

Chapter 2

THE PRINTING PRESS AND THE NEW ADULT

It is obvious that for an idea like childhood to come into being, there must be a change in the adult world. And such a change must be not only of a great magnitude but of a special nature. Specifically, it must generate a new definition of adulthood. During the Middle Ages there were several social changes, some important inventions, such as the mechanical clock, and many great events, including the Black Death. But nothing occurred that required that adults should alter their conception of adulthood itself. In the middle of the fifteenth century, however, such an event did occur: the invention of the printing press with movable type. The aim of this chapter is to show how the press created a new symbolic world that required, in its turn, a new conception of adulthood. The new adulthood, by definition, excluded children. And as children were expelled from the adult world it became necessary to find another world for them to inhabit. That other world came to be known as childhood.

There are at least seven cities that claim to be the birthplace of the printing press, each of them designating a different man

as the inventor. Such a dispute, all by itself, provides us with an example of one of the most astonishing effects of the printing press: It greatly amplified the quest for fame and individual achievement. "It is no accident," Elizabeth Eisenstein remarks in *The Printing Press As an Agent of Change*, ". . . that printing is the first 'invention' which became entangled in a priority struggle and rival national claims."¹ Why no accident? Because, she suggests, the possibility of having one's words and work fixed forever created a new and pervasive idea of selfhood. The printing press is nothing less than a time-machine, easily as potent and as curious as any one of Mr. H. G. Wells's contraptions. Like the mechanical clock, which was also a great time-machine, the printing press captures, domesticates, and transforms time, and in the process alters humanity's consciousness of itself. But whereas the clock, as Lewis Mumford contends, eliminated Eternity as the measure and focus of human actions, the printing press restored it. Printing links the present with forever. It carries personal identity into realms unknown. With the printing press, forever may be addressed by the voice of an individual, not a social aggregate.

No one knows who invented the stirrup, or the longbow, or the button, or even eyeglasses, because the question of personal accomplishment was very nearly irrelevant in the medieval world. Indeed, prior to the printing press the concept of a writer, in the modern sense, did not exist. What did exist is described in detail by Saint Bonaventura, who tells us that in the thirteenth century there were four ways of making books:

A man might write the works of others, adding and changing nothing, in which case he is simply called a "scribe." . . . Another writes the work of others with additions which are not his own; and he is called a "compiler." . . . Another writes both others' work and his own, but with others' work in principal place, add-

ing his own for purposes of explanation; and he is called a "commentator." . . . Another writes both his own work and others' but with his own work in principal place adding others' for purposes of confirmation; and such a man should be called an "author." . . .²

Saint Bonaventura not only does not speak of an original work in the modern sense but makes it clear that by writing, he is referring in great measure to the actual task of writing the words out, which is why the concept of individual, highly personal authorship could not exist within a scribal tradition. Each writer not only made mistakes in copying a text, but was free to add, subtract, clarify, update, or otherwise reconceive the text as he thought necessary. Even such a cherished document as the Magna Charta, which was read twice a year in every shire in England, was by 1237 the subject of some controversy over which of several versions was authentic.³

After printing, the question of who wrote what became important, as did the question of who did what. Posterity became a living idea, and which names could legitimately live there was a matter worth fighting about. As you can infer from the last sentence in Chapter One, I have accommodated an established tradition by settling on Johann Gensfleisch Gutenberg as the inventor of the printing press with movable type, although the earliest dated example of such printing is, in fact, the Mainz Psalter printed by Johann Fust and Peter Shoeffler, two of Gutenberg's partners. But whoever is truly entitled to the claim—Gutenberg, Laurens Coster, Nicolas Jenson, Fust, Shoeffler, et al⁴—this much is clear: When Gutenberg announced that he had manufactured a book "without the help of reed, stylus, or pen but by the wondrous agreement, proportion, and harmony of punches and types . . .,"⁵ he and any other printers could not have known that they constituted an irresistible revolutionary force; that their infernal machines were, so to speak, the typescript

on the wall, spelling out the end of the medieval world. Although many scholars have given expression to this fact, Myron Gilmore's statement in *The World of Humanism* sums it up most succinctly: "The invention of printing with movable type brought about the most radical transformation in the conditions of intellectual life in the history of Western civilization. . . . Its effects were sooner or later felt in every department of human activity."⁶

To understand how those effects have a bearing on the invention and growth of childhood, we may take as a guide the teachings of Harold Innis. Innis stressed that changes in communication technology invariably have three kinds of effects: They alter the structure of interests (the things thought about), the character of symbols (the things thought with), and the nature of community (the area in which thoughts develop).⁷ To put it as simply as one can, every machine is an idea, or a conglomerate of ideas. But they are not the sort of ideas that lead an inventor to conceive of a machine in the first place. We cannot know, for example, what was in Gutenberg's mind that led him to connect a winepress to book manufacturing, but it is a safe conjecture that he had no intention of amplifying individualism or, for that matter, of undermining the authority of the Catholic Church. There is a sense in which all inventors are, to use Arthur Koestler's word, sleepwalkers. Or perhaps we might call them Frankensteins, and the entire process, the Frankenstein Syndrome: One creates a machine for a particular and limited purpose. But once the machine is built, we discover—sometimes to our horror, usually to our discomfort, always to our surprise—that it has ideas of its own; that it is quite capable not only of changing our habits but, as Innis tried to show, of changing our habits of mind.

A machine may provide us with a new concept of time, as did the mechanical clock. Or of space and scale, as did the telescope. Or of knowledge, as did the alphabet. Or of the possibilities of improving human biology, as did eyeglasses.

To say it in James Carey's bold way: We may find that the structure of our consciousness has been reshaped to parallel the structure of communication,⁸ that we have become what we have made.

The effects of technology are always unpredictable. But they are not always inevitable. There are many instances where a "Frankenstein's monster" was created who, upon waking, looked around, judged himself to be in the wrong place at the wrong time, and went back to sleep. In the early part of the eighth century the Anglo-Saxons had the stirrup available but no genius to see its possibilities. The Franks had both the stirrup and Charles Martel's genius, and as a consequence employed the stirrup to create a new means of war, not to mention an entirely new social and economic system, i.e., feudalism.⁹ The Chinese and the Koreans (who invented movable metal type prior to Gutenberg) may or may not have had a genius available to see the possibilities of letterpress printing, but what they definitely did not have available were letters—that is, an alphabetic system of writing. Thus, their "monster" returned to its slumber. Why the Aztecs, who invented the wheel, thought its possibilities were exhausted after attaching it to children's toys is still a mystery, but nonetheless another example of the noninevitability of technology's infusing a culture with new ideas.

Lynn White, Jr., in using still another metaphor to make this point, remarks: "As our understanding of the history of technology increases, it becomes clear that a new device merely opens a door; it does not compel one to enter. The acceptance or rejection of an invention, or the extent to which its implications are realized if it is accepted, depends quite as much upon the condition of a society, and upon the imagination of its leaders, as upon the nature of the technological item itself."¹⁰

In the case of Gutenberg's press, we know, of course, that European culture was ready to receive it. Europe not only had an alphabetic writing system of two thousand years

standing but a fairly rich manuscript tradition, which meant that there were important texts waiting to be printed. The Europeans knew how to manufacture paper, which they had been doing for two hundred years. For all of the widespread illiteracy, there did exist scribes who could read and write, and could teach others to do so. The revival of learning in the thirteenth century, and the rediscovery of the wisdom of classical culture, had whetted appetites for books. Then, too, the growth of commerce and the beginnings of the age of exploration generated a need for news, for durable contracts, for deeds, for reliable and standardized maps.

We may say, then, that the intellectual condition of Europe in the mid-fifteenth century made the printing press necessary, which accounts, no doubt, for the fact that so many men in different places were working on the problem at the same time. To use White's metaphor, the printing press opened a door upon which European culture had been anxiously knocking. And when it was finally opened, the entire culture went flying through.

No geniuses were required to discern some of the implications of printing. Within fifty years after the invention of the press more than eight million books had been printed. By 1480 there were presses in a hundred and ten towns in six different countries, fifty presses in Italy alone. By 1482 Venice was the world's printing capital, and Aldus Manutius, a Venetian, was probably the busiest printer in Christendom. The sign outside his shop indicated a flair for the apt pun as well as the state of his business: "If you would speak with Aldus, hurry—time presses." Half of Aldus's employees were Greek exiles or refugees, so that at the time of his death, in 1515, every known Greek author had been translated and printed.¹¹

At about the time of Aldus's death the printing press launched the career of the first journalist, the first literary blackmailer, and the first mass-producer of pornography, all in the person of Pietro Aretino.¹² Born of lowly origins and

without education, Aretino understood intuitively that the printing press was an instrument of publicity—that is to say, he invented the newspaper, and it is to him we may also ascribe the origin of confessional writing. With few exceptions, e.g., Saint Augustine's *Confessions*, there was no literary tradition of intimate disclosure, no established "voice" or tone by which private thoughts were expressed publicly. Certainly there were no rhetorical conventions for addressing a throng that did not exist except in the imagination.¹³ Receiving instruction from no one (for there was none to be had), Aretino rushed ahead in print with a stream of anticlerical obscenities, libelous stories, public accusations, and personal opinion, all of which have become part of our journalistic tradition and are to be found still thriving in the present day. His invention of "yellow" journalism and a style in which to express it made him both rich and famous. He was known in his time as the "scourge of Princes," the Citizen Kane of his day.

If the work of Aretino represents the sordid side of a new literary tradition that addresses a mass but unseen public in intimate terms, then the work of Montaigne represents its more wholesome side. Born in 1533, when Aretino was already forty-one years old, Montaigne invented a style, a form of address, a persona, by which a unique individual could, with assurance and directness, address the unseen living, as well as posterity. Montaigne invented the personal essay, which is to individualism what ballads were to collective consciousness—personal history, as against public history. For all of its modesty, humor, and high intelligence, Montaigne's writing does not celebrate community but celebrates only himself—his uniqueness, his quirks, his prejudices. When, four hundred years, later Norman Mailer wrote *Advertisements for Myself*, he was merely continuing, and giving an apt name to, a tradition established by Montaigne—the writer as self-publicist, and discloser, the writer as individual in opposition to the community. As Marshall McLuhan remarked in his characteristic way, "With print the discovery of

the vernacular as a PA system was immediate."¹⁴ He had in mind not only Aretino and Montaigne but especially François Rabelais, who was second to none in his capacity for self-assertion and celebration. He boasted, for example, that his *Gargantua* had sold more copies in two months than the Bible in ten years.¹⁵ For this remark he was denounced as ungodly and blasphemous, the entire episode calling to mind similar denunciations, made more recently, of John Lennon for his remark that The Beatles were more influential than Jesus Christ. The point is that scribal culture had worked against the idea of intellectual property rights and therefore of intellectual individuality. As Elizabeth Eisenstein notes, "The conditions of scribal culture . . . held narcissism in check."¹⁶ Print enabled it to break free.

At the same time as the printing press unleashed a heightened and unabashed self-consciousness in writers, it created a similar attitude in readers. For prior to printing, all human communication occurred in a social context. Even such reading as was done used as its model the oral mode, the reader speaking the words aloud while others followed along.¹⁷ But with the printed book another tradition began: the isolated reader and his private eye. Orality became muted, and the reader and his response became separated from a social context. The reader retired within his own mind, and from the sixteenth century to the present what most readers have required of others is their absence, or, if not that, their silence. In reading, both the writer and reader enter into a conspiracy of sorts against social presence and consciousness. Reading is, in a phrase, an antisocial act.

Thus, at both ends of the process—production and consumption—print created a psychological environment within which the claims of individuality became irresistible. This is not to say that individualism was created by the printing press, only that individualism became a normal and acceptable psychological condition. As Leo Lowenthal remarks, "the prevailing philosophy of human nature since the Renaissance

has been based on the conception of each individual as a deviant case whose existence consists very largely in his efforts to assert his personality against the restrictive and levelling claims of society."¹⁸

Following Innis's lead, i.e., his insight that a new communication technology alters the structure of our interests—we may say, then, that the printing press gave us our selves, as unique individuals, to think and talk about. And this intensified sense of self was the seed that led eventually to the flowering of childhood. Childhood did not, of course, emerge overnight. It took nearly two hundred years to become a seemingly irreversible feature of Western civilization. **But it could not have happened without the idea that each individual is important in himself, that a human mind and life in some fundamental sense transcend community.** For as the idea of personal identity developed, it followed inexorably that it would be applied to the young as well, so that, for example, by the eighteenth century the acceptance of the inevitability of the death of children (Ariès calls it the concept of "necessary wastage") had largely disappeared. In fact, near the end of the sixteenth century the death of a child began to be represented in various ways on parents' tombs. A macabre fact, perhaps, but indicative of a growing awareness that everyone's life counts.

But individualism alone could not have produced childhood, which requires a compelling basis for separating people into different classes. For that, something else needed to happen. And it did. For want of a better term, I shall call it a "knowledge gap." Within fifty years after printing had been invented, it became obvious that the communication environment of European civilization was dissolving and reconstituting itself along different lines. A sharp division developed between those who could read and those who could not, the latter being restricted to a medieval sensibility and level of interest, the former being propelled into a world of new facts and perceptions. With print, new things to talk about pro-

liferated. And they were all in books, or at least in printed form. Lewis Mumford describes the situation this way: "More than any other device, the printed book released people from the domination of the immediate and the local . . . print made a greater impression than actual events. . . . To exist was to exist in print: the rest of the world tended gradually to become more shadowy. *Learning became book-learning* [italics mine]. . . ." ¹⁹

What sort of information was in books? What things were available to learn? There were, first of all, "how to do it" books: books on metallurgy, botany, linguistics, good manners, and, at long last, pediatrics. *The Boke of Chyldren* by Thomas Phaire, published in 1544, is generally considered to be the first book on pediatrics written by an Englishman. (An Italian, Paolo Bagellardo, published an earlier one in 1498.) In his book, Phaire recommends the use of teething rings, and provides a comprehensive list of "grevious and perilous diseases" of children, including "apostume of the brayne" (probably meningitis), terrible dreams, itching, blood-shot eyes, colic and rumbling of the stomach.²⁰ Publication of books on pediatrics as well as those on manners is a strong indication that the concept of childhood had already begun to form, less than a century after the printing press. **But the point here is that the printing press generated what we call today a "knowledge explosion." To be a fully functioning adult required one to go beyond custom and memory into worlds not previously known about or contemplated.** For in addition to the general information, such as was found in "how to" books and assorted guides and manuals, the world of commerce was increasingly made up of printed paper: contracts, deeds, promissory notes, and maps. (Not surprisingly, in an environment in which information was becoming standardized and repeatable, mapmakers began to exclude "Paradise" from their charts on the grounds that its location was too uncertain.²¹)

In fact, so much new information, of so many diverse types,

was being generated that bookmakers could no longer use the scribal manuscript as their model of a book. By mid-sixteenth century, printers began to experiment with new formats, among the most important innovation being the use of Arabic numerals to number pages. The first known example of such pagination is Johann Froben's first edition of Erasmus's *New Testament*, printed in 1516. Pagination led inevitably to more accurate indexing, annotation, and cross-referencing, which in turn either led to or was accompanied by innovations in punctuation marks, section heads, paragraphing, title paging, and running heads. By the end of the sixteenth century the machine-made book already had a typographic form and a look—indeed, functions—comparable to books of today. But even earlier in the century printers were concerned with the aesthetics and efficiency of book formats. The printer of Machiavelli's *First Decennale* bitterly complained about a pirated edition of that highly successful book. He described the spurious edition as “a miserable cheapjack . . . badly bound, with no margins, tiny title pages, with no endpapers front or back, crooked type, printer's errors in many places.”²² And this a mere fifty years after the invention of the press.

Here it is worth recalling Harold Innis's principle that new communication technologies not only give us new things to think about but new things to think with. The form of the printed book created a new way of organizing content, and in so doing, it promoted a new way of organizing thought. The unyielding linearity of the printed book—the sequential nature of its sentence-by-sentence presentation, its paragraphing, its alphabetized indices, its standardized spelling and grammar—led to the habits of thinking that James Joyce mockingly called ABCED-mindedness, meaning a structure of consciousness that closely parallels the structure of typography. This effect of printing is a point that both Harold Innis and Marshall McLuhan extravagantly asserted; but even such a cautious scholar as Elizabeth Eisenstein believes that the emerging format of books, its particular way of codifying

information, “helped to reorder the thought of all readers, whatever their profession.”²³

There can be little doubt that the organization of books into chapters and sections came to be the accepted way of organizing a subject: the form in which books presented material became the logic of the discipline. Eisenstein gives an interesting case in point from the field of law. The medieval teacher of the *Corpus Juris* could not demonstrate to either his students or himself how each component of the law was related to the logic of the whole because very few teachers had ever seen the *Corpus Juris* as a whole. But beginning in 1553 a print-oriented generation of legal scholars undertook the task of editing the entire manuscript, including reorganizing its parts, dividing it into coherent sections, and indexing citations. By so doing, they made the ancient compilation entirely accessible, stylistically intelligible, and internally consistent, which is to say, they reinvented the subject.²⁴ Similarly, as Eisenstein notes, “The mere preparation of differently graded textbooks for teaching varied disciplines encouraged a re-assessment of inherited procedures and a rearrangement of approaches to diverse fields.”²⁵ In other words, the availability of different texts on the same subject required that there be consistency in how parts were sequenced; and in determining which things came first and which last, textbook writers were recreating their fields.

At the same time, and inevitably, sixteenth-century editors of books became preoccupied with clarity and logic of organization. “The . . . doctrine that every subject could be treated topically,” writes Gerald Strauss, “that the best kind of exposition was that which proceeded by analysis, was enthusiastically adopted by publishers and editors.”²⁶ What they were adopting, of course, was a value as to the best way of organizing one's thinking on a subject. It is a value inherent in the structure of books and typography. But by no means the only one. As calligraphy disappeared, so that there was a loss of idiosyncratic script, the impersonality and repeatability of

typescript assumed a certain measure of authority. To this day—and notwithstanding the individuality of authors—there is a tendency to believe what appears in print. Indeed, wherever the mark of a unique individual is absent from the printed page, as in textbooks and encyclopedias, the tendency to regard the printed page as a sacrosanct voice of authority is almost overwhelming.

What is being said here is that typography was by no means a neutral conveyor of information. It led to a reorganization of subjects, an emphasis on logic and clarity, an attitude toward the authority of information. It also led to new perceptions of literary form. Prose and poetry, for example, became distinguished from one another by the way in which words were distributed on the printed page. And, of course, the structure of the printed page as well as the portability and repeatability of the printed book played a decisive role not only in the creation of the essay but also in the creation of what became known as the novel. Many of the earliest novelists were themselves printers, such as Samuel Richardson. And in writing what we might call our first science fiction novel (his *Utopia*), Sir Thomas More worked at every stage with his printer. All of which is to say that we can never underestimate the psychological impact of language's massive migration from the ear to the eye, from speech to typography. To be able to *see* one's own language in such durable, repeatable, and standardized form led to the deepest possible relationship to it. Today, with written language all around us so that we cannot manage our affairs without the capacity to read, it is difficult for us to imagine the wonder and significance of reading in the sixteenth and seventeenth centuries. So powerful—perhaps even magical—was the capacity to read that it could save a man from the gallows. In England, for example, a petty thief who could read a sentence from the Bible merely had his thumbs scarred; one who could not met a different fate. "The said Paul reads, to be branded; the said William does not read, to be hanged." This from the judicial

record of the sentencing of two men convicted of robbing the house of the earl of Sussex in 1613.²⁷

Print made the vernacular into a mass medium for the first time. This fact had consequences not only for individuals but for nations. There can be little doubt that fixed and visualizable language played an enormous role in the development of nationalism. Indeed, linguistic chauvinism coincides exactly with the development of printing: the idea of a "mother tongue" was a product of typography. And so was the idea of Protestantism. There is no upheaval more directly and uncontestedly associated with printing than the Protestant Reformation. For this assertion we have no better authority than Martin Luther himself, who said of printing that it was "God's highest and extremest act of grace, whereby the business of the Gospel is driven forward." Lutheranism and the book are inseparable. And yet for all of Luther's astuteness in the use of printed pamphlets and books as a means of religious propaganda, even he was surprised on occasion by the unsuspected powers of print. "It is a mystery to me," he wrote in a letter to the Pope, "how my theses . . . were spread to so many places. They were meant exclusively for our academic circle here. . . . They were written in such a language that the common people could hardly understand them." Perhaps Luther would not have been so mystified if he had known of Socrates' warning about writing, as expressed in the *Phaedrus*. "Once a word is written," Socrates said, "it goes rolling all about, comes indifferently among those who understand it and those whom it nowise concerns, and is unaware to whom it should address itself and to whom it should not do so." And Socrates did not have in mind the printed book, which compounds the problem a hundredfold. For surely what Luther overlooked here was the sheer *portability* of printed books. Although his theses were written in academic Latin, they were easily transported throughout Germany and other countries, and printers just as easily had them translated into vernaculars.

Luther, of course, was a great advocate of vernacular print-

ing and exploited the fact that the written word goes rolling all about "unaware to whom it should address itself." He wrote a German edition of the Bible so that the Word of God could reach the largest number of people. It would take us some way off the track to discuss here the many interrelations between print and religious rebellion, but it is necessary to stress the obvious fact that the printing press placed the Word of God on every family's kitchen table, and in a language that could be understood. With God's word so accessible, Christians did not require the papacy to interpret it for them. Or so millions of them came to believe. "Christianity," writes Lawrence Stone, "is a religion of the book, namely the Scriptures, and once this book ceased to be a closely guarded secret fit only to be read by the priests, it generated pressure for the creation of a literate society."²⁸ The Bible became an instrument to think about, but also an instrument to think *with*. For if ever there was an instance of a medium and a message precisely coinciding in their biases, it is the case of printing and Protestantism. Not only did both reveal the possibilities of individual thought and action, but polyglot versions of the Bible transformed the Word of God as revealed in the medieval Latin Bible into the *words* of God. Through print, God became an Englishman, or a German, or a Frenchman, depending on the vernacular in which His words were revealed. The effect of this was to strengthen the cause of nationalism while weakening the sacred nature of scripture. The eventual replacement of love of God with love of Country, from the eighteenth century to the present, may well be one of the consequences of printing. For the past two centuries, for example, Christians have been inspired to make war almost exclusively in the interests of nationhood; God has been left to fend for Himself.

The replacement of medieval, Aristotelian science by modern science may also be attributed in large measure to the press. Copernicus was born at the end of the fifteenth century, and Andreas Vesalius, Tycho Brahe, Francis Bacon, Galileo,

Johannes Kepler, William Harvey, and Descartes were all born in the sixteenth; that is to say, the foundations of modern science were laid within one hundred years after the invention of the printing press. One may get a sense of how dramatic was the changeover from medieval thought to modern science by contemplating the year 1543. In that year both Copernicus's *De Revolutionibus* and Vesalius's *De Fabrica* appeared, the former reconstituting astronomy, the latter, anatomy. How did the new communication environment produce such an outpouring of scientific discovery and genius?

In the first place, print not only created new methods and sources of data collection but vastly increased communication among scientists on a continent-wide basis. Second, the thrust toward standardization resulted in uniform mathematical symbols, including the replacement of Roman with Arabic numerals. Thus, Galileo could refer to mathematics as the "language of Nature," with assurance that other scientists could speak and understand that language. Moreover, standardization largely eliminated ambiguity in texts and reduced error in diagrams, charts, tables, and maps. By making available repeatable visual aids, print made nature appear more uniform and therefore more accessible.

Printing also led to the popularization of scientific ideas through the use of vernaculars. Although some sixteenth-century scientists—Harvey, for example—insisted on writing in Latin, others, such as Bacon, eagerly employed the vernacular in an effort to convey the new spirit and methods of scientific philosophy. The day of the alchemists' secrets ended. Science became public business. Bacon's *Advancement of Learning*, published in 1605, is the first major scientific tract written in English. A year later, Galileo published a vernacular pamphlet that he apparently printed in his own house. Galileo was not insensible to the power of vernacular printing as a means of self-publicity, and, in fact, used it as a method of establishing his claim as inventor of the telescope. Then, too, printing made available a wide assortment of useful

classical texts that medieval scholars were either unaware of or had no access to. In 1570, for example, the first English translation of Euclid became available.

By the end of the sixteenth century, not only Euclid but astronomy, anatomy, and physics were available to anyone who could read. New forms of literature were available. The Bible was available. Commercial documents were available. Practical knowledge about machines and agriculture and medicine was available. During the course of the century an entirely new symbolic environment had been created. That environment filled the world with new information and abstract experience. It required new skills, attitudes, and, especially, a new kind of consciousness. Individuality, an enriched capacity for conceptual thought, intellectual vigor, a belief in the authority of the printed word, a passion for clarity, sequence, and reason—all of this moved into the forefront, as the medieval oral environment receded.

What had happened, simply, was that Literate Man had been created. And in his coming, he left behind the children. For in the medieval world neither the young nor the old could read, and their business was in the here and now, in “the immediate and local,” as Mumford put it. That is why there had been no need for the idea of childhood, for everyone shared the same information environment and therefore lived in the same social and intellectual world. But as the printing press played out its hand it became obvious that a new kind of adulthood had been invented. From print onward, adulthood had to be earned. It became a symbolic, not a biological, achievement. From print onward, the young would have to *become* adults, and they would have to do it by learning to read, by entering the world of typography. And in order to accomplish that they would require education. Therefore, European civilization reinvented schools. And by so doing, it made childhood a necessity.