There is a tsunami of data that is crashing onto the beaches of the civilized world. This is a tidal wave of unrelated, growing data formed in bits and bytes, coming in an unorganized, uncontrolled, incoherent cacophony of foam. It's filled with flotsam and jetsam. It's filled with the sticks and bones and shells of inanimate and animate life. None of it is easily related, none of it comes with any organizational methodology. ■ As it washes up on our beaches, we see people in suits and ties skipping along the shoreline, men and women in fine shirts and blouses dressed for business. We see graphic designers and government officials, all getting their shoes wet and slowly submerging in the dense trough of stuff. Their trousers and slacks soaked, they walk stupidly into the water, smiling—a false smile of confidence and control. The tsunami is a wall of data—data produced at greater and greater speed, greater and greater amounts to store in memory, amounts that double, it seems, with each sunset. On tape, on disks, on paper, sent by streams of light. Faster, more and more and more. ■ Some of these people go back to their desks where, folded back and forth like accordions, are gobs of paper printouts of this stuff. They nod their heads and say "Yes, this is important, this is good stuff. The person sitting next to me, sitting in the next office down the aisle, they understand it, so I will smile, making believe I understand it too." ■ These same people read the newspaper, thinking they understand the issues of the day, whether it's the Savings and Loan crisis, the health-care crisis, Bosnia-Hercegovina, or taxes, or insurance. They nod their heads, knee-jerking to key words in headlines, but unable to tell anybody else, including themselves, the essence of any issue. ■ All day, from morning at home, to workday lunches, to dinner at night, out loud or to themselves, they "uh-huh, uh-huh, uh-huh" making believe they understand a reference to a name, a reference to a fact, the references to knowledge that supposedly make the world coherent. They "uh-huh" some friend, some teacher, a boss, a peer when a book or movie or magazine article, or piece of machinery, or software, or hardware is discussed. They "uh-huh" everybody because they were taught when they were young that it is not good to look stupid, that it is not good to say "I don't know," it is not good to ask questions, not good to focus on failure. Instead, the rewards come from acknowledging or answering everything with "I know." ■ You're supposed to look smart in our society. You are supposed to gain expertise and to sell it as the means of moving ahead in your career. You are supposed to focus on what you know how to do, and then do it better and better. You're supposed to revel in some niche of ability. That is where the rewards are supposed to come from. ■ Of course, when you sell your expertise—and what I mean by sell is to move ahead in a corporation, or sell an idea to a publisher, or sell an ability to a client—when you sell your expertise, by definition, you're selling from a limited repertoire. However, when you sell your ignorance to move ahead, when you sell your desire to learn about something, when you sell your de-

MAKING THE COMPLEX CLEAR The *Tokyo Access* guide shows the railway line encircling the city. The route looks quite abstract when compared with a map of its real path. But, it clarifies the fact that the route is essentially a circle around the city, making it easier to understand and remember. The actual route is pear-shaped, with a bump at the bottom twisting to the right. Since you can't get on and off the train between stops, it doesn't matter what twists the train route takes. What does matter is the essential path and the sequence of stops, with reference to a familiar place—the Imperial Palace. *Access* guides are shown on page 28.

sire to create and explore and navigate paths to knowledge, when you sell your *curiosity*—you sell from a bucket with an infinitely deep bottom that represents an unlimited repertoire. And, you sell in a way that's not intimidating, in a way that joins the explanation to the fascination that comes with understanding. ■ How opposite is our life from what we have been taught. Our educational system is based on the memorization of things we're not interested in, bulimically spewed out on a paper called a test, and then forgotten. We learn to use our short-term memory rather than long-term memory. Many of our interests are shunted aside. The teenagers' interest in music and cars and sports are looked on as second-rate themes for their lives instead of embraced as connections to all knowledge and wisdom. The car connects to the history of transportation, to our road systems, to our cities and our highways. It connects to the balance of payments and economics around the world. To steel and iron, and steel construction, and plastics and design. It connects to physics and mathematics and chemistry. It connects to foreign languages and culture. To medicine and governmental policy. And, all the things the car connects to connect to everything else. So do sports. And so does entertainment, which connects to technologies of all sorts, to design and hardware and software and information. Information is everything. We are what we read. ■ Well, let's talk about design. Unfortunately, design, which used to be a perfectly good word, means to make something look better for most people. A company invents or develops some new piece of electronic hardware. When it is finished it calls in a designer to wrap it up in a nice package. Then the company gets an engineer who understands how it works to write the instruction booklet. He suffers from the disease of familiarity, and so few customers really learn how to use the product. The designer picks the typefaces in that booklet and (maybe) puts a cover on it. The designer is not involved in the use, organization, or understanding of the instructions, except tangentially to make it easy to read. The designer is called in to make a magazine article look better, or an illustrator is asked to make a picture look arresting, or a photographer is asked to take an interesting view of an author or a subject. Nowhere are any of these designers used in the fundamental sense of creating meaning or understanding. ■ That's why I've chosen to call myself an Information Architect. I don't mean a bricks and mortar architect. I mean architect as used in the words *architect of foreign policy*. I mean architect as in the creating of systemic, structural, and orderly principles to make something work—the thoughtful making of either artifact, or idea, or policy that informs because it is clear. I use the word information in its truest sense. Most of the word information contains the word *inform,* so I call things information only if they inform me, not if they are just collections of data, of stuff. ■ If I throw 140,000 words on the floor and connect those words with a sentence or two, we wouldn't call that a dictionary. A dictionary, or an encyclopedia, or many of the collections of data in our world, are based on being able to find something. The ability to find something goes hand-in-hand with how well it's organized. We choose to organize the dictionary alphabetically, and for most of us, most of the time, that's a useful organizing principle. ■ In fact, the alphabet is the only organizing principle that we actually have to learn. Because the alpha-

bet was not given to us by God. Alphabets change with languages; in Russia it is different, in Japan different again. For us, the alphabet is a learned order of 26 letters. The 26 letters have no functional sequence, but have proved useful in the evolution of our literate society. It really works quite well and it is one of our acceptable ways of organizing information. Now we could organize dictionary words by groups. All words that have to do with climate or weather could be together, all words that have to do with automobiles or speed or traffic could be together, all words about health and well-being could be lumped in a group. Therefore, great groups of these words could have one or another category as their organizing principle. In turn, the categories could be organized alphabetically, with words about automobiles in that category in the beginning under the "A's," and words about animals and zoology under "A" and "Z." ■ Some things are best organized by where they are. The thousands of roads and sites and towns and bodies of water are best organized by location on a map. We want to be able to find those places that are immediately around us as we look on a map. We certainly don't want to drive across France alphabetically. We don't want the United States in an atlas organized with Alabama first, and Alaska next, and Washington last, because we don't drive that way. That's not how we find where we're going, or how we find something. ■ As I looked into the organization of information, I realized that there were only five ways to do it. They can be remembered by the acronym LATCH: L) by location, A) by alphabet, T) organized by time (many museum shows are organized by timeline; the famous Charlie Eames *Franklin and Jefferson* timeline of those two great men was probably one of the best ever devised), C) by category (as I've alluded to; it's the way department stores are organized), and H) by hierarchy, from the largest to the smallest of something, from the reddest to the lightest red, from the densest to the least dense, and so on. The primary choice of which way you organize something is made by deciding how you want it to be found. ■ These are all examples of information architecture; the building of information structures that allow others to understand. But, the structures of information go well beyond basic organization. Many principles of clarity can be employed. For example, you only understand something new relative to something you already understand, whether visually, verbally, or numerically. Something will have an understandable size if it is related to the size of something you know. This is easy to see when viewing a photograph of a building that seems to have no human scale. Or visiting a painting and being surprised by its size, because all the reproductions of it are not relative to a human being. Scale always relates to us. ■ For most things (not everything) in our everyday life, scale is based on a relationship to a human being. When things that are vastly large, beyond comparison to a person, or very small, they have to be understood relative to something else and the task becomes difficult. Small things can be shown beside the head of a pin (if we can see them), vast things like those that have to do with astronomy and the solar system tend to lie beyond our visceral comprehension. ■ Well, why am I going into the organization of information in such detail? Just to show that thoughtful structuring of information is an essential skill that a graphic designer, information architect, or information designer needs to have in his or her

repertoire. There is not a single school of design in the United States that has a degree program called *Understanding.* True, a problem is given out here and there to learn how to do pretty charts and pretty graphs and pretty maps. There's an occasional faculty member who goes into the subject more thoughtfully. But, as a fundamental discipline it is missing. And yet, there is quite simply an explosion of work to be done in this arena nationally and internationally. In 1962, now more than 30 years ago, I produced my first book with plans of 50 cities in the world, all the same scale. Nobody had done that before. Five years later I did an atlas, again with all maps and legends and statistical analysis in the same scales, the same weighting of information. But, even now in 1996, these are not the ways that people use when they print masses of information about cities, statistics, corporate information, guide books, maps, sports, medicine or finance. The list is endless. It has been 30 years now that I have been lecturing about this oncoming wave of greater and greater amounts of data, and the need to establish school courses and degrees to manage it—the architecture of information. ■ In 1976, I chaired the AIA national convention with a theme called *The Architecture of Information.* Now we leap ahead to the information superhighway of 1996, when information has become national policy. When it fills the front sections and most of the business pages of the newspaper. When it graces the entertainment sections of most of our magazines—when *Time* and *Newsweek* devote special issues to it. And, when the most popular of the new magazines *Wired* focuses on leading-edge issues in what is now referred to as the Information Age. ■ Well, it's not the age that has been addressed by designers. Because of their access to computers, like everybody else, designers do make prettier pie-charts, now in 256 or in millions of colors, now in three dimensions, now exploding apart in wedges, floating in space, with shadows on some strange ethereal background. Each of these decisions has made the information less understandable. But apparently they are applauded by other graphic designers and by clients who don't seem to care about understanding, or are convinced that jazz and beauty and design as they know it—making things prettier—is the wave of the future. Confetti with shadows was brought to us by designers 20 years ago, and it is still around us. We continue to flatter the makers of these things and invite them to speak at our major design invocations like Aspen and others. They are followed by students around the country whose main claim to fame is to make type unintelligible, to break it up in abominations of understanding. ■ And yet, through this field of black volcanic ash has come a group of people, small in number, deep in passion, called Information Architects, who have begun to ply their trade, make themselves visible, and develop a body of work on paper, in electronic interfaces, and in some extraordinary exhibitions. These people will be the wave of the future. The broken type will self-destruct and be nary a footnote of the 1990s. In the 21st century, the floating confetti and its shadows will blow away along with all the exploded pie charts. The field of Information Architecture will soon be the degree-giving focus of choice at most of our "design" schools.

MAKING THE COMPLEX CLEAR AGAIN The *Medical Access* guide used a system of layered schematics to show the workings of the human body. Again, the near-abstract clarified essentials within an extraordinarily complex structure. Designed by Richard Saul Wurman and drawn by Michael Everitt, the layers of bone structures and organs were separated or combined to explain tests and 32 surgical procedures. *Medical Access* is shown on page 29.