

## Chapter 2

# Communication Technologies and Power Relations in Five Historical Periods

### 2.1 Language, Speech, and Power

The purpose of this study is to discover if, and if, in what ways, changes in communications technologies have influenced, strengthened, and/or changed relations—primarily power relations—between humans, and between humans and their environments. We started our quest “at the beginning”—when the first humans interacted via the first communication technologies—in order to determine a base from which to note the power changes, or lack of them, that subsequent communication technologies wrought.

Thus, our inquiry started by researching literature about modes of communication (such as gestures, touching, sounds, and images) in the early *homo* family that existed prior to *Homo sapiens*, as well as the emergence of speech in *Homo sapiens* (or, others would say, which emergence led to and became a defining mark distinguishing *Homo sapiens sapiens* from other *Homo sapiens*, as well as from the other *homo* species, especially *Homo neanderthalensis*, depending on one’s interpretation). This also led us into a brief inquiry into the literature on communication among other animals, and, most importantly, to a consideration of the evolution of language in humans.

Even though other animals communicate, and may have language, human language seems to have greatly enhanced the emergence of the mind from the brain by providing the brain with something through which to develop increasingly useful concepts. At the same time, changes in the larynx, vocal tract, tongue, and lips of humans enabled them to do something that some (but by no means all) experts feel no other animal or *homo* species could do then and still cannot do, which is to produce the sounds for the vowels *i*, *a*, and *u*, and in general use the physical structures of the skull to develop and communicate ideas and concepts orally and aurally effectively and in ways that enriched language and mind in the process.

This ability to think, talk, and act in certain ways appears to have set humans off on a trajectory about 100,000 years ago that enabled them to become, in an evolutionary eye blink, the kind of globally dominant animal that humans are now.

If human dominance is to some significant extent due to language, then that seems to be Power with a capital P.

One aspect of the debate about that trajectory lies squarely at the intersection of our research interests. Could Neanderthals speak? Or at least speak as well as humans do? If not, is the apparent extinction of Neanderthals about 30,000 years ago, and the subsequent emergence of *Homo sapiens*, as the only surviving *homo* species due, to some important extent, to the fact that humans could reason and speak (more effectively)? Did language and speech enable humans to organize themselves so they could respond to the changes in the natural environment, impacting them more effectively than could Neanderthals? Did humans successfully use their ability to think and speak specifically to organize themselves so as to eliminate Neanderthals? [3, 10, 24, 33, 35, 38].

If so, then this is one of the most dramatic and earliest examples of how new communication technologies changed power relations among the *homo* family. Evidence suggests that Neanderthals were more muscular than humans; their skeletons were more massive; they were hairier and thus perhaps better protected against the cold; they appear to have had larger brains; they may have had a better sense of smell; their gestation period perhaps was for 10–12 months instead of 9; they seem to have matured faster after birth and were fully adults by age 15. But they may have had shorter lifespans as well. Nonetheless (if they were a separate species of *Homo sapiens*, which itself is disputed), Neanderthals seem to be extinct, and humans reign solitary and supreme.

Why? The ability of humans to speak may be the, or at least one, reason. Early evidence suggested that Neanderthals might have lacked the physical ability to produce the range of vowels and consonants that humans could—the shape and placement of their larynx and related structures made it impossible [3, 42]. Neanderthals might have been “smart” enough to produce human-like speech, but not physically able to do so. And thus the superior ability of humans to think, plan, discuss, organize, and act may have enabled them to adapt successfully to environmental changes while Neanderthals did not—indeed, perhaps humans acted affirmatively to eliminate Neanderthals.

Or not. Although this issue is seldom the main focus of research on the evolution of humans, language, and speech, there has been some heated discussion of it in the literature. During the 1970s, there seemed to be enough evidence to support the hypothesis that Neanderthals did not have the physical apparatus to speak at all. Now, expert sentiment [10] seems to be that they both spoke and heard in the same range as humans, but that humans seem to have developed a greater repertoire of abilities and behaviors that enabled them to survive in adapting to the rapidly changing environmental conditions to which Neanderthals could not—or in any event, did not—adapt.

In an impressive survey of data about human and Neanderthal co-evolution during transition from the onset of the last glacial maximum at the end of the Pleistocene period to the warmer and more stable Holocene period, Clive Finlayson lists 14 features that both modern humans and Neanderthals possessed in varying degrees at the beginning of the transition: “almost total dependence on mammalian herbivore

meat; fat deposition; storage, food sharing; trade; large home, annual and inter-annual ranges; large group size; within-group division of labor and operation as teams; reliable-type technology; large-range, projectile, technology; tool re-use; complex social structure including kin- and non-kin altruism; rapid development and transmission of technological ideas; [and] behaviors that transmitted information not directly experienced by all group members—symbolism and complex spoken language” [24, p. 134].

After a careful evaluation of the evidence, Finlayson concludes that humans and Neanderthals utilized or altered these factors in ways that enabled humans to survive while Neanderthals went extinct about 30,000 years ago or so. He concludes in the last paragraphs of his last chapter, titled provocatively, “The Survival of the Weakest”:

Moderns have continued the trends towards increasingly complex technologies and social system, having conquered even the most inhospitable of environments. Cultural and social diversity is the hallmark of human societies across the Earth today yet nobody seriously attempts to equate these differences to biological differences. Nobody, rightly, suggests that we are observing different species of humans. Yet, looking at similar evidence of cultural and social diversity in the Pleistocene there are still those who equate these to biological differences, the product of mutations that made us something apart from the rest of nature. It is just another version of the antiquated view of humans at the top of the evolutionary pyramid. If anything, I hope to have shown in this book that we are the product of chance and a great deal of luck. We are here because, in scrambling for survival in the margins of the world of other humans, we became increasingly inventive and kept finding ways of hanging on and then taking over when others that had been better adapted than ourselves vanished as circumstances changed. That we are here today is the end result of a series of chance events that kept us in the running. It could easily have gone the other way ... [24, p. 208]

Finlayson seems to be expressing a “mutative” view here: “We are the product of chance and a great deal of luck” by which we apparently fortuitously made use of the 14 features he listed above to survive and thrive in ways Neanderthals did not and other species could not.

Similarly, in *Adam’s Tongue: How Humans Made Language, How Language Made Humans*, Derek Bickerton adopted the concept of “niche construction” to explain the origin of human language. He goes to great lengths to show that human language did not evolve smoothly from earlier *homo* communication modes, such as gestures and cries; still less did human language evolve step by step from the communication modes of other animals. Though not unrelated to these earlier features, human language and speech are aspects of evolution initially largely related to what he calls the “need” for humans to cooperate in order to scavenge for food more effectively [1].

Humans initially used “iconic” imitation of animals and the environment to obtain cooperation. Through repeated use and enhancement, these became “categories,” and then “concepts” with symbolic words that emerged, pidgin-like, until it became “possible to build merged, hierarchical sentence structures” [1, p. 245]. While stressing the biological basis of speech, Bickerton repeatedly states that “biological developments don’t mandate new behaviors—they merely make them possible. Whether these possibilities are exercised is a matter of choice, entirely up to us”—again, a mutative perspective [1, p. 246].

Bickerton does not discuss the Neanderthal question directly in this book, but does refer to Neanderthals as “a species of almost equivalent abilities” with those of Cro-Magnons [1, p. 246]. While having a biological, evolutionary basis, “niche construction” requires willful constructors: “The pathway of runaway niche construction moves with a powerful current, but not necessarily an undivertable one. The very notion of niche construction asserts the autonomy of the organism, the power latent in species to influence their own destiny. Our niche gave us language, language gave us intelligence, but only the wise use of that intelligence can keep us free and fully human” [1, p. 249]. Nonetheless, one does not need to advocate intelligent design, evolutionary “progress,” or that “man” is the Crown of Creation to observe that somehow humans do seem to have used language and speech so as to think, plan, discuss, organize, and act more efficiently and effectively than was possible before the emergence of language and compared to those without human language. We are not able to say anything with any confidence about how power relations among humans were impacted by this, but it seems clear that language did enable the hairless ape to do things, to itself and to its environments, that were impossible to do so fully before the acquisition of language and speech, and that this set humans on the niche-creating trajectory we are still on, to our ultimate triumph or tragedy.

However, speech was not the last new communication technology that humans used for these purposes.

## 2.2 Governance and Power in Oral Societies

It clearly is difficult, if not impossible, to know for certain what life was like “in the state of nature”—in the tens of thousands of years humans are believed to have lived in small nomadic hunting and gathering oral societies. No written or other clear records remain from that time, since writing apparently was unknown, and if there were other modes of recording and preserving information, they appear not to have survived or are currently undiscovered or unrecognized. Archaeologists, anthropologists, linguists, and others have tried to reconstruct the structures and processes of early societies by examining what physical evidence remains from the past, on the one hand, and by studying what are assumed to be (and are a rapidly diminishing number of) currently existing societies that might serve as examples of the way all humans once lived.

The latter activity is especially fraught with many political as well as methodological and substantive difficulties. What was once bravely called “political anthropology” has been under attack in recent years as the work of biased, paternalistic, and ethnocentric people, largely from the west, who brought all of their western prejudices and feelings of superiority with them [26].

So it is with great trepidation, here also, that we attempt to characterize the social and power relations within and between non-literate, oral societies. We rely initially on the recent work of Ted Lewellen, since he has been involved in the study of political anthropology for a long time and has tried to respond to criticisms in later versions of his earlier work [37].

Lewellen says that “in most non-state systems, power is fragmentary and temporary, dispersed among families, bands, lineages, and various associations . . . . Although politics is constant in such societies as individuals seek support for leadership positions, public decisions are made, and territory is defended, it is not manifested in either a monopoly on coercive force nor in any form of centralized economic system based on taxes or tribute” [37, p. 22].

According to Lewellen, for almost all of humanity’s past, humans lived in small nomadic bands of between 25 and 150 people. Most of them were biologically related to each other. They knew and spoke the same language—their most powerful medium of communication—and thus shared the same basic view of the world that had been passed down by repeated imitation and word of mouth. There were slight divisions of labor based on the most obvious gender or age differences, but for the most part everyone, from the youngest to the oldest, and whether male, female or other, did whatever each could do without any fixed status distinction. For the most part, everyone “knew” what to do on the basis of tradition, but when decisions needed to be made, issues were jointly discussed and solutions agreed upon by consensus. The clichéd question of many a cartoon—aliens from a spaceship asking a group of Stone Age people to “take me to your leader”—would have been utterly meaningless. There were no “leaders” in any organized, hierarchical, hereditary way. The groups were economically, politically and socially self-sufficient, peaceful, and egalitarian—what one person had, everyone had. No one accumulated wealth while others went wanting. Being nomadic hunters and gatherers of their food and utensils, both private and public property was unknown. There were no fixed territorial boundaries. Even though there was internal conflict, murder was rare, while organized killing between groups was so rare as to be essentially nonexistent, some recent arguments to the contrary notwithstanding [50].

This mode of social organization seems to have persisted for many tens of thousands of years. If so, we humans have lived far more of our lives in these social conditions than in any subsequent ones—especially those of the very recent industrial or informational present. We are in some psychological and perhaps even biological ways predisposed for life in small, intimate, like-minded familial groups where (in effect) “everybody knows your name.”

Although there are disagreements within the anthropological discipline about terminology and boundaries, Lewellen designates the form of social organization that developed after the band as the *tribe*. “Tribes are uncentralized egalitarian systems in which authority is distributed among a number of small groups; unity of the larger society is established from a web of individual and group relations. Because these groups rely on domesticated food sources, they are more densely populated and usually more sedentary than are hunting-gathering bands. As with bands, there is little political or economic specialization, except for a division of labor along age and sex lines, and there is no religious professionalization” [37, pp. 26–27].

After providing several examples of tribes, and characteristic of many others, Lewellen points out that “throughout Melanesia certain big men attain significant political authority through wealth, generosity, and courage in war. Although these leaders may exercise chieftain-like authority, their position is inherently unstable, because it is dependent on their ability to buy followers thorough gift giving and

loans. A bad crop, an inability to gather sufficient pigs for a lavish feast, or a failure in battle can quickly shift authority to a contender with better luck or skill” [37, pp. 27–28].

The next development in early forms of governance after tribes were *chiefdoms*, which are marked by higher population density and complex centralized authority. In contrast with both bands and tribes, “chiefdoms have relatively permanent central agencies of government, typically based on collection and redistribution of an economic surplus (often including a labor surplus). A position of chief, unlike that of headman of a band or lineage, is a position of at least minimal ‘power’—that is, the chief has access to a certain amount of coercion. The chief may be the final authority in the distribution of land and may be able to recruit an army. Economically, he is the center and coordinator of the redistribution system. He can collect taxes of food or goods, some of which will be returned to the populace, creating a new level of group solidarity in which a number of specialized parts depend on the smooth functioning of the whole” [37, p. 33]. Lewellen gives pre-contact Hawaii as an especially impressive example of a large, complex, forceful, and prosperous chiefdom system [37, p. 34].

The next step in social organization, according to Lewellen, is the *state*, which has many of the features we now recognize as political forms and processes. “States are generally large, complex societies, encompassing a variety of classes, associations, and occupational groups. Occupational specialization, including a full-time political bureaucracy, unites the entire group in a web of interrelated dependencies. Because of the vast range of individual and class interests within a state, pressures and conflicts unknown in less complex societies necessitate some sort of rule of impersonal law, backed by physical sanctions, for the ongoing maintenance of the system” [37, p. 36].

Lewellen does not discuss orality or any modes of communication, or suggest that they are in any way related to the organization or emergence of bands, tribes, and states. However, Madden, Palimi, and Bryson [39] offer an example of how reliance on oral communication only influences the social and political structures and processes of non-literate societies. The study by Madden et al., is based on research into the Kope people in Papua New Guinea, who first encountered westerners briefly in 1930 but did not have extensive contact until after the Second World War.

They conclude that oral communication “can be regarded as performing three main functions:

1. Defining tribal identity through history and mythology
2. Preserving social networks
3. Promulgation of practical skills, including hunting, house-building, agronomy” [39, pp. 5–6]

In discussing “tribal politics” Madden et al., say that “leadership among the Kope has never been hereditary; leaders were chosen on merit. The tight network of family connections helped to make the biases and motivations of aspiring leaders common knowledge, and their skills would have been on display to all [39, p. 6]. The main role of the tribal leader was to represent his tribe in inter-tribal negotiations.

In consequence, the most important skill for a chief was oratory. He would need to be well versed in local history and politics, but not only was his knowledge important, so too was the skill with which he presented it" [39, p. 7].

In this regard, it is instructive to cite Rosalind Thomas, who pointed out that "the most important factor in oral tradition is the way the tradition is passed on. This includes several elements: the precise nature and form of the transmission, for example, whether the tradition is passed on in poetic or other fixed form; the group which transmits it, whether a family, dynasty or whole community; and why it is being transmitted (e.g., for status or honor)" [53, p. 6]. Noting the importance of mnemonic professionals, Thomas continues, "For instance where we find traditions kept by professional memorizers who lay great stress on strict accuracy because they are responsible for dynastic traditions, we may expect fairly accurate transmission over a long period" [53, p. 6].

In another study that demonstrates the complexity and sophistication of knowledge that can be achieved by oral communication alone, Carol Fleisher Feldman "reports that among the Ilongot of the Philippines there are thirteen oral genres, each identified by a distinctive genre name, that are divided by the Ilongot into three main categories: straight speech, crooked speech and language of spells. There are three genres of straight speech: news or gossip'; stories about the recent past; and myths or stories about a more distant past. There are genres of crooked speech: riddles' children's rhymes' songs, performances—usually of a daring kind; and oratory. Finally there are five genres of spells: boasting about headhunting prowess; highly conventionalized and formalized boasts and pronouncements, curses, invocations in the service; of healing by layman; and such invocation known only to shamans" [22, p. 50].

Madden et al. list the roles of oral communication in the Kope as:

Induction—the passing on of the knowledge and skills needed to make a person a fully contributing member of the tribe.

Dissemination—the spreading of news and stories.

Presentation—the ability to select and express information in a way that best suits the "interests of the representative and those of his family, or of the clan he represents."

Organization—the sharing of information to co-ordinate group activities, such as hunting, warfare and trade.

Interpretation—the ability to derive information.

Preservation—the retention of tribal history, culture, and expertise by the elderly [39, pp. 9–10].

Regarding our interest in communication and power, Madden's point about "presentation" seems especially important. Whoever is the communicator is able to some extent to shape information so as to further the interests of the communicator's family or clan. Then, as now, the ability to set the agenda of a meeting is an exercise of significant power.

As Lewellen said of pre-state societies generally, Madden et al. also affirm that the "Kope were of necessity generalists. Age and sex played a part of the roles a

Kope may be able to fulfill, but all members of the tribe had an understanding and appreciation of every task, making them well able to judge whether or not they were being adequately performed” [39, p. 12].

Madden et al. focus on the various ways in which information is acquired, stored, and shared in an oral society, and the impact those modes have upon the social structure of the Kobe society. Speaking, reciting, remembering via various mnemonics, including music and dance, were key. “It is widely acknowledged that, in pre-literate cultures, hearing was the sense most commonly associated with the exchange of information.” However, seeing is important too: “[C]olour and imagery commonly play a part in pre-literate cultures, not only in ritual but also in the exchange of information.” The use of body paint and wearable ornaments to show status, and of physical markers to delineate the boundaries of regions was common: “When a society becomes sufficiently stable, it begins to manipulate the landscape by producing permanent structures.” However, even then, memory and living speech were essential: “As a means of transmitting information from generation to generation, [physical artifacts] were only effective when reinforced by rituals, or ‘social acts of remembering’ that imbued them with meaning ... If such mnemonic rituals and rhymes are suppressed or prevented ... after a few generations the communal memory will be lost, and with it, the meaning assigned to the material representations of that culture” [39, pp. 19–21]. As we shall see, this is exactly what happened when literacy emerged, especially when oral tribes encountered literate empires.

### 2.3 Governance and Power in Scribal Societies: Tallies, Tokens, and Thought

Apparently only a few thousand years ago, and for the first time in human history, symbols began to be used, at first not to convey abstract ideas or emotions but rather to designate items, identify who owned them, how much they were worth, and perhaps where they were going. For about a thousand years or so, what eventually became writing was nothing but markers, labels, lists, or tables. But these pale scratches made communication across time and distance easier than it had ever been before, bestowing power and privilege on those who knew how to make and interpret the symbols. Enos [21] describes the process in detail. He states that no symbols have been found “from the first half million years of human occupation of the Middle East” [21, p. 19]. And, “The first archaeological material attesting to a symbolic tradition in the Middle East belongs to the epoch of Neanderthal man, the Mousterian period, as late as 60,000–15,000 BC ... . Fragments of ochre [with] no indication of how the red pigment was used” and “funerary paraphernalia displayed in burial sites” have been found. For example, flowers were deposited in a grave at Shanidar Cave, about 60,000 BC. At Qafzeh, Israel, a child’s tomb was furnished with animal antlers [21, p. 19].

Bone fabrics from the Paleolithic period (15,000–10,000 BC) have been found with engraved parallel, V, or X-shaped markings. Iconic symbols representing animals



have also been found from this period. Enos points out that “the function of these two categories of symbols—iconic and linear, or naturalistic and geometric—can only be hypothesized.” “Marshack proposed that the notched bones were lunar calendars, each incised line recording one appearance of the moon . . . . Andre Leroi-Gourhan reviewed the animal images as referring to the numinous, each species representing one manifestation of a complex cosmology. If these interpretations are valid, we can for the first time identify the use of both symbols and signs” to communicate ideas and information [21, p. 21]. However, great care must be taken in imputing meanings into ancient artifacts. While it probably is true the images were fashioned so as to communicate ideas and information, unless we have other, corroborating data we should be very reluctant to assume we can be sure what those ideas and information actually were. They may be numinous. They may be profane. They may be sexual. They may be whittling. They may be Jungian. They may just be “art” with no other purpose than to be.

Enos does seem correctly to summarize the importance of these signs and symbols for the evolution of human consciousness and social organization: “The Paleolithic tallies are an impressive step in the evolution of technologies for the communication and manipulation of data”. Their major significance was to promote abstraction:

The signs translated concrete information into abstract markings. They removed the data from their context [...]. The signs separated the knowledge from the knower, presenting data—as expressed by Marshall McLuhan—in a ‘cold’ and static visual form, rather than the ‘hot’ and flexible oral medium which involved voice modulation and body language. As a result, graphic signs not only brought about a new way of recording, handling, and communicating data, but an unprecedented objectivity in dealing with information. [21, p. 22]

This “cold,” seemingly objective character of graphic signs (and written communication) is one of its most distinctive features, giving writing the impression of being unbiased and authoritative in ways speech seldom if ever can in comparison.

At this point, further innovations in human symbolic communication seem to have stagnated for a while. Enos states that “there is no evidence for any major modification in the use of symbols during the Mesolithic period [10,000–8,000 BC] in the Middle East” [21, p. 22].

However, the Neolithic [8,000–6,000 BC] brought big changes. This was the period when many extensive sedentary communities based on true agriculture arose. Many clay tokens have been found that were used to convey important information about agricultural possessions and products. Enos makes clear that “tokens were never found in sites where hunting and gathering was the base of food procurement, but are part and parcel of the first agriculturalists’ tool kits. Second, the timing of their appearance and their geographical extension in the eighth millennium BC precisely coincides with the time and region involved in experimenting with the domestication of plants and animals. Third the first tokens stood for products of the farm. Fourth it appears logical that a lifestyle based on planning a harvest and hoarding food for survival would incite record-keeping. Fifth, and finally, it also makes sense that a socioeconomic system based on the redistribution of commodities would require a device for record-keeping in order to control goods . . . . Symbolic meaning

emerges as cultures evolve to a point that such forms of manifesting meaning are needed and valued” [21, pp. 24–25]. This latter point is probably true, but it is not inevitable that a culture will decide it “needs” symbols; that the medium will be clay; that the need or medium will become permanent; or that the medium will evolve into something better at expressing, preserving, and transmitting desired meanings.

However, in this case, Enos declared that these clay “tokens are the link between tallies and writing” [21, p. 25]. He continues, “While tallies were meaningless when out of context, the tokens could always be understood by anyone initiated into the system. The cone, for example, stood for a small measure of grain and could only have this one meaning.” “The tokens were ‘word signs.’” “The greatest novelty of the tokens was in that they formed a system” [21, p. 26]. They “enhanced logic and rational decision making by allowing the scrutiny of complex data” and “presaged Sumerian pictographic writing in form and contents” [21, p. 27].

### ***2.3.1 The Emergence of Writing and the Transformation of Oral Societies***

As systems of writing emerged, they began to enable forms of social organization the world had never seen before: organized religion and priests in place of free-floating spirituality; formal education and teachers instead of amorphous beliefs and skills based on observation and imitation; terrifying hierarchical authorities of many kinds including, eventually, rulers, bureaucrats, judges, and jailers instead of peaceful, equitable, small groups within an environment of “subsistence abundance,” as Marshall Sahlins has so convincingly described typical band and tribal life.

Handwriting and reading was a profoundly mutative technology. Even though most people did not know how to read and write, formal life eventually became for the first time based on written rules that were interpreted and enforced by power-wielding authorities. Wherever writing developed, rigid, rule-based, remote, enforceable “objective” government emerged in place of flexible, functional, direct, participatory governance typical of oral societies. Most importantly, writing enabled thoughts to be frozen, codified, and made mandatory across time and space. Vast empires capturing huge numbers of people spread in large part because of the power of the written word and the power that the word gave those who interpreted and enforced it.

By preserving written law and religious scriptures, and by empowering scribes and priests charged with further preserving, interpreting and enforcing legal and religious words, for the first time the past could effectively control the future, squelching the spontaneous and easy adaptation to changing times and needs which the eternal present of oral societies made possible. Although it might seem to one living in an oral society that norms and mores were eternal, in fact they were frequently highly ephemeral and fleeting. Old norms were often quickly forgotten when they proved dysfunctional and new ones easily adopted in ways that made them seem eternal.

Walter J. Ong focuses especially on the changes in the ways humans think, behave, and believe that are the consequences of literacy, compared to orality. Indeed, Chapter Four of *Orality & Literacy* is starkly titled, “Writing Restructures Consciousness.” The opening sentences make the point very clear:

In recent years certain basic differences have been discovered between the ways of managing knowledge and verbalization in primary oral cultures (cultures with no knowledge at all of writing) and in cultures deeply affected by the use of writing. The implications of the new discoveries have been startling. Many of the features we have taken for granted in thought and expression in literature, philosophy and science, and even in oral discourse among literates, are not directly native to human existence as such but have come into being because of the resources which the technology of writing makes available to human consciousness. We have had to revise our understanding of human identity. The subject of this book is the differences between orality and literacy. Or, rather, since readers of this or any book by definition are acquainted with literate culture from the inside, the subject is, first, thought and its verbal expression in oral culture, which is strange and at times bizarre to us, and second, literate thought and expression in terms of their emergence from and relation to orality. [43, p. 1]

Ong states that “our understanding of the differences between orality and literacy developed only in the electronic age, not earlier. Contrasts between electronic media and print have sensitized us to the earlier contrast between writing and orality” [43, p. 3]. We will see that the interest in the social impact of the printing press that motivated the greatest pioneering scholar of them all, Elizabeth Eisenstein, was piqued by reading *The Gutenberg Galaxy* by Marshall McLuhan, who is rightly viewed as the founding father of media studies, and especially of the impact of television on contemporary societies.

Jack Goody is also one of the main sources for information about the impact of writing on oral societies [27–30]. In *The Logic of Writing and the Organization of Society*, Goody devotes separate chapters that show how writing led to organized religion with a powerful priestly class; strengthened and expanded formal economic systems; created powerful centralized governing systems with controlling bureaucracies; created rigid, remote, “law” and lawyers, while banishing flexible, customary, participatory conflict decision-making; and created other new institutions with their newly privileged social classes, such as in education and the arts, that led to what we call “civilization”—life in cities where the few literate elite ruled in their interest over the far more numerous peasants and other agrarian workers who provided food and other staples at the beck and call of the literate elite.

In Chapter One, “The Word of God,” concerning the creation of organized religion, Goody states that “in the beginning was the Book, but it was the priest who read and explained it. Hence religions of the Book are often associated with restrictions on the uses and extent of literacy. In the extreme case the priests are the one category of persons able to read at all: in other words the division between literate-illiterate corresponds to that between priest and laity” [29, p. 17]. Once things are committed to writing they are difficult to remove, and often difficult to add to as well. “It is not of course that writing prevented any change. In some spheres of knowledge a permanent record was a condition of future development. But in other spheres and to different degrees writing made change a question of deliberate reform

rather than of continuous adaptation” [29, p. 30] as was the case in oral societies where freezing ideas and practices was much more difficult and on-the-spot modifications of previous norms was common. “To write down a prayer is to fix it in a particular way so that it becomes essential to repeat, for example, the Lord’s Prayer in the exact words in which it had been written, even if we scarcely understand them, rather than invent our own variation that may be more appropriate to the times and occasion” as was typical of oral societies that could and did change its sacred words occasionally [29, p. 38].

However, on a point we will see made many times subsequently, Goody also makes clear that “given literate expression, even dissent established its own tradition. One role of the intellectual was to develop and to preserve alternative views of the world (that is, ideologies), the accumulation and further diffusion of which were largely a function of the intervention of writing since it prevents skepticism and speculation from being totally absorbed in the dominant cultural ethos; that is to say, writing may provide even the opposition with a semi-permanent platform” [29, p. 31].

So, with literacy also came the emergence of religions, usually, though not always, featuring jealous and vengeful solitary male gods (whereas manifold fertility goddesses and other spirits had coexisted relatively peacefully before) and the systematic, organized use of killing to gain, control, and extend property (whereas property, whether land or goods, was a useless impediment to the life of hunting and gathering societies, though it became the basis of power and dominance for civilized empires). Writing ended the free floating though perhaps deeply and personally held spirituality of earlier times as well. Although spirituality apparently flourished for millennia before the invention of writing, once writing emerged, god—or his prophets—insisted on writing things down to see that beliefs and practices became fixed and unchanging forever. Fluid personal and tribal spirituality gave way to rigid organized religion with revealed holy texts that only carefully trained persons could read or interpret properly. So while in fact in the beginning was *not* the Word, from about 5,000 or so years ago onward, the Word—the written word properly recited and interpreted—has reigned supreme over transitory personal and oral spirituality. When one Word clashed with another Word, the matter was typically resolved by fighting, killing, and burning the books that contained the evil Words.

As Andreas Feldtkeller comments:

The act of writing down a religion makes a difference: metaphorically speaking, to write down a religion means to draw a line through the field of religious practice between what is to be preserved and what is to be rejected. To convert something into a written code is to preserve it: an important motive for religious writing, therefore, is to safeguard a certain form of religious practice from the everlasting stream of change, and to take care that this form will be known and practiced, if possible, forever. On the other hand, the same act of writing is also an act of rejection: other forms of religious practice will not be chosen for preservation; they may even be explicitly excluded from what the written form recommends as practice. [23, p. 9]

Of course (and until very recently), even after the invention of writing, most humans could not write or read. Those were abilities possessed by only a handful of

persons in any civilized society. Even many rulers and military commanders—and certainly common folks—could not read or write and had to rely on the professional scribes—often religious priests—who could. The effect of this was to make the Word even more mysterious and the influence of those who could read and explain the Word almost magically powerful. Books were scarce—often unique—because they were each laboriously handwritten. The most important books had to be copied over and over in order that the Truth could be passed down to later generations and passed over so as to govern people physically far from the center of power. As a consequence, mistakes, omissions, and new material often found their way into the copies. But that fact was generally unknown since texts located in different places were seldom brought together and compared.

A vivid example of this process can be found in Japan, where the writing of the *Kojiki* and *Nihongi* ended the dominance of the tribal beliefs of earlier people and imposed the beliefs of the ruling clan as supreme. Fujii Sadakazu has discussed the role of Fieda no Are as an intermediary figure between the time that orality and chanters who memorized oral tradition flourished in Japan and the time when they were marginalized and eventually destroyed by the power of the written word (though written words often were memorized and recited aloud as though they were still oral chants) [17, p. 40]. Writing similarly led to the spread of various Buddhist sects and Confucianism in medieval Japan [34].

Along with all other researchers in this area, Goody emphasizes that “the construction of the text, which is in any case something other than the transcription of discourse, can lead to its contemplation, to the development of thoughts about thoughts, to a metaphysic that may require its own metalanguage” [28, p. 38]. *Decontextualization* is inevitable with writing, leading to classification and the easy, repeated study and interpretation of old texts. One certainly can do abstract thinking in oral societies by having set phrases attached to people and events, and by other mnemonics, but it is so much easier—apparently inevitable—to decontextualize (to separate portions of the text from its original time, place, purpose, and promulgator) once hand-writing is established.

Indeed, J. Peter Denny [14] states, “although the effects of literacy upon human thought are large, they are often misconstrued and exaggerated. Western thought, to which literacy is a big contributor, is widely believed to be more reflective, more abstract, more complex, and more logical than thought in preliterate agricultural and hunter-gatherer societies. The available research, however, shows that these beliefs are wrong and that Western thought has only one distinctive property separating it from thought in both agricultural and hunter-gather societies—decontextualization. Decontextualizing is the handling of information in a way that either disconnects other information or backgrounds it” [15, p. 52].

Nonetheless, we believe the evidence does show that the ability to decontextualize thought via writing is by no means inconsequential. It does, as the title of Goody’s first book on the subject suggests, lead to “the domestication of the savage mind” as much as the “decontextualization” of teosinte by early humans in what is now Mexico eventually led to maize and thence centuries later to American hybrid sweet corn.

Concerning the part writing played in the establishment of economic systems, Goody states that “the early role of writing in exchange (effectively, commerce), and the role of writing in the management of the economic affairs of the temple and the palace” is crucial [29, p. 45]. As we have noted before, Goody makes clear that “early writing in Mesopotamia was employed for bookkeeping rather than recording myths and rituals” [29, p. 49]. And, “Writing was, in effect, originally an instrument for the communication of orders,” declared Leclant, “rather than for the registration of ideas. It is absolutely essential for organization and command” [29, p. 65]. Making a point similar to that of Enos, above, about the emergence of signs and symbols, Goody says that “it is clear that such administrative tasks would be enormously facilitated by writing: a bureaucracy of this scale would seem to be difficult to manage without some form of externalized record-keeping...”, though the extensive pre-contact Hawaiian polities, spread across many islands, appear to have done so without writing [29, p. 66].

In *On Writing and Government*, Goody considers the impact of writing on the creation and expansion of formal, external, rigid bureaucratic management of people and ideas in contrast to the personal, interactive mode of oral societies. Indeed, he says that “obviously the whole constellation of modern political institutions and behaviour is part of a developing tradition in which changes in the mode of communication play an important role” [29, p. 87]. “The limitations that oral communication place on the organization of the polity is what I want to examine in the course of this chapter, arguing that writing is critical in the development of bureaucratic states, even though relatively complex forms of government are possible without it” [29, p. 91]—again, of which Hawaii is probably the most elaborate example.

Goody observes that “whoever controls the calendar, the mode of reckoning time . . . . acquires a power that extends throughout the social system, reaching into each of the domains of politics, religion, law, and the economy” [29, p. 95]. In this regard, it is important to note that the ancient Japanese word for government and administration (called *seiji* today) was *matsurigoto*—doing what was necessary so that the rituals and festivals (*matsuri*) necessary for ensuring bountiful food (among other things) were properly performed (*goto*) at the proper times of the year. Rice growing (unlike, say, potato or wheat farming) demands considerable and continuing cooperation among many people to succeed. Thus obtaining and managing such cooperation was such an essential task that *matsurigoto* was used to describe all government and administration up until very modern times in Japan. Keeping the calendar and other written records was a fundamental duty of government. At the same time, Goody again notes, “writers have influenced political systems throughout the history of the written word, not only by administering and supporting these regimes but also by extending the range of criticism and opposition” [29, p. 119].

Importantly for our study, Goody contends that “writing remains a significant factor since it constitutes an important dimension of power at any level. The composition of the agenda and the written report structures the decisions a committee makes; those who read and study the papers are in a position to exercise power. The taker of minutes is not simply a service role but one that can influence the decisions made” [28, p. 122]. It is important to recollect that we learned above that the

ability to set the agenda by the person most adept in remembering and reciting the tradition also gave that person considerable influence in oral societies.

As Goody notes, “One aspect of the introduction of writing is the greater precision it gives to orders from above and to pleas from below. It is less easy to evade an order that has been committed to writing and carries an authoritative signature” [29, p. 124]. Hence, a written “order” is decontextualized—stripped from the authority of the person reciting the order in an oral society and placed in the words and signature on the document from which the person is reading—in a literate, scribal society.

Writing makes governance and other influence possible for increasingly larger and more complex congregations of people, over vastly broader areas of space, and even over many generations through time, down to the present in the case of many of the world’s philosophies and religions still powerful today. Indeed, as we will see, each new level of communication technology from speech onwards enables greater and greater complexity of thought, and organization of a greater number of people over expanding arenas of space and time.

It is in the creation of law that Goody makes clearest the role of writing in destroying the forms, processes, and distribution of power in oral societies and in creating new ones. He explains, “[B]y creating a text ‘out there,’ a material object detached from man (who created and interprets it), the written word can become the subject of a new kind of critical attention” [29, p. 129]. He continues, “The very fact that laws exist in written form makes a profound difference, first to the nature of its sources, secondly to the ways of changing the rules, thirdly to the judicial process, and fourthly to court organization,” as he shows in detail [29, p. 134].

As we saw before, in oral societies, rules and procedures can persist or quickly change depending on their utility at the time. “But once committed to writing, ‘customs’ cannot just fade away. So although writing greatly increases the amount of information held in store, and in this sense enhances the potentialities of the human mind, it also makes the problems of erasure much more difficult ...” [29, p. 136]. On this, Goody quotes the very influential early legal scholar, Henry Sumner Maine’s *Ancient Law*: “‘When primitive law has once been embodied in a Code, there is an end to what may be called its spontaneous development.’” [29, p. 138]. Any act to change what is written in the law becomes to some extent an act of conscious rebellion. It is seldom easy to do. The process of changing rules in an oral society may in fact be both unnoticed and unintended “so that rules that are no longer applicable tend to slip out of the memory store. But write down the norms in the form of a code or statute and you then have to make deliberate and conscious efforts to effect any alternation” [29, p. 139].

Goody makes very clear the way in which the medium of writing itself becomes an agent of change: “[T]he difference between implicit and explicit reasoning, between the contemplation of the text and the pondering of the utterance, between the capacity to review a statement visually as well as internally, by eye as well as by ear, while in some respects small, is of fundamental importance for the development of what we think of as reasoning. Reading permits a greater distancing between individual, language, and reference than speech, a greater objectivity which increases the analytic potential of the human mind” [29, p. 142]. Furthermore, “Writing affects



not only the sources of law and reasoning in law but also the organization of law. The relationship of law to society becomes formalized with the advent of writing” [29, p. 142].

Once writing is used, and a set of persons—judges, prosecuting and defense lawyers, clerks, librarians and the like—emerge who know how to read and write, judgments in current disputes based on precedents (decisions in past, similar disputes) become possible in ways it never was in oral societies. A legal profession arose with knowledge of the past and terminology to describe it that few other people could attain. As Goody explains, “Legal norms no longer reside in the memory of each and every individual (at least of every elder) but may be literally buried in documents to be disinterred only by specialists in the written word” [29, p. 144]. And, “The long-term implications of such dissociation of law and custom, which is at the same time a differentiation of the two realms with the written word usually being given priority, are radical for the development both of society and of the individual” [29, p. 144].

Writing changed everything. But it did not create peace out of presumed primitive chaos. Before there was writing, there was order, but no law. As Stanley Diamond makes clear: “Custom—spontaneous, traditional, personal, commonly known, corporate ... is the modality of primitive society; law is the instrument of civilization, of political society sanctioned by organized force, presumably above society at large, and buttressing a new set of social interests ... ” [15, p. 120]. And, “In Maitland’s words, ‘the king has a peace that devours all others.’” [15, p. 130] “Thus the law against homicide was not a ‘progressive’ step, as if some abstract right were involved which the state, coming of age, finally understands and seeks to establish. Anti-social conduct is exceptional in small kinship groups ... ” [...] Crimes of violence were rare, and murder virtually unknown” [15, p. 134]. “Law and order is the historical illusion; law versus order is the historical reality” [15, p. 140].

These conclusions are vivid evidence of the way changing communication technologies change societies and the instruments and distribution of power in them. Moreover, almost all of the above is evidence of how the medium, and not the message *per se*, is the agent of change, though once the media become widespread and entrenched, the messages sent through them become powerful in and of themselves.

David Olson makes similar points but also shows that even well after literacy was widespread and controlling in many areas, “a man’s word” and community traditions still had powerful legal force that didn’t wane fundamentally until the late medieval period in Europe, decisively ending as a result of the impact of the printing press, as we will show later. Olson writes that “until the twelfth century complaints were delivered orally; the breach of law was stated, and compensation was demanded. The defendant replied to the charge and the local ‘doomsman’ indicated the type of validation to be used to decide the case. This decision was not a matter of weighing the evidence in the attempt to arrive at an abstract ‘truth.’ Rather it was a matter of fairness, of allowing some clue to indicate the defendant’s innocence or guilt. This of course, is trial by ordeal. The innocent, it was assumed, could survive some horrible ordeal; the guilty would perish by ordeal, lose the duel, or whatever. A physical sign, losing the duel, was a sign of guilt” [42, p. 152].



In England, written documents did not become more important than oral memory and testimony until the twelfth and thirteenth centuries. Olson “detailed how the scrutiny of written documents and records came to provide the evidential bases permitting legally competent judges to pronounce on innocence or guilt of the accused . . . . The fundamental tenet of the late Middle Ages . . . was the identification of objectivity with a text. As a consequence . . . questions also began to be asked about the validity of hearsay testimony, oral family record, and collective memory” [42, p. 155].

Citing Michael Clanchy’s *From Memory to Written Record, England, 1066–1307*, Ivan Illich shows how oral commitments and physical experiences were more and more replaced by written agreements. “Formerly, you solemnly walked with the buyer around the property that you wanted to sell: Now you learned to point it out with your finger and had the notary describe it . . . . Surprisingly, even serfs carried seals, to put beneath their dictation” [31, p. 283].

“For a millennium,” Illich continues, “Christians recited their prayers as they picked them up with the community, with great local and generational variants. Sentences were often so corrupted that they might foster piety but certainly did not make sense. The twelfth-century Church synods tried to remedy this state of affairs. Their canons imposed on the clergy the duty of training the laity’s memory by having the repeat the *Pater* and the *Credo*, word for word, as they are in the Book. When the penitent went to confession, he had to prove to the priest that he knew his prayers by heart, that he had acquired the kind of memory on which words could be engraved. Only after this memory test could he proceed to the examination of another spot of his heart, henceforth called his conscience, in which the account of his evil deeds, words, and thoughts had been kept. Even the illiterate ‘I’ that speaks in confession now perceived through new, literate, eyes, its own ‘self’ in the image of a text” [31, p. 284].

Goody concludes that “the great civilizations of the Ancient Near East ([and also] of India or China for that matter) . . . possessed and utilized one critical invention of mankind in the sphere of communications, namely writing, whose use was not simply cosmetic but penetrated deeply into many areas of social life, permitting the development of new forms of social organization and new ways of handling information” [29, p. 182]. Importantly, Goody adds that he does not “claim that the introduction of writing immediately or necessarily leads to the changes I have singled out. The written tradition is cumulative, it builds up over time” [29, p. 182].

Moreover, as we will see about printing, it is always possible for a culture to resist or at least postpone the introduction of writing so as, in effect, to preserve the behavior, values, and institutions of an oral society that writing would otherwise destroy. But when all is said and done, the influence of writing on society was profoundly mutative. People who learn and teach by writing think differently from those who do not know how to read and write—even in scribal societies. But in a literate society, even the “illiterate” think and act differently from the way everyone thinks and acts in societies where writing is not known at all. The very structure of society in a scribal society is different from that of an oral society in ways so fundamental as to impact even the modes of thought and actions of the illiterate.

Surely, then, literacy is a good thing. Better than the ignorance of orality. Painful as the transition from orality to literacy might be for those who experience it, surely the subsequent benefits of civilization make it all worthwhile. This belief is ingrained in every literate person in modern societies: to be able to read is an unqualified good. To be illiterate is unqualifiedly bad and must be rectified. People of a certain age might remember the tale of Albert Edward Foreman, as told by W. Somerset Maugham in “The Verger” [40]. Foreman was fired from his low paying job as verger—a kind of janitor—at St. Peter’s, Neville Square, when—shockingly—it was discovered that he could neither read nor write. Maugham then goes on at length describing Foreman’s struggles to survive until he had in fact become quite rich. A bank officer suggests to Foreman that he transfer the money he has in a low interest-paying savings account into products that will earn him much more. But Foreman is hesitant. The banker assures him:

You needn’t have the least anxiety. We’ll make you out a list of absolutely gilt-edged securities. They’ll bring you in a better rate of interest than we can possibly afford to give you.

A troubled look settled on Mr. Foreman’s distinguished face. “I’ve never ‘ad anything to do with stocks and shares and I’d ‘ave to leave it all in your ‘ands,” he said.

The manager smiled. “We’ll do everything. All you’ll have to do next time you come in is just to sign the transfers.”

I could do that all right, said Albert uncertainly. “But ‘ow should I know what I was signin’?”

“I suppose you can read,” said the manager a trifle sharply.

Mr. Foreman gave him a disarming smile.

Well, sir, that’s just it. I can’t. I know it sounds funny-like but there it is, I can’t read or write, only me name, an’ I only learnt to do that when I went into business.

The manager was so surprised that he jumped up from his chair.

That’s the most extraordinary thing I ever heard.

You see it’s like this, sir, I never ‘ad the opportunity until it was too late and then some’ow I wouldn’t. I got obstinate-like.

The manager stared at him as though he were a prehistoric monster.

And do you mean to say that you’ve built up this important business and amassed a fortune of thirty thousand pounds without being able to read or write? Good God, man, what would you be now if you had been able to?

I can tell you that sir,” said Mr. Foreman, a little smile on his still aristocratic features. “I’d be verger of St. Peter’s, Neville Square. [40]

The following excerpts from “The Song of Lawino” by Okot p’Bitek of Uganda vividly reveal the way some people still living in largely oral cultures feel about the imposition of literacy:

Listen, my clansmen,  
I cry over my husband  
Whose head is lost.  
Ocol has lost his head  
In the forest of books.  
When my husband  
Was still wooing me  
His eyes were still alive,  
His ears were still unblocked,  
Ocol had not yet become a fool  
My friend was a man then ...

My husband was still a Black man  
 The son of the Bull  
 The son of Agik ...  
 The papers on my husband's desk  
 Coil threateningly ...  
 They are tightly interlocked  
 Like the legs of the giant forest climbers  
 In the impenetrable forest.  
 My husband's house  
 Is a mighty forest of books,  
 Dark it is and very damp,  
 The steam rising from the ground  
 Hot thick and poisonous  
 Mingles with the corrosive dew  
 And the rain drops  
 That have collected in the leaves ...  
 O, my clansmen,  
 Let us all cry together!  
 Come,  
 Let us mourn the death of my husband ...  
 For the Prince  
 The heir to the Stool is lost!  
 And all the young men  
 Have perished in the wilderness!  
 And the fame of this homestead  
 That once blazed like a wild fire  
 In a moonless night  
 Is now like the last breaths  
 Of a dying old man!  
 ...  
 Bile burns my inside!  
 I feel like vomiting!  
 For all our young men  
 Were finished in the forest,  
 Their manhood was finished  
 In the class-rooms,  
 Their testicles  
 Were smashed  
 With large books! [45]

### 2.3.2 *A Note on Women, Literacy, and Power*

Belinda Jack, in *Woman Reader*, writes: “Women’s access to the written word has been a particular source of anxiety for men—and indeed some women—almost from the very beginning ... For much of history it was this fear of women assuming greater power that caused the most unease” [32, p. 1]. She adds that concerns about reading have to do with “the ultimate secrecy of reading: no-one outside the reader can know what is going on in the reader’s mind, or indeed body, and no-one can know what difference the reading experience may make to his or her thoughts or behaviour. Lone reading is an inherently antisocial activity and the onus on

women has been, and often remains, to be sociable and to facilitate easy human relations. Reading is intensely private and literally self-centered” [32, p. 6].

Here again, Jack focuses on the medium as the message and not on the message that women are reading—the very act of reading is subversive of women’s “proper” role. But the message is important, too. Although Jack says that reading induces hidden thoughts, it is what reading might do to a woman’s body that is the more subversive. This raises the specter of the eroticizing potential of new media that we noted above about the printing press vs. the hand-copied book. The woman reader both thinks and feels, and might act on her feelings provoked by the private nature of reading in ways she might not while listening in public where such provocative images are not likely to be shared in the first place.

In probably all communities, writing was initially restricted to a very small number of people. Even after writing was known we have seen that most people still lived entirely within the lingering oral society. In fact, the ability to read and write often did not initially bestow much power or prestige on those who were literate. Indeed, early writers were seen more as servants than as masters. Jack points out that “Scribes were readers for the illiterate,” functioning “as notaries, accountants, archivists, secretaries and bureaucrats. But more interestingly, they also acted as paid readers, working for their non-literate patrons and superiors.” At the present time, “literacy seems to us so fundamental to authority and power ... that it is hard to understand a society in which the literate, including some women, were seen merely as servants or craftspeople in an otherwise almost exclusively oral culture ... . The deity responsible for the protection of scribes was not a god but a goddess, Nisaba. Her symbol or attribute was a stylus, suggesting that writing and recording were the scribe’s primary activity” [32, p. 28].

Geoffrey Roper says this about women and writing in Islamic societies:

Inevitably in traditional society, most scribes, whether professionals or amateurs, were male. Yet there exist a surprising number of references to women performing this role. Some caliphs and other rulers employed female servants or slaves as calligraphers or as secretaries. Poets and writers also sometimes employed bondwomen to transcribe their works; other Muslim women were themselves poets or scholars who produced their own MSS. Even some fine Qur’āns are known to have been copied by female calligraphers, and in tenth-century Córdoba there were reported to be 170 women occupied in writing Qur’āns in the Kufic script. Much later, in sixteenth-century Iran, a traveller claimed that ‘the women of Shiraz are scribes ... in every house in this city the wife is a copyist.’ (Būdāq Qazwīnī, quoted in Déroche, 192) With all due allowance for exaggeration, these references indicate that book production was by no means an exclusively male domain in traditional Muslim societies. [47]

Nonetheless, as literacy spread, Belinda Jack notes that concerns about its influences increased as well. “In Japan, in the early seventeenth century, the rise of print culture caused anxieties about the increasingly affordable reading material available to women” [32, p 3]. “What has been deemed ‘acceptable’ women’s reading, on the other hand, has often been the same across time and space. In ancient Rome, women’s literacy was tolerated or even encouraged provided it constituted a moral training (including strictures on virginity or marital fidelity), or led to women more able to fulfill their role as teachers, particularly of their sons, or if it made them more competent managers of sometimes large households” [32].

Similarly, it is worth noting, concerning literacy and orality in Africa, that “Herbert Chimhundu argues that the gender behavioural patterns embedded in Shona oral art forms are primarily ones that urge conformity to established roles for women and emphasize virtues such as docility, kindness, and generosity and qualities of beauty, fitness and known ancestry. They discourage independence and participation in public life for women and to do this often call up the oppositional images of women as mothers, *madzimai*, and women as prostitutes, *mahure*. The latter is an image associated with women and urban life which runs through Shona written literature” [25, p. 13]. And, “Language is seen by Chimhundu as a conservative factor especially as it is articulated in proverbs and various song genres” [25, p. 13].

A key difference here is the fact that oral admonitions are public utterances whose contents are known and thus can be corrected or supported, while books and pamphlets are read in private, and perhaps in secret, with their content secret and undisputed as well.

“At the same time,” Belinda Jack continues, “there was a widespread awareness that literate women were proof of their father or husband’s social status, as they were evidence of the family wealth that had provided both tutors and, more importantly, the leisure time necessary for reading. These same criteria applied to women’s reading in Europe and the New World in the nineteenth century. Being seen to be reading the right kind of book became something of considerable social importance” [32, p. 4].

From ancient times on, when not altogether convinced or charmed by their reading, some women readers have been prompted to write, modifying a vision or proposing a radically different one. Some of the most fascinating traces of women’s reading are in their rewritings, often of works by men [32, p. 11].

### **2.3.3 A Note on the Korean Alphabet and the Redistribution of Power**

Writing was introduced into Korea from China, and with it came both writing in Chinese and writing Korean with Chinese characters. The Korean language is not particularly suitable for writing with Chinese ideographs, and so for Koreans to learn how to read and write at that time was a very long and difficult process that only a few of the ruling elite mastered. To the extent most official written governmental, commercial, and religious affairs were in Chinese or Chinese-written Korean, only a few people were able to understand and communicate in the official medium. Official writing was “Greek” to the ordinary Korean, and so governance was carried out in an unintelligible code beyond the comprehension of most Koreans. This also meant that Korean society, its governance and most profound thoughts, was easily dominated by China. The only “real” culture was Chinese, most elite Koreans believed. Korea had no “culture,” except in imitation of the Chinese. That belief both enabled China to easily dominate Korea and for Koreans to feel worthy of domination because of their backwardness.

All of this changed after the Korean alphabet was invented and introduced by King Sejong in 1443. Ki-Moon Lee states that “The Korean alphabet is not an ordinary writing system. The history of world writing is in general a story of borrowing the writing system of a neighboring people, changing it a little, then employing this adapted system to record a new language . . . . The Korean alphabet, however, is a distinct exception to this generalization. As a completely new creation, it was unquestionably an ‘invention.’” [36, p. 19].

S. Robert Ramsey says that “unlike other great reformers in history, Sejong did not enforce use of the new script, nor did he punish those officials who had openly opposed it. It took over a hundred years before *han’gul* [the new alphabet] took root in Korean society, and then largely among those at a remove from social and political power, such as women and Buddhists. Nonetheless, we can imagine that this fate would have pleased him. More than once he urged men of learning to teach the people; as he interpreted Confucian thought, it was education that brought out the basic goodness of human nature. He believed that everyone, including women and girls, should be given the ability to read and write, and for that purpose his script reform succeeded admirably” [45, p. 26].

There was initially great opposition to the new mode of writing. Since the creation of writing different from Chinese characters on the one hand meant, politically, the loss of special privilege and on the other, culturally, the estrangement from China, it is not at all surprising that the memorial submitted to the King by the Ch’oe Malli faction in opposition to the new writing system pointed out exactly these two things:

Although from ancient times customs and local usages have differed within the Nine Isles, there has never been a case of one of them separately making a script based on the local speech. Only types like the Mongolians, Tanguts, Jurchen, Japanese, and Tibetans have their own graphs. But these are matters of the barbarians and not worth talking about. It has traditionally been said, ‘Change the barbarians using Chinese ways’; we have never heard of changing towards barbarousness. Through the successions of ages, China has always regarded our country as having the bequeathed customs of Kija, but in matters of culture, literary and material, and in ritual and music, we have rather taken after China. To now separately make the Vernacular Script is to discard China and identify ourselves with the barbarians. This is what is called ‘throwing away the fragrance of storax and choosing the bullet of the praying mantis.’ This is most certainly a matter of great implication for our civilization!

If you put the Vernacular Script into practice, then it will be the Vernacular Script that clerks will exclusively study. They will have no regard for learning. The clerks and the officials will diverge from one another and form two classes with respect to writing. If those who are to become clerks can gain positions with the Vernacular Script, then those who advance afterwards will see that it’s like this and regard knowledge of the twenty-seven-letter Vernacular Script as enough to establish themselves in the world. Why should they have to strain their minds and labor their thoughts going through the study of ‘Nature and Patterns’ [in Song Learning]! After several decades of this there certainly won’t be very many people who know characters. They might be able to use the Vernacular Script in their application to clerkly matters, but if they don’t know the writings of the sages and worthies, ‘they won’t study, their faces will be to the wall.’ They will be blind with respect to right and wrong in the Pattern of things. They will be futilely expert in the Vernacular Script. But what use can be made of that! The Culture of the Right which our country has amassed and accumulated will gradually come to be swept from the earth. [36, pp. 25–26]

To this strong line of reasoning, King Seong replied in part, “The sounds of our country’s language are different from those of the Middle Kingdom and are not confluent with the sounds of characters. Therefore, among the ignorant people, there have been many who, having something they want to put into words, have in the end been unable to express their feelings. I have been distressed because of this and have newly designed twenty-eight letters, which I wish to have everyone practice at their ease and make convenient for their daily use” [36, p. 27].

The change of script helped produce the change in society that King Seong wanted. Seldom has the reality of shifting power as a consequence of shifting communication technologies been so clearly revealed!

## 2.4 The Printing Press, Governance, and Power

The next big mutative step in communication and governance was the printing press. Though a printing press was known first in China and Korea, and played a role in forming the political economy of those cultures, it was the printing press (and auxiliary developments) of Gutenberg and others in Europe from the mid-fifteenth century that is the better example of how changing communication technologies revolutionized power within long-established societies. In terms of the content it produced, the printing press enabled the spread and success of the Protestant Reformation, the flowering of old Greek and Roman knowledge as new knowledge that energized the Renaissance, the creation of the Westphalian nation-state system, the cosmologies of Copernicus, Bacon, and Newton and other ideas and technologies of the modern scientific-industrial revolution, culminating in the maturing of theories of “democratic” governance of Hobbes, Montesquieu, Locke, Rousseau, and others.

But, as we have shown with other communication technologies, probably the more important impact of the printing press is in ways of thinking and perceiving oneself, one’s community, and one’s world.

Among the first scholars to discuss the mutative role of the printing press was Elizabeth Eisenstein whose, *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe*, was a stunning eye-opener when I first encountered it shortly after its publication. Coming a decade after my engagement with the person and ideas of Marshall McLuhan (initially his book, *The Medium is the Massage*, Bantam Books, 1967, and an amazing phonograph album based on it) and my writing of “Non-verbal, non-numerical models and media in political science,” *American Behavioral Scientist*, May 1968 [11], Eisenstein’s work [19] led me to redouble my research in the line of inquiry that has led to this very moment of writing [12, 13]. From a more conventional mode of scholarship than that of McLuhan that I first knew, Eisenstein confirmed, deepened, and broadened my understanding of the role that changing communication technologies played in social change generally. I was not the only one. When I returned to her work for this current project, I discovered that there were scores of scholars who had been as influenced by her as I had been. She was the object of



almost fulsome praise, adoration, and defense, as well as the object of some unseemly vitriolic scholarly criticism. However her admirers seem to vastly outnumber her detractors.

We have relied here mainly on the second edition of her more recent volume, *The Printing Revolution in Early Modern Europe*, where she says, “I have written a review essay to serve as an ‘afterword’ to this edition. It discusses some of the questions posed and issues raised since the publication of *The Printing Press as an Agent of Change* 25 years ago and provides references to recent studies in order to supplement the selected reading list, which has been retained from the first abridged edition” [20].

Eisenstein herself acknowledges that it was reading McLuhan’s *The Gutenberg Galaxy* that set her onto trying to understand the social impact of the printing press [20]. She expected to find a vast literature to master but found almost nothing. She was especially astounded to see how few historians, writing their histories of Europe or the world, do anything more than mention the printing press in passing, giving it little or no special importance. Some historians of the period don’t mention it at all: “To my surprise, I did not find even a small literature available for consultation. No one had yet attempted to survey the consequences of the fifteenth-century communications shift” [20, p. xv].

It needs to be said at the outset that Eisenstein [18–20] is a tireless advocate of the view that changing communication technologies change power relations in societies, meaning not just the printing press, but most emphatically that. She repeats that point over and over in her writing, always also expressing amazement that so many scholars of history fail to notice it. This leads them to puzzle over many aspects of late medieval/early modern European history that she believes can best be understood by referring to the impact of the printing press: “The advent of an ‘industrial’ society is too often made responsible for conditions that were shaped by the momentum of an ongoing revolution in communications” [20, p. 112]. She continues, “To leave printing out of the picture is not only to conceal significant links but also to overlook important disjunctions” [20, p. 300]. Additionally, she argues, “One cannot treat printing as just one among many elements in a complex causal nexus, for the communications shift transformed the nature of the causal nexus itself. It is of special historical significance because it produced fundamental alterations in prevailing patterns of continuity and change. On this point one must take strong exception to the views expressed by humanists who carry their hostility to technology so far as to deprecate the very tool which is most indispensable to the practice of their own crafts” [20, p. 308].

In exhaustive detail (that has spurred many scholars to go into even more detail in elaboration of her pioneering work) she demonstrates over and over again that “Intellectual and spiritual life, far from remaining unaffected, was profoundly transformed by the multiplication of new tools for duplicating books in fifteenth-century Europe. The communications shift altered the way Western Christians viewed their sacred book and the natural world. It made the words of God appear more multi-form, and His handiwork more uniform. The printing press laid the basis both for literal fundamentalism and for modern science. It remains indispensable for humanistic scholarship. It is still responsible for our museum without walls” [20, p. 309].



The printing press was also one of the key drivers for the emergence of copyright and intellectual copyright law. As May and Sell observe, “Many of the legal innovations that laid the foundations for later copyright laws were first developed in the late fifteenth and early sixteenth century as the extensive Venetian publishing industry oscillated between boom and bust” [41, p. 57]. Although copyright and intellectual property (IP) has a long and storied history, it was not until the 1700s that specific legal frameworks emerged giving birth to the “author.” Noting the critical importance of the 1710 Statute of Anne, Rose explains, “This act was, in part, a legislative extension of the long-standing regulatory practices of the Stationers’ Company, the ancient London guild of printers and booksellers. Yet there were two major innovations: the statute limited the term of protection (the guild copyrights were perpetual) and authors were legally recognized as possible proprietors of their works (previously only members of the guild could hold copyrights)” [48, p. 4]. Rights of and for “authors,” which was certainly driven by the development and diffusion of the printing press, has only become more complicated as new technologies blur familiar lines. But, did the printing press change power relations?

In a point very important for our interest in understanding if and how changing communication technologies change power relations in society, Eisenstein clearly states that “when referring to printing as ‘an agent of change,’ I had in mind that historical change, in and of itself, is indeterminate, always contingent on numerous factors and usually compatible with movement in diverse directions. Thus the increased availability of vernacular Bibles to readers at large, the provision of polyglot versions to a scholarly elite, and the reactions of Roman churchmen to both developments did not point Western religion in any one direction. But however contradictory these three developments were, they shared in common the fact that they represented change” [20, p. 333]. Indeed, very big social change. Our research in this project strongly corroborates Eisenstein’s contention here.

Similarly, Eisenstein emphatically denies advocating any kind of “technological determinism.” She writes: “‘To describe the printing press as an agent of change,’ writes Michael Warner in an influential critique, ‘is to make the mistake of privileging a particular technology over culture and worse, to assume that technology is prior to culture.’” [20, p. 356] We have shown above that this charge is frequently made by scholars who stress the importance of culture over technology to explain social stability and change. Eisenstein vigorously rejects Warner’s allegation, replying that her repeated use of “scribal culture” and “printing culture” shows she understands that technology and culture are tightly interwoven. Indeed, all her examples show how culture (and human decisions) affects how printing impacts specific societies, and vice versa—perhaps similar to the way the environment influences how and if certain genes are expressed. Which is more important, biology or the environment? Neither, since each is engulfed in and in some ways causative of the other. So also with technology and culture.

At the same time, she stresses that printing was “*an* agent, not *the* agent, let alone *the only* agent of change in Western Europe” [20, p. xvii]. Moreover, “the notion that [social change] could ever be reduced to nothing, but a communications shift strikes me as absurd” [20, p. xix]. Similarly, she makes clear that impact was made

by more than the hardware of the printing press alone. “We will take the term ‘printing’ to serve simply as a convenient label, a shorthand way of referring to a cluster of innovations (entailing the use of movable metal type, oil-based ink, wooden hand-press, and so forth)” [20, p. 14]. Eisenstein is here indicating at the importance of other hardware that facilitated the printing press.

However, we will show that Eisenstein does not specifically discuss any examples of the software or orgware surrounding the printing press, without which the printing press alone would have had little or no impact at all. We take this to demonstrate the utility of the broader definition of technology with which we began this monograph. By focusing on the hardware alone, the greater influence of the technology, in its software and orgware, may go unnoticed, and thus the impact of the technology overall be considerably unrecognized and thus unappreciated. This omission can be particularly important when one wishes to “transfer” a technology from one culture to another. Again, by focusing only on hardware, the profound influence of software and orgware of the technology will not be noticed, and the impact of the transfer be much different—for good or ill—from what was anticipated.

So in what ways did the invention and rapid diffusion of the printing press broadly understood impact Europe? It is difficult to know where to start, the places and mode of impact are so numerous. Let’s again emphasize the distinction between the impact of the *substance* of what is being communicated from the impact of the *form* of communication itself—the distinction between the impact of the message vs. the impact of the medium. We will start by considering the impact of some of the messages.

The vital role that the printing press played in the Protestant Reformation has been frequently commented on. However, “although the anti-Turkish crusade was thus the ‘first religious movement’ to make use of print, Protestantism surely was the first fully to exploit its potential as a mass medium . . . . Luther himself described printing as ‘God’s highest and extremist act of grace, whereby the business of the Gospel is driven forward’” [20, p. 165]. “The art of Printing will so spread knowledge, that the common people, knowing their own rights and liberties will not be governed by way of oppression and so, little by little, all kingdoms will be like to Macaria [a Utopia]” [20, p. 168].

At first, the press was viewed as a good thing by all involved. But, “Gutenberg’s invention probably contributed more to destroying Christian concord and inflaming religious warfare than any of the so-called arts of war ever did,” and it led to religious and political fundamentalism as well as to modern science [20, p. 176].

Eisenstein repeatedly stresses the difference between Catholic and Protestant behavior, and not just attitudes, towards the science the printing press facilitated as well. She cites many examples of Protestant authorities saying they were opposed to, and of Catholics saying they supported, some new scientific book or other, but the specific policies in the two groups appear very different. On the basis of the evidence she presents, Protestants tended to be much more liberal in the books they permitted to be printed and distributed, while Catholics were much less so in actual practice.

Moreover, the impact of the press on the religious beliefs and practices of ordinary people was markedly different from the impact of science on them. “Protestant’s use of the press made religion more accessible to the people, empowering them, while science, for Protestant and Catholic alike, relying on mathematics and arcane terms, remained remote and mysterious to most people—to this very day, perhaps because of choices made at the time” [20, p. 306].

It would be a huge mistake to assume that the subject matter of the early printing presses was primarily religious, philosophical or scientific texts, or other publications of piety and intellect. The “contemplative attitudes associated formerly with spiritual devotion also accompanied the perusal of scandal sheets, ‘lewd Ballads,’ ‘merry bookes of Italic,’ and other “corrupted tales in Inke and Paper” [20, p. 104].

Indeed, this is a good place to point that much, perhaps most, of what was originally printed—and that most certainly made the most money—was not the Bible or other religious or educational material, and most emphatically not scientific tomes. It was job printing. Peter Stallybrass observes that the “printed calendars and indulgences that were first issued from the Mainz workshops of Gutenberg and Fust ... warrant at least as much attention as the more celebrated Bible” [51, p. 315]. “The first dated text that survives from Gutenberg’s press is not a book but an indulgence” [51, p. 315]. “Gutenberg was already printing his great Bible when he stopped working on it to print 2,000 copies of his thirty-line indulgence in 1454–5. He undertook this work because it was paid for upfront and brought an immediate cash return” [51, p. 316]. By following the money, so to speak, “Gutenberg both kept afloat and subsidized his larger project by printing broadsides” [51, p. 316]. Records show the same was true for all other printers of the time. Even centuries later, Benjamin Franklin said that “the ‘little Jobs’ took precedence over prestigious folios, because the ‘little Jobs’ regularly injected cash into the notoriously under-capitalized book trade” [51, p. 324].

Stallybrass also makes another very important point, often overlooked—what did printers actually print for the most part? “Our obsession with literacy rates has tended to obscure the extent to which many printed sheets fulfill their function without being read ... I would argue,” he says, “that printing’s most revolutionary effect was on manuscript. If we define manuscript in terms of all writing by hand as opposed to the kind of manuscripts that have been the main object of study, we might begin to see that the history of printing is crucially a history of the ‘blank’”—that is, of printed forms designed to be filled in by hand. Stallybrass devotes much of his essay to discussing them [51, p. 340].

This interesting though seemingly unimportant comment may be the key to understanding why print cultures spread so quickly in Europe, but not elsewhere, a point we will explore briefly below. Here we note only that in terms of volume and income, most of what was printed by the early presses in Europe were forms, announcements, advertisements, calendars, and the like—things of considerable commercial value without in any direct way being fomenters of revolutionary religious or secular ideas.

As one example of her failure to pay adequate attention to orgware, Eisenstein mentions, but does not discuss in the detail she does many other things, the “rise of

the fourth estate” as a powerful new social force [20, p. 110]. The creation of “the press” as a countervailing institution between government and civil society surely is one of the major examples of how the printing press altered power relations as they had been in scribal societies. It was difficult to imagine, much less demand and then achieve, free speech or “freedom of the press” until the press existed as an independent interest group and political force that could exercise and profit from such freedom. Yet she does not discuss this development at all except to mention it in passing.

Eisenstein does, however, stress the fact, often overlooked, that the printing press enhanced visual literacy as much as it did word literacy: “Protestant propaganda exploited printed image no less than printed word—as numerous caricatures and cartoons may suggest. Even religious imagery was defended by some Protestants, and on the very grounds of its compatibility with print culture. Luther himself commented on the inconsistency of iconoclasts who tore pictures off walls while handling the illustrations in Bibles reverently” [20, p. 40]. In another sphere, that of pictures and engravings in scientific texts, “[I]t was not the ‘printed word’ but the ‘printed image’ which acted as a ‘savior for Western science’ in George Sarton’s view,” Eisenstein states [20, p. 42]. She stresses that it was often the illustrations in the books that made the biggest impact on people’s consciousness by making them visually aware of and thus psychologically participative in events far away in places they would never actually visit. “The effect of duplicating images and portraits of rulers—which were eventually framed and hung in peasant hovels throughout Catholic Europe, along with saints and icons—has yet to be assessed by political scientists” [20, p. 108]. As political scientists, we duly note this and suggest this served to strengthen the appeal and bonds of nationalism.

So far, we have focused on the *content* of what was printed as being the major impact of the press. But it would be a serious error to assume that is the most important, let alone only, reason that the printing press served as an agent of social change in Europe. Regardless of what the subject matter was, the printing press had revolutionary impacts on human thinking and acting independent of the material printed.

One point Eisenstein makes frequently in her writing is that “during the millennia that intervened between the invention of writing and the introduction of printing in the West, it never took fewer than ten scribes to feed one clerk. The production, collection, and circulation of books were subject to an economy of scarcity. Recovery and preservation were naturally of paramount concern. Within a century after the installation of printing shops in Western Europe, however, even while old texts reflecting problems of scarcity were becoming more available, a new economy of abundance began to make its presence felt” [20, p. 334]. Within a generation, the vast scribal industry that had flourished for centuries was gone. A few impersonal printing presses took its place: another impact of technology as *orgware*—because, though they were thrown out of one line of work, now all scribes could look for jobs in the many positions needed in the new, rapidly expanding printing industry.

For all of prior history even the most diligent scholar would never read in a lifetime what almost all serious scholars could master as young students after the printing press. Before, manuscripts were rare and scattered, so that the scholar might spend a lifetime wandering about looking for and pleading to read the few books

available. After printing, increasingly, all the books in the world could come into any scholar's own personal library. Scholarship no longer meant spending a lifetime reading and re-reading one or two available texts. It meant collecting, reading, synthesizing and producing new ideas gained from more and more texts. "The era of the glossator and commentator came to an end, and a new 'era of intense cross referencing between one book and another' began" [20, p. 47]. Similarly, "Less reliance on memory work and rote repetition in lecture halls also brought new mental talents into play. Printing enabled natural philosophers to spend more time solving brain teasers, designing ingenious experiments and new instruments, or even chasing butterflies and collecting bugs if they wished" [20, p. 269].

Eisenstein dramatically states that the transitional period between medieval and modern societies was "an elastic period encompassing some 300 years during which Western Europe is seen to have experienced the cultural equivalent of a chemical change of phase" [20, p. 126]. A "phase change" is almost a textbook definition of a transformation—a situation where flowing water "suddenly" and unexpectedly becomes steam, if heated, or ice if chilled; it is the butterfly inexplicably emerging from the cocoon the caterpillar spun. "The shift from script to print also involved a Europe-wide transformation which occurred in a relatively short span of time. In a few decades, printers' workshops were established in urban centers throughout Europe. By 1500, various effects produced by the output of printed materials were already being registered. Compared with the three centuries that stretch from 1250 to 1550 or 1300 to 1600, the age of incunabula is short indeed . . . . By 1500, one may say with some assurance that the age of scribes had ended and the age of printers had begun" [20, p. 127].

Nonetheless not everyone was equally impacted by the transformation. Then, as now, though many are able to acquire books, many do not, and only a few become serious book readers, with fewer still becoming book-based scholars. From the time of the emergence of writing and the scribal society, manuscripts were typically read out loud—whether in public or private—as though one were reciting from memory and not reading from texts. This continued for a long time after the invention of printing—down to the present day in some cultures. Nonetheless, as we have seen when commenting on reading and women, the trend after the printing press was for silent reading that facilitated privacy, individualism, intrigue, and revolution.

One feature of printing *per se* that made a big impact on thinking and acting—down through Henry Ford's industrial assembly line and beyond—was standardization. Duplicating exactly the same book by hand copying was nearly impossible. Mistakes, omissions, new material crept in almost every time a new copy was made. Of course, not each run of a printed book was identical to others, either. Mistakes were constantly being corrected in later editions, but "the fact remains that Erasmus or Bellarmine could issue errata; Jerome or Alcuin could not. The very act of publishing errata demonstrated a new capacity to locate textual errors with precision and to transmit this information simultaneously to scattered readers. It thus illustrates rather neatly some of the effects of standardization" [20, p. 56].

We saw earlier that with the emergence of literacy from orality, classificatory modes of scholarship were enhanced by writing because now ideas could be more easily

decontextualized, studied, compared, and rank-ordered. Eisenstein elucidates this in a section titled, “Some effects produced by reorganizing texts and reference guides: Rationalizing, codifying and cataloguing data [20, p. 71]. She gives as one example the fact that “printed reference works encouraged a repeated recourse to alphabetical order” [20, p. 72] that resulted in a still-thriving data-retrieval system—made redundant first by random “key word” searches and now by “big data” algorithms.

Many of the conventions of printing that we take for granted now arose with the printing press: “regularly numbered pages, punctuation marks, section breaks, running heads, indexes ... arabic numbers for pagination ... more accurate indexing, annotation, and cross referencing resulted. Most studies of printing have, quite rightly, singled out the regular provision of title pages as the most significant new feature associated with the printed book format” [20, p. 81].

Roger Chartier says that “if one is to find an analogy in the *longue duree* history of writing and reading, one should look at the invention of the codex. By replacing the scroll with the new book form, this revolution, largely forgotten or unacknowledged except by specialists, is the one that led to practices that are still ours today and that were completely impossible with the scroll—for example, leafing through a book, quickly locating a passage, using an index, and writing while reading,” all things not easily done with scrolls that the codex form of the book made easier [6, p. 407].

Printing also made a substantial impact by improving preservation. Single hand-written manuscripts were easily lost, stolen, burned, or destroyed by water, mold, bugs, or rats. The only way to preserve a manuscript was to hand copy it, which introduced the probability of errors with every subsequent copy, as we saw before. With the printing press, a single manuscript could be printed in multiple copies, stored in many libraries, and reprinted when necessary.

The role of printing in creating both nations and standardizing their languages should be acknowledged as one of its most important contributions. Again, Eisenstein quotes Steinberg: “Printing ‘preserved and codified, sometimes even created’ certain vernaculars. Its absence during the sixteenth century among small linguistic groups ‘demonstrably led’ to the disappearance or exclusion of their vernaculars from the realm of literature ... . The preservation of a given literary language often depended on whether or not a few vernacular primers, catechisms or Bibles happened to get printed” [20, p. 92]. “Typography arrested linguistic drift, enriched as well as standardized vernaculars, and paved the way for the more deliberate purification and codification of all major European languages” [20, p. 93].

The printing press was also responsible for another kind of “fixity”: Until the advent of printing, the revival of classical thought in ancient Greek and Roman manuscripts sometimes happened locally, but quickly faded. With the printing press, the number of classical texts known multiplied, and their effects became a major feature in the revolution of thought at the time.

The printing press saw the invention of the “author.” Previously, one was a scribe (copier), a compiler, or a commentator—not a promulgator of one’s own ideas. Initially the term “author” seems to have been given to a person who “writes both his own work and others’ but with his own work in principal place ... ” [20, p. 95]

“The new forms of authorship and literary property rights undermined older concepts of collective authority in a manner that encompassed not only biblical composition but also texts relating to philosophy, science, and law” [20, p. 96].

Printing also allowed certain once-novel ideas to become repeated and amplified endlessly so that “over the course of time, archetypes were converted into stereotypes, the language of giants, as Merton puts it, into the clichés of dwarfs” [20, p. 100].

Repeatedly, Einstein makes clear that the impacts of the printing press on Europe might have been different in other cultural contexts. “The early presses, which were established between 1460 and 1480, were powered by many different forces which had been incubating in the age of scribes. In a different cultural context, the same technology might have been used for different ends (as was the case in China and Korea) or it might have been unwelcome and not been used at all (as was the case in many regions outside Europe where Western missionary presses were the first to be installed) ... . Under different circumstances, moreover, it might have been welcomed and put to entirely different uses—monopolized by priests and rulers, for example, and withheld from free-wheeling urban entrepreneurs. Such counterfactual speculation is useful for suggesting the importance of institutional context when considering technological innovation. Yet the fact remains ... ” [20, pp. 308–309] that the facts remain.

In her 2006 “Afterword,” Eisenstein states that when she wrote the first version of her book, commenting on the fact that communication technologies were changing, and changing society in revolutionary ways, that she was referring to Xerox as the big new mutative technology. The only copy of her original manuscript had been on carbon paper. Xerox was going to change all that! 20 years on, in 2006, Xerox was a rapidly obsolescing technology.

That is indeed one of the most interesting things that comes from reading all the sources about the printing press as an instrument of social change: When they do comment on the future impact of the electronic technologies of the time they are writing, their ideas seem quaint and even misguided in light of what we think is happening now. As will the forecasts of this monograph not too far into the futures.

### ***2.4.1 Printing, Power, and Islam***

We have seen that the printing press spread like wildfire shortly after its invention in 1450 in Mainz, Germany, and within a short period of time profoundly transformed western Europe, splitting the waning influence of the once truly “Catholic” Church into many often murderously conflicting factions. Nationalism, nation-states, national languages, new occupations, and new ways of governing, learning, and even thinking soon replaced ways millennia old. The story in Islamic societies is quite different. “Print did not begin to become established in the Islamic world until the nineteenth century ... ” [46, p. 233] Geoffrey Roper puts the issue even more squarely: “Why was book printing not adopted by Muslims for more than 1,000 years



after it was invented in China and 250 years after it became widespread in western Europe (in spite of its use by non-Muslims in the Muslim world)?” [47]

Was it because the *ulama* (Muslim legal scholars) were concerned that the products of the printing press would foment religious discord, as they observed it do in Europe? Some researchers maintain that a late fifteenth-century edict was issued in Turkey declaring that “occupying oneself with the science of printing was punishable by death.” While the authenticity of that decree is disputed, it has been frequently repeated and seems to capture the official sentiments of the time [8].

Was it because Islamic leaders were naturally suspicious of foreign products generally? If so, why did they embrace western military weapons so eagerly [8]? Not to mention tobacco [47, p. 234].

Roper agrees with Robinson, who says that “the problem was that printing attacked the very heart of Islamic systems for the transmission of knowledge; it attacked what was understood to make knowledge trustworthy, what gave it value, what gave it authority” [46, p. 235]. And, “At the heart of this system of transmission is the very essence of knowledge for the Muslim, the Quran. For Muslims the Quran is the word of God—His very word. It is more central to Islamic theology than the Bible is for Christians or the Torah is for Jews. It is the divine presence. It is the mediator of divine will and grace . . . . ‘Quran’ itself means ‘recitation,’ al-Quran, the recitation, the reading out loud. It is through being read out loud that the Quran is realized and received as divine. Muslims strive to learn as much of it as possible by heart. They recite it constantly through the daily rounds, at prayer times, through the passage of the year, most notably in the month of Ramadan, and through all the stages of life. It is like a sacrament, ever on their lips. For its words are not mere words. ‘They are,’ in Constance Padwick’s magical phrase, ‘the twigs of the burning bush aflame with God’” [46, p. 235].

A very important point here is that the Quran is said to derive directly from the lips of the Prophet. Although Muhammad is not the author of the Quran, the orthodox perspective on the text is that it is perfect copy of Allah’s book in Heaven. They are the Prophet’s very words, transmitted faithfully and fully as personally heard and repeated by his followers. “When, a few years after the Prophet’s death, these messages came to be written down, it was only as an aid to memory and oral transmission. And this has been the function of the written Quran ever since” [46, p. 236].

This is completely different from the Christian New Testament. The New Testament was written in Greek by people who some say were divinely inspired, in the case of the Gospels, several hundred years after the death of Jesus. The Epistles of Paul and others were written closer to the time Jesus is said to have lived. But none of the writers whose thoughts are contained in the New Testament were direct auditors or direct transmitters from actual auditors of the exact words of the historical person called Jesus. No one can be sure what Jesus said, but one can be reasonably certain of what the Prophet said. However, given the way in which both the New Testament and the Quran were assembled and compiled over time, and as a consequence of internal conflicts and struggles among the compilers, reasonable doubt can exist about what both Jesus and the Prophet might have meant by the words attributed to them. Moreover, both the Prophet and Jesus (like Socrates and



Homer) were illiterate, dependent on others to document their words in writing. Jesus also spoke Aramaic and not the Greek in which the New Testament is originally written. The Quran is still written and read in the language the Prophet spoke.

As a consequence, “The oral transmission of the Quran has been the backbone of Muslim education. Learning the Quran by heart and then reciting it aloud has been traditionally the first task of young Muslim boys and girls.” Moreover, all early Islamic books were “merely an aid to oral publication” [46, p. 236].

To be sure, Islam was not opposed to the written word *per se*. “‘Good writing,’ declares a tradition of the Prophet, ‘makes the truth stand out.’ Calligraphy is the highest of the Islamic arts. The beautiful writing of the words of God is the typical adornment of Islamic space. Yet, writing and literacy have always danced attendance on a superior oral tradition in the transmission of knowledge” [46, p. 237].

This applies to all Islamic knowledge, and not just the Quran. “Person to person transmission was at the heart of the transmission of Islamic knowledge. The best way of getting at the truth was to listen to the author himself. Muslim scholars constantly travelled across the Islamic world so that they could receive in person the reliable transmission of knowledge” [46, p. 238]. Very importantly, “No one was to read a book without the help of a scholar” [46, p. 243].

Ziauddin Sardar [49] says the third most frequent term in the Qur’an is *ilm* (knowledge). Knowledge—seeking it, obtaining it, analyzing it, expanding it, sharing it, preserving it, and seeking newer understandings of it—is central to Islam. Originally *ilm* was very broadly conceived, interpreted, and shared, but over the years it came to mean only certain parts of, often secret religious knowledge that few initiates could possess. How did this narrowing and freezing of such a fundamental concept happen?

Sardar reinforces what we have already learned so far—how very important handwritten texts are to Muslims—though we will see that he puts a different interpretation on this from what some others have concluded. He observes, “The first Muslim community, living in Medina, recorded the Qur’an on almost anything they could find: on papyrus, palm fibres, bone tablets, hides, white stones and parchment. The Prophet Muhammad himself had his important decisions documented. Nearly 300 of his documents have come down to us, including political treatises, military enlistments, assignments of officials and state correspondence written on tanned leather. Because he could not read and write himself the Prophet was constantly served by a group of 45 scribes who wrote down his sayings, instructions and activities” [49, p. 91]. After his death, an elaborate system was devised for obtaining and authenticating other teachings that had not been initially written down: “Each saying of the Prophet was traced through a chain of authoritative transmitters right to the lips of the Prophet Muhammad himself” [49, p. 92]. “The methodology of *hadith* collection and criticism, with all its precision and accuracy, combined with the Qur’anic emphasis on *ilm*, became the basis for a host of new scholarly and literary genres,” [49, p. 93] leading to the flowering and spread of Islamic culture from the ninth through the thirteenth centuries.

This proliferation of Islamic culture was also “made possible by one of the most revolutionary events in Islamic history ... the manufacture of paper” [49, p. 94].

The know-how for papermaking was acquired by Muslims from Chinese captured in Samarkand, but Muslims added numerous features that led to the improvement and mass production of paper, eventually exporting it to Europe in the late thirteenth century. The people who made and sold paper, published and sold books, and served as scribes, often became scholars in their own right. Centers of learning and eventually universities grew up around scholars and their libraries. Reading, writing, widespread research, scholarship, and creativity on every topic imaginable—*ilm*—flourished throughout the breadth of the Muslim world [2].

However, at the same time, some religious scholars (Sardar uses the spelling *ulema*) began to be concerned because wide readership was fostering widespread and differing interpretations of the meaning of what was being read. “The initial response of the *ulema* ... was to undermine the concept of *ilm* itself ... . *Ilm* was now transformed from meaning ‘all knowledge’ to meaning only ‘religious knowledge’” [49, p. 99]. Eventually very strict rules for determining who could become an *ulema* (by the memorization of the entire Qur’an and of numerous other writings) were put in place. As Sardar explains, “All this had a devastating effect on Muslim culture. From a general and distributive concept, *ilm* became an exclusive and accumulative notion ... . Muslim thought ossified and became totally obscurantist. Consequently, Muslim culture lost its dynamism and degenerated, while the Muslim community was transformed from an open to a closed society” [49, p. 100].

Into this stifling environment came the printing press. “Not surprisingly, the arrival of printing produced a hostile response from the *ulema*, who managed to resist the introduction of printing presses in Muslim countries for nearly three centuries. The mechanical reproduction of the word of God or material connected with it, they argued, was irreverent. Furthermore, they insisted that the only way to understand a text and retain its uncertain authority was to hear or read it aloud, phrase by phrase, by or in the presence of someone who has already mastered it, and to repeat and discuss it with such a master. The mass printing of books would lead not to understanding and appreciation of sacred and classical texts but to misrepresentation and misunderstanding” [49, p. 101].

This belief in the primacy of the spoken over the written is not much different, except perhaps in purity, fervor, and insistence, from learning everywhere in oral societies and scribal societies, including Europe before the printing press. As we have seen above, the spoken oath, along with a handshake, or with one hand on a Bible, persisted for years—right down to the present time. Even though my grandmother insisted that I learn to type, she also insisted that I handwrite all of my letters to her. It was impolite, too impersonal, for me to type them. Similarly, though the printing press played a role in the rapid drafting and dissemination of the Constitution of the United States in 1787–1789, the final document itself was handwritten, and not printed. It may be that the depth and persistence in Islam of preference for the oral and handwritten over the mechanically printed was extraordinary, but it was not unique. Robinson himself states “that the widespread printing of books was also not adopted in the Hindu, Chinese and Japanese worlds until the nineteenth century” [46, p. 240].

So why did the acceptance of printing finally happen? Roper and Robinson give somewhat different political reasons. Robinson says, “Muslims came to adopt

printing only when they felt Islam itself was at stake and print was a necessary weapon in the defense of the faith” [46, p. 240]. Thus Muslims in India, where they were a minority, were among the first to set the Quran and other basic works into print so that the faithful could keep the faith pure in a hostile environment. In a culture where one is surrounded by everyone reciting the Quran, written copies are not so necessary. When most people around you are heathens, with their religious ideas freely available in cheap publications, it is necessary to see that yours is, too, so that younger generations will not forget the truth. Similar developments happened in Southeast Asia, Indonesia and Africa—wherever foreign imperial powers threatened Islamic culture.

One consequence of the spread of printed Islamic material was a deepening and intensifying of the pan-Islamic sense of the *ummah*—the global community of all believers. “Without the press this pan-Islamic horizon could never have been seriously explored,” Robinson states [46]. At the same time, as the Quran and other sources were eventually translated and published in local vernacular and not in the original Arabic, the ultimate authority of the *ulama* was in fact seriously challenged and undermined by the abundance of printed materials, fewer and fewer of which were officially authenticated or whose reading was done in the presence of a proper teacher. Indeed, eventually there was a kind of “protestant Islamic revolution” led by people who freely interpreted the words of the Prophet, translated into their language, according to what those words meant to them presently reading them, and not as the orally transmitted tradition declared them to be and mean.

“By breaking the stranglehold of 1,200 years of oral transmission, by breaking the stranglehold of the madrasa-trained *ulama* on the interpretation of Islamic knowledge, print helped to make possible an era of vigorous religious experiment. Print came to be the main forum in which religious debate was conducted; it was an era of pamphlet wars and of religiously partisan newspapers and magazines . . . . The result was a rapid fluorescence of sectarianism” [46, p. 246]. In summary, Robinson concludes that “all these changes are results of what we might term the mass production effects of print. They are results of the revolution in access to knowledge that print makes possible” [46, p. 250].

Roper makes a slightly different political argument. He also contends that the initial resistance to printing was by Islamic rulers who resisted printing because “printing challenged the entrenched monopolies of intellectual authority enjoyed by the learned class (*‘ulamā*’), and threatened to upset the balance between that authority and the power of the state” [47, p. 25]. Then, paradoxically a few centuries later, “this was indeed one important reason why printing was eventually sponsored, in the eighteenth and nineteenth centuries, by modernizing rulers. They wanted to create a new, broader military and administrative class, versed in modern sciences and knowledge, who could bolster the power of the state against both traditional hierarchies within and new threats from outside. The printing press was seen as an indispensable instrument for achieving this new order” [47, p. 26].

In terms of the focus of this monograph, both arguments vividly demonstrate that changing communication technologies did, or were thought they might, change

power relations in societies, which some favored and others opposed. Few regarded the printing press as neutral. Although some considered it demonic, most understood it to be transformative. When the gates were open and books and other printed material poured forth in Islamic countries, “the ready availability of inexpensive copies of a standard authorized version of the Qur’ān transformed the attitude of many Muslims to the sacred text, and the uses to which they put it. Its function ceased to be primarily ritual and liturgical, and it came to be regarded as a direct source—not necessarily mediated by scholarly interpretation and authority—of guidance and wisdom in human affairs.” And, “The new accessibility and role of the Qur’ān consequently led some believers to adopt fundamentalist attitudes to Qur’anic doctrine, with considerable consequences in the social and political spheres. Others, in contrast, gradually abandoned traditional scholastic and legal interpretations in favour of their own reconciliations of Qur’anic ethics with modern life and politics. This divergence remains an acute feature of modern Islam, reinforced by outside pressures and new sources of authority in what continues to be above all a book-based system of belief” [47, p. 39].

Cosgel et al. give an economic, game-theoretic explanation for both the resistance and the end of resistance to the printing press in Islam. Noting also the fact that the same rulers who successfully resisted the introduction of the printing press very eagerly embraced the introduction of western military weapons, they argue that the reason the Ottomans resisted the introduction of the printing press was because of the financial importance of Islam in the overall political economy of the empire. To allow the easy spread of new ideas by printing would undermine the authority of existing Islamic institutions and threaten the finances of the state. It was economic and not religious reasons that were primary for Islamic resistance to printing, they insist. The close relationship between Church and state in Europe had already been significantly loosened, Cosgel et al. point out, and there was thus no similar financial incentive for the state to forbid the introduction of new religious or scientific ideas. “The Ottomans eventually sanctioned printing in Arabic script in the eighteenth century after alternative sources of legitimacy emerged,” Cosgel et al. point out [9, p. 2].

By the same token the Ottoman rulers welcomed advanced weaponry from the west since it served to consolidate and enhance their ability to rule over and extract revenue from their subjects. Cosgel et al. perform meticulous research and calculations to show that their economic analysis and reasoning is sound [9]. They question the explanations given by Roper, Robinson, and others as incapable of precise quantitative testing; that indeed some of the traditional, cultural, religious, even political reasons given seem vague and perhaps contradictory. Dittmar [16] took a similar quantitative approach in trying to determine if the printing press made a positive economic impact in Europe by showing that, controlling for other variables, the population of European cities that first used printing presses grew while those that did not have presses did not.

Nonetheless whether qualitative or quantitative, political or economic, the results seem to be the same—the printing press was a substantial agent of social change in the areas where it was able to flourish.

### 2.4.2 *Note on Printing in China and Korea*

As we have hinted, Gutenberg was not the first person to invent the printing press with movable type. This technology was known and used in China and Korea far earlier. That it did not have the same impact in those countries as it did in Europe is a good example of the fact that the mere existence of a piece of hardware is not in and of itself sufficient to produce social change. Pre-existing orgware may effectively resist it. Moreover, it was not because of cultural or intellectual “backwardness” that the printing press in Korea and China did not serve as the agent of change that its later counterpart did in Europe, as some observers have claimed.

As the title of a book by Thomas Francis Carter makes clear, printing *per se*—namely extensive woodblock printing—may have been invented in China and used in Korea and Japan before moving westward to Europe and elsewhere [5]. However, Kai-wing Chow observes that “in most standard histories of western European printing, the advent of print is fixed at the point when Gutenberg printed a Bible with movable type no later than 1456,” ignoring the earlier existence of xylography, or woodblock-printed books [7]. Furthermore, “A recent study of the development of printing in China, Korea, Japan, and Europe has demonstrated that once woodblock printing was in use, printers experimented with movable type, first using wood movable type, then metal types” [7, p. 173]. In Europe, Chow says, woodblock printing was viewed as “art” for aesthetic expression and not as a mode of communication as it was in east Asia [7, pp. 175–180]. Consequently, he observes, “One is amazed at the ignorance about the history of printing in China found even among experts on the history of printing” [7, p. 185]. Chow asserts that the fact that Chinese and Korean writing required the printer to have a large number of complete Chinese ideographs compared to the ease of compilation that European languages, based on a small number of characters in the alphabet enabled, did not discourage Asians from using the printing press, as is sometimes said to be the case. He also quotes scholars who point out how inexpensive woodblock printed books were in China because of “abundance of wood and cheap labor for carving” [7, p. 186].

Another reason Chow gives to explain why the printing press did not come to dominate in China as it did in Europe was a matter of software. China did not need a press *per se* while Europe did. Western paper was made from rags and so was uneven and resistant to ink. Such paper needed a heavy press in order to imprint the ink successfully. Chinese paper, typically made from rice, was smoother and did not need heavy pressure to absorb the ink [7, p. 188]. Western sources often give cultural reasons for China’s continued use of wood block printing, not acknowledging that there were good economic and material—software—reasons instead, Chow concluded [6, p. 187].

Similarly, in her introduction to *Printing and Book Culture in Late Imperial China*, Cynthia Brokaw also writes that, “Before the twentieth century, Chinese printing was dominated by xylography” [4, p. 8]. She continues, “To be sure, block printing was not the only technology available to Chinese printers . . . . Moveable-type printing had been developed in China as early as the eleventh century.

Xylography remained the preferred method, however” [4, p. 8]. And, “As long as carving costs remained low, xylography was the more attractive method for economically-minded publishers” [4, p. 9].

Brokaw goes on to give many reasons why xylography continued to prevail over movable-type printing in China until current times. For example, she points out that a western printer had to spend a great deal of money upfront to set up his business and buy his fonts and the press itself, compared to a Chinese woodblock printer. The westerner then tended to print things that required a long run of a single text or form. To reprint a book later required the time and expense of resetting each page of the entire book. “With woodblock printing ... the greatest expenditure in the printing process was the initial carving of the blocks. This, however, might not be too onerous an expense, as block carving did not require long training or even literacy on the part of the carver. And once the blocks were carved, the printer could produce as many or as few copies of the text as he liked.” If a new run of the same book was later required, “no new heavy investment in labor was required; he could simply print off the original blocks” [4, p. 9]. Moreover, printing in Chinese ideographs, being based on the meaning of the character and not its pronunciation, could be read by people in many languages other than Chinese. This provided an enormous market for Chinese books, while sale of books in European alphabetic languages were limited to people who could read each language [4, p. 11]. Brokaw elaborates on other such economic—software—reasons for the continued use of block printing in China.

The situation in Korea was slightly different, but with similar consequences. Korea learned woodblock printing from China and excelled in the art and craft so fully that many Korean publications became highly prized in China. Moreover, “In addition to the woodblock tradition, Koryo craftsmen, drawing upon their highly skilled metal-casting techniques, produced the world’s first moveable metal type. Exactly when this happened is not known for certain. The first known use of moveable metal type was in 1234 to print twenty-eight copies of *Sanjong kogum yemun* (*Prescribed Ritual Texts of the Past and Present*). This was more than two centuries before Gutenberg. Indeed, some historians have speculated that knowledge of Korean moveable metal type may have reached Europe and inspired the development of printing there. The Koreans, however, did not invent a printing press” [49, p. 114].

### 2.4.3 *The Printing Press, Constitutionalism, and Logo Fundamentalism*

Certain words—and often words *per se*—are believed to have magical powers in most oral and scribal societies. It turns out that the belief that words are magical is found in modern print-based societies as well and has not diminished even now that words can be spread at the speed of light.

Although few people in “developed” nations may believe that their “curse” or “swear” words actually cast a solemn spell on anyone—“God Damn You” doesn’t really mean that for most people—the seven dirty words you can’t say on television”

or in a classroom, or in front of “ladies,” and the like still have the strong force of law and custom behind them. They are just too powerful. There are also “fighting words” that should never be uttered, but if they are, give leave for the auditor to exterminate the utterer.

The example of religious fundamentalism based on the infallibility of the Bible or other religious texts has been amply illustrated above. But there is economic fundamentalism as well, with Adam Smith’s *The Wealth of Nations* being the sacred text (though seldom actually read) for free market neoliberalism, as well as political fundamentalism that is best exemplified in the reverence in which many Americans—not only Tea Party sectarians but also some justices of the US Supreme Court—hold the sacred words of the American Constitution.

Fortuitously, Britain’s American colonies in revolt provided the *tabula rasa* upon which was realized the extraordinary notion of “constituting” a new nation by assembling a group of highly privileged men to discuss and then eventually write down a set of basic governing principles for the newly imagined United States. Informed by Greek and Roman classics, and based on cutting edge ideas and technologies of the day—especially Newtonian mechanics, deistic theology, and the hand-powered printing press (steam-powered printing presses did not come into existence until about 30 years after the United States did)—the US Constitution was a breathtaking social invention, brilliantly overcoming a host of design challenges, though by no means all of them, while creating serious future problems as well. It was designed for, and fit for, a vast, overwhelmingly agricultural society with a small, widely scattered rural population of semi-illiterate farmers and plantation owners, many of whom wanted political independence from their mother country, far, far away.

The fundamental principles of “constitutionalism” have been widely copied. Since 1789, there have been very many opportunities for polities to envision and fashion new forms of governance—the governments of the internal American states themselves; the political revolutions in England, France, and elsewhere in Europe in the nineteenth centuries; Russia in 1918; Japan, Germany, and other “Axis” nations after the Second World War; numerous former colonies in South America, Africa, the Middle East, and Asia, also after the Second World War; the collapse of socialist systems in 1990; the attempt to create a European union; and most recently “nation-building” opportunities after the United States has brought down existing tyrannical governments.

In almost every case, people sat down and wrote a constitution, unreflexively imitating the Newtonian mechanistic and rationalistic assumption of the late eighteenth century, and acting as though the only communication technologies available for governance are still the printing press and the spoken word. “Representatives” are still expected physically to assemble somewhere in a central location, debate policies, and “make law” (itself a very modern pretense, compared to the older understanding of “discovering law”) by writing down their decisions, which are subsequently to be administered by bureaucratized humans and enforced by officers of the law backed by the threat or use of deadly force. Most nation-states still preserve and expand their “right” and ability to destroy other nation-states.



Internally, disputes are formally resolved in courts of law where people specially trained in the meaning of the words of laws and constitutions verbally battle it out in front of judges who are elevated in every sense of the word. In some places, there are special courts with special judges who have, or have usurped, the exclusive right to determine the meaning of the words in the written law and written constitution.

Certain printed words (and those who wield and interpret them) have thus obtained over time a kind of arcane, magical, holy, superhuman power vastly exceeding that of other printed words. When the power of these words seems to fail, instead of reaching beyond the logo-centric cosmologies and technologies that underlie them, and trying to base social order on newer cosmologies and technologies, most people, rulers and ruled alike, look for stronger words and more powerful, more magical, phrases.

The documents intended to form the basis of the European Union are stubbornly logo-centric. It is no wonder that whenever young people in Europe have a chance to vote on them (which they seldom are allowed to do), they vote them down. Although many young people in Europe seemed to be proud to be “Europeans” and not only citizens of their current nation or locality, and once relished in the common currency, borderless travel, articulated educational and professional standards, and other advantages of what has been achieved so far, they instinctively understand that the cumbersome, word-larded framing documents are largely inadequate for providing a governing basis for “Europe” in a globalized world of the twenty-first century.

Things in the United States are even more glaring in this regard. A stunning kind of logo fundamentalism has captured both church and state. The US Supreme Court is currently controlled by men who believe that the original words of the US Constitution have an essential and unchanging meaning that is not only separate from and superior to what those words might have evolved to mean now (much less how they might now be better interpreted to mean), but also that they have essential meanings separate from what even the Founding Fathers themselves might have intended the words to mean. These judges are not especially concerned with what the Founding Fathers thought the words meant. They believe the words themselves speak clearly, flawlessly, and eternally.

The source of this kind of interpretation might be the fact that some of the most influential members of the court were educated at a time when what was known as “The New Criticism” was popular in departments of English in US universities, a perspective put forward by Margaret Talbot [52].

The New Criticism was popular in the United States and United Kingdom during the 1940s and 1950s and has influenced literary and cultural critics ever since. As Talbot notes, “New Critics treat a work of literature as if it were a self-contained, self-referential object. Rather than basing their interpretations of a text on the reader’s response, the author’s stated intentions, or parallels between the text and historical contexts (such as author’s life), New Critics perform a close reading, concentrating on the relationships within the text that give it its own distinctive character and form” [52].

Walter J. Ong, who we have discussed before as one of the more influential scholars in understanding how the emergence of writing changed human thinking,



behavior, values, and institutions uses the New Critics as a “prime example of text-bound thinking” [43, p. 160]. He goes on to argue that “to say that the New Critics ... have been text-bound is not to degrade them. For they were in fact dealing with poems that were textual creations. Moreover, given the preceding state of criticism, which had devoted itself in great part to the biography and psychology of the author to the neglect of the text, they have warrant to stress the text ... . New Criticism thus appears as a shift from a residually oral (rhetorical, contextual) mentality to a textual (non-contextual) mentality. But the textual mentality was relatively unreflective. For, although texts are autonomous by contrast with oral expression, ultimately no text can stand by itself independent of the extratextual world. Every text builds on pretext” [43, p. 162].

Ong attributes the New Criticism’s exclusive focus on the text first to the academic shift from the study of Latin and Greek sources to contemporary vernacular literature (the study of which was never part of academics in previous millennia), and then to the creation of academic departments of English, most importantly as graduate studies, after World War I. Noting there was no such thing as “Old Criticism,” this concentrated academic focus for the first time, after the 1930s, made “deep study” of decontextualized texts possible and fashionable. Postmodern scholarship has made this mode of analysis even more fashionable and pervasive, extending it to visual images in cinema and advertising, and not just written texts.

No institutions in the world today are more obsolete than governments. Although logo fundamentalism plagues religions and economic theories alike, both religions and economies have mutated marvelously since they were originally created. Many religions flourish today, each with different attachments to what is felt to be traditional and what is felt to be current. One function of the Holy Ghost in Catholicism is to help keep the Church up-to-date. Similarly, Evangelicals are guided by the Spirit, which is very much alive within them. Other Christians ask “What would Jesus do?”, understanding that Jesus is alive with them today, and not speaking from a past that has been dead for two millennia. Even those Christian denominations that insist on following precisely the 2,000- to 3,000-year-old written Word of God rely not on the original words in Hebrew or Greek as they were understood when written, but on various modern English (or other vernacular) versions where the words have contemporary meanings that may not be those of the original words at all.

Although some economists may contend that their views are based on the eighteenth-century ideas of Adam Smith, as subsequently revealed by Milton Friedman and disciples, there is little or no relation between the economic institutions of Smith’s (and the Founding Father’s) time, and now. Economic institutions are constantly mutating as technology, ideology, and power provoke them.

And yet, most strangely, all constitutionally based governments everywhere still follow the cosmologies and technologies that inspired the Founding Fathers in 1789. In spite of a myriad institutional additions and Supreme Court decisions, the original words of the Constitution still rule in the United States, and the spirit of constitutionalism rules everywhere written constitutions exist, which is almost everywhere.

In the next section we will show how electricity and electronics have mutated power and most of society over the late nineteenth century to the present.

There have been numerous feeble attempts to create “electronic democracy,” first via newspaper, radio, and television [13] then via the Internet [14]. But logo fundamentalism still rules the thoughts and behaviors of many academics, lawyers, bureaucrats, and the general public.

What if, instead of words, basic principles of governance were expressed in pictures? If governance is intended primarily to regulate the way people behave, what better way to illustrate those principles than by pictures that clearly depict proper and improper behavior? Linear words do a very inadequate job of explaining the desired and undesired behaviors now. Might not pictures do much better?

However, since behavior is complex and situational, static illustrations alone might not sufficiently do the job. For this, basic principles of behavior could be expressed in the algorithms of detailed computer programs linked to sophisticated three-dimensional dynamic audiovisual displays. The new Bills of Rights would deal, among other things, with making those algorithms transparent to all.

The words “to govern” come from Greek words meaning “to steer.” A “governor” is the “steersman” of society. In a constantly mutating society such as ours is now, it makes little sense to be governed by an anchor, rather than by a rudder—if not more accurately by the rudder of a ship tied fast to the dock.

## References

1. Bickerton D (2010) *Adam’s tongue: how humans made language, how language made humans*. Hill & Wang, New York
2. Bloom J (2001) *Paper before print: the history and impact of paper in the Islamic world*. Yale University Press, New Haven
3. Boë LJ et al (2007) The vocal tract of newborn humans and Neanderthals: Acoustic capabilities and consequences for the debate on the origin of language. A reply to Lieberman (2007a). *J Phonetics* 35(4):564–581
4. Brokaw CJ, Chow K (eds) (2005) *Printing and book culture in late Imperial China*. University of California Press, Berkeley
5. Carter TF (1955) *The invention of printing in china and its spread westward*. The Ronald Press, New York
6. Chartier R (2007) The printing revolution: a reappraisal. In: Baron SA et al (eds) *Agent of change: print culture studies after Elizabeth L. Eisenstein*. University of Massachusetts Press, Amherst
7. Chow KW (2007) Reinventing Gutenberg: Woodblock and movabletype printing in Europe and China. In: Baron SA et al (eds) *Agent of change: print culture studies after Elizabeth L. Eisenstein*. University of Massachusetts Press, Amherst
8. Coombe RJ (1998) *The cultural life of intellectual properties: authorship, appropriation, and the law*. Duke University Press, Durham
9. Coşgel MM et al (2012) The political economy of mass printing: Legitimacy and technological change in the Ottoman Empire. *J Compar Econ* 40(3):357–371
10. D’Anastasio R et al (2013) Micro-biomechanics of the Kebara 2 Hyoid and its implications for speech in Neanderthals. *PLoS One* 8:12
11. Dator J (1968) Non-verbal, non-numerical models and media in political science. *American Behavioral Scientist*

12. Dator J (1983) The Honolulu electronic town meeting. In: Page W (ed) *The future of politics*. Frances Pinter, London
13. Dator J (2006) Will America ever become a democracy? In: Mannermaa M et al (eds) *Democracy and futures*. Parliament of Finland, Helsinki, pp 61–68
14. Denny JP (1991) Rational thought in oral culture and literate decontextualization. In: Olson DR et al (eds) *Literacy and orality: conference: selected papers*. Cambridge University Press, Cambridge
15. Diamond S (1971) The rule of law versus the order of custom. In: Wolff RP (ed) *The rule of law*. Simon & Schuster, New York
16. Dittmar JE (2011) Information technology and economic change: the impact of the printing press. *Quart J Econ* 126(3):1133–1172
17. Drake C (1993) Fujii Sadakazu. In: Fitzsimmons T et al (eds) *The New poetry of Japan—the 70s and 80s*. Katydid Books, Santa Fe
18. Eisenstein EL (2012) *Divine art, infernal machine: the reception of printing in the West from first impressions to the sense of an ending*. University of Pennsylvania Press, Philadelphia
19. Eisenstein EL (1979) *The printing press as an agent of change: communications and cultural transformations in early-modern Europe 1*. Cambridge University Press, Cambridge
20. Eisenstein EL (2012) *The printing revolution in early modern Europe*. Cambridge University Press, Cambridge
21. Enos RL (1990) Symbols in the prehistoric Middle East: developmental features preceding written communication. In: Enos RL (ed) *Oral and written communication: historical approaches*. Sage, Newbury Park
22. Feldman CF (1991) Oral metalanguage. In: Olson DR, Torrance N (eds) *Literacy and orality: conference: selected papers*. Cambridge University Press, Cambridge
23. Feldtkeller A (2005) Scriptures, forms of practice, and comparative religions. In: Andersen P, Reiter FC (eds) *Scriptures, schools, and forms of practice in Daoism: a Berlin symposium*. Harrassowitz, Wiesbaden
24. Finlayson C (2009) *Neanderthals and modern humans: an ecological and evolutionary perspective*. Cambridge University Press, Cambridge
25. Furniss G, Gunner E (2008) *Power, marginality and African oral literature*. Cambridge University Press, Cambridge
26. Gledhill J (2000) *Power and its disguises: anthropological perspectives on politics*. Pluto Press, London
27. Goody J (1977) *The domestication of the savage mind*. Cambridge University Press, Cambridge
28. Goody J (1987) *The interface between the written and the oral*. Cambridge University Press, Cambridge
29. Goody J (1986) *The logic of writing and the organization of society*. Cambridge University Press, Cambridge
30. Goody J (2000) *The power of the written tradition*. Smithsonian Institution Press, Washington, DC
31. Illich I (1991) A plea for research on lay literacy. In: Olson DR, Torrance N (eds) *Literacy and orality: conference: selected papers*. Cambridge University Press, Cambridge
32. Jack BE (2012) *The woman reader*. Yale University Press, New Haven
33. Johansson S (2005) *Origins of language: constraints on hypotheses*. John Benjamins Publishers, Amsterdam
34. LaFleur WR (1986) *The karma of words: Buddhism and the literary arts in medieval Japan*. University of California Press, Berkeley
35. Le May M (1975) The language capability of Neanderthal man. *Am J Phys Anthropol* 42(1):9–14
36. Lee KM (1997) The inventor of the Korean alphabet. In: Kim-Renaud, Y.-K. (ed.) *The Korean alphabet: its history and structure*. University of Hawaii Press, Honolulu.
37. Lewellen TC (2003) *Political anthropology: an introduction*. Praeger, Westport
38. Lieberman P (1998) *Eve spoke: human language and human evolution*. W.W. Norton, New York

39. Madden AD et al (2006) Information behaviour in pre-literate societies. In: Cole C, Spink A (eds) *New directions in human information behavior*. Springer, Dordrecht
40. Maugham WS (1977) *Collected short stories*. Penguin Books, New York
41. May C, Sell SK (2006) *Intellectual property rights: a critical history*. Lynne Rienner, Boulder
42. Olson DR (1991) Literacy and objectivity: the rise of modern science. In: Olson DR, Torrance N (eds) *Literacy and orality: conference: selected papers*. Cambridge University Press, Cambridge
43. Ong WJ (2007) *Orality and literacy : the technologizing of the world*. Routledge, London
44. P' Bitek O (1968) The song of Lawino. In: Beier U, Moore G (eds) *Modern poetry from Africa*. Penguin Books, New York
45. Ramsey SR (1997) The invention and use of the Korean alphabet. In: Kim-Renaud YK (ed) *The Korean alphabet: its history and structure*. University of Hawaii Press, Honolulu
46. Robinson F (1993) Technology and religious change: Islam and the impact of print. *Mod Asian Stud* 27(1):229–251
47. Roper G (2010) The history of the book in the Muslim world. In: Suarez MF, Woudhuysen HR (eds) *The Oxford companion to the book*. Oxford University Press, Oxford
48. Rose M (1993) *Authors and owners: the invention of copyright*. Harvard University Press, Cambridge
49. Sardar Z (2003) Paper, printing, and compact discs: the making and unmaking of Islamic culture. In: Inayatullah S, Boxwell G (eds) *Postmodernism and other futures: a Ziauddin Sardar Reader*. Pluto Press, London
50. Seth MJ (2006) *A concise history of Korea: from the Neolithic period through the nineteenth century*. Rowman & Littlefield, Lanham
51. Stallybrass P (2007) Little jobs': broadsides and the printing revolution. In: Baron SA et al (eds) *Agent of change: print culture studies after Elizabeth L. Eisenstein*. University of Massachusetts Press, Amherst
52. Talbot MM (2005) *Supreme confidence: the jurisprudence of Justice Antonin Scalia*. The New Yorker
53. Thomas R (1989) *Oral tradition and written record in classical Athens*. Cambridge University Press, Cambridge

**Mutative Media**

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