The Coming Classics Revolution Part II: Synthesis

COLIN WELLS

On December 4, 1935, the *Harvard Crimson* carried a brief story under the headline "Parry, Greek and Latin Professor, Killed Yesterday." The subject of the story, Milman Parry, was a young assistant professor of classics who had been educated at Berkeley and the Sorbonne before winning the position at Harvard several years earlier. His death, the campus newspaper reported, "was the result of an accidental shooting. . . . Parry, visiting his mother-in-law in Los Angeles, was unpacking a suitcase in his hotel bedroom when a revolver mixed in with his clothing went off, mortally wounding him. His wife, who was in the next room, immediately summoned an ambulance, but he died before reaching the hospital."

Parry was only thirty-three years old at the time of his death. In 1930s America such phrasing was commonly used to mask suicide, which left a greater residue of social stigma than it does now. Parry was a romantic figure in life, with a penchant for adventure, a dashing mustache, and an equally dashing writing style. Speculation about his death continues to this day, and the question remains unsettled. One possible motive for suicide—entrenched academic resistance to Parry's revolutionary ideas—has been commonly assumed, yet seems unlikely. After a somewhat rocky start Parry's academic career was in fact flourishing, contrary to the later image that arose of him as a lone genius unrecognized in his time.

The genius part of that image, however, is right on the mark. A couple of decades after Parry's death, the eminent British classicist H. T. Wade-Gery would call him "the Darwin of Homeric scholarship" for the way that Parry's theo-

ries completely overturned previous interpretations of the ancient Greek poet whose epic poems, the *Iliad* and the *Odyssey*, were the first works written down with the alphabet and thus constitute the foundations of Western literature.

Parry journeyed to Yugoslavia in the early 1930s with crates and crates of the newest sound equipment to record *guslari*, the unlettered native bards who sang epic tales dramatizing the long-past deeds of legendary heroes. Parry's goal was to prove his shocking thesis: that the epic poems of Homer were produced not by a writer, brilliant or otherwise, but by an entire culture—a culture, moreover, without writing at all. In two trips to Yugoslavia, Parry recorded thousands of hours of oral verse, demonstrating its detailed similarities with Homer's poems and proving his thesis beyond any doubt.

In short, Parry discovered oral culture and founded the new discipline of orality studies, forever revolutionizing anthropology and much, much more. Parry wasn't just the Darwin of Homeric studies. He was the Darwin of *culture*—or at least, as I like to imagine, he would have been had he lived.

Because orality is just the half of it. Building on Parry's work, his contemporary and fellow classicist Eric Havelock would argue long after Parry's death that only the ancient Greek invention of the alphabet has shifted humanity away from oral culture, unleashing the intellect (including science and other forms of rational inquiry), opening the door to the spread of new ideas, and giving rise to the first clearly articulated abstract thought. In the few centuries between Homer and Plato, Havelock maintained until his death in 1988, the ancient Greeks became the first civilization in the world that can be considered truly literate.

Most controversially, Havelock argued that other writing systems—Egyptian, Hebrew, Arabic, Indian, and Chinese among them—have never been able to equal the alphabet for both learnability and readability. Not only was the alphabet the *first* writing that allowed us to produce new ideas and spread them widely, he asserted, it's the *only* kind of writing that has ever allowed us to do so.

These two brilliant thinkers, both classicists, were born within a year of each other in the early twentieth century. Taken together, their work suggests a radically new picture of cultural evolution that rivals Charles Darwin's theory of biological evolution. But like Darwin's theory, this new picture has been highly controversial and widely misunderstood, especially Eric Havelock's crowning contribution to it. Parry's orality thesis, though bitterly contested at first, has now been accepted as fundamentally valid. Havelock's alphabetic thesis, in contrast, continues to be dismissed or ignored, and Havelock himself has been and still is vilified and condemned in the most vituperative terms. He remains under an ideological cloud not just for classicists but for other academics as well.

Yet Havelock's central arguments have not been truly engaged by his critics, much less refuted. In the first part of this essay, I made the case that Havelock was largely correct and that the alphabetic thesis calls for a revolution in classics. In this second part, I'll suggest that it also calls for a revolution *of* classics. In other words, classicists aren't the only ones who need to reassess what classics means in light of Parry's and Havelock's work. Scholars of other disciplines in the humanities and social sciences do, too.

What follows is an attempt to retell the deceptively familiar story of "Western civilization" from this new perspective. My reboot of the franchise is admittedly idiosyncratic and incomplete, but I'm not necessarily trying for completeness. I'm trying to extend the argument I made earlier into the larger sweep of history, and to show that the study of classics must stand at the center of any adequate understanding of how human culture has evolved globally—and how it is still evolving today.

Darwin had the forceful and tenacious Thomas Henry Huxley, known as "Darwin's Bulldog," to champion his ideas to the public. Nearly three decades after Havelock's death, perhaps it's time Havelock had a bulldog, too.

FIRST IMPRESSIONS

I WORK at an after-school program in my small town, and when the kids come down we usually spend the first hour or so doing homework. Among my group are the third-graders, whom I now understand to be going through a great transition, possibly the biggest of their whole lives. This is my personal view of third grade. I'm not an expert on child development, so take it with a grain of salt. On the other hand, I've spent a lot of time with third-graders. I think it's the most important year in a child's education. It's the year when reading skills are solidified, and children begin to learn how to handle abstract ideas.

This is not a natural process. Third-graders work very, very hard. They don't get nearly enough credit for how hard they work. But as they'll be the first to admit, to get them to work, you have to push them, almost all of them, to some degree. Some more, some less, but virtually no one learns to read without at least some pushing (that's what homework is, after all).

Over the past decade or so, seeing the transformation that comes as a result of all of this effort, I have begun to grasp just how deeply our educational system shapes the ways we think about the world. So deeply, I believe, that we all take that sort of thinking for granted. It's invisible. We seem to tacitly assume, somehow, that part of being "human" means juggling abstractions—good and evil, right and wrong, fantasy and reality—and that thinking abstractly is a sign of high intelligence and good thinking (or, conversely, that not thinking abstractly is a sign of low intelligence and bad thinking). It's not *our* way of thinking, it's just thinking, period. Thinking *is* abstraction. Or so we think.

In contrast with all the blood, toil, tears, and sweat over homework, you never have to push children to tell stories. Unlike reading and writing, stories and storytelling undeniably are a natural part of being human. Anthropology tells us that oral cultures the world over use stories to transmit cultural information, and those stories are characteristically

about agents that do things: people, heroes, gods, monsters, demons, personified aspects of nature, even, but not abstract ideas as such.

Stories are easy to remember, and in cultures without writing everything is geared toward memory. There are deep connections between memory, story, and concrete thinking, which helps explain, for example, the personification of natural phenomena in oral mythologies. Neuroscience suggests that the capacity to construct narratives is hardwired into our brains, and the usefulness of stories is perhaps why, as with sugar and fat, we evolved to love them so much. So it's not that people in oral cultures can't think abstractly, but rather that they put little stock in doing so, because clearly defined abstract concepts aren't much use in telling a story. "Handsomeness" is slippery and hard to hold. "The handsome Prince" is instantly grasped. Oral cultures don't have dictionaries, or need them, for the meanings of stories are plain to the listener, though always implicit not explicit. Its reliance on implicit meaning can make oral culture feel "primitive" to the literate, even when it involves sophisticated layers of effects. In the words of Harvard oralist David Bynum, "The story and its constituent motifs are themselves an elaborate, prefabricated system of general meanings ready-to-hand for the 'primitive philosopher,' who need only hit upon interesting analogies between fable and experience to be a thumping success. Philosophy of this kind needs little or no abstract reasoning to create prodigies of symbolism."[1]

Even in literate cultures if you really want to remember something you weave a story around it, as those who construct elaborate "memory palaces" do. We read novels for pleasure, and nonfiction publishing retains a sharp divide between "academic" books, which are supposed to be dry and abstract, and "popular" or trade books, which are expected to entertain readers by telling a story. Such practices, I suspect, are distant echoes of the original distinction between oral and literate patterns of thought. Stories are fun. Ideas are heavy going.

Narratives, of course, are expressed through language, which is also part of the "natural" human tool kit. All cultures have language, and children learn to talk on their own, needing only to hear others talking in order to do so. Their young brains are language sponges. Not so with reading and writing, which are far from universal in human culture and are only acquired through long discipline and hard work. Scholars estimate that only about six percent of the thousands of languages spoken in human history have ever been written down.

Writing is also a relative newcomer. For most of human history, it hasn't existed at all. As archeologist Denise Schmandt-Besserat has recently shown, the earliest writing emerged from shaped tokens of clay that were widely used in food storage and craft industry throughout the Middle East for thousands of years starting around 8,000 BC, about the time that people began farming, which makes sense. Eventually, in Mesopotamia, the tokens evolved into symbols impressed into clay. At first used for counting, like the tokens from which they evolved, these symbols were the first writing. In ancient Sumer, they became the basis of cuneiform, which was used for writing first word-signs and then also syllable-signs. (Cuneiform itself is not a writing system, but refers to the manual technique of impressing signs into clay using a wedge-shaped stylus; Latin *cuneus* = wedge.)

Since not all syllables can be clearly and unambiguously represented—in most languages, there are simply too many possibilities—to read syllabic writing required knowing many dozens of signs combined with at least some guesswork. And because the earliest writing was highly limited in scope these cultures remained largely oral, though in some of them cultural and political authority tended to concentrate in the hands of priestly or scribal elites.

OLD MEN WITH BEARDS

THEN, AROUND the year 1,000 BC, a Semitic people known as the Phoenicians achieved a great breakthrough by paring the

previous syllabaries down to a manageable 22–30 consonants. Although Phoenician writing had signs for consonants, consonants are not generally pronounced by themselves. *Consonant* means "sounding with," and what they are sounded with is *vowels*, which comes from the Latin word for voice, *vox*.

The Phoenician innovation spread remarkably widely. It was taken up by other Semitic peoples and became the basis of the Hebrews' and later the Arabs' writing systems, among many others. As I discussed in more detail in Part I, Semitic writing like Phoenician and Hebrew (and later, Arabic) could get by without specifying vowels because root meanings in Semitic languages are based on clusters of consonants, so that words with similar consonant clusters are related in meaning.

Reducing the number of signs made writing much easier, streamlining the process dramatically. But it didn't change the basic process of reading, which still involved guesswork, even more so than before. The gain in manageability was counterbalanced by the loss in precision. In order to read such texts, you first have to know what they're saying. So it helps a lot to have some familiarity with the message, as in "Ll mn r crtd ql" or "Nc pn tm thr ws lttl prncss." Having recognized the message, you decipher the writing by supplying the missing vowel sounds.

As a result of its difficulty, early writing was used almost exclusively as an aid to memory, always the main focus of oral culture. The few exceptions are brief and predictable in expression, like stylized praise or denigration of a student (not too surprisingly, Mesopotamian scribes have left a scrappy written record on baked clay of their workaday ups and downs). Such writings are rendered recognizable to readers not only by simple, conventional expression but also by being entirely monolithic—exaggerated praise unalloyed with even the slightest criticism, for example, or the reverse. But mostly it's tax records, storage records, bills of lading, votary gifts, monumental commemoration, proverbs, myths

and legends—one way or another pre-alphabetic writing was a nightlight, as opposed to a searchlight: it helped us to navigate familiar territory, rather than to explore strange new landscapes. This is the salient—and rather obvious—shared feature of all early writing from Hieroglyphics to Hebrew, from cuneiform to Linear B, though as far as I have been able to tell most academic scholars of writing pass it over completely. I often wonder whether they fail to see it, or whether they see it and fail to remark on it. Either way, the failure speaks volumes. It should be front and center.

Instead we're told over and over how all kinds of early writing allowed every passing thought to be fully expressed, and how each culture had the kind of writing that worked best for it, whatever that means exactly. This anodyne shibboleth, virtually ubiquitous in the herd scholarship of the ultracorrect 1980s and 1990s, is still common. Yet how could it be demonstrated? Or falsified? Or even understood?[2]

Two big things are conveniently left out of this happy picture: the dynamics of reading, and the actual written evidence. Yes, theoretically you could write down your every passing thought in Akkadian cuneiform, if you had long enough. The problem is that I will only be able to read what you've written if it communicates language and thoughts that I'm likely to have myself. So what we see in the actual evidence is the mundane or the conventional, and, in the relatively small number of "literary" texts, stories such as the Epic of Gilgamesh that were already familiar in the oral culture and were told in simple language with simple sentence structure. Similarly, in the largest surviving collection of ancient consonantal writing, the Hebrew Bible or Old Testament, along with the culturally familiar material and the simple sentence structure we also see the characteristic technique of repeating the same basic idea, as if writing it down once couldn't be relied upon to get the idea across. Biblical scholars call this "parallelism." (*Cursèd shall ye be when ye come in, and cursèd shall ye be when ye go out. Cursèd shall ye be in the morning, and cursèd shall ye be in*

the . . . can you guess the next word?) Consonantal writing did nothing to change the dynamic of reading: you had to understand it before you could read it.

Nor did consonantal writing become broadly based enough to wrest literacy from the scribal and priestly elites. Indeed, it had the opposite effect. Group consensus was now even more necessary in order to resolve unavoidable ambiguities in the texts, since one passage could have several possible readings. This tended to strengthen the grip of scribal or priestly elites—in practice, old men with beards—on cultural authority in cultures that used consonantal writing.

THE ATOMIC THEORY OF LANGUAGE

GREEK AND PHOENICIAN traders were mingling across a wide area from Cyprus to southern Italy by about the year 800 BC, when Greeks began establishing their first overseas colonies. The Greek alphabet, most likely invented shortly afterward, is based on Phoenician writing but with a revolutionary twist: the addition of vowels. Surprisingly, the alphabet was invented only once. Every alphabet in the world is based on the Greek model.

What made the alphabet truly revolutionary was not so much the writing part as the reading part: it literally reversed the old way of reading. Uniquely among all the world's writing systems, the alphabet allowed readers to read the message phonetically first, easily and automatically, and then go on to figure out what it meant. Finally, you didn't have to figure it out first!

By reversing the old way of reading and eliminating guesswork, the alphabet gave us room to figure out the meaning of strange and complicated written messages for the first time, thereby opening the door to the spread of new ideas and unleashing humanity's intellectual potential. This is why, almost from the beginning, alphabetic writing has been used to produce original literature, unlike all previous scripts. In other words, the alphabet has been a searchlight that lets us

explore new territory, rather than a nightlight that limits us to familiar horizons (though alphabetic readers, too, love the old familiar stories, a holdover from our "natural" state of orality, which we never really shed completely). Ever so slowly and haltingly, the balance of human culture begins to shift its center of gravity—from memory to novelty, from preservation to innovation. This is the "alphabetic thesis," which has been put forward over the past half-century by scholars such as classicist Eric Havelock and social linguist Walter Ong, whose 1982 book *Orality and Literacy* helped spread Havelock's ideas to the wider and often reflexively hostile academic world.

Consonantal writing, Havelock argued, works with the consonantal roots of Semitic languages as long as the messages are conventional or familiar. But in Indo-European languages like Greek (or French, or Russian, or English) roots can have the same consonants in the same order and be completely unrelated. *Bid* is not related to *bud*, and neither is related to *bad* or *bed*. For Indo-European languages, consonantal writing alone would create an incomprehensible mess with any but the simplest, most familiar messages. There would be attempts by speakers of other Indo-European languages to address this problem, such as the cuneiform script invented for Old Persian, perhaps by the Persian King Darius I himself in the sixth century BC, or the Brahmi script developed for Sanskrit a few centuries later. Persian cuneiform is often described as semi-alphabetic, since among its forty-one signs are three vowels, *a*, *i*, and *u*, although other signs stood for consonants plus these vowel sounds. Brahmi script indicated vowels by means of various short strokes added to the syllabic signs, resulting in a large number of complicated signs.

The great advantage of Phoenician writing was its manageability. Indeed, Havelock cited research suggesting that twenty to thirty letters is the optimal number for brains like ours that evolved to handle spoken, not written, language. To retain this advantage for an Indo-European language, it

was necessary to put vowels on an equal footing by giving them their own signs—in other words, to separate consonants and vowels conceptually for the first time. It was even more necessary for Greek than it might have been for other related languages, since Greek is so heavily inflected, with not just root meanings but sophisticated verb forms, case endings, and much else besides, all reliant on subtle and complex arrangements of vowel sounds. Some common words in Greek are composed of vowel sounds alone—*aei*, "always," comes to mind.

So the alphabet began with a single act of analysis. This is wonderfully appropriate given the Greeks' almost immediate fascination with that same pursuit, and given how the alphabet itself would assist them in it.

Tablets, pots, and figurines made of stone, clay, and metal survive today, little artifacts from the eighth century BC that have the earliest examples of alphabetic writing scratched or chiseled into them. Some record offerings dedicated to a particular god, like a bronze statuette from Thebes inscribed with a prayer to Apollo: *Mantiklos dedicated me to the far-darter of the silver bow from the tithe. / Phoebus, do give something gracious back in return.* "Far-darter of the silver bow" and "Phoebus" are common epithets of the god Apollo in epic verse; Mantiklos, the man making the offering, is one of the earliest individuals whose name we can read without guessing and who was not a legendary hero, a ruler, a palace bureaucrat, or a prophet. Mantiklos was a regular person, in other words. That little slice of immortality seems like a gracious return indeed, if not necessarily the sort of thing he had in mind, exactly.

Other remains mark similarly humble moments in daily life, as in the case of the famous Dipylon wine jug found in Athens, which praises the winner of a dancing contest who received the modest container as a prize. *Whoever now of all the dancers frolics most playfully* . . . begins the line scratched amateurishly into the glaze above the geometric designs which, according to the scholars who study such

things, show that the jug itself was made around 740 BC. The rest is not easily legible, but it clearly ran something like . . . *gets this wine jug as a prize*. If the writing was scratched into the glaze shortly after the pot was fired, this jug could be the oldest surviving "long" example of alphabetic writing (the earliest securely dated evidence, a pot sherd containing just a few letters that was discovered in the 1990s, is from about 775 BC). But the writing might have been done years or even decades after the vessel itself was made. Another piece of pottery, a drinking cup from Ischia, an island off the coast of southern Italy where Greeks had established their first overseas trading outpost, proudly proclaims: *Nestor's good-drinking cup I am: / He who drinks from this cup straightway him / Desire shall grip even of fair-garlanded Aphrodite.* This alludes to famous lines from Homer's *Iliad*, in which the Greek sage Nestor's drinking cup is described as seizing men with the desire for comradely talk, with words flowing freely between them. Our Nestor, however, apparently hopes to get something else going. As with the Dipylon jug, the words were scratched into the finished cup sometime after firing.

So although the date of the alphabet's invention is still hotly contested, with some scholars maintaining that the invention took place as far back as 1,400 BC, there is no archeological evidence of any alphabetic writing before around the year 775 BC, and no evidence of full sentences for at least several decades after that. Scholars also argue about the purpose of the invention. The two main strands of explanation propose that the new writing was invented either for use in trade, or for writing down epic verse like that of Homer.

The purpose, however, is far less important than the consequences. If storytelling remains the primary way of communicating information orally, alphabetic writers now have the option of organizing their discourses in other ways. Of course, writers still tell stories. But expository prose—an entirely new mode of writing that focuses on well-defined

topics, articulates new ideas and new information, utilizes complex sentences with subordinate clauses that delicately arrange or qualify the ideas and information, and takes its structure from thematic or logical considerations rather than chronology alone—appears first in Greece starting around 600 BC and gradually comes to dominate alphabetically literate discourse (the oldest surviving book-length work of prose, the *Histories* of Herodotus, dates from about 450 BC). You simply don't find sentences like that last one being uttered in oral cultures, where vocabularies are much smaller and syntax much simpler.

In ancient Greece, as Havelock explained in his seminal 1963 book *Preface to Plato*, this led to the first abstract ideas in writing and also to the first intellectuals—those who deal in abstract ideas. Among those ideas are the now familiar concepts we know as reason (*logos*, originally "an accounting" in Greek) and reality (*ousia* or *ta onta*, "being" or "the things that are" in Greek), which became the basis of science and other forms of rational inquiry. Others included the distinction between literal and metaphoric meaning, which was articulated for the first time by authors such as Plato and Aristotle.

The rise of abstraction as Havelock outlined it has been a bit of a tough chew for more recent scholars, who seem unable to get their heads around any model that transcends fuzzy osmosis: "abstract" letters are vaguely assumed to promote abstract thinking, and so the scholarly arguments invariably come down to whose letters are more "abstract."[3] But Havelock suggested specific mechanisms by which abstraction arose as human cognition was freed from the confines of narrative. Orality demands memory, memory demands story, and story demands characters who do things. With its unique capacity for novelty, the alphabet broke this chain, liberating us from the agendas of memory. The Greeks' hackneyed progression from "myth" to "history" (more accurately reformulated in recent years as from *mythos* to *logos*), like their vaunted "invention of the indi-

vidual," may thus be perceived to have come out of a deeper shift, as an oral culture driven by collective tradition transformed itself into an alphabetic one driven, in part at least, by novelty, originality, and abstraction. I sketched this process a bit more fully in Part I, including quotations from Havelock's writing.

The shift from memory to novelty was at least as much linguistic as it was intellectual, Havelock insisted, as the Greek language expanded in ways detectable in the extant sources. Leading examples are the uses of the definite article to indicate abstraction (as in "the good") and the copula to indicate conceptual linkage (as in "truth is beauty"). Such usages, which English has inherited, are characteristic of literacy but not of orality. They went with a general shift in focus from the concrete to the abstract, from narrative to exposition, from personified agents to impersonal topics, from what things do to what things are. Havelock began this exciting work, but much remains to be done.

This same movement, I suggested further, is reflected also in new Greek conceptions of a split between matter and spirit, of natural versus supernatural causation, of an immaterial soul, of an abstract and unitary godhead leading to monotheism—like the soul, a Greek and not a Jewish invention—and, ultimately, to religious "faith" in the form of Christianity, whose emphases on personal belief and the supernatural were also radically new and emerged only within an alphabetic milieu.

Heady stuff, yes, but as it unleashed the intellect, the soul, and God, the alphabet also democratized literacy, allowing humanity's first readership to emerge and diffusing cultural authority beyond a scribal or priestly elite. This diffusion in turn exerted further pressure on the language, creating a feedback loop of expansion and innovation that culminated in the language we know as "classical Greek." A critical threshold was crossed around the late fifth century BC, as education, first in Plato's Athens and then throughout the Greek and Hellenistic worlds, became primarily about learn-

ing to read. Writers are qualitatively different from priests, scribes, prophets, or palace bureaucrats, but writers need readers in a deeper sense than is commonly understood: a readership expands spoken language by taking up written innovation, Havelock suggested, so that even illiterate speakers will reproduce literate patterns of language and thought. A scribal, priestly, or bureaucratic elite lacks the traction to expand language in this way. Greco-Roman civilization, Havelock said, was the first "to be founded upon the activity of the common reader."[4]

Now, all this may go down a treat with Western cultural triumphalists, but a more liberal sensibility can tend to rebel at such claims. Mine certainly has, and from time to time I still have to force myself to recall the evidence all over again, rather than giving in to my original, and in retrospect naïve, gut feeling of what's fair and proper. We'd like to think of all writing as the same, perhaps—but the evidence clearly shows that this is not so.

As literate people, many of us automatically assume that literacy is linked to intelligence, and with that unquestioned assumption firmly in place some of us, at least, then shy away from the thought that one national or ethnic population might be more intelligent than another. I would say that rejecting this thought is not just politically correct, but factually so. The problem lies not in that egalitarian impulse, but in the prior assumption of a direct link between literacy and intelligence, which—like Aristotle's common-sense assertion that heavier objects fall faster than lighter ones—is almost universal yet is also easily refuted once the trouble is taken to check it against reality. Unfortunately, this basic mistake is compounded by the fact that those studying writing and literacy, professors mostly, are themselves highly literate, and thus especially prone to flattering themselves with what Havelock himself identified as the "literacy bias" linking literacy and intelligence. Hence the common accusations of "ethnocentrism" or "Hellenocentrism" or even "anti-Semitism" against Eric Havelock—for example, one leading

authority accuses Havelock of suggesting that the "Semitic mind" was "too dull" to think abstractly. But not only does Havelock not say any such thing, he argues explicitly and strenuously against such interpretations.[5]

It's as if the professors making these accusations didn't take the trouble to read Havelock's work very closely but instead responded with gut-level revulsion to what they assumed he must have been saying. And it is true that scholars of earlier generations commonly made or implied such connections between the alphabet and mental superiority. How easy to conclude that Havelock was simply reviving these old chauvinistic assessments. But Havelock's thesis is more radical than that. It makes different claims and rests on different arguments from previous interpretations, and I believe that on questions of literacy the academic world—the world at large, in fact—urgently needs a Galileo-style reality check.

This does not mean we must abandon our aims of fairness and morality. Quite the opposite. True morality lies in perceiving the evidence, not in ignoring it because we find it challenging. As the historian of science and intersex advocate Alice Dreger writes in a very similar context, "I have come to understand that the pursuit of evidence is probably the most pressing moral imperative of our time. All of our work as scholars, activists, and citizens of democracy depends on it. Yet it seems that, especially where questions of human identity are concerned, we've built up a system in which scientists and social justice advocates are fighting in ways that poison the soil on which both depend."[6] Like science, history too depends on evidence, and it's even more susceptible to such identity-based interference. Writing systems (and the languages they are generally, if wrongly, perceived as inseparable from) are at least as deeply intertwined with identity as gender and sex roles, but nothing less than the truth is at stake—and, as I'll try to show, quite a bit more as well.

As Walter Ong perceived, there were two great classicists in the twentieth century, Milman Parry and Eric Havelock, and their work goes together. Neither was perfect, of course;

peripheral aspects of both their theories have been contested and in some cases refuted. But their central points stand, and together they throw an entirely new light on the significance of the ancient Greeks.

For just as Parry and his continuator Albert Lord discovered the principles of oral composition by examining Homer, so did Havelock's complementary work discover the principles of alphabetic literacy by examining Homer's successors. It's not a coincidence that the principles of orality came from an examination of Homer, rather than (for example) from the consonantal texts of the Hebrew Bible, which Havelock suggested are blurry snapshots of more nuanced "oral originals." Like a high-resolution camera, the alphabet captured the fine details.[7] So without the alphabet, we would have neither Homer, the very first alphabetic text and one revealing (because still closely patterned on) oral material in the service of memory, nor his successors, writers like Hesiod and Archilochus who were humanity's first pioneers on the frontier of original literature.

As alphabetic literacy takes hold first in Ionia, the Greek coast of what is now Turkey, the earliest science, philosophy, and history soon follow. Just to take a single example of how this could work, for his radical notion that the earth is an object floating in space, one Ionian writer, Anaximander, has been called "the first scientist" (by physicist Carlo Rovelli, who understands the significance of a new idea better than many scholars in the humanities). Anaximander came up with this idea around 600 BC, about two centuries after the invention of the alphabet. That may seem like a long time, but consider this: every culture untouched by the Greek literary tradition that we know of *without exception* has conceived of the world as a huge plate supported by various divinely-emplaced structures—columns, pillars, turtles, whatever. All peoples have studied the sky, yet two thousand-plus years of Chinese "science," for example, never dislodged the oral conception of a flat earth with heavens above. Ditto (*mutatis mutandis*) Egyptian, Babylonian, Mayan.[8]

Moreover, as far as we know, Anaximander is the only person who ever had the idea of the earth as an object floating in space on his own. You and I sure didn't. We have it now because Anaximander wrote it down with the new alphabet and passed it on for further alphabetic study and improvement by successors such as Aristotle, who showed that the floating earth is a sphere, Aristarchus, who figured out that it spins on its axis and revolves around the sun, and Eratosthenes, who ascertained its circumference. That includes, incidentally, the concept of "space" itself. If anyone else ever had these ideas independently, they left no record. Such is the power of the alphabet. Yet its very pervasiveness today makes it nearly invisible to us.

Shortly after the founding of Greek science and philosophy, Greeks in Ionia fall under the sway of the mighty Persian Empire.

THE BEGINNING OF THE END

PERSIA, CLASSICAL GREECE'S main antagonist, also plays a role in our synthesis. Oral cultures share a common, holistic world view. The world is a fundamentally ordered place, but its divinely sanctioned order can be threatened by the forces of chaos (in mythology often depicted as serpent monsters). Among ancient civilizations, order was defended by heroic warrior-gods. From the Norse Thor to the Vedic Indra, Indo-European warrior-gods shared features that reflect a common ancestry, and Semitic cultures in the Middle East possess a similar set of "combat myths."

For thousands of years, this was the basic outlook of cultures without writing: we live in a comfortable world of order, with unsettling chaos posing a threat from outside. It's still the outlook of the few oral cultures remaining today. It is not, however, our outlook, at least not historically. Its impact on how we perceive the world has indeed been the alphabet's broadest legacy—though not always necessarily in terms Anaximander would recognize.

Zoroastrianism, the world's first "apocalyptic" belief system, rises in Persia starting perhaps around 1,300 BC. The prophet Zoroaster adapts the combat myth common to oral cultures, moralizing order and chaos into good and evil powers (dualism) and incorporating the novel idea that the world, rather than being static, is moving toward a great final confrontation in which the good powers in the world will finally repel the invading evil powers.

The concepts that Judaism and Christianity will later take from Zoroastrianism include salvation, a savior figure, heaven, hell, the immortal soul, an afterlife, the devil, bodily resurrection, final judgment, a last battle, and eschatological transformation of the world.

But there is one big difference. Zoroastrianism at this time is an oral tradition, not a written one, and it does not present these "concepts" as abstract ideas. Instead, as in other oral traditions, they come to us as concrete features of stories or as agents who do things in stories. We, the alphabetically literate beholders of them, are the ones who identify them as "concepts." (Zoroastrianism's sacred text, the Avesta, was passed down through generations of priests by rigorous memorization; scholars believe it was not written down until the sixth century AD.)

And like other oral traditions, Zoroastrianism doesn't draw a clear boundary between natural and supernatural, matter and spirit—all conflict between good and evil powers, and indeed all human and divine activity, takes place exclusively in this world. The good powers are represented by particular plants and animals (cattle and dogs, for example) and so are the evil ones (wolves and snakes among them, not surprisingly). In taking up the concept of the End Times, first the Jews and then the Christians will each radically transform it in their own ways.

Eventually, the Persians are incorporated into the Assyrian and Babylonian empires. And, in the sixth century BC, so are the Jews.

CAPTIVITY AND REVENGE

THE PERSIAN STORY continues with Babylonian Captivity of the Jews and the rise of the Persian empire under Cyrus the Great. Persian Zoroastrianism influences the anonymous Hebrew prophet known only as Second Isaiah, who prophesies the downfall of Babylon at the hands of Cyrus. Second Isaiah's fervent message fuses religious exclusivity and awesome divine power into a cosmic revenge fantasy against the enemies of Israel. Like Zoroaster, Second Isaiah predicts a great future victory in which the world will be utterly transformed.

The difference is that in Zoroastrianism, as in oral tradition generally, the world is controlled by the forces of good and invaded by the forces of evil. Second Isaiah, seeking to explain a situation in which the forces of good have seemingly been totally defeated, reverses the polarity of this vision, if temporarily. The world is under the control of the evil power and the forces of good are the invader. In our global evolutionary story, this reversal of polarity represents a small but momentous cultural "mutation."

Plainly sensing this significance yet not quite grasping its true nature, some scholars (such as Norman Cohn, whose books about the history of apocalypticism I have relied upon in my synthesis, though some of my conclusions about it are different from his) have presented Second Isaiah as "the first monotheist." Christians have always sensed it, too, which is why the verses of Second Isaiah have likewise been taken up as preparing the way for Christ. Messiahs aside, if Second Isaiah really was pushing monotheism, he certainly buries the lead. "No god beside me" can be taken as *implying* an incipient monotheism, or at least it can if we have a strong motive to take it that way. But, as others have observed, for a supposedly revolutionary program, one or two such ambiguous phrases in reams and reams of text seems a little spotty.

My point is not that Second Isaiah could not have entertained the notion of a unitary godhead, but that, even if he did, his writing system did not allow him to articulate it

explicitly in a way that readers could clearly grasp. Mainstream Jewish sources of the same period acknowledge other gods by name. Significantly, Second Isaiah is the only prophet *later* included in the Hebrew Bible whose name we don't know. When circumstances changed to give his message traction—in an alphabetic environment that had already explicitly articulated and broadcast the idea of a unitary godhead—his prophecies were lumped in with Isaiah's, which is why, when he was identified as a separate author in modern times, he was stuck with the name "Second Isaiah."

Those who still insist on tracing monotheistic faith to the Hebrew Bible (mostly Christian and Muslim believers eager to validate the timeless antiquity of their own traditions) are looking at the ancient Hebrews through faith-tinted goggles. These "faith goggles" have remained firmly strapped on in our own modern times. Even avowedly skeptical observers find them very hard to remove, and they end up coloring our entire perspective on religion. We have books about "the faith instinct," and we commonly refer to other religious traditions such as Hinduism and Buddhism as "faiths." Such imprecise usage notwithstanding, faith and religion are not the same thing, and faith has not been emphasized or even articulated in most religious traditions. Nor is it articulated in the Hebrew Bible. After thousands of years, let's recognize Second Isaiah for what he was: a prophet speaking in the voice of one particular divinity, not a theologian making explicit statements about the divine.

Cyrus does indeed defeat the Babylonians and free the Jews. However, when other aspects of Second Isaiah's prophecy fail to materialize, he is ignored by the Jewish mainstream. Cyrus does not destroy Babylon, Jews do not flock back to Israel, and Israel remains under Persian rule. Second Isaiah's message seems poised to fizzle out.

Meanwhile, Cyrus conquers Greek Ionia, and when the Ionians revolt the Persians crush the nascent Ionian enlightenment. A few years later they invade mainland Greece itself.

REVENGE FOR THE INJURED GODS

CONFLICT BETWEEN Greece and Persia brings us back to the Greek world, where early philosophy and science struggle to gain a foothold as Persia looms on the Greek horizon. For the first time in human history, and as a direct result of the intellectual possibilities opened by alphabetic writing, a firm conceptual boundary is erected between the natural and the supernatural—a barrier that represents the most consequential act in the history of human thought (or, in evolutionary terms, another cultural "mutation" that, as we'll see, will eventually combine with the one described in the last section).

The innovative idea that nature follows regular laws has a huge psychological impact, especially on the old holistic gods of nature, ushering in a radically new tradition of religious skepticism. As the first materialistic philosophy emerges in alphabetic writing, the sharp edge of nature's regularity forever splits the old holistic world in which matter and spirit are intertwined.

The split between matter and spirit, between "seen" and "unseen," will haunt the West forever after. Cultural conflict is taken to a new level as abstract concepts such as piety, natural causation and—its inevitable companion—supernatural causation begin to intertwine themselves with identity. Anxiety over skeptical inquiry soon reveals itself in the infamous Diopeithes Decree, which outlaws astronomy and religious skepticism in Athens soon after the arrival of the first philosophers there in the mid-5th century BC. The anxiety is easy for us to dismiss, but the gods uphold human society and protect the state. Without them, there can be only violence and chaos. A couple of decades later, Socrates is portrayed as a dangerous radical in the Athenian comedy *The Clouds*, which ends with him being whipped off the stage to the cry, "Revenge for the injured gods!"

The key to the new literacy, Havelock repeatedly emphasized, is an education revolution, as literacy is taken up by

the educated aristocracy. Elementary education, now and forever, becomes about learning to read. The old oral education—rhythm-based (to aid memorization) and centered on music, dance, and poetry—is replaced by a text-based curriculum with the new art of rhetoric (a hybrid of oral and literate) as its centerpiece. In Athens, the heir to the Ionian enlightenment, this shift happens during the lifetime of Plato.

Plato undertakes a sustained effort to systematize the two emergent features of alphabetic literacy that will come to characterize intellectual activity (both absent, or largely so, in cultures without writing): definition and abstraction. His student Aristotle focuses instead on systematizing the realities of the here-and-now, from the cosmos and nature to humanity in its many aspects.

This is also the first time that monotheistic ideas are articulated, that explicit skepticism of the supernatural is widely circulated, that belief becomes the ground of cultural conflict, that anti-intellectualism shows itself, and that miracles begin to exercise their seductive power on the human imagination. All these things are connected. They seem normal to us, but they happened first in classical Greece, and they happened because of the alphabet.

Science, by its very existence, presents a terrifying glimpse of a world without any divine or supernatural agency whatsoever. Proof is not the issue—the mere possibility is enough to create anxiety, antagonism, and, ultimately, a collective "return of the repressed" in the form of triumphalist supernaturalism. In organizing and managing these responses, faith will be religion's answer to science's challenge.

THE UNITARY GOD

IN THE NEWLY LITERATE Greek world, the recognition of what would eventually come to be called the laws of nature pushes people toward the idea of a single god who is in charge of everything. But the materialistic conception of "nature" leaves no room for the supernatural. This inner tension has

always plagued "the god of the philosophers," from ancient Greek times to the Watchmaker God of Enlightenment Deists such as Thomas Jefferson. The rationalistic conception of the divine is just too dry to satisfy our human thirst for objects of worship with real power in the world.

The Jews, exposed to Greek culture since the conquests of Alexander the Great, are part of the trend in the Greek world toward both monotheism and a rising fascination with the supernatural. Judaism is the crucible in which Greek and Persian ideas blend together. Because of its unique scriptural basis, Judaism already possesses an abstract dimension (no idolatry) to its conception of the divine that inoculated it against the injurious impact of alphabetic literacy. This may be why Judaism survived intact from pre-alphabetic times when paganism did not—although it, too, had to make significant accommodations and adapt to the new alphabetic world. As in the larger Greek world, temples and sacrifices would give way to the new model of group assembly centered on prayer that is associated with exclusive monotheism.

A MATCH MADE IN HEAVEN

FROM THE TIME OF Plato on, as people react to the psychological threat posed by nature's regularity, miracles assume a bigger and bigger place in the popular consciousness. By Jesus' day, self-proclaimed miracle-workers are common among both Greeks and Jews, and numerous mystery religions compete with each other for wonder-working credibility.

In the Jewish world, this rising supernaturalism blends with, and revivifies, the apocalyptic message that earlier seemed on the brink of dying out. Woo-woo meets End Times—it turns out to be a perfect match. In an almost point by point response to Greek science, Jewish sources such as *1 Enoch* and *Jubilees* depict a world once ordered by divine will (not natural laws) that has now fallen under the sway of demonic forces (pagan gods). Apocalypticism finds fertile ground as Jews contend with both hostile Hellenistic monarchs and the secular,

rationalistic philosophy against which the authors of *1 Enoch* and *Jubilees* are reacting. But, though influenced by it, mainstream Judaism never fully embraces the apocalyptic message. When the Hebrew canon is formalized by the end of the first century AD, *1 Enoch* and *Jubilees* are not in it (though they remain highly popular with early Christian writers).

The Pharisees are the perfect illustration of this process (the name may come from *Pharsee*, "Persian," which is what Zoroastrians who settled in India are still called): the rise of rabbinic Judaism reflects accommodation to and reaction against the Greek environment, along with the Zoroastrian influence. The Mishnah introduces theological dogma, a Greek preoccupation completely absent from the Hebrew Bible, into Judaism for the first time. It asserts that three kinds of people will have no share in "the world to come": those who deny the resurrection of the dead, those who deny the divinity of the Torah, and, significantly, Epicureans—followers of the materialist teachings of the Greek philosopher Epicurus, an atomist.

THE BIRTH OF ANGST

RISING SUPERNATURALISM is only one symptom of the tremendous cultural anxiety evoked by the collapse of oral culture and the advent of the alphabetic mind. Ancient sources also reveal that broader sense of anxiety and alienation with which literate and partly literate humanity has struggled ever since. Eric Havelock's alphabetic thesis thus explains the innocent, pleasure-loving side that we have always sensed in the ancient pagan world, which Rousseau romanticized as "the noble savage" (oral patterns in Western European literature were extinguished only as late as the Romantic period, which promptly glorified them out of nostalgia).

Havelock described the alphabetic origins of "those slight hypocrisies without which our civilization does not seem to function." In oral culture, he observed, "there was no warfare between body and spirit. The pull between the pleasur-

able inclination to act in one way and the unpleasant duty to act in another way was relatively unknown. All this begins to change perhaps by the time the fourth century was underway. . . . A psychological condition long encouraged by a purely oral culture was becoming no longer possible."[9]

Ultimately, alphabetic literacy introduces an unprecedented and unparalleled element of self-consciousness into what we believe about the world, allowing us to identify beliefs as beliefs for the first time. Belief, of course, is an abstract idea, so this self-consciousness was part of the rise of abstraction—but, as it turns out, a particularly touchy part, given human psychology. The Greeks were not the first to try to explain things, but they were the first to explain *how* they were explaining them—and to examine precisely how explanation results in belief.

THE REVENGE OF THE UNSEEN

THE CONCEPT OF FAITH evolved to assuage anxieties caused by the alphabet's volcanic disruption of the old oral order. "Comfort ye, my people, saith the Lord." But comfort can have a dark side. Revenge psychology is central to the emerging concept of religious faith in Late Antiquity. Oral cultures, whether in ancient combat mythology, Zoroastrian apocalypticism, or contemporary tribal contexts, typically envision a world of order in which chaos is the invader. For oral cultures, the world is comfortable, although it needs to be defended against chaotic forces that threaten it. As we've seen, early Jewish apocalypticists starting with Second Isaiah reversed the polarity of this vision, if temporarily: YHWH has allowed evil forces to take over—but only to show the enemies of the Jews just how mighty he really is underneath an apparent record of weakness and total defeat. The world, in other words, is uncomfortable, and comfort can only be restored by annihilating the enemies of the Jews.

With the advent of alphabetically literate skeptical inquiry, it is religion itself that grows uncomfortable. Jesus and Paul,

modern scholarship affirms, both came out of the Jewish apocalyptic tradition. While Jewish apocalypticism incorporated grandiose supernatural elements into its revenge stories, it always remained fixed on the Jews' worldly travails. Not for nothing does Christian faith emerge from another story of worldly defeat and humiliation. But owing to Paul's genius, Christianity picks up on the revenge impulse in a totally unexpected way. If the old apocalypse targets the Jews' worldly political enemies, the new apocalypse targets worldly thinking itself, as embodied in the skeptic, the unbeliever, and the Doubting Thomas.

For a clear contemporary example, think of Darwin and the intense animosity he and his ideas have inspired, particularly among rapture-ready true believers of all stripes. Today, we are quite used to secularism being "public enemy number one" for enraged Christian, Muslim, and Jewish fundamentalists alike. Little do we suspect that this same impulse helped spark the very birth of faith itself.

Paul solemnizes the marriage of supernaturalism and apocalypticism and repackages Christianity in comprehensively supernatural terms that perfectly address the new alienation of humanity from nature and the world. Christianity succeeds because, alone among the many competing religious traditions, it offers a coherent and emotionally compelling vindication of all the instincts that science threatens. In this way, Christianity is a product of the self-same process that it pushed back against: the hitherto unexamined, even unsuspected, historical process of abstraction that will be the main subject of the classics revolution. Christianity exalts not just one particular supernatural figure, like other mystery cults, but the very concept of supernatural power itself—and, crucially, it offers believers a share in that power for themselves. Paul holds out the promise of participation and ownership in a divine supernatural *system* that can stand against the emerging (and still relatively shaky) natural system of science.[10]

And so the first global franchise is set up on an anti-science basis. If Jesus is McDonald, Paul is Ray Kroc, establishing

the franchise in the name of the founder and issuing standardizing directives to Romans, Corinthians, Ephesians, Thessalonians . . .

Paul's franchise fixes in place the temporary reversal of polarity we see in Jewish apocalypticism: the world, now seen in a fallen state, is permanently under the sway of the evil power. Nature, the realm of science, is demoted and the pagan gods of nature are literally demonized. The otherworldly pose spreads like wildfire through the parched spiritual undergrowth of late antique society. For Jewish, Christian, and Muslim millenarians alike, the *apocalypsis*, or "unveiling" in Greek, comes to stand for the ultimate payback, when the unseen will literally come out of hiding to annihilate the seen in a final act of cosmic revenge.

All the drama around "the end of the world" tends to hide what apocalyptic thinking has always really been about, starting with Second Isaiah: the complete and total vindication of those who feel marginalized. In this respect, the end is just the means, if you will. That's why the apocalyptic messages of ISIS, for example, have exerted such a seductive pull not only in the idea-starved Arab world—which has marginalized itself through its consonantal writing, with such catastrophic results—but also among alienated and psychologically vulnerable young people from non-Muslim Western families.[11] Such cultural and social marginalizations resonate so strongly with faith traditions (including modern "cults") because faith itself arose from a similar sense of outrage at the way science pushed religion aside so brusquely.

This sense of outrage gave faith its broad appeal after science arose and explains how entire cultures could adopt an apocalyptic outlook, which on the face of it presents a puzzle. After all, why would a sense of marginalization resonate with the mainstream, which by definition isn't marginal at all? Well, all cultures have religion. Apocalypticism's message of ultimate vindication for the marginalized could resonate with cultural mainstreams because the inherent authority of skeptical, naturalistic explanation threatened to

discredit religion itself, and religion stands squarely in those cultural mainstreams. Science put religion on the defensive.

From an epistemological standpoint, all believers are marginalized in this world. In pinning its hopes on the next world, what faith reveals is the ancestral mark of religion's marginalization at the hands of reason.

HE RULES IN DARKNESS

THE DEVIL gets his due in this part of our synthesis, which suggests how the dualistic outlook, in which a good power is opposed by an evil power, was passed on from Zoroastrianism through Judaism to Christianity. (The earliest trace of Satan can be found in *Jubilees*.) Dualism and apocalypticism go together, and the Essenes also share a belief in the devil with Christians. The major difference between the two traditions is Christianity's interest in converting pagans.

In popular literature of the early Christian era, saints' lives (hagiographies) replace secular biographies, which now disappear as a genre for centuries. Christian ascetics such as St. Anthony, the founder of monasticism, literally wrestle with Satan and his demons in the desert, using their special powers for good in waging an epic supernatural battle that makes them the comic-book superheroes of the late antique world. The comparison is not a casual one; super-ness counts. Whether in a hairshirt or tights with underwear on the outside, it's all about the transcendence of nature's onerous laws—supernatural superpowers go with superheroes.

(Interestingly, Superman's Jewish creators gave him the Kryptonian surname name El, the Semitic word for "god," while giving his arch-enemy the first name of Lex, Latin for "law," which shares its root with words for reading such as "legible." Perhaps we should not make too much of this, however!)

Like today's superheroes, each saint has a special set of powers and abilities that sets him or her off from the others.

But unlike in the comic books, the superhero's opposition in Late Antiquity always includes bodily desires for food and sex. Asceticism is an integral part of resistance to the natural world and its evil ruler, Satan.

THE LIGHT OF LOVE

TO ARGUE that faith represents a flight from reality—in other words, fantasy—is not at all to say that faith is a bad thing. Fantasy has immense power to change the world for the better, and the historical record clearly shows that Christianity has done so many times. Even for many atheists, the most appealing aspect of Christian faith is its emphasis on love, which was just as much a part of St. Paul's message as his systematization of the supernatural. Indeed, the two are psychologically linked. What is reason, after all, if not something cold and impersonal?

And yet even Christian love has had a dark side, a shadow impulse that has allowed it to be invoked by torturers who profess to save the souls of those they torment as often as by the comforters of the downtrodden. Perhaps Christian love represents, at least for some, the common defense mechanism that Freud identified as "reaction formation," in which we conceal unacceptable impulses by affirming their opposites. In this case, the unacceptable impulse hidden by avowals of "love" is violent narcissistic rage against the limits imposed by the laws of nature. To some degree, it must have been so for Paul, who revealed his violent potential by persecuting Christians before his conversion just as clearly as he revealed his resentment against Greek philosophy after it.

It is important to recognize, however, that not all Christians have reacted this way. For social activists and others throughout history, Christian love has sprung clear and joyous from the heart. And from Augustine to William Faulkner, the moral authority of Christian love, and in particular of faith's exaltation of the common and the outcast, has made the Bible the most fertile source of creative inspiration in Western civilization.

If anything, history shows us that, contrary to the claims of many atheists, religion has inspired as much good as evil. But there's a less simplistic—and more productive—way of thinking about religion than adding up credits and debits. Instead of focusing on the supposed consequences of religion, a Darwinian view would also consider religion and individual religious traditions *as* consequences in and of themselves. And if the evolution of religion is a matter of science, the evolution of individual religions falls squarely in the realm of history. Though a powerful influence, literacy is only one aspect of the complex web of circumstances that make up the historical environment.

The idea of religious faith itself emerged in the wake of alphabetic literacy, but other sorts of circumstances also helped shape the two largest faith traditions of Christianity and Islam. A Darwinian historical explanation can account for many of the differences between these two global faiths. It can also explain why, despite these differences, both have one big thing in common aside from their shared exaltation of the supernatural: the conspicuous presence of internally competing and contradictory messages.

Christianity and Islam began in very different environments and with very different early messages that proved suitable to those environments. Christianity originated in the Roman empire, a literate, ethnically diverse, and politically unified environment with robust philosophical traditions in which military power was monopolized by a strong central state. Islam originated in almost opposite circumstances—the Arabian peninsula in the lifetime of Muhammad was oral, ethnically unified, and politically chaotic, with military power spread among competing and mutually hostile tribes. The upshot is that if a prominent message of early Christians had been, say, "Kill the infidel," there would not have been any later Christians. Conversely, if a prominent message of early Muslims had been, "Love your neighbor," there would not have been any later Muslims.

Yet both traditions grew, and as they grew their circum-

stances changed. In different ways, each successfully negotiated a transition from persecuted minority to imperial adjunct, and each had to embrace countervailing messages in order to attract and keep a wide following (messages, for example, that could be mobilized in the service of imperial or other political agendas, as well as messages that could be defended on ethical or moral grounds). In all cultures, there are people who want to love their neighbors, people who want to kill their neighbors, and people who just want to make it to bedtime. Many of us may want to do all three at various times, depending on circumstances. Traditions that retain a narrow, coherent message (such as Jainism) remain limited in their appeal.

From this perspective, religion, including faith, is neutral, like art or music: violent people have violent faith, peaceful people have peaceful faith. In offering any and all kinds of messages, *à la carte*, faith renders itself so "meaningful" as to be meaningless. There is no "essence" to any global faith, or to faith itself, outside of its basic character as an allergic response to science. There are only competing messages, competing agendas, and constantly changing circumstances. That goes for history in general, too.[12]

Far from being too skeptical, in allowing faith enough meaning to be "evil," new atheists such as Sam Harris and Richard Dawkins aren't skeptical enough. Cherry-picking their own messages from the *à la carte* menu of religious scripture just as the faithful do, they credulously buy into the premise that faith has inherent meaning in the first place. Instead of asking whether faith has a positive or a negative meaning, we should dig deeper and question whether it has any inherent meaning at all.

GETTING GOD'S NUMBER

THE ELABORATELY MONOTHEISTIC theology that comes with alphabetic literacy highlights the primal relationship between writing and counting that helped give rise to the

earliest forms of writing in the first place. Unlike Judaism, Christianity and Islam have always been obsessed with putting a number on God, and the early controversies that wracked the Christian church show this clearly.

First, in Late Antiquity, it was the nature of Christ: was it one, or two, or what? Was Jesus a human, with a single nature? Was he divine, with a single nature? Was he a blend of two natures? In the centuries following the conversion of the Roman emperor Constantine, followers of Arius, Nestor, and other Christian leaders later branded as "heretical" contest these issues as the church struggles to define orthodox belief.

Then, these "Christological" controversies merge into the "Trinitarian" controversies that followed, as divisions over the number of God continue into the Middle Ages. The father, the son, the holy ghost—how do they relate to each other? Is God one, or two, or three? Or what? Part and parcel of faith is the explicit insistence on unity even while implicitly acknowledging plurality.

It's hard for us to grasp how high the stakes were in these conflicts. Christian Orthodoxy now supports the state propaganda machine of the Roman (later the Byzantine) empire, and so millions of souls hang in the balance. The fate of the world no longer hinges on what you *do*, as it has in oral cultures including that of the ancient Hebrews, but on what you *believe*.

By the end of the sixth century, Christianity has permeated life in the Byzantine empire. The first holy war is fought between Christian Byzantium and Zoroastrian Persia, an ancient conflict that, rekindled—and carefully watched by the disunified Arab tribes to the south—is now fueled for the first time with profound sectarian fervor. Born with the alphabet a millennium earlier, belief has now become an instrument of war.

THE UNITARY GOD REDUX

ISLAM CLAIMS the monotheistic high-ground, "One"-upping the Christians and their Trinity: "God is One," the Quran

tells us: "Say not Three." Like Judaism but unlike Christianity, Islam originated within a culture that had not yet directly encountered the Greek tradition of free inquiry based on alphabetic literacy. As recent scholarship suggests, Islam's strict monotheism can be seen as a reaction instead to the endless theological disputes that ensued when the inherent complexities of the Christian god had to be explained. The Arabs looked at the convulsions wracking the supposedly monotheistic Christian church and said, basically, "We can do better." This is why Islam shares Christianity's obsession with God's number.

And yet belief in God is never as simple or straightforward as it might seem, or as those who proclaim it might like us to think. The Muslims' reaction to reason was indirect, at least at first. Like all other peoples throughout history aside from the Greeks, the Arabs took the idea of monotheism by example, emulating the monotheists around them (Jews, Christians and, depending on one's definition of monotheism, Zoroastrians, whose tradition was also changing), rather than evolving it on their own. They encountered the Greek literary tradition of free rational inquiry only after monotheism had been firmly established, and it was rational inquiry that put explicit belief on the table. This is why Islam tends, like Judaism, to be more focused on practice than on belief.

Like the Jews, however, the Muslims, too, would be dragged into the endless tug-of-war between "Athens" and "Jerusalem" that came with the territory. Arabic writing coalesces in the Islamic period and "classical Arabic" remains that of the Quran, which has also traditionally been the yardstick of literacy in the Arab world. As I've already suggested, the meaning of such consonantal scriptures needs to be continually reinforced by group study and the unquestioned authority of old men with beards, which is what both Jewish and Islamic traditions have always conspicuously relied on. Not just the interpretation, as in alphabetic Christianity (which has certainly had its share of old men with beards, as well as a Reformation sparked by an alpha-

betic text multiplied by the new technology of print), but the actual reading of the language itself needs to be constantly maintained by consensus, both oral (as in group study) and written (as in commentaries).

Hence the massive accumulation of written commentary in both traditions, which not only dwarfs that on Christian texts but is qualitatively different, focusing more on how to read the words and less on what they mean in spiritual terms—though that, of course, generally follows the reading. Hence also, perhaps, the rage of old men with beards in some of these cultures today, whose traditional control of the message erodes a bit more every time a courageous and heroic girl insists on her right to learn to read.

In ninth-century Baghdad, the Abbasid caliphs take advantage of a preexisting literature in Syriac, a linguistic cousin of Arabic also written in a consonantal descendant of Phoenician script, and which has a centuries-long tradition of translation from Greek. Medieval Arabic science and philosophy thus begin as a translation movement ultimately from prestigious Greek sources.

Syriac and Arabic scientific literature dramatically illustrate the power of alphabetic literacy to pull non-alphabetic writing into the realm of abstraction. Written languages have measurably larger vocabularies and more complex syntactic options available to users than do oral or largely oral ones, and the Arabic language had to be expanded in order to accommodate Greek scientific and philosophical concepts. A similar example from the religious sphere is found with the Slavs, whose culture was strictly oral before their conversion to Orthodox Christianity starting in the ninth century, when the Byzantine missionary St. Cyril adapted the Greek alphabet to spoken Slavic. The Cyrillic alphabet may be familiar, but the leading modern authority, Sir Dimitri Obolensky, argued that Cyril's real genius was linguistic, as reflected in his creation of a virtually new liturgical language, Old Church Slavonic, that expanded the Slavs' oral language in the same ways (vocabulary, syntax).

Indian syllabic writing, too, captures vowel sounds and can thus convey original content, but like Chinese writing it has so many complex signs that reading it cannot be said to be easy or automatic. It's not enough to put down a new idea. People also need to be able to read it, enough of them to form a readership. Because of the great difficulty of reading Indian and Chinese writing, literacy in these cultures, too, has traditionally been limited to narrow, highly trained priestly (Indian) or bureaucratic (Chinese) elites, which lacked the traction to expand the spoken everyday languages in the way that a wider readership did in ancient Greece. Sophisticated, curious, insightful, and often very profound, by the first millennium AD, Chinese and Indian literature included recognizable attempts to grapple with abstractions such as reality, time, and space. Abstraction, I suggested in Part I, is implicit in human thought, so this should not be terribly surprising. The question is not whether people in these cultures were "able" to think abstractly, or even whether they were curious about such notions, but whether they had the means to render such thought efficiently into sustained, explicit, and nuanced language that could be easily and widely read by others. Because literacy remained so restricted in these cultures, Havelock argued, neither could devote to their inquiries the kind of expanded language available to writers in classical Greek and Latin.

India's Brahmi script, the ancestor of later forms such as Devanagari, appeared in the third century BC, after India's exposure to Greek culture during the conquests of Alexander the Great, which the timing suggests may have stimulated its development (like Greek, it appears to be based on Phoenician writing). There was much give and take between the two cultures going back at least to the sixth century BC, and Greek philosophy itself may have been stimulated originally by Indian oral traditions. Indian and Greek philosophy have much in common, although—crucially—the Indians did not develop an independent tradition of secular inquiry. Comparatively undifferentiated, even when materialistic in

its interpretations, Indian philosophy (including science) remained in service of religion and favored story and verse over prose exposition in its delivery.

Each of these great civilizations, then, represents a distinctive blend of oral and literate cultural patterns, and many (though certainly not all) of the differences in emphasis among them can be explained within that context.

THE AGE OF MIRACLES

EVEN ALPHABETIC LITERACY requires the support of a solid elementary educational system, which is precisely what broke down in the West during the Middle Ages, when the alphabet, too, grew restricted to scribes and priests, and oral patterns reasserted themselves in Western culture. Reading and writing, Havelock and Ong tell us over and over, are not natural acts in the way that talking is. Children acquire speech on their own. They acquire reading and writing only with great training and discipline under the best of circumstances.

Literacy, Havelock insisted further, is far from being the individual accomplishment we commonly take it for. Instead, it is a social condition—and a fragile one at that. The alphabet is necessary for widespread literacy, in other words, but not sufficient. Elementary education is also essential.

It's safe to say that no civilization has ever been more obsessed with miracles than late antique and medieval Christendom. For more than a thousand years, until the Protestant Reformation, miracles stood as the unquestioned benchmark of religious credibility—and credulity—in the Christian world. The familiar exaltation of the other-worldly at the expense of the worldly was expressed with remarkable consistency, from the timeless frozen purity of Byzantine iconography to the writings of figures such as the Venerable Bede—who salts his eighth-century history of the English church with thrilling miracles on nearly every page, and who praises Caedmon, the first poet to write in English, as having

"stirred the hearts of many folk to despise the world and aspire to heavenly things." This was, quite simply, the highest praise a medieval critic could offer. Medieval society's insistent supernaturalism—enforced by a powerful church that constantly policed the thinking of philosophers and didn't hesitate to burn heretics or unbelievers—amounts to nothing less than a wholesale cultural denial of nature's regularity. It went hand-in-hand with the demotion of nature itself. And neither can be adequately explained without reference to the original rise of alphabetic reason in classical antiquity.

We tend to see the Middle Ages as a time when religion ruled with an iron fist, dominating European social and political institutions and occupying the central place in cultural life. Compared with what came after, perhaps, this might be true, and even compared with the advances in secular learning that came before, during the "first enlightenment" of the Classical and Hellenistic ages. Yet, when we compare them with the age before reason, the Middle Ages take on a startling new appearance. The unquestioned and confident polytheism that lives in what scholars call "primary" oral culture, a comfortably holistic world in which matter and spirit are the same, makes the faith of the church in the Middle Ages come across as crabbed and overassertive—often strident, at times even desperate, in its insistent supernaturalism. The real age of religion had already passed with the demise of primary orality.

Faith itself is but a vestigial and epistemologically insecure rump of that formerly undisputed dominance, one that prevailed in the West as education crumbled, popular literacy receded in favor of scribal or craft literacy monopolized by the church, and "secondary" oral patterns reasserted themselves in popular culture.

THE LONGEST WAR

THE STRUGGLE between Athens and Jerusalem lasted throughout the Middle Ages and beyond. Oral cultures fold

social control into their orality. Literacy put belief on the table, which traditionally means that social control has to be coupled with thought control. Another word for that is "church." Hence the persecution of pagans, Jews, and philosophers in the West, Byzantium, and Islam. Alarmed by the terrifying social implications of free inquiry, medieval man was a thought-control freak on steroids. (Medieval woman, perhaps, not so much.)

If each of these cultures represents its own unique blend of oral and literate cultural patterns, they illustrate as well how other factors such as geopolitics and cultural identity come into play in deciding how the clash between faith and reason plays out within a culture. In all civilizations that have joined the long tug-of-war between Athens and Jerusalem, both sides have always had their militant proponents, who gain or lose traction as changing circumstances favor or work against them. Secular, rational inquiry has generally flourished during "golden ages" of prosperity and expansion, and then declined as changing circumstances gave strict fideists the upper hand.

Only in the wealthy and ascendant Arab caliphate, where scientific inquiry began as a translation movement from Greek sources, was real scientific progress made during the Middle Ages. Supported by powerful patrons, scientists working in Arabic accomplished the only original scientific work of the Middle Ages, when the collapse of elementary education in the West had pushed alphabetic writing, like its consonantal forebears, into the realm of what Havelock called "craft" literacy, the familiar scribal or priestly elite.

Yet the Arabs faced huge challenges in capitalizing on these advances, which relied on concerted government support rather than on the work of independent thinkers and writers as in classical and Hellenistic Greece. Arabic science was never able to gain traction in the larger culture, and as the caliphate declined so did its spirit of inquiry, which could not long outlast its original manifestation as a government-sponsored translation movement. Medieval Arabic

intellectual culture had some towering giants, but they left tiny footprints that peter out in the sand. In distinct contrast with someone like Anaximander, the most original thinkers writing in Arabic—the astronomer and geographer Al Khwarizmi, the philosopher Averroës, and the historiographer Ibn Khaldun come to mind—had few if any successors and made little impact until rediscovered in alphabetic translations. Writing is one thing. Reading is another.

The eclipse of Arabic science has always challenged historians. Many historical circumstances, including the mass invasions of Arab lands by the Turks and Mongols, no doubt contributed to the decline of science in the Arab world, but communication technology must be included among them. Arab astronomical observations pointed to a new understanding of the cosmos. But it would take a Copernicus—using not just efficient Arabic numerals and the Latin alphabet but also the borrowed technology of print—to capitalize on the Arabs' observations by achieving, articulating, and spreading that new understanding.

NEEDHAM'S QUESTION

PRINT TECHNOLOGY came to the West from China, which also gave us other technological advances, including gunpowder. But technology and science are not the same thing, and the Chinese, like the Arabs, were never able to capitalize on novelty by conceptualizing it and spreading that conceptualization in written form, directly and unambiguously. Chinese inquiry shares two other telltale qualities with Arabic science: the presence of concerted state support, and an associated emphasis on what was "useful." In contrast, in classical times at least, the alphabetic Greeks were independent thinkers and writers interested in theoretical understanding rather than practical application. The great Sinologist Joseph Needham gave an impressive list of Chinese "scientific" accomplishments, but each one represents new technology, not new understanding.

Needham famously asked why the Scientific Revolution didn't happen in China. By now we're in a position to suggest an answer to Needham's question—the same one, in fact, that Needham himself offered: Chinese thought never split the world into matter and spirit, retaining a holistic outlook that braided the two together. Never having unsettled themselves with the idea of natural explanation, the Chinese never took refuge in triumphalist supernaturalism; without the threatening presence of free rational inquiry, China developed nothing resembling the Western tradition of monotheistic faith. As I suggested in Part I, we can also look deeper by asking whether the roots of holism in Chinese thought may lie in the holism of Chinese writing, and even, perhaps, in the holism of Chinese language.

China has now been alphabetic for more than fifty years. While it won't do to ascribe all cultural change in China to the use of alphabetic writing, it also seems hard to ignore the confluence of the alphabet's arrival with the rapid changes that have overtaken the world's most populous nation. As in India, where difficult scripts hindered the rise of a national language and the use of alphabetic English has cut across linguistic boundaries, China's economic boom has relied on alphabetic writing in very basic ways. And also like India, previously multiform and holistic religious practices have begun moving towards Western-style monotheism predicated on a split between matter and spirit (as reflected both in conversion and in modifications to indigenous traditions).

CRITICAL MASSES

NEEDHAM'S QUESTION begs a follow-up: why did the Scientific Revolution take so long to happen in the West? As Eric Havelock perceived, the alphabet had to acquire two powerful partners, quantification and replication, before truly modern science could emerge. A place number system (including zero) came to the alphabetic West from the Arabs in the twelfth century, and the technique of printing on paper

came from China in the late fifteenth. (Havelock was scathing when it came to the cumbersome Greek system of mathematical notation, comparing it unfavorably with other systems, which gives the lie to those critics who have accused him of "extreme Hellenocentrism.")

This part of my synthesis also draws on the brilliant work of scholar Elizabeth Eisenstein on the impact of print technology, particularly on the course of the Renaissance, the Reformation, the Scientific Revolution, and the Enlightenment. The new experimental method in science, for example, could not have flourished without the possibility of widespread replication of results, which was simply impossible in the manuscript age. But the mass production of inexpensive, identical texts, along with identical maps, charts, tables, and illustrations has been absolutely essential to modernity in all its forms. Only now does rhetoric, that venerable hybrid of oral and literate culture, disappear from its long-held place at the center of education, to be replaced by the familiar, and more fully literate, print-based array of individual disciplines in the humanities and sciences.

As Havelock and Eisenstein both stressed, for optimal effect reading must be automatic, fluid, and unconscious. Handwriting, however meticulous, is always idiosyncratic. The printing press enhanced the fluidity of reading immeasurably simply by standardizing letter-shapes. (Calligraphy is the enemy of literacy, Havelock memorably asserted. This does not make calligraphy less beautiful or sophisticated than print—quite the opposite, in fact—just less easily read. Havelock argued further that a prominent calligraphic tradition is a bellwether for narrow literacy, which would seem to be borne out by the Chinese and Arabic examples, as well as by that of the West during the Middle Ages.)

With the possible exception of the Greco-Roman period, most reading before print was voiced, with people reading out loud to a group or even to themselves. Print turned reading once and for all into something that happens inside your head, opening up new private, personal vistas for countless

millions, including growing numbers of women readers, who formed the earliest readership for novels. (Men were supposed to read about science, history, and, increasingly, politics, as newspapers arrived in tandem with that other great boon to literacy, the coffee shop.)

The long sweep of Western history since the advent of print reveals a continuing pattern—messy but discernable—of secular surge followed by religious reaction: Renaissance followed by Reformation, Scientific Revolution by Inquisition, Enlightenment by Romanticism, Secular Humanism by Religious Right. More to the point, with each cycle in the pattern, the surges have gained in momentum while the reactions have diminished in momentum, if not in urgency. The Jerry Falwells and Pat Robertsons may have alarmed secular humanists at the turn of the new millennium, but they lacked the power to burn them at the stake, as their medieval counterparts could have done (and occasionally did).

Print technology also boosted consonantal writing such as Arabic. Yet the boost of print, like the arrival of electronic media, has ultimately acted to conceal the residual difficulties in achieving fluent, mass literacy that remain inherent in consonantal writing. Even boosted by print, non-alphabetic systems still fall short of matching the alphabet's greater readability. Nor, equally importantly, has print technology improved the capacity of non-alphabetic writing to convey the new and unexpected. Though Arabic problems with literacy and science give rise to much triumphalist crowing in the West, along with talk about cultural or religious "essences," they have less to do with the Arabs' culture or religion than with their writing system. Novelty in alphabetic texts deters their translation into consonantal writing. While intellectual life in Arab countries remains the province of a "Westernized"—i.e., alphabetized—bilingual elite, the most vibrant and sophisticated aspects of mass culture in Arab lands are characteristic features of orality: poetry (which comprises much of the literature published in Arabic, though

the overall number of books published is very small) and music.

This line of thinking helps explain the unfulfilled promise of the Arab Spring, as young tweeting and blogging protestors seem to have stalled out against the inertia of a populace to which literacy means familiarity with the Quran. Turkey, in contrast, underwent "conversion" from Arabic to Western alphabetic writing early in the twentieth century and until quite recently at least has been held up as a model of democratic prosperity in the Islamic world. Notably, Turkey's recent Islamic resurgence has been accompanied by a vibrant literary and intellectual florescence. And, to me at least, it hardly seems coincidental that one Arab country, Tunisia, with compulsory elementary education in alphabetic writing (French) seems to be coping with change better than those without it, such as Libya, Egypt, and Syria (or that Tunisia was where the Arab Spring began).

Outside the Arab world, the predominantly Muslim states having the roughest time with modernity are Iran, Afghanistan, and Pakistan, where Arabic script is used for Indo-European languages with a very high proportion of loan words from Arabic.[13] In Muslim Indonesia or among Muslim populations in India, by contrast, alphabetic writing is well established and modernity has settled more comfortably, if still raising some dust. It feels a bit simplistic to posit a direct connection between the alphabet and democratic politics. Communism and fascism, after all, both came out of alphabetic cultures and arose after long traditions of monarchy. It helps to distinguish between cultural authority and political authority. There may be indirect connections with politics: the spread of new ideas may promote democracy, or may not, depending on the ideas. But the direct link is that between the alphabet and the restless ferment of novelty.

Over long centuries, as has commonly been observed, consonantal writing has remained firmly anchored to sacred texts in a way that feels unthinkable for the free-floating alphabet, which slipped its Homeric mooring as its first

order of business. Of course, it is precisely the sacred dimension of these revered scripts that helps explain why the alphabetic thesis has been so radioactive in this age of grim ideological anxiety, combined perhaps with the daunting challenges, for the Arabs at least, of settling on an acceptable change to their traditional script (if any be acceptable) and coping with an already inflamed social and political setting.

Yet continued denial has its own dangers, and it seems clear (again, to me at least) that much of the Arab world's extraordinary cultural isolation and frustration can be traced to script if not scripture. Far from being merely another distressing example of ivory-tower obtuseness (although it is that), alphabet denialism as I see it also contributes to very real human suffering right now every day in places like Iraq and Syria. Like it or not, the global village is an alphabetic one in which ideas are the common currency. Sacred script or not, ignoring a problem will not make it go away.

In the end, then, the sustained dissemination of new ideas would appear to depend on something that only the alphabet can provide: what Havelock called "the democratization of literacy," which entails the creation of both a robust, critical body of literature and a robust, critical reading public. The historical evidence, at any rate, is clear and unequivocal: over the vast panorama of human history, only the alphabet has allowed us to produce new ideas and to spread them widely.

POSTSCRIPT: ACTIVE VOICES

JOSEPH NEEDHAM compared the West's oscillation between matter and spirit with schizophrenia, but perhaps the image of a dynamo better captures the creative aspect of the tension between them that he also observed: faith and reason are two magnetic poles, and the cultural generator that spins around them throws off incendiary sparks and energizing currents. It also threatens to divide forever the path of human understanding.

Part of our difficulty lies in the fact that, courtesy of the alphabet, we have only relatively recently begun to distinguish between fantasy and reality. We're still finding our way in dealing with these and other abstractions, and we cling to a childish "point-scoring" approach when it comes to our ideas and beliefs, including issues of faith and reason. Many atheists need to claim that the bad things about faith outweigh the good (or that there is nothing good about religion at all), many believers need to claim the same about reason. The most obvious problem with this simplistic approach is that it ignores reality. In reality, as opposed to the fantasies of atheists and believers alike, both faith and reason can be (and have been) used to justify any sort of agenda, from violent and intolerant to peaceful and loving. That much should be self-evident to all but the most rigid fundamentalists, be they of the atheistic or of the faithful variety.

Perhaps the rest of us in the tolerant middle can finally break away from the delusion of scoring points and move together towards better understanding. Isn't that what both sides claim to be about, anyway? From this perspective, scoring points is irreducibly hypocritical, whichever side you're on. Not that atheists and believers need to hold hands and sing *Kumbaya* together. The understanding that can help us best is the specific and intellectual kind. Respecting, accepting, serving, loving—these are all laudable and certainly helpful, but in the end they're not really necessary for détente. The bottom line is that no problem can be solved until it is first understood properly, hard edges and all. If we're going to gain any distance from belief, we need to have at least a vague understanding of how it came to grip us so tightly. Hope for the future lies in actual, real, hard-won understanding of just exactly how we got where we are today.

The struggle for historical understanding will never be won with finality, of course. Nor would we wish it to be. But perhaps some parting observations are in order. If the alphabet represents the first revolution of fully voiced literacy, the boost of print was a second wave in that revolution, and the

arrival of electronic media is yet a third. It's too early to say what exactly is coming in this third wave, but there is a broadly discernable trend. Each wave has allowed new voices to be heard, accompanied by furious protests from the old gatekeepers of culture—a fury that merges into an ever-rising din whose unruly chaos initally seems overwhelming. But somehow we miraculously seem to adapt. Though upheaval reigns at first, our cultural vertigo eventually abates, and the new becomes the old.

All this points to the easily forgotten original meaning of vowels, which have always been in the business of giving voice. That's what phrases like "the democratization of literacy" and "the diffusion of cultural authority" really mean, so that Sappho, classical Athens, Nicholas Copernicus, Aphra Behn, David Walker, Oscar Wilde, Virginia Woolf, W. E. B. Du Bois, and Lena Dunham—even a suggestive fictional character such as Buffy the Vampire Slayer, not to mention her real-world equivalent Malala Yousafzai—can all be perceived as points on a global story arc that grows ever more inclusive of previously unheard voices. The downward trending flipside of that arc is dotted with the likes of church censors and, more recently, unemployed male book critics. Women, LGBT persons, people of color, and other new voices notwithstanding, the most globally energized demographic in the electronic age is the very one that has been least heard from in all cultures in the past: girls, who, in cultural terms, are just now coming into their own. And who is angriest at this brash empowerment? Older men, the unquestioned cultural authorities of yore, whose once-hypnotic bass chords are, at long last, being drowned out in the rising QWERTY chorus of texting and tweeting.

That's precisely why one of the emblematic heroes of our turbulent age is a girl who would not be deterred from learning to read and write even when controlling men shot her in the face, and, conversely, why the entitled male wardens of the unvoiced in such idea-starved cultures are targeting girls and girls' schools so conspicuously. Their fury betrays them. Boko

Haram means "Western education is forbidden," and the word *boko* is thought to be a corruption of *book*. The obscurantists, abductors, rapists, and murderers of Boko Haram, ISIS, and the Taliban must sense their own downward-trending story arc, at the thrilling denouement of which they will all perhaps crumble away to dust like so many staked geezer vampires. We can only hope.

Meanwhile, our earbuds and emojis (beloved of tweener girls, and thus now ubiquitous in the larger culture) can easily distract us from the essential truth that the buzzing new world of electronic media relies on the alphabet as much as print ever did. Both are primarily alphabetic technologies, not only in their early development but also, to only a slightly lesser degree, in their subsequent global deployment. Marshall McLuhan saw the rise of radio, telephones, and TV as betokening a new age of electronic orality. If that age existed at all, it didn't last long. Fifty years on, our personal computers, smartphones, and tablets—none of which can do without keyboards in one form or another—suggest instead an emerging new age of electronic literacy. We may track viral videos on YouTube, but try finding one without entering letters into a search field (which, at least according to Sergey Brin, is why Google is now a wholly-owned subsidiary of, yes, Alphabet). The eclipse of talking by texting on our phones, especially among young people, likewise represents the resurgence of the alphabet's underlying and enduring primacy in this new age. Notably, txtng wtht vwls wrks whn mssgs r bsc nd cnvntnl but we automatically bring them back when complexity or novelty requires them—that is, when we abandon stylized or predictable communication, even if momentarily (lol), to give full voice to our own distinct individualities.

We may not know precisely where the diverse, multivalent connections between writing and thinking will lead us, but we can say that, for now at least, they show no sign of being broken. And so the very same letters that got us here in the first place offer our best and only hope of truly moving on. What

Shelley observed of his own European culture two centuries ago is coming true on a global scale today. We are all Greeks now.

NOTES

Books drawn on for part two of this essay: Norman Cohn, *Cosmos, Chaos & the World to Come: The Ancient Roots of Apocalyptic Faith*, second edition (New Haven and London 2001); Norman Cohn, *The Pursuit of the Millennium: Revolutionary Millenarians and Mystical Anarchists of the Middle Ages*, revised and expanded edition (New York 1970); E. R. Dodds, *The Greeks and the Irrational* (Berkeley and Los Angeles 1951). *Pagan and Christian in an Age of Anxiety* (Cambridge 1963); Elizabeth L. Eisenstein, *The Printing Revolution in Early Modern Europe*, second edition (Cambridge 2005); Jack Goody, *The Domestication of the Savage Mind* (Cambridge 1977); Fred Halliday, *Islam and the Myth of Confrontation: Religion and Politics in the Middle East* (London 1996); Eric A. Havelock, *The Literate Revolution in Greece and Its Cultural Consequences* (Princeton 1982); Eric A. Havelock, *The Muse Learns to Write: Reflections on Orality and Literacy from Antiquity to the Present* (New Haven 1986); Eric A. Havelock, *Origins of Western Literacy* (Toronto 1976); Eric A. Havelock, *Preface to Plato* (Cambridge, MA 1963); G. E. R. Lloyd, *The Ambitions of Curiosity: Understanding the World in Ancient Greece and China* (Cambridge 2002); Thomas McEvilley, *The Shape of Ancient Thought: Comparative Studies in Greek and Indian Philosophies* (New York 2002); Dimitri Obolensky, *The Byzantine Commonwealth* (London 1971); David R. Olson, *The World on Paper: The Conceptual and Cognitive Implications of Writing and Reading* (Cambridge 1994); Walter J. Ong, *Orality and Literacy: The Technologizing of the Word* (London 1982); Adam Parry, ed., *The Making of Homeric Verse: The Collected Papers of Milman Parry* (Oxford 1971); Carlo Rovelli, *The First Scientist: Anaximander and His Legacy* (Yardley, PA 2007); Denise Schmandt-Besserat, *How Writing Came About* (Austin 1996).

The books listed here include several whose authors, I suspect, would disagree quite strongly with some of my conclusions. G. E. R. Lloyd and Thomas McEvilley in particular present politically correct accounts of, respectively, Chinese and Indian traditional thought that explicitly (Lloyd) or implicitly (McEvilley) reject the alphabetic thesis—yet both also include evidence that, in my view, undercuts that case decisively. I have included them partly, then, as "hostile witnesses" who buttress the credibility of the

alphabetic thesis all the more for doing so unwittingly. I hope to explore the ways in which they do so in more detail elsewhere. For now, I merely wish to avoid implying that these scholars (or any of the others listed, for that matter) would endorse my use of their work.

1. David E. Bynum, *The Daemon in the Wood: A Study of Oral Narrative Patterns* (Cambridge, MA 1978), 155.

2. The death grip of political correctness on academic thought is at last being observed, if not yet broken, by liberal commentators. For example, Alice Dreger's new book *Galileo's Middle Finger: Heretics, Activists, and the Search for Justice in Science* (New York 2015) has received much attention for its depiction of liberal ideology trumping inquiry in science; Jonathan Chait's widely discussed recent article, "Not a Very PC Thing to Say," in the January 25, 2015 issue of *New York Magazine* did much the same for the social sciences.

3. See, for example, Raymond W. K. Lau's recent article "Chinese Writing and Abstract Thinking: A Historical-Sociological Critique of a Longstanding Thesis" (Hong Kong 2010, rev. 2014), retrieved online May 5, 2015 at http://www.ouhk.edu.hk/ASS/Prof.Raymond_Lau/3.pdf. A sociology professor at the Open University of Hong Kong, Lau ignores nearly a century of orality studies and cites Havelock only from a single, brief anthologized excerpt. His critique of the alphabetic thesis perpetuates virtually every misunderstanding that has characterized academic responses to it (20–21). Common to these responses has been a profound and abiding confusion around issues to do with evolution, which scholars in the humanities and social sciences have persisted in reflexively equating with "progress."

4. Eric A. Havelock, *Origins of Western Literacy*, 2

5. Citations may be found in Part I of this essay (*Arion* 22.3, Winter 2015).

6. Alice Dreger, *Galileo's Middle Finger* (note 2), e-book location 203.

7. See Part I (*Arion* 22.3, Winter 2015). It has been suggested that the reason oral composition was deduced from Homer is simply that the Homeric texts have been so closely studied by philologists and textual critics. Yet the Hebrew Bible has, historically, been subjected to just as close philological scrutiny and textual criticism.

8. Carlo Rovelli, *The First Scientist*, xi–xiv. See also Dirk L. Couprie *et al.*, *Anaximander in Context: New Studies in the Origins of Greek Philosophy* (Albany 2003), and Daniel W. Graham, *Explaining the Cosmos: The Ionian Tradition of Scientific Philosophy* (Princeton 2006), both of which Rovelli cites. Rovelli stresses Anaximander's conception of the earth as an object floating in space; Couprie stresses Anaximander's "discovery of space" itself. Rovelli and Graham stand out in that they lay special emphasis on alphabetic writing in explaining the rise of science; with rare approbation, Graham cites not only Parry and Lord, but also Havelock and Havelock's former student Kevin Robb, now carrying the alphabetic torch

as a classics professor at USC (11–12).

9. Eric A. Havelock, *Preface to Plato*, 158.

10. I discuss this subject further in my essay "How Did God Get Started?" *Arion* 18.2 (Fall 2010), which I have drawn on in this section and elsewhere. My interest in the alphabet arose from this inquiry into the historical and psychological origins of monotheism and religious faith.

11. For the apocalyptic appeal of ISIS, see Malise Ruthven, "Lure of the Caliphate," *The New York Review of Books* blog, retrieved March 2, 2015 at http://www.nybooks.com/blogs/nyrblog/2015/feb/28/lure-caliphate-isis/?insrc=wbll.

12. I would like to acknowledge a long-standing intellectual debt to the late Fred Halliday, in whose deeply humane writing I first encountered the productive conceptions of faith traditions as *à la carte* menus, and of history itself as reflecting the interaction of changing circumstances on the one hand, and competing agendas and messages on the other, which gain or lose traction as circumstances change.

13. See Part I, note 6 (*Arion* 22.3, Winter 2015).