ALSO BY NICHOLAS CARR

The Big Switch: Rewiring the World, from Edison to Google

Does IT Matter?

THE SHALLOWS

What the Internet Is Doing to Our Brains

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Prologue

THE WATCHDOG AND THE THIEF

In 1964, just as the Beatles were launching their invasion of America's airwaves, Marshall McLuhan published *Understanding Media: The Extensions of Man* and transformed himself from an obscure academic into a star. Oracular, gnomic, and mind-bending, the book was a perfect product of the sixties, that now-distant decade of acid trips and moon shots, inner and outer voyaging. *Understanding Media* was at heart a prophecy, and what it prophesied was the dissolution of the linear mind. McLuhan declared that the "electric media" of the twentieth century—telephone, radio, movies, television—were breaking the tyranny of text over our thoughts and senses. Our isolated, fragmented selves, locked for centuries in the private reading of printed pages, were becoming whole again, merging into the global equivalent of a tribal village. We were approaching "the technological simulation of consciousness, when the creative process of knowing will be collectively and corporately extended to the whole of human society."[1]

Even at the crest of its fame, *Understanding Media* was a book more talked about than read. Today it has become a cultural relic, consigned to media studies courses in universities. But McLuhan, as

much a showman as a scholar, was a master at turning phrases, and one of them, sprung from the pages of the book, lives on as a popular saying: "The medium is the message." What's been forgotten in our repetition of this enigmatic aphorism is that McLuhan was not just acknowledging, and celebrating, the transformative power of new communication technologies. He was also sounding a warning about the threat the power poses—and the risk of being oblivious to that threat. "The electric technology is within the gates," he wrote, "and we are numb, deaf, blind and mute about its encounter with the Gutenberg technology, on and through which the American way of life was formed."[2]

McLuhan understood that whenever a new medium comes along, people naturally get caught up in the information—the "content"—it carries. They care about the news in the newspaper, the music on the radio, the shows on the TV, the words spoken by the person on the far end of the phone line. The technology of the medium, however astonishing it may be, disappears behind whatever flows through it—facts, entertainment, instruction, conversation. When people start debating (as they always do) whether the medium's effects are good or bad, it's the content they wrestle over. Enthusiasts celebrate it; skeptics decry it. The terms of the argument have been pretty much the same for every new informational medium, going back at least to the books that came off Gutenberg's press. Enthusiasts, with good reason, praise the torrent of new content that the technology uncorks, seeing it as signaling a "democratization" of culture. Skeptics, with equally good reason, condemn the crassness of the content, viewing it as signaling a "dumbing down" of culture. One side's abundant Eden is the other's vast wasteland.

The Internet is the latest medium to spur this debate. The clash between Net enthusiasts and Net skeptics, carried out over the last two decades through dozens of books and articles and thousands of blog posts, video clips, and podcasts, has become as polarized as ever, with the former heralding a new golden age of access and participation and the latter bemoaning a new dark age of mediocrity and narcissism. The debate has been important—content does matter—but because it hinges on personal ideology and taste, it has gone down a cul-de-sac. The views have become extreme, the attacks personal. "Luddite!" sneers the enthusiast. "Philistine!" scoffs the skeptic. "Cassandra!" "Pollyanna!"

What both enthusiast and skeptic miss is what McLuhan saw: that in the long run a medium's content matters less than the medium itself in influencing how we think and act. As our window onto the world, and onto ourselves, a popular medium molds what we see and how we see it—and eventually, if we use it enough, it changes who we are, as individuals and as a society. "The effects of technology do not occur at the level of opinions or concepts," wrote McLuhan. Rather, they alter "patterns of perception steadily and without any resistance."[3] The showman exaggerates to make his point, but the point stands. Media work their magic, or their mischief, on the nervous system itself.

Our focus on a medium's content can blind us to these deep effects. We're too busy being dazzled or disturbed by the programming to notice what's going on inside our heads. In the end, we come to pretend that the technology itself doesn't matter. It's how we use it that matters, we tell ourselves. The implication, comforting in its hubris, is that we're in control. The technology is just a tool, inert until we pick it up and inert again once we set it aside.

McLuhan quoted a self-serving pronouncement by David Sarnoff, the media mogul who pioneered radio at RCA and television at NBC. In a speech at the University of Notre Dame in 1955, Sarnoff dismissed criticism of the mass media on which he had built his empire and his fortune. He turned the blame for any ill effects away from the technologies and onto the listeners and viewers: "We are too prone to make technological instruments the scapegoats for the sins of those who wield them. The products of modern science are not in themselves good or bad; it is the way they are used that determines their value." McLuhan scoffed at the idea, chiding Sarnoff for speaking with "the voice of the current somnambulism."[4]

Every new medium, McLuhan understood, changes us. "Our conventional response to all media, namely that it is how they are used that counts, is the numb stance of the technological idiot," he wrote. The content of a medium is just "the juicy piece of meat carried by the burglar to distract the watchdog of the mind."[5]

Not even McLuhan could have foreseen the feast that the Internet has laid before us: one course after another, each juicier than the last, with hardly a moment to catch our breath between bites. As networked computers have shrunk to the size of iPhones and BlackBerrys, the feast has become a movable one, available anytime, anywhere. It's in our home, our office, our car, our classroom, our purse, our pocket. Even people who are wary of the Net's ever-expanding influence rarely allow their concerns to get in the way of their use and enjoyment of the technology. The movie critic David Thomson once observed that "doubts can be rendered feeble in the face of the certainty of the medium."[6] He was talking about the cinema and how it projects its sensations and sensibilities not only onto the movie screen but onto us, the engrossed and compliant audience. His comment applies with even greater force to the Net. The computer screen bulldozes our doubts with its bounties and conveniences. It is so much our servant that it would seem churlish to notice that it is also our master.

One

HAL AND ME

"Dave, stop. Stop, will you? Stop, Dave. Will you stop?" So the supercomputer HAL pleads with the implacable astronaut Dave Bowman in a famous and weirdly poignant scene toward the end of Stanley Kubrick's *2001: A Space Odyssey*. Bowman, having nearly been sent to a deep-space death by the malfunctioning machine, is calmly, coldly disconnecting the memory circuits that control its artificial brain. "Dave, my mind is going," HAL says, forlornly. "I can feel it. I can feel it."

I can feel it too. Over the last few years I've had an uncomfortable sense that someone, or something, has been tinkering with my brain, remapping the neural circuitry, reprogramming the memory. My mind isn't going—so far as I can tell—but it's changing. I'm not thinking the way I used to think. I feel it most strongly when I'm reading. I used to find it easy to immerse myself in a book or a lengthy article. My mind would get caught up in the twists of the narrative or the turns of the argument, and I'd spend hours strolling through long stretches of prose. That's rarely the case anymore. Now my concentration starts to drift after a page or two. I get fidgety, lose the thread, begin looking for something else to do. I feel like I'm

always dragging my wayward brain back to the text. The deep reading that used to come naturally has become a struggle.

I think I know what's going on. For well over a decade now, I've been spending a lot of time online, searching and surfing and sometimes adding to the great databases of the Internet. The Web's been a godsend to me as a writer. Research that once required days in the stacks or periodical rooms of libraries can now be done in minutes. A few Google searches, some quick clicks on hyperlinks, and I've got the telltale fact or the pithy quote I was after. I couldn't begin to tally the hours or the gallons of gasoline the Net has saved me. I do most of my banking and a lot of my shopping online. I use my browser to pay my bills, schedule my appointments, book flights and hotel rooms, renew my driver's license, send invitations and greeting cards. Even when I'm not working, I'm as likely as not to be foraging in the Web's data thickets—reading and writing e-mails, scanning headlines and blog posts, following Facebook updates, watching video streams, downloading music, or just tripping lightly from link to link to link.

The Net has become my all-purpose medium, the conduit for most of the information that flows through my eyes and ears and into my mind. The advantages of having immediate access to such an incredibly rich and easily searched store of data are many, and they've been widely described and duly applauded. "Google," says Heather Pringle, a writer with *Archaeology* magazine, "is an astonishing boon to humanity, gathering up and concentrating information and ideas that were once scattered so broadly around the world that hardly anyone could profit from them."[1] Observes *Wired*'s Clive Thompson, "The perfect recall of silicon memory can be an enormous boon to thinking."[2]

The boons are real. But they come at a price. As McLuhan suggested, media aren't just channels of information. They supply the stuff of thought, but they also shape the process of thought. And what the Net seems to be doing is chipping away my capacity for concentration and contemplation. Whether I'm online or not, my mind

now expects to take in information the way the Net distributes it: in a swiftly moving stream of particles. Once I was a scuba diver in the sea of words. Now I zip along the surface like a guy on a Jet Ski.

Maybe I'm an aberration, an outlier. But it doesn't seem that way. When I mention my troubles with reading to friends, many say they're suffering from similar afflictions. The more they use the Web, the more they have to fight to stay focused on long pieces of writing. Some worry they're becoming chronic scatterbrains. Several of the bloggers I follow have also mentioned the phenomenon. Scott Karp, who used to work for a magazine and now writes a blog about online media, confesses that he has stopped reading books altogether. "I was a lit major in college, and used to be [a] voracious book reader," he writes. "What happened?" He speculates on the answer: "What if I do all my reading on the web not so much because the way I read has changed, i.e. I'm just seeking convenience, but because the way I THINK has changed?"[3]

Bruce Friedman, who blogs about the use of computers in medicine, has also described how the Internet is altering his mental habits. "I now have almost totally lost the ability to read and absorb a longish article on the web or in print," he says.[4] A pathologist on the faculty of the University of Michigan Medical School, Friedman elaborated on his comment in a telephone conversation with me. His thinking, he said, has taken on a "staccato" quality, reflecting the way he quickly scans short passages of text from many sources online. "I can't read *War and Peace* anymore," he admitted. "I've lost the ability to do that. Even a blog post of more than three or four paragraphs is too much to absorb. I skim it."

Philip Davis, a doctoral student in communication at Cornell who contributes to the Society for Scholarly Publishing's blog, recalls a time back in the 1990s when he showed a friend how to use a Web browser. He says he was "astonished" and "even irritated" when the woman paused to read the text on the sites she stumbled upon. "You're not supposed to read web pages, just click on the hypertexted words!" he scolded her. Now, Davis writes, "I read a lot—or at least

I should be reading a lot—only I don't. I skim. I scroll. I have very little patience for long, drawn-out, nuanced arguments, even though I accuse others of painting the world too simply."[5]

Karp, Friedman, and Davis—all well-educated men with a keenness for writing—seem fairly sanguine about the decay of their faculties for reading and concentrating. All things considered, they say, the benefits they get from using the Net—quick access to loads of information, potent searching and filtering tools, an easy way to share their opinions with a small but interested audience—make up for the loss of their ability to sit still and turn the pages of a book or a magazine. Friedman told me, in an e-mail, that he's "never been more creative" than he has been recently, and he attributes that "to my blog and the ability to review/scan 'tons' of information on the web." Karp has come to believe that reading lots of short, linked snippets online is a more efficient way to expand his mind than reading "250-page books," though, he says, "we can't yet recognize the superiority of this networked thinking process because we're measuring it against our old linear thought process."[6] Muses Davis: "The Internet may have made me a less patient reader, but I think that in many ways, it has made me smarter. More connections to documents, artifacts, and people means more external influences on my thinking and thus on my writing."[7] All three know they've sacrificed something important, but they wouldn't go back to the way things used to be.

For some people, the very idea of reading a book has come to seem old-fashioned, maybe even a little silly—like sewing your own shirts or butchering your own meat. "I don't read books," says Joe O'Shea, a former president of the student body at Florida State University and a 2008 recipient of a Rhodes Scholarship. "I go to Google, and I can absorb relevant information quickly." O'Shea, a philosophy major, doesn't see any reason to plow through chapters of text when it takes but a minute or two to cherry-pick the pertinent passages using Google Book Search. "Sitting down and going through a book from cover to cover doesn't make sense," he says. "It's not a good use of my time, as I can get all the information I need faster through the Web." As soon as you learn to be "a skilled hunter" online, he argues, books become superfluous.[8]

O'Shea seems more the rule than the exception. In 2008, a research and consulting outfit called nGenera released a study of the effects of Internet use on the young. The company interviewed some six thousand members of what it calls "Generation Net"—kids who have grown up using the Web. "Digital immersion," wrote the lead researcher, "has even affected the way they absorb information. They don't necessarily read a page from left to right and from top to bottom. They might instead skip around, scanning for pertinent information of interest."[9] In a talk at a recent Phi Beta Kappa meeting, Duke University professor Katherine Hayles confessed, "I can't get my students to read whole books anymore."[10] Hayles teaches English; the students she's talking about are students of literature.

People use the Internet in all sorts of ways. Some are eager, even compulsive adopters of the latest technologies. They keep accounts with a dozen or more online services and subscribe to scores of information feeds. They blog and they tag, they text and they twitter. Others don't much care about being on the cutting edge but nevertheless find themselves online most of the time, tapping away at their desktop, their laptop, or their mobile phone. The Net has become essential to their work, school, or social lives, and often to all three. Still others log on only a few times a day—to check their e-mail, follow a story in the news, research a topic of interest, or do some shopping. And there are, of course, many people who don't use the Internet at all, either because they can't afford to or because they don't want to. What's clear, though, is that for society as a whole the Net has become, in just the twenty years since the software programmer Tim Berners-Lee wrote the code for the World Wide Web, the communication and information medium of choice. The scope of its use is unprecedented, even by the standards of the mass media

of the twentieth century. The scope of its influence is equally broad. By choice or necessity, we've embraced the Net's uniquely rapid-fire mode of collecting and dispensing information.

We seem to have arrived, as McLuhan said we would, at an important juncture in our intellectual and cultural history, a moment of transition between two very different modes of thinking. What we're trading away in return for the riches of the Net—and only a curmudgeon would refuse to see the riches—is what Karp calls "our old linear thought process." Calm, focused, undistracted, the linear mind is being pushed aside by a new kind of mind that wants and needs to take in and dole out information in short, disjointed, often overlapping bursts—the faster, the better. John Battelle, a onetime magazine editor and journalism professor who now runs an online advertising syndicate, has described the intellectual frisson he experiences when skittering across Web pages: "When I am performing bricolage in real time over the course of hours, I am 'feeling' my brain light up, I [am] 'feeling' like I'm getting smarter."[11] Most of us have experienced similar sensations while online. The feelings are intoxicating—so much so that they can distract us from the Net's deeper cognitive consequences.

For the last five centuries, ever since Gutenberg's printing press made book reading a popular pursuit, the linear, literary mind has been at the center of art, science, and society. As supple as it is subtle, it's been the imaginative mind of the Renaissance, the rational mind of the Enlightenment, the inventive mind of the Industrial Revolution, even the subversive mind of Modernism. It may soon be yesterday's mind.

THE HAL 9000 computer was born, or "made operational," as HAL himself humbly put it, on January 12, 1992, in a mythical computer plant in Urbana, Illinois. I was born almost exactly thirty-three years earlier, in January of 1959, in another midwestern city, Cincinnati, Ohio. My life, like the lives of most Baby Boomers and Generation Xers, has unfolded like a two-act play. It opened with Analogue Youth and then, after a quick but thorough shuffling of the props, it entered Digital Adulthood.

When I summon up images from my early years, they seem at once comforting and alien, like stills from a G-rated David Lynch film. There's the bulky mustard-yellow telephone affixed to the wall of our kitchen, with its rotary dial and long, coiled cord. There's my dad fiddling with the rabbit ears on top of the TV, vainly trying to get rid of the snow obscuring the Reds game. There's the rolled-up, dew-dampened morning newspaper lying in our gravel driveway. There's the hi-fi console in the living room, a few record jackets and dust sleeves (some from my older siblings' Beatles albums) scattered on the carpet around it. And downstairs, in the musty basement family room, there are the books on the bookshelves—lots of books—with their many-colored spines, each bearing a title and the name of a writer.

In 1977, the year *Star Wars* came out and the Apple Computer company was incorporated, I headed to New Hampshire to attend Dartmouth College. I didn't know it when I applied, but Dartmouth had long been a leader in academic computing, playing a pivotal role in making the power of data-processing machines easily available to students and teachers. The college's president, John Kemeny, was a respected computer scientist who in 1972 had written an influential book called *Man and the Computer*. He had also, a decade before that, been one the inventors of BASIC, the first programming language to use common words and everyday syntax. Near the center of the school's grounds, just behind the neo-Georgian Baker Library with its soaring bell tower, squatted the single-story Kiewit Computation Center, a drab, vaguely futuristic concrete building that housed the school's pair of General Electric GE-635 mainframe computers. The mainframes ran the groundbreaking Dartmouth Time-Sharing System, an early type of network that allowed dozens of people to use the computers simultaneously. Time-sharing was the first manifestation of what we today call personal computing. It made possible, as

Kemeny wrote in his book, "a true symbiotic relationship between man and computer."[12]

I was an English major and went to great lengths to avoid math and science classes, but Kiewit occupied a strategic location on campus, midway between my dorm and Fraternity Row, and on weekend evenings I'd often spend an hour or two at a terminal in the public teletype room while waiting for the keg parties to get rolling. Usually, I'd fritter away the time playing one of the goofily primitive multiplayer games that the undergraduate programmers—"sysprogs," they called themselves—had hacked together. But I did manage to teach myself how to use the system's cumbersome word-processing program and even learned a few BASIC commands.

That was just a digital dalliance. For every hour I passed in Kiewit, I must have spent two dozen next door in Baker. I crammed for exams in the library's cavernous reading room, looked up facts in the weighty volumes on the reference shelves, and worked part-time checking books in and out at the circulation desk. Most of my library time, though, went to wandering the long, narrow corridors of the stacks. Despite being surrounded by tens of thousands of books, I don't remember feeling the anxiety that's symptomatic of what we today call "information overload." There was something calming in the reticence of all those books, their willingness to wait years, decades even, for the right reader to come along and pull them from their appointed slots. *Take your time*, the books whispered to me in their dusty voices. *We're not going anywhere.*

It was in 1986, five years after I left Dartmouth, that computers entered my life in earnest. To my wife's dismay, I spent nearly our entire savings, some $2,000, on one of Apple's earliest Macintoshes—a Mac Plus decked out with a single megabyte of RAM, a 20-megabyte hard drive, and a tiny black-and-white screen. I still recall the excitement I felt as I unpacked the little beige machine. I set it on my desk, plugged in the keyboard and mouse, and flipped the power switch. It lit up, sounded a welcoming chime, and smiled

at me as it went through the mysterious routines that brought it to life. I was smitten.

The Plus did double duty as both a home and a business computer. Every day, I lugged it into the offices of the management consulting firm where I worked as an editor. I used Microsoft Word to revise proposals, reports, and presentations, and sometimes I'd launch Excel to key in revisions to a consultant's spreadsheet. Every evening, I carted it back home, where I used it to keep track of the family finances, write letters, play games (still goofy, but less primitive), and—most diverting of all—cobble together simple databases using the ingenious HyperCard application that back then came with every Mac. Created by Bill Atkinson, one of Apple's most inventive programmers, HyperCard incorporated a hypertext system that anticipated the look and feel of the World Wide Web. Where on the Web you click links on pages, on HyperCard you clicked buttons on cards—but the idea, and its seductiveness, was the same.

The computer, I began to sense, was more than just a simple tool that did what you told it to do. It was a machine that, in subtle but unmistakable ways, exerted an influence over you. The more I used it, the more it altered the way I worked. At first I had found it impossible to edit anything on-screen. I'd print out a document, mark it up with a pencil, and type the revisions back into the digital version. Then I'd print it out again and take another pass with the pencil. Sometimes I'd go through the cycle a dozen times a day. But at some point—and abruptly—my editing routine changed. I found I could no longer write or revise anything on paper. I felt lost without the Delete key, the scrollbar, the cut and paste functions, the Undo command. I *had* to do all my editing on-screen. In using the word processor, I had become something of a word processor myself.

Bigger changes came after I bought a modem, sometime around 1990. Up to then, the Plus had been a self-contained machine, its functions limited to whatever software I installed on its hard drive. When hooked up to other computers through the modem, it took on

a new identity and a new role. It was no longer just a high-tech Swiss Army knife. It was a communications medium, a device for finding, organizing, and sharing information. I tried all the online services—CompuServe, Prodigy, even Apple's short-lived eWorld—but the one I stuck with was America Online. My original AOL subscription limited me to five hours online a week, and I would painstakingly parcel out the precious minutes to exchange e-mails with a small group of friends who also had AOL accounts, to follow the conversations on a few bulletin boards, and to read articles reprinted from newspapers and magazines. I actually grew fond of the sound of my modem connecting through the phone lines to the AOL servers. Listening to the bleeps and clangs was like overhearing a friendly argument between a couple of robots.

By the mid-nineties, I had become trapped, not unhappily, in the "upgrade cycle." I retired the aging Plus in 1994, replacing it with a Macintosh Performa 550 with a color screen, a CD-ROM drive, a 500-megabyte hard drive, and what seemed at the time a miraculously fast 33-megahertz processor. The new computer required updated versions of most of the programs I used, and it let me run all sorts of new applications with the latest multimedia features. By the time I had installed all the new software, my hard drive was full. I had to go out and buy an external drive as a supplement. I added a Zip drive too—and then a CD burner. Within a couple of years, I'd bought another new desktop, with a much larger monitor and a much faster chip, as well as a portable model that I could use while traveling. My employer had, in the meantime, banished Macs in favor of Windows PCs, so I was using two different systems, one at work and one at home.

It was around this same time that I started hearing talk of something called the Internet, a mysterious "network of networks" that promised, according to people in the know, to "change everything." A 1994 article in *Wired* declared my beloved AOL "suddenly obsolete." A new invention, the "graphical browser," promised a far more exciting digital experience: "By following the links—click, and the linked document appears—you can travel through the online world along paths of whim and intuition."[13] I was intrigued, and then I was hooked. By the end of 1995 I had installed the new Netscape browser on my work computer and was using it to explore the seemingly infinite pages of the World Wide Web. Soon I had an ISP account at home as well—and a much faster modem to go with it. I canceled my AOL service.

You know the rest of the story because it's probably your story too. Ever-faster chips. Ever-quicker modems. DVDs and DVD burners. Gigabyte-sized hard drives. Yahoo and Amazon and eBay. MP3s. Streaming video. Broadband. Napster and Google. BlackBerrys and iPods. Wi-Fi networks. YouTube and Wikipedia. Blogging and microblogging. Smartphones, thumb drives, netbooks. Who could resist? Certainly not I.

When the Web went 2.0 around 2005, I went 2.0 with it: I became a social networker and a content generator. I registered a domain, roughtype.com, and launched a blog. It was exhilarating, at least for the first couple of years. I had been working as a freelance writer since the start of the decade, writing mainly about technology, and I knew that publishing an article or a book was a slow, involved, and often frustrating business. You slaved over a manuscript, sent it off to a publisher, and, assuming it wasn't sent back with a rejection slip, went through rounds of editing, fact checking, and proofreading. The finished product wouldn't appear until weeks or months later. If it was a book, you might have to wait more than a year to see it in print. Blogging junked the traditional publishing apparatus. You'd type something up, code a few links, hit the Publish button, and your work would be out there, immediately, for all the world to see. You'd also get something you rarely got with more formal writing: direct responses from readers, in the form of comments or, if the readers had their own blogs, links. It felt new and liberating.

Reading online felt new and liberating too. Hyperlinks and search engines delivered an endless supply of words to my screen, alongside pictures, sounds, and videos. As publishers tore down their pay-

walls, the flood of free content turned into a tidal wave. Headlines streamed around the clock through my Yahoo home page and my RSS feed reader. One click on a link led to a dozen or a hundred more. New e-mails popped into my in-box every minute or two. I registered for accounts with MySpace and Facebook, Digg and Twitter. I started letting my newspaper and magazine subscriptions lapse. Who needed them? By the time the print editions arrived, dew-dampened or otherwise, I felt like I'd already seen all the stories.

Sometime in 2007, a serpent of doubt slithered into my info-paradise. I began to notice that the Net was exerting a much stronger and broader influence over me than my old stand-alone PC ever had. It wasn't just that I was spending so much time staring into a computer screen. It wasn't just that so many of my habits and routines were changing as I became more accustomed to and dependent on the sites and services of the Net. The very way my brain worked seemed to be changing. It was then that I began worrying about my inability to pay attention to one thing for more than a couple of minutes. At first I'd figured that the problem was a symptom of middle-age mind rot. But my brain, I realized, wasn't just drifting. It was hungry. It was demanding to be fed the way the Net fed it—and the more it was fed, the hungrier it became. Even when I was away from my computer, I yearned to check e-mail, click links, do some Googling. I wanted to be *connected*. Just as Microsoft Word had turned me into a flesh-and-blood word processor, the Internet, I sensed, was turning me into something like a high-speed data-processing machine, a human HAL.

I missed my old brain.

Two

THE VITAL PATHS

Friedrich Nietzsche was desperate. Sickly as a child, he had never fully recovered from injuries he suffered in his early twenties when he fell from a horse while serving in a mounted artillery unit in the Prussian army. In 1879, his health problems worsening, he'd been forced to resign his post as a professor of philology at the University of Basel. Just thirty-four years old, he began to wander through Europe, seeking relief from his many ailments. He would head south to the shores of the Mediterranean when the weather turned cool in the fall, then north again, to the Swiss Alps or his mother's home near Leipzig, in the spring. Late in 1881, he rented a garret apartment in the Italian port city of Genoa. His vision was failing, and keeping his eyes focused on a page had become exhausting and painful, often bringing on crushing headaches and fits of vomiting. He'd been forced to curtail his writing, and he feared he would soon have to give it up.

At wit's end, he ordered a typewriter—a Danish-made Malling-Hansen Writing Ball—and it was delivered to his lodgings during the first weeks of 1882. Invented a few years earlier by Hans Rasmus Johann Malling-Hansen, the principal of the Royal Institute for the