

## CHAPTER FOUR

{AN ALPHABET THAT  
THINKS }

Electronic text provides powerful new ways to allocate human attention. It puts words on a screen in ways that make complex arguments easier and quicker to understand; ways that democratize verbal expression; ways that promise to economize the time and effort we spend in reading words and trying to understand them; ways that provide new and rich mixtures of word, image, and sound. We have an expressive field, which has created new “spaces between words” and filled them with image and sound. We have available to us, once again after all these centuries, “an alphabet that thinks.” Yet, except recently in TV advertising, and in experimental ways elsewhere, none of them has been explored. Business and government have ignored them, though these worlds manufacture billions of words a day (in an attention economy, remember, words are stuff). The business world has pushed its cost-containment efforts down to the paperclip level, and some governments have even begun to make half-hearted gestures in this direction. And yet no equivalent of the “lean manufacturing” enzyme has appeared in the word factories of the world. Quite the opposite. The bureaucratic official style rolls on like the Mississippi. Amid the feeding frenzy inspired by digital technology, the new technology of textual expression has been ignored. Why?

Why have we not embraced these new expressive opportunities? The current “e-books” offered to the public, and the debate about them, ignore the fundamental changes electronic text brings with it. Why have we left these new expressive powers to advertising or simply to languish in the corner of experimental fiction? In the graphic domain, they have been embraced with a vengeance. Computer-assisted design and manufacturing programs, architectural drafting and modeling systems, and scientific visualization of every

kind, all of these often shared between computers worlds apart, have revolutionized how information is handled and shared. But the same revolution has not occurred in communication using the word, written and spoken. Business people and economists have turned themselves inside out evaluating what productivity gains, if any, computers have brought to the world’s business. They have not considered how, when print moves from book to screen, changes in the logic of expression might affect that productivity.

All we’ve done is to imagine how word processors might make us long-winded or how computers are destroying books or how images are driving out words. Those who think about the evolution of imagery have pondered how digital multimedia carries on the history of film. Those who defend books have told us that the sky is falling on text. Neither group has much considered what happens to text in digital expression. They have framed the debate around the form of the printed codex book, not about its contents. They have defended, or discarded, the binding, not the book.

Electronic books have a short history. They started out, in the mid-1970s, as electronic databases. “Project Gutenberg” was the pioneer. Classic texts in the public domain were offered in electronic form. This means of reproduction and distribution has continued to the present day, with the University of Virginia E-Book Web site perhaps the outstanding example. Then the Voyager Company took a step forward and created a format called expanded books. We have already seen an example of this format, the electronic edition of Minsky’s *The Society of Mind*, in the previous chapter. These books were designed to be read on a portable computer screen. They included a “print” text with moving images and sound added. A subsequent version, TK3, allows you to create an e-book in which text can quote sound and moving images. Other formats that permit such quotation have appeared. But this is not the direction in which electronic book publication has gone.

Instead, most e-books have chosen to mimic printed books as closely as possible. They transport to the screen all the expressive limitations of printed books: no color, no motion, no sound. Those who develop them have striven to make them as much like a printed book as possible.

The third stage of e-books has been the migration from desktop or laptop to personal digital assistant, the Palm Pilot and its ilk. You might not think that many people would want to read extended texts, especially literary texts, on such a small screen, but if so, several million people have proved you wrong by doing just this from the University of Virginia’s E-Book Library for the MS Reader and Palm devices. Not so long ago, when I had to spend a

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lot of time lying on my painful back, I tried reading Jane Austen's *Persuasion* on a Palm Pilot. It wasn't as bad as I anticipated. It was like reading the novel in a tiny one-handed edition, a couple of sentences per page. But here, too, the advance—if advance it was—in expressive technology aimed to preserve the printed format in a new expressive substrate. A new kind of binding, not a new kind of book.

So we have an expressive space that expands what a “book” can mean. Text can move in two and three dimensions, creating new relationships with the space around it. Complex texts can thus be clarified by spatial clues; the visual cortex can enhance conceptual argument. Moving images and sound can be quoted as easily as text. Yet the electronic book wants to mimic the limitations of a printed codex. Why such a disinclination to use the mental, as well as the electronic, equipment? There are many explanations. Let me review some, concluding with what I think is the fundamental reason: We have been thinking about human communication in an incomplete and inadequate way, a way based on stuff, not attention.

First: the CD-ROM failure. This first attempt to create texts that used the new expressive space was a commercial failure. They were more expensive to produce than a printed book. By nature and by custom, word people and image people do not speak the same language and getting them working together to create a genuine electronic book was often difficult. And when the product was ready for sale, the distribution channels had not yet been created. The production schedule of a digital text differs from that of a printed text in fundamental ways. Further, before this new medium had a chance to succeed or fail on its merits, it was swept away by the Internet. A lot of people lost money on the CD-ROM gamble. Once bitten, twice shy. Nothing makes you lose face faster than losing money.

The CD-ROM failure was the first manifestation of a much larger problem: antique and incompatible software and hardware. Compatibility has been a problem from the beginning, but it is only in comparison with the codex book that we see how acute it has always been. The codex format for alphabetical text has remained constant for the best part of 2000 years. You can pick up a tenth-century manuscript of Virgil and, after some paleographical training, read it. The volatility of electronic text and the machines that display it has reminded us of a virtue in books we had taken for granted. Here, as elsewhere, the librarians have led our thinking. Some archivists even see a gap in history opening up, as the documents of our time slowly become unreadable. Since I was so blind to the original problem, I won't opine as to the probability of such a catastrophe.

Second: screen resolution. “No one,” the litany goes, “wants to read extended text on a computer screen.” There are, however, some exceptions to this powerful argument. Some people do want to read extended text electronically, else why do they download millions of texts from the free Web sites? Why do people spend hours in online discussion groups and artificial worlds created by words? Why do people, when they want to look something up, try Google first? A mountain of extended text is available, and read, on screen: articles, reports, newspapers, and magazines, both current and archived. Scholars create Web sites to anthologize the latest work on a particular topic. Why do people pursue all this extended textual reading on screen if they hate to read extended text on screen? Because it is more convenient, obviously, and that convenience trumps the screen-reading problem. Make it easier to read on screen, and people no longer find it so hard to read on screen.

Screen resolution used to be the problem but surely not now. The ability to increase the size of text on a screen benefits many readers. Small print in a book is often harder to read than large print on a screen. People get used to reading text even on a small screen, much more so on a larger one. Incurable readers like me have found that, in many lighting situations, a self-illuminated backlit surface like a computer screen is easier to read than a book. And, sooner or later, commercial electronic publishers are going to discover that a common format for the reading machine must be adopted and that the reading machine itself must be giveaway cheap. They will learn, as Kodak did, to give away the camera and make your money on the film. Instead, the public has been offered high-priced and incompatible electronic reading boxes and sensibly left them alone.

But in spite of all these arguments, printed books do, *consideratis considerandis*, have better resolution. And they will be read as long as they do. Or at least as long as electronic text is not substantially easier to create, distribute, store, and carry around with you. When the Voyager Company first published the Jane Austen novels in electronic form, I bought them and put them on my laptop. It was an early laptop with poor resolution, but it sure beat carrying around the *Complete Novels of Jane Austen* for those inevitable afternoons you spend hung out to dry at O'Hare airport. And when you finally get on the plane and the passenger in front of you reclines fully, leaving you no space to use a computer, or even hold a book, your Palm Pilot will come to your rescue. Readability varies with text, reading machine, and occasion, and these equations will continue to change. Screen resolutions will continue to improve. Some of the experiments in “electronic paper” (flexible sheets that

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display an electronic image) may come to fruition. Resolution is not an insuperable problem.

Third: Books are not only reading machines, they are talismans. They bring with them the profound penumbra of all that books have represented to all of us who value them. Here touch and feel and binding do matter. The physical stuff of the book carries a profound electrical charge. The walls of my house are covered with books and looking at them gives me a profound pleasure. A life's reading paints a mural on every wall. I look at the bookshelves and reread my reading life. I sometimes use as a lecture prop a late sixteenth-century vellum-bound pocket-sized edition of the *Epistolae obscurorum virorum*, the *Letters of Obscure Men*. The *Epistolae* is a humanist parody of the long-winded humanist conversation of the time. My edition is a worm-eaten volume of no cash value, but I bought it as a graduate student, when I wanted to make a physical connection between a text I was reading and the time it came from. I wanted the *stuff* of the text. This talismanic charge evaporates on the screen. Naturally enough, we regret losing it. We should; it is a big loss.

Books, especially for those of us whose lives are built around them, usher us into a magic land. We lose ourselves, as we say, in a book, but we have found something too, that magic land inside the book. It is built from the interweaving of the two kinds of alphabet. On the one hand, we have the flat, silent, and colorless world of classic print. It works by shutting out the continually distracting world of behavior. But this always proves too great a deprivation. We hunger to find again our natural ground of sight and sound. To regain it, verbal styles have always tried to build sight and sound back into themselves. They have always tried to heal the split between the flat two-dimensional world of denotation and the rich three-dimensional world of behavior. They create wonderful passages of sensory description, vivid "speaking pictures." All kinds of rhymes and sound patterns recall the voice that is missing.

Here again, we can find precedent in the teachings of classical rhetoric. Rhetorical training preserved and categorized a storehouse of decorative patterns, called figures. Among them were the figures of sight and sound. These verbal pictures and sounds invited us to recall the sights and sounds of the behavioral world that fixed text banishes. The reader thus became the bridge between the alphabet and the world. Together, these verbal patterns constitute the world of verbal styles. In turn, these styles have created a particular world, the world of books, partly the product of the writer and partly the cre-

ation of the reader, a world that floats somewhere between the flat world of writing and the three-dimensional world of behavior. The reader is invited to think by oscillating between these two kinds of alphabetic information. Style and substance, they are sometimes called.

Oddly enough, the institution of the library, which preserves these talismans and magic worlds for us, has always operated with a digital, not a fixed print, logic. Books, the physical books themselves, were incidental to the real library mission, which was the dispersion of knowledge. Fond as librarians are of books, and dedicated as they are to preserving them, their native generosity of spirit comes from their zeal to make knowledge available to whoever needs it. Their final loyalty is to knowledge, to the free marketing of ideas, to the cultural conversation. Libraries have always tried to make documents of all sorts circulate with the freedom natural to electronic notation. The elaborate indexical apparatus that they have built around printed books amounts, in a broad view, to an early model of the "global search" that digital expression makes possible. It is not surprising that the ever-shifting interface between books and screen came to them first. Nor is it surprising that the most fruitful thinking about digital expression has come from the library world.

Fourth: The strongest barriers to a full use of electronic text's "alphabet that thinks" comes from copyright claims. Sales and distribution of e-books that are simulacra of printed books have been constrained at every point by rights holders' fears that someone will steal their texts. So copy protections are added that make e-books hard to use in a normal book-like way. So, too, constraints are invoked against electronic distribution and print-on-demand at the point of sale. And when you try to create a genuine multimedia text, the issues of intellectual property loom larger still. It is harder to get permission to quote images or film segments than to quote text, and when permission is granted, the fees for it are higher. The polite conventions of "fair use" that authors writing nonfiction depend on have not been extended to images and sounds and are being threatened for words themselves. Beyond this, in an economics of attention expression of any sort, the sum total of the cultural conversation is where the value lies and copyright is being extended over increasingly large areas of it. As a result, authors who want to contribute to this conversation soon come upon new No Trespassing signs. And these signs turn up increasingly for simple print-publishing projects as well. Behind such a preemption of the cultural commons stands, for electronic text, a conceptual difficulty. Copyright thinking, as it has developed around print, does

not fit alphabets that think and efforts to make it do so will always hamstring its logical expression.

Fifth: Alphabets that think create texts that mix words, images, and sound in dynamic ways. Such mixtures do not seem, to many people, and especially to scholarly audiences, as “serious” as a fixed printed book. Thus they do not make adequate career tokens. Even texts that are “printed” in everything but name—that is, print on a screen—do not seem serious to an academic audience until they are printed out in a codex book. Back again to our paradox of stuff. Nobody would say that the binding is more important than the contents, but in fact it often is, because the binding authenticates the package—as Christo so well knew. The binding makes the talisman.

Sixth: Alphabets that think make us suspicious in another way, too. They hark back to prealphabetic scripts, and these are bound to seem primitive and inexpressive. It is this iconic notation, as Eric Havelock argued, which conceptual thinking must discard if it is to advance. Here, as so often, such a prejudice will affect the old more than the young, but it is there for all of us. A competitive attention economy does not seem as serious as the monopolistic one of the printed book.

Beyond the “touch and smell” nostalgia for the printed book, electronic text elicits deeper and more serious fears. For nonfictional prose, the central fear is the blurring of conceptual thought that comes with a thinking alphabet. Just as Havelock argues, only by transcending the alphabet that thinks can conceptual thought find a condign notation. Only the aesthetics of subtraction that alphabetic notation creates can allow us to ignore the expressive surface, filter out extraneous signals, and concentrate on the conceptual meaning. Look through rather than at. It is a legitimate fear. We don’t want coffee-shop chatter in the library of our mind. We feel we must preserve the unselfconscious transparency of the medium if we are truly to “lose ourselves in a book.” A bi-stable form of notation, like a bi-stable economics, that switches periodically from at to through and back, from stuff to nonstuff and back, makes us queasy.

Readers of prose fiction especially have felt these fears. People often argue that the book leaves much to our private visual imagination that a moving image violates. But you could say the same for a movie, and yet movies prompt as many individual interpretations as novels. What is the rich interiority that we fear to lose as we move from book to screen? Clearly, the loss must be real because so many sensitive readers feel it. Do we object to voice because we are so long used to a voiceless notation? If the visual imagination

undermines fictive illusion, why does fiction include so many vivid descriptions? Why has the “speaking picture” been a part of rhetorical training since the Greeks? Do we lose the privacy of a book, the one-to-one relationship? But why should a reader-to-screen relationship seem less private? Some critics have lamented the passing of eloquence, the love of ornate language or of language itself. But formal eloquence has not prospered well in either the world of the high-speed rotary press or the sound bite. If we have forsaken it, we can blame neither the alphabet that thinks nor the digital screen on which it thinks. Only the passage of time will specify this loss or ameliorate it.

Surely poetry cannot complain when it regains its voice. And, as we have seen, there is a long tradition of poetry written in a thinking alphabet—shape poetry—in Western expression, which testifies to a continuing hunger for the rich signal digital expression permits. If we think for a moment of the kinetic alphabet examples of the last chapter, we see poetry extending its domain, not shrinking it.

Even more fundamental than the fear for lost interiority, however, lies a deeper misapprehension. The standard model we use for human communication is one I have called the clarity-brevity-sincerity, or “C-B-S,” model. It is one based on the exchange of goods, of physical stuff. Words are like things and ideally should *be* things. You have a message that you want to send to someone else. It must be clear: you don’t want the wrapping to obscure the stuff. It must be brief. You don’t want to waste anybody’s time. That’s why UPS delivery persons run from the truck to your door. And you must be sincere. You must not, that is, have any designs on anybody, try to persuade them of anything. You must say exactly what you mean, neither more nor less. You owe the whole truth to everybody.

The inadequacies of this model have been widely observed. In oral cultures, people talk for the sake of keeping the human conversation going, to remind themselves that they are still alive. There is no written repository for reality so, to maintain the culture, the conversation must be continual. And since much of our cultural reality remains oral, we continue to do the same even though we can write and record and photograph. “Symbolic human interchange has very little to do with the passage of information. . . . It has to do with keeping up the interaction,” as behavioral biologists have made clear.

We also talk because we like to play around with language. We love slang, the special terms of art we use in our work, word games like pig Latin, or cockney rhyming slang. And we have always loved formal eloquence, too, the special languages we invent to mark special occasions. All these are the

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domain of rhetoric. But “rhetoric” we also know as the familiar antonym of “reality,” as the synonym for deception. We distrust self-conscious ornament, artifice that shows. This war with ourselves about what we want words to do has been waged since Plato’s day. It was relaunched by the Royal Society in seventeenth-century England as a plea for scientific clarity against rhetorical obfuscation: “They have therefore been most rigorous in putting in execution, the only Remedy, that can be found for this *extravagance*: and that has been, a constant Resolution, to reject all the amplifications, digressions, and swellings of style: to return back to the primitive purity, and shortness, when men deliver’d so many *things*, almost in an equal number of *words*. They have exacted from all their members, a close, naked, natural way of speaking; positive expressions; clear senses; a native easiness: bringing all things as near the Mathematical plainness, as they can.”

This theory of communication has dominated our thinking to the present day. Words should be as much like things as possible, ideally *are* the things they represent. The word “table” should look like a table. If you try to wrap words up in emotion, in design, you are only masking the naked truth with fallacious glosses. You are trying to persuade somebody of something. The truth, like Adam and Eve before the Fall, is naturally naked. And the heart that delivers it should always be naked as well. These assumptions are so fundamental to how we think about communication that they inhere in the terminology we use to describe it: rhetoric versus reality; style versus substance. They have been strongly reinforced by the hyperventilated romanticism of our own age, where we spend so much time, defenses down and conventions aside, in telling each other how we really feel.

The C-B-S model of communication has, then, an economic basis—the economics of stuff. It fit perfectly the industrial revolution that followed speedily upon it. The advent of printed text only reinforced this stuff-based conception of human communication. Print came in books, and books were undeniably stuff. You could drop them on your foot. More to the point, in daily life you could put them on store shelves and sell them, store them in a bookcase at home, hoard them or lend them as you liked. And after the details were worked out, you could copyright and publish them and thus own what was inside them as well. All good, sound stuff. But what happens when the economy is not based on stuff but on information and the attention that makes sense of it? And what happens when we move from the fixity of print to the volatility of digital expression?

The C-B-S theory of communication comes with a powerful moral charge.

If loyalty to stuff is communicative virtue, then an interest in the wrapping, or the person doing the wrapping, or the effect on the wrappee is communicative vice. No wonder Christo, the archetypal modern wrapper, has taken so much flak. The moral basis for this suspicion may be even older than the economic one. “Rhetoric,” the general term of abuse we now use for everything not conforming to C-B-S code (that is to say, all the expressive devices used by our opponents, as against those that we use ourselves), has from early Greek times been portrayed as a woman. To start with, she was a goddess named Peitho, but by Christian times she had metamorphosed into a temptress. She it was who tarted up the plain truth in fancy clothes, put on the glossy lipstick and seductive eye shadow of a “rhetorical mask,” and led us down the primrose path.

Plain language is thus nearly allied to plain living. No fancy clothes. No cosmetics. No fancy food. No fancy cars. Thoreau’s cabin on Walden Pond. From plain living, we can take a step deeper into the argument. When you do away with “fancy” things of all sorts, you are declaring war on ornament. On style. Neither, in the plain world, should exist at all. And beneath the hatred of ornament we find the deepest level of all, the hatred of theater. In *The Anti-Theatrical Prejudice*, Jonas Barish traces this prejudice from Plato’s hatred of poetry through its reincarnation in the hysterical Christian Church father Tertullian, through the Puritan closing of the theaters in England during Cromwell’s time right through to Jane Austen’s suspicion of playacting (in *Mansfield Park*) as something respectable people did not do. And so into the current raging among puritanical religions on the dangers of beauty, human and artistic, and the need to destroy it and the people who create it.

The iconoclastic drive runs deep. It reflects a fear for our sense of self and society. Our self should be our soul, permanent, self-standing, unique. Something halfway between the ears and preeminently real. Our society should be equally self-standing, equally preexisting. Nothing artificial or temporary or “theatrical” about it. The theater, by its generic appeal, suggests that life itself is theatrical. The advent of print reinforced this moral charge, too, as well as the economics of stuff, for it is a puritanical medium. Print abjures sensory stimulation of all sorts to concentrate on presenting propositional thought. It seeks, like the silence of a library, to isolate us from distractions, to put utterance in an ideally plain frame.

The rhetorical view of life has always departed from premises opposite to these. It sees the self as a social fabrication, created by the many dramas we pass through in our lives. It is formed from the outside in, not vice versa. In this

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view, we accrete a self by playing a series of roles as we pass through life, rather than being born with one. A self like this can exist only in society, a society that is an ongoing drama, which evolves and changes. Such is the world we saw Andy Warhol creating and living in, a world dominated by self-conscious role-playing. In a world like this, Christo's wrapping is a legitimate part of the scene, not an aberration to be ignored or described in dyslogistic epithets. Such a "rhetorical" world has always seemed, to one part of our minds at least, the incarnation of falsity, everything we don't want the world to be.

So. We have a theory of communication that is based on a theory of economics that is based on a theory of morality that is based on a theory of self and society. It goes all the way down to bedrock. How can you possibly argue with this perpetual dream of native innocence and simplicity? Argue for hypocrisy? More narrowly, how can you argue against clarity? Or brevity? Or, above all, sincerity?

Well, sometimes you have to. There are, as we all know once we think about it, big problems with the C-B-S theory, and at all levels. It is a wonderful theory to avow but less useful in practice. Imagine what would happen if you lived your life according to such precepts, stripping away the rhetorical mask and "fallacious gloss" of ordinary life in a disinterested zeal for the naked truth. After a day or two of this you'd lose your job and your family, and the next day your mind, too.

The tact and forbearance, the sense of decorum that tells us what may be said when and where, all are stripped away by the C-B-S theory. As a way to live with others, it is unworkable. It suffers from the worst fault a theory can suffer from. It leaves out much of what it sets out to explain—human behavior. And if it does not work as a theory of behavior, still less does it work as a theory of expression. You don't, as Sarah Churchill once said, owe the whole truth to everybody. You adjust what you say to time and place. A message is not an inert package of lead shot. It is intended for a particular recipient, with particular abilities and sensibilities. The C-B-S ideal of communication, while great for moral exhortation, proves of limited use in analyzing actual acts of communication. Powerful and important, but limited. Consider clarity, for example. An air controller's transmission will be clear to the pilot of the plane (at least we hope so) but not always to the passenger listening in on the conversation back in the cabin. What will be clear to the physician may not be to the patient. A message is not a lump of coal, either delivered or not. It is not a message at all, in fact, unless it reaches the recipient and changes that person's view of the world.

Or we might consider brevity as an expressive ideal. Keep it short. Cut the cackle. No one can argue with that. But how short? Well, no longer than it needs to be. Well, but how long is that? Well, it depends. But it always depends. Depends on time and place, on human situation. When a navy pilot on patrol in the Pacific during World War II radios back to his carrier, "Sighted sub; sunk same," he is about as brief as he can be. But he is conveying a far longer signal, one full of emotional overtones that tell us what he thinks about what he has done, the insouciance with which he views his triumph. He is not being brief to be brief, but as a short way of being long. Just saying, "Ah, good, I am being brief," doesn't tell us anything about the communication. Or take an even shorter famous military message, that returned by General McAuliffe of the 101st Airborne Division when surrounded by German forces at Bastogne. To the German demand for surrender he replied famously, "Nuts." Such a communication depends for its power not on its length but on how that length works in a particular context. It is an informal reply on a formal occasion, one that expresses not simply an answer to the demand, "No," but contempt for the enemy and defiance of his strength.

Still, you must admire it. What sincerity! Yes, except that famous generals have been, with rare exceptions, poseurs, self-conscious actors on the killing fields. Douglas MacArthur, with his endless photo ops and press releases, provides the defining case, but rough, tough, down-to-earth heroes from Patton to Montgomery and Rommel took great care to present a particular image to the public. So, it does him no disservice to think, it must have been with McAuliffe. He was writing to posterity as well as to the German commander opposite him.

The C-B-S theory of communication, then, doesn't always work, powerful and powerfully needed though it is. It doesn't fully explain what it purports to explain. It doesn't describe accurately what is happening. As a theory of written expression it substitutes for accurate description only vague moral exhortations, satisfying in the saying but hard in the doing. And it is an unteachable theory. It argues that all expression should be transparent, not noticed, existing only to showcase the meaning. But how do you teach transparency? You can't hit what you can't see. You can, as sometimes happens in prose composition courses, correct a little grammar and then give up and talk about something else, current events, race-gender-class oppression, or whatever is fashionable in the current conversation. If you try to describe the "C-B-S" pattern, then you must look at it not through it. You must deny its fundamental premises in order to think about it. Serious inquiry into such

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a theory is thus intrinsically self-confounding. Time, again, for some “of courses.”

Of course we should always get the lard out of our prose. I have written two textbooks and two videos that show how to do this. Of course we should make ourselves clear instead of writing pretentious hokum. Here is where the revisionist thinking I discuss in the final chapter begins, and it is a vital beginning. Of course we should tell the truth, as it has been given us to understand it. Of course we should try to be candid as well as kind, as truthful as the bounds of civility permit. Of course we should, in every way we can, temper the wind to the shorn lamb, aware that our own shearing-time cometh apace.

But these laudable goals often don't offer much help in understanding how human communication works. They have never worked well even in the goods economy they are based on (as economists sometimes find out) and they lead us hopelessly astray when we leave the comforting world of stuff. For an attention economy, we need a richer and more inclusive theory of expression, one that defines clarity, brevity, and sincerity formally and descriptively rather than with moral platitudes. Recall Walter Wriston's request quoted in the first chapter: “The world desperately needs a model of economics of information that will schematize its forms and functions.” The matrix of style sketched out in the next chapter tries to supply such a model. I cannot think it is the model Wriston might have had in mind, but he was, after all, asking for a new way to think about the problem.

In the Western conversation about human expression, spoken or written, the great villain has always been self-consciousness. As soon as our audience thinks we are considering how we are speaking, paying attention to style instead of substance, they start feeling their pockets to make sure their wallets are safe. Every time we open our mouths, then, or put our fingers on the computer keyboard, we should cast contrivance aside and be spontaneous and sincere. Every rhetorician since the Greeks invented the craft has been taught this as a first operating principle. But, since any training in speaking and writing is a training in precisely these arts and contrivances of insincerity, such advice has always been fraudulent. Whether it applies to writing, or to the fine arts where artists are always taught that the best art is the art that conceals art, it always finally amounts to the advice the English comedy team of Flanders and Swann gave in one of their satiric sketches: “Always be sincere, whether you mean it or not.” Thus if we accept self-consciousness in human expression as a vice, as has been universally the case, we end up by recommending hypocrisy as the way to save our souls.

But self-consciousness about behavior of all sorts, not only communica-

tion, has been a part of human life from the beginning. And in an information society it can only increase. The more we are deluged with information, the more we notice the different ways it comes to us, the more we have—in pure self-defense—to become connoisseurs of it. The torrent of information makes us more self-conscious about it, about all the different packages it comes in, about the different ways we interpret it, and about how we should express our responses to it. It is more counterproductive than ever to demote stylistic awareness. Stylistic self-consciousness should be the first line of defense for a child swimming in the information flood.

The need for a new way of thinking runs deeper still. Stylistic self-consciousness, the habit of looking at an expressive surface as well as through it, emerges logically from the nature of digital expression. The center of the computer revolution, as a new system of human expression, lies in its central polyvalent digital code. The same code that expresses words can generate images or sounds. Information can be moved from one sensory modality to another while still being driven by the same data. This choice of expressive means naturally generates stylistic self-consciousness.

Digital expression has heightened our expressive self-consciousness both of words and of images and sounds. We've seen in the previous chapter how this heightened consciousness of expressive medium has worked for words and the letters that compose them. Desktop publishing has made typographical layout and font selection matters of everyday expressive concern. We no longer take them as givens; we can make the choices ourselves, and thus we become more conscious that they *are* choices and that other choices might be made. Or consider still images. Image-processing programs allow us to perform all kinds of permutations on digital images, and we are used to seeing such permutations in print and on television. Such editing of images as used to be possible was the province of professional specialists. Now anyone can do it. We edit our snapshots while they are still in the digital camera. Perhaps most powerful of all, the editing of moving images, of home videos, has become a consumer-level phenomenon. When you use a simple film-editing program like Apple's iMovie you become self-conscious about how moving images work in a way that no other means of engagement can equal. You can snip and clip and reassemble with a few mouse clicks, and the more you become a video editor, the more conscious you become of the medium you work in. You have become used to looking at rather than through. That is what editing of any sort is all about, but it seems especially dramatic when you can edit movies that until recently you could only look at.

A few years ago, the idea of “sound design” as a concomitant to image

design was restricted to special effects people and a few acousticians. Now anyone can take sounds from alien contexts, translate them on the screen into their visual equivalents, and stretch and bend them at will. Such bending and sampling, long a staple of electronic musical composition, is rapidly becoming part of everyday expression. A flourishing industry caters to people interested in high-level musical reproduction, the so-called high-end audio world. People in this world become extremely conscious of recording techniques, the basic rules of acoustics, listening-room design, the nature of human hearing. As a result, the act of listening becomes acutely self-conscious. People become connoisseurs of sound. Their listening habits always oscillate between the sound and the music.

Wherever we look in the current landscape of expression, then, we find people increasingly self-conscious about what they see and hear. The pattern of attention has been democratized. In a matrix with these requirements, stylistic self-consciousness, *at* attention, must be considered not as a sin but as a fundamental variable in human expression. We should seek to chart it, not to condemn it. Only thus can we come up with a means of description that will comprehend the full range of human expression, plot the full range of design, rather than dismissing half of it as sinful or mistaken. And only thus can we calibrate style with behavior.

So where do we stand with the electronic book? It has not yet been created. The alphabet that thinks has not yet found its condign format. It would be easy enough to say that the Internet provides this format, but it doesn't. It is a gigantic library, not a limited expressive format like a codex book. Certainly electronic texts that mix word, image, and sound are usually more expensive to produce than printed books. At the deepest level, though, our failure to use digital expression in a fruitful and efficient way comes from a theoretical misunderstanding. We are thinking about it using an incomplete set of templates for thought. Just when our expressive horizons have been expanded, we want to narrow them. We have been thinking about electronic text as the wrong type of revolution. We have confused an extension of the Gutenberg revolution in replication and distribution with a revolution in expressive logic. We have now a new expressive alphabet, an alphabet that thinks. It creates new spaces for words and between words. We can use these new spaces, this new alphabet, alongside our present fixed-print one. We have a choice between the two. This choice unifies the two great strands of notation in Western culture, the neutral, transparent alphabet that the Greeks created and the older imagistic notation of Egyptian hieroglyph and Sumerian cuneiform.

We have, that is, at last unified the history of Western cultural notation. We have two kinds of alphabets and thus two kinds of reading. We are free to choose whichever notation suits our purpose. The real electronic book, when it appears, will be a rich and fruitful combination of the two.

The Latin rhetorician Quintilian gave this advice about how reading should be taught: "It is impossible, except by actual practice, to make it clear how a boy is to learn when to take a fresh breath, where to make a pause in a verse, where the sense ends or begins, when the voice is to be raised or lowered, what inflection should be given to each phrase, and what should be spoken slowly or quickly, excitedly or calmly." Such a reading world was full of sound and gesture; it existed in the world of ordinary behavior. It was itself a social behavior that performed a text in the way a pianist performs a score. Readers had spent a millennium and a half perfecting such performance. It was "literacy" as it presented itself in a world still profoundly oral, still dependent on the live spoken word.

But when you need to absorb more information more quickly, when a performer is not readily to hand, you want to subtract the behavioral context. You want to filter out the reading voice and dramatic gesture and pregnant pause and careful change in pitch. You want to filter out orality entirely. It took us another millennium to perfect this new manner of reading. We see its perfected state, a state happily not reached until recent times, in courses in speed reading, in business writing that consists of bullet points, and in bureaucratic prose that has lost its voice and become literally unreadable. Such text aims to be transparent and unselfconscious.

Now, electronic text has made it possible for us to have both kinds of "book" and to choose between them, or mix and match as needed. Both kinds of reading are "efficient," but they maximize different variables. The expressive powers of oral culture and literate culture can now be put into synergistic relationships with one another. We do not yet know how these new synergies will work themselves out. One thing, however, is clear. The new spaces for words will be competitive and self-conscious. They will require a new conception of rhetoric, a new doctrine for teaching expression in an electronic attention economy.

At present we have no such educational program. Because we still think that stuff is more important than nonstuff, educational programs that teach communications skills have always been secondary to the main enterprise. Freshman Composition has always lived in the basement. It will remain there until we understand the new economy in which we dwell. Meanwhile,

*Gives us  
reason for  
changing*



here and there programs in electronic expression, in using an alphabet that thinks, are beginning to develop. The modern educational enterprise being as compartmentalized as it is, those who teach the old alphabet rarely make common cause with those who teach the new.

If we are to bring these two alphabets together into a common universe, we must have a common way to think about them. That common theory the following chapter seeks to provide.

## Background Conversations

### *Technology and Values*

I've been arguing, in this chapter, that electronic books, "e-books," change how conventional books are produced and distributed but do not change their fundamental structure. They try, in fact, to preserve it in every way they can. They have pages, and you can turn them over; they have "print" and it doesn't dance about; they have margins and other visual clues taken over from the codex book. They even, in some versions, impose restrictions greater than those of a codex printed book. If I buy a book at the bookstore, I can take it home and read it wherever I want to, and loan it to whomever I want. Some electronic books allow you to download your e-book onto only one computer, so that if you want to read it on another computer in another room, you have to buy another copy. We return to the pre-Gutenberg convention of the monastic library, where the manuscript book was chained to the stand. You can't get more zealous about denying the logic of digital expression than returning to a time when the printed book had not been invented yet.

I've also been arguing that the rich signal that will animate truly electronic books, whatever shapes they ultimately take, does not represent the end of Western culture or the repudiation of its essential values. Such a multiplexed signal represents, as I've tried to suggest, a return to the "traditional" Western means of communication, if by that we mean the conventions that have been employed since written history began. It does not repudiate this tradition, a tradition that has not always been built on the printed book and yet has somehow preserved the "values" supposedly endangered by electronic expression. In the first place, the oral culture that preceded the invention of writing was not replaced by writing but existed side by side with it. Wherever we place Homer on the oral/literate spectrum, no one denies that *The Iliad* and *The Odyssey* were meant to be recited aloud. So was Virgil's *Aeneid* and every major literary work at least up through Chaucer's *Canterbury Tales*. Plato thought writing itself repre-

sented an impoverishment of conceptual thought, and Chaucer would certainly have thought that his poetry, read silently and in isolation, had suffered a diminution. Shakespeare wrote for the stage not the book. And surely the aristocratic owners of those splendidly illuminated medieval books of hours would not have preferred a text without distracting pictures.

So, if we are afraid that the values, intellectual or moral, that come with the printed codex book are now in peril, we can't contend that we are turning our back on Western culture. Quite the opposite; we are turning back to it and examining it afresh in ways that digital expression now allows. But, nevertheless, Western culture may have been wrong before 1453, and only got its head on straight when printed books became the dominant communications technology. That has, in fact, been the dominant humanist argument about electronic text, and I ought to take it into account. It is conveniently expressed in two widely divergent books, Sven Birkerts's *The Gutenberg Elegies* and Jane M. Healy's *Failure to Connect: How Computers Affect Our Children's Minds—and What We Can Do about It*.

Birkerts's book has two parts. In the first, he reflects on what reading has meant to him in his life and on what he feels to be the current shallowness of American life, a shallowness that he feels comes from a proliferation of texts and of other claims on our attention. When there were many fewer texts to read, people read them more intensively, "vertically," as he calls it. Now we read more texts but "horizontally," without dedicated attention. It is the standard argument: too many claims on our attention. He expands this argument into a general condemnation of shallowness in our current life. We lack depth, the depth that we find in authentic works of art and literature. "Resonance—there is no wisdom without it. Resonance is a natural phenomenon, the shadow of import alongside the body of fact, and it cannot flourish except in deep time. Where time has been commodified, flattened, turned into yet another thing measured, there is no chance that any piece of information can unfold its potential significance. We are destroying this deep time." What's the villain? The electronic communications revolution, of course. "When the electronic impulse rules, and where the psyche is conditioned to work with data, the experience of deep time is impossible. No deep time, no resonance; no resonance, no wisdom."

A central cliché floats clear of the muddled metaphors: The lives we live are too busy for reflection. More precisely, reading printed text now has a number of competitors for our attention. This competition is a bad thing. But monopolists have always thought this way. Allow competition and where will it lead?

The beginning of competition in this attention field has always been resisted.

Plato's Socrates had harsh things to say about writing, as against speaking. The written word is mute and unchangeable, not a suitable vehicle for the advancement of wisdom, which requires the lively interchange of human conversation. Socrates' argument for orality as against literacy precisely reverses the argument Birkerts advances, but Socrates felt it led to the same result: superficiality of thought and feeling. When printing was invented, and texts made available to a wider audience—the first revolution in duplication and distribution of books—the authorities of church and state thought their communications monopoly threatened. Where would such irresponsible dispersal of knowledge lead? A bunch of shallow “horizontal” thinkers dealing with “vertical” subjects? Impossible! Alexander Pope had a similar response when, at the beginning of the eighteenth century, the franchise of literacy was extended beyond those with a proper classical education. Deprived of this background, what could people be but dunces, suitably described in his *Dunciad*? But if the response to changes in communication technologies has always been the same—superficiality!—even though the changes themselves differed, might the response come from some other source?

Birkerts seeks to defend what he calls “the real heart of reading.” The kind of reading he is thinking about becomes apparent a little later. “When we enter a novel, no matter what novel, we step into the whole world anew.” Throughout, he has in mind novels. All the other kinds of reading—biography, history, political science, economics, business writing, scientific writing—none of these participate in this breathless metaphysics of reading. Surely these other kinds of reading do not involve the sublime self-transformation he is talking about. So his argument comes down to the willing suspension of disbelief that any great work of art demands, novels included. This is not precisely a new idea, but it is as close as he gets to “the heart of reading.” And we can get “lost in a book” in other kinds of books besides novels, and in lots of novels, popular romances of all kinds, that do not claim to be soul transforming.

As it happens, a great literary critic, C. S. Lewis, inquired into the same subject, the heart of literary reading. In *Experiment in Criticism* he explores “how far it might be plausible to define a good book as a book which is read in one way, and a bad book as a book which is read in another.” Art, once again, defined as attention. He divides readers into two classes, the “few” who are literary readers and the “many” who are not. This division, he contends, is not invidious. “I have a notion that these ‘many’ include certain people who are equal or superior to some of the few in psychological health, in moral virtue, practical prudence, good manners, and general adaptability. And we all know very well that

we, the literary, include no small percentage of the ignorant, the caddish, the stunted, the warped, and the truculent. With the hasty and wholesale *apartheid* of those who ignore this we must have nothing to do.” He includes art and music in his inquiry. The many use art for other purposes, the few “receive” it. Here is what “receiving” means: “We must look and go on looking till we have certainly seen exactly what is there. We sit down before the picture in order to have something done to us, not that we may do things with it. The first demand any work of art makes upon us is surrender. Look. Listen. Receive. Get yourself out of the way. (There is no good asking first whether the work before you deserves such a surrender, for until you have surrendered you cannot possibly find out.)” Don’t worry, as Birkerts does, about what it does to your soul. Get the self out of the way.

The many read only for the story, never for the style. “They have no ears. They read exclusively by eye.” In the terms I use in this book, they are all *through* readers. But readers who look only *at* are part of the many, too. They are the “stylemongers.” We are here talking, in either case, about literary reading. He makes clear that “scientific or otherwise informative reading” is different from literary reading; there we need not “believe or approve the Logos.” No suspension of disbelief required.

What do the few read for? “The nearest I have yet got to an answer is that we seek an enlargement of our being. We want to be more than ourselves. . . . We want to see with other eyes, to imagine with other imaginations, to feel with other hearts, as well as with our own. . . . One of the things we feel after reading a great work is ‘I have got out.’ . . . Not only nor chiefly in order to see what they are like but in order to see what they see, to occupy, for a while, their seat in the great theatre.” Here, for Lewis, is the vital center of reading: “Literary experience heals the wound, without undermining the privilege, of individuality. There are mass emotions which heal the wound; but they destroy the privilege . . . But in reading great literature I become a thousand men, and yet remain myself.” Here is what Birkerts was, I think, trying to say. “Those of us who have been true readers all our life seldom fully realize the enormous extension of our being which we owe to authors. We realize it best when we talk to an unliterary friend. He may be full of goodness and good sense but he inhabits a tiny world. In it, we should be suffocated.”

*Experiment in Criticism* was published in 1961. At that time, computers were still data-management tools run by a priestly programming guild. The profile of the many had nothing to do with supposed pernicious effects of digital expression. It was a perennial way of reading, not a crisis or failure that had to be

blamed on someone or some technology. Lewis argues finally, I think, for something like what I've called oscillation. We should not ignore style but not read entirely for it (*at vision*). We should not read only for the plot (*through vision*) but we can hardly ignore it. The few are the people most skillful in preserving the bi-stable reading. The many become many because they shut that bi-stability down, read only one way or the other. We may, then, want to say that what we are trying to preserve, as the reading of printed text comes under so much new competition, is precisely the bi-stable pattern of attention that separates the few from the many. And we might argue that we can judge the new means of digital expression by asking whether they enable the many to become the few in ways not formerly possible. I have been contending that digital expression does precisely this.

Birkerts argues that digital expression flattens our historical perspective. Here's his argument: "The depth of field that is our sense of the past is not only a linguistic construct, but is in some essential way represented by the book and the physical accumulation of books in library spaces." But this is to confuse codex books with what is in them. It is a natural mistake for someone who works in a bookstore to make, but a mistake nonetheless. How can the accessibility, replicability, and transportability of historical information flatten our historical perspective? It can only enhance it. Books were stored in libraries because knowledge was in books and someplace was needed to organize and store them. But books don't, any more than bookstores, create historical perspective by their very existence.

It is Birkerts's own lack of historical perspective that informs his argument about "the waning of the private self." The perennially uneasy relationship between the private and the social self is as old as Western culture. It has ebbed and flowed for many reasons. Orality depends on a public self; literacy creates or, depending on who you read, reinforces a private self. The two kinds of self have varied as the oral/literate interface shifts. It is a fundamental dichotomy. I've argued, in *The Motives of Eloquence*, that the fundamental structure of Western literature comes from this relationship. It may be that the ratio has tipped in favor of the social self, but to argue that electronic communication has been the prime mover in the alteration, if there has been one, requires more than just regretting that "our slight solitudes are transected by codes, wires, and pulsations." The crucial issue here is making sure that the oscillation between the two kinds of self remains dynamic; there are many reasons for thinking that it has never been more so than today. That, perhaps, is why we fuss so much about it. We feel the strain. That is as it should be.

What really troubles Birkerts is that "a terrible prestige-drop has afflicted books themselves." Here lies the main offense of electronic information. It provides a competitor to books for our attention. For such a devotee of books, he has surprisingly little faith in the object of his devotion. Are books so weak that they cannot survive competition? Might they not be improved by it, as occurs whenever we see competition in any other sphere of life? We'll see, but as of now it doesn't look as if books are going out of style. There are too many of them, not too few, too many to buy, read, understand, shelve. Birkerts's view is so narrow and mean-minded a bundle of mercantilist fears amid an emerging global market that he won't raise his head and look around him.

Jane Healy's critique of digital expression (*Failure to Connect: How Computers Affect Our Children's Minds—and What We Can Do about It*) goes deeper, and is better informed, than Birkerts's fears for the future of novels. She was an early enthusiast for the personal computer as an aid to learning but has come to think it a disastrous waste of time at best and an unfortunate misprogramming of the growing child's brain in "that precious interval when brain, body, and spirit are still at their most formative stages." But, like Birkerts, she takes arms against the entire communications revolution.

Healy is a "language arts specialist," and that means that she is concerned with the same issues that concern me. What happens to words, and the teaching of words, when they move from page to screen? Words on the page, she feels, generate a richer interiority than they do on screen. Or certainly than do images on a screen. Furthermore, they use the eyes in a different way: "The rapid, rhythmic eye movements used when reading printed text are called 'saccades,' and they differ from those demanded by electronic transfer from one medium to another. These differences make it hard to transfer from one medium to another. Whether or not children's eyes will successfully adapt to electronic text is unknown, but the new technology places more demands on the eyes at any age." Just so, just as reading did, when literacy became common. As for moving from one medium to another, we are back to our standard villain, competition for our attention.

About digital multimedia, Healy quotes with approval another authority, Richard E. Mayer, who argues that "Technological advances in computer-based graphics . . . have not been matched by corresponding scientific advances in understanding how people learn from pictures and words." I certainly agree that, so far as words are concerned anyway, computer graphics have not been used with anything like the imagination and bravery they should have exhibited. The fault, however, is not lack of research but lack of creative enterprise in

Birkerts  
Mistake

how electronic text works. And lack of interest in text. Before we study how people learn from pictures and words and sounds in new combinations, we ought to have some imaginative and original examples of how they work together in the electronic expressive space. First you do something and then you study it.

Rhetoric has thought about how words and images and sounds go together for several thousand years now, but it has always proceeded on the basis of practice. The real villain here is lack of understanding about how alphabetic notation works, and how it has worked in the past, in manuscript or print. During much of this history, the "reader" was a "listener" and had to move, and often suddenly, from the world of orality to the very different one of literacy. He or she had to re-create in the literate world simulacra of the gestures and images and voices that play such a fundamental part in the oral world. What a difficult job to do. It seemed, in fact, as we have seen, an impossible one to Plato's Socrates. (Plato himself, as his own prose style shows, was a master at this fundamental oscillation.) And yet, somehow, we have managed to do it, to become readers who can create a simulacrum of three-dimensional vibrant reality inside our heads. The creative imagination has been fed.

Healy is concerned with what we all seem to be concerned with, in one way or another, the economics of attention. Information is bombarding young children from all sides and bemusing them. "In fact, teachers believe that increased 'tuning out' by media-blunted brains is one factor in the growing 'epidemic' of attention problems." But we always "tune out" something when we "tune in" something else. We confront a plenitude of signals to be sure, but is this utterly new? Would we truly want to return to the good old days when information was sparse indeed and the world was therefore, since it was based largely on inherited ignorance, much easier to make sense of? Alas, the historical record does not suggest that people in those less informed days found the world any easier to understand. Healy would have us, presumably, ration these signals according to patterns of which, informed by the latest educational research, she approves. We should be clear about the issue here. It is not whether the brains of young children are being formed in one way or the other. It is, by explication as well as implication, about the rationing of attention. That rationing is what a great deal of this media doom-prophecy is all about. The free market of attention, and of the technologies that compete for it, is too dangerous. Think of all the things that might go wrong. Better, as with markets in stuff, to know thoroughly what we are doing before we do it. But nobody can ever have this proleptic wisdom. Much of the time, perhaps most, we don't know what will happen until it happens.

Like Birkerts, Healy is concerned with the damage electronic media may be doing to the human soul: "We turn now, finally, to 'soul-making.' Instead of merely asking what our children will *learn* with computers, we also need to ask what they will *become*." This concern about what children will become is a real one, perhaps the fundamental one, as it has been since Plato posed it in the *Republic*. And it is as central if we believe that we arrive in the world already equipped with an immortal soul as it is if we think we are issued one in school. Healy worries that the computer will become an avatar of authority and that children will treat it as human, with emotions, and that those who program it will thus mislead youth, just as Plato's Socrates feared rhetoric would do. Here's how she puts it: "Our children will be confronted by never-imagined problems of what it means to be human. Already advertisers are on deck . . . How should we prepare them for such challenges? Let me respectfully suggest that a thorough grounding in values, empathy, and a core sense of self should be our primary goals." Clearly. How could anyone disagree with this? But it is hardly a new problem. The future has always been new and unforeseen and dangerous. As Alfred North Whitehead reminded us in *The Aims of Education*, it is the business of the future to be dangerous. It has always posed "never-imagined problems of what it means to be human." The enemy is feigning, simulation. Plato characterized it as "rhetoric" and its villains were called "sophists." Tertullian characterized it as the theater, and its villains were all those who supplied theatrical illusion to mankind. Now Healy characterizes it as the computer, and the villains the "advertisers" (that all-purpose villain) who use it to mislead youth. Simulation is something that computers are indeed good at. It may be that the computer's fundamental powers will turn out to be theatrical rather than computational. I think it may work out that way. She has certainly picked the right villain. Computer graphics have indeed called up all the variations of the antitheatrical prejudice that Jonas Barish, in his book of that name, has chronicled.

Now that she has selected her villain, she moves on to her critique, the standard one since Socrates. Our age lacks "values." And, as with Birkerts, and Neil Postman, and a host of other commentators, the villain is—you guessed it—technology! "Yet it is hard to teach 'values' in a culture that fails to respect them. What has gone wrong? I would suggest that our passion for the fruits of technology has caused us to separate intellectual and moral values, mind and soul. We seem to care more about how fast our children can learn than how deeply they can feel."

The standard complaint first. We no longer respect "values." But what have we been learning to do this past fifty years? Ethnic values, religious values, the

A? order

Healy's mistake?

values of social justice—most of the legislation since the New Deal has striven to teach us new respect for values and with some success. If we have failed, it certainly has not been for lack of trying. Values and our supposed lack of them are constantly in our mouths and in our minds. Are we less principled than those in earlier times? I can only say, "Lady, open a history book, any history book." Never, for better or worse, has there been a time of more delicate feelings, of a more relentless pursuit of values in all their anfractuositities. We are all the children of Laurence Sterne's Uncle Toby. Far from neglecting how "deeply we feel," we seem often to debate nothing else, from talk shows to an educational system that has made "facts" into a dirty word. Whether or not our world turns out better or worse than earlier times (I would take my stand on better) it will not be for lack of debate about values and deep feelings. As for the state of our souls, I'm not so brave as Healy is, either to debate about them or to try to straighten them out. Like the first Queen Elizabeth, "I would make no windows into men's souls." That, as the good Queen so well knew, leads to the rack and the stake. Healy's social critique, then, is not new or profound or, so far as we can determine, any truer of our time than of any earlier one.

Now her critique of technology. As so often with humanist critiques, a standard satirical load is simply dump-trucked onto technology as a general-purpose villain. Again, this is not a new coupling. The relationship between virtue ("morals," "values") and the means of human communication, full as it has always been of "feigning" of one sort or another, has always been problematic. Humanist teaching since the Renaissance has argued that it was a good relationship, and the "humanities" curriculum has been relying on this unproved relationship ever since Quintilian made it in his compendium on classical education, the *Institutes*. The humanities, unlike the sciences, teach us values and moral depth. Quintilian at least posed the argument honestly: Is the orator always a good man? Does rhetorical training, the training in the word that has always stood at the center of the humanities, always by its nature, produce good men or only good orators? Quintilian answered good men. C. S. Lewis gave a less facile answer. The few, the really good readers, are by no means always good men, nor the many always bad ones. Two different kinds of talent, and neither dependent on reading.

Healy has turned the Quintilian assertion on its head. We can make a direct causal connection between a communications technology and moral virtue, and in the case of the digital computer, it is a negative one. Computers corrupt the mind and soul. It is a pretty big assertion. A gigantic one, in fact. Each reader will have to decide whether the many educational studies that Healy cites prove the

causal relationship or only assert it. But we ought not to forget that it is a causal relationship that has been asserted about every big change in communications technology, as well as about social changes of all sorts, and that it makes assumptions about the nature of the self and of society that have, likewise, been debated at least since Plato maligned the sophists.

As with Birkerts, the real issue is whether the central self, the rich human interiority that both he and Healy seek to defend, is to be conceived, and sustained, as existing on its own or only in alternation with the social self. If the center lies in vital and vibrant movement from the one to the other, then the real question about computers as a communications technology is whether they enhance this vital oscillation or try to shut it down.

I argue that they encourage it; if so, perhaps the sky will not fall as words migrate from page to screen. Mitchell Stephens, in *The Rise of the Image, the Fall of the Word*, thinks that the sky of conceptual thought may stay up after all. His thinking about television comes as a great relief after the prophets of doom. He points out that television to date has been an imitative medium: "There is only one sight this audience has not seen much of during this first era of video: original uses of moving images."

Stephens is arguing that the vast resources of the moving image can create a new dimension of creativity and human expression, one with expressive powers equal to that of the written word. "We live, however, in a culture that, despite the proliferation of images, not only has little faith in their ability but has at times been actively antagonistic toward them." His argument for images is not ecstatic or simple-minded ("For certain important purposes, a picture may actually be worth *less* than a single, relatively narrow, well-placed word") and it is an argument for moving images, for what video excels at. He believes that "once we move beyond simply aiming cameras at stage plays, conversations or sporting events and perfect original uses of moving images, video can help us gain new slants on the world, new ways of seeing. It can capture more of the tumult and confusions of contemporary life than tend to fit in lines of type. Through its ability to step back from scenes and jump easily between scenes, video can also facilitate new, or at least previously underused, ways of thinking." I think he is right, and I think that we can learn a lot about the hidden dynamic of text, what we call style, by pondering these powers and using them to examine fixed text. But, whatever the powers of textual expression as against those of "complex seeing," as Stephens puts it, we'll learn about these powers only by exploring them. Allowing them to compete with one another.

I remain enamored of reading text. Maybe "addicted" is not too strong a

selfish?

Oscillations -  
at v through  
interior self  
social self

word. Piles of unread books are piles of hidden gold. I want to get at them. I also have faith in written alphabetic text. It will continue to do what it does best, what it has always done best. If other forms of expression relieve it of some duties that they can better perform, why should we lament? "Paraventure," as Chaucer said, "thou has cause to singe." It is the competitive economics of attention that will tell us which medium does what best. We should not be surprised that this competition, like other kinds, disturbs as well as refines.

## CHAPTER FIVE

{STYLE/SUBSTANCE  
MATRIX}

Style and substance, fluff and stuff are loose and baggy categories but useful ones even so. Important versus peripheral, planned versus spontaneous, natural versus mannered, appearance versus reality, inside versus outside, why versus how, manner versus matter: we must make such distinctions every day. Confusingly enough, though, such pairings describe both the world and what we think is important in it, so the opposites in each pair can change places in a wink.

If you are a car designer, for you the style of the car will be the substance. If you are a philosopher, "what you think about things" will be the "things" of your world.

Such loose but handy categories do not endear themselves to the scientific mind, either physical or social, and rightly so. What good are terms if they can change places with their opposites just by how you look at them? Worse still, if you can't define the one without the other, if you can't define "backstage" without defining "front stage." Such definition by oscillation causes the poets no problem. So Wallace Stevens:

Rationality is only an instrumental concept: it refers to how people go about achieving their goals. Where do goals come from? In traditional "narrow economics" we do not ask this question.

Jack Hirshleifer and David Hirshleifer, *Price Theory and Applications*

In the inanimate action of matter upon matter, the motion produced can be but equal to the force of the moving power; but the operations of life, whether private or public, admit no such laws. *The caprices of voluntary agents laugh at calculation.*

Samuel Johnson, *Thoughts on the Late Transactions respecting Falkland's Islands* (my emphasis)