

MAN OF LETTERS

Matthew Carter's life in type design

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Matthew Carter is often described as the most widely read man in the world. Carter designs typefaces. He is universally acknowledged as the most significant designer of type in America, and as having only one or two peers in Europe. A well regarded British type designer named Dave Farey once told a reporter, "There's Matthew Carter, and then there's the rest of us."

Carter is sixty-eight. He is British, and he lives in Cambridge, Massachusetts. He works in a room in his apartment. He has designed type for magazines such as Time, Newsweek, U.S. News & World Report, Sports Illustrated, Wired, National Geographic, and Business Week; and for newspapers, including the New York Times, the Washington Post, the Boston Globe, the Philadelphia Inquirer, and the Guardian, in London. He designed Verdana, for several years the signature typeface of Microsoft; Bell Centennial, the typeface used by A.T. & T. in the phone book; and type called Galliard, which has been used by the U.S. Postal Service on a stamp.

Carter has a partner named Cherie Cone who lives in California and sees to the business side of their firm, which is called Carter & Cone Type. Recently, he's been engaged with three projects. One involved designing type for Le Monde, the French newspaper, which wanted a different appearance; one, still under way, is for Yale, where Carter teaches (the university wants a typeface for its official documents, its signs, and the work of its students and faculty); and the third was for the Times. The Times wanted for its magazine an alphabet of the face it uses to print its name. All the paper had were the letters that spell "The New York Times."

A typeface customarily has two hundred and twenty-eight characters, including letters, accents, numerals, fractions, ligatures (the structures that in certain faces join letters together); commercial signs, such as those for the dollar and the euro; and punctuation marks, ampersands, and peculiars, such as asterisks and daggers for footnotes. A type designer typically produces four versions of a face: roman—that is, upright-letters, italic, bold roman, and bold italic. Such a grouping is called a family. Carter has designed sixty-two families, which include two hundred and sixty-three faces. A few designers may have designed more—no records are kept—but not many.

Carter designed the typeface for the phone book in 1978. He was then working for a company in New York called Mergenthaler Linotype. The previous face had been in use since 1937. A phone book lasts longer than a newspaper, but not long enough to justify its being printed on good paper with good ink. Subscribers had told the company that the current type, called Bell Gothic, was too spindly to read easily. It looked starved, they said. No known typeface read clearly at the size the company wanted. They refused to make the type larger, because adding pages was expensive. The phone company's instructions were that, regardless of the design, the same amount of information must appear on the page.

Carter tried making all the numbers different sizes from each other, as they are in certain antique typefaces, but when he saw the numbers printed it looked as if they were faintly vibrating. The phone book is set in four categories of type: one for names and numbers; one for addresses; one in boldface, mainly for businesses; and one for entries called sub-captions, which is used for listings contained under a heading—the departments of a museum, for example. Carter's solution was to make the typeface for addresses narrower, and the one for names and numbers wider and heavier, which saved space and therefore a lot of money.

There are graphic designers and artists who like to enlarge type to see whether anomalies appear. If you substantially enlarge the "B" in Bell Centennial, the white space looks like two bells lying on their sides. Carter says this was unintended.

Carter is tall and lanky. His carriage is erect. He moves gracefully. When he was young, he had brown hair, but now it is gray and long enough to be pulled back in a small ponytail, which makes him look a little like a barrister. He has blue eyes, an aquiline nose, and a cleft in his chin. He talks out of the right side of his mouth. His skin is pale. He lives with a woman named Arlene Chung, who is an artist. His manner is polished and gracious, so it takes a while to realize, mostly from hesitations in his speech, and the measured quality of his voice, that he is not given to revealing himself easily.

Choosing wine in a store, Carter looks for a bottle that has type he designed on the label. He likes to watch movies with an eye out for anachronistic appearances of type. In a movie set in 1939, he saw a document printed with a version of a typeface called Snell Roundhand Bold, an elaborate script which is used mainly for monograms, engravings, and on the menus of fancy restaurants, and which he designed in 1972. (The script was based on the handwriting of a seventeenth-century British writing master named Charles Snell.) Another time, at an antique auction, he saw a poster announcing the sale of slaves, which was being offered as genuine. He noticed that some of the writing was in a typeface invented in the nineteen-fifties. He thought it was strange that someone would take so much trouble to forge a document and then be sloppy about the typeface, but people tend to think that typefaces have always existed. Not long ago, a lawyer called him. She had a woman in her office who had tried to claim a piece of property her father had left

her. The woman had been taken aback when her father's business partner presented a document, with a date of 1981, in which the father wrote that he was giving the property to the partner. Carter was able to confirm for the lawyer that he hadn't designed the typeface used in the letter until fourteen years later.

Carter was born in London in 1937. His father was a typographer and a designer of books who became a historian of typography. His mother had trained to be an architect but never took the steps to qualify, and worked as a draftsman instead. Shortly after Carter turned two, the war began. The family lived in London, and when the bombing started they bought a small house in Croydon, a suburb south of the city. Carter's father was drafted, and not long after that the family was evacuated. Carter, his mother, and his younger brother were able to take very little with them, and no toys that Carter remembers. To teach him to read, his mother cut an alphabet for him from linoleum. "Gill Sans," he says, "a popular typeface of the time." She also talked about his father and his work and showed him books his father had designed.

Carter and his mother and brother eventually returned to the house in Croydon. He remembers his father's steamer trunk appearing one day in the house's front room. In it was a type-founder's mold. His father had been stationed in Jerusalem and had worked on a typeface for Hebrew. Carter thinks that his father must have explained to him how a type mold worked, because he remembers pouring melted clay into it, when no one was around, to try and make a piece of type, and his father's displeasure.

Carter left for boarding school when he was seven. At school, he was a misfit, he says. He liked art, which no one considered important, and bebop, which the school disapproved of. His father was called to the school and told that unless his son reformed he was unlikely to amount to anything. The meeting did not have the result the school had hoped for. For one thing, Carter's father didn't know what jazz was; Carter explained it to him later, and he saw nothing to deplore. For another, he thought that the housemaster conducting the meeting had been rude. "My father was austere, but he was very principled," Carter says. Even so, one of Carter's signal memories of school was the housemaster's telling him, "Carter, you'll never be a gentleman"-meaning a banker or a bishop or a general.

At seventeen, Carter was accepted at Oxford. Most entering students had been in the military and were older, so the school suggested that Carter, who had asthma and couldn't serve, take a year off before attending so that he wouldn't be so much younger than everyone else. His father arranged an internship for him at a printing company in the Netherlands, in Haarlem, called Enschede en Zonen. Since the late nineteenth century, type has been made by machine, but Enschede made type by hand, using techniques that hadn't changed for four hundred years. Carter was apprenticed to a cutter of type called P. H. Radisch, who was eccentric and secretive. Enschede had bought a machine to manufacture type. Each night, Radisch removed a part from the machine and on his way home dropped it into a canal. Eventually,

the machine disappeared entirely. Radisch had for years refused to train anyone to succeed him but had lately taken on an assistant. The assistant was "willing to tolerate an amateur," Carter says. Carter sat between the two men, and though Radisch said very little to him, the assistant was helpful. Carter was one of the last men in Europe trained to cut type by hand.

With a needle, a type cutter scratched the outline of a letter on the end of a thin shaft of steel called a punch. Then he began scraping steel away from the borders of the letter. "It's a subtracting exercise," Carter says. "You remove the steel, and the letter is what's left." The type cutter made his own tools, small and fine files and chisels and gauges. Working in steel was like carving in marble, Carter says. If he made a mistake, he lost his work. The severe penalty for an error, or for changing his mind, meant that "you thought hard before you embarked," he says. Such thinking helped him form his judgment. Carter could produce a letter every few days. Radisch took a day to make one. Since the letter was backward, it wasn't really possible to tell by looking at it how accurate it was. The steel, filed and polished, shone slightly, which made the surface appear to be uniform even if it wasn't. A cutter could judge his work by heating the punch in the flame of a candle, which removed any oil left by his hands or moisture from the steel's being cold. Then he blew out the candle and held the punch in the smoke. When it was blackened, he moistened some paper by breathing on it and pressed the punch gently into it. The image was called a smoke proof.

Carter stayed a year at Enschede. Seeing that he had a talent and the ability to apply it, he shed the poor opinion of himself that he'd had at school. He decided to pass on college and make some kind of life in typography. He did not expect his parents' approval, but they withheld it only briefly. His father died in 1980. He used to say only that he thought that the conversation at the dinner table might have been more interesting if Carter had chosen another field.

Most of us see a page of type as black marks against a white ground. Type designers see white space interrupted by black marks. Each letter has a boundary on either side called the side bearing. The letter "O" has the same bearing on each side, but most letters do not. The space within the letters is called the counter. The counter within the "n" must be at least in proportion to that within the "m" for the letters to look right in company. In addition, the counter of any letter must agree visually with the bearing. One means of helping settle the space between letters is a serif, the ledge of embellishment on the feet and shoulders, and sometimes halfway up the shaft, of letters in typefaces that are called serif faces. Serifs also make letters easier to read. Without serifs, "l" is difficult to distinguish from "1" or a lowercase "l." Carter says that words such as "Illinois," "Illicit," or "Illogical" written in a face without serifs can look like a picket fence.

In designing an alphabet, someone is designing a set of parts that must work in concert and in any combination. Initially, he has no idea how they will. David Berlow, a designer at the Font Bureau, in Boston, worked with Carter at

Mergenthaler and was one of his partners at Bitstream, a company Carter founded with three others in 1981. "When you start a typeface, there's only a tiny part of the process that's visual," Berlow says. "You make decisions about what I am designing and why am I doing it. Matthew is notable for always making good decisions. He is very fond of saying that designing type involves a billion possibilities. Once you make your first decision-serif or sans, say-half a billion decisions remain. And when you make your second-the thickness of each character, perhaps-a quarter billion remain, and so on. Old style or new, until finally you're down to ten thousand questions. Designers often get caught between two decisions, and those decisions occur somewhere just before you draw the first 'A.' "

According to Tobias Frere-Jones, a type designer in New York at Hoefler & Frere-Jones, designers don't regard the alphabet as a linear sequence. Instead, they tend to see round letters ("O," "G," "C," "Q"), square letters ("H," "F," "L," "T"), and diagonal ones ("A," "W," "X," "Z"). The classic approach to type design is to begin with the capital "H" and "O." "Just drawing the 'H,' there are a number of choices to make," Frere-Jones says. "How substantial? How wide? Are there serifs, and, if so, how broad, how thick? When you get to the 'O,' you have to decide how heavy the heaviest part of the letter should be. There are reasons it can't be the same as the 'H.' If the heaviest part of the 'O' is the same as the heaviest part of the 'H,' the 'O' will look too thin, because the 'O' reaches its heaviest weight only for a moment, whereas the 'H' gets to hold that maximum weight all the way to the top. Also, if you draw the capital 'H' and 'O' at the same height, that 'O' will look too short, so the base of the 'O' has to fall a bit lower than the 'H,' and the top has to rise a bit higher for them to seem compatible."

Perfect geometry appears to form the basis for many typefaces, Frere-Jones says, "but in fact the eye will become confused if it sees pure geometry. The forms will seem stiff and labored." Designing type involves a kind of stagecraft-"organized cheating," Frere-Jones calls it-so that the eye will accept as symmetrical forms that are actually imperfect. "All sorts of fancy footwork goes into type design," he says, "and if it's done well you'll never know that corrections were made."

A letter that many designers try to draw soon after the "H" and the "O" is the capital "R," which has parts of all three classes of letters. Also, it is something of a showcase letter. "How the designer negotiates the 'R' can make it distinctive," Frere-Jones says. "Carter's 'R's are very robust-they're almost kind of proud. If you look at the cap 'R' in Verdana, the Microsoft face, which almost everyone has on his computer screen, I think it's a beautiful shape-the way the tail comes out quite far to the right. It's declarative."

Twenty years ago, Carter began drawing on a computer. He prefers to start with the lowercase "h" and "o." He proceeds carefully, because any misjudgment multiplies its effect as he continues. He does a "p" and a "d" next, because they include elements of the "h" and the "o" and also are inversions of each other. "If something looks awful with your 'p' and 'd,' " he says, "you know something's wrong with your

'h' and 'o,' and you revise them." Next he might draw a "v," because it involves new considerations. "You get half a dozen letters, and you work on them again and again until you feel confident," he says. When he has collected enough letters to feel that his decisions are sound, he begins printing proofs of them in combinations-"ab," "ac," "ad," and so on.

"The heavy lifting begins when the alphabet is finished," Carter says. "I begin then to see how the letters go together to make words, how they line up next to each other, how they sit on the page or the screen, how they work with the punctuation and the symbols. I print up forty or so pages, and when I first see them I feel suicidal. Nothing is working. If it isn't working, I don't necessarily know immediately why it isn't. It simply looks bad. Then starts the long process of going back and making changes here and there. You change something one day, and the next day you change it back, because you realize that it wasn't the problem. Nothing gets better, you despair, until one day you're looking-you've changed something small-and you realize suddenly you're looking at a typeface."

Like architecture, typography and type design are servant arts. It is all but universally agreed that type is intended to convey ideas and should not aggressively draw attention to itself, except in advertisements or signs or trademarks-what is called display typography-or perhaps in fine printing. Avant-garde typographers whose intention, according to the designer Jonathan Hoefler, is "to do with type design what Joyce did with words and Stravinsky did with music" print texts that are meant to be difficult to read, to be deciphered like a code, but type designers tend not to be occupied by the notions that engage typographers. Type design is a practical trade, and a type designer is typically an artisan whose attention is brought to bear on solving a problem, usually legibility. David Berlow says that when a designer shows him a typeface that he would like him to distribute, he asks who will use it. "If there isn't an answer, I don't have an offer," Berlow says.

Type cannot help but provoke associations. The absence of serifs suggests modernity. Gothic forms suggest religion or the law. Carter doesn't care how type is used. He cares that it can be read. "People who use type-graphic designers and typographers-have ideas about the emotional content of type," he says. "All along I've had to focus on the job."

That type should be serviceable and undemonstrative was stated, nearly as a manifesto, by a critic named Beatrice Warde, in 1932. Some designers and typographers take her remarks literally and feel they no longer so rigorously apply, and some see them as flexible and essentially still pertinent. Carter falls into the second group. In "Printing Should Be Invisible," an address delivered to the British Typographers Guild, and later collected in "The Crystal Goblet," Warde said, "The book typographer has the job of erecting a window between the reader inside the room and that landscape which is the author's words." He might build a stained-glass window that is beautiful to look at, she says, but a failure as a window-that is,

he might set a book in type so ornate that it becomes impenetrable. The reader's mental eye, she said, should focus "through type and not upon it."

Warde also told the Typographers Guild that the most important purpose that printing can achieve is to allow ideas to be transferred from one mind to other minds. Type used well was invisible, she said, just as the right speaking voice went unnoticed. "There is nothing simple or dull in achieving the transparent page," she said. "Vulgar ostentation is twice as easy as discipline. When you realize that ugly typography never effaces itself, you will be able to capture beauty as the wise men capture happiness by aiming at something else."

Carter does not regard himself as an artist. An artist works with private images, he says, and he works with the alphabet. As a designer, he thinks he is a little unusual in that he doesn't have a background as a calligrapher. He doesn't draw well, either. "I could never make a pen go where I wanted it to," he says. In an interview published in "Typographically Speaking: The Art of Matthew Carter," he told Margaret Re, "Although I couldn't write particularly well, what calligraphers called a 'good fist;' I could see in my mind's eye what I wanted the letter to look like, and I could perfectly understand the sequence of the pen strokes that went into making the letter. I just couldn't make the pen do it." To draw the outline of a letter by hand, he used French curves and straightedges, then colored it in.

Carter enjoys designing type for inhospitable environments. "Many of the projects that have interested me most," he says, "have involved somehow the instruction, Make a typeface that will work at tiny size when printed on newspaper at very high speed in ink composed of kerosene and lampblack-all the lowest standards of production." Before he designed Verdana for Microsoft, in 1993, the typefaces on computers were adapted from type used in magazines and books and newspapers. Because the resolution on computer screens is so imprecise, the letters looked scrawny and wan.

Microsoft wanted its new typeface to be as legible as possible. Carter was aware as he worked that the point might soon be reached where more text was read on computer screens than was read on paper, and that the purpose in designing this face was not simply that it print handsomely but that it also look good on the screen. The limitations involved did not discourage him. "If you're working on something such as a screen font, you have to get yourself into a certain frame of mind, because of the coarseness of the situation," he says. "What you're designing can never be perfect-you're not looking for a platonic ideal. You're looking at two lowercase 'e's and trying to decide which is less bad." Carter is fond of an observation made by the architect Charles Eames, who said that he was often aware of working with constraints, but that he never made compromises.

"If you're going to make a molded chair seat, such as Eames did, there are certain forms you can't make-the plastic will break on you," Carter says. "I have a temperament that likes puzzling over problems. It's plain there are constraints here.

You haven't got the fittings to make it right. When you paint a portrait, you have the brushes and the paints, and how you make the image is up to you, but if you're making a mosaic, you have a harder time to capture a likeness. If that's what you're doing, there's no point complaining you're not using oil paints."

On a computer screen, Carter would display writing set in his design, and, on another screen beside it, he'd display the same words set in Microsoft's face, MS Sans. Then he would back up slowly until he could no longer read one or the other. "It's a crude way of doing it," he says, "but it works. If you degrade it, you learn."

Verdana is a sans-serif face. Carter couldn't be sure that it would be used to make words-it might simply appear in a line of code-so he put serifs on the capital "I." "Disambiguating is what psychologists call it," he says. "Making sure that people know what they're reading." The "O" he drew nearly the same width all the way around, which is regarded as a modernist touch.

Carter does not depend on inspiration. "I don't get bolts from the blue," he says. If you gave him a blank sheet of paper on a Monday morning and asked him to design a typeface, he says, the paper would still be blank on Friday. He likes to visit cemeteries and take photographs of the lettering on gravestones. The early New England stonecutters used no font he recognizes and sometimes mixed upper- and lowercase letters. For a few years he has been working on a typeface based on their styles. The bulk of his work has involved historical typefaces-faces, that is, that have reference to earlier styles. Type designers have always been backward looking, partly for practical reasons. Experimental designs are unlikely to find a market. In addition, all of the great historical designers, seeking an ideal, devised their faces from earlier models or from inscriptional or handwritten examples.

The alphabet was organized into capital and small letters around 800. The capital letters derived from inscriptions on Roman monuments, and the smaller letters from handwriting. Initially, all printing imitated handwriting. The first book that could be easily carried around was printed in Venice in 1501. It was called a pocket book. It was printed in italic, which was thinner than the other styles of type, and was said to be an imitation of Petrarch's handwriting. Printers kept their letters in cases arranged before them on a table. Each letter had a compartment. Capital letters were kept in the upper case, and small letters in the lower case. How many copies of each a printer kept on hand depended on the work he did. Dickens used a lot of vowels. Lord Macaulay used mainly consonants. Tastes in typography have always been narrow. When John Baskerville introduced a typeface in England in 1757 which was thinner than Caslon, the dominant face of the period, people thought that it was so shocking by comparison that the strain of reading it would make them go blind.

Attitudes about type are still restrictive. "There isn't much latitude in the manipulations a designer can perform on the individual letters," Carter says. "Only so much can be done to a 'b' before it ceases to look like a 'b.' Its meaning is fixed

and cannot change much. As with a piece of classical music, the score is written down-it's not tampered with-and yet each conductor interprets it differently. I'm what historians call a presentist. I know I can't look at the great French designer Garamond's work the way he did, in 1561. That would be like performing music written in the sixteenth century on the instruments it was originally played on. Even if we did that, it wouldn't sound as it did to Bach. The phrasing would be different, or the attack, or the tone. In designing a historical face, I am performing it. There is tension in the interpretation. It's how the tension is handled that defines success. I'm comfortable working with the tension that exists between the functional need for legibility and the aesthetic need to be slightly different."

Any artisan, Beatrice Warde said, must learn to resist his "natural preference . . . for whatever looks difficult." A Carter typeface is notable for its elegance. "There's a reservation to his style," David Berlow says. "Matthew doesn't put elaborate features on characters, to catch attention. Everything is carefully executed. This is the hardest part of type design."

A reader is not likely to be able to identify the distinctive elements of a Carter typeface; he will only notice that it reads fluidly. "But, if you take it apart, it's fascinating to see the relationships he has created among the letters," Cyrus Highsmith, a designer at the Font Bureau, says. "Everything seems to fit. The deeper you go into the structures and the network of relationships, the more you find. And when you find something that doesn't fit, it's always there for a very interesting reason. Everything he does is deliberate and controlled but full of life."

When Carter was young, designing type was a clannish and abstruse pursuit. A young designer was expected to labor for years before he produced an acceptable alphabet. Ten years' engagement in the trade was regarded as the amount of time necessary before an aspiring designer might deliver a good lowercase "g." Or people would tell Carter, "There's only a couple of good type designers in every other generation, and we just had a few in the last one."

Computers make anyone a designer of type who wants to be one. A novice at a computer might make eighty versions of a letter in a day. Carter thinks that the ability to design letters on a computer means that more adventurous typefaces are being drawn. The difficulty for someone learning the trade on a computer, however, is telling the difference between a face that works and one that doesn't-deciding, that is, which seventy-nine letters to discard.

"I think it helps to learn in a situation where you have had fewer choices and only one chance to get it right," Carter says. "I would never tell a young designer that he had to go through this recalcitrant method, or that he would be better if he learned how to do it the way I did, but somehow you have to develop judgment. You do it by seeing your work in use. Before you have a body of work, you have to learn from others. Are the lines straight or loose? Is the 'h' too big alongside the 'o'? Or too thin? Does it look like it's going to fall over? Has the 'D' got so boxy that it looks like a 'G'?"

Do you like what you have or not? You have to force yourself to form an opinion. If you haven't got discernment, you simply repeat what you're used to."

Carter returned from the Netherlands in 1956. Having learned a lapsed trade, he moved in with his parents. He painted signs and did lettering work. He sought punch-cutting jobs but found hardly any. At the time, there may have been fewer than half a dozen punch cutters employed in Europe and America. In 1958, he moved to London, as a tenant of his aunt, and found work with a group of designers who were tired of the plainness of British type and were, Carter says, aspiring to an international style. When they saw something they liked, they asked him to draw it. Meanwhile, *The New Mechanick Exercises*, a journal concerned with typography and printing, put a photograph of Carter cutting a punch on its cover. "Mirabile dictu," the magazine said, "a new and extremely promising hand-punchcutter has lately emerged and set up business as an engraver of steel punches, lettering artist and typographical designer. His name is Matthew Carter."

In London, Carter was taken to lunch by one of his father's friends. "He had done well in life," Carter says, and "he summoned me and said he wanted to make an investment in my career." He asked Carter what he could do for him, and, without knowing why, exactly, Carter said that he would like to go to New York. He gave Carter three hundred pounds, and in April of 1960 Carter arrived in the city. Much of his time he spent visiting graphic-design studios. "It's hard to recall, in these days of the global village," he says, "how different design was in different places. I had grown up in a type-making privileged situation, and I'd had my year at Enschede and my time in London, and I was cocky, but once I got to New York and saw the level of work the designers were doing-in magazines and advertising, in posters you would see around the city, at the exhibitions I attended, the entire aggregate impression-I was made abruptly and forcefully to realize that I knew nothing." He felt that he was faced with two choices: to slink home or to resolve to stay. "The cowardly part of me could have gone back to England and pretended I hadn't seen all of this design," he says. "Or I could decide, 'Wake up, Matthew, you've been living in a fool's paradise. You crossed the Atlantic and found something that knocked you sideways, now it's your move.' "

In the spring of 1960, the John Coltrane Quartet played its first engagement. Carter was in the audience. Over several weeks, he heard them three or four times. "Sometimes they played the same songs in the second set as they played in the first," he says. "Not because they were lazy but because they wanted to surpass themselves, or find something in the music that they hadn't found earlier in the evening. They were that acute." Listening to them, he decided that he owed it to himself to try and stay in New York. "Their seriousness of purpose was a lesson," he says. "Four great geniuses who would knock themselves out every night when instead they could have coasted. I felt I could have been dishonest enough to return to England and say I hadn't seen great design. But I couldn't somehow pretend that I hadn't heard the John Coltrane Quartet." As it happened, Carter couldn't find work

in the city and went back to England, where he worked as a designer, but in 1965 he was hired by Mergenthaler, whose offices were in Brooklyn.

While Carter had been working at Enschede, in the Netherlands, his father was visiting Antwerp to catalogue type for the Plantin-Moretus Museum. Plantin was one of the great printers of the sixteenth century, and 1955 was the four-hundredth anniversary of his first work. The building that had been his premises had remained in his family until the early nineteenth century, when it was given to Antwerp as a museum. To prepare a catalogue for the anniversary, the museum had engaged Carter's father. For centuries, no one had examined the archives in the museum's basement, which included boxes of antique type. While his father was in Antwerp, Carter made several visits.

"Soon as I showed up, I was put to work," he says. "We'd be in this little attic room, and someone would deliver a box from the basement, and we would scrub away at the punches, clear off several centuries of dust, then try to identify who had cut them." Carter was keenly aware of the contrast between the task he was laboring to learn and the examples he held in his hands. Plantin's account books still existed, and Carter felt his imagination stirred as he read the entries in them.

"I was eighteen," he says. "I had the run of this temple of typography, and I would sit up in the middle of the night and think about it. Opening a drawer and finding these materials, some of them known, some not, and just handling this stuff in a very informal way-the best work of the finest period of typography-there was a feeling of a presence, and the sense of being part of a continuum of typography, of being locked into a history. I'm someone without the slightest religious bent or superstition, but spending those hours after the museum closed-and so intimately with those materials-moved me."

When I asked him once how he had come to have such a feeling for type designed in the distant past, he thought for a moment, then he said, "I feel that I know the ghosts."