AN ILLEGITIMATE, HOMELESS MAN, DYING IN abject poverty, changes the course of history and his name goes down through the ages as a household word. There's hope for us all. Johannes Gensfleisch zur Laden zum Gutenberg is generally credited with inventing the printing process. Actually, there was already printing of a sort, but Gutenberg perfected the craft with the invention of movable type. (Kind of like there were already computers in the world, then the Mac was invented.) However, back in the 9th century the Chinese were already carving wooden blocks to print prayer scrolls; in the 11th century they developed movable type of clay and metal. In the 13th century the Koreans were casting metal type in sand molds. Movable type is the key thing here–rather than having to carve each page as a separate block, movable type allows one to put together a page of characters, print it, take those characters apart and put them back together in another order for another page. Now, the Chinese and Koreans had an obvious problem–their languages have too many billions of characters to make this process practical. Plus there was no ink invented that could stick to metal. Besides, these Far Easterners just

a 14th century copyist

plain preferred calligraphy anyway. Well, the Europeans in the 15th century didn't know anything about what the Chinese and Koreans had done, so they had to re-invent movable type. Gutenberg was in luck. By the time he came along, the process of papermaking was well-developed; punch-important step in of metal, was al-the gold- and silver-which Gutenberg was metalcasting was well coins and medals; used for cheese, processing, and those industrious Van Eycks, had making, which is an creating letters out ready developed in smithing trades (of a practitioner); under way, creating presses were being wine, textile weaponsmithing. And Dutch painters, the invented an oil-based ink that would adhere to metal. Now isn't it an interesting thought to ponder what might have happened if Johann had been born a hundred years earlier, before the world was ready for him? Or if the boys in the garage had been born fifty years earlier? Eventually someone would have gotten the printing process together, but would we ever have had Macintoshes?

Herr Gutenberg

ANYWAY, GUTENBERG (BORN IN 1399 IN MAINZ, Germany) was getting into political trouble with the goldsmithing guilds in the city. So he ran off to Strasbourg, where it seems he began developing his printing equipment in the strictest secrecy. The history books are always wondering why he was so secretive, but is that so unusual? Aren't we still trying to keep PostScript hints and unbreakable codes secrets? Well, the man was obsessive. Driven. An artist. Broke. He went back to Mainz with his perfected system, and in 1450 (at 49 years of age) talked a local financier, Johann Fust, into lending him money–800 guilders, with the press equipment as security. But Gutenberg was a perfectionist. Besides, he didn't have PageMaker. He couldn't just change his leading with the click of a mouse to make those forty-two lines of type fit on the page. He couldn't press Command-Shift-J and make everything justify. No, he had to have every letter carved and molded backwards out of a separate tiny piece of lead; create other separate letters for the initial caps; take all these backwards letters and arrange them backwards in a wooden flat; insert varying amounts of lead space between each word to justify the text; insert slugs of lead between the lines; ink it up and run it through the press; check for typos, which obviously meant quite a bit of readjusting; then after getting a hundred or so good proofs, take all the letters out

of that wooden flat and put them back into their cases (that's movable type) and start all over again with the next page. Whew. And just the thought of keyboarding the Bible is overwhelming. Gutenberg worked on his project for two years, and Fust got a bit impatient at the lack of progress. Give the guy a break, Fust, he didn't have a Mac IIfx. He didn't even have a typewriter. Fust loaned him 800 more guilders and insisted on becoming a partner. In 1457 Fust had really had it. Seven years. So he took Gutenberg to court and sued for the 1600 guilders he had loaned him, all the type, all the presses and other equipment, all the com-pleted work on the 200 Bibles, plus an extra 426 guilders as in-terest on his loan. With the judge being another member of the Fust family, Gutenberg didn't stand a chance. But Fust was a banker–what did he know about printing Bibles? Certainly Gutenberg's most skilled foreman, Peter Schoeffer, wouldn't desert him and traitorously decamp to the buttered side of the press? Alas, Peter was in love with Fust's daughter. Fust and Peter Schoeffer went on to publish what has become known as the first printed piece of work in the world, the 42-line Mazarin Bible. And Peter married the boss's daughter.

JOHANNES GUTENBERG ENDED UP HOMELESS IN THE street at the age of 56. Like any obsessive personality, he managed to find some way to carry on his printing in some manner, but he grew increasingly blind. Looking at tiny little pieces of lead all day isn't any better for your eyes than staring at a computer screen, it seems. He never did really get it together again; eventually a local bishop took pity on this destitute inventor and put him on welfare, providing him with a yearly allowance of grain, cloth, and wine. But what goes around comes around, doesn't it? Even though Fust took over and went on to become rich and to proclaim himself as the publisher of this history-making product, who do we remember? That's right, that impecunious blind old inventor who spent his life struggling for something he believed in. Fust isn't even in the dictionary. Developers took to the printing press like developers took to the Mac. In less than forty years there were more than a thousand presses operating all over Europe. By 1500 there were 150 presses in Venice alone! More than two million books had been printed. How many people were there in Europe in 1498, anyway? It caught on quickly, but the technology didn't advance very rapidly. Until the early 1970s, everything you saw printed was created using Gutenberg's technique–tiny little movable pieces of lead type. The only significant advancement

had been Otto Mergenthaler's Linotype machine in 1882–it could very noisily produce a whole line of type at a time, rather than one character at a time! Wow! In the early '70s a revolution began in the graphic and type world with the advent of electronic type. (The New York Times was printed for the last time by Linotype in 1979.) Now things are really moving fast. But, as on a roller coaster, the speed is exhilarating–who cares if you get a little dizzy? *– rw*

"No one can say to-day how electronics will affect printing. We cannot for the present foresee a complete suppres-sion of book print-ing with individual movable metal types as discovered by Gutenberg."
Elizabeth Geck, 1968

a 20th century author, designer, typesetter, & publisher