digitization in *The Electronic Word*:

1. The first point to recognize is that once a text has been digitized it can be metamorphosed endlessly. This is the difference

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<sup>24</sup> Theresa Scassa, "The Best Things in Law are Free? Towards Quality Free Public Access to Primary Legal Materials in Canada" (2000) 23 Dal. L.J. 301.

<sup>25</sup> George Landow, "Hypertext as Collage-Writing" in Peter Lunenfeld, ed., *The Digital Dialectic: New Essays on New Media* (Cambridge: The MIT Press, 1999) at 166.

between the law in books and the law in electrons (or action, if you prefer).

2. The second point is to grant that author and reader, legislator and legislatee, are equal participants in the text or statute's construction, since the reader (with the text on his/her computer screen) is equally able "to add to a text or subtract from it, rearrange it, revise it, suffuse it with commentary," introduce graphics, or transform it into music if he/she wants.<sup>26</sup> This is the difference between the doctrine of legal interactivism and the now outmoded doctrine of legal positivism, which as we have seen only makes sense given a print-based communications order.

3. The third point is to stop thinking of statutes as bounded texts and start conceptualizing them as "delivery systems," or exercises in "interactive fictionalized modeling."<sup>27</sup> On this model a statute would be composed of a series of alternative scenarios or hypotheticals which user-citizens could choose between and enact for themselves on a completely individualized basis. The inspiration for this model comes from music as much as MUDs—specifically from the vision of the future of music which Glenn Gould advanced in "The Prospects of Recording": "Gould argued for an interactive listener who would splice the apes in his collection into new composite performances. 'I'd love,' he said, 'to issue a kit of variant performances and let the listener assemble his own performance.'<sup>28</sup>

4. The final point is to consider law as performance rather than enactment—or better, as to be acted out rather than decreed. This is consistent with the way in which laws are often communicated and impressed on participants through bodily rituals in primary oral societies. Laws are hence not visual texts, as they are in the West, or even exclusively verbal, but multisensory.

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<sup>26</sup> Richard Lanham, *The Electronic Word* (Chicago: University of Chicago Press, 1993) at 6.

<sup>27</sup> *Ibid* at 6, 126-29.

<sup>28</sup> *Ibid* at 274. On Gould's social and legal philosophy see David Howes, "La constitution de Glenn Gould" in J-G Belley, ed., *Le droit soluble* (Paris: GRD, 1999).

When the law is a dance or a ritual meal it becomes something one can touch and taste and incorporate into your own body as well as see and hear.<sup>29</sup> By dancing out the law, for example, one both learns it and performs it, in conjunction with other members of one's community.

As cyberspace becomes less disembodied and more sensuous through the introduction of interactive multisensory programs, there will be those who wish to experiment with more embodied forms of making and communicating laws.

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<sup>29</sup> For a general review of the literature see Bernard Hibbitts, "Coming to Our Senses': Communication and Legal Expression in Performance Cultures" (1992) 41, 4 *Emory Law Journal* 873. For an example of law as ritual meal see Antonia Mills, *Eagle Down Is Our Law: Witsuwit'en Law, Feasts and Land Claims* (Vancouver: UBC Press, 1994).