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Matthew Carter: Reflects On Type Design

By: Phyllis R. Hoffman

**A thesis project submitted in partial fulfillment of the
requirements for the degree of Master of Science in
the School of Printing Management and Science in
the College of Imaging Arts and Sciences of
the Rochester Institute of Technology**

May 1999

Thesis Advisor: Professor Archie Provan

School of Printing Management and Sciences
Rochester Institute of Technology
Rochester, New York

Certificate of Approval

Master's Thesis

This is to certify that the Master's Thesis of

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With a major in Graphic Arts Publishing Option has been
approved by
The Thesis Committee as satisfactory for the thesis
Requirement for the Master of Science Degree
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May 1999

Matthew Carter: Reflects On Type Design

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May 1999

Dedication

A very special thank you to my five wonderful children:
Warren, Russell, Franklin, William and Judson

Acknowledgements

I would like to thank the following people for their assistance in providing support for this Thesis Project. Director: Hal Gaffin, Professor Marie Freckleton, Professor Archie Provan.

Thank you Bernie and Jim Lachman, and Valerie Cole who supplied me with a transcription machine.

A special thank you to Professor David Pankow who helped me track down some of the typefaces of Matthew Carter.

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Abstract

This project is an oral history about the type designer Matthew Carter. Through questions Matthew Carter's thoughts and ideas on type design have been explored. The resultant dialogue was recorded as an oral history of Matthew Carter. There are video and audio tapes along with the written project.

The purpose of this research is to determine how Matthew Carter approaches designing letterforms as technology changes. A discussion follows in which Carter's core philosophy of letterform design is defined; his ideals and perception of type design, and any significant trends anticipated in the future of letterform design.

The theoretical basis for this study is the changing technology and how or if it affects typeface design.

A List of References is included as Appendix A. Based upon this review, no one has explored the idea of how type design has changed over time, from hot metal typesetting, through phototypesetting, to the age of digital typesetting. There are many surprises as Matthew Carter explained how his approach to type design has changed little over the period. The method in which one could set type has changed opening the way to new possibilities.

Methodology included study of all of Matthew Carter's typefaces, formulation of relevant questions, travel to Cambridge, Massachusetts to interview Matthew Carter and record the interviews on both audio and video media.

Questions of Importance include Matthew Carter's early years in printing, his professional life, the present and the future of typeface design. The appendices contain a list of all of the type faces designed by Matthew Carter.

Chapter 1

Introduction

INTERVIEW WITH MATTHEW CARTER

Interview Date: March 16 and March 17, 1997

We are seated in the elegantly understated living room of Matthew Carter. There is a cityscape enlarged from a sepia 17th century book on perspective on the wall behind us, a Centaur type face specimen by Bruce Rogers resting comfortably on the table beside him. We are about to interview the renowned type designer Matthew Carter. Cherie Cone, a colleague of Matthew Carter's, will be joining us later. The interviewer is a student from the Rochester Institute of Technology (RIT) and is doing this interview as a part of completion of her Master of Science Thesis.

Question: The Interviewer Phyllis Hoffman will appear as PH

Response: The Interviewee Matthew Carter will appear MC

Response: The Interviewee Cherie Cone will appear CC

The reason we chose Matthew Carter is that his career as a designer of type has spanned over forty years. From the last days of hot metal to the present day, he has been reconciling type design with changing technology. Through a series of questions that were posed to him, his thoughts on the business of type design, how type design has changed artistically, structurally and materially over the period and how the technology itself has affected letterform construction is presented.

In 1956 at the age of 19, when hot metal typesetting was at its zenith, Matthew Carter studied type design with P.H. Rædisch, an assistant to the Dutch type designer Jan van Krimpen in the type foundry of Enschedé, Haarlem, The Netherlands. While there he meticulously studied punchcutting under Rædisch. Today he is on the cutting edge again of new font technology as he is designing screen fonts for Microsoft.

Let's listen to what he has to say:

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Chapter 2

Public School Years and Charterhouse

PH: Could you talk a little bit about your childhood? In London, where you grew up?

MC: My father was a typographer, both a practical typographer and also, particularly toward the end of his life, an historian of type and typography. So, I grew up in that world. I grew up with books about printing, and history of printing, about typography. I suppose I just kind of absorbed an interest in that from my father and other friends of his who were in the same business. I went to an ordinary school and while I was at school, I had some interest in printing and graphic design I was lucky in that there was a very fine art master at my school who rather encouraged me and others to take an interest in art in the broader sense. It was a well equipped studio and so, I did get interested in letters, lettering and hand writing. This was at a time in the early fifties when I was in school. There was a revival in italic handwriting and I got rather drawn into that. I did one or two bits, I'm sure, of very amateurish lettering for the school magazine.

PH: What was the name of the school?

MC: The name of the school was Charterhouse. It's what is known in England as a public school, which means exactly the opposite.

PH: It's a private school.

MC: It's a private school, it's one of the older schools in England. I don't think that it was a particularly good school when I was there but it was blessed with having a good art department.

PH: Was it a very highly disciplined school? Did you have to follow regulations very closely?

MC: Oh yes, oh yes. I would say definitely. It was a very traditional school. Very much structured on Victorian lines, still, at that time. I'm sure its very different now and I'm sure it's been different for a very long time. I think that just at that

time it was going through a rather awkward transition between being sort of authoritarian, a Victorian institution at the time that one associates with English public school education. And a transition into a more enlightened nature. I think one of the early symptoms of that was, that they had very good studio facilities and other things, there were good workshops and good, extra curricular stuff you could do at the school was in some ways better, I think, than the formal education at that time.

PH: As opposed to the authority you had to obey?

MC: Yes, I think that

PH: To memorize . . .and compete.

MC: Yes, I suppose when you're a school boy at the ages of 13 through 17 you don't have. . .

PH: It's a very difficult age.

MC: I went to boarding school when I was seven, just after World War II. I was in boarding school all of my school life. So ten or eleven years, what ever it was, I was in boarding school, it was the only life, I knew and the only education I knew. It's only afterwards, when I thought back on it that I had some questions about the academic teaching. But I didn't feel at the time that it was harsh or constraining. I think that I would have different ideas about it now, but as I say, it was what was accepted at the time. I did find the art teacher and studio facilities at Charterhouse were a great relief and I enjoyed the amateurish painting and this interest I had in hand writing. At that time they were encouraged by the master and I think it was he who characterized what it's aims were. I suppose you could say it was to produce people for the army and for the professions, like chartered accountants and business people. So it would not naturally have occurred to anyone attending a school like that, that they might make a career in the arts or in design had it not been for this art master. His name was Ian Fleming - Williams. There might be other ways to make a living and I think it was he who perhaps first put it into my head that there might be a possibility of earning a living in some other way. I'm sure this was very

nebulous and unformed in my mind at the time, but it was just a general idea that there was something other than the straight jacket of a conventional education, conventional college, university education that would follow I have very fond memories of him and of the time I spent in the studio at Charterhouse.

PH: Did your father encourage you to continue with your letterforms?

MC: Well, that's a good question. I think my father's view was rather . . . At that stage in my life when I hadn't yet left school, but sooner or later the question would have to come of what I was going to do. I think my father rather discouraged me from following in his footsteps. I think he did that out of the kind of feeling that one typographer in the family was enough and if I went off and did something different, it would make conversation at the dinner table at home more interesting. So there were more things going on.

PH: What did he have in mind for you?

MC: Well, the funny thing is the only thing I can ever remember - the only conversation I can ever remember with my father about what I might do in life, I can't date, I can't remember this exactly, what stage of my education this took place. One of his jobs had been to be in charge of publication design, for what is grandly known in England as Her Majesty's Stationery Office, in other words the government printer. Part of that job had been working with the museums in London producing publications for them. Such as publications for the Victoria & Albert Museum, and other government owned offices, the museums in London. Whether it is still true, I don't know, my impression is that probably the museums have their own publishing enterprises nowadays, individually. At that time the Stationery Office was concerned with producing books or pamphlets or guide books to museums. I think that this had brought my father into contact with a number of the people in the museum world in London. And I think he liked them, and I think he liked what he saw in that world. He did once tell me that he thought that a life in a museum would be a very interesting one. Perhaps rather revealingly, in terms of what his opinion of me was, he said the good thing was if one went to work in the museum, as time passed, as people at the top of museum either retired or died, you moved up the ladder . . .

PH: What a way to have to do so!

MC: I think that this struck my father as being a good way to go because some advancement would occur, whether or not you deserved it or earned it.

PH: Oh dear!

MC: He put this idea in my mind. I don't remember what my feelings were about it at the time. I don't think I was strongly for or against it. when it came to going on from Charterhouse to university, I did, in a sense, follow in my father's footsteps. Because I took the exams to be accepted at his old college at Oxford. The plan was that I was going to study English at Oxford. Because, in those days I had some vague idea, that I would end up in some bookish, I would say bookish rather than literary, I don't think I aspired to be a writer, but I thought that perhaps something like publishing or museum work.

PH: As opposed to academia, for example.

MC: Yes, yes. . . would be my future, as you can tell, this was all pretty vague. I did pass my exams and was accepted at an Oxford college to study English. Which, by the way, at Oxford at that time was pretty dour business. It barely involved itself with modern literature at all. It was largely a matter of Anglo-Saxon, Chaucer, Beowulf, all that sort of thing.

PH: That's grueling!

MC: What happened was that I left Charterhouse in the summer of 1955 and at that time, we still had, what was known in England as National Service, in other words, draft, conscription . . .

PH: Oh, yes.

MC: . . . but the whole system was running down at that time. That while some of my contemporaries left school at the same time that I did to go into the Army, and you did do two years, in the Army, Air Force, whatever. A good number of us,

and I was one of them, were not accepted for various reasons, into the National Service and so we were, as it were, ready to go to University immediately after we left school. However, Universities were very perplexed by this because they, of course, were used to having people who had been two years in the Army, between leaving school and going to University. So when they heard that I was not going to go into the army, I was ready to start Oxford, they said to me; well, you'll be out of step, you'll be out of sync with every one else, if you come up immediately, they said, tell you what, we'll split the difference. Go away for a year, find something to do for a year, and then come to Oxford, and then you'll be more in pace with the other people in terms of agenda, maturity. It's just that they were not used to having 17 or 18 year olds coming to University.

PH: So, they had to make a transition at Oxford?

MC: Yes, so, they had to make a transition, and of course, over that period, in the late 50's, they must have had to make that transition completely because for example, by the time my brother left school, he was five years younger than me, National Service was over. I can't remember exactly what date but it ended. My parents were confronted with the need to dream up something for me to do for a year between the summer of 1955 and the fall of 1956 when the University was prepared to face up to having me.

Chapter 3

Enschedé, in Haarlem, in The Netherlands

Jan van Krimpen

The idea that my father came up with was that I should go, spend that year in the printing house of, Enschedé in Haarlem, in The Netherlands. My father was very familiar with Enschedé because in the first place the man who was the leading designer at Enschedé, van Krimpen, was a long standing friend of my fathers. Their friendship really endured. van Krimpen at that time of his life was, frankly, a rather disagreeable and quarrelsome person. He quarreled with most of his friends, he quarreled with his son very unfortunately. But, for some reason, he and my father were on rather good terms.

Enschedé at that time, the company still exists, but it's not quite the same nowadays. But at the time it was a very interesting organization, an ancient firm. An old established firm. It did a number of things under the same roof. Enschedé is thought of now as a security printer, they print bank notes, and stamps. That was an important part of their business in the 1950's. Indeed, they designed stamps and bank notes as well on the premises. The whole security side of Enschedé was a very important one. They were also general printers, they did a lot of very good color work. They printed lots of things. There was a big bulb and seedsman industry in the low countries and so they did a lot of printing for that. Also a lot of fine printing, limited editions were printed. They were very diverse printers. They had another interesting thing that may have been unique at that date, in that they had their own type foundry, made their own type. They had Monotype equipment as well. A great deal of their type, they not only made cast type on the premises but also designed type. Jan van Krimpen was working there as a type designer.

They had what nowadays would be called an internship program. We didn't have that word then, I really don't know what we called it, but they had this scheme (there had been two people at least who had done this before me) where accepted [as] young trainees, un-paid. You could go and work your way around the Enschedé work, the Enschedé factory. The idea being that you would do a

bit of this and a bit of that, to give you a broad general introduction to the world of design and printing. A couple of predecessors of mine did that and both ended up in the design profession.

The plan was that I would go and do the same thing. In September of 1955, I went off to Enschedé, found a place to lodge and started work there. I can't now remember why, whether it was my request or it was at their suggestion, but I, in fact, started in the typefoundry. The first place that I was sent was to the typefoundry and I became very fascinated in the workings of the typefoundry, particularly in punchcutting, which is the actual making of the type, the originating of type. I spent virtually the whole of the year devoted to this. Actually working in the typefoundry, as though I were an apprentice punchcutter. This is really what it amounted to. I did spend a little time in other departments, but I became very fascinated by the punchcutting, matrix making, and typesetting. They kindly allowed me to continue to concentrate in that, rather than marching me around to different departments at Enschedé. By the time the year was up, I had some sort of journeyman knowledge of the techniques of punchcutting, matrix making as they were practiced at Enschedé. This meant that by the time I came to leave Enschedé go back to England with the idea of going to University to go to Oxford, to study English and so on . . .

PH: Beowulf.

MC: Beowulf, Chaucer, Anglo-Saxon literature. I had really become very fascinated by the idea of type and of designing type. Obviously, what I had learned at Enschedé was really the techniques, in fact I learned to make type before I could really design it. But, the one thing obviously led to the other.

Chapter 4

Back Home to Britain

PH: Yes, yes. . .

MC: So when I went home after this year at Enschedé in Haarlem, I really had to summon up the courage to say to my father that really, I did not want to go to Oxford and pursue an academic career. I rather trembled at the thought of doing this,

PH: Yes, I can understand that very well.

MC: Because my father was a very academic man, he had been to Oxford, he, then by this time, was working at the Oxford University Press, in Oxford as part of the University establishment. Perhaps unfairly, I thought I was in for a very hard time, if I said I didn't want to continue education and didn't want academic qualifications, instead I wanted to try to make a living somehow in the world of design and particularly in type and typography which had come to fascinate me. But, when I eventually got my courage up and put this idea to my father, he accepted it immediately, I was expecting an argument about this, obviously. [chuckle] Because, a certain amount of trouble had been taken to secure me a place at Oxford. To do all the exams and so on. This volte- face that I confronted my parents with, they took extremely well. My father had this idea that maybe it would be good if I didn't follow the same professional career, that maybe it would be nice if I went and worked in a Museum and become an expert in I don't know what, binding brasses or something. It was never suggested to me what it might be. But, when I said to him that I had become fascinated with all of this, he was very, very supportive, and I started work. I did spend a little bit of time actually working for him as an assistant at the University Press. Because at that particular juncture, the University Press at Oxford was another very ancient establishment, and at that time they had decided to make a little internal museum. They turned over a room at the University Press, to make a little museum to display their historical material that they had. Books and type and so on. I went and worked for my dad for, just a few months (it wasn't very long) helping to organize and with lay out, and labels for this little museum within ,

the University Press. That was an interesting experience for me, it taught me quite a lot. Then, growing out of that, largely thanks to contacts that my father was able to give me, I started being able to do a little bit of engraving work. The problem, as you can appreciate, with what I had learned at Enschedé was that this was really an obsolete craft that I had. I can't say that I'd mastered it, but I had some proficiency in it, by that time, apart from living museums, like Enschedé, no one really made type any longer. I had laboriously acquired a skill for which essentially there was no use. I did do a little bit of engraving, a little bit of punchcutting work at that time. I did a little bit for the University Press, I cut a number of binding brasses, that book binders use brass tools which are, made or were made in much the same way as type punches, so I cut a fair number of those. I did a little bit work for Giovanni Mardersteig in Verona. Giambattista Bodoni; one or two repairs and changes he needed done to his types and I did a little bit of work for Monotype, which John Dreyfus put my way. I don't find a very good recollection of this, I think John remembers more about this than I do, I did help them a little with some trial work and I think two faces they wanted to make bolder weights for; I think one was Dante [see Figure 1, Appendix B, Page B-1] I did a few little chores for Monotype at that time. I started originally working out of my parents home. Then, when I was 21 years old, I moved to London. My aunt, my father's sister, had a nice house in London and which she had converted [along with] an adjacent piece of property to be a small self-contained flat or apartment really. And, I became her tenant there, I lived there, in London.

Chapter 5

London and Free Lancing

PH: The life of a young typographer in London.

MC: Exactly. I shared these quarters with a great friend who had been a friend of mine at school, who still is a friend of mine, who was then an architectural student. We shared digs in London. At that time I first began to do design work within the graphic design community in London. Which was then a rather small community, I may say. I was lucky in making a great friend of a man called Rowley Atterbury, who was a printer at the Westerham Press in England. Again, very very fine printers, with a very good collection . . . they did not make type, but really had an interest in type and had a collection of type which they used at the press, both Monotype type and foundry type, he put a little bit of work my way. He was also very kind in making introductions and so, through a network of contacts partly through my father, and partly through other people that I met, I did manage to establish a design practice in those days. I think I moved to London in 1958 or maybe 1959. (I can't quite remember.) But anyway, essentially in the early 60's, I was working in London, drawing, drawing lettering really. One must remember that this was in the days before, obviously before, any sort of film setting existed, all type was still Monotype, or Linotype or cast foundries metal type. There wasn't even dry transfer lettering in those days. I can't remember when Letraset was invented, but it was originally a wet process, a very, very funny business to look back on. If you were a graphic designer/typographer working in London, as I had a number of friends more or less my same age or a little bit older, who were aspiring to work in international style. This was just after some of the important sans-serif faces were released in Europe, like Helvetica and Univers, which came out (I don't remember exactly the date) in 1957, 1958 that sort of time. Those, were alas, not available in England at that time . . . it seems extraordinary today to think that there would be a typeface which was available in one country but not in another, but that was very much the case in those days. And so, I began to make a living, in London as a designer of lettering. Either just words, just logotypes or words. Or sometimes whole alphabets. For a small number of graphic designers, there were maybe six or eight only, that I worked for in London at that time, but, as I

say, these were young graphic designers. They wanted to design type, design publications, not type, but publications in an international style. But if they went to the typesetting houses in London in those days, there were no modern sans-serifs available yet. They eventually did come, but they were not available yet. So I worked for a number of designers, and this was very, very good training for me. I think because they were good designers, they had an idea about what they wanted, and I certainly learned a lot through working alongside these designers at that time.

PH: Do you think your early history of punchcutting helped to have you see what the designers were trying to get at? Did it give you an edge, so to speak?

MC: It might have done, just in so far as it had familiarized myself with lettering. I mean, I had I suppose, some feel for letterforms and their shapes and how to space them and so on from this type foundry training I had had, although stylistically, the kinds of type that I got involved with in the 60's were rather different. There were the kinds of type I had been involved with at Enschede's which tended to be book faces, traditional types, perhaps its wrong to call van Krimpen's designs traditional, but they were serif faces. And I was much influenced, obviously, by van Krimpen and by Sam Hartz, who was also working at Enschede's at that time. What I learned in London was a very different school of typography, if you like. This was the beginning of the sans-serif revolution. It got started in Switzerland in the 50's and migrated throughout the world.

PH: Oh, I see, so you came at them from two different perspectives.

MC: Yes. I think what happened to me in London in the 60's was a very beneficial thing because it broadened my ideas about type. And another thing happened to me, actually in 1960 was very, very important, absolutely crucial in my attitude toward this, and the way my life, my working life panned out. And that was the following: That just after I had become established in London. By the way, I should say, I've talked about doing various lettering jobs, but that time, as a free lance, it was really not possible to make a living exclusively out of type or lettering. There just was not enough work. So I really had to scuffle. And I did all sorts of things, sign writing, technical drawing.

PH: It sounds like today, history is repeating itself.

MC: Yes, but we'll get into this later. I think of it as being rather different from today because I have a number of colleagues now who are in their early twenties, who because of the whole computer revolution, have relative accessibility of type and type making techniques. Now they really are able to make a living, a decent living, out of exclusively type. But in the 50's and 60's that was not true. There was just not enough work, I was lucky, as I say, because I got to know a number of designers who, because they had no other resource, no other way of getting the styles of type that they liked had me draw it for them. Which is what I described as work in London.

Chapter 6

Design Studios in America

This very fortunate thing happened to me. That an old family friend, an old friend of my fathers, who had rather prospered in life, summoned me one day for lunch. And said to me, like a sort of fairy god father, he said to me: (You know here I was, starting out in professional life.) Was there anything that he could do for me. Really, because he said that my grandparents had been kind to him in his youth. (I didn't know this, and I don't know quite in what form.) But evidently, he felt some debt to my family, my father's family, and so on, for being kind to him when he was a lad and he wanted to return the favor and he, you know, was in a position to do this financially. So, he asked me to think, to think what he could do. And this came down to money, really, you know. I made a suggestion to him, which he very quickly accepted, and financed, was that I should go to New York. And, you know, as I sit here, I can't really remember why I was so dead set on going to New York. I must have seen examples of American graphic design and typography, obviously. Although I do not think many. I did not know I had met one or two Americans who had come to England, who had called on my father, I met one or two, but I'm a little mystified as to why so I immediately said to this man: "I've gotta go to New York. That's the thing I really need to do."

PH: Are you in your twenties, at this point?

MC: I'm in my twenties, I was about 23 years old in 1960. I was able to use one or two of my father's contacts in order to find myself a place to stay in New York. This friend of my families, presented me with the sum of 300 £. And this was enough to get me to New York and to stay there for about three months, two and one-half or three months, in the Spring of 1960.

MC: I stayed with friends. I luckily didn't have to spend thousands on lodging. Because I stayed with friends. That I spent in New York, changed my life, without any question. It completely changed my life. . . Because, I saw, a couple of typography shows, graphic design shows in New York at that time which just blew my mind with what I saw there. And, due to contacts I was able to work

my way around the studios, the advertising agencies, printers and so on in and around New York in that time. They were very, very kind to me in giving me introductions and of passing me from hand to hand. Within these few weeks, in the Spring of 1960, I really got a very good overview of (I mustn't say American graphic design, because this was only New York, I went to Yale & New Haven) I didn't travel further within America at all just, in New York, but what I saw was in very concentrated form.

PH: Did you recall exactly what the show was?

MC: It's rather hard to, I may have gotten the chronology slightly wrong here. I mentioned the work that I did for this small group of designers in London.

PH: Yes.

MC: Most of that happened when I came back from New York. It happened in the early 60's. 1960, 1961, 1962, 1963 and so on.

PH: Well, it's a lot of years ago so that's certainly understandable.

MC: But when I went to New York, I think, my upbringing, my training at Enschedé's, had all been a very traditional one. And I was interested in the history of typography. I still am. I thought about typography as historical. The techniques that I had learned, as I say, were obsolete, were very old fashioned. I had a very backward looking view of type and typography and the people that I respected and worshipped in the world of typography were people like van Krimpen, Mardersteig, who were great practitioners, but of a rather traditional view, I think. And what I saw, of course in New York was that it was a very different world, a very much more commercial world. It was advertising design, it was promotional design, it was the sort of thing, the people whose work I was looking at specifically were Lou Dorfsman, Herb Lubalin, that generation of American graphic designers and typographers. Whose use of type was something that was completely unknown to me, I hadn't seen that at all. The kind of, rather dramatic paratechnical use of type. Witty use of type with the idea of expressing ideas by the way you use type, almost illustrative use of type, which those people were so gifted to have. I was completely unprepared for that.

I was also unprepared, I had seen some less contemporary work, I can't now remember where I saw it, it might have been at Yale, in one of the libraries there. I certainly saw an almost complete collection of the work of Dwiggins; the book designs of William Addison Dwiggins. Which was again something that I had never seen in Europe, I think of it as a purely American style out of the middle west, out of Chicago, Goudy, Dwiggins, Cooper, I had never seen any of that work at all.

PH: It has the spirit of the West in it.

MC: Yes, Yes.

MC: I think of it, I wish I had a more scholarly knowledge of it, because to my way of thinking, it seems to have sprung ready made out of the midwest. Rather like Frank Lloyd Wright in the world of architecture.

PH: Yes, exactly so.

MC: Obviously, there are historical precedents to Frank Lloyd Wright, there are precedents to Goudy, in typography. Goudy was interested in the history of type and some of his faces are of an historical revival. But, he had such a strong personality. What came out was just Goudy really. The same with Dwiggins. This was another whole aspect of American type and typography which I just encountered for the first time. My head was reeling from this. . .

PH: Yes, New York is like this, especially when you are doing something you like to do.

MC: Yes, and there were a lot of other things. I met a lot of very nice people when I was in New York.

PH: Yes, it was very open.

MC: New York did not, at that time, have the reputation it eventually acquired with the people nowadays of being a rather difficult place to live .

PH: It's changed.

MC: I had no cares at all, living in New York at that time, I loved it. There were a number of other things, too. I've always been interested in jazz and that was an extraordinary period in the history of jazz. So my days were spent looking at typography, Push Pin Studios, and Lubalin, Smith and Carnasce, and in the evenings I would go to Birdland and the other jazz clubs in New York.

PH: Did you go to Haarlem?

MC: I did . . .

PH: Did you go to the Cotton Club?

MC: No, I didn't go to the Cotton Club, I did go to Haarlem, just as a tourist to drive around. In fact, I went around a lot in New York, geographically; to Brooklyn and so on.

Mergenthaler Linotype

Mc: But one of the places that I did go was in Brooklyn to what was then called Mergenthaler Linotype. Linotype was then in, what you can only describe as, a dark satanic mill, near the Navy Yard in Brooklyn, in a rather run down area because the Navy Yard had just recently closed. But I went there to Linotype because of a man who I had not actually met before this trip to New York, although he had actually been to England, he was a friend of my father's. I met with Mike Parker, Mike is about eight or nine years older than I am, and he had just, I think in 1959 gone to work at Linotype as an assistant to the head of typography at Linotype; Jackson Burke. I went and visited Mike, in fact I saw a lot of Mike during this trip. We became fast friends and still are. And of course I went to visit him and Jackson at Linotype. And something, although as I say, this factory had a lot of what you might call unattractive aspects to it, I mean it was a factory.

PH: A factory from hell.

MC: Yes, very noisy, very dirty. And yet, something about it just fascinated me and I suppose I was crass enough at the time to say that I would love to find a job there. Well, there wasn't a job for me at that time, Jackson had only recently hired Mike and there was no opening for anyone else. I kept in touch with them, I went back, after these few weeks in New York, and continued to work in London. . .

Chapter 7

Back to Free Lancing in London

Crosfield Electronics, Lumitype 540—Photon

. . . and worked as a freelance. But I, kept in touch, particularly with Mike. And around 1963 I think, I took my first job in London. My first salaried job, as distinct from being self-employed, for a company called Crosfield Electronics, an interesting company, they were an electronic company, obviously, their name tells you that, their main business was in press controls and various kinds of electronic equipment for the printing industry. They had recently, established a side line of selling, and pretty soon, they began to actually manufacture an American designed, or actually, a Franco-American designed phototypesetting system, which was called in this country, the States, Photon but in Europe, Lumitype. (I don't know why it had two different names.) But I was hired by Crosfield because they were starting to sell photocomposing systems in Europe, obviously, in Britain and Europe, and actually, further afield as well I think. And they needed someone to take care of the typographic aspects of this. In other words, when a client ordered a photocomposing system from Crosfield, from Lumitype, I think Lumitype 540 was the model number in those days, the type was on a disk, a glass disk, there was no inventory, nothing was on the shelf, so each customer had to have their own disk made to their own specifications. In other words they had to select which typefaces, if there was a library, a repertory of types, that Lumitype and Photon had, but each customer had a custom disk made with fonts on it. And it was my job to see to the specification of these fonts. The attractive part of this job, to me, was that Crosfield, although they made the machinery, they made the typesetting equipment, they did not have the ability to make the fonts themselves.

Paris: Deberny et Peignot

Crosfield did not have the ability to make the fonts, for that, I had to go to Paris where there was another branch of the Lumitype — Photon concern housed within the very old established type foundry in Paris called Deberny et Peignot. Charles Peignot (who was then the 'seigneur', the boss) had invested in the

development of the Lumitype and within the type foundry, which is still operating as a type foundry, still making type, at Deberny et Peignot, they actually manufactured the photocomposing disks for Photon Lumitype. So, during this period of about two years, I would have to go to Paris one week out of very month.

PH: Oh. What a chore!

Adrian Frutiger

MC: My French in those days was even more rudimentary than it is now, however I liked Paris. There were a lot of things I liked about Paris. Both professional and not. You see, I had a very enjoyable time. But the work that I did at Deberny et Peignot was also interesting principally because it meant going over to Paris and being at the studio of Deberny et Peignot which was where Adrian Frutiger worked. Now he had, by this time; 1963, 1964, which ever it was, Adrian had slightly backed out of day to day working at the studio. I think he used to come in like maybe once a week.

The studio was run by a number of designers working there under a studio manager, Adrian did come in periodically and I got to know him quite well and I used to also go and visit him in his studio. Frutiger was, of course, a Swiss, who had been hired by Charles Peignot to go and work at Peignot in Paris, where he spent most of his working life. He has now retired and gone back to live in Switzerland. So, it was in Paris at Deberny et Peignot that he designed Univers and the other faces that went into the Lumitype — Photon library. I feel I owe a lot to Adrian, but it is rather hard for me in a way to put my finger exactly on what. He was not necessarily an influence on me in the sense that my work resembles his, I don't think that it does. I don't think that he would think it did, but where he did influence me, I think, and I think that this is a thing that very often people who do influence you, don't influence you really, in the sense that they put a completely fresh idea into your mind, or a completely fresh approach into your mind. What they tend to do, I think, is to confirm ideas that perhaps you already have in a rather unformed state, or just in an instinctive state. One of the things that interested me about Adrian was that he had really quite a good technical grasp. In other words, if I needed to know how some

aspect of the Photon machine worked. It was easier for me to ask Adrian than for me to ask one of the engineers. It was not a linguistic matter, because my French was bad, it was because of Adrian's temperament, I mean Adrian's attitude toward design was one where he found it interesting to know how things worked. Now, I don't know that this necessarily influenced his work particularly.

Adrian's father was a weaver, Adrian was always very, very skilled with his hands, you know, built things and so on. A very practical person. And I think that I had a little bit of that same inclination and so, it was interesting and comforting at the same time, for me to find one who was working very successfully, I mean, doing wonderful work. Who also had at least some concern about how his work actually was produced. You really, at that time, the rather early days of photocomposition, it was necessary either that you knew some of this yourself, or that you had access to people who could tell you about it. Because the technologies of photocomposition in those days were not all that wonderful. Various kinds of degradation occurred to the work that one did. One drew letters, but they didn't necessarily come out of the machine in the way you wanted them to for technical reasons within the optical system in the machine. Some knowledge of what this technology was doing, good and bad to one's input, one's work, was a useful thing to have, it enabled one to make allowances to compensate for some of these problems.

I became extremely fond of Adrian, as a person, I think he confirmed in me a feeling that one should as far as possible, take responsibility for one's work, and what happened afterwards to one's work. In other words, a designer's responsibility didn't just stop with presenting a sketch to some studio who would then take charge of that and manufacture it. There were plenty enough designers who did that, I didn't say that it's wrong at all, in fact it may be good, but temperamentally, I think that I always had this idea that designing and making were somehow related. It's difficult for me to think of designing as a purely intellectual activity that does not involve the making of something. It's just my mind set that designing and making are related.

There are a lot of people a lot of designers, much better designers than I am, for whom that is not true. But, they are much happier to hand things off and have

people whom they trust to interpret their work. And so, of course, in many design disciplines it's inevitable that you do this. An architect can't really operate without assistance, I mean if you're in any scale of business you have to be able to delegate work and if you're a successful architect, you have to be able to do this. This is not a moral issue, or even a value issue, but the way I like to work, the way I am comfortable working, is where I do retain some kind of interest and influence on how my work passes through the production stages, whatever they are, and eventually sees the light of day as a printed image on a page, or nowadays on a screen. Adrian, as it were, made me think that this was O.K. That this was, a respectable way to work and that this kind of combination of esthetic concerns and practical concerns was all right.

PH: He seems to have given you confidence to do what you wanted to do!?

MC: I think that's exactly true. It was not he who suggested this because I had served my apprenticeship, I learned to make type before I could design it. But as I went forward, I think, he helped me feel comfortable with this attitude.

PH: I guess so, with what it is you wanted to do, who you were.

MC: Exactly that, I'm sort of repeating myself, but I think, he did not influence me so much in the kind of letters I draw, although, he did open my eyes to a number of historical sources that were of interest to him. It was more this attitude. And then another, this is more anecdotal in a way, interesting thing happened to me at more or less the same time; again in Paris, the two leading lights in the world of type in Paris, at that time, were Adrian Frutiger; who as I say was a transplanted Swiss and . . .

Roger Excoffon

Roger Excoffon, was almost never addressed by his first name, everyone knew him as Excoffon. He was French, he was from the south of France, from Marseilles. He worked in Paris and he had a very flourishing design – actually really, an advertising agency. He did a lot of work, poster design and so on. He was also a type designer and you could not have found two different temperaments than Excoffon on the one hand and Frutiger on the other.

PH: Gallant, stalwart as opposed to probably flamboyant.

MC: Yes, that's exactly right. Excoffon was much more Gallic, a very different personality. A very different style, a very different worker and so on. He was a wonderful man in many ways, and he did a wonderful thing for me which was that, you know, when I first met him I was a complete beginner and I wouldn't have the nerve to do this nowadays, but in those days I did have the nerve to call people like that.

PH: That's why you were going to do that, you weren't supposed to?

MC: Exactly, I knew no better, you know. I'm in Paris, I would like to visit you. His heart must have sunk, but he received me. And, was very kind to me, and further more I remember that he took me out to lunch in some cafe' in Paris. And, somehow, we managed to communicate. He, spoke no English, except as I discovered very much later, as I got to know him quite well, he could speak quite good English at night when he was drunk.

PH: But not for lunch.

MC: But he couldn't speak it at all. Not at lunch time. Not part of his personality. But what he did, which I've always felt intensely grateful to him, he treated me as an equal. Here I was the rawest, the most callow aspiring essentially, a student, with nothing to show for myself, no real achievement, no real work that I had done. He treated me as an equal as though I would understand everything he said. All the terms of reference were shared and that sort of thing. I always thought afterwards, that I owed him a great debt for that because in a strange way, you know, if you don't become something, necessarily by virtue of doing it, you know, when I was in Paris at this time, I had actually made type, had drawn a lot of letters. There was nothing I was very proud of to show, but when I always thought that I sorta became a type designer when Excoffon took me out to lunch and treated me as though I was a type designer. This is a 'laying on of hands' a sort of ratification. If someone takes you seriously and doesn't say, 'you are a stupid, ignorant child' , which was what I was.

PH: It's almost like a confirmation.

MC: It's a confirmation and Excoffon had the most beautiful manners. He was a very stylish man, he was also, I will insert this: (We might try and get Cherie talking about this later.) I've never met a woman, who met Excoffon, who didn't fall in love with him.

PH: Oh yes, we'll have to talk to Cherie then.

MC: Yes, he was ah, he had a sort of magnetism, almost movie star magnetism.

PH: Was he Picasso like?

MC: No, he was not! He was a gentleman. He didn't have the kind of [ego] Picasso. I think that Excoffon had an ego, but, it did not express itself, at least not to the extent that I knew him. It didn't express itself in sort of Picassoesque tyrannical form. I, as a matter of fact, got to know Excoffon, because his chief mistress at that time was an old friend of mine and still is. She worked for him. He led this European, I suppose, a sort of classic French life of wife and family and also sort of official mistress as well. And she, I knew I happened to get to know him through . . .

PH: Your friendship.

MC: Exactly. I mention Excoffon in all of this just because I felt this kind of confirmation. I always felt I owed him a great debt for taking me seriously at a time when he had absolutely no reason to do so whatever. That always taught me that it is important to try to do that.

Advice to Students

MC: Now I am older than Excoffon was when Excoffon met me, and sometimes, you know when, students are wanting to spend time with you or your teaching, I always try and remember the good example I have from him, of taking the younger generation seriously. Because it can have a very validating effect. I think there was a broader thing that I learned from that is, and it still is very

much evident today, in fact I should almost have made this the very first thing I ever said in this recording. But if you made ten different recordings perhaps you will have ten different type designers, I think you would get ten very different accounts, very different opinions, very different ways of working. It's very hard to generalize about type design. Even in the expanded form it is today thanks to the computer revolution. There are still not a very great many people that most of us are, essentially, self taught. I mean, yes you can take classes in how to use Fontographer or you can serve an apprenticeship as I did – a quasi-apprenticeship – but really, when it comes right down to it there are people who will encourage you as Frutiger did. There are people who will confirm you in certain ideas, there are people who will take you seriously if you're lucky, like Excoffon did for me. But really, most type designers are self-taught. The danger in generalizing is that it is very hard to do that because you do have a very wide range of personalities. I was lucky in meeting people as different as Adrian Frutiger and van Krimpen, Mardersteig, Excoffon and Herb Lubalin. Very, very different personalities, doing very different kinds of work. All of them designing typefaces. I think that was useful to me because it taught me that there wasn't just one path, just one way to do this, however much you might wish to sit at the feet of someone like Adrian Frutiger, just to take an example, that would not be enough, really. You had to bring a lot to it yourself. You could not really learn. I think it was the diversity of these people that I was lucky enough to meet at an early age, a formative age, let's say, that gave me this idea that you are on your own, that you'd better face up to that. That you could not just say: 'I'm going to study type and type design,' learn type design from people from the past. You have to make your own way in this world. And I think that through these encounters that I've had with people, helped me to realize that and helped me to feel that, I couldn't depend on other people. There was some kindness from strangers that came my way, I was very lucky because of my father's connections, but still and all, ultimately you were on your own, and you had to make your own path. I think that is something that perhaps temperamentally was latent in me, it was helpful to me to be exposed to a number of different possibilities, different attitudes, different ways of working. Excoffon was not the slightest bit, really, concerned about how his type was made. He did not have this kind of studious, mechanical view that Adrian did. He was much loftier in a way about that. So all of this was, you know, grist to the mill for me, it was useful.

Then, just to get back on the kind of chronological path here before I get too way-laid. I did this job for a couple of years for Crosfield's, working in London, dividing my time between London and Paris.

Chapter 7

Linotype

I had kept close touch with Mike Parker at Linotype in New York. Mike would come once in a while to England. There was also a British Linotype company, I got to know them a little bit. I don't think that I ever did any work for them. But then in 1965, the great opportunity came along. Jackson Burke, this wonderful man who Mike reported [to] at Linotype had to retire because of ill health and so in 1965 Mike found himself as I think the title was: Director of Typographic Development. But anyway, the guy responsible for typography at Linotype, a very responsible position.

Mike Parker and a Partnership Born.

He offered me a job. Mike had a design background at Yale, he had been at the Graduate Design School at Yale and was and is a very expert typographer and designer. I think the way Mike saw a possible partnership, which is indeed exactly as it played out between us both for many years and in more than one situation, was that Mike had great managerial skills, which I certainly do not have, entrepreneurial skills, salesmanship, is a big part of Mike's personality. He is a very outgoing sort of person. I think that what he saw as a potential working arrangement between us, is that I would do the sort of hands on designing under his general direction. I would be a sort of author figure, he would be an editor and publisher in this relationship. That's what he proposed to me and it is exactly what happened. In other words, I went in September of 1965, I moved to New York. Again, Linotype was still in Brooklyn, down by the Navy Yard, down by the Pratt Campus in Brooklyn. I'd began by lodging in Mike's house and eventually found myself my own living quarters in Brooklyn Heights. And I, in a way, did not know what to expect. It was a very, odd transition to make, I may say, you know, people laugh nowadays about the swinging 60's and swinging London. Let me tell you for someone who lived in London in the 60's that it was a great life. And to sort of give that up and move to Brooklyn at that time was . . .

PH: Move to New York!

MC: You know, it was a hackneyed expression: Culture Shock. But this was, let me tell you, a culture shock. What sustained me was that it very quickly became apparent I had a good time at Crosfield's, it had been interesting, my time in Paris had been interesting, but evidently, ah, I had a certain amount of pent up stuff that was looking to get out of me in terms of design.

Linofilm, Linotype

To set the scene: By 1965, photocomposition was commercially established and in Linotype's case, they had a successful photocomposing system called the Linofilm, which was in production in sales, going ahead, being delivered, being installed, and by '65 the bulk of the work, it was very laborious work. The bulk of the work of converting their metal types to photocomposition had been done. Not all of it, it was still going on when I arrived there, but the bulk of it had been done. And so there was an opportunity for Mike at this juncture, and probably not before, but at this juncture to say: "Are there any classes of type, are there any kinds of type that Linotype has not been able to do because of the constraints of the Linotype metal photocomposing mechanical metal photocomposing, mechanical composing system that had gone away in the new technology of photocomposing. Is there anything that we can do now or we should be able to do now that we could not do for mechanical reasons with the Linotype machine?" And, indeed, it seemed to Mike and me that there were some things. The most obvious one was script faces. By script faces I mean faces that imitate handwriting and particularly ones that joined. It was the nature of the Linotype machine that each letter had to be on a separate brass matrix. There was no way that one letter could join to another.

PH: It was a nightmare caused by the technicalities of the machine?

MC: It was just physically impossible to do that. And furthermore, there was no way that the letter could overhang the physical limits of the rectangular brass matrix. So a slanting script or a very cursive script, or come to that, non- Latin scripts which need to join were never even attempted with Linotype because they just were not feasible. But the Photocomposing machine with Linofilm was very, very well adapted to doing that kind of typesetting. You could make letters

overlap, you could superimpose letters on top of one another. And you did away with this kind of rectilinear bounding box, which you had had in physical form in metal type. That was just notional and just went away in photocomposing typography. So, we started our program of doing script faces. Snell Roundhand, (see figure 3, Appendix B) which was one of the first projects that I did for Mike, was really a kind of celebration of this emancipation from the constraints of metal type.

MC: We did not only script types, but we did various other things as well. Indeed, essentially we did what we thought the market could use, could absorb. But we started this program of designing new faces within Linotype having an ‘in-house’ designer in a creative sense. There was obviously a big staff of what was then called letter-drawers. An unionized staff who had traditionally done the interpretive work for designers such as Dwiggins. Who had supplied work from the outside, but by bringing me into the fold, the idea was that they would have an ‘in-house’ design ability. This all got off to a very fast start for me and Mike. Mike is a very, very hard worker, he works very long hours and I got caught up in this as well. So in those early days of Linotype we worked non-stop, producing a lot of work in those early years. And, as I say, there was evidently some kind of pent-up thing in me at that time which, might have opened the faucet.

So Mike and I had this very good relationship of author and editor . He deciding what we would do and of course, looking daily at what we were producing . This was a very favorite period in my life of working with Mike very intensely.

PH: Did you feel as though, finally you have found someone with whom you could commiserate and you were no longer

MC: Yes!

PH: Having to design in a vacuum of discovery?

Linotype

MC: Yes, yes, I think that is true. And not only because of Mike himself, but in an odd way I found that about the whole of Linotype. They carved a little office for me out of the steno pool at Linotype. I had this very odd life. Talk about culture shock. I had this little office, which Mike and I set up with a drafting table. This was within this extraordinary, Linotype Company who had been there since early in the century. And most of the people that I met in the factory, that I came to work with, were second and sometimes third generation Linotype employees. They came from Irish and Italian families principally from within Brooklyn and Queens. And some of them had had parents and grandparents who worked in the same company. So this was an education for me of a much broader kind.

Brooklyn Heights

MC: I lived then in the Heights. I had a young family and this in itself was a very fascinating experience. Brooklyn Heights into which I landed, because of its nearness to the factory, turned out to be a very, very interesting community. And a very liberal one, and this, at a time when America was going through all kinds of crises, assassinations, the whole Vietnam War and the change of heart about the war, to put it crudely, America waking up to the fact, that she was perhaps not universally loved. America underwent tremendous soul searching. We happened to have a lot of friends who were journalists, photographers, 'media people', (I don't think we used the term in those days) and people involved in the early days of Women's Lib. This was a very fascinating life. Eventually, during those early months that I worked at Linotype, I had no social life at all because all I did was work. But then things broadened out a bit, and I did acquire a sort of social life in Brooklyn and enjoyed it very, very much. I can't say that in the wider world it was an enjoyable period of history, it was rather agonizing in many ways. I was at a vantage point, in a way. . .

PH: Did you agonize with us as we went through the Vietnamese War?

MC: Yes, very much. I was not an American and am still not. I still have British citizenship. I have an alien resident, green card. Mostly because of the kinds of friends who we locked into in Brooklyn Heights, I did feel close to the Vietnam war because a lot of people were close to it. A lot of friends were close to it. I had friends who were beaten up in the . . .

PH: War protests?

MC: Yes, and the Democratic Convention in Chicago in 1968.

PH: The Chicago Eight?

MC: Yes, remotely, a lot of people who were involved in that life at that time, so it was an interesting period. It was not always a very comfortable period.

PH: What were your feelings about that , vis-à-vis your experience of having lived in London and Paris?

MC: It was very different and I think, you know the truth of the matter is that if you live in any capital city, perhaps any city of any size, it might apply also to Boston and Cambridge where I live now, you really, sort of in the end make your own life.

PH: So we're back to hearing the same thing which you 've mentioned originally?

MC: The Swinging Sixties in London was wonderful. I had a whole group of friends, and you know, I enjoyed that thoroughly and everything about it. I did also very much enjoy (I don't know if there was a name for it) but, the Sixties in New York were another whole voyage of discovery for me. Very much a part of my growing up process, a very different one. You got a very different view of the world, frankly, from New York and not always a comfortable one, but a very realistic one. I did see two sides of American life working at Linotype. The people I met and worked with at Linotype tended to be old line conservative

PH: The salt of the earth, so to speak?

MC: Exactly.

PH: "My grandfather did this, my father did this, I'm going to do this. . ."

MC: Exactly. Their view of something like, to take a very obvious example, the Vietnam War . . . was probably very different from the view I might have from someone that I might have had dinner with in Brooklyn Heights who was perhaps working with network television, or was a photographer who was traveling the world. Their view of these things tended to be a very different one. I did see both sides of that kind of agonizing about America's place in the world. America's future in the world. What effect that had on me I don't really know, except that it made for a very interesting life. I tend to believe that one works well in a situation where there is a lot of input, a lot of things happening in your life. I remember a funny conversation I once had in an earlier time in Paris with Adrian Frutiger where (can't remember the occasion, but I was off to see some exhibition, I love going to exhibitions, I've derived a lot from that) I was trying to persuade Adrian to go with me and he didn't want to do this, he said that he already had so many images in his mind, that were waiting to get out, he had no room to acquire any more, you know?

PH: I was just thinking, we spoke a lot about your dad, a lot about the men in your life who influenced you. Were there any other women beside your beloved Aunt who influenced you? Could we talk about your mom?

MC: We should talk about that a bit.

MC: OK. I was telling you an anticdote. Let me start that again, for continuity. We were talking about the influence of life in the wider sense on the narrower working life. And I was saying, that I remembered an occasion in Paris where I'd tried to persuade Adrian Frutiger to go to an exhibition with me because I love going to exhibitions, and museums. He said he didn't want to do that because there were already in his mind so many images that were teaming to come out that he didn't have room to store any more. He didn't have any more input circuits. But I'm not like that, I wish I were in some ways, but I need input, I need to see things and talk to people, and I can't really work in a complete vacuum. So a life of the kind that I led in New York in the early sixties.

(By the way; I was there between 1965 and 1971) I went back to live in London in 1971. But over those six years, I led a very interesting life in New York with a lot of cultural activities of a broader kind.

PH: Lots of musuems? Lots of people of different cultures?

MC: A lot of visitors. And, you know, good, good all around life. I would say that I think that that is something that contributes to, to working life.

Mom and Aunt Peg

MC: But I'll tell you what, just to take you up on a suggestion you made a minute ago. You said that I'd mentioned my father and a number of other men that had been influential and what about the place of women. My mother was certainly an influence on me. She had trained as an architect. She never practiced as an architect, but she had a very good eye and she stopped working essentially when my parents got married. She did not continue. I mean she brought up me and my brother, kept house. Her sensitivities to visual things, is a part of my genetic make-up, also the environment in which I grew up. There were always nice books around, not only books on typography, my mother was very good at choosing nice children's books when I was young. I was also lucky with a woman of the same generation, my aunt, my father's sister, who lived to a very great age, she recently died, my aunt Peg, whose tenant I was in my London days.

When I was young, in boarding school, she was very good to me because during every school vacation she used to take me out for some sort of treat. This she sort of saw as a duty as my aunt. She was my only aunt, I didn't have any uncles, only one aunt and no cousins, so a very small family.

She took this assignment very seriously and would always come up with something very interesting to do. These were often art exhibitions or visits to museums. I owe to her, from a very tender age, the experience of being taken to exhibitions. Not only taken to exhibitions, but she's very good because she made me say what I thought about. I remember she used to quiz me about a painting or a piece of sculpture. She would plump me down in front of some painting at

the National Gallery or the Tate Gallery, and ask me what I thought about it. We would converse about it. So this wasn't just a dumb walking through galleries, this was a matter of having to think about what you were seeing and then maybe borrowing a book from the library about certain paintings or a certain school of painting. She was very, very good to me in that way. She took me to the theater and other places as well.

PH: Do you remember any plays from that period that you particularly liked?

MC: I remember that one of the things that she tried to do, and it was not always possible, but as part of just being at school, studying English in school, one had to study Shakespearean plays and a number of Elizabethan authors, just as in this country. She would always try and find productions of what ever I was having to study in school at that particular time. Where ever was possible, I mean you weren't always lucky enough to find but there was a production of Coriolanus on, as we were doing Coriolanus in school. At the time she was able to do that and so, made this, as much as possible, fit in with what I was studying as a child in school. So she was another person that was very influential.

PH: Was she musical?

MC: No, my family as a whole, was not musical. I must say. Music was never really to the extent that I am fond of music myself, I don't know where that came from. I tend to think that was more from some friends that I had in school who were musical. I think I acquired some interest in, not a broad musical interest, I'm not knowledgeable about music except in the rather narrow field of jazz that I've always been interested in. I don't have a good ear, I can't play an instrument, I can't sing, I can't do anything like that. I enjoy it. At various times of my life music has been important to me. It certainly was when I landed in New York. That was part of the excitement in New York with out a doubt.

PH: Do you recall any paintings particularly that you saw when you were at the museums?

MC: I recall quite a lot of paintings. I remember a broad range of paintings because I was taken to many different exhibitions and galleries and sometimes, even more

now, in England, there are a lot of a houses that are open to the public. Typically, houses that noble families lived in. You get to see, you get to pay your money and go in and walk around exhibitions of houses. In those days, when I was young, nowadays, everyone seems to go to exhibitions, but they didn't so much in those days. I remember that when I was young in London I used to go to museums on a Sunday, and sometimes I would be the only person there.

PH: Were they free?

MC: Yes! By and large they were. Sometimes if you went around to country houses . .

PH: You had to pay there.

MC: Yes.

PH: They needed money for taxes.

MC: Yes, that was why they were open very often.

MC: In order to fund the upkeep of the place. By and large museums were all free. This was great for one's impoverished sort of student life days in London going to museums and galleries.

PH: I think what I'm trying to get at is, was there any particular art work, or artist . . .

MC: No, I don't think so. I was very caught up by the time I was of the school leaving age, by the time I've talked about the studio at Charterhouse where I was lucky enough to spend some time painting and drawing, getting interested in design typography. I think at that time, I was very caught up with modern art. I was very interested in Baroque in particular and certainly the expressionists. Anything that was modern interested me at that time. I was in London, some months ago, currently there was a magnificent exhibition of the late painting of George Baroque. It reminds me how much I love that. I would look at that and I would say OK. But I wouldn't necessarily single him out. Neither the teachers I had at Charterhouse nor people I described like my parents, or my aunt were

very dogmatic about art, about the visual arts. They were fairly eclectic in their taste.

PH: Which was helpful for your knowledge.

MC: Which was helpful because I think, my parents had friends who were artists. So they had paintings in the house, painted by them. I got to see one way or another much, much more than that. I had one way or another a fairly broad exposure to certainly the visual arts. Not to music, as I was saying before, that was not really part of my upbringing. [Voice trails off.] My parents were not musical, but as far as architecture, . . .

PH: Your mom,

MC: Yes. When we went on family holidays, one of my parents favorite things was to visit nice houses that were open to the public, or churches. In those days, churches were never locked, you could just arrive at any church, go in and look at, some Saxon or Norman church, you could go in and look at the church. My parents loved to do that, they didn't have an ounce of religion in them, in the formal sense, but they were interested in church architecture and the decoration of churches.

PH: Stained glass. MC: Yes, stained glass certainly, I remember . . .

PH: The way in which the light played on the glass.

MC: I remember as a child walking around churches. I never went to church to worship. I never went on a Sunday. But very often going to churches and sharing my parents pleasure, in some wonderful piece of carving or stained glass, . . . there were a lot of things my parents liked to do that I suppose that in a way all got somehow in the big compost heap.

PH: Yes, indeed.

MC: Influences in my upbringing. The kind of things that I loved.

The Influence of World War II

PH: How did the War affect you? (WWII)

MC: Well, I was born two years before war broke out. I do remember the War. I remember seeing the contrails, the trails of bombers coming over and dogfights in the Battle of Britain. I remember bomb damage, I remember craters. My father went off, he was too old, to be a soldier, be on active duty. Because he was a linguist he went off and spent almost all of the war as a censor, working in the military censorship. Most of that time he was in Jerusalem, what was then called Palestine. My father was away for almost all of the war. My mother and I were evacuated out, we lived in the suburbs of London, at the outbreak of war. Then we moved out of London to the country in order to avoid the bombing as much as possible. Almost immediately at the ending of the war, (the war ended in 1945) in 1946 I went off to boarding school. I do remember things about the aftermath of the war. Food rationing, and clothes rationing, there were various privations during and after the war. Being in boarding school, I remember that the food was pretty appalling, the school did everything they could, I'm sure.

PH: I'm sure they did.

MC: But food was severely rationed. I never saw a banana until well after the war. [ironic/sad laughter] Things like that you take for granted. A child would take for granted nowadays. I don't know, if not having eaten a banana until I was 10 or 12 years makes a great deal of difference to life. But

PH: Oh, but it does. It absolutely does.

MC: I have gotten to know people in Holland, and Belgium and France whose experience of the war was very much worse, very much more tragic. Those countries were occupied. Come to that I had German friends who had very harrowing experiences in the war. And the Japanese.

PH: Nobody was unscathed.

MC: No one was unscathed. In one way, the British were not all that badly off.
We were invaded, we were never occupied.

PH: Did the bomb raids scare you?

MC: One had to sleep in the shelters. They built these cages, steel cages, within houses. I remember my mother and I had to sleep in these things. I do remember a kind of sense of threat. I mean that you heard the bombers coming over, you heard the doodlebugs, you heard the things, and you heard the explosions. I don't know whether I was actually physically afraid of that or not, I don't know. But I do know,

PH: You were more curious than afraid?

MC: Well, yeah. What happened was that when the aircraft defenses in England became aware by means of radar, that there was a raid, coming on its way to London, they sounded a siren and this was the signal that if you were not already sleeping in your shelter, you had damn well better get there. Or, sometimes, people had shelters out in the garden. You had to go out and get into this sort of bunker in the garden. I do know that, (perhaps this answers your question), it's happened to me once or twice, not in recent years, but many years after the war, I want to say, 10 or 20 years after the war, because of some, air raid, occasionally having nothing to do with a real air raid, they would, practice with the sirens, or something or other, once in a while it's happened to me that I've heard years after the war, I've heard a siren, go off. I tell you, I'm under that table before I know what I'm doing. Once you've experienced an episode. As a little child you've been trained to drop everything and get to the aircraft, the air raid shelter when the siren goes off. You don't lose that reaction completely, I have a bit of that evidently. May have gone by now. But I do know that there was some residual speaking about that, but you know war, I mean, it sounds like an awful thing to say, but for a four or five year old, war is pretty fascinating. You can pick up bits of bombs in the garden, and there was always this kind of funny thing because it was my first encounter with Americans. You know, there were many, many American troops stationed in Britain during the war.

PH: Were they disciplined pretty well?

MC: They had the reputation, the British, I think had, the British public had mixed feelings about them. There was this saying that the Americans were what was it? Ah, 'Over paid, over sexed and over here.' Of course, the view that the British had was the American troops had a much nicer life than the Brits did. Because we had all this rationing and so on. But for a child, the American soldiers were fascinating because they were wonderful to kids. They literally did give us gum. You know, if you were on a train, or bus and there were American servicemen, this was wonderful. They would give you things. I remember an American soldier giving me his hat badge, he took his hat badge off and gave it [to me] he probably got into trouble. Anyway, they were adorable to kids.

PH: That is so nice to know.

MC: Yes, there were many things about being a child during the war that were a lot of fun. You found bits of bombs laying around.

PH: Did you have a little tricycle or wagon?

MC: I did, and I had a little collection at home of bits of shrapnel, you know, you found. That you picked up in the street. It sounds awful.

PH: Not really, it's a way of adapting is it?

MC: Absolutely. I think that's exactly what it was. And so, you know I was not exactly devastated, I do have memories of the war, and of these relative privations, which, in a way were a lot of fun when one is young. Sugar rationing went on a very long time after the war. I think sugar rationing continued, I think about, God, I don't know, until into the early fifties. At least five or six years after the end of the war. When I first was at Charter- house, one still had to have coupons to go to the school tuck shop to buy a bar of chocolate and you could only buy a certain number of bars of chocolate out of the month.

Chapter 8

Cherie Cone, Partner in Carter & Cone Linotype Days

MC: We were really talking about the Linotype experience. This is a good juncture for Cherie to join in because she and I met at Linotype. And to this point I'd been talking mainly about the period when I was actually working at Linotype, living in Brooklyn. The next phase of that was that the Linotype company moved its headquarters from Brooklyn up to Long Island. And simultaneously opened a couple of offices in New York. One small one in Brooklyn where I worked with one or two other designers. And then, eventually, in a much larger office which was opened in Manhattan on Thirty-Fourth Street. Which is the office that Cherie was eventually to manage. I don't know the reason for the company to move out to Long Island except that I know most of the executives lived out there. They probably wanted to live closer to work.

CC: They probably downsized too, right?

MC: I don't know about that. They may have done. When they got rid of the whole metal factory. I think that's probably true. Yes.

PH: Cherie, what was your job at Linotype?

CC: Well, I was hired in 1976 as a rank beginner, trainee. Absolute ground zero.

MC: Answered an ad.

CC: Yes, yes, I got my job through the New York Times. But also Arnold Bank had told me when I studied with him at Carnegie Mellon in 1976, that I should go to work for Mike Parker at Linotype. I was sort of intending to give him a call when I saw the ad in The Times. I went as a complete gringo. Mike promised me that I could have two years of training and then he thought that maybe he would let me manage the department. And six months later, he called me in and said: 'Well I'm sorry, but I'm giving it to you now.' He just threw me in.

PH: There you were.

CC: There I was!

MC: She was promoted from most junior trainee to boss of the department.

CC: Yes, that's right. I wasn't even there for all of the six months. I don't know what he thought or was thinking but anyway, overnight I went from reporting to some of these people to having them report to me.

PH: By this time, it was no longer a union shop? Am I correct?

CC: Yes. That's right.

PH: And did you meet Matthew the minute you walked in the door? Or did you meet him several weeks later?

CC: I met you some weeks or months after I . . .

MC: Yes, I think that's true because

CC: I was still a trainee.

Matthew returned to London from 1971 until 1981

MC: Yes. At this point, I had gone back to live in London. I went back in 1971, and continued to live there for ten years. My work was all done for the American Linotype Company. I would do my work in London and then three or four times a year I would come back to the States to deliver work and get more and take part in the regular planning meetings that were a feature of our lives in those days. Where Linotype discussed the development projects for the next period they were working with. There would be representatives there from the English Company and the German Company as well. So it must have been on one of these trips back to New York from London, that I met Cherie and the

other people that were more recently being hired in the letter drawing office, as it was called.

PH: That was a lot considering that they had been trying to reduce

MC: How many people in the Manhattan office?

CC: Fifteen, all together.

MC: Some of whom were very old hands indeed. Some of them had been at Linotype for a very long time.

CC: Yes, twenty years, twenty-five years. Long time, yes. Nice challenge.

PH: And you walked into that Cherie?

CC: I did.

PH: Having to be their supervisor?

CC: I did.

MC: So life, this whole period, the mid seventies was a very important one, from the point of view of type and typography as a whole, I think because it was a period of very rapid expansion of type libraries. There were a number of factors, I think. The whole business of photocomposition had taken hold. In the early days of photocomposition, there were really two parallel streams through which typesetting went. Text typesetting went through machines such as the ones that Linotype made, like the Linofilm. And headline typesetting, display typesetting went through manually operated machines called the Phototypesetter.

CC: Yes.

MC: There were a number of these things.

CC: Yes.

MC: And then these were recombined as mechanicals eventually. But then what happened was that the typesetting machines became capable of setting headline sizes. One could suddenly combine all of this work in one machine and drive it from the keyboard. But this meant that companies like Linotype, which had traditionally made a fairly large repertory of faces, faces mainly intended for newspaper text, book work, and general jobbing, suddenly had to face up to the fact that since the machines were capable of setting headline styles that they had to add a very great number more faces. Because, obviously, in headline typography a wider choice of faces is typically used, faces that had in the past been done as you know, cheap film fonts for use in these manuals. So at this time, in which Linotype was building up its design office for the purpose of equipping these newer machines with a much wider range of typefaces. The job throughout the seventies that all of us were involved in was this very rapid expansion of Linotype type. Just cranking them out.

PH: So it meant long hours, it meant a lot of rethinking of old ideas?

MC: Yes, it meant . . .

CC: Retooling

MC: It meant all of those things.

CC: Streamlining.

A Union Shop

MC: I think the other thing which one forgets about, is that it was also Cherie's office and Cherie's appointment to run it, was very much part and parcel of this. When I was first at Linotype, it was a Union shop. The people who did the letter drawings were only allowed to do, I think it was two a day. They had to hand their drawings to a supervisor who made whatever criticisms were necessary. Then at a certain point, the supervisor would take the drawing to the head of the department. Now, under the Union regulations, the head of the department was not allowed to touch the drawing. Was not allowed to make a

mark on the drawing. So you could not say: 'Oh this shape is wrong, this is what I'd like it to be.' It all had to be done verbally back and forth down the chain of command.

PH: That's labor intensive.

MC: It was a very laborious, typically Victorian, Edwardian hierarchical industrial management system, which was solid in one sense. Because it meant that every single thing went through the same supervising mind, so the standard was very high because there was all of this control.

CC: The designs were gorgeous, they were beautiful.

MC: There was a limit to the knowledge, and certainly a limit to the responsibility of the individual designers. Because, you know, they did a drawing, and then it was critiqued by someone else. What happened over this period the seventies, driven by the much greater hunger for type; for new typefaces, re-edited typefaces, re-released typefaces. And under the change of economics, of font making that came along with photocomposition, was that this whole hierarchical thing became much more flexible. Those more senior people that Cherie mentioned that worked with her were, of course, trained in this old system and they had to adapt to a system which we now take for granted, which is that designers would have much more autonomy. So someone's got to be nominally in charge of the department and someone ultimately says yes or no, but you don't have this rigid structure whereby each individual's responsibility is very limited by their experience, their seniority and so on.

Typographic Explosion During the Seventies

MC: The way we worked at Bitstream, to jump ahead a little bit in the story, was that yes, there was a person in charge, administratively, which was again Cherie. Then there were people, senior people in the type foundry. But aside from that, designers, individual designers were expected to do the whole process themselves. They researched it, they digitized it, they did all of the stages of the thing, it was their project. Generally speaking, only one designer worked on a single project. Sometimes you had to have two, in the case of

some urgent job. But there was much more individual responsibility given to designers. This is something that happened, as I say, it was really driven by the greater demand and the greater facility for making fonts. But were really part of this typographic explosion during the seventies.

PH: OK. What happened to the Union in this case? Did it just sort of go away gently?

MC: Yes, I think frankly what happened was this . . .

CC: Well, it was still there in the factory,

MC: Yes, yes

CC: and probably still is.

MC: Probably still is, yes, I think, that frankly, the Union was uncomfortable with the situation the way it used to be.

PH: Having designers there, is that what you mean?

MC: Yes, typically, Unions like to have as many members as possible and they like to have a Union Shop. I can't help to feel that, in a sense, the Union connived at what happened which was to move the letter-drawing office geographically to a different place outside the jurisdiction. I don't think that any blood was spilled in the course of arranging this. What it meant was that the senior supervisors who had worked under the Union system, who had not been allowed to make a mark on a drawing for as long as they had been in these senior positions, suddenly found themselves back in a situation where they could be drawing hands on. This rejuvenated them rather. Because, you know, some of them, obviously, all of them had started that way, on the boards, but then they had not been allowed to draw, really for a long time. Some of them who might otherwise, I think of one in particular, who might otherwise just have retired, we persuaded to stay on because he could be much more actively involved, really, as a designer in all phases of the work. So I think this benefited the younger people because they came into a situation where they were given more

responsibility, more authority early on, helped them develop. I think that it re-energized the 'old guard' because they were suddenly able to do things without someone looking over their shoulder, really.

CC: Without slowing everything down purposely.

MC: Exactly, and everyone did as many drawings as they could. If you got to a place in the typeface where you are doing the period and the comma, under the old scheme, that was all you could do that day, you know? I suppose there were some people . . .

PH: That was so frustrating.

MC: You know a lot people were frustrated. So people got to a much more humane system of working at their own rate. So this, I think was a big improvement in working conditions and I think it allowed for this, much greater productivity that was such an important part of the expansion of typography during the seventies.

PH: Did you feel from the people who were working with and for you, a difference from the old way to the new way in their attitude? Cherie did you find any difference?

CC: I guess, I came along after really the whole business of the Union was settled and had been for some years by the time I was there. So I didn't see that transition, the transitions that I saw had to do more with the technology that was evolving, you know, working on cameras instead of just drawing and cutting 'Rubylith' eventually working with IKARUS; and the whole digital revolution. So I saw much more of that kind of change than the whole Union thing, I wasn't really part of that.

PH: Did you find that your designers were eager to learn the new technology?

CC: Oh, absolutely.

PH: They just couldn't wait to get involved?

CC: Absolutely, yes, even the older ones, I mean, they were, they were scared and very apprehensive, but everybody realized that this was happening and it wasn't going to go away, you couldn't ignore it, you might as well get on with it. And I think everybody was excited about the production possibilities. You know that you could do things you could never do before, you could do them faster and smarter, you know everything. It's just wonderful.

Chapter 8

The Founding of Bitstream

MC: It removed some of the drudgery that is part of doing a large number of characters.

CC: Yes. So everybody took to it. It worked out. They followed us up to Boston for Bitstream, so it must not have been too bad.

PH: Then you decided to start a new company, Bitstream, with the majority of the people going with you, is that what you are saying?

MC: You know, we went from the period which I was describing, broadly speaking, the seventies; a period of great creative ferment at Linotype. And by the way, in those days, particularly at the beginning of that period, Mike Parker, whose title was Director of Typographic Development at Linotype, really he was Director of Typographic Development to the Industry because everyone copied Linotype's lead, and indeed copied their typefaces very often. Mike was really setting the Typographic Development Standard for the industry.

CC: And the pace.

MC: And the pace.

CC: And the direction.

International Typeface Corporation (ITC)

MC: And the quality level. And everything. The thing which is necessary for history is the following: One of the interesting things that happened right at the beginning of the seventies, and it was symptomatic of this expansion I was talking about, was the formation of the company called ITC, International Typeface Corporation, (which is very much part of the digital world), that was begun by a small group of New York type people. Their idea was that they were not equipment manufacturers. To this point, virtually all type came from

equipment manufactures, we were still in the days of proprietary typesetting systems; if you had a Linotype machine, you bought your type from Linotype, if you had a Monotype machine, you bought your type from Monotype because a Monotype font wouldn't fit on a Linotype machine and vice-versa. Your customers were really sort of locked in to you as a supplier. The idea that ITC had was to really be a franchising operation. They said: 'We will develop type designs and we will license the rights of manufacture of these typefaces to anyone who will respect our property and pay royalties and do the right thing.' I think the first company they came to and probably the key company, was indeed Linotype.

I well remember the meetings when the founders of ITC came to see us, to see whether we would, essentially buy into this scheme or not. Or whether we would say no, we are only going to make our own home grown typefaces. But Mike, I think, typically of him and his sort of generous spirit, embraced this idea. He thought it was a good idea. As far as ITC is concerned, the rest is history. They were then able to go to other companies like Compugraphic, who also tended to follow Linotype's lead anyway, in those days. So they bought into that. Here was another important new source of type and type designs, not of manufacturing, but of organization, coming into the industry at the same time, all adding to the load of work that needed to be done within companies like Linotype. This was kind of a heady period, all during the seventies, of us adding a great many faces and working very hard and very congenially. At Linotype the camaraderie was terrific, we were great heroes because we were using a lot of type, it was making good money. But, you have to remember, that for companies like Linotype, I believe the same was true of Monotype, indeed, all the typesetting equipment manufacturers; ninety percent of their business, ninety percent of their revenues was equipment, ten percent only of the gross was type. Fonts of type. So, although we made good money, we were only a small part of the overall P& L of the company.

Towards the end of the seventies, Linotype started to get into trouble on the equipment front. Originally, in days of metal Linotype, Linotype had a virtual monopoly of the business. But with the advent of the new technologies, photocomposing technology, and eventually digital technology; other companies came in, I mentioned one of them, Compugraphic, a very important

one, Autologic; there must have been three or four good new companies that came into the electronic photo era. They targeted particularly Linotype's traditional market of the newspapers. (At least initially they did.) By the end of the seventies, Linotype's equipment sales were suffering badly. They no longer had the dominance in the equipment market that they had. By the end of the seventies, it was therefore a question as to whether the level of equipment sales could continue to sustain development of type at the pace we were doing it. Even though, the type itself continued to be profitable, we had all sorts of marketing schemes; "Font of the Month Club" and all sorts of things; we were selling a lot of type. Meanwhile we were only dealing with ten percent of the company's business at best, roughly.

CC: But paying our way.

MC: Handsomely, handsomely. Also by this time, Linotype was no longer it's own owner. It was part of a larger group of companies, and that happened twice. It became first, part of a group called Eltra and then called Allied, was that?

CC: Allied Signal.

PH: Oh, that company is part of railroads

MC: Allied Signal, yes.

CC: It's huge, yes.

MC: Yes, it's a huge company. Whereas originally, Linotype had been run by it's own management. Even when it became a part of Eltra Corporation, Linotype, I think was pretty well managed. It was largely the management from Linotype that ran Eltra. Although they had many other responsibilities, other companies to look after, they still had enough background at Linotype to understand how the business worked.

But at the next stage, this was no longer true. So as Linotype's market share of equipment was on the decline, this coincided with some sort of upper reaches of management who really did not understand the business at all. The type

business. So, there came a period, I can't tell you exactly, it must have been 1979 or 1980, where Linotype, because of declining revenues, was asked to make across the board economies. We type people rather resented this because we said that we may be only a small part of the overall picture, at least we are profitable. You may be losing money on machines, but you're making money on type. Why cut back type at the same time you cut back everything else? But they said: 'No, orders have come from "on high", cut.'

CC: Everybody.

MC: Everybody gets cut. So here was a request to reduce our headcount.

PH: Well, your staff was not very large, to begin with.

MC: No, it wasn't a huge staff.

CC: No, very lean. Very mean. And very fast!

MC: Yes, yes. But coincidentally another thing had started. There is another strand in this story which lead to our departure from Linotype. And that was this: I spoke with companies coming into the photocomposing field like Compugraphic, but by the end of this period, there was another wave of companies coming in, and this was the, I guess you could call them the digital imaging companies. These were companies like Scitex, Camex, very exciting, fast growing companies, who were introducing very powerful, very expensive digital systems that would do any kind of imaging you like. They would set whole pages of newspapers, rather than dividing up between the text and the typesetting and the engraving and so on. Every- thing was done at a single pass.

CC: Photo's in place, it was so exciting!

MC: Yes,

CC: To see that, I mean you don't think about it now, but the first time they showed that. . . It was astonishing.

PH: It's a miracle.

CC: Yes.

MC: All of this, all of this, of course, at the time extremely advanced computer technology coming out of, some of it out of defense, but anyway revolutionary technology. These companies that got off to a very fast start, found themselves, of course, they were all new companies, found themselves in need of type. You're selling a system which among other things sells type, you've got to have some fonts of type. Their first reaction was to go to the old line companies in the field, such as Linotype, and Monotype and try to license typefaces in order to adapt them and sell them on whatever business basis for their systems. Their feeling was that theirs was a new technology, and that sorta of leap frogged the older companies in the field. It would be good for these older companies to ally themselves with some of the new powerful forces in the industry.

The typesetting companies took a different view. Particularly Linotype. They saw these newfangled companies purely as competition. And they said since our main business is equipment, and we only make type as an ancillary to our equipment, then we should not consider licensing our typefaces to new companies because that will be, in effect, aiding the competition.

We said we think that is very short sighted and very stupid. We said there is good money to be made by licensing the type and if we don't license the type to these companies, they will copy them anyway. They will bring these typefaces out anyway, we will derive no benefit from this whatever. We said there is a very strong business argument for us, not only servicing Linotype but by licensing faces broadly, essentially to all comers, because we can charge really good royalties. Because other than that these companies gotta hire, start, they gotta train people.

CC: And they didn't have a clue about how to do that.

MC: They didn't know how to do that.

PH: That's what my question was going to be: Did they even have a clue as to how the technology worked?

CC: No.

MC: No.

CC: No, they would give it to engineers and get results

MC: And it would be a mess!

CC: Just terrible.

MC: Yes, yes. But again, we were over ruled by the management who just sort of said . . .

CC: They stonewalled it.

MC: They stonewalled it. So, at this point Mike Parker, Cherie and I really started to see the writing on the wall. We saw on the one hand, the necessity to cut back this very vigorous program that had been running for so long, and on the other hand we saw the possibility that if we stayed at Linotype we were going to be shut out from all of the new exciting technology. We were going to find ourselves in a sort of technical backwater very soon without any real platform for us to sell our type, if Linotype refused to license type. If Linotype was its only customer for type, then we could foresee a time when there wouldn't be a customer for our type within Linotype. So we really had to confront this whole situation. Mike took a not entirely voluntary leave of absence for awhile and toured around the industry. And eventually, we came up with a plan to do independently for ourselves what we thought Linotype should have done. In other words to become a resource, a typographic resource, a font resource for new companies coming into the industry. Whatever their interest was in type; it could be image setting, it could be stamping labels, making posters, anyone who wanted fonts of type.

There should be a source of high class, high quality digital fonts available to anyone who would pay the price. Exactly what we had proposed. The business plan we had proposed to Linotype had been turned down. We turned round to Linotype and said: 'Well, since we've got to make economies, how about saving our salaries, the management of the type division is going to leave.' We had a financial guy in the type division called Rob Friedman. He had his own problems with Linotype of a slightly different kind. But he was in a mood to leave as well.

CC: I think he saw a tremendous opportunity.

MC: Yes, also because he had seen that type made money. So there was Mike, an entrepreneur, manager, typographic head. There was Cherie, the Letter-drawing Studio Manager, as it were, the production person and so on. There was me, a designer. There was Rob, the financial guy. So we thought, you know this is not a bad combination. It's lacking some things. It's lacking more designers. And it's lacking technical people, it lacks. We don't have any software engineers. So what?

Scitex and Camex

What the three and eventually four of us did was really to start talking to the companies that Linotype had turned down. Notably Scitex and Camex. Scitex is an Israeli company and we went to Israel to talk to them there. Camex was right here in Boston and we came and talked to them. And they did a wonderful thing. Both of those companies did a wonderful thing. They were rivals, they were competitors, really, in the field. But they made a common cause, and said: 'We will fund you to start this company called Bitstream by advancing you royalties.' We will give you seed money, to get started to hire the people you need to hire, and to produce your first typefaces which we had to do very quickly. And we'll pay you up front. And then, you can earn it back over time.

PH: So, the worry about money was taken totally away, you didn't have to worry about where the money was coming from.

MC: Exactly. We had our initial funding from our first customers. In particular, those first two customers. Because we lacked good technical people, and partly because Camex and other companies that we might be dealing with tended to be centered around this part of the world. You know there are a lot of technical companies around the outskirts of Boston, around Route 128, in particular Camex was here. We decided to locate here in Cambridge because we thought if we're in the shadow of MIT we'd be able to find good software engineers. Indeed we did. We were very fortunate in finding good technical people. We were also very fortunate because although we had to be extremely careful how we went about recruiting, a bunch of what was it? Ten?

CC: Nine.

MC: Nine really good designers from Linotype including the best of them, decided to take a gamble on this new company. I think they also saw, in broad terms, a threat that existed at Linotype of this shrinking situation and were concerned about their eventual prospects there.

PH: That showed a great deal of faith in you based on all of these companies; Scitex and Camex and the former employees of Linotype.

MC: Yes.

PH: They had to have seen the way you worked and admired you.

MC: Yes, I think

PH: They never would have made that move on 'blind faith' would they have?

CC: No!

MC: This office that Cherie ran had a good spirit to it. Everyone recognized that Mike was an outstanding leader, you know.

CC: It was a winning team in every way. Just wonderful.

MC: We thought the business plan was a good one. Particularly after we had signed up Scitex and Camex, we got our grub stake, as it were. Got a roof over our heads. So yes, it was an act of faith on their part really to . . . This was 1981 when Bitstream started so I was . . .

CC: I was in my Thirties.

MC: I was older, Mike is a year older than that.

PH: You started your own company.

First Digital Typefoundry

MC: Exactly. It's not a thing, you know. In one sense we did it reluctantly because we thought that Linotype, obviously had a good, a better chance to do what we eventually did. If we had stayed there and made a separate type division with its own P & L, and had gone after these adventurous young companies, and aggressively marketed their type, I think that they would have done very well. Of course as things turned out because Bitstream was a success. . . Linotype did eventually, essentially, do what we had suggested. They eventually came around to trying to compete with us. Licensing their type as did Monotype and some of the other companies as well. Eventually all of the old line companies went digital as well. It took us renegades leaving Linotype, really, to do this. To set up a digital type foundry.

CC: An independent one.

MC: An independent digital type foundry. By independent we mean that we were never in the hardware business. We never made typesetting equipment. We were a new kind of type company, in a way, that was a third party type supplier. We found, luckily, that even though the companies we dealt with were, in many cases head to head competitors with one another, they did not mind licensing type from the same source. In other words, you'd have these companies like Scitex competing with one another, in a sense they didn't

compete in their type selection because they had the same type from the same company, it was all Bitstream type.

PH: Why do you suppose they were willing to do that?

MC: I think because . . .

CC: What choice did they have?

MC: . . . they didn't have much choice . . .

CC: They wanted a library.

MC: . . . since they have been stonewalled by other sources. I think they realized, these were big electronic manufacturing companies, very heavily into computer software and hardware, they thought . . .

CC: I've been talking too much.

PH: Oh, you haven't! Would you say that Bitstream then was the first digital type foundry?

MC: It certainly was in this country. There were two other companies that were very prominent at the time. One was a German company in Hamburg called Unternehmensberatung Rubow Weber (URW), who were initially the developers of a system called IKARUS, which we had actually used in our Linotype days. We did not adopt their technology at Bitstream, we went a different route. URW was originally an equipment and software company. They also became suppliers of type as well. Now, who actually started doing this first, I'm not exactly sure. The other company, which is Adobe, started about the same time as Bitstream, maybe a few months later. Their principal business, was and is: PostScript. The page description language. They started making type, again as part of PostScript, they continued to do so. I mean they continue to develop their own typefaces very prominently. They were certainly a digital type foundry, although they were many other things as well. They got into the applications software business eventually at Adobe as well.

PH: Bitstream really was the one to begin a typesetting foundry in cyber space?

MC: It was the only one that was a dedicated independent digital type foundry. (Type foundry is an anachronism, we didn't cast anything. except pixels, I suppose.) So that, generally speaking, is the background to the formation of Bitstream.

PH: You said that you didn't use IKARUS as your basic design parameter. What did you use as a design parameter?

CC: We got equipment from Camex, they had already written, I think, some rudimentary design software. They had curve algorithms.

MC: What they had, essentially was page layout equipment and software. for document design. They had done. . . a certain amount of work on adapting this to type design. At the time when they thought that they were going to have to face up to making their own type and hiring their own type designers.

CC: Like doing it themselves.

MC: They had put a couple of very talented programmers on this conversion job. So, there was the beginnings of some equipment, which we then took over

CC: Right, and started a development program to really make it a good designers tool. With Camex's help and with the help of some people that we hired as well.

PH: So your Massachusetts Institute of Technology (MIT) engineers helped with setting new algorithms?

MC: That's really what they were hired for.

CC: Yes.

MC: Tool building essentially.

CC: Yes. We put them together right on the floor with the designers and made the point very seriously that your job is to make these designers happy. It doesn't always work that way, you know, sometimes the engineers are driving the train. But we made the point very seriously that the designers need to drive this train and the tool needs to work for them. So we had a wonderful, blend of the engineers right on the floor with the designers making sure that they got the best tools possible for maximum throughput. It worked out very well.

PH: Maybe you could run through the procedures from design to the engineers and to finished product proof.

MC: Once the system was built you did not need engineers to run it. In the early days, we had to make our own tools. Once the tool is made, then there is some maintenance that is required. Very often we improved things, I'm sure as designers had ideas about, hey, it would make a lot of sense to do this instead of doing that, I did that.

CC: Yeah, right.

MC: Then, you call in the engineer, you see if you can do it or not. But essentially . .

PH: What I'm trying to get at is how did you do this originally? Lets say you designed a font and you said to Cherie, 'OK, we've got to get this digitized,' now could you tell me the process, how that happened at the time, how did you get the engineers to see what it was you were trying to do? And how it was you got them to understand that the sizes would change?

CC: Well, it wasn't a big stretch. Most of them understood coming in, the nature of the project that we were trying to do here and we would sit them down with a designer and a designer would digitize a character which consisted of going around the outside with a cross hair puck and actually entering in curve points, (all the points around the outside of the character) and from there doing more characters and setting the spacing. In the process of doing that, as Matthew was saying ; they'd say it would really help a lot if I could do it this way, instead of that way, and if I had this facility, if I could store the character here instead of

there or whatever, but it wasn't a big project to get the engineers to understand what was required. They were good, they knew.

PH: So, it wasn't a problem with communication with the designers because the designers knew precisely what was expected of them?

CC: Yes, in most cases.

MC: And then eventually all of the terminals, the work stations, where the input occurred, where the characters are digitized eventually there were ways of attaching this online to a typesetting system. We had a sort of slave typesetting system, and a dark room to develop the output. So that it became pretty easy to proof what we were doing. In the early days we had to use a plotter.

CC: Yes, a big Versatech Plotter. Reams of this stuff.

MC: It put things out at very large sizes, which is not ideal because its not good to judge type letterforms too large. There was nothing else.

CC: It was pretty good.

MC: Eventually the whole thing got so that the designers at a certain point could output what they were working on from a typesetter to see it in actual size. Verify what they were doing, so it became a very fluent production, design production system.

PH: So, am I understanding that they could then at that point see if the type would be good at ten point as well as in other sizes?

MC: Absolutely. What ever they liked.

CC: What ever they liked.

PH: That happened very quickly, in a very short time.

CC: It did, because the deadlines were very tough. It just inspired everyone to find the most efficient ways of working.

PH: How much time did you have to develop these typefaces?
fifty faces for Scitex

CC: Oh, ah, the first typefaces. Woah! What did we have to do what ? Was it fifty typefaces we had to do for DRUPA?

Fifty Faces for Scitex for the DRUPA Trade Show

MC: Was it as many as that?

CC: Yes, it was fifty faces.

MC: Yes, yes.

CC: For the DRUPA trade show in Germany. We started production, was it late January? I don't know, sometime in the early part of 1982.

MC: Yes.

CC: And that show was in early summer maybe?

MC: June. I think it was June.

CC: That was just impossible. It was impossible that it could happen. Everyone was saying that we won't do it. But we did it!

PH: It takes my breath away to think that you did.

CC: Oh, we nailed them flat!

PH: That's amazing!

MC: The importance of this is that Scitex was making a big splash at that DRUPA in '82. They really had to have this type. It was the kind of test of our metal whether we could do this. The industry was watching to see if we would make it and of course the old line people were saying: 'they'll never do it'

CC: Not a prayer!

MC: Not a prayer! Even if they do; the fonts will be crappy, they won't be very good.

CC: That's right.

MC: So there was this rather glorious moment. I must say, I remember it with passion! When we showed up at DRUPA with the fonts . . .

CC: with the fonts on magnetic tape.

MC: They booted them in the Scitex System and then some of the older industry people came round to the Scitex booth, rather expecting to scoV, but were good enough to say: 'it's terrific!'. We were 'overnight' a little bit of a, we were 'stars', a little bit as a result of the DRUPA experience.

CC: Absolutely. It was one of THE high points.

MC: No one had ever manufactured type in that format, at that rate, at that quality before. It made believers of a lot of people, and of course, it did our business a tremendous amount of good because at that point we were real. If we had blown that deadline, I think it would have been very difficult for us to have recovered from that, at least quickly. I think that a lot of other companies then, started coming to us, did so because we didn't have a long track record — but we had this important achievement behind us that we had shown we could do it — we weren't some fly-by-night thing that was claiming to be able to do something which they really couldn't do. We delivered — it was all right — so Scitex was extremely happy.

CC: It was very sweet!

MC: It was very sweet, it was exhausting, but it was . . . we felt vindicated by that.

PH: I hope you had lots of Champagne.

CC: We had everything!

MC: I daresay we did, yes.

CC: We had lots of people coming up to us saying: ‘Where did you come from?’ They knew that we had left Linotype, they didn’t have a clue what we were doing, and then all of a sudden — wham! — It was good!

MC: That was a good time. Should we continue with the story?

PH: Yes, please do.

Chapter 8

The Bitstream Debuckle

MC: Obviously, there is more than one view of this, but I think Cherie and I rather share our view of what happened at and to Bitstream over a period of time. This was the early 1980's (1981) when we started. This was a rather heady time in the software industry, a number of start-up software companies who went off to very, very fast starts – went public – made a great deal of money – for their backers – their merchant bankers – for their founders. I think that for the first two or three years it looked as though Bitstream was just such a company. Here was a company that got off to this rather sensational start and was going to become immensely profitable. Not initially did we become profitable, because we had some problems with our banks and our backers in the early days. At a certain point, I think we began to attract the attention of some financial people who thought: 'Here's something that they should bet on, essentially.'

CC: Here's a nice little Golden Goose.

MC: Here's a little goose that's going to lay some golden eggs. Bitstream became attractive to some financial people. Including merchant bankers who had the ambition to take us public. We got new members of the board, (the board at that point had been the four founders, plus a lawyer). We got some more financial types on the board who started to project very rapid, very, very profitable growth for this young company. Having in mind similar success stories that had happened elsewhere in software companies. They laid out very, very ambitious plans for the revenue doubling every year, and I don't know what else. . . Really quite dizzying prospects. We were all told that we were going to be multi-millionaires.

CC: Many times over.

MC: But, unfortunately, the business really did not grow at that rate. Frankly, I think although, speaking for myself, it was easy in a way, I had no business experience, you know, it was easy to be brought along by the exuberance of some financial type in a suit sitting on [the] opposite side of the desk saying:

'This year we're making 25 thousand, 25 million [dollars], next year its going to be 50 million, the year after that its going to be a hundred million, you're going to be worth so many million'.

PH: Well, part of you wants to believe that . . .

MC: Part of you wants to believe that,

CC: It does!

MC: I think another part of me and the other type people. . . we didn't want to disbelieve that . . . I think we had some difficulty in seeing exactly where this business was coming from . . . we were used to a good business at Linotype, it was not . . .

CC: It was never that kind of sky rocketing business

MC: No. No.

PH: So, even at that point . . . ?

CC: It was a good solid business, but I don't think it was ever . . .

MC: Anyway whatever our misgivings about this, we were there we were involved in all of this. By 'we' I mean the two of us. As the revenues grew . . . the way Bitstream went oV in the early years, if they were doing it now in the '90's it would look like a stellar growth company. Because the company did grow, it just didn't double in size every year. After a year or two when it became plain that Bitstream wasn't going to double in size every year, it was NOT a hundred million dollar company, it was still a twenty or thirty million dollar company, I don't even know what the numbers were . . .

CC: It was a very nice, respectably sized company.

MC: Right, then people started saying: 'Well, the problem here must be type, we're in the wrong business. So what Bitstream has to do is to find itself something

else which initially it can do at the same time as type and eventually do instead of type.' In other words, we must diversify this company, we must find new lines in order that, if type isn't going to make us a hundred million dollar company something else will make us a hundred million dollar company.

CC: Something else will. We've got to get out of the type business.

MC: We've got to get out of the type business. So at a time when, at least in my opinion, and Cherie's I think, we really should have, I'm talking about '85, '86, '87, those sorts of dates, when the company really should have been digging into the type business, should have been challenging Adobe, . . .

The Adobe Challenge

CC: Full bore

MC: . . . really going after every client, every customer, getting into the retail business, getting everything we possibly could in type. The best brains in the company were all sitting around in the off-site meetings trying to think how they could get out of type. Trying to think of something else that they could do along side or eventually instead of type. The result was that much less energy went into our core business than should have done, you know speaking with hindsight, and the long and short of this whole diversification was that they never did come up with anything that really fitted the company's profile, as away to diversify. Contrast this with Adobe, a very, very different situation. You see, Adobe started by inventing Postscript. They had huge revenues from the licensing of a page description language which had to go on every Macintosh at the time. They started making type to back that up and they probably made some money on type and they probably lost some money on type.

PH: That type was a moot point, basically.

MC: It was part of the religion, it was not their whole business. Meanwhile, their PostScript business brought in, was a 'cash cow'. It brought in huge profits, enough money that they were able to re-invest and diversify in the way that

they chose to do, particularly into the application software business. Photoshop and all these excellent products that Adobe now sells probably makes far more money than they ever did in type. But, Bitstream without an equivalent product to PostScript, with only the font revenues which were good – but not huge, never really had enough money to, as it were, finance a new company within itself. There just wasn't enough cash flow to do so, even if they had good enough ideas, which I don't think they did have.

CC: Right. Right.

MC: There really wasn't the resources to launch whatever it was – selling tooth paste or selling application software – or whatever they came up with, there just wasn't enough money around.

CC: There was plenty of money for a good solid company.

MC: Yes. We found ourselves spending money on all of these investigations rather than planning into the core business. Eventually the company got short of cash. They were not spending wisely, I don't think, the money that they did have. It was necessary to borrow more, and do more and more financing. From the minor perspective of the founders, our founders stock became more and more diluted and tinier and tinier as a portion of the whole, as more money had to be brought in, at more and more preferential rates. So eventually, Mike Parker left, I think in '87 and then his place was taken over by Rob Friedman who had been the financial guy, Rob became the next President. In due course things continued not to go right with the company. Rob departed, the board set about finding a new President, they found a very pleasant man, but Cherie and I did not think, our advice was not heeded by the board in this or anything else. Cherie and I used to find ourselves very often talking to members of the board particularly the Chairman of the Board who Cherie and I were very fond of, and remain – we don't see him any longer but – a very wonderful man. We were trying to open their eyes to the reality of what we saw of the situation. But we weren't really listened to. Our fellow board members had, I think, a very old fashioned view of a board as being something that only listened to the president. In fact, Cherie and I were just mute bystanders on the board, really, and not counsels, but not really listened to at all. So we found ourselves in an

unpopular position. The company tried a number of things, a number of ideas to make money, Cherie and I had grave misgivings about them and felt as officers of the company, that we had to express these doubts. These products went ahead, were plopped in the market, which made us no friends. We resisted the temptation to say “I told you so . . .”

PH: Just what was it that was ‘plopped’ on the market?

Bitstream Challenges Hewlett-Packard

MC: One notorious thing: In the early days of computer or desktop typography, it is interesting this, just as a side thought, the biggest single type business that ever existed was Hewlett-Packard’s sale of font cartridges. Font cartridges were a piece of hardware, a physical cartridge, with various fonts hard – wired inside it, there were sockets on the side of HP printers and in order to add to your range of type you had to physically jam one of these cartridges in the side of the printer. It added a number of fonts to the repertory that was on line to this printer. It was an excellent idea. These cartridges expanded the capabilities of the printer very well. And they were well enough made, and HP sale of those cartridges was probably the single biggest money making business that ever existed in type. It was, of course, heavily encroached on by the growth of the soft font business [fonts on diskettes]. This came about largely after PostScript became an open font format. In the early days you could not make high quality PostScript fonts. There were two things: Type I fonts which Adobe themselves made and sold; the only other font format that was open to third parties was called Type III, the fonts were not very good so they could not compete with the Type I fonts. From the point where that became an open font format, then everyone could play. Now, I’ve lost my thread, where was I going with this?

CC: Well, we were being asked about ‘flops’.

MC: Yes, yes! At a certain point Bitstream said, you know all this money in cartridges, what we need to do is produce a cartridge and sell it for people to plug into their HP printers, or any other printer that has a cartridge socket. Cherie and I thought: ‘It’s too late!’ We thought that the boom days of the cartridge had gone

CC: We missed the window of opportunity.

MC: We missed the window of opportunity. People are no longer buying font cartridges in any thing like the same . . . Besides HP had this business locked up so tight that it would be very hard to break into it. It's not a market where you can say: 'Mine is a better version of Times Roman than HP.' Because in that office market no one is going to be interested in that.

CC: Nobody cared.

MC: They are going to go with brand name, brand loyalty. It's an HP printer, buy an HP cartridge, for Christ sake, you know, and leave me alone. We did not think that this, (although we had to admit huge fortunes had been made out of cartridge sales), we did not think that it was the right thing for Bitstream to do, to make a cartridge. However, we were overruled, they hired a very capable woman to come into Bitstream to run this, to market it. I think she did an incredible job. I am proud to say that Cherie and I did everything we possibly could have done to help this product and indeed, she acknowledged that afterwards. But it 'tanked' it was a flop for the reasons that Cherie and I had said. But, as you know from life in general, you don't make friends by being right about things like that. Even though, it wasn't a situation where we said: 'This is a stupid thing to do, we're going to have no part in it.' I think we should have been fired if we had said that, you know, the board decided that it was going to make the cartridge, it is going to back this, it was our job to help, we did help, none-the-less.

CC: We absolutely did, we broke our backs.

MC: We broke our backs but the cartridge for commercial reasons, whatever reasons you like, it was a bad product, a badly timed product. It had a lot going for it, this woman, as I say, gave it an amazing shake. She got in very good people to help her, the marketing was as good as she could have done, I think really, under the circumstances. But . . .

CC: It was not in the cards.

MC: . . . wrong business plan.

CC: It just was not in the cards.

MC: Right. So that was a good example of something where Cherie and I, without wishing to do so, found ourselves unpopular within the company. Because, it was felt somehow that we – I don't know – whether we had put a jinx on this thing – I don't know what people's . . . — it probably wasn't a rational reaction at all. Somehow Cherie and I were identified with being reluctant to diversify the company with our feeling that it's best chance of success still was as a type company. That's what we should be concentrating on. Trying to find these things like cartridges in desperation and plowing a lot of money into them. Those cartridges cost a lot of money.

CC: Millions! Millions!

MC: Which we really didn't have. We had to raise money to bring this thing to market. We thought that was not the right thing to be doing and we were proved right, frankly. It doesn't give me much satisfaction to say it. In some ways I wish it had made millions, and millions, and millions, and millions of dollars of profit. We probably would be at Bitstream now, and perfectly happy.

CC: We would have loved to be wrong.

MC: We would have loved to be wrong, but this happened to us a number of times.

CC: Yes, when I was laughing a while ago, I was remembering. Matthew and I had great noses. We don't have Harvard MBA's, but we have very good noses. If it smells wrong to us, chances are there is something wrong with it. This happened to us over and over and over again.

MC: Yes, in a sense I sympathize, you know you've got a board of directors who are principally financial people, who had good solid business experience. They are listening on the one hand to perhaps Bitstream's Vice President of sales or marketing whose got a business plan with a lot of numbers in it, and yes, you

can show how many cartridges Hewlett-Packard sold in this year and that year. These are huge numbers. Then some of them might turn to me or Cherie and say: 'What do you think about this Matthew?'. I would say: 'I didn't think this, will quantify that. Please, what numbers do you have?' Well, I don't really have any numbers to give you, but I just don't think this is going to work.'

CC: It ain't gonna fly!

MC: I would say it does and Cherie would say it does, but the people we were dealing with really did not cotton to somebody else saying: 'It don't smell right to me.' Or our saying: 'I've been in the type business all my life and all I can tell you is I don't think this is going to work.' And they would respond with: 'Why don't you think this is going to work?' Well, I could give them some reasons, but mostly what I was saying is: 'This feels all wrong to me.'

PH: Yes, I do know, yes.

MC: 'Why would someone buy our cartridge rather than someone else's cartridge?' They would respond: 'It's got these other features.' I would say: 'The whole point about a cartridge is its a no-brainer. You take it out of the box, you plug it into the printer.' They had this idea that the Bitstream cartridge would have little cartridges on the back of its cartridge. And I suddenly thought: 'This is so counterintuitive.' The purpose of a cartridge is a total no-brain solution to a real problem. Once you complicate this cartridge, by making inter-changeable parts within the cartridge, you've killed it conceptually. That's not what a cartridge is. You are now trying to graft versatility with a software solution onto a hardware solution, by having little things like credit cards you jam in the back of this thing. I think I said : 'My gut tells me this ain't gonna work!' Well, as it happens, my gut is right. Even though I admit I could not make a presentation to a board of directors that said, 'This is the amount of money you're going to loose.' I did not have the ability to do that. So our counsels were not heeded, frankly, at all, at this stage. Then, as I said, when Rob left this new guy was hired, I felt he was not right for the job. Again, this was my gut feeling. He had excellent credentials. Excellent experience. I did not think that the experience was in the right place. I thought what we needed was a good retail person. He had no retail experience at all. Because I thought that retail

was where Bitstream's future should lie. I thought that the retail business was the thing that Bitstream was doing least well. I thought that the OEM business would take care of itself. They hired an OEM guy. I thought: 'That is fine.' But that's not addressing . . .

CC: That's the piece we have.

MC: That's the piece we have. We did not feel comfortable about that. A number of other things came into play. One was, I think, more real to me than to Cherie but I felt . . . How old was I five years ago? I was fifty-three. . . . I thought: 'Unless all aging designers whine about the amount of time they spend in meetings with clients, and the amount of time they don't spend designing, they would not be able to ever find the time to design.' I awoke one morning and thought: 'Well, there is something you could do about this, which is not to go to any more meetings and start designing again. That's what I should do.' At one time, that would not have been a viable answer, because until the advent of the Mac in '85, '86 until the beginnings of open font format, open PostScript, and what had become the whole independent type foundry, there would have been nowhere for me and Cherie to go. The pioneers like Emigr   who began that business started about ten years ago. We had one of those designers at Bitstream, a very enterprising guy, who left a year or so before we did. Two years before we did?

The Font Bureau

MC: He took the plunge and started working independently with a Macintosh. Made a go of it, slowly at first. This is what is now called the Font Bureau, a very successful business. It became evident to us by this time we are talking about, we were considering leaving Bitstream, that it might be possible for us to survive alone out there in the world as a two person company. That would simply make fonts of type, sell them, and accept commissions.

PH: As a bench mark?

MC: As a bench mark? Yes, exactly, exactly.

PH: Which is what you wanted Bitstream to be?

MC: So, Cherie and I after thinking about this . . .

CC: Soul searching.

MC: . . . soul searching. We decided to take the plunge. We spoke to the chairman of the board whose principle concern was the OEM business, (still very important for Bitstream). Because a big chunk of this business was with Japanese companies, the board thought that the Japanese companies would worry. Some of the big Japanese companies, that Bitstream depended on for revenue, saw the two remaining founders leaving, . . . you know, that's not the sort of thing Japanese companies like. Founders don't leave Japanese companies. You spend your whole life traditionally where you are, you never leave. So they were very worried about a crisis of confidence with some of their best customers.

PH: What about you?

MC: Well, the compromise we arrived at, worked pretty well. It was that we would indeed leave, we would cease to be officers of the company, we would cease to be on the payroll. We did resign, we did go, but we remained as members of the board for an additional period. So the company, Bitstream could say: 'Well, Matthew and Cherie have left to start their own business. We expect to have a good working relationship with them, and look, they're still on the board. So, how serious can it be?'

PH: Oh, I see.

CC: And we're all friends . . .

MC We're all friends, it's all fine. This saved face in a way. I don't know whether this was ever a concern with the Japanese OEM's or not. But it was felt that it would be. We agreed to do this.

Chapter 13

A New Company is Formed: Carter & Cone

MC: Essentially what happened was that Bitstream gave us some severance pay, I think you would say, in the form of an investment in our new company, in other words in the same way that Bitstream had got their 'seed cash' from Scitex and Camex as an advance, Bitstream put some money into Carter & Cone which allowed us to get started, to buy our equipment, to do all that sort of thing. We had since bought them out, by the way. We are now wholly our own.

Without that grubstake it would have been difficult for us to get started, so that cash was very valuable to us. We did, in fact, part on good terms with Bitstream. Particularly since they were then doing yet another layoff, they had two or three already, and, we were earning good salaries at Bitstream, a lot more than we earn now. And so saving our salaries was a considerable break.

CC: We wrote ourselves out of the plan.

MC: Yes we did. We were part of making a new proposal, a new business plan for Bitstream and guess what? Our names weren't on the 'org' chart. Some people noticed that and so we were in a sense popular for making that economy. We were prepared to remain on the board for form's sake. In due course we also left the board. Again, no fire-works evolved. And in due course we were able to buy Bitstream out. So we're now totally separated from them. Bitstream still exists, they are actually located in the very same quarters on first Street in Cambridge.

CC: Concentrating on their type business.

MC: Concentrating on the type business still. What they did, this is another one of these ironies; we left Linotype having proposed a business plan for them, which they afterwards adopted. Not that they ever got out of the equipment business. The story of Linotype is that they were saved by PostScript. Once, you know,

with the death of the proprietary systems, they started manufacturing PostScript image setting equipment, they were able to get back into good financial state. The same with Cherie and I always, although we were not popular saying this, said: 'Forget about being a hundred million dollar company, let's be a twenty million dollar company. Let's make two million dollars of profit in a year, what's the matter with that? If you're a forty person company, what's the matter with that, for God sakes?' Eventually, that's what Bitstream is, that's what they aspire to. They are a very much smaller company, they're concentrating on type. I'm sure, like any other company, they are trying to come up with some widget for the web, or something or other, that will help them. Some new technology, like OEM technology, but meanwhile, I think their business is still predominately in type.

PH: If there was one single thing that you could say about Bitstream's demise as far as its principals are concerned, what do you think that would be?

MC: I don't know, it's very easy to be wise after the event. I do think that a very significant part of why Bitstream did not succeed in the way that I think it could have done, was that a number of people got greedy. Probably we did too. We were seduced into a greedy feeling about the potential of this company. I think that, I've always felt that in life that it's better to make mistakes out of ignorance and make them yourself, rather than put your trust in someone and permitting them to make the mistakes. It's much harder to recover. I think if Bitstream had somehow managed to withstand all those blandishments from people who told us things they wanted to believe themselves, that they wanted us to believe. They really didn't have solid ground for believing, quite frankly. If we had been able to resist that, we might have lost some opportunities, I think the company would have settled down and gone on, we would have learned from our ignorance, you know. You can always recover, at least you can generally recover, from mistakes you make pretty much. But as I say, if you put your faith in someone else, it's much harder to recover. They walk away. If some merchant banker says that they are going to make you a millionaire, they don't get to make the money, but none-the-less they go off and work with another company. They've lost nothing, really in the end.

PH: But, it's your whole life, it's your blood.

MC: See, you're left with a smoking wreck. Then what are you going to do next? I think that, although I do have a feeling that we were gullible.

CC: And to not trusting our own instincts.

MC: Yes.

CC: We didn't quite see how this hundred million dollar company was going to come about, but there were all of these so-called business people who . . .

MC: were heavy hitters

CC: . . . heavy hitters . . .

MC: Who had been through companies that were a hundred million dollars. Which is why you give them some credibility. Because a lot of people have lived this experience successfully. That's why they're on your board.

CC: Exactly. [sigh]

MC: Because they've made their pile, and now they're . . .

CC: going to help you.

MC: . . . going to help you.

CC: And I think the lesson for me is trust your instincts, and play your strengths. Matthew and I don't make stainless steel cookware, we might be able to make really good stainless steel cookware, I don't know, we don't know anything about it. What we do know is how to make type. And that's what we do, and that's what we're going to do.

MC: There are people who have, historically, made good money out of type. I'm not in this for some altruistic reasons, I like to make money. But I think that Cherie

and I are much more comfortable in a situation where we do have control. You know? If we make mistakes, we know who to blame.

CC: Right. I don't mind failing, I just want to fail on my own efforts, I don't want anybody else to do it for me. Thank you very much. There's another thing I want to say, some validation for having done the right thing for Carter & Cone; it is true that we spent all of our time in the board room talking about benefits, just endless, endless, endless meetings, and that's not so bad for me, but I thought it was a terrible shame for you, [meaning MC] to get caught up in all of that when you really should have been designing type.

MC: That really would be my answer to Phyllis' question about what's the one thing? I just learned that I was a designer.

CC: Yes.

MC: And I may not be a good business person, in fact, I don't think I am, that's, thank God, why Cherie's here. But the best use of my time is designing things.

CC: Right.

PH: Absolutely.

CC: But it was impossible not to drag him into the room for additional weight on what ever point needed to be made so . . .

MC: Yeah, I was a founder and an officer of the company so I belonged in the meetings. It wasn't wrong that I was involved in these things, I chose to have that role. But I don't think, in the end, it's the one that suits me, temperamentally, the best. So from the point where it became possible to survive as an independent contractor in the type world, I think that, it was the right decision for us to do that.

PH: Do you have any thoughts about Carter & Cone from having been through the Bitstream scenario?

CC: Stay small.

MC: Yes, stay small.

CC: Stay small.

MC: We don't have ambitions to employ people. We would like to, we would like to have a successful business, obviously. Within reasonable limits, we do. But, we're a little bit spoiled because around here, in Boston, there is, in particular, the Font Bureau, they stayed right here in Boston. They have had a lot of trainees come through. They have an intern scheme and they have had some very good interns. Though there is a good deal of type design talent in the person of various twenty year old designers around Boston.

PH: So you can contract?

MC: Exactly.

CC: That's exactly what we do.

MC: Who can serve as, when occasionally

CC: Back-up.

PH: When you're overwhelmed.

MC: Exactly. So, this has worked out to this point fairly well. And to this point we've had enough work. You can say our business is in two halves, really. One is what you might call the retail business, and this is a matter of developing faces, speculatively, really. I design some typeface because I want to design it. I have some idea for a typeface, and I design it. We make it, and we advertise it and hope some buy it, you know?

PH: Is Sophia one of those?

MC: Yes, Sophia [see Figure 3, Appendix B, page B-3] and Mantinia [see Figure 4, Appendix B, Page B-4] are the same as that.

CC: Yes, Sophia and Mantinia. A year or so after we started Carter & Cone, it was after the Mantinia Brochure, which was such a watershed for me, so beautiful , the face is wonderful! I realized that in the time since we left and started Carter & Cone, Matthew had done more designing than he had done in all the years at Bitstream. That's all I needed to know, that's it. That was such validation for having done it.

MC: Then there is the other side of our business, which is contract business. Commissions where a company comes to us and commissions a typeface, an adaptation of a typeface or something like that. This could be publications, we've done some work for a number of publications.

PH: Like Wired? (see Figure 3, Appendix B, Page B-5)

MC: Wired is an absolutely classic case in point. They knew what they wanted, but they couldn't make it work, so we re-designed the face for them, and made it work for them. We've done similar things for Time Magazine, U. S. News and World Report and various others. Then there are publications which are an important source of revenue for type designers now. I think more for the Font Bureau than for us. They have very much gone after that publication/art director market very successfully. And indeed, if you made a list of the North American publications, which had had at least one typeface either designed for them or at least adapted for them or something or other, you would have a very long list. There are not many publications who haven't had something 'special' done for them by one or the other of the independent type companies. That's a useful source of revenue. The other source of revenue is, in particular, the large computer companies. Most of my time for the last three years has been spent on work for Microsoft. We've also done work for Apple and one or two other companies. All of that is what I would consider commission. In other words, the company comes to you and says: 'We want something. (A typeface to do something or other.) Will you quote and do that?'

PH: This seems to me that you both, then, become consultants?

MC: Yes. The ideal life would be a perfect balance between the retail and the contract work. Probably retail is, of course, it's very interesting to do, it's interesting for me, but it takes a long time to make a profit. Because type goes out there and it sells, you hope. It goes to various other retailers who carry our typefaces. The good thing about contract work is that you get paid as you do it. So it's cash on the barrel head. But it doesn't have this residual sale going on and on. In some cases what we've done, like an author of a book, as a designer of typeface, you have to part with it completely. So very often what we've done with these commissions is actually to license a face for a negotiated period of time. For example the face I did for the Walker Art Center [see Figure 5, Appendix B, Page B-5.

I think is their exclusive property for four years. After that, it reverts to me, they'll be bored with it in four years anyway, they've had their use of it and they didn't have to pay a great deal for it in the first place. So typically, there is a class of typefaces that we've developed that in time will have been both things; they will have been commissioned initially, then they will go on broader sale after the person who commissioned them has gotten the use out of them that they have wanted. So there are some faces which come in both ways.

We should say a little bit more about the whole phenomena of the independent type movement.

PH: Yes, that would be very instructive.

MC: Because that has made a huge difference to our lives, and the lives of a lot of people in this business, obviously.

PH: Are you speaking about the entire movement similar to Carter & Cone, Garage Door, Emigre etc.?

MC: Yes, yes. When I was first involved in type, indeed, until our departure from Linotype, and part of the early days of Bitstream, type was a machine part. If you had Linotype equipment, you could only buy your fonts from Linotype. Actually, there were some minor exceptions to that. Furthermore, if you'd

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by, Linotype brings out a new line of phototypesetting equipment, which is better, faster, cheaper. (VIP, for example, whatever came next.) Not only do you come back to Linotype and buy a whole new piece of equipment, but you have to re-buy all of your fonts because a Linofilm font doesn't work on a VIP any more than a Monotype font works on a VIP. It's a different animal, it has a different physical form. It's the same typeface, I mean you may be buying Helvetica Roman, but you've got to re-buy it. So, this sale and re-sale of a basic library of type keeps growing, in the case of Linotype, and some other companies in the way we described, with new designs, and licensed designs and so on. That was where the money came from for companies like Linotype to amortize the development of new faces. They had this large library of type, they sold it to one guy, and they sold it again to the same guy.

CC: Not always happily.

MC: No. But they got their money and I'm sure there were deals. But, essentially, the return on the investment of type designs that were done sometimes fifty years before, kept on paying. Well, you have now a very, very different situation. And what has made the change was the end of proprietary type systems. Nowadays all systems work the same, they are all PostScript or TrueType Systems. You can buy a Linotype PostScript typesetting device, what's it called? The Linotron? You may choose to buy your fonts from Linotype, you may choose to buy them from Adobe, you may choose to buy them from Cherie and me. They are all PostScript type fonts, they will work equally well on your typesetting system.

Suddenly, the market is open to independent developers, the third party market opens up. Also at the same time what has happened, of course, is that with the competitive marketing of hardware and software, more and more fonts are just given away. When you buy a piece of equipment, or a piece of software now, you expect to get a whole lot of fonts with it and indeed you do. And some pieces of software, you get a mix of fonts, you get a lot of them. Also, there are a lot of CD's of fonts around at fire sale prices.

The companies who owned and still own these large libraries of type like Agfa, Linotype, Monotype, and so on, can no longer really make good money selling

them. There is just so little profit in the re-sale of type of what I jokingly call: 'Type by dead guys' you know, all the existing typefaces that everyone has to have. But you can acquire them for nothing nowadays. Virtually. So there is no longer money being generated, profit being generated, from the sale of existing typefaces, which will finance the development of new faces. With the honorable and single exception of Adobe, the old line typesetting companies, those that exist, at least some of them, have gone out of business all together and are no longer developing their own type. They cannot afford to do it. They sell their existing libraries as well as they can, they make their OEM deals and this and that. Therefore, all of the impetus for the development of new faces has come from the independent. We are one example among many of these independent type firms, independent type companies.

How do we finance it? first of all, we don't have as big an operation, as big an overhead, obviously. We finance it by doing work for companies like *Microsoft* in our case or *Time Magazine* etc, doing contract work. There is enough money, just about, in that kind of work to mean that a portion of my time can be spent in developing new faces on a speculative basis. Eventually, we hope very much, that those will make money as well. They do. Our faces, we don't have many retail faces, and what? three or four, something or other, they continue to sell over a period of time.

CC: It adds up.

MC: It adds up, you know. It's a nice little piece of our business.

PH: As they become popularized and more people use them, there will be more and more calls for them.

MC: That's the argument. Meanwhile, it is companies like us, and a few others who are developing new designs, not the big companies, the exception being Adobe for the reason I mentioned before, they do produce their own type, they do, for the most part, a very admirable job of doing so, but for them, they don't rely on the revenues from the sale of existing type, they rely on the revenues from PostScript. In other words, the type they produce, the type program, development program they have in operation there with their own in-house

design staff, and other things that they license and bring in, is really part of the PostScript religion. It's part of keeping PostScript in people's faces, in winning awards, in being good guys in the design community. All these things which are very useful and profitable for Adobe in the wide spectrum of their products and so on.

PH: So typeface is basically being financed by another part of the business.

MC: Yes, I do not know . . .

CC: It may be profitable for them in some ways.

MC: . . . whether Adobe makes money or loses money on that whole type program. Obviously, I know enough about them to know some of their typefaces have been extremely profitable, extremely successful, because I know the designers. And I know what their roles have been like. Others I suspect have not made money. Where this balances out, I don't know. It's not the most important consideration for Adobe as to whether their type division is in red ink or black ink at the end of the year. I'm sure if it was in deep red ink, someone eventually would wake up. They are the exception, by exception I mean they are a large company who is developing new typeface designs. ITC who came into the story back when we were talking; their formation in the very early '70's are still going. They still franchise, I don't think they like that word, but essentially that is what it is, they commission, then develop typefaces, then license them to other people.

They [ITC] are a fair sized company and a well established company. They're still players, very much, in the field. There are a number of retail outfits like the FontShop and the Font House and Precision Type, and to a certain extent, particularly the FontShop, they also develop their own faces. Again, on commission from independents. There is one, I don't know how it's fairing, but there was one interesting reaction to all this on the part of Agfa just a couple of years ago, where they sorta adopted a 'if you can't beat them, join them' policy, realizing that they could no longer afford to develop new faces themselves or commission, new faces. They made a proposal to a number of independents including us, to say well 'we will license some faces from you, we will package

them, we will have this big promotion, we'll call it the 'Creative Alliance', we'll use all our good stuff to market your faces. We'll make up packages of type from different sources, different independent sources, and we will sell them for you. And they started doing that. I'm not sure how well that's doing. I don't really know. We don't have a royalty. We got up front money and our royalty doesn't kick in for some period of time.

CC: Three years.

MC: Three years, so we don't have any way of measuring by royalty flow how well they're doing. In any case, we only have one design in the Creative Alliance. So, broadly speaking, you have to say that new type designs are coming from the independents. There was an issue of *Publish Magazine*, which you may have seen just a few months ago, that listed seventy-two different type foundries, different sources of type, most in North America, they include some in Europe. I suspect that there are probably more than that. The interesting question is: 'How many of those are really making a living exclusively out of type?' Of course, an awful lot of people, quite sensibly, have type as a side line. Including some of the more interesting; there's a funny group of designers called House Industries, who produce very wacky typefaces. Well, I don't know, it may be that type is now quite a prominent part of their integral business, but when they started it was sort of a little bit of gravy on the side, as it were, they being graphic designers in the wider sense of having all sorts of clients. They were in the midwest somewhere. They started designing type rather like Rick Valesenti is doing first. There are a number of people, as you would expect, who are combining making and selling type as part of a broader practice of graphic design. But, there are some people, we are one of them and the Font Bureau is another one, who really only make type. I don't think that there are many of whom that is true. Who just make a living exclusively out of making type. We could probably figure it out, there is not a hell of a lot of people doing that.

PH: I was wondering about your thoughts about a way of making a profit in type design. Would creating new type be more profitable than relying on the ancient typefaces to create royalties? It seems to me that is what I'm hearing .

CC: I don't think that royalties is the way to go anymore.

PH: . . . that it's very important to keep designing new type and as they become popular, people want them and, hopefully purchase them . . .

MC: Yes.

PH: . . . create a market so that they will use them . . .

MC: Yes, yes.

PH: . . . and say: 'Oh, I've got to have this type' .

MC: We could nothing like survive on our royalties from retail sale. It's a small number. As a per typeface number, it's respectable, but we've only got three or four typefaces, so it doesn't add up . . .

CC: Yeah, if we had . . .

MC: The Font Bureau is in a different situation because the heart of the Font Bureau is quite a small company, only three or four actual employees, but they have this wide group of other designers, stringers, and they have a very simple deal with these people. They say: 'we will market your type and we'll split the results, the revenue'. (What ever they contract — fifty-fifty or what ever the deal is.) So they act as publishers, marketers and they now have — I don't know what the latest number is, it's got to be over two hundred.

CC: Yes.

MC: They are growing to the size that one associates with a Linotype or a Bitstream or a company with a big type foundry. And I think, that although they do do a good deal of commission work, I think just because of the sheer number of typefaces, this all snowballs into a rather respectable amount of revenue coming into them from retail.

PH: Do they have to constantly redesign?

MC: Yes, I think that was, again, a thing that Bitstream lost sight of that although we were introducing new – I mean new to the sense that they were new to the Bitstream library – a very small number of faces only, four or five faces only, were original to Bitstream and I think that that was not a good idea. Again, I think Cherie and I would have been happy to have more than that, but you need a locomotive on the front of the train and I think the good thing about developing, to put it in a simplistic way: If we introduced a new typeface, whatever it is, pick Caslon [Figure 6, Appendix B, Page B-6], that is an excuse to mail our existing customers and remind them of all the other typefaces we have. Each time you produce something new you've got something to say and you've got something to say about the new face, but you've also got something to say about the other faces as well. So you kind of keep yourself in front of people by dribbling out, in our case, we don't do quite enough, it's been quite awhile since [we] released a new face. We badly want to get some up there. The only reason we haven't is the pressure of the *Microsoft* work, software. It's good business to keep these things out there. You are absolutely right that you have to keep adding to it to enliven the library so that your clients have something unusual to look for.

PH: So, as the business is changing and as you are changing, you are finding yourselves on the cutting edge, yet again. Having to . . .

MC: [Sigh] Well, yeah.

PH: . . . at this point in life . . . what are you thinking? Please tell me.

Chapter 14

Digital Punchcutters

MC: Well, another funny thing, just another paradox really, of the situation that we type designers find ourselves in. There is a term that people sometimes use, they talk about digital punchcutters. Which is, again, an anachronism, that's kinda like type foundry, that's not really what one does, but the interesting thing is (to hark back about something I was talking about this morning, which is, at least for me,) the relationship that I seem to need to have between designing something and making something. In the early days of type's history, in fact most of type's history really, you could not make a distinction between the person who designed type and the person who made type. In the early days in order to be a type designer you had to have the skill to cut punches, because there was no division of labor between those two things. The person who thought about it did it.

It was only with the industrialization, really, of type and a little bit before that maybe, but you had this concept of in quotes 'artist/designer and the artisan' who executed the type. This may have been the artisan punchcutter who working to someone else's orders like Edward Prince who cut types for William Morris and the Kelmscott Press and all that sort of thing. Or it could be the people of the older generation that Cherie and I knew working at Linotype, interpreting the designs that came in. Effectively, since at least a hundred years, longer with mechanization, with the invention of the Linotype and Monotype, there has really been a division between the designing and the making.

Because you could not possibly master all of the different technologies that went on in that factory at Ryerson Street in Brooklyn. All the stamping, and milling is inconceivable. With photocomposition a little more control came back in the sense that my actual drawing, the drawing that I did myself, with my own hands, could be used as the image source. It was photographed. No one took that drawing and re-drew it as a blueprint to go into the factory.

But then, I could not make the actual font, the font making for the Linofilm or the VIP were highly industrialized, very highly controlled industrial chemical, photographic business. I could never have done that in the kitchen sink.

So, yes, there was a bit more of me involved in a way, but still I could not make a font. I could not make a font and sell a font myself in the way that punchcutters could do in the sixteenth, seventeenth and eighteenth century.

The nice thing now is, that because of the computer technology and the software that we use, we are back, the thing has come full circle, we are as you sit at your computer, working with Fontographer, you are designing on the screen, you are making letters on the screen. Behind the screen you are making a font. At the end of the day, you may only have two characters in the font, but it is a font and it's a font that you can set type with. I often say to my students at Yale: 'The only reason you work on a computer is because you can't work directly on the printer. The computer is only there to drive the printer. The real tool is the printer with 600 dots to the inch, [that] beautiful printer sitting up there on the table is what you are really working with. You've got to think through the printer, not through the computer.'

PH: A very important point.

MC: So, we have come full circle. In other words, we can design, we can make fonts. I design something, I give it to Cherie on the diskette, she sends it out to our customers. It's a made font, it's an actual manufactured font and the software is doing that behind the scenes. So there is this immediacy, you know, we've closed the loop. I taught at Yale since before there were computers, going back a long time. In the early days, we all used to sit around and make nice drawings, you know, on illustration board. At the end of the semester, I would gather these up and some very kind person at Linotype would get these manufactured into a font because there was some Linotype equipment at Yale. But by the time that had happened the students had all graduated and gone.

CC: Long gone.

MC: So they never got to see, nowadays you know, the beauty of the system that we work with, in my opinion, the best we've ever been from very early time, is that

as soon as I digitize a character I can output that immediately from the printer, in actual size. That closed loop we've never had, punchcutters could do it by holding a punch in candle soot and dabbing it on a piece of paper, but still it's very hard to get the letters to line up right with that (method). It's a lot better (now). Nothing is better than sending a sketch to the factory and having that re-drawn and then several months getting the trial matrices back, which is the way Dwiggins and Eric Gill and other people had to work of that generation. But, so you talk about, yes, in one sense there is a cutting edge in the sense that this technology is very new, but on the other hand it's extremely familiar to me. And extremely congenial to me because in a funny way, I am, mercifully, I can do more than one letter a day now thanks to this technology, but it's very, the feeling is very like what I experienced in 1956 sitting at a bench at Enschedé's cutting away at steel because I do the whole thing. I design it, I thought of it and I make it. At the end of the day I've made something which is tangible.

CC: You've got it!

MC: In a sense it's intangible now, because it's a bunch of bits, it's electrons, it's not a lump of steel or cooper. It sounds rather fanciful, that, it's a very real part of a designers life. And again, I have to avoid generalizing, this maybe meaningless to a lot of designers. And, of course, to young designers who only come to type and typography on the Mac. They would not know what I was talking about because they've not known anything else. Of course, you can print it out on the printer.

CC: You fool.

MC: You fool, you know? And if I say well there used to be . . .

CC: There was a time . . .

MC: . . . it was six months before I could see what I had designed. Huh? It doesn't seem real. (to students) That is very close to my heart. That kind of immediacy . . .

CC: and control.

MC: . . . and control.

CC: really.

Chapter 15

The Art of Design QuarkXPress and Fontographer

MC: And I have to say, this is something against generalization, but it's a thing that a number of colleagues of mine agree with me, and I've heard them say as well in public, yes, so we use Fontographer, that is the type design program that most all of us in the profession use, but in a strange way we really, a lot of the designing, a lot of the most important parts of the designing are actually done in QuarkXPress. QuarkXPress, I mean, you can't design type in QuarkXPress, you can modify it a bit, bend it around on the page, but really, when I've got a font even partially done, I'm going to install it, I'm going to bring up, I've got a number of documents, of course, pre-set texts and so on. I'm going to select all and put it in my new font and there, you know, is a piece of typesetting. It may not have half the letters in the font, but I still have it, I can read it, I can have the experience of reading this within seconds of my getting out of Fontographer and into Quark. And so, this is another part of the loop. You're not just looking at little strings of letters which you can print out from the rather limited text window in Fontographer, you are suddenly looking at a page of a book or a page of a magazine out of your printer. That is really when you start to see whether this typeface is working or not. You know, because you are face to face with all of the realities, you can't fudge it any longer. Here it is: It's nine and one-half on ten in this column and does it work or doesn't it? And that, you can arrive at that stage so much faster now than you ever could have done before.

PH: But here's another thing, your judgment of how it works, and does it work or doesn't it work, seems to me to be based on your years of understanding, your years of training.

MC: That's a very interesting point, and it's a thing I've got drawn into conversations about this a certain amount. To be honest with you, I have an open mind about it. And I'll explain why I say that: I did an interview sometime ago with Erik Spiekermann, good friend and chum. Erik, like me, had a traditional training.

He was trained as a comp, I was trained as a type founder. By comp I mean setting type by hand in a composing stick. And we were discussing whether we were glad that we had had a traditional background, not that we would have had any other given when we were born, but do, or to put it this way, would we recommend to someone now that they should have that background? Or would we recommend dispensing with all of that, getting on with it, sitting right down in front the Mac and getting on with it.

PH: Study nothing?

MC: Tabula rasa. Which is better? So we talked about this, Erik and me and the only thing that we could really think of to say about it, which did give us the feeling that there was some justification for having gone this traditional route was that nowadays. In the old days, if you'd been working in a design studio and somebody said: 'OK design a letter head.' At the end of the day maybe you would have got two or three comps out. Drawn out nicely, you've traced over the type sheets. You've got a couple of ideas. And at the end of the day, you'd sit down with who ever and you'll consider these. Now, if you're working on a Mac nowadays, by the end of the day you can have eighty different versions of this because you do it once with the type this point size, if you don't think that's quite right then you change it by a quarter of a point, you know? And try it again. And so on and that's a lot of fun and it's very easy to change your mind. But, still in all at the end of day, whether you are deciding between two versions of the letter head or eighty.

PH: Now, we were talking about the fact that you could design something one minute and get like about eighty . . .

MC: Oh, yes, yes. What we were talking about was the argument, if there is one, for a traditional training. I was saying that the computer allows you to generate this very large number of different possibilities, different alternatives, which is something that I like, I like being able to change my mind easily and look at a number of different possibilities, but still and all, at the end of the day, you've got to decide which of these eighty alternatives you are going to use. And the way you do that is, obviously, by using judgment. So, how do you form this judgment? How do you nurture this ability to judge?

PH: Yes, that's the very essence of it.

MC: You could make the case, as Erik and I discussed that working in a traditional way, maybe does teach you that. Or help you in that. The reason that we thought of is this: In my experience of cutting letters in steel and so on, if you started at eight o'clock in the morning and you worked on a single letter, and at five o'clock in the afternoon, just before you knocked off, you made a mistake, you have lost a whole days work. In other words, you think pretty hard before you commit to making a letter or a part of a letter, just as, if you are a monumental mason you are cutting letters in marble, if you cut four lines of text for memorium, you cut a wrong letter, not only have you lost all of that work that's gone into it, but you've got to go out and buy a new piece of marble. In other words, you think long and hard, before you bash the chisel with the mallet because the price of getting it wrong is so high, there is no 'undo' when you're cutting letters in stone. Same for a calligrapher, if you are writing a beautiful document, you make a mistake it it, it's very costly to correct. That is no longer true. If I make a mistake in Fontographer the 'undo' works, instinctive almost, hit control 'Z' and you're back to where you were. Having to think long and hard before you actually make something, because it's very expensive in time and effort and everything else if you get it wrong, is maybe useful as a way of training that judgment. You could make that argument. I think that you could make that argument. And a lot people who have had a traditional training, do make that argument.

I was on a panel when I was in London a month ago talking to students, a number of us talking to students about some issues. And some of the people who were on the panel with me as instructors, teachers, said that they refuse to allow student[s] to touch a computer for a year. First of all, they've got to do other sorts of exercises, manual exercise, drawing and so, before they are allowed to use a computer. They were convinced that this was the right way. Speaking for myself, I'm not convinced. I did have this traditional training, and I'm not sorry, it was the only thing I could do, but I think if I were teaching, particularly at the undergraduate level now, I don't think I would do what this colleague of mine said was so necessary. I think I would let them loose on the computer right away. I think that they still have to learn the judgment, but I

think that the experience gained from seeing a lot of information is also a way of gaining ability. Gaining that judgment. You know, we talked this morning about my early days and how for let's say for the first ten years of my life, working life, after leaving school, before I went to Linotype, I really had to scuffle, I did do some type work, I did do some things that I learned, I could not really make a living exclusively out of type. So the amount of learning I could do about type was really limited during that period of ten years, to the amount of type work that I could find to do. Because you only really learn from the doing of it.

You know you need first hand experience. I contrast that with colleagues that I now have who are in their twenties, who are the equivalent age that I was in the period that I'm speaking of and they are, it is because they are talented, that they are able to find work in this present day typographic climate. That they can make a living and what interests me about this situation is that, you know, that they are amassing experience at a far greater rate than I was able to do at that age. In other words, they are producing font after font after design. Maybe a little too fast in some circumstances, they don't really get to dwell on things enough. They are good enough designers, in their twenties, what they are going to be like when they are forty years old, or fifty years old, it's awesome to think about. Because I am convinced the way you learn is by seeing your work in use and it wasn't really until I got to Linotype ten years after leaving school that certain amount of pent up stuff started to come out of me. I really started to do some work from which I think I learned a tremendous amount. Really, because I could put everything I had into this work. And so, I was up against it in a way I hadn't been before. But some of these young friends of mine, are doing that already. And they are like two years out of school, or something or other.

PH: That is pretty amazing.

MC: It's amazing. And it bodes very well for the future of this whole enterprise. Yes, yes. When I contrast traditional sorta of manual skills as against immediate immersion in the current tool, the current technology, the Macintosh, I don't really have a strong feeling that one is better than the other. I had the traditional formation, I have a huge amount of baggage with me.

PH: As a result?

MC: As a result of that. And I rather envy young people who can plunk down in front of the Mac and just look at type as though they were the first people in the world who had ever seen a letter. [Laughter] Completely uninhibited, uninformed, I mean that's the risk, you're going to make some pretty stupid things probably. But at the same time you are not laden down with a lot of ideas that you'd had and so on. And sometimes, you know, when something like type, which has always been, the people who dealt with type, have all been really a priesthood. Initiates. Because it was hard to get into it. It was difficult to practice. There was always this kind of, call it a priesthood. Sorta cult of people who knew about type. A lot of what we knew had to do with things that we all know that we can't do.

But occasionally there comes along a situation where, for some technical reason, I can think of an analogy in the early days of dry transfer lettering. You went out, well, if you were a corner store, a grocer, you wanted to make yourself some signs. You didn't necessarily have to go to the local printer or to a sign maker, you could go to the local art store, buy yourself some sheets of Letraset, go home and rub down some letters and make yourself a perfectly good notice to put in your window or whatever. Now, the letterforms themselves were silk-screened, they were fine, they were perfect. But, of course, you got no indication whatsoever of how to space the letters. So here you have someone who has never worked with type at all before, he's a grocer. He's got the letters that you have formed, how does he put them down on the show card to put in the window. Well, the most obvious thing for him to do is to put all the letters the same distance apart or which is even easier to do, make them all just touch. I mean, just kiss one another, then you can space them all down the line. Now, you and I know, because we are well trained typographers, that is a terrible thing to do, that is the last thing to do. If I am worth what I earn, it is because I know how to space type and so on. But, at a certain juncture, what you've got is a lot of vernacular lettering really, in which, thanks to dry transfer lettering, the letterforms themselves were perfect, the spacing was what no trained typographer would dare to do. But, I am convinced that through their innocence, people did lettering in this way,

profoundly affected the professionals. Because we had never dared to put type exactly the same distance, or just touching. Suddenly, we had this whole possibility, this whole fashion, which has now died down considerably, for very tight letterforms. Art directors started insisting on this from the typesetting houses. Well, I don't say that Letraset in the hands of the ignorant or innocent was the only reason that that happened, but I do think that it had a lot to do with it. So, sometimes, rarely, but sometimes you get situations where type gets out of the hands of the 'priesthood' and into the hands of the laity and they go do something with it, and it makes the 'priests' sit up and take notice because it's not in the 'scriptures' that we do it that way. This is very salutary, and it makes us think again. I think that there is a lot of that feed back because of the accessibility of things that used to be very arcane. There is a lot of that feed back going on.

PH: It sounds to me as though you like the innovative methods as well as the more (traditional methods) sorta the innovation is almost like jazz.

MC: What I notice in some young people, who come to typography without any traditional formal training, they've picked it up because of familiarity with the Macintosh, for example. It is interesting enough, that they then go back, some of them, I mean a number of them I know, they get interested enough, that then they go back and look at the history. And look at the traditions and get interested in [that].

PH: I've seen that at the Rochester Institute of Technology (RIT).

MC: Yeah. You see? And this is really part of, I think, a larger phenomenon, you know, it used to be that most people who got into type design, had got there through some other form of lettering. Erik Gill was a monumental mason and a sculptor, he cut letters in stone, out of that grew his interest in type. Hermann Zapf is a calligrapher, virtuoso penman, and got into type design through that. Many, many cases of people in the same way or general graphic design. Herb Lubalin, wonderful, wonderful graphic designer and typographer. Got sufficiently interested in letterforms to design typefaces. And the reason for that is that type design was thought of something mystical and difficult and arcane and hard to get to grips with. Nowadays we seem to be moving to a state

where the opposite is true, it is a great deal easier now to sit down in front of a Macintosh, bring up Fontographer, and start doodling a letterform than it is to start cutting a letter in stone. Or sharpening a turkey quill and starting to write on vellum and so I think you may find the whole thing has got flipped. Whereas in the past, calligraphers, some of them like Cherie, graduated from calligraphy to type design, and type design was thought of sort in a way of advanced form of calligraphy. I think, you'll find exactly the opposite happening, where familiarity with making letterforms on a computer is far more general an accomplishment. Certain people, as it were, graduate to the difficulties of calligraphy or cutting letters in stone or cutting letters in wood or various other lettering arts. And, indeed, they get into the broader sense of history of typography. It will happen that way round. We are, after all, just at the dawn of the time when presumably most children will learn to read and write, not with a pencil in their hand, but with a mouse and a keyboard. I think it is already starting to happen. So they are going to be using fonts before they can really write the letterforms. If they ever learn to write.

PH: One of the very first things I wanted to ask you was what about the degrading of the digital files. Do you have a sense of how long a file will stay viable? Because I'm thinking each time that you reproduce something, it degrades a little.

Chapter 15

Digital Data

MC: I don't know if that's true of digital data. I don't know. It's a problem that, you must have come on this problem at the Cary Library, it's a problem that confronts curators and librarians and so on. I talked a lot to Ann Anminger at the Houghton Library, which is Harvard's fine Print Collection, where one of the things they have most assiduously collected is the process. In other words, they have the printed book, and what they would love to find is the illustrator's sketches for the illustrations or the type designer's sketches for the typeface, because they are fascinated by how these things progress, how they come together and how they form the finished product by whatever stages. Nowadays, in one sense you can store the whole process digitally. But typically, you don't have, I don't have any drawings for Sophia [see Figure 2, Appendix B, Page B-2] or Mantinia [see Figure 4, Appendix B, Page B-3]. There is nothing. If you said: 'Show me a drawing of Mantinia.' I'd go to my computer and output a letter. The digital data is the original source of it. There is nothing in the way of a sketch or anything. Now, for some type designers, there is. I have buddies who still draw. At least they sketch. As sorta the first way and then they scan that into the computer and so on. Some designers draw in Illustrator and then transfer it to Fontographer. Everyone has a different way of working. But in a real sense, there isn't any process, it is very difficult to, you can do a sort of thing like I've done and (just take Mantinia as a case in point) I can do some screen dumps of characters either in work or finished on the screen. I can show you pictures of things I might have looked at when I was thinking about Mantinia, things that inspired me or that I referred to. All of that kind of data is, of course, available. But, I can't show you a set of drawings in the sense that I could have done for Snell Roundhand [see Figure 7, Page B-6 or Galliard. [see Figure 8, Appendix B, Page B-7] I have the drawings of Galliard here. Those are real drawings. They, in order to produce them. I use a drawing in a sorta artificial term to mean an image on a piece of paper or other substrate.

MC: Exactly, and you know, I was thinking a bit about one of your written questions that I think what you had in mind was to say how has type design changed? Type design. How has type design changed as the methods of making type have changed from metal, to film, to digits, to desktop. And, again, I think a lot of people would disagree with me about this, but my feeling is that if you say that producing a typeface, designing a typeface, is a better term, designing a typeface is ten on a scale. I would say that on the same scale, the method by which you design this typeface, rates about one. In other words, nine-tenths of it is the same whether your making it in steel or on a Macintosh. Only one-tenth of it has changed. A lot of people would disagree with me because they would say: 'Oh, using a computer is a totally different experience.' But I have never felt that, I feel that when you cut letters in steel, it was very slow and very difficult and you had to acquire some skills in metal-working in order to be able to do it. But, I do not think that the fact that steel is steel, made any real contributions to the letters that were made in that way. I mean, they are not good or bad letters according to how 'steely' they are. I don't think that there is in type anything such as truth to materials. Which there is in a fine art. I mean, in sculpture and in architecture, I really think there can be a truth to materials. certain building forms.

PH: Or even putting ink on the paper, the paper then becomes part of the design medium, but that is a whole different aspect.

MC: But, for, right. So, you know, there aren't really 'steely' letters. There aren't really photo, I mean you could produce some examples of letterforms, I gave some earlier, but it would be very difficult to make in metal. You could produce some digital faces that would be very hard to make in any other (medium). But, those are really the exceptions, I think, to the rule. So yes, the method of making type has changed very dramatically and by a funny accident of my having been born when I was, I've been able to make type by essentially, all the ways that type has been made throughout its history. You know, I started in cutting punches.

PH: Did you ever think growing up in England. . .

MC: You know, if I'd been born a lot earlier, I would probably have been out of here before we got to the desktop. If I'd been born much later, I would have missed that strange last gasp of punchcutting at Enschedé's working with Rädisch, who retired very soon after I had spent that year with him. So it was just a fluke, if you like, that I've been able to . . . so the methods have changed very considerably, I mean for the better, in my opinion, but again, I would have to say that its only about ten percent of the problem, if that's the right word, the opportunity of designing a typeface which is in fact effected by how you make it, the method by which you make it. So, these change of tools, these change of methods that have gone along during forty years since I'm at school, they've had a huge effect on how type is set, they've had a huge effect on problems on very much border issues about the dissemination of information, the whole economics of information technology, printing, and now, the world wide web and all that sort of thing. All of this has changed beyond recognition, but I don't think that type design has changed in anything like the same way, but to the extent that it has changed, and it has, I would not attribute that to the method. I would say that type design is mostly influenced by very broad cultural things of the kind that influences other applied arts. Other designs and so on. And technology may be part of that input, a small part of that input, and, of course, it also happens that when you get big technical advances. We're in that period now, obviously, where you have a desktop computer as having a very radical effect, things are changing very fast. What you tend to get is a sort of appetite for experimentation in the air. You know, it's not strictly cause and effect, it's not literally that this technology makes it much easier or forces you to do something in a different way, but it may just put you in a mood, or society in a mood to be more daring, to fool around with things and perhaps be less respectful of historical precedents or whatever. These major currents in the air I think are what influence type design. Very much more than saying: 'Oh well, yesterday we did it in metal, now we do it in film, tomorrow we're going to do it in electrons.'

PH: So you're saying basically, that's a moot point, and the designer, what the designer brings

MC: Yes,

PH: to the technology

MC: Yes

PH: More so than the technology.

MC: Yes, I think it is, I can, I could make an illustration on the computer, I could make a letterform, I think, that looks as though it had been made in steel, maybe. But it wasn't, I just made it on the computer, you know. You can fake these things, but, yeah, I think type has really by and large hidden its methods. I don't mean that it's been shy about its methods, but I mean, it's pretty hard to tell from, you know, put a letterform in front of me and I can't tell you, unless I just happen to know whether that was first made of steel or was film, or was digital data. How do I know?

PH: Oh, I'm so glad to know because I was looking at that and I wonder which form it was made in?

MC: I don't think that you can necessarily tell.

PH: I was wondering would you mind ever so much demonstrating perhaps a letterform and how you design on the CRT?

MC: We can certainly do that. Let me just follow a train of thought because we're talking about technology and design. It's happened a number of times to me during this, living through this evolution of typographic technology. That when a new technology is introduced, it is almost always in an imperfect state. Early days of photocomposition, when I was in Paris working at Deberny et Peignot with Frutiger, there were conspicuous problems with the optical system of the Photon, a moving type machine that tended to blur the letters, the letters were not very sharp, when they hit the film, they tended to have an almost sorta like a comet tail, a little blur on one side of them. This meant that when you had very complicated letter like a cap W or something or other, it tended to pick up a lot of weight, it tended to look much heavier than it really was in the drawing. Whereas a simple matter like an I or an L, was fairly more faithfully reproduced. So we started to think as designers as ways around this

and ways to compensate this by making the W's all much too light and that sort of thing in the drawing. Because we knew that they were going to get screwed up in the system and so we had to put a lot of English on it, you know? If you know what I mean.

PH: Yes, we do. [Laughter]

MC: We had to compensate for all of it. So, you know, the same in the early days of digital type. Early digital typesetters were sorta odd hybrid machines and it was very slow to change fonts. And so, people started making italics by slanting the raster in the way you fool around with the controls on your TV set. Everything goes weird. They used to be able to do that on the control on those early cathode ray tube type setters. And, so we had to come up with some typefaces that kinda, a sort of damage control. You had to be able to do these things to them and they didn't have to look too bad because some of the existing typefaces, Helvetica, Futura looked like hell when you did this to them. Not surprisingly, they were not designed with that in mind. [Laughter] So we did design some versions of them with that in mind.. But then, of course, what happens is that some bright engineer discovered a new filter or a new flash tube or a new something or other and suddenly it all worked fine and all the W's came out too light.

PH: Because, or course, they were designed that way.

MC: Exactly. So there is a parable here of how in the early days of technologies designers are often called upon to help them through their birthing pains, or their teething troubles, in other words.

PH: Their baby steps

MC: Exactly. Make this W look less terrible until we can fix the problem. And engineers, by definition, you know you're from a scientific family, engineers can do anything. If an engineer can understand what he or she needs to do they will do it. Sooner or later.

The definition of a machine is something that is perfectible. Human beings are not perfectible, but machines are, so you can't train all human beings to like W's that are too heavy. Sooner or later you've got to fix the machine. And, of course, you do. Of course, the engineers find a way to do this. They've always done this. I've loved working with engineers all of my life because sooner or later they solve the problem. But there is this odd change over period when they are turning to me saying to me: 'Please help me over this hump, because this looks God awful. I know I can fix it in the end, meanwhile I've got to sell this machine.' So there tends to be a phase, at least, where the technology does effect design, or where designers are asked to take the technology into account when doing designs. But then, of course, as I say the Photon got to a point eventually where it you could do away with these compensatory things that you did with heavy W's and so on and the digital type systems evolved fully to the point where the font change is very fast so you've stored Helvetica Italic, Helvetica Condensed, Helvetica Condensed Italic, [see Figure 10, Appendix B, Page B-7] all of these things, you didn't have to make them synthetically, fooling around with the raster, doing shear distortions and so on. You just went back to regular type.

So what happens is you get these periods when you've got your training wheels on, where designers kind of help, but then the technology catches up and you go back to using the classic Helvetica design which you had been using in metal and film and so on. We see it at the moment. Most of my time in the last three years has been working for Microsoft on screen fonts. Fonts for the screen. Why do you need screen fonts? Well, you need screen fonts because the resolution of monitor screens is relatively low, generally speaking, screen resolutions are worse than 100 dots to the inch, many of them are about 72 and so on. Contrast that with printer resolutions, printers now, even the office laser printer has at least 600 dots to the inch and reproduction quality output units are up in, God knows what it is, 2400 or something unimaginably high resolution. Why you need screen fonts when you need someone like me bothering about screen fonts, worrying about screen fonts, worrying about them on behalf of a company like Microsoft which produces, has to have an answer to this, is because a great many people spend their whole lives working on screens now and seldom if ever, have occasion to print stuff out. We, in the graphic design profession, think of the screen as preview mode, you know,

we're designing a document, we would like the screen to be as good as possible, we like ATM to render the type as well as possible to the screen, we like to be able to make our kerning decisions on the screen and so on, if we possibly can, we like to be able to enlarge things and reduce them and so on. What really counts is when the toner hits the wood pulp and it comes out of the printer. That's when we really know whether this is right or not.

But that isn't really increasingly narrow view of life. In other words, for most people the priorities are exactly the reverse. It doesn't a damn what comes out of the printer, because you may never print this document after all. What happens on the screen is absolutely the top priority, because you spend your entire day gazing at this damn screen and your whole work takes place on the screen. Therefore, it behooves people like me to try and make the type as clear as possible. However, ten years from now, or fifteen or twenty years, I don't know what the lag is, some bright spark is going to market an affordable 200 or 300 or 500 dot to the inch screen. Then, all this work I've been doing, you can throw away. Because Helvetica is going to look wonderful on the screen, just as it does now coming off the high resolution output device.

PH: Yes.

MC: The only reason, that I have to, as it were, do an alternative to Helvetica is because Helvetica [see Figure 7, Appendix B, Page B-7] does not lend itself to reproduction at coarse resolution on a computer screen.

PH: This is true.

MC: It's too bad but how could it have been? I mean it wasn't

PH: It wasn't designed

MC: It wasn't designed with that in mind. So because of screen resolutions, because the fact that typography on the web is handled through a rather difficult system called HTML, which means that the control is hard. We are at one of those periods in the evolution of technology where designers such as myself are being asked, as I was in the early days of photocomposition, as I was in the early days

of digital composition, to try to compensate for some technical shortcoming. In this particular instance, course resolution of affordable monitors.

PH: How are you overcoming that?

MC: Well, we have produced a series of faces and they are designed as problem solving exercises. Facing up to the fact that you only have limited resolution. If you only have a certain number of dots to the inch on the screen, that's what you'd better work with. And rather than starting from some pre-existing printer face and saying: 'I'm going to now make an adaptation of this to the screen and I'm going to add all sorts of high class hinting to it and so on, make it as good as I possibly can.' I started from the opposite end, I said: 'What I'm going to do is, I'm going to make some bitmaps that look good on the screen and when I'm happy with those bitmaps on the screen with various different important sizes, then I'm going to wrap an outline around them and we'll do all the fancy hinting and so on.' So, I'm not taking a printer font and adapting it, I'm making a screen font and if I'm doing any adaptation, the printer font is the adaptation of the screen font. It's an exact reversal of the normal priorities. And I find that that is a better approach. It's a better approach to the actual bitmaps on the screen, some of which, of course, are very clumsy in small sizes. And most importantly, it's a better approach to the spacing. That the spacing of type is always as important as the, you know, I've said this before and people think that I'm trying to be sorta of paradoxical, but most people think of type as black marks on a white background.

But type designers really do have to think of type as being white interrupted by black marks. In other words, the negative part, the white, where the letter isn't, whatever you call it, is just as important. The insides of letters and the space between letters and so on. And this is even more important, in some ways, on the screen because of it's courseness. If you get a couple of letters touching, or if you get two letters far apart they touch so badly, or there is such a big gap between them, that it is very unsightly and it interrupts the reading rhythm very badly. That tends to be one of the very worst problems of screen fonts which are made from printer fonts, which are rendered to the screen from printer outlines. So by sorta grasping the nettle and saying: 'I know this is going to be course, I'm going to make bitmaps, they look like brick laying, not

type design, they are so crude, but that's what I've gotta do, I've gotta do best as possible. Very often I'm not going to come up with the right answer, I'm just going to come up with the least objectionable [laughter] of the different answers I can think of.' You know there is no really right way to do it. But there is a least wrong way very often to find. So

PH: You're developing a brand new typeface, then basically just a whole new letterform.

MC: Yes, but if you looked at these letterforms you would not think that they are, I mean if you looked at the printed output on the screen, you would not think: 'Well, this is a new letterform.' I mean they are very conventional.[see Figure 8, Appendix B, page B-3] Verdana.

PH: You're making them as unobtrusive as possible?

MC: Because they have to be generic.

PH: Yes

MC: Really

PH: So that readers can read through them faster

MC: Other people will come along, maybe I'll come along later, and do some fancier ones. But what Microsoft and I were looking for in this whole exercise, which is getting toward its conclusion now, was to do a rather small family of serifs and sans-serif faces which were kind of, you know, plain vanilla, but they were very sturdy and easier to read at the small text sizes on the screen. So they don't have great ambitions to sorta visual quality or originality, novelty, or anything like that, God forbid, I mean that would be self-defeating, really.

PH: They're utilitarian.

MC: Exactly, bread and butter.

PH: They're there so that if I chose to write to you on the web and send you a letter, that you could read it very quickly

MC: Exactly with the least eyestrain, the least annoyance and maybe at the end of the day maybe you're less bad tempered than you would be. [Laughter] Otherwise, having slogged through your e-mail as so many people do now.

PH: Exactly so. And that's good, and if I have other reports to read [as well,]that language will come up, then that will be good and I'm done with it.

MC: Yes, yes.

PH: However, if I want something beautiful, I'm certainly not going to use that type

MC: No, that's not the purpose of it.

PH: Each thing has it's purpose.

MC: And if you were designing a web site and you wanted larger letters, there you're not restrained by the same considerations. The letters are big enough on the screen, you've got enough information to render them decently. You can see what actual typeface looks like.

PH: How much like Walker are they?

MC: Oh, these are not much like Walker [see Figure 6, Appendix B, Page B-3.

PH: They're not the plain

MC: No, not really. No not really. I suppose the sans-serif face has a little in common with Bell Centennial, [see Figure 9, Appendix B, Page B-8] the face I did [for] the phone books.

PH: Ah yes!

MC: Related problems, as you can imagine.

PH: Yes, and I'm thinking that also, your Bell Centennial (see Figure 4, Appendix B, Page 9) information possibly was a connection when you were working with the firm in France, in Paris, at Deberny et Peignot Foundry.

PH: Yes, Deberny et Peignot. When you had to make adjustments there and I'm wondering if that was also an exemplar for your current work?

MC: I think that is true. In a way,

PH: It's remarkable.

MC: Bell Centennial [see Figure 9, Appendix B, page B-3]. was, again, an instance of a designer having to sort of compensate for technical problems. Not actually typesetting problems so much, partly typesetting problems, but general production problems in the sense that the phone book is set in very small sizes

PH: Printed on very inexpensive paper

MC: Printed on newsprint with kerosene and lampblack, you know, at huge speed and thrown away once a year, you know? It's an ephemeral publication. These are the realities of production, so a lot of the kind of things that look rather quaint about Bell Centennial if you enlarge the letters, are there in order to make it actually, conversely more ordinary when its at small sizes. So yes, there are these sort of no nonsense basic shapes.

PH: They are not like Galliard, (see Figure 4, Appendix B, Page B-3) or Sophia (see Figure 2, Appendix B, Page B-2) or Mantinia (see Figure 3, Appendix B, page B-4).

MC: No, faces, particularly titling faces for use in on paper things like Mantinia and Sophia and so on, they really rely on some visual qualities, some visual interest, because the sizes at which letterforms like them are often used, you can really see the details, you are invited to see the details. So you draw those in a certain way in order that, you hope, that they have some quality that you are aware of because they are big enough to see it, to focus on it. When type is for use at

much smaller sizes there you 're really more concerned with texture and combination of forms than in the individual shapes of letters and how pretty. That's a distraction.

Chapter 15

The Galliard Saga

PH: Well, now Galliard is considered a very fine book text font. It's gone through what? Changes four different times?

MC: Well, it hasn't really.

PH: Subtle changes?

MC: The history of it is this: That I designed it at Linotype, well, for Linotype, it actually, it was begun when I was working in Brooklyn, but for various reasons, we sorta put it aside. I finished it later. It was completed in, I think, 1978. I think that's right.

PH: That was the first Galliard?

MC: When Linotype released it. And then, two or three years later, ITC acquired it from Linotype, one of the last jobs that Cherie and I did before we left Linotype was to make copies of all of my drawings and supply them to ITC. So, what ITC got for originals of Galliard were extremely authentic, I mean they were absolutely faithful copies. But, of course, all though the theory behind ITC is that when they distribute their faces to all their subscribers, their licensees, everyone manufactures them the same. In fact they don't. And there are a number of versions of Galliard out there. And notably, I'm bound to say, Adobe's, which are distinctly bad. Adobe did Galliard rather early. I was rather flattered that they chose to make it early, but they did it at a time when they were still convinced, or persuaded that their typography was only going to be used in the office. The penny hadn't dropped, that what the Mac and PostScript was going to be used for was typesetting. So they made early faces to a different standard. They messed around with Galliard in some ways I don't find very well done. Then a funny thing happened which was that, and by the way Bitstream also made a version of Galliard, which again went back to my original drawings. Because I kept them and so I was able to put them to the disposal of

Bitstream. So that was again, a very authentic version of Galliard. But then I think it was in the Seybold Report, some journalist got hold of the face that Adobe Galliard and Bitstream Galliard did not look the same. And how come since they had the same name, this was both ITC Galliard. What was the matter? And they ran a little article in which they compared not so much the primary, the alphabetic characters, but things like brackets and asterisks, I can't remember. But a lot of the secondary characters in the font. They did a side by side comparison and they said: 'You know, here's Adobe's and here's Bitstream's and why are they different?' Well,

PH: They didn't research it?

MC: Well, they knew the answer. Seybold knew the answer, which was that Adobe had made Galliard rather early and they cut a lot of production corners. In other words, they hadn't used the square brackets, (for the sake of argument), that I had designed, because that would have meant digitizing them and so on. Instead they took some other square brackets they happened to have that they thought more or less right, and inserted those in the font. And so, you know, with the number of characters but of course, because Adobe has the reputation that they have, when this article appeared in Seybold everyone thought either Bitstream was screwed up or worse still, Matthew has got himself in serious trouble here because he's gone and redesigned Galliard which is not his property, it's an ITC face. He's redesigned it for Bitstream. So, we had this curious thing happen. Mark Batty, the President of ITC and various people, came up to Bitstream loaded for bear, as they say. Ready for a face down. To tell us to take our version of Galliard off the market because I'd screwed around with it. Well, Mark is not a typographic expert, he's a dear friend of mine besides, we sat him down patiently and we explained to him the situation which was that Bitstream Galliard is absolutely one hundred percent faithful to ITCs art work because they were both made from the self same drawings. And the problem was not Bitstream's version it was Adobe's version. Which perhaps for understandable reasons, they had cut a lot of corners, maybe this was before their good typographic people were on board and one thing and another. So it was not at all what I was accused of which was, here is the God like Adobe, what they do must be right. In this instance it was Adobe, for reasons I'm sure that they could explain where they had not done it right. Bitstream had actually

done it one hundred percent right. So, Mark had to admit, I sometimes wonder if he had to go off to Adobe and have the same meeting there, but I doubt if he did, but anyway, so that whole problem went away.

Then when, one of the first things that Cherie and I wanted to do when we started our own company five years ago, was to do a proper version of Galliard. By proper I mean both that I should digitize it myself because I like to do that, but when Galliard was originally designed back for Linotype, it had a very good big complement of characters, it had small caps, it had old style figures, it had a lot of ornamental characters, it had a whole lot of stuff, fractions, all manner of things that typographers like to use because, as you say, it's principally a book face, gets used for art catalogues where they've got good reasons to have all these good characters. But in PostScript days, no one had made, a number of companies including Bitstream and Adobe, had made Galliard but then none of them had done these additional characters. So Cherie and I said: 'OK. We will digitize Galliard and we will make the supplementary fonts, the expert fonts, and whatever they call them. So that they have all the fractions, all the ligatures, the small caps, the old style figures, everything you can think of. Ornamental characters, all of the old fashioned characters.' So that's exactly what we did. In one or two instances, I mean, when I originally designed Galliard, I think the reigning machine at Linotype was the VIP. The VIP had constraints on the number of characters in a font. So there was some illogicalities in the drawings that I made. For example, I think I had a lower case 'n' with a flourish at the end of it, but I did not have a lower case 'm' with a flourish at the end of it. It's the same flourish, there was only room for one or the other, so I did one and I never bothered to do the other. So when I did the Carter & Cone version, I added a few characters like that just because the reason to exclude them had gone away and my as well put them back in again. Believe me, because I have my drawings, this version of Galliard is, it's the most authentic, other than the original Linotype one. Because its made directly from the drawings. But then again, I started when we launched this, I started to read people saying: 'Well, Matthew's produced yet another version of Galliard.' But again, I had to get in a sorta of argument with people and say: 'No, I didn't. What I did was produce the original Galliard as faithfully as I know how. This is not new, this is the old original Galliard which you are seeing again for the first time since Mergenthaler released it in '78'. But people said:

‘Oh well, you changed it.’ I didn’t change a thing. People suspected me again of revamping Galliard. Actually, on the contrary, my whole idea was to make it as absolutely faithful to the original design as possible and that’s exactly what I did. So Carter & Cone Galliard is really my drawings from 1978 given a new lease of life, a re-issue in digital form. There is nothing apart from a handful of characters that I put in because there is no reason to leave them out originally.

PH: So, there was an article that I read, I’m not exactly sure, I don’t have my files in front of me, that showed where there was a difference in your design. What they were showing was a difference probably between something that was not the original design?

MC: That may be. The other thing that I’m not sure about is that, ITC nowadays will supply their typefaces both as analog art and in digital form. They had various companies digitize their typefaces, so that you can license them now. I do not know who digitized their version of Galliard. I’ve heard say, it’s not a stellar job of digitizing.

PH: That could very well be.

MC: That’s the illustration which you could have picked up, which I don’t remember seeing myself, but it may be that somebody found a character or characters in a digital version of Galliard which differs from mine. I can only say that I don’t think that was deliberate. I would also have to say that mine, I would back mine because I used the original drawings. Someone else may not have done that, or it may have been digitized from another generation. I don’t know without looking at it. That may be the case.

PH: So, then we get into all this, who digitizes the fonts, the originals, what happens to them, do they degrade as they are ‘translated’ (copied) and unless you do Galliard and I buy Carter & Cone Galliard, I’m not assured that I’m getting the correct face. That’s all there is to it?

MC: As a practical matter, that may be true.

PH: If you really want something absolutely beautiful, and you want the most beautiful book produced with Galliard you would have to go with the original.

MC: I would say that, this is becoming a familiar theme, I apologize if I'm repeating it, but I tend to think that the fewer number of different hands involved in the designing and making of a type the better it tends to be. Somebody, it might have been Fred Goudy, described the industrial processes which we were talking about earlier, of a drawing coming from a designer, going to the letter drawing office, going to the punchcutting department,

PH: Yes

MC: it's like pouring honey from one jar to another, a little bit gets left behind every time. That's a rather harsh judgment, but it may well have been true. I believe that the fewer number of hands in it, the better. Type design is better is better as a sort of 'auteur' that's highfalutin talk but the chances are that if the designer digitized it it's going to be better than if someone else digitized it. It's just human nature.

PH: There is no question.

MC: My great friend, Gerard Unger in Holland, has recently made a new version of his typeface, Swift. Swift has been out for some time in a version that was digitized in a way Gerard did not think was well done. But, contractually, this is how it had to be done. He then, sorta did what I did with Galliard, really. He sorta acquired the right to make his own version of it. I don't know that he placed everything

We were just talking about the qualities of digitizing type. I just feel that if a designer can do it or can have very close control over it, chances are it's going to come out better.

PH: Do you have a favorite character?

MC: Nope. I'm rather on my guard against, well, you know it can happen on a case by case basis.

PH: Laughter, OK.

Because there are some absolutely elemental decisions you have to take in these letterforms which control the drawing of many of the other letters in the font. In other words, there is information in these few characters which you can extrapolate and then use and re-use to form other letters as you apply the system.

You're much better off starting with H, not necessarily a glamorous letter, it's not so much fun to draw as a Q with a lovely tail, but it tells you an enormous amount of information about that particular typeface. So you're better off facing up to these kinds of basic questions first, then when you're down the line a way, then you can start worrying about the tail of the Q or the lowercase g or something which you can maybe put a bit more of yourself into this. Express a little bit more, they are more capricious as forms and less dependent on these formal rules that come about in the derivation of letterforms from one another. So, they're useful for identifying typefaces, everyone can tell Baskerville because it's got an open lowercase g. It's very handy, key letters and so on. But I don't have a favorite letter in the sense that I sit in an airplane noodling lowercase g's because I know pretty soon I'm going to find, I don't have a letter that is my way into a typeface. As I say, you can see individual letters, or small groups of letters that can influence you.

PH: It is as though when you were describing seeing the beautiful paintings in the museum, that it was an emotional response, and I believe that.

MC: Yes, but then, yes, I think that's true. What I got out of, I wish it happened more often, obviously, but once in a blue moon it does happen, I see a very specific thing like Mantegna's lettering, certain Byzantine inscription or a couple of them that gave me an idea for Sophia. Or some historical style of type which perhaps you've known perfectly well that you never looked at very closely when you do look at it closely you see some things that you didn't realize were there and get interested, get sucked into it in that way. I love that experience, it's a wonderful thing to find something which maybe you don't use it in that form, but it sets you off on a train of thought. Oh wow, what if I did so and so? Sometimes, it's very helpful to have stimulus of that kind. Rather than just sitting in front of a blank screen or a blank piece of paper, waiting for a bolt from the blue. I wish that happened and I think it does for some

designers. It certainly does for painters and sculptures and musicians sometimes. But I need a trigger. Very often and they come in odd places. I always, I photograph lettering that I see around me quite a lot. I often carry a camera, particularly when I'm traveling. I have quite a lot of bits of lettering which I've photographed. Many of them very unpretentious pieces of lettering.

PH: just things that you want to [study] for some reason

MC: Yes, exactly this is the equivalent of an office common place book or something. It's just things that have caught my attention and I may never look at them again, or I may see something in there that sets me off to thinking or makes me go and look up something else. You know the way these trains of thought come about and I always enjoy that. As I say, I wish it happened more often. I wish there were more stimuli out there that one could find, that one could harness to give one good ideas.

PH: Yes. Is there anything that you can recall that is modern that gets you going?

MC: Yes, I was very, I'm very appreciative of a lot of modern type design. A lot of people of my sort of generation and background, have become as dinosaurs. Well, I enjoy, rather like we were saying this morning, you were asking me if there was a particular painting, not really, there are some that I like more than others, but I like quite a broad range of difference. But you see if I say I only like historical type, I only like type by dead guys, it's rather like saying well, I'm only going to watch movies by this director, or I'm only ever going to eat this cuisine. It seems to be very limiting.

PH: Boring.

MC: It's boring. My feeling is just that way about type. I love it when there comes through the mail, for example, an antiquarian bookseller's catalogue that has got some beautiful reproductions of some incunabula page or something or other. This is just beautiful! I love looking at that and I leave it open around the place and come back and look at it and so on. But at the same time, I must tell you that I get just as excited when the latest Emigre comes onto the doormat, and I rip it open. Or the next calendar from the Walker Art Center where

they've been using my typeface in some new different way or something or other. So you get some catalogue of some crazy garage people or RayGun, I'm a magazine junky, I love magazines.

I love magazines, I look at more than I buy, I must admit, but I love looking at the European editions of the fashion magazines. Some of these 'zines, some of these music magazines and so on. I think, that as I was saying earlier, that the more input you have, the better. It's not a literal thing, so much. I did give you an instance in the case of Mantinia that was literal, I saw a letter, a few letters that really turned me on. Generally speaking my reaction isn't as literal as that. My reaction tends to be: 'Oh'. I see a page or I see a typeface or something or other which interests me. And often for the professional there are, it sometimes happens that you see a face which you don't particularly like in the sense that you don't warm to it emotionally, but you can see some things in it that perhaps are professionally interesting. Something done in a certain way. Um that's an intelligent piece of work or you can say that really ruins this typeface, I must remember never to do that. [Laughter] You react in different ways and I think that it's interesting to expose yourself to as wide a variety or different inputs as possible. Because if I had some formula that I could take something, or smoke something that would automatically give me a wonderful idea for a type design. I would do nothing else. But I've never been able to narrow it down to that. So my way is the scattershot approach. I kind of, I try to embrace a good many different influences. Arlene sometimes complains that I'm not open enough. She's probably right, I am probably not open enough to many different things as possible. Maybe I'm too hide bound. But I make a conscious effort to look at stuff. I don't do it because I think it's good for me necessarily. I do it because I enjoy it.

PH: And I think it's very hard to overcome that training in your background. Because so much of that is ingrained when you are very young.

MC: I think so. I think, again I was very lucky; going back to something I said this morning, I'm eternally grateful that I had that experience of coming to New York in 1960 because that shocked me. Pleasurably, but it was just a shock. And it jolted me out of a rather complacent, I was part of the typographic establishment

PH: What happened to change the rules?

Chapter 17

Typography

MC: What is the name of this game? I grew up as an insider because of my father's profession.

I met a lot people considered important in the typographic world when I was a youngster.

PH: Of course.

MC: So, I suppose I was kind of cocky and felt I knew it all at the age of about twenty. But when I went to New York, I was actually twenty-two, I think. I suddenly, I had to reset everything. I just looked. And it wasn't that I threw out everything that I'd seen before, I just realized, Jesus, you've been kidding yourself. You thought you knew what type looked like and how type is used but you ain't seen nothing. Look at Dwiggins, you dreamt there would be a Dwiggins, you never dreamt there would be a Herb Lubalin.

PH: But, did you dream there was going to be a computer?

MC: Absolutely not. How could I? If you're serving a life sentence at this business And it's a very salutary thing. It changed my life, it's what brought me to the States. It had a very real effect on me in that way and so I'm glad, and grateful that that happened. I think that shocks like that are very good periodically. I think it's very good to pick up some publication that someone else has designed and look at something which you could never have done yourself. You wouldn't know where to begin. To look at this closely. There are a lot of people whose work couldn't be more different, I'll tell you a funny story. I, at least it strikes me as funny. A few years ago I was in Canada on a double bill with Neville Brody. Who, I may have met Neville before that, but anyway, I didn't know him very well. And I gave a talk and he gave a talk. The journalist up there had this bright idea, he said: 'Here are these two people, Neville who is the young revolutionary and Matthew who is an old fart. All I have to do is get these two

together in a room and ask one or two loaded questions and there should be a real fight.' Neville and I had no idea either of us that this was going to happen.

PH: Oh no.

MC: And we sat down, and this guy tried to kind of ginger us up and put the needle in. It was really wonderful because Neville and I agreed on everything. There was no collusion. We hadn't. He was asking us questions about our feelings about type, I can't remember what the questions were, but they were sorta intended to open a gap between us. Instead of which, Neville would say something and the guy would turn to me and say: 'What do you think?' And I'd say: 'Neville is absolutely right.' He's really put his finger, you know. And then I would say something and the guy would turn to Neville and expect Neville to sorta punch me or something or other. Neville would say: 'Well, I never thought of it like before, Matthew's right.' And so we went on like this, instead of Neville and me getting annoyed at one another, this journalist got madder and madder because he couldn't get a rise out of us. Eventually, we took mercy on him and we sort contrived, Neville and I to disagree about, I think, about our feelings about Helvetica. But I'll tell you, this is significant, I can't remember if it was Neville who liked it and I didn't or whether I liked it and he didn't. But anyway, it's funny when it happened and it's funny in retrospect, if you do something like type design, which as I say, is not a big calling, there are not an awful lot of people who do it. There are more than there used to be, the more the better in my opinion. But, it's not a big field, you can put any two of us into a room, it could be me and Neville, it could be Ed Benguiat and Zuzana Licko, any two combinations, and those two people would actually have more in common than they would have different. Now that doesn't mean to say, that my letters are like Nevils or that Zuzan's are like Ed's. That's all sort of in a way, it's not incidental, but you know, Neville and I talking to this journalist, we probably have. Our letters turn out very differently, but we probably have very similar ideas about why we like letters, why we got interested in the first place. All kinds of things we have in common, that outweigh that his H and my H are not the same. You see what I mean, to Neville and me those, the H's are very important, that's the H we designed, but because mine is like that and Nevils is like that doesn't mean that I dislike Neville or I think his H is wrong. It's different. I like it or I don't like it, or he likes mine, or he doesn't like mine,

so what? I remember talking, I'll make this the last anecdote. Arnold Bank, whose name came into this earlier because he was a wonderful, American calligrapher, Cherie studied under him. It was with Arnold that I stayed on West Eighty-Seventh Street when I came to New York in 1960. Because he was a friend of my dad's. And I remember one evening, actually I think it was in England when he was visiting my parents, he told me story. He said: 'When I was young and idealistic.' Said Arnold over a martini. 'I would look at some O that some guy had drawn and I would look at that O and say: "That's a bad O. The man who drew that O will never be a friend of mine."' He said that it was so intense the feeling I had about that. But now, he said, if I look at an O, I say: "I like the guy who designed that O. And he can make an O however he damn well pleases, as far as I'm concerned." So this kind of softening in the hard line that Arnold had felt as he had grown older, he was not all that old a man when he was telling this story.' When you are very young you could look at some other persons work and maybe I did this. I'm sure that when I was, if you had shown me something, you could have shown me plenty of things in 1956 and I would have said: 'That's really bad lettering.' Or bad type design and I wouldn't like the guy who had done that.

But I don't really feel that any longer. I can say: 'That is not a favorite typeface of mine,' but chances are I know the person who designed it by now, I would say I like this guy, but you know. As I say I'm getting back to this kind of conversation that I had with Neville because I have this feeling that we do all have more in common than is the difference between us. I enjoy that, which means that it is a pleasure for me to talk to someone like Zuzana Licko or Ed Fella or people whose work is radically different from mine. As they produce it, as I see it. But that doesn't mean that I'm not interested in talking to them and indeed in some ways it kind of adds piquancy to the encounter. I find it more difficult sometimes, it sometimes happened to me that a student of mine has produced something which is obviously a very close imitation of my work. The student thinks that I'm going to love this because, they think that I'm going to be flattered that they have followed my direction, my precedent so closely. But I find that embarrassing, I've never been comfortable with that. I may not

PH: Rather than go off on their own?

MC: I would rather they buggered off and did something else. As my father would have said: 'It would make the conversation at the dinner table more interesting.' I've seen this letter already, because I designed it, why do I want to see it again?

PH: You've been there, done that.

MC: Exactly. Show me something different. I would much rather be sitting talking to Gerard Unger he's a little younger than me, but I think of him as being my own generation. Or Sumner Stone similarly. We don't draw similar letters at all, but I think that actually it makes for a much more interesting conversation. It doesn't mean that we quarrel or fight because his H is this way or my H is that way. In fact it makes it much more interesting for us to be talking because there is all this common ground we have, but at the same time, the results are a bit different. Because there are different mentalities different whatever

PH: Just very subtle differences in thought processes that create these beautiful variations.

MC: If they all turned out the same, what would be the point? Again, if you are serving a life sentence, it would be very nice if you just continued to redesign the same typeface over and over and over again. There have been some designers who have tried that. But you can't get away with it, beyond a certain point. At some point you've got to come up with something new. It's inconvenient, but you shouldn't be able to recycle the same idea indefinitely so, you've got to cast around a bit and by keeping your eyes open, your ears open and so on, I think you do make it easier on yourself to do that.

PH: Every once in awhile you have to go through a metamorphosis. Have you figured out how many years you go along and go along and all of a sudden another kind of experience . . .

MC: Climacteric comes along. No, I don't seem to have a regular cycle of that kind. I think that when I went to New York in 1960, as I say, it had an enormously beneficial effect on me. So did going to Holland in 1956. I mean, that was not a

negative, I feel that I outgrew that in a way, but it was also, it did a lot for me. When I went to Linotype in 1965, I was, that was a huge shake-up for me.

PH: Again, extremely traumatic experience for you.

MC: Yeah, leaving Bitstream, I felt again, as Cherie said when she was talking earlier, I have not been able to do much design work at Bitstream, I had to concentrate on various other things, but so again, there was probably some pent-up stuff and I, being on my own devices and sorta of: 'hey, here's a new business and a new opportunity and what are you going to do?' I think that was, again, a shake up. And a very good thing to have those occasions come around in your life, periodically. Again, I don't think that it would suit everyone and I'm sure there are a lot of people who would much rather just

PH: Stay put

MC: When you think of it, when you look at the whole history of typography, most people were born and died and type didn't change at all. Evolutionary change of type over the centuries

PH: That's true, I hadn't thought of that.

MC: It's only rarely that a Caslon [see Figure 5, Appendix B, Page B-5], or a Baskerville [see Figure 11, Appendix B, Page B-11] came along and made a difference and even if they did a lot of people ignored it. So this idea that type is a changeable thing. That we have this plurality of styles simultaneously available to us is a very modern thing. As I say, when type changed right at end of the eighteenth century and the beginning of the nineteenth century because of Didot and Bodoni and so on, you know, the British foundries like Caslon and Fry and so on who had been making old style types so called, got rid of them. If you'd been to a type foundry in Britain or in this country say in 1830 and you wanted to buy some type, the type you would have bought was Modern, you could have Modern or Modern. If you'd wanted Garamond, no one would have known the name, they wouldn't have had a clue what Garamond was. If you had said Caslon, there might be some people who dimly remembered that there was such a thing.

There might have been one or two historical styles that people vaguely remembered, perhaps they'd seen them in old books or something or other. But this idea that you could go to a foundry and say: 'Well, I'll have some Garamond and some Caslon.' You could have Modern or Modern. Well, maybe you could have had some Clarendon, beefed up Modern. Heavier. So, that style, as I say, you know, you would have led your whole life and type didn't change at all. The newspaper on the day you were born and the newspaper that had your obituary would have looked exactly the same. Same typeface, same size, same everything. This idea that these things change is entirely modern. The idea of reviving type is extremely modern. The first type revivals, I suppose you could say William Morris revived type but not on a commercial basis. ATF Bodoni was produced in 1905, or something or other, which was the first real commercial type revival. So this idea idea that you could have Bodoni and you ain't living in Parma in 1780, 1790. That's a very modern notion that we have a choice.

PH: Well, on that note I'm afraid we have to end our first day. I'm reluctant to do so, I will tell you. But I know that we must let you have some rest.

Chapter 18

Scripts Other than Latin

MC: Scripts other than Latin is really the way I think of it. Over the years I've had a certain amount of experience grappling with non-Latin scripts. My first real exposure to something other than A, B, C was in my Linotype days in the early to mid '70's when the following thing happened: Linotype came out with a new phototypesetting system called the VIP. I don't know if the engineers who were responsible for its development appreciated this or had it in mind when they were doing it. It so happened that the VIP was a particularly good system by comparison with what had gone before it at setting complicated scripts. By complicated, I mean, typically where scripts had to have accents, diacritical marks, sometimes more than one, which is, of course, the case with Greek. It came to the attention of Linotype's sales agent in Greece, at that time a very good and energetic man called Costas Chryssochoides, that there was some potential in this VIP phototypesetter for sales in Greece.

Greek Faces

At that time there none of the manufacturers of photocomposing equipment had established domination of the market in Greece. In other words it was kind of an open field. The big problem was - So here is a big piece of equipment for setting Greek but there were very, very few Greek typefaces for sale in the Linotype Library. The question had to be faced —the decision had to be made by the Linotype executives whether they would invest the time and money in developing some new Greek faces in order that they could thereby facilitate the sales of equipment. I think that they realized at the time that they were never going to be able to make money from the sale of Greek fonts of type, it's no good. But without the fonts there was no Greek typesetting equipment. My boss, Mike Parker was eventually given the go ahead to mount a campaign to provide some Greek faces. To my pleasure I was asked by Mike to take part in this. We set off for Athens to do some exploratory work, talk to Costas and to some prospects he had in regard to customers.

One outfit that we talked to early on was an architect, an urban planner in Athens, Doxiadis, who worked internationally. He had a requirement to be able to set, obviously Greek, but also English and maybe other European languages as well, because typically, he was hired by governments here and there to make proposals for urban development. He wanted his own in-house typesetting system. outward looking international company. They had some very good people on staff. They really guided our first attempts to produce a small selection of modern Greek typefaces that were the equivalent of typefaces that were then in use in the Latin world, the English speaking world.

There is always a problem - I will come back to this theme - when you are designing type for ascript, which is not your modern script. Eventually, I think, you have to depend on advice from people for whom whatever script, Greek in this case, is their natural [language] grew up speaking Greek, writing Greek.

PH: Do you know Greek?

MC: No, I studied classical Greek in school, not to great effect I may say, but that's rather a different matter, I knew the names of the characters. I knew it in the sense I can transliterate it. But I can't understand Greek.

PH: So that is exactly what you needed to develop [these] typefaces?

MC: I needed a little bit of background —knowledge of Greek—some familiarity with [(Greek)] but I was not able to speak modern Greek or read and write modern Greek. Therefore you are inevitably dependent on finding someone to advise you. This has always been a difficult problem —whatever the script in my experience. The reason being this, of course, that you can go to Greece, you can go to India, to Russia, anywhere, that does not use the Latin alphabet and you can find someone who can tell you what you would be doing. But because you have no real insight into what you're doing you cannot tell if this 'expert' is giving you good advice or bad advice.

PH: Exactly.

MC: I've had some odd experiences. As a matter of fact in Greece, as I will tell you, things went very well, we were very lucky.

Indian Script

I was also lucky when I did Devanagari [see Figure 12, Appendix B, Page B-4], the Indian script. But I had other experiences where I got caught in a situation, really where I would be talking to one person on one day and they would say 'Do it this way.' All of this would make perfect sense to me. But, then, the following day I would talk to someone else and they would say: 'The guy you were talking to was an idiot and has no idea what he is talking about at all.'

PH: Could that be Arabic you are speaking about?

MC: I've never really designed a font for Arabic from the ground up so to say. I've not actually had that experience with Arabic. Let's just leave it that I've had that experience in various places.

PH: American language could be like that as well.

MC: Right, I dare say. So one thing that we were lucky to do in Greece was to find not a type designer, after all, if there had been a type designer in Greece, we would have hired the type designer and had them do the job. But we were not able to find anyone who was qualified to do that. What we found in the end was a very good graphic designer, a woman, I think her name was Sophia Sarris. We could tell by just looking at her portfolio of commercial work that she had done that she was a very good designer - that she had a good eye. So we enlisted her help in doing the Greek faces. The first one we did was Helvetica Greek [see Figure 8, Appendix B, Page B-5] because Helvetica was then, at the height of its popularity.

The first thing that everyone said whom we spoke to in Greece: 'What typefaces would you like?' They all expressed their desires, their preferences, in terms of pre-existing Western alphabets. They would say: 'Well, we've got to have Helvetica Greek. We've got to have Baskerville Greek (see Figure 10, Appendix B, Page A-6). We've got to have Century Schoolbook Greek.' (see

Figure 10, Appendix B, Page). (Whatever they felt.) But Helvetica was clearly top of the list. So the way we worked was that I drew a version of Helvetica Greek. In many cases I had alternative forms of characters where I was not really sure quite how I should approach the design of that character or a group of characters. Having done that work, having made some trial fonts, went back to Athens, sat down particularly with this woman, Sophia Sarris and said: ‘Now look at this, then look at that and tell me, just right off the top of your head, which you think is better?’ She gave us, as it turned out, some remarkably good advice. ‘This doesn’t look quite right to me. I prefer this. Or this is more natural than that.’ Or even more telling: ‘If you do this to this character, it implies that you should do this to these characters as well.’ This kind of guidance, so Sophia was able to give us and it was backed up by some other people that we talked to. So, from that second trip to Athens, I went back with a very much more confident feeling about how this should be done. And that was really what it took to do the job. I mean I went back and I completed the regular weight of Helvetica Greek and then the bolder weight and eventually it grew into a family with some inclines.

Greek doesn’t really have an italic in the cursive sense. But we did incline versions of Helvetica as well as the upright ones. I believe this was quite a successful exercise. That sort of took care of the first of these customers that we had, Doxiadis in Greece. But then, of course, we had ambitions to a bit more than that. We did a version of Optima Greek (see Figure 11, Appendix B, page A-6) in which Hermann Zapf, the designer of Optima, selected what he thought were good versions of the characters. I made the production drawings and again, I think, we took them to Greece. I did do a version of Baskerville and Century Schoolbook and eventually, I think, Souvenir. I had some help from, I was then living in London, a younger designer Tim Holloway, who got interested in the subject of non-Latin types and went on to do more of them. So we did a small repertory of Greek faces, not a large number, but it was enough to allow Costas Chryssochoides to go around to his potential customers in the printing and publishing world in Athens and in Greece broadly. I think the project was a success in the sense I believe that in having this rather modest number of Greek typefaces designed enabled him to make very significant machine sales.

So the gamble that management took of investing this money and developing some Greek fonts, I think paid off. Not that I repeat they **ever made any money** on the fonts themselves. The fonts, in this instance, were there to enable the sales in equipment. So that was a pleasant experience for me. I enjoyed this opportunity to go to Athens, of course, a number of times.

PH: Was the spacing between the characters a challenge?

MC: It is in any typeface and Greek is odd in some ways because there are a certain number of characters particularly among the capitals which are common to both Latin and Greek. You do have a starting point when you do a Greek [face] that is based on a Western type. - I'll talk a little bit more about that question in a minute. — At that time, in the 70's, all of the requests that we had for type from the people we interviewed was expressed in terms of: 'We need to set bilingual type for books, documents, pamphlets, whatever, in which we have both English or other European languages that use the Latin script set side by side with Greek. Therefore, it is important for us to have a column in Helvetica Latin, a column in Helvetica Greek side by side and they should have a rapport between them. In Greek, it seemed not an impossible task to do this, because there is a certain amount of common ground between the two scripts as it would be between Latin and Cyrillic, as there are some common letters, and between Greek and Cyrillic and so on. So, this little project, I can't remember, lasted two, three or four years, working at it intermittently. At a certain point I think Costas Chryssochoides reckoned he had sufficiency of Greek faces and I went on to other things.

In fact, I never went back to Greece, even on vacation or for other reasons, until two years ago when a friend of mine here, who actually lives in Belmont just outside of Boston, a Greek, a retired Greek, a professor of physics, Greek by birth, although I think most of his working life has been spent in this country. He, being the sort of scientist who likes publishing books and papers, had really found, obviously, had seized on the opportunity of using desktop computers for publishing scientific papers. But had been appalled by the poor standard of Greek fonts that were available for the Mac or the PC. Although, he had absolutely no typographic or printing background, he's a physicist. He got sufficiently worked up about by the poor standard of Greek fonts, that he did

something about it. He came to see me and visited others and informed himself about the current state about of type and type design in the Latin world. He got to know Hermann Zapf and various other people. He managed to raise some backing and start a little company, a society in Athens, called The Greek Font Society, with the object of developing in Greece some good typefaces for exactly the purpose that he needed them, desktop publishing.

MC: Historically, all most all Greek type has been designed and made outside of Greece in Italy, England and France, so it's an interesting idea to have a Greek font development company actually in Athens.

PH: Why do you suppose the Greeks decided to export that rather than create their own within the culture?

MC: I don't know. I think it, historically, had a lot to do with, well, in the early days of printing, during the Renaissance, in Italy in the sixteenth century, there was within the Italian Renaissance, a fascination with the classical languages; Greek and Latin, and I don't really know the history properly myself, also some sort of scholarly Diaspora from Greece towards Venice, so when printers such as Aldus, in Venice, started to wish to publish in Greek because there was demand for scholarly work in the classical languages. he [Aldus] was able to find Greek scholars close to Venice, who could advise him on the making of Greek fonts, which is exactly what - you might say more in Italy at that time than Greece itself. And then priority or the preeminence in type design and production past from the Northern Italian cities to Paris and to a lesser extent to Lyon some decades latter. There was a major project mounted by the King of France to produce, again, a series of classical Greek authors in France. François Instituted the cutting of a series of Greek faces by Garamond in France known as the Grecs du Roi — the King's Greeks. So again, there was another initiative to develop Greek faces, again because that was where the center of learning and scholarship was at that time. So it came about that there was a demand for Greek type outside of Greece because the interest was not in grammatical Greek, it was classical Greek at that time, printing editions of the classic Greek authors. And then, in time, British and Scottish type founders got interested in the same kinds of problems, I can't say there has been no native Greek type design over the centuries, of course, there has been some, but most of it was, in

fact, done outside of Greece because the driving force was the desire to print the classical authors rather than the current literary language or spoken language.

Now we do have an entity in Greece that is producing some Greek fonts and fostering an interest in Greek typography. Well, this colleague of mine Michael Macrakis, who started The Greek Font Society, had the idea of holding a conference devoted to the subject of Greek type in Athens which took place in the summer of 1995. I went there, I was invited to be one of the speakers, which I was delighted to be, this was the first occasion that I'd been back to Athens for twenty years, really. Since that project I described, doing these faces for Linotype. This, going back to Greece and looking at Greek typography and how it had evolved in those twenty years was on one hand a very pleasant experience for me because those faces that were done at Linotype are everywhere in Greece. They had evidently caught on, and you see a very great deal of them. This was sort of flattering for my ego to see these faces that I had done twenty years before so well established in Greece.

PH: Yes.

MC: But then, a very interesting debate began within the conference, informally and on the part of some of the speakers. It centered on this question of, as I said earlier, when we were soliciting ideas about what Greek faces we should develop. 'Oh, we need Helvetica Greek, we need Century Schoolbook Greek, We need Optima Greek, or Souvenir Greek.' They wanted Greek versions of pre-existing Latin faces. Partly for that reason that I gave, that biscriptural composition was a big issue then. But there has since developed a feeling among Greek typographers that Greek should really not be designed as a companion or sort of cousin of Latin, even though some characters are in common between the two things. To put Greek into a Latin straight jacket is an un-natural thing for it. I was very interested by this because back in the 70's I had been a little disappointed that there was no demand for what you might call Greek Greek. Everyone wanted Greek versions of Latin faces. So naturally the versions, this didn't apply so much to the sans-serif faces, with which the Greeks seemed to be much more comfortable, like Helvetica and Optima. But when it came to Baskerville Greek and Century Schoolbook Greek — in other

words serif faces, Some of [the] Greek typographers I was talking to, two summers ago in Athens, said: 'It was really un-natural to put a Latinized serif structure onto Greek letters. This was not the right way to design Greek.' I was very interested to hear that— it struck a chord with me because I had wondered at that time

PH: As you were designing?

MC: Yes, at least it was a question, I wasn't really to answer the question - but the question crossed my mind. Indeed, before I finished that whole episode back in the 70's, I had designed a Greek face myself just on my own initiative - it was not based on a Latin model - it failed tremendously, I don't think anybody bought a single font of it because they thought it was archaic - but that's another story. It was very interesting to understand, in the summer of '95 that Greek thinking about their own typography had advanced to the point where they were feeling that they wanted to free themselves of the influence of Latin type. There are now beginning to be a small number of designers in Greece like other parts of the world, the personal computer, the Macintosh, has encouraged people to get interested to design Greek faces. Now there is a lot of activity in Greece. Some of this activity is a matter of taking contemporary faces and making them Greek. It was also within The Greek Font Society, this project of Macrakis', a desire to try to develop some styles of Greek, for lack of a better term, Greek, Greek. These are not derivatives of Latin faces. They are Greek in nature, completely.

PH: Developed from within the culture?

MC: Exactly and from their own history of the way they like the language, they write the script. This is just a little update on that situation. As I say, I was flattered and delighted to see as much of this work that I had done back in the 70's so well established in current typography. Also I came under fire, in a way, for having designed these faces, these Greek faces that are so Latinized. I could only defend myself by saying that that was what we were asked to do at the time. It was not an issue twenty years ago, but I was delighted now that it was an issue, even though the work I did twenty years ago came under fire I thought that there were very, very good and sympathetic reasons for that, So I

was not, as it were, embarrassed or chagrined by that. In fact, I was encouraged to think that, in some ways the things I had done had provoked a re-examination of Greek attitudes toward typography.

PH: And that's healthy.

MC: Of course it is. At a time when type and typesetting was still a matter of proprietary systems as it was back in the 70's. There was not much incentive for the Greeks to set up elaborate type founding enterprises within Greece. But now that the whole economics have changed thanks to the personal computer, you might say, there is no excuse for them not to be doing it, and indeed, they seem to be.

PH: The world is an entirely different place.

MC: It is, as far as the economics of type design and production are concerned it is. I met numbers of students when I was back in Athens, during this conference, who were quite fired up about Greek typography and where it should go. There was a certain amount of this going on in the corridors, people having quite strong feelings about the nature of Greek typography and where it should be headed. I can't take sides because I'm not familiar enough with the situation, I've been away from it for twenty years. I thought it was all very healthy and very good things will come out of it. So that's my experience with Greek.

PH: It sounds as though you are a respected team player in the Greek typography world.

MC: I was pleased to see the work we had done, as I say, we had very good advice on the ground, as it were, in those days. I was pleased to especially see Helvetica Greek, seems to have grown up and seems to have established a kind of central position in Greek typography rather as well as Helvetica has in ours.

PH: My thinking is that without that— this revolution could never have occurred. That this was the basis that gave it the impetus to go forward.

Cyrillic

MC: Yes, I think that's likely true. You need a basic set of fonts in order to build on.

Just one little addition to the Greek story. As I said yesterday, I'd been working a lot in recent years for Microsoft on these screen fonts called Verdana [see Figure 10, Appendix B, page B-6], which is a sans-serif and Georgia, [see Figure 7, Appendix B, page B-6] which is the serif face. Because Microsoft operates internationally, completely internationally, - they have a requirement that such fonts, as these, they commission from me should come with a very large character set indeed. All the accents, diacriticals, all the currency symbols that you need for all of the European languages that use Latin script, including the Eastern European languages, some of which use quite a lot of accents. Czech and Turkish — also they need Greek and Cyrillic.

I have just recently gone back to drawing Greek and drawing Cyrillic for the first time. I was, I don't sound confident drawing Greek, but because of the experiences twenty years ago, modified and enlightened in my experience a couple of years ago I feel I could take on the design of Greek. Cyrillic I had never really gotten involved in so this was a challenge. So I had to find some expert help, a consultant to help me with this task. Microsoft was willing to pay someone to advise me on the development of the Cyrillic versions of these two families. I was very fortunate, in being able to use the services of a friend and colleague whom I had known because we've been to many conferences together. A man called Maxim Zhukov who is a Russian, was trained in Russia, I think came to this country to work at the United Nations – (UN) I believe was originally employed by the Soviets — but with the demise of the Soviet system he has become an employee of the UN and is in charge of, as you can imagine, the UN has a huge publication burden, producing documents in many, many different languages. I think they have five official languages at the UN and many more they need to do from time to time. So Maxim has been one of their resident experts. [He] has been much involved in the electronic and on-line aspects of publishing on demand for the UN. Because he is a very experienced typographer both in Cyrillic and Latin he has been acting in recent times as a consultant to a number of American and Russian companies who are interested in developing Cyrillic faces. He's done a good deal of work for ITC

who have a program of developing Cyrillic programs for their existing fonts. he has done work for Adobe, I believe he consulted with Adobe on the development of Minion, a Cyrillic, and he's working closely with an outfit in Moscow called 'Paragraph' who have done a good many Cyrillic families recently. So Maxim has a lot of experience of this aspect of typography, of Cyrillic typography and knows the history of it - has published works on Cyrillic typography. So I enlisted Maxims help, he's been wonderful to work with on this. I've taken my best shot at designing first of all Verdana [see Figure 17, Appendix B, Page B-5] - the sans-serif Cyrillic, having completed that, Georgia, [see Figure 18, Appendix B, Page B-7] the serif face and I've sent the results to Maxim who has very, very carefully gone through them, with a fine tooth comb, criticizing individual letterforms, minutely in some cases giving me very, very astute advice. Not only that, as it were, teaching me, when I've made a mistake he doesn't say: 'That should be this way.' He explained to me why - if you have this form in this letter to Russianize required this treatment to this letter because in our minds they are related, you may not see this. That is exactly the sort of thing, of course, which I can not see because I don't read the language. My father did, oddly enough, back in the 1930's, but he spoke Russian, he designed a font for Monotype. But I haven't a word of Russian.

PH: Are you speaking of the tvyordy znak or the myakhky znak (or the yerih) which are the hard and soft signs in the Russian language that have to go exactly in the same place?

MC: Oh, ah, I'm not even that knowledgeable about it.

PH: They are the little b's, bl's that have to be precisely placed or it will change the whole meaning of the word.

MC: Yes, every aspect of the whole character set and it is a comprehensive character set because it not only has to set Russian, I believe there are other languages that use Cyrillic and certain characters have to be added to the character set in order to be used in Ukrainian and Georgian and other scripts.

PH: The scripts are so beautiful.

MC: They are indeed. Yes.

PH: Are you doing an almost romanized version?

MC: Well, yes. Then again, I think that as with the Greek experience that it is easier to do a sans-serif version than a serif version.

PH: It's easier to just get rid of the flourishes?

MC: You're down to the basic structure. One of the things that happens with Cyrillic is that in the inclined version in a serif face, let's call it the italic, I don't know if the Russians use an italic, the slanted version, the cursive version, has in many cases, quite different letterforms.

PH: It's easier to print Russian letterforms than it is to write them (in the cursive versions).

MC: Yes, yes. In the sans-serif, the inclined version is more or less the same as the upright. I've been working my way through these projects working very closely with Maxim who has been both criticizing what I've done and instructing me in the error of my ways. As we've gone along. I'm pleased to say, that As we've completed these different projects, actually I'm not all the way finished with Georgia, I have the bolder weight still to do as we speak. Maxim has been, has become quite pleased with the results, I think. This has been a very interesting, educative project for me, I hope, I'll never be able to do it without advice, but I'm hoping to go back perhaps and add Cyrillic versions to some of the faces I've designed, again with some help from Maxim to hold my hand as I embark on these things.

PH: It's extraordinary.

MC: If Maxim had not existed, I would have had to invent him.

If I had not been so lucky as to have such an expert so close at hand as the UN in New York, I don't know what I would have done, I had to find someone with those skills, even if it meant going to Moscow and finding someone to do that. I've been very fortunate in finding the right person close at hand.

PH: Is that not part of genius, knowing what you know and then saying OK this is where I need help?

MC: Well, I think you have to in any of these non-Latin experiences. You have to put yourself in someone else's hands, you absolutely have to. Greek, which is the script other than Latin which I've had most experience, perhaps I'm kidding myself. I'm arrogant enough to feel I've developed enough knowledge of that to be able to fly by myself a little bit without constant supervision, at least. I certainly don't feel that way with Cyrillic. I have depended very closely on Maxim, who not only has a fine knowledge on typography, but also has some zeal about Russian typography. Maxim sees the benefit of having more Cyrillic faces for printing Russian, not immediately in his professional role at the UN, but on a cultural level. This is a field that needs more work done in it, more development. I think that he's very open to putting his weight behind doing good new Russian faces and fostering the development of new type design for Russia. So we talked about Greek, we talked about Cyrillic.

PH: I was wondering about the Arabic, (Indian) and Japanese Scripts.

The Exotic Typefaces of India

MC: Well, the other main project I have had was, again, in the 1970's, when I was living in London. This concerned working with the British branch of the of the Linotype empire, in England on Indian scripts. The first one I was responsible for was Devanagari [see Figure 14, Appendix B, Page B-6], for historical reasons having to do with the British Empire, the Raj and all that, the company within the Linotype group which had traditional responsibility for both the Indian scripts and the Arabic [scripts] and the Hebrew scripts [see Figure 13, Appendix B, Page 13] was the British company, much more than the American or the German branches of Linotype. This continued to be the case, may still be the case for all I know, I'm out of touch, in the photocomposing days of the 1970's, it was the Linotype-Hell [who] were responsible for developing a series of typefaces for sales to India. Again, there was a great stroke of good fortune here, good recruiting, good sense on the part of Linotype because they found and hired a remarkably gifted women called fiona Ross, who was quite young when she came to Linotype. fiona had been a, again not a typographer, but a scholar of Indian languages. I think at the University of London and the history of Indian Language, a Sanskrit scholar.

She not only spoke the languages, but she knew professors and good people in India. So I was able to work very closely with fiona as my editor, working on Devanagari, [see Figure 14, Appendix B, Page B-14] we in fact, based the face on an historical style. There were a number of type foundries in India in times past, mostly in Poona. A foundry in Nirmaya Segar produced, in my untutored eye, some very clear and elegant Devanagari design. It was one of them that we based the font we did for Linotype. Again, I was extremely lucky in having someone as well versed in the whole field as Fiona because she could cut through this rather partisan, very freely offered advice. It's not difficult to find people who can give you an opinion about how Devanagari should be designed. It's really hard then, to know whose opinion you trust? Very often, they contradict one another.

PH: Yes.

MC: Almost always they contradict one another in my experience.

PH: Now, we're talking about Hindi here.

MC: We're talking about the script, Devanagari, in which Hindi is written. There are a number of languages that are written in Devanagari, in India - Hindi is certainly the most important of them. Yes. In addition to English there are many different languages which are spoken within India and many different scripts.

PH: Some of the students at the Rochester Institute of Technology (RIT) (who) are from India say they have to make up their own characters.

MC: Yes, I'm not surprised. Devanagari is very close, as is Arabic to their calligraphic origin. They have this artistic relationship with calligraphy.

PH: What a challenge.

MC: What a challenge. Again, as in Arabic, there have been metal Devanagari faces. I refer to some that have been cast in India. The constraints of metal typography were such, that they were never able to have enough characters. By enough I mean the scribal tradition of writing Devanagari required a profusion of, not the basic characters, those are laid down, but combinations of characters, what they call conjuncts. They like to run characters together when they occur together. Which seems very confusing to us and to the Latin mind. Because the way Latin type evolved, if you go far enough back, if you go back to Gutenberg, it was a characteristic of a Latin font, there were many different versions of characters because Gutenberg was in the business of forging manuscripts. Therefore he and other early type founders had various scribal contractions within Latin type fonts. They got purged out of our Latin typography fairly rapidly particularly as Roman types were being used for the vernacular languages in addition to Latin.

PH: To simplify the language?

MC: Yes, indeed it did. We are lucky now to have an fi and fl ligature in Latin fonts on the computer. In the sixteenth century you will find in typical fonts there

were many more tied characters. There was still enough scribal influence, enough calligraphers' influence in type. But Latin type, Roman and italics, got free of all of that, got away from its calligraphic roots much quicker and much more thoroughly than almost any other script. The idea in peoples minds about typographical quality - where the Indian scripts and the Arabic scripts are concerned, is still very much tied in with calligraphic ideas. Even though it was possible to mechanize Devanagari and to make it perfectly readable, it was still not an ideal solution for Hindi and/or other speakers who still relish the idea of having a much enhanced font with all these conjunct characters, just as a competent scribe would write. So the job we had at Linotype was not only to make a good basic Devanagari but to enhance it with all of these additional characters and combinations of characters. Ligatures and conjuncts. And this we did. It was almost an open ended task. Because having all of these characters, in two weights, we thought we'd wrapped up the job. I would, again, get requests from fiona who would say: 'I'm sorry we've sold this font to another printer and they said , we simply have to have this or that.' I would get some appeal in the mail from fiona saying: 'We've got to have this character.'

MC: The situation in India, I think, I'm again judging from hearsay, not only do you get conflicting advice, or can you get conflicting advice but, there are also other levels of complexity. For example: I think that the Indian government or perhaps some local governments from within India, have decreed that certain versions of characters will be used and where there are different ways of writing certain characters, that these will be used and others will not be used.

So there's a situation where, or there can be a situation where the government says this, but then, nobody pays attention to what the government says. And they want to use something else and so you need someone with a rather, with a view of all of this, above the fray, a rather Olympian view of this. And that is exactly what fiona brought to this because she had a tremendous amount of common sense added, built onto very profound scholarly knowledge and so on. And she was able to sorta cut through this a little bit. And say: ' Well, we're going to do this, and we're going to do that.' And I believe the results were good. But that was really my only experience with the Indian scripts. This project ended for Linotype.

PH: Now, have you gone back and revisited that?

MC: No, I have not, I have not. I have not had a comparable experience to what happened in Greece. Of revisiting India. Maybe I will, I have never been to India, I would love to go. I've met many Indian typographers in this country, in the States and in Europe who've been traveling. I've met them at conferences, I'm very drawn to them, I like them very much and I would like to go. So far, I haven't had the opportunity, but maybe I shall.

I can't really add very much more to the Indian typography. Except just to say that fiona did work with other designers and built up, I think, a considerable library of Bengali and Gujarato and other scripts that they eventually did at Linotype. I'm sure that they were all well done under her direction.

PH: Do you see an international language standard?

MC: I would like to think so. It's a vexed question because, it is one which in a way, there is no right answer. There is a movement, there has been for some time in Europe now, political movement to consolidate Europe to build on the economic community and do things with the currency. It seems particularly from the English speaking view, there are cultural aspects to that which are very appealing because what is likely to be the lingua franca nowadays is English.

PH: (English) is (spoken) everywhere.

MC: Yes. I'm told that in twenty years, eighty percent of the worlds population will speak English, will speak some English.

PH: Oh yes, absolutely.

MC: In my father's generation that was not yet true. In my father's generation, the lingua franca was still French. The French, no doubt, still resent the fact that it is no longer the case. My father spoke perfect French and it was possible for a French journalist, for example, to interview a politician of Winston Churchill or

Anthony Eden or Harold Macmillan in French. It was necessary for someone in diplomatic life to speak French.

PH: The Russian court (also) all spoke French.

MC: That has largely gone by the board. Now, to the extent that there is a common language, it is, of course English. One, if you travel around, one of the comical things about the universal use of English is that in certain places it is used so much that it has developed into its own form. If you go to Sweden, everyone speaks beautiful English. What they actually speak is something that they refer to as Swenglish. Because it is a Swedish version of English and they use certain phrases, certain words that British English or American English is unfamiliar with. Because I guess, obviously the influence of Swedish itself, then the Germanic languages, they tend to run words together. Yes, I can absolutely understand a Swede speaking fluent English to me. Once in awhile he or she will say something rather, which makes me smile because it's not English, English, it is Swenglish. You find that same thing very much in Japan, where an increasing number of people are speaking English. But again, there are certain words they use in a completely different sense to the way we would use them. Certain 'buzz words' that means things to them. It's very interesting the separate development.

So to get back to the European situation which is a parable to all of this, you tend to get one the hand a desire to break down boundaries, and have less nationalism, less Zion phobia in the world. But on the other hand you have the counter bearing desire, particularly on the part of the smaller linguistic or national groups, you might get steam rolled. Otherwise to reassert their interest in their own language. There are languages in the world, indeed scripts in the world, which must be in danger of extinction. Partly because of the influence of media, radio and television in particular to iron them out. If you, there is now, has been for some time, within the British isles a desire to re-establish Welsh as a language. I think it would be hard for a Welsh person to get along without speaking English, I would guess. But certainly, Welsh is spoken, I think increasingly, there are broadcasts in Welsh, and television in Welsh. They have their own local Welsh language. So you get these assertions of national pride or linguistic pride, cultural pride, springing up. Partly as a

result of this other tendency, which is to say hey: 'Life is easier if every one just spoke English and just forget it. Then we could all communicate with one another where ever we go in the world. You don't need passports any longer, you don't need boundaries we all speak the same language, we all use the same currency. Why do I have to [learn any other?]'

PH: I'd like that.

MC: That's all right because I'm English, you know and you're American and we're in the 'catbird seat here' as it were. But if I was a Welshman or if I spoke one of the Native American languages I might feel very differently about this indeed.

PH: But can't we have it all?

MC: I hope so. I hope so. And just while we're on this subject, in a curious way I think that one of the last hopes for saving certain written languages or indeed certain languages.

PH: (Especially) those of oral (tradition).

Native American Languages

MC: Yes, lies in the personal computer. There are some Native American languages that have never really had a written form because of the economic of making type and printing in those languages has been just too formidable.

PH: Yes, this is true many are tonal with clicks and sounds like that. (By the way, since my interview with Matthew Carter in March of 1997, the Lenni-Lenape language has been placed on line complete with intonations clearly with an Oklahoman drawl but never the less it is a first for that language.)

MC: With the result, in some cases, I believe, I had a student at Yale, who had American Indian blood and she did a study of this and did some work on providing fonts that were able to express certain languages which were in danger of extinction because there were very few people who spoke them, fewer still that wrote them if any.

PH: This is true. (Winona Esther Blueeye of the Seneca completed before her death a dictionary of Seneca. Her daughter is in the process of digitizing that version. Warren Skye, another Seneca, teaches spoken Seneca. His version is different than Winona's. Mohawk is spoken differently from family to family, street to street, reservation to reservation. There is no standard that I know of other than Joseph Brant's translation of the English bible into Mohawk in the mid 1760's. This adapted Mohawk is no longer spoken, although some words still exist from the old language.)

MC: It's only because computers are relatively inexpensive and making fonts for computers is relatively inexpensive, there might be some hope of, in effect it has happened to me more than once, in fact I think once when I was, when I was at RIT, when I was teaching there, that I had another pupil, a man, who was very interested in this question of making fonts. I'm ashamed to admit that I can't remember which of the American (Indian) languages that he was particularly interested in. Somewhere up there on the Canadian border, by the Great Lakes.

PH: There are so many.

MC: There must have been some connections he had up there. Where he was involved in trying to facilitate getting some literature down on paper.

PH: And some have been translated because of the English

MC: Yes.

PH: And also they took some of the natives (to England).

MC: Some of them do have missionaries in the past.

PH: Absolutely. (Actually, it was the Moravians who preserved the Lenni- Lenape language and history in literary form. The Jesuits said, when they were among the Ojibwa that if they had known that they were bringing such devastation to the people, they wouldn't have come. Many died from Chicken Pox and colds.)

MC: Missionary zeal having been one of the principal reasons why different scripts have been developed, and types commissioned, very often in the past. Other than having one or two students who were interested in this particular American problem of survival of some of these languages. That's been, I have not done any work myself on such things, but we were talking about Hangul and I guess I should finish up on that subject by saying just one or two more things about the Asian scripts.

Japan and the Morisawa International Type Design Competition

My feeling is, I've been able to struggle through Greek and Cyrillic and even Devanagari with expert help and I once did some work on Hebrew, again. But that was very derivative and didn't require much of my input. But when it comes to the Asian scripts, for Japanese [see Figure 16, Appendix B, Page B-3] and Chinese, I wouldn't know where to begin. I'm absolutely convinced that it's not possible for someone like me to design Kanji and Kana characters because without having what I refer to as Kanji eyes —the way Kanji is written and read is so different from the way we read and write Latin that I could never even begin to take on the business of doing that, it's just too far away. On the other hand, because the Japanese and I suspect the same will be true of Chinese in time, it certainly is already in Hong Kong and to an extent Tai Wan. Because they use English so much increasingly, there is beginning to be in Japan some expertise on the part of Japanese in designing Roman type.

I'm a judge in a type design competition that is run by the Japanese company Morisawai. The competition happens once every three years and I've done it twice. It's not a very long span, but I've noticed on both those occasions that, there are two categories, by the way, in this competition, one for Japanese and one for Latin. I've noticed that there are an increasing number of entries in the Latin category that have come from Japanese designers in some designers who have entered types in both categories. I'm bound to say that the standard of the Latin entries has gone up considerably. Just as, by the way, the standard of the use of Latin type, in general in Japan has gone up. In the eight or nine years that I've been going to Japan, I've notice a much more sophisticated use of Latin type in the air. In Japanese advertising. Sokin-tai. [see Figure 12, Appendix B, Page B-4].

MC: As I was saying, I expect to see much more interest in, ability applied to the design of Latin faces by Japanese and eventually Chinese designers and vice versa. I regard, unless that it should happen that someone is brought up bi-lingually and got interested in the design of Kanji, I don't see how someone like myself could ever take that on. There is a continuing, long standing problem of combining within the same document Kanji and Kana and what Japanese call

Romaji, what is Latin type. It's long been the case that Japanese type foundries have supplied Romaji as part of fonts. They tend not to be very well designed, to Latinize. They are not very good examples of Latin type. This problem of combining the two scripts on the same page, sometimes on the same line, where you need a citation or a quotation, is a very difficult one. I think ultimately an impossible one. I don't think you can ever get a complete sympathy between two things as different as Kanji and Latin type. On the other hand, there may be some things you can do that make the combination less jarring to a Japanese than I gather they often are at the moment. There are a number of things that are variable. I tend to think that the Latin type is easier to vary than the Kanji.

PH: So you are saying its just the Latin.

MC: Yes, yes. There are things you can do, obviously, with the weight of the type, with the alignment of it, you can play with that. You can play with the alignment, where the Latin type aligns with the Kanji. You can play with relative size. You can play with such things as the proportions as the X height within the Latin. X height to capital. There are a number of variables. I talked to a number of, I go to Japan as often as I can, by the way, I love it.

PH: I agree with you, it's beautiful.

MC: Yes, any excuse to go to Tokyo or Japan, I seize on. I have good friends there among the design community. Very often conversations come around to this vexed topic of trying to improve the impossible relationship between Kanji and Romaji. This came to a bit of head for me with a commission, actually not from a Japanese company at all, but from a Taiwanese company called Dynalab, who are prominate Taiwanese software company. Who as part of their range make and sell fonts, most of their manufacturing, I think, is actually done in mainland China and Shanghai. They have a very busy office in Tokyo. A few years ago, they hired a new, I don't think he replaced someone, I think it was a new position within Dynalab of someone who was in charge of font development, with a view to typographic quality. A man called Sammy Orr, who comes from Hong Kong, had worked, I think, perhaps, I think he said he worked for Monotype in Hong Kong. Anyway, he had moved to Taipei to take charge of

typography at Dynalab and I had the opportunity of visiting them just a few years ago when I was in Tokyo, I flew to Taipei and spent some time, did a seminar at Dynalab and met a lot of their designers. Had a very nice time. This grew into a commission because a project that Sammy Orr had started at Dynalab was to develop a new typeface for setting Chinese and Japanese and I don't know all of the history of it and I don't know who other than Sammy was involved. It was an historical revival, it was a typeface based on a recognized style of handwriting. I think quite an ancient one, an imperial hand that had not been rendered as a typographic font.

PH: Was it calligraphic?

MC: Yes, it was a very calligraphic style. It was, I don't know how to describe it in Japanese terms. It was rather delicate, very fluid and rather sharp in features. The

PH: The edges were sharp?

MC: Yes, the different radicals, the different elements within the Kanji tended to taper to quite sharp points. This was a typeface which was not intended for use particularly in small sizes because of the delicacy of the features of it. It was intended to be used mainly at rather larger sizes. They asked me if I could take on the design of the companion Romaji, which I was delighted to do, but something I approached with considerable diffidence, as you can imagine because of the notorious difficulties of doing this. I had a few things to go on, plainly, I wanted to find as much as I could about the historical origins and nature of Kanji Chinese - Japanese design. As much as I could understand about its origins, its nature and so on. I knew that it was an historical, it was old, it was historical. I could see, of course, it was relatively light in color and it had this kind of, this sharpness, this sharp taper as a feature of the design. So I cast around in the history of Latin typography to try to find something that had some features in common. A classical face, an historical face with some sharpness, some fine features in it. What I eventually decided on was to do a version of a face that has in itself a had curious history in Western typography. It is a face for a long time, which had thought to have been cut by Garamond. But was not, in fact, cut by Garamond, it was a face that was acquired a long

time ago by the French government at the National Printing Office, and was mistakenly attributed to Garamond. It was, in fact, cut well after Garamond's days, Garamond died in 1561 and this was a face developed in the 1620's by a Protestant type founder in the town of Sedan Jean Jannon. He cut a series of faces, really they were sort of imitations of Garamond. They were not literal copies, Jannon put quite a lot of himself into these faces. Because they were mistakenly attributed to Garamond, they were used as the basis of some of the revivals of Garamond that were made back in the 1920's and 1930's in this country and Britain by companies like ATF and Monotype. They called them Garamond, they thought they were Garamond. Detective work done by Beatrice Warde and published in *The Fleurbaey* revealed that there was a case of mistaken identity here that these faces were not, in fact, Garamond, they were at one removed, they were based on the work of Jannon.

These faces of Jannon's, since Beatrice's [Beatrice Ward] work are correctly attributed to Jannon, struck me as having some of the features I was looking for, they have a sort of spikiness, that sounds like an unpleasant character, but they had this sharpness. They were a little bit lighter in weight than the classic Garamond. They, of course, their historical stuff, they were not from the same historical period as the Sojourn, the face that Sammy Orr was working from, but his, he was basing his script on a written hand that goes back before typography was invented. So there was no exact equivalent that I could find. But anyway, I found this, I did a version of Jannon, really. Making such adjustments as I thought were necessary and, of course, trying it with Sammy, Sammy had sent me his fonts and I tried them, I tried setting them along side one another. It seemed to me to be working and I made some alternative suggestions and sent this to Sammy Orr at Dynalab. By going backwards and forwards, we came to a agreement about how this should go and I finished up the font. One little thing which I had not anticipated and which came into play I would just add

Japan

PH: We were talking about the Japanese font.

MC: Yes, I had one little foot note about this Romaji, this commission I had from Dynalab to design a Roman face to accompany the Chinese and Japanese, which I duitfully did based upon an historical model.

One thing I hadn't anticipated was I suppose I should have done, when I normally design Roman or Italic type I'm only concerned with setting it horizontally. As you know the Japanese and the Chinese set in both directions. They set horizontally and they set vertically. It is necessary for them to be able to set Roman type the same way. Not a thing I had thought very much about before. It did come up in the design of this face for two reasons. One is that I had made, as was historically appropriate, I had designed a capital Q with rather a long tail projecting so that it would go under the 'u' that followed it in most languages. But that caused problems, or could cause problems, in vertical setting because you would have this one character with a strange excrescence sticking out on the right hand side which might mess up the vertical alignment of a cap Q, so I had to dock the tail and make it a much smaller tail of the Q for that reason. The other thing that happened was that, again for reasons of historical appropriateness, and also because I happen to like them, I designed the figures in this Roman face as being what are normally referred to as Old Style figures or non-ranging figures. In other words in size the figures were similar to lowercase characters, they did not match the capitals in heights, but they had all different heights like lowercase letters. Old Style figures, as I say. Now, again, when these are set vertically, they gave an odd appearance to Japanese eyes because they are used to ranging figures. In other words figures which are all the same height, one through zero, so that when you set them vertically, they look as though they have the same amount of vertical space between them. If you set vertically, these Old Style figures, you run the risk of having a large gap between a couple and then a smaller gap between a couple. In other words, they would interrupt the rhythm, and be very odd looking. Now, this had not crossed my mind, I must admit, before I sent these trial faces over to Sammy in Taipei, there again, I had to change the design before it was produced. Or eventually they did, I think, in the end. In order to make the

figures all the same size for that reason. So it just shows you, that you think you know about designing Roman and Italic type. But in certain applications you can up with things you really hadn't had to take into consideration before. This vertical setting, I mean, you do occasionally see Latin type set vertically, but it so unusual, sometimes you see it on a shop fascia here down the front of a building or occasionally on posters. It's so much the exception, it's so rare that you don't really figure it, take it into consideration when you are designing.

PH: This is true. Do you enjoy Haiku?

home, very, very congenial situation at the Walker. Thanks to this exhibition and the general ethos of the place. It has all sorts of things going for it. For one thing there are a lot of different departments that have not only fine arts, they have performing arts, they have film and video, they do a tremendous education program. I've never been to the Walker, and I've been there a lot of times, without seeing school children there and students. A lot of outreach to the community. They are very well supported by the community. The board of directors, whom I've met, it's all local people. Obviously some of them wealthy, backing the organization. But not all of them, all sort of people involved. It's a place I very greatly admire. Well,

PH: All helping to build this wonderful community of art.

MC: Yes, yes. In a very nice building. Why exactly all this happened in Minneapolis, I don't really know.

PH: It's a cultural Mecca.

MC: It really is. It is right next door to the Guthrie theater on Loring Park. I just really like the place. So I had this very pleasant experience in my background, as it were with the Walker and then the Friedman's left and a new regime came in. Kathy Halbriech she had worked in Boston at MIT, and I think at Museum of fine Arts here, went to be director. Laurie Haycock Makela went to be in charge of design, to be the Design Director. My first contact with Laurie was that she had at that time, the Walker was responsible for the design and co-publication of a journal called *Design Quarterly*. It shared with MIT. They did the design and production at the Walker. As Laurie took over the role as Design Director, one of their responsibilities was doing *Design Quarterly*. She had the very nice idea of inviting three type designer, she did not exactly commission faces from us. Her question to us was, I've got a few hundred dollars that I can spend on you three, do you have anything that is nearly ready to be released, and would you like it to have its debut in *Design Quarterly*, a very well considered design journal. I jumped at the opportunity, it just happened, luckily, that I had been working on this face called Sophia, it was nearly done, I finished it up and I sent it to the Walker to Lori for this issue of *Design Quarterly*. She also invited Ed Fella and Zuzana Licko to do the same

thing, and both of them did. So there was this issue of *Design Quarterly*. I think in the winter of '93, maybe, which was a regular issue of the journal. It used these three type designs for titling purposes here and there in this issue. Again I had yet another pleasant experience with the Walker, in this case with the new regime of Laurie Makela.

Now, out of this contact that we had had, over using Sophia, Laurie, who I say, was new to the Walker, felt the need to re-examine the identity, the graphic identity of the Walker in all of its multifarious roles. I think as she thought about it, she and her staff, it's a very small staff, just a director and two or three other people, often an intern. It's a very small design staff and they do a heck of a lot of work, they are very productive people. As they, as Laurie contemplated what would, how would she stamp a new identity on the Walker, I think she found it, understandably a very perplexing thing to do because the Walker itself is a very diverse institution. Deliberately so, it's at the heart of the Walker that it has this multi-discipline, multi-faceted nature. In fact they have this slogan that they apply to themselves, it's motto, they say they are: 'Open to interpretation. Closed on Mondays.'

Being open to interpretation is very much the philosophy of the curatorial policy of the Walker and Kathy Halbreich and her staff. How do you stamp an identity on something which is by its very nature and intention very diverse? A kinda classic corporate means of doing this, we say a logo, a symbol did not seem appropriate, that was too modern, I think. That was not what was called for. I was not involved at this stage, but Laurie evidently came to the conclusion, that well, why not, let's explore if we couldn't commission a typeface which in some way could identify the Walker, because of course, it would be used in their publications and in their monthly calendar, maybe in signage everything that they would use a typeface for. But at the same time would have some form of flexibility in its use, so that it was not monolithic and it had some of this, I don't she knew how, but thinking about it initially, but it should have some of this openness in sympathy with the Walker itself.. She asked me if I was interested in taking this on. She had a small budget. The one thing, I was very, very drawn to the project because of this pleasant association that I already had had with the Walker and the fact that I liked it so much, that I jumped at the opportunity. And the other thing that they offered as 'bait' was

that they would make a record of the whole process. In other words, if I would agree to get involved in this, that they would chronicle everything that we did and how it would turn out. I thought: 'What an interesting idea.' I think part of their reason was, they thought that might have an educational implications for them. They thought that it might be an interesting exercise with their board to be able to explain how a very avant-guarde, leading edge art institution had seen itself and seen its identity. How they had managed to grasp that and get it into some form that they could use. I thought that was a lovely idea.

PH: Makes sense.

MC: Yeah, I immediately agreed to work on this and went to Minneapolis, actually not my first visit there, but the first visit in this program. The first of several.

PH: Yes.

Chapter 20

Design by Committee

MC: And got a feel for the style of what they were doing and just generally marinated myself in the whole Walker thing. [see Figure 15, Appendix B, Page B-6. A very enjoyable experience, I may say. But then, it came to the crunch. So what am I going to do? There was this rather difficult brief, which was coming up with a typeface that is at one and the same time identifiable, it can't be too bland, it's got to have some character, some personality, otherwise why wouldn't they just use Helvetica? It's got to have something to it. On the other hand it's also got to have some sort of variability. So [I decided] that it's got to be a family of faces. I was thinking about this. The best tactic that I can think of is for me to design something, better yet two something's, in other words go back to the Walker with a couple of ideas. I thought, I'll take a shot at a couple of things, I honestly don't know whether either of them will be right or not, but maybe the experience of talking through whatever presentation I make to them, both to the designers themselves, and to the Director, Kathy and her staff, who I knew would be involved at all stages. This was not just something the designers and I would go off and mumble about by ourselves, we would get involved with everyone else. I said, I felt that maybe I could get enough feedback from flying a trial balloon there, that would help. In fact, that is exactly what happened, I went with two ideas for typefaces. Neither of them, I wouldn't have presented them if I thought they were hopeless, I didn't have, I didn't go there saying: 'I've got it, this is it. If you adopt this, I'm going to go away in a huff.' I said to them: 'I've come with two ideas, and quite honestly, I don't know whether you would like them or not. But I would like to present them to you and I would like you to feel completely uninhibited in anything you may wish to say. You won't offend me in the slightest bit. In fact this is how I plan to get to the next stage.'

So this is what happened, we kicked this around, we recorded the meetings, just as we are doing now. We saved by the way, every scrap of correspondence every fax, everything that went to and fro in the course of this. As I had rather felt, neither of these faces as they stood, these trial fonts, they were not complete faces. None of these trials really, were obviously right. In the course

in a number of conversations both with the designers and the other people, that I showed this to at the Walker. I got enough feedback that I then felt I really did have a clue as to where I was going with this. I should say, just in parentheses, it is relatively rare that a type designer who is after all a specialist, working in a rather narrow niche, really gets to talk about his or her work with someone who is outside the immediate graphic design and typography profession, but is still someone with perhaps a very highly developed artistic sense or design sense.

PH: An appreciation for what you are trying to do.

MC: Yes. So this experience of talking not to Laurie and her small staff, of course, who were very much on the ball. But talking to Kathy Halbriech, who is not a typographer, she's a museum director with a background in art history. But, to have someone of her intelligence, her experience and grasp and sense of what the Walker is and stands for. The things she said and the same is true of some of her curators, who also got into the act. The things she said was so revealing to me that it really panned out the way I had hopped. They picked up on certain things, they didn't like certain things, they were extremely articulate, obviously. These are people who are used to art criticism and assessing things, and making cases for things, and discussing all kinds of artistic projects. That's what their job is really. So this was a wonderful experience for me and I did come away with a very much better sense of where I was going with the thing. What it ended up by being was a, at the heart of the design is a rather plain set of sans-serif capitals, it has no lowercase, it's only used for display purposes, for headlines. Although they use it down to relatively small sizes, it has only capitals and figures. Within the font, I added, what we came to call some snap on serifs.

PH: Yes, I

MC: Instead of the serifs being an integral part of the letterform as they are in every other serif typeface, obviously. I made them separate characters. I made different kinds of serifs. I made thick ones, and thin ones and diagonal ones, and slab serifs and curved serifs. There are five or six different flavors of serif in this font. I devised a way of being able to attach these serifs from the key-board

to the letterforms. In other words, you could set a headline and it would come out in these plain rather sturdy sans-serif capitals and you could go back through the line and at will, you, the person who is doing the typesetting, not me. Whoever is sitting in front of the Mac at the Walker designing next months calendar, for example. They've got some words to set, the name of an exhibition, or whatever it is. So they set it plain, and they can go back though and they can add serifs to the letterforms exactly where they choose. They can make them all one style, or they can mix the styles. They can leave them off all together, as they sometimes do. they can put them all on. Do whatever.

PH: Now, are they doing this by pointing and clicking? Are they clicking on the letter? Or are they highlighting the letter?

MC: They're doing it on the keyboard. Yes, they are. Each of these serifs have a keyboard position, you do 'option one' and this serif curves jumps up on the screen. I would just say because we talked earlier today about Greek and Hangul that I didn't realize this until after the event, oddly enough. I think what gave me the idea subconsciously of doing this. Was those times I talked about earlier of working with Greek in particular. Where we suddenly had a machine at one time that where you could put a basic character down and then you could add the accents afterwards. Now the accents, at least in Greek, do not touch the letters, they are floating above or below, as is the case with most diacriticals. There is no reason why they can't also attach. And it was exactly that same sort of technique that I used in the Walker. Here is a cap H, plunk. But, nowadays, as well you can add other elements, mainly these serifs or not. As you choose. So this became the way of having, OK, it's a typeface proprietary to Walker, but at the same time it is open to interpretation in the sense that the person who is actually setting this type, has very much more control over the way this font is going to appear than is normally the case with a typeface. Normally, when you design a typeface, it goes out as a fait accompli to who ever uses it. They can . . .

PH: Stretch it.

MC: Yeah, but they can't take all of the serifs off or put all the serifs on. That is not what you normally do. So this was, and of course, this solution we came up

with, by the way I worked very closely with the designers there, they contributed an enormous amount to this. The 'to=ing and fro=ing' was wonderful. The whole thing was predicated on the fact, it was a sort of laboratory situation, I knew who was going to be using this typeface, what for and so on. And so there was a much greater sense of participation then there would normally be even in a case where, for example, a magazine commissions a typeface. Yes, I know who's going to be using it, but again I deliver it, they use it, they don't modify the font as they use it. They decide to set it at nine point or ten point or something or other.

PH: They still can't change the rules there.

MC: They can't change the letters. But as one of the designers at the Walker said about this face, he said: 'It's like you are not using a font, you are creating the font at the same as you are creating the document.' I thought he put it very well. There is this interpretation built into this typeface. I thought that that matched the different, this diverse nature of the Walker and so on. We did an inclined version of it, an Italic. Essentially that was it. Once I saw this possibility of doing these snap-on serifs, there was no holding me, I finished this job and sent it off to them. And I still love to see, when I receive the monthly calendar in the mail, I tear it open to see what have these crazy people done with my font now. I should say our font because they participated so much in the design of it as well as the use of it. It is always great fun to see what they are doing. Tomorrow, they will be shipping from the Walker to Japan an exhibition on the whole history of this typeface, and its development and its use. Morisawa, as I talked about before, has a new building in Tokyo, their headquarters are in Osaka, but they have a building in Tokyo. In the foyer of this building, at the entrance way of this building, they have a small gallery in which they have exhibitions from time to time, in which they have posters or books. And they are mounting an exhibition in April of the Walker typeface. So, I'm going to go over there and look at that. As we sit here they just finished putting this together at the Walker and they are shipping it off tomorrow to Japan.

PH: Now, who made the arrangements to have all of that occur?

MC: One of the nicest things about this project, I may say, is that it's been a really nice thing to talk about when I give talks at conferences. This project really lends itself to a talk. For one thing we saved so much material to make slides of, at a certain point, when I start to show what happens. You show the typeface in plain vanilla, then you show, what happens is you add the serifs. What happens is, you can hear the audience say: 'Inward inhalation. Wow!'

So I've had a lot of mileage out of this project. It is certainly true that at least once when I was in Japan, I had included a segment about the Walker project. When I'm talking over there. We did a little keepsake, the Walker printed a little history about this project, of which I gave away copies when I was over there. They know about it and they thought it was fun, playful. They like other people at galleries have to find something to put on the walls, so they invited us to put this exhibition up, it is now in the throes of completion.

PH: That's really exciting.

MC: Yeah, that was a great experience for me. Some people have looked at this Walker face and said: 'Most of your work is rather classical and traditional. You seem to have gone mad and gone modern to design this thing.' It's not like that really, the fact that is if you are commissioned by someone to do a typeface, you really have to respond to that commission as in any other form. It is no different from industrial design or fashion design, or whatever. If Microsoft are kind enough to ask me to do a set of essentially generic screen fonts for maximum legibility at small sizes on the screen, I'm not going to design something like the Walker. That would be totally absurd. They would refuse to pay me, that would not be an acceptable solution to a Microsoft, such a different situation. But on the other hand, if the Walker commissioned me to do what they commissioned me to do and I turned over to them a totally bland standard typeface, I think that they would have no use for that either. What you try to do is respond to the particular nature, as with Walker, as I say, it's a little hard to get a handle on the place because it is diverse. On the other hand, it has a strong personality. The people who work there have strong feelings, as you know. It's not a kind of mealy mouth place, indeed, it is quite controversial. A lot of their exhibitions, you accounts in the New York Times, of some exhibition that is open that originated at the Walker, a lot of them get slanged

because not everyone likes all of the artist whom they build exhibitions of. So they are controversial. I think they see that as part of their role in life as provocateurs.

PH: Oh, absolutely.

MC: It is not that I suddenly went mad one day and did a very modern , zany sort of typeface. It's just that, that is the solution that the Walker is looking for and you have to have the adaptability to respond to that particular need. It is called problem solving. The problem was a very difficult in one sense, a very engaging problem. A tough one to figure out, but fascinating for one to do. If *Time Magazine* wants a text face or *US News & World Report* wants a text face, you ain't gonna approach it in quite the same way, you have to be adaptable. I must say this all started with you asking me to fantasize a bit. I suppose I would have to say that in a fantasy life there would be many more clients like the Walker Art Center because I think the rate of progress of typography and type design in general would be very stimulated by institutions of all kinds. Not necessarily museums or art galleries and museums that would have the kind of bravado, really, the kind of courage, would see it as being exciting to commission a piece of work, and maybe take a risk.

MC: I don't wish to appear to be badmouthing my clients, on the contrary, I think that in an ideal world there would be more, more adventurous commissions, more free-form commissions. I think that would be fun, at least at my stage in life having done a fair number of different typefaces, by now, always looking for new things to do, always looking for some situation, some working relationship, some commission, some something which will move me a little bit off where I am standing and put me somewhere else. Whether, that is a matter of going to Taipei and dealing with those guys. Or whether it's a matter of going to Minneapolis and dealing with the Walker. It is always nice to have something that makes you think: 'Hey, I can't just do this, I can't just serve up the same over again. I've got to put my mind to this.'

PH: A new challenge!

MC: A new challenge! I'd better see if I can rise to this.

PH: New mysteries to solve.

MC: Yeah, exactly, it's really very, it's very nice to find some new challenge, or new opportunity. I speak for better or worse, I speak from someone who has done a fair spread of different kinds of type design because I've always wanted to do that.

PH: So you bring all of that to your table, and then designing with others, and seeing other things and other possibilities, my goodness there are so many.

MC: Yes, yes.

PH: There are so many available options, it would hard to (know) which to choose, which to do, I can see. Do you see any place in the world you haven't been, and you want to go? I remember you mentioned India.

PH: That's a challenge.

MC: I think that that is a great opportunity and it . . .

PH: Of course.

MC: . . . does take me places that I would not otherwise be able to afford to do.

MC: Of course, my whole history with my love affair with Japan is that I went there originally for a conference and it was a very organized conference. We were treated royally when we were there. And we were taken by bus, the conference was in Tokyo, but we also went to Kyoto and to Nara, we were taken around and shown all of the wonderful temples and shrines, all the tourist attractions. This was wonderful. I just had this kind of yearning from inside the bus, as it were, that I had to somehow, get off the bus and get behind the curtain, get into some of these places.

MC: That's the sort of thing that I would very much like to have happen. Such a project, someone would not necessarily have to be there during all of it, but you could make a very strong case for spending

PH: The amount of time you are talking about.

MC: A couple or three months. Yes. That I think would be very, very nice. I've spent enough time in Japan, I don't speak a word of the language, but I've spent enough time there to feel very comfortable there. I don't think the prospect of spending a longer period of time would be daunting. I think, in fact, I would look forward to that, rather than the opposite.

PH: I wish you many commissions so that you can do that.

MC: [Laughter] Thank you. And there are other places, you know I've told you that I've never been to India, but I would like to go there. I have always hoped that one or other of the international associations I belong to would come up with a conference in India.

PH: Maybe, some day they will.

MC: I hope they will.

PH: Wouldn't that be fun?

MC: Yeah. I would jump at that opportunity as well.

Typographical Potpourri

MC: Most of my life, as I say, I have not been very comfortable talking because there is so much explaining you have to do. So it was rather a drag to try to explain to someone what type design was, what it entailed and how

PH: So did you make up another story?

MC: Yeah, I said I was a brain surgeon, or a truck driver or something or other. But then, you're on the spot because you've got to explain that, a rocket scientist or something.

PH: Then, they will leave you alone.

MC: I've noticed a change where all of that is concerned now. If you get into a conversation with someone sitting next to you on a plane, they ask you what you do, Nowadays, if you say: 'I work with fonts, I design fonts' Everyone knows exactly what you're talking about. People who had no idea, they know what type is, in the sense they read the newspaper and they know if there are little letters there, it's type. But the idea that there should have been a human being behind this, that there should be a deliberate design effort that resulted in typefaces, is a totally novel idea to them in the old days. Nowadays, any nine year old, you see nine year olds in computer stores looking at some software package saying: 'Well, what fonts has it got with it'?

PH: Pretty amazing, isn't it?

MC: This is amazing, this is completely amazing to me. If I contrast it with a former situation. Well, why does that come about? Obviously, because these humming beige boxes, these personal computers, are now in essentially every office

PH: And most homes.

MC: And most homes. A lot of homes and many throughout the world. And you can't have a computer that doesn't have fonts on it at least some. Some of them have a lot of them, more and more. The classic business executive, if there is that sort of person, I suppose that there is, who in the past might conceivably have expressed an opinion to the steno pool about changing the golf ball on the typewriter. It was unlikely that they would have done that. They conceivably might have had some feelings about that typewriter face versus that typewriter face, Nowadays, it is almost part of their job to be aware of the fact that computers have fonts on them and furthermore there is an element of choice. It may be they work in a company which has decided that all of their correspondence and literature is going to be done in Times, or Helvetica or it may be that they work in the sort of company where one sales person may think: 'Hey, I'm in a competitive situation here. I want my presentation graphics or my memo to look better, so I'd better worry about the fonts I'm going to use. Use the best font.' So the people who had no exposure to fonts in the past, by exposure I mean the opportunity to exercise some taste in it. Are suddenly finding themselves doing that. It has always puzzled me in a way that you used to need people who had very highly developed tastes in what they wore and what they ate and what they drove and what they say in the movies and what they read in a literary sense that would have no clue about typography whatever. I think the reason for that is that they were never able to exercise a taste in typography. If you go into a store to buy a necktie, there are choices of neckties and you can buy a necktie you like and in some way this has something to do with you, it's your choice. It's a personal decision. You can't go into a bookstore and pick up the new Kundera novel, *Slowness*, but it's in Bodoni and I'm a Baskerville sort of person. I want it in Baskerville please.

PH: That possibility may be though.

MC: That possibility is only just around the corner. But to this point no one has been able to do that. There is a high level of taste in all sorts of things, that is just starting because people in their offices are learning it's quite all right to prefer Palatino to Bookman for your memos. Or if you are a restaurateur are you going to set your menu in Chancery or are you going to set it in Times Roman?

PH: Or Sophia for a Greek titling font.

MC: This may reflect on your business and you may feel that this is much more appropriate. to cuisine. People are suddenly starting to have the opportunity to exercise this taste. Now this does not mean that I could get on the train in the morning and hold up an enlargement of a lowercase 'a' and people would tell me, yes, that's the a in the Boston Globe or not, it's not at that level, God forbid that it would be at that level.

PH: I see what you are saying, because executives are now consulting with people and saying: 'What do you think would be good, where do you think this would fit?' They ask graduates of RIT all the time.

MC: I don't feel depressed about the future of Graphic Design because it is becoming democratized and it exists in a form in every office. On the contrary, I feel that there is a rosy future for it because I think that the more awareness there is in typography and the more developed taste there is in typography, and the more opportunities for people to exercise discrimination where typography is concerned there will be more appreciation, there will be more connoisseurship, there will be more discriminating commission of designers. I think that that's very good. When I was young, perhaps this is more of a British phenomena than American, I remember when food was not nearly as good and as interesting as it is now.

PH: We, now have so many choices.

MC: Yes, there were always great restaurants, that's fine. There always will be, I love great restaurants. In mediocre restaurants, in people's homes and come to that when you go to the supermarket. You know, I remember when I first lived in London, you could not buy a green pepper in the local green grocers. I remember when they started to appear in green grocers and people went, ugh, very dodgy foreign muck. What is this stuff? But now a days I can go into the local supermarket, there are all kinds of things in the produce department, I don't know what they are, I couldn't even begin to cook them. Because they are Asian or South East Asian or they are West Indian. I think that the standard of food in peoples homes and the standard of food in run of the mill restaurants, has risen enormously with the greater choice of ingredients, over the last thirty

or forty years. What is the corollary of all of this? Has it meant that the professional chefs are all out of a job? Has it hell? If you have a baby Nowadays, the thing you most hope for is that they will grow up to be a chef. They earn more money than orchestra conductors. They have syndicated TV programs, they rule the world.

PH: That's right. And everybody's got to eat.

MC: Yes, you pick up any sort of magazine or newspaper, its all about restaurantuers. The chic new restaurant, this chef has gone from here to here. It's big news. Why was this? There were always great chefs, but there are more of them now because people are interested in food. Even excluding passionate 'foodies'. The general run of the mill person with the means to eat in a restaurant, is more knowledgeable about food, they tend to travel more, they have experienced more different cuisine's, there are probably more ethnic restaurants out and about. We can walk from this house, there is Japanese, Greek, Indian, Irish, numbers of different cuisine. Chinese. In fairly modest neighborhood restaurants. This means that the level of knowledge about food and its preparation and how to eat it has risen. That I think is why it such a good thing to be a chief now. I tell this story to Graphic Designers, I say the fact that more people are going to be interested in Graphic Design, I think it is good for you guys, I think you've got a good future because. Some really bad graphic designers may go to the wall like some greasy spoon restaurants have gone to the wall.

PH: And they will find another area.

MC: Right, they'll find something else to do. I think this analogy with food which is quite apropos, I think. I think graphic design will benefit in the end from a higher standard of general knowledge. It is no longer as abstruse and arcane as it used to be. To bring it back to a personal point of view, if some nice person turns to me and asks what do you do and I say I work in fonts. One can have an intelligent conversation with them They may mispronounce the names but they kind of get the point, you know?

PH: Yes.

MC: They understand that there is such a thing as a person, that fonts do come from somewhere they are not just in the air.

PH: They come from God.

MC: They are not a natural phenomena, there is some sort of causality, that there are real warm human beings involved in things like fonts. This has been a big change in my life. I'm glad I've survived to the point where there is more awareness of what we all do.

PH: And it's good that it is being driven by the market. That the executives are all embracing the technology.

MC: Exactly. It is not something that is being foisted on them in some way.

PH: No. They are seeing the possibilities.

MC: It has happened to me, again I found myself saying to someone on an airplane who is just in throws of computerizing their department. When they hear that I'm in the font business they

PH: They call help!

MC: They call help, what do I. They don't necessarily know immediately, why would they or should they. There are ways to find out. It's a different world than the one I grew up in. Where I try to explain to people how I survive.

PH: Kind of neat. It's great to be alive at this time.

MC: Yes, it is, if I had my, again, the fantasy situation, if I had my choice of the periods in the history of typography and I have some knowledge of the history and I could choose when to be living and working I would choose exactly this moment. I wouldn't mind being a bit younger than I am.

PH: Ah, but if you were, you wouldn't be who you are right now.

MC: To be alive during all of these changes and all of this turmoil and during this, for lack of a better term, this democratization of the whole thing, the accessibility. I don't feel that. I suppose that in my early life, when I first got involved in typography, there was this very closed shop. This small cadre of people who were participants. I don't really regret the passing of that. What we were talking about yesterday. This priesthood little group of initiates. I don't really regret the passing of that. I'm just as glad that it is more open to all comers. I'm very glad to have been around when that transformation has started. I'm sure it will go much further. It is at least underway. And how.

PH: Indeed. And I'm thinking also in your design of the typefaces for Microsoft, we will probably see that on the World Wide Web (WWW).

MC: It's there already. It's given away for free. You can download it from Microsoft's Web Site, it's a freebie. I am designing more screen fonts for Microsoft.

PH: A new challenge!

MC: A new challenge! I'd better see if I can rise to this.

PH: New mysteries to solve.

MC: Yeah, exactly, it's really very, it's very nice to find some new challenge, or new opportunity. I speak for better or worse, I speak from someone who has done a fair spread of different kinds of type design because I've always wanted to do that.

Chapter 22

What's ahead for Matthew Carter?

MC: I look forward to essentially more of the same. By 'more of the same' I don't mean reworking the same designs. I look forward to working on, my present professional existence, which I described yesterday as being a mixture of speculative type design and commissions, is one that suits me very well. I couldn't ask for a better situation to be working at this stage of my life. This is not to say that every job that [I] do is as fascinating as I might want it to be. There is still not so much work out there for independent type designers that you can afford to turn down work. Except in very extreme cases. In order to make ends meet, a certain amount of my work, in an ideal world I would necessarily like to do. It's not an overwhelming amount of the portion of what I have to do and I can easily cope with that. I'm pleased to have the work whatever it is because it helps to make a living.

PH: It helps to eat.

MC: Yes, it helps to eat and do those other things. Upgrade the equipment when it is needed and do all of that.

PH: Those are all essentials. But, let's just pretend, just for a little while that you could

MC: Fantasize.

PH: Yes, and you have absolutely no restrictions. What would Matthew Carter want to do?

MC: Well I.

PH: Would you want to fly? Would you want to change your career? Would you want to do something new in what you are (currently) doing?

MC: Well, one way to answer that fantasy question is to say: 'If I won the lottery overnight.'

PH: Let's just pretend that you did (win the lottery).

MC: The whole requirement to earn a living just went away. An unheard of cousin in Australia with a gold mine, whatever happens, untold wealth rains down upon me tomorrow.

PH: What would you do?

MC: I think that I would take a vacation right away.

PH: OK. Where would you go?

MC: But I don't think I would give up work all together. I really do like what I do. I don't see any reason on the horizon why I would stop doing that. I suppose I would pick and choose the things I did with more self indulgence. If I did not have to do some jobs that come through the door, I would not do them, I would put more of my time into what I call speculative design. Which is to say is working on faces or ideas that I've had or historical revivals that I wish to do. One thing that I think I would do, I would like to do is that, it's not an easy thing in this business to collaborate with another type designer. Which is not to say that there are no type faces that are designed by two or more people. There are a number, and a number of good ones. Some of them, although they tend to be attributed to a single designer. In fact when you learn their history, you find out that there was often more than one person involved. Perhaps more in editorial capacity. But very important. So collaborations have occurred in one way, I've done that with Mike Parker. Mike as editor and me as author, working very closely together. I've never worked, I've described collaboration with Sammy Or on this Dynalab project. But then again, that's not quite what I mean. I've sometimes talked to other designers about the possibility of collaborating on some project. We've got so far as to, to try and think of something we could work on. I haven't done it to this point. I'm not saying that I would require to win the lottery in order to do it. This is the kind of project where it would be hard to do it to a firm deadline, for example. If you were

sending ideas back and forth, whatever form this collaboration took, it's open to a number of different ways. Either you could divide it up with different parts of the family would be done, or you could do some sort of Multiple Master like a face where I did one extreme and another designer would do another and they would meld in the middle. There are a number of different possibilities of how you could collaborate. It is the sort of thing that would be best done with some time and some leisure and some possibility of spending time. Traveling and spending time with another designer, if they were not right here in Boston. That is one thing that I would be very interested in doing.

PH: Do you have collaborators in mind already?

MC: Yes, there are a number of people

PH: Have you spoken to one another concerning this (collaboration)?

MC: I've talked more than once with Sumner Stone who is a very good friend of mine, who lives on the West Coast in Palo Alto. We've talked a good deal about this, but it's never really quite come to the point. But maybe it will be one day. I would wish it to.

I haven't talked so much about it with Gerard Unger, although he's another person whom I greatly admire his work and his way of working. Also he and I are very old and good friends. I think that is kind of, you need to have some *simpatico* in order to be able to make this fly. You don't want this to be the cause of the end of a beautiful friendship.

PH: Oh, no.

MC: Sort of coming to blows on it. I wouldn't take this on with someone (that I don't know). There are also one or two of the younger generation of designers whose work I admire very much. I talked over dinner, I can't remember where we were in the world, somewhere, with Jonathan Hoefler, who's a young designer in New York. Whose work I like very much. We said: 'Wouldn't it be nice to collaborate on something?' That would please me very much.

In a way I have been doing some work recently with a young designer in Boston, Tobias Frere Jonas, who also, whose work I have a very, very high opinion on, of. We have in a way been collaborating, but this is something that came about because I began a project with the intention of just working on it at my own pace. I've got a fair way along in doing this family of types, it's called Miller. At a certain point, I got, someone saw it and wanted it finished in order to be able to use. I did not have the resources to do that in a timely way myself. I had other things that I had to be doing at that time. The Font Bureau in the person of Tobias got involved in this and so we have been working together on this in a very good way. This was not a project which started with that aim in mind, this was something where I had to bring in help at a certain point. I was delighted to be able to use Tobias who I like, whose work I like very much. It's been a happy collaboration. This was not something where Tobias and I sat down and said: 'Hey, wouldn't it be nice to do something or other.' And we figured this out together and we planned out what we would each bring to the party, which was rather the sort of thing I have in mind. So that's, I don't know if this will ever happen. If you ask me to fantasize about some things I haven't done and would like to do. That's one of them.

PH: It sounds like a marvelous idea.

Chapter 23

Summary

This has been an interesting study for my Master's Thesis. That Matthew Carter is devoted to type design is without question. New technology interests him immensely and he embraces it as soon as it is out. Matthew Carter's approach to type design is very much as it was when he started out at Enschedé, in Haarlem, the Netherlands.

The answer to the question: Are letter shapes a result of the technology or is it a matter of design conforming to the technology is two fold; in the case of scripts it was impossible to create a type face by using hot metal punchcutting. With the advent of photocomposition the rules began to change. Suddenly Matthew was free of the bounding boxes that so inhibited much of his creative ideas. The first typeface he was able to create in the new format of photocomposition was Snell Roundhand [see Figure 23, Appendix B, Page B-5]. Designed for Mergenthaler Linotype's Lineofilm. The approach to this design process is similar to that at Enschedé in that the same thought process goes on for Matthew Carter as when he learned to cut punches at Enschedé

Because increasingly English and languages other than Latin must stand side by side, Matthew Carter has been far and away the leader in his field. His Sokin-tai and Kanji and Kana are a good case in point. Matthew Carter saying that it was the first time he had to consider the horizontal lines as well as the verticals. (see Appendix B, Page 197).

The new letterforms are transient because as the technology changes so will they. Right now our monitors read things only at low resolution. Matthew Carter is designing fonts to fill the gap so that those who must work on a monitor all day will not be so fatigued by the end of the day.

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Appendix A

List of Typefaces Designed by Matthew Carter

Date	Type face names
1965	Auriga. Crosfield Electronics for the Photon 540. Completed By Mergenthaler Linotype in 1970.
1966	Cascade Script. Mergenthaler Linotype's Linofilm.
1966	Snell Roundhand. Mergenthaler Linotype's Linofilm.
1967	Helvetica Compressed. Mergenthaler Linotype's Linofilm.
1970	Olympian. Mergenthaler Linotype. Released simultaneously as Linotype matrices and Linofilm fonts.
1972	Shelly Script. Mergenthaler Linotype's VIP.
1977	Video. Mergenthaler Linotype's Linotron 505.
1978	Galliard. Mergenthaler Linotype's VIP. Acquired by ITC released as ITC Galliard.® in 1981.
1979	Bell Centennial. Mergenthaler Linotype's Linotron 606.
1980	National Geographic Caption. Mergenthaler Linotype's Linotron 606.
1987	Bitstream Charter. Bitstream's FontWare. Acquired by ITC and released as ITC charter in 1993.
1992	Elephant. Microsoft's TrueType Fontpack 2. Digitized in Fontographer.
1993	Mantinia Carter & Cone Type Inc. PostScript and Truetype.
1993	Sophia Carter & Cone Type Inc. PostScript and TrueType.
1994	Benton Bold Condensed and <i>Time Caledonia</i> . <i>Time</i> Magazine.
1994	Big Caslon. Carter and Cone Type Inc. PostScript and TrueType.
1994	Skia. Apple Computer/ TrueType GX.
1995	Interchange. Set of nine screen fonts for AT&T Interchange. TrueType.
1996	Walker. The Walker Art Center. Minneapolis. Post Script.
1995	Wiredbaum. Wired. PostScript.
1996	Alisal. Carter & Cone Type Inc. and Agfa Creative Alliance. PostScript.

List of Typefaces Designed by Matthew Carter

- | | |
|------|---|
| 1995 | Tahoma. Screen fonts for Microsoft. TrueType. |
| 1996 | Sokin-tai. Roman type to accompany kanji and kana. DynaLab, PostScript. |
| 1997 | Verdana and Georgia screen fonts for Microsoft. TrueType. |

Appendix B

Figure 1. Dante Semi-Bold Typeface

Figure 2. Sophia

Figure 3 Mantinia

Figure 4 Wiredbaum

Figure 5. Caslon

Figure 6 Helvetica

Figure 7 Walker

Figure 8 Bell Centenial

Figure 9 Galliard

Figure 10 Baskerville

Figure 11 Optimia Greek
Designed with H. Zapf

Figure 12 Century Schoolbook Greek

Figure 13 Souviner

Figure 14	Georgia
Figure 15Hebrew Raschi
Figure 16	Devanagari
Figure 17	Sunkin-tai
Figure 18	Bitstream
Figure 19	Video
Figure 20	Auriga
Figure 21	Snell Roundhand
Figure 22	Alisal
Figure 23Bitstream Elephant

Carter's first typeface was Dante Semi-Bold Italic, (See Figure 2) cut in 1961 under the direction of the typographic consultant to Cambridge University Press, John Dreyfus of Monotype Corporation.

abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Figure 1, Dante Typeface

THE FACES BY
& ED FELLA, IN
'ERLY' N^o 158.

Figure 2, Sophia

A^A B^B C^C D^D
E^E F^F G^G H^H I^I J^J
K^K L^L M^M N^N O^O P^P Q^Q
R^R S^S T^T U^U V^V W^W X^X
Y^Y & & Z^Z Æ^Æ Œ^Œ

Figure 3, Mantinia

and struggle to the Internet, which is playing a significant role. The implications are enormous for the future, and the events in Serbia are closely watched by governments around the world – especially the Chinese government, which is concerned about the expanded Internet could play in that country. The students are producing data on whether expanded access to the Internet is utterly inconsistent with authoritarian government. Whether it's impossible to have both a modern information economy and a dictator, and whether, therefore, the Internet is innately predisposed to undermine such a regime, this assumption is being tested for the first time. Inference, several speakers addressed this issue, among them Horvitz. An American living in Prague, Horvitz is with the Open Society Institute, the prodemocracy foundation founded by billionaire George Soros with a mandate to promote Internet connectivity in the Czech Republic. Horvitz's report recounted Eastern Europe's loss of innocence, as the Soviet interest in promoting the First Amendment in the Soviet empire, combined with local government passed a growing concentration of media, led to a deterioration

Figure 4, Wiredbaum

THE CONCERT room had both an organ and

Figure 5, Caslon

abcdefghijklmnop
qrstuvwxyz
ABCDEFGHIJKLMN
OPQRSTUVWXYZ

Figure 6, Helvetica

And different lengths of serif can also be mixed:

HHHRRR

A palette of various serif shapes would also be possible:

HERA HER

The permutations are endless
(and could easily become wild if over-indulged):

H

Although certain unconventional hybrids
might well be valid as tones of voice:

HER

Figure 7, Walker

abcdefghijklmnopqrstvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890\$(.,;:'-¹¼³⁸¹²⁵⁸³⁴⁷⁸¹³²³/—)*

Figure 8, Bell Centenial

abcdefghijklmnop
qrstvwxyz
ABCDEFGHIJKLMN
OPQRSTUVWXYZ
XYZ& 1234567890

Figure 9, Galliard Italic

13293 Baskerville inclined/kursiv/inliné 12 (100)

αβγδεζηθικλμνξπορστυφχψω
ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΠΟΡΣΤΥΦΧΨΩ
1234567890 .,:;!?

Οι πρώτες εκδόσεις ελληνικών κειμένων έγιναν στο τυπογραφείο του Άλδου Μανουτίου στη Βενετία. Άπο τό 1494 ως τό 1515 τύπωσε μιά θαναμάσια σειρά κλασικών Έρ

Figure 10, Baskerville Greek

06302 Optima medium/kraftig/quart-gras 12 (21)

αβγδεζηθικλμνξπορστυφχψω
ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
1234567890 .,:;

Οι πρώτες εκδόσεις ελληνικών κειμένων έγιναν στο τυπογραφείο του Άλδου Μανουτίου στη Βενετία. Άπο τά 1494 ως τά 1515 τύπ

09302 Optima black/fett/gras 12 (21)

αβγδεζηθικλμνξπορστυφχψω
ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
1234567890 .,:;

Οι πρώτες εκδόσεις ελληνικών κειμένων έγιναν στο τυπογραφείο του Άλδου Μανουτίου στη Βενετία. Άπο τά 1494 ως τά 1515 τύπ

Figure 11, Optimia Greek
Designed with H. Zapf

αβγδεζηθικλμνξπορστυφχψω
ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΠΟΡΣΤΥΦΧΨΩ
1234567890 .,:;!?

Οι πρώτες εκδόσεις ελληνικών κειμένων έγιναν στο τυπογραφείο του Άλδου Μανουτίου στη Βενετία. Άπο τό 1494 ως τό 1515 τύπωσε μιά θα

Figure 12, Century Schoolbook Greek

αβγδεζηθικλμνξπορστυφχψω
ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΠΟΡΣΤΥΦΧΨΩ
1234567890 .,:;!?

Οι πρώτες εκδόσεις ελληνικών κειμένων έγιναν στο τυπογραφείο του Άλδου Μανουτίου στη Βενετία. Άπο τό 1494 ως τό 1515 τύπωσε μιά θαυμάσια σειρά

Figure 13, Souvenir

abcdefghijklmn
opqrstuvwxyz
ABCDEFGHIJKLMN
OPQRSTUVWXYZ
VWXYZ

Georgia

Figure 14, Georgia

אבגדהוזחטיכךלמנסןסעפאצקרת
Æ\$"„*:;[]()’?!,. 1234567890

Figure 15, Hebrew Raschi

02309 Devanagari light/

किसी जाति के जीवन में उसके द्वारा प्रयुक्त शब्दों का अत्यंत महत्वपूर्ण स्थान है । आवश्यकता तथा स्थिति के अनुसार इन प्रयुक्त शब्दों का आगम अथवा लोप तथा

07309 Devanagari bold/

किसी जाति के जीवन में उसके द्वारा प्रयुक्त शब्दों का अत्यंत महत्वपूर्ण स्थान है । आवश्यकता तथा स्थिति के अनुसार इन प्रयुक्त शब्दों का आगम

Figure 16, Devanagari

高宗武丁のことばは、
いまだに甲骨文で、
みるこ
ができるのである。

DEFGHIJKLMNOPQRSTUVWXYZ

efghijklmnopqrstuvwxyz

(Designed to be incorporated with the Kanji typeface to the right.)

Figure 17, Sunkin-tai

abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Figure 18, Bitstream Charter

abcdefghijklmnop
qrstuvwxyz
ABCDEFGHIJKLMN
OPQRSTUVWXYZ
XYZ& 1234567890

Figure 19, Video

Auriga, a new letterform.

Figure 20, Auriga

How can the quality of a typeface be judged? Why do the masters in the art of typography use a few specific type designs? What do they see in them? Good design is always practical design. What the

Figure 21, Snell Roundhand

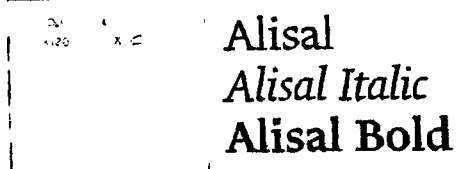


Figure 22, Alisal

abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
XY&Z

Figure 23, Bitstream Elephant

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Figure 24, Cascade Script

Layout 228

Set of Latin characters for Icelandic/Lateinischer Zeichensatz für isländisch/
Jeu de caractères romains pour l'islandais.

Á á Ð ð É é Í í Ó ó Ö ö Þ þ Ú ú Ý ý Æ æ

Figure 25, Icelandic

abcdefghijklmnop
qrstuvwxyz
ABCDEFGHIJKLM
NOPQRSTUVWXYZ

Verdana

Figure 26, Verdana