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# Fifty Years a Typesetter: Adventures in Printing Together with Some Meditations on Theory and Craft

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JANUARY 27, 1961.



The New-York Times

**TYPOGRAPHICAL TREASURE:** A press once used by William Morris for the printing of limited editions is displayed by Jethro K. Lieberman, 17, son of new owner.

# Fifty Years a Typesetter

*Adventures in Printing  
together with  
Some Meditations on Theory and Craft*



half century ago, I began my apprenticeship in the world of letters. The hard kind, made of lead. At the green age of nine, in the San Francisco print shop of my father, J. Ben Lieberman, in our home at 1947 47th Ave., between Ortega and Pacheco, two blocks from the Pacific Ocean, I learned to set type, one letter at a time. The printery was downstairs, but since this was San Francisco, the press was actually on the first floor in what, in an east coast house, might be in the basement—a playroom with Mickey Mouse wallpaper that in November, 1952, became home to an 8x12 Chandler & Price motorized press and a modest cabinet of type. I learned to set type and print essentially as people had printed from the time of Gutenberg (though large commercial printing changed in the mid-to-late 1800s). But now printing with handset type is gone, save for the occasional hobbyist. The technology, like the buggy whip, is a relic of a bygone era. Since it is probable that this will be the last time in

history that anyone will have half a century at a type cabinet, it seemed to me worth recording these informal recollections.

My father's fascination with type and printing evidently began in high school in the late 1920s when he was editor of the school newspaper, an interest abetted by his service on the *Daily Illini*, the newspaper of the University of Illinois, which he served as editor-in-chief during 1934-1935. During naval service in World War II, he was editor of the monthly Navy magazine that became *All Hands* at war's end, which prompted his growing involvement in typography. His first foray into the taxonomy of type was presented in the *Navy Editors' Manual*, published in 1945. In 1948, we moved to San Francisco, where he worked at the *San Francisco Chronicle*. One day my father almost precipitated a strike as he chanced to walk through the pressroom and put his hand on a piece of type, which no one but union employees were allowed to touch. He determined to get his own press. He was taught the craft by the owner of a commercial shop, Leslie Isman, the father of my school chum Bob Isman.

My father quickly sensed the possibilities. One of his earliest stories of the power of printing involved a dinner party my parents threw for his boss, the executive editor of the *Chronicle*, Paul Z. Smith, and one or two other couples. That afternoon, my father printed individualized cocktail napkins, welcoming each person by name. These sophisticated people were so astonished that the evening was spent talking of little else. The printed word carries.



It also scares people, as it scared kings and popes since the incunabula. The story goes that the summer of 1953 when we were moving from San Francisco to the East Bay my mother answered the bell one afternoon to discover two some-

what embarrassed policeman standing at the door. They had a report, they explained, of counterfeiting. Was there a press? Yes. Could they take a look? Certainly. They got to the playroom to discover pieces of children's gaudy pink paper play money that had escaped from a game. Evidently a potential buyer of our house had seen the play money, noticed the press, and called the police. The police were chagrined, my mother, Elizabeth, laughed, and my father lived off the story for decades.

In 1952, with the arrival of the C & P, my father founded his private press, The Herity Press. That was almost exactly 500 years after Gutenberg's invention of movable type. (The encyclopedias are not entirely clear when the first type was cast, though by 1452 Gutenberg had found financing, and in 1456 he printed what is probably the most famous and surely the highest-priced book in the world, the *Gutenberg Bible*). Gutenberg's invention was the beginning of an era. By the time I got to it, half a millennium later, it was nearly the end, even though no one quite knew it then.

So, with the arrival of the press, I grew up in a family with a major preoccupation with printing. (It wasn't the only thing: one summer, my father thought he could make a fortune syndicating "fillers," short paragraphs of the sort that used to inhabit the bottom of *New Yorker* columns. My sister and I spent days stuffing into envelopes hundreds of piles of "spicers," as this venture was called, for mailing to newspapers across the country. Nothing came of it.)

But printing was the main thing. Early on, I knew words, or words with special meanings, unknown to my chums and probably my teachers: kerning, leading, quoins, furniture, chase, stick, serifs, ligatures, makeready. (For definitions, see inside back cover.) Most important, I knew what a font was.

It wasn't what it is today. A font of lead type, from the 15th Century until the late 20th, was a very particular size of a very particular face in a very particular style (a full set of fonts for a particular face would include roman, italic, bold, and bold italic, and sometimes semi-bold and semi-bold italic. A font, in other words, was not just Bodoni. It was Bodoni italic 12-point, or Bodoni 10-point bold. If

you wanted an italic in a larger size, you needed to go to a different type case with an entirely separate assortment of type. A robust set of fonts of a single face would require drawers each for at least 8-, 10-, 11-, 12-, 14-, 18-, 24-, 30-, 36-, 48-, 60-, and 72-point, and that's just for roman. Repeat for italics. Repeat for bold. Repeat for bold italics, and if the set is really complete, also for small caps. You're talking a half a ton of type or more. Some faces have even more weights: the complete Garamond from ITC (International Typeface Corporation) has 16 character sets per point size. To complicate things still more, as you can see, the height of a font of one face is not necessarily the same as that of another face: Here are some fonts, as the individual letters would appear in a type drawer:

This is Goudy Old Style in 10-point boldface

*This is Goudy Old Style in 14-point italic*

ADOBE CASLON IN 12-PT. CAPS & SMALL CAPS

This is Mona Lisa in 12-point roman

All these are serif faces. Here's a sans serif face (so called because the serifs, the little ending flourishes on the letters that are usual in book, newspaper, and magazine texts, are absent):

This is 11-point Gill Sans roman, a sans serif face

These days, computerized typefaces come in roman, italic, bold, and the others, but the need for separate sizes has vanished since the computer will generate any size you want, up to tenths of a point. Type is now available that was unthinkable even a quarter century ago. No one cut metal type of 14.8 points, and I don't know why you would want it, but you can have it if you wish with a couple of keystrokes. (By the way, there are 12 points to a pica, and six picas to an inch, so a 72-point typeface is one inch high.)

Speaking of type drawers, the apprentice quickly learned the "lay of the case"—that is, the arrangement of the letters in the little compartments. In the modern versions, type cases come in two flavors, one with capital letters on top, one with them on the right

(there are hundreds of variants). Two factoids worth noting. First, why are the “small” (non-capital) letters called “lower case”? Look at the case pictured on the cover (Yankee job case). Because far more lower-case letters are used than capitals, they were originally placed in a separate, lower case (look closely at the illustration, p. 10). Today they are the front of a single case, *i.e.* lower than the capitals, to make it easier for the typesetter to reach them. Hence lower case. Second, notice that the capitals are arranged in alphabetical order, except for the “J” and the “U,” which come at the end. Why? Because those letters were not in the Latin alphabet and came into English after the original lay of the case had been established.

Type cases are disappearing. A few years ago some antique stores and mail-order catalogs sold them for mounting on walls and storing bric-a-brac. I saw them priced as high as \$100 each. In 1997, when my mother was moving and I had to dispose of about four-fifths of the printing equipment, I found that we had about 400 type cases. A few weeks before the move, Jo and I chanced to visit an antique store on Martha’s Vineyard with type cases for sale for about \$40. I sought out the owner and told her I could supply her with inventory if she needed more. How many? she asked. When I said 400, she gasped for air, sat down, and said at most she would sell three in the next year or two. So much for riches. Most of the cases, filled with type, went to the Center for the Book Arts in New York City.

Today, much of what I have been recalling is arcane learning. But in those days, at mid-century, woe betide you if you began a project in one of your standard faces—a Garamond or Palatino—only to discover halfway through that you had run out of *e*’s. (The Herity Press house face, by the way, was Kennerley, a Goudy face [see p. 18] that is apparently still not available digitally.) If it was a very important project, and you had invested a lot of time, the best thing was to put everything down and order another font or two of it and wait for it to arrive. The other solutions were to throw the type back and start over with a face in which the eye told you there was sufficient type in the case, or rewrite the message so that it didn’t use as many words with whatever letters you were missing. In theory it didn’t

matter what you wrote; in practice, what you would be able to print depended on the brute reality of how many letters you had.

Type cases also posed the pesky problem of the “wf” (wrong font): someone at some time would have mistakenly put 11-point type into the 10-point drawer, and you’d find yourself either picking through the type one letter at a time as you deposited the letters into your stick

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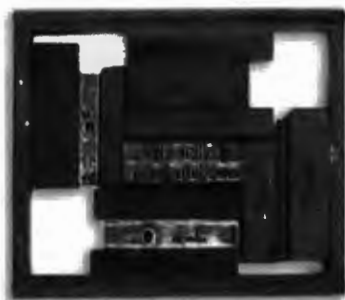
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nasty surprise after you printed your proof copy and had to pluck the offending letter out with a tweezer, throw it back where it belongs, and hope you had an extra letter of the right size.

Most of my readers, I assume, can today produce what looks like a printed page, set in type, using a word processor and a laser printer. It can be done almost as fast as it takes simply to type (oh, sorry, to *keyboard*) the words on the page. Just so you’ll know, here is how you print on a letterpress (I won’t bore you with *all* the details).

You begin by extracting the letters, one at a time, from the type case. These are placed, groove side up (meaning the letter is upside down), from the left to the right in a three-sided metal holder called a composing stick or, more usually, just stick (illustration above). Words are separated with a standard non-printing space, but to justify the line, spacing of various thicknesses must be added between the words as you come to the right side. Leading (pronounced “ledding”) is added between each line of type—a strip of metal below type height. Leads can be of different thicknesses also to allow more room between lines (a standard lead is 2-points, a slug is 6-points). When the stick is full, the type is placed, en block, onto a printer’s stone, an ultra-smooth hard surface like granite or marble. Removing the type from the stick is an art form all in itself. Hold it wrong, loosen your grip, and you will “pi” (pronounced, “pie”) the type, spilling it into a random jumble. You swear a lot (unless you’re nine), and then sigh a lot, and then picking up and inspecting one letter at a time, put it all back in the type drawer so you can start over.

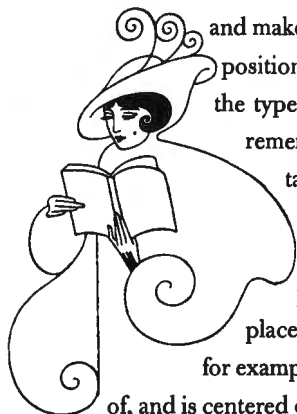




Assuming you avoided piing (that's "pie-ing") the type, you put it inside a metal frame, the chase, that will eventually be held upright in the press. Type in the chase is known as the "form." You surround the form with small pieces of wood of various sizes, called "furniture," which will fill in the rest of the chase and will be locked into place by metal devices known as quoins, which can be expanded with the turn of a key to put pressure against the furniture. Just before you tighten the quoins all the way, you use a smooth block of wood, perhaps with a felt surface, to plane the type—put the wood block over the type and tap carefully with another block or a special key to insure that the entire block of type is level. You are now ready to put the form in the press. If you were setting three lines for the name and address on an envelope, and you knew what you were doing, this whole series of steps could be done in about thirty minutes (compare the thirty seconds it now takes to do the same thing on a letter form by computer).

After locking the chase in the press, you ink up a circular plate at the top of the press (assuming you're using a conventional tabletop or standard motorized press). Only one color at a time can be printed, but you can print many colors, on a single page, by changing the ink. (Of course you will have to change the type and be exacting in your placement of the new type in the chase for every color you're using.) Rollers run over the ink plate, coating themselves with ink, and then run vertically down the chase, inking the type.

It's time for makeready. You want to see whether the type in the chase is more or less in the right place so that it will print where you want it on the page. You print a rough proof page. If it is in the wrong place, you can either remove the chase and reposition the type, or you can adjust a set of gauge pins that will hold the paper in place on the flat bed—the platen—that will move up (by hand lever or motor)



and make contact with the inked form. Adjusting the position of type and pins can take awhile, and since the type in the chase is upside down, you have to remember that ruler measurements to the right take effect by moving type to the left. (Well, all right, you have to experience it to see it.) But these adjustments are crucial so that each page will be printed in precisely the same place. Once you've got the position right, so that, for example, a letterhead prints one inch from the top of, and is centered on, the page, you're still not done. You have to worry about the pressure as the paper is socked against the type. Too much pressure and the type impression will be too strong, sometimes boring right through the paper, too little and the printing will be too light or uneven. You adjust the pressure by adding or subtracting paper under the tympan sheet (the top sheet on the platen on which the paper is held by the pins as you feed it into the press). If you're really good at all this, and what you're printing is short or straightforward (a few centered lines of type, for example), you might accomplish all this in another 30 minutes, maybe even less. But sometimes it can take up to an hour before all is ready.

Now you can print. On a motorized press, you throw a lever so that every time the paper on the platen comes up to meet the type in the chase, it will print. You get into a rhythm: one hand puts the paper into the pins as the platen swings up, the other hand extracts the printed page as it comes down, and the first hand is ready to insert the next page. The better you are, the faster you can go, and the more pages an hour you can print. Of course, if you're careless, you'll smash your hand beyond all recognition, so when you miss a beat you throw the lever back so that the platen won't actually hit the type—otherwise, the inked type will print directly on the tympan paper. (Just make sure you've removed your hand.) So you bleat, turn off the motor, and wipe away the ink on the tympan paper (if you don't the obverse side will be printed on as well when you feed the next sheet). If you're working on a hand press, you must pull the

lever each time you print, so there is a smaller chance that you'll miss feeding a sheet into the pins at the proper time, though if your mind wanders—feed sheet, pull lever down, let lever up, extract sheet, feed next sheet—you'll inevitably find yourself stopping and scrubbing the tympan sheet clean.

If you're good, you can print a single sheet on a hand press in less than ten seconds; faster on a motorized press if you're really good. If you're a novice, you worry, and so you're printing a sheet every 15 or 20 or even 30 seconds. You want 250 sheets of stationery. You do the math.

Okay, now you're done printing, but you're not finished. You remove the chase from the press, put it on the stone, and using a cleaning solvent (kerosene, probably) wipe the type dry (you do not want to let the ink harden on the type). Then you clean the rollers and the ink plate—you do it right away or else you'll have a dreadful time, after the ink dries, restoring the plate and rollers to the purity that printing demands. If you're pretty sure you'll be printing more stationery soon, with the same letterhead, you might let the type "stand." Remove it from the chase and put it in a safe place on a type cabinet, perhaps with a sturdy rubber band around it to keep someone from carelessly knocking into it. Of course, if you let too many forms stand, without distributing the type (throwing it back into the drawer), you'll exhaust that font and won't be able to print other things with it until you do. So generally you distribute the type, replace the furniture in its cabinet, and let the stack of printed sheets dry over night.

Presto, your very own letterhead, in a delicious green Deepdene, or rich red Palatino, or whatever your fancy (and type budget) allows. Then you go directly to a sink and use special soap to scrub your hands carefully—you've been touching lead, after all, and lead is poisonous if ingested.

It has taken you an entire evening, or Saturday morning (with a late lunch), to do all this. Today I can do practically the same thing in five minutes of composing on the computer and then letting the color laser printer pump out the 250 pages in 20 minutes. Of course,

what I get is no longer letterpress, my choice of paper weight and texture is severely limited, and the type is not yet as sharp and detailed as true lead type. More on this later.

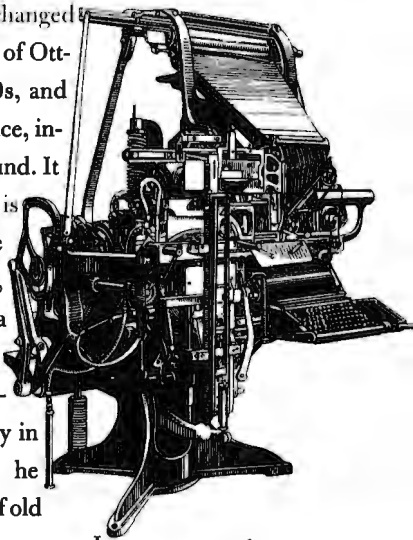
For about 450 years, from Gutenberg's first use of handset metal type in the mid-fifteenth century until the late nineteenth century, what I've described is more or less how things got printed: one letter at a time. Though letterpress printing of books was far more efficient than manuscripts produced by the calligraphy of scribes, there were nevertheless costs and impediments peculiar to the process. To produce a page you needed a fair amount of type of the right font for the work. In the heyday of metal, letters were never unlimited. No one had enough of any one font to set all the pages of a book at once, nor would there have been space to store all the pages in the printery. A few pages at most would be set and printed at one time. Then the type would be distributed, so that the typesetter could compose the next set of pages. According to the story as I got it from Mark



Barbour, curator of the International Printing Museum, now in Carson, California (I am writing from memory, so

the details might not be quite accurate), the *London Times*, until the 1890s, never ran more than eight pages a day. To produce that many pages took some 200 typesetters in shifts to set and lay out the pages (there was not enough type for more pages, nor, presumably, did the advertising and subscription revenue produce enough to permit the paper to hire more typesetters). The night shift distributed the type so that the morning shift could start all over again.

The invention of the Linotype changed everything. The invention was that of Ottmar Mergenthaler in the mid-1880s, and it's a tangled tale of invention, finance, investment, opportunities lost and found. It need not concern us here, though it is amusing in hindsight that at least one very practical person, Mark Twain, reputedly the first author to take to a typewriter and a man always looking for investments, missed the significance of Linotype. In a short essay in 1905 on the follies of expertise, he wrote: "I am a compositor-expert, of old and seasoned experience; nineteen years ago I



delivered the final-and-for-good verdict that the linotype would never be able to earn its own living nor anyone else's: it takes 14 acres of ground, now, to accommodate its factories in England."

The Linotype [shown above] and sister machines allow the operator to use a keyboard much like the typewriter (though the keys are not placed the same) and permits an entire line of type to be cast in one piece from molten metal. Suddenly it was not only possible to have an unlimited supply of type (just keep pouring in the metal), but it was also far easier to handle type in the press. Astonishingly, for such a path-breaking invention, the next most important invention after movable type itself, its heyday was short, only three-quarters of a century, from the 1890s until the 1970s, by which time it had been almost completely replaced by photocomposition and then digital type.

By the way, the first two vertical lines of keys on the Linotype spelled "etaoin shrldlu." Linotype operators who made a mistake would often fill in the line by running their fingers down the first two columns of keys. The ruined line was supposed to be discarded and remelted. Occasionally, however, the line would mistakenly be set in the press, leading newspaper readers to puzzle over the meaningless

“etaoin shrldu” at the end of an incomplete thought. No more. Mrs. Etaoin Shrdlu was the name of our family cat (1955-1972). She received an obituary in *Printing News*, about the time the obituaries were being written for the Linotype machine itself.

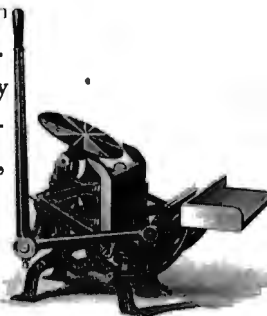
Linotype changed printing. It was immensely successful because it was immensely efficient. But in so doing it threatened the craft. Printing letterpress is a craft, and one not easily learned. I meant it when I say I apprenticed: it took years to begin to feel comfortable using the letterpress, and I for one never did master it. But the craft, like all crafts, has its compensating virtues. It is deeply therapeutic: you must lose yourself in the craft or it won't come out. It requires patience, devotion, flexibility. It is physical as well as mental: your hands are in constant motion, and must coordinate with what your eye is telling you. You need a strong back, because you're standing most of the time. Fact, not theory, played a significant role in creating the printed document. You didn't just type, the way we do now, and let the words tumble forth, and devil take the hindmost how it looks or falls on the page. You had to space (between words), and kern (between different pairs of letters), and lead (pronounced “led”) between lines. You had to decide how long the line was going to be. You wanted to avoid widows, a stub of a line appearing on the first line of a page. That often even forced you to rewrite, since the written text would not necessarily fit properly into the design (the length of the line, the depth of the text). You learned to edit, touch the letters, feel the words, visualize the sentences. You became literate—not by cogitating but by doing. Printing is palpable, and though it could become visceral, you are always constrained by the medium, by the hard reality of choosing to make the line 24 picas long instead of 30, or setting the text in 12-point rather than ten. And if the type as set contained “rivers” (vertical multi-line blank space), you edit and reset some more. You are always concentrating on the tasks at hand. How else did the text in this pamphlet fit in exactly 24 pages (and without widows)? Your mind cannot wander, any more than when you play piano you can be thinking about the Yankees. Printing was my baseball (made easier, of course, by the absence of major league teams

on the West Coast; we moved east in 1957, passing the Dodgers on the way in the other direction).

In short, typesetting taught craft, and craft is the most powerful antidote to pure theorizing there is. We need an antidote. I now live in a world inhabited by people who are paid handsomely for theorizing, and all too many of their theories, and too much of many theories, are disconnected from the world they purport to explain. Craft dispels fakery because the craftsman is bound by nature, and nature refuses to be faked. If another letter will not fit on the line in the composing stick, it will not fit; spaces can be made smaller, but in the end the line fits or it does not. Reality is out there, and blinking it gets you nowhere.

For me, printing was not about much more than making printed things: stationery, invitations, cards. During my senior year in high school I flooded my friends with a raft of rather juvenile posters, broadsides, and manifestos proclaiming a political party, the Frambesia League. It caught on among my circle of friends, and the summer before college (this was 1960) many of my high school classmates and I staged a “political convention” at which, dissatisfied with the emerging Republican and Democratic candidates for president, we nominated Benjamin Franklin and William Seward. A couple of newspapers ran a story. After that, I used the equipment mostly to replenish my stationery supply, though I did print a title page to my undergraduate thesis and occasional holiday cards. I also lugged a press to the Harvard Stadium in 1962, and on behalf of the Yale Daily News scooped the Crimson by printing an “extra” in the stadium immediately after the game. (Harvard won, alas and alack.) I think the last time I actually used a tabletop press was to print Jo’s and my wedding invitation in 1990. Before then, digital type had arrived.

For my father, printing was much more: private presses have an ancient and honorable history, and he was a leading, perhaps the foremost, proponent of the private-press movement in America from



mid-century until he died in 1984. He was a founder of the printers' "chappel," a group of printers who convene monthly and produce joint products. (He had an argument with the *Times* about the spelling, an editor at first refusing to believe that the word ever existed or that it should be used. I think the paper finally capitulated in a story about private presses, as did *The New Yorker* in a Talk of the Town piece about my father and chappels.) The first, the Moxon Chappel, began on the West Coast in 1957.

My father wrote two books (*Printing as a Hobby*, originally 1963; and *Type and Typefaces*, in two editions, beginning in 1967—I still have his notes on the third edition, and perhaps some day, despite the proliferation of books on type in the computer age, it will be worth reworking). He cajoled my mother into helping produce the *International Register of Private Press Names*, which went through nine editions until time finally caught up with both of them. In 1974, he founded the American Printing History Association, still flourishing today, and was its first president. He was a member of many other printing and graphic arts societies, including the Goudy Society, which he helped found. He also launched a commercial imprint, the Myriade Press, but did not live long enough to publish more than two or three books on printing. He was a ceaseless correspondent and nudge and proselytizer about all things printing. I cannot recount it all here. It is worth noting perhaps that he was indefatigable in his desire to teach people how to print. Over the years, learning that we had a press, people would call and ask if he would do them a favor and print them some stationery or an invitation. My father would invariably say no, I won't print it *for* you, but you're more than welcome to come over and I'll help print it *with* you. He always insisted on keeping a sample of whatever was printed at our house, and I have a four-drawer file cabinet full of samples of 20th-century (mostly poor) design. He also collected the product of private presses around the country. That collection was sold when my mother moved, and it is now at the University of Delaware.

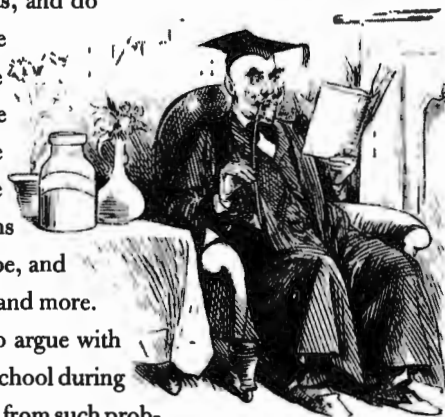
Throughout all this activity, there was one underlying and overarching theme: and that was my father's devotion to freedom of the



press, an idea instilled in him from high school and college days, and the subject of his Ph.D. dissertation at Stanford in 1952. The date is not, I think, coincidental; it is unsurprising that he acquired his first press the same year he had thought deeply about the issue. For my father, freedom of the press was not an abstract theory, not one to be trusted alone to Constitution and courts, but could become a reality *if people actually owned and operated presses*. He wanted to institutionalize that freedom, not through theories but through practices.

In the mid-1960s, he thought for a time he could actually accomplish this gargantuan task, by making it possible for people to do true letterpress printing cheaply. He invented and patented a simple box press, which he called the Liberty Press (p. 16), founded a company called Popular Printing, which sold the press and all necessary parts and pieces, including inks, rollers, type, furniture, pins—the works—for, what was it?, something like \$20 (of course, that was '60's money). It came in a small soft attache-sized case. In fact, as I think about it now, it must have been the world's first laptop. You could open it up, assemble the parts, and do real letterpress printing. The commercial theory was the same as Gillette's: give the razors away but make the public buy the blades. Make the press and instructions available with a little bit of type, and people will want to buy more and more.

Alas for theory. I used to argue with him about this, I being in law school during the company's brief run. Aside from such problems as undercapitalization and a dubious office manager, the theory didn't work. I suppose I should not be so hard on theories—I grew up with them. At the dinner table, as I recall through the haze of passing years, my father would suggest a theory about this or about that. Why do you suppose, he would ask, that some particular something happened? Well, quoth he, I have a theory. Or how do you explain



some other something? My theory is . . . I grew up with theories. Some still to come. And in my more mature years I break bread with colleagues who live and breathe theories. Entire intellectual edifices, as we all well know, have been erected upon airy theories. But the problem with theories is that until they've been tested they're just conjectures. In law, where I mostly hang out, these hypotheses almost never get tested, so the better the theory, the higher the rewards, no matter that no one will accept today's theories, or even approaches, in another 20 years. (Deconstruction, anyone?)



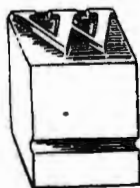
In this case, my father's theory that millions of people would naturally see the great advantages and vast pleasures to be had from possessing and using real printing equipment, especially when it could be had for a small sum, turned out to be monumentally, colossally wrong. *My* theory, which I propounded to him over and over, was that printing was actually difficult, the more so if one had to use the small Liberty Press and accouterments. I knew this because I used it one year when I was in the Navy with no leave time to go home and print holiday cards. People want printed things if the printed things look printed. Printing is about technically proficient, well-designed letterforms on paper. No one could produce anything that resembled the book pages they took for granted, or even the stationery they could get from a local print shop, with one of those Liberty presses. And if not, why do it? Moreover, printing requires painstaking, exacting work, at least if you do it right. If you are an aficionado, then you don't mind. If it's your passion, you'll indulge it. But if you just want some stationery, far easier to pay a little more and order it. I tried to convince him that few people would have the patience required, much less develop the skill needed. After all, we were only just emerging from a craze in which people presumed to paint by numbers. American hobbyists ranged from numberers to people who built model ships in bottles, and the latter were very few. Printing with a Liberty Press kit fell much closer to the ship-in-the-bottle than the painting-by-numbers skill. I protested that demand

would never be large enough, even if Popular Printing had the wherewithal to advertise widely. He scoffed.

Parenthetically, Popular Printing also felt the mildest sting of a new problem developing in 1960's America: product liability. The company was, after all, selling lead, and lead is dangerous. Of course if you take proper precautions, which consisted of nothing other than not sticking your fingers in your mouth while you were working and properly washing your hands when you were done handling type, there was no danger at all. In all the years of hanging around printers, I know of none who ever suffered from lead poisoning. But some potential vendors told Popular Printing they were wary of carrying the product because it contained lead. My father could never understand these doubts and fears. I tried to explain *Greenman v. Yuba*.

So in the late 1960s, Popular Printing, Inc., went belly up. Thirty years after its demise, when I was cleaning up my mother's home to ready it for sale in 1996-1997, one major task was sifting through one-half of a two-car garage which was piled high with—well, who knew? As some of the top boxes came down, I found buried against the wall, stacked eight feet high and many feet outward, what must have been all the raw materials for the items that PoP, as the company was nicknamed, had been planning to sell: thousands of thin aluminum tubes, open at the end, into which the ink would be poured; literally a ton of furniture (the small pieces of wood for locking the form into the chase); rollers; hundreds, maybe thousands, of plastic frames of the Liberty Press, and on and on. Buried for three decades, as if my father could not bring himself to admit that there wouldn't someday be a sudden demand that he could fill. I also found a four-drawer filing cabinet stuffed with order forms, and, saddest of all, a large batch of unopened letters from the late 1960s that proved to be actual orders that could not be fulfilled because the company had ceased operating. It all went to the dump.

Still, my father remained optimistic. In *Type and Typefaces*, he predicted that the study of typefaces would become universal. He was right, but for



the wrong reason. He thought that people would heed type in its lead form; what he almost lived to see (he glimpsed it, briefly) was the astonishing development of digital type, which truly has spread across the world and which actually is being used by millions of people. Right idea, wrong technology.

Along the way we had a procession of presses. One of them, an 8x10 tabletop Chandler & Price, also known as the Pilot Press (the numbers indicate the chase size in inches), I have to this day (see p. 13). We also had motorized presses, usually 10x15. For a couple of years in the late 1950s or early 1960s we had a giant press, I know not what kind, that must have been seven feet tall and had octopus-like tentacles with suction cups at the end. It was a self-feeding machine, so that you didn't have to stand in front of it. It was a sight to behold—when it worked. Mostly it seemed to break down, and I'm sure the repairman made a good living servicing the damn thing.

But my father's proudest acquisition was the 1891 Hopkinson & Cope Improved Albion Press No. 6551 (see back cover), with which William Morris (1834-1896) at his Kelmscott Press in England printed the monumental Kelmscott *Chaucer* (1896), next to the *Gutenberg Bible* probably the most renowned printed book in the world. The story of the acquisition and the press's travels has been told elsewhere (see sources, p. 24).

The Albion, which weighs about 3,000 pounds, was Morris's third press, purchased and specially reinforced for the back-breaking task of printing the *Chaucer*. In 1924, the press was brought to the U.S. by Frederic W. Goudy, the preeminent American type designer. Goudy so revered the press that he wrote: "[My] acquisition of this press should be sufficient reason to insure for [the] Village Press a very definite mention in the annals of American printing."

My parents acquired the press in late 1960. Early in 1961, a letter arrived from Sydney Cockerell, Morris's assistant, who was then 94. He wrote that "any direct copying or adaptation of Morris's types and ornaments would, in my opinion, be a fatal mistake." True.

Restoring the press was apparently an important event, for the *New York Times* published a story, about which I felt quite embar-

rassed. I was home during January intersession and chanced to be alone in the house when a *Times* photographer showed up at the door. I suggested that my parents should be pictured; couldn't he come back? Of course not: he was ready to shoot. He bade me don a jacket and tie and pose (inside cover). Upon hearing I was in college he asked whether I was "pre-lore." It took awhile to understand that this was a New Yorker's way of enunciating "pre-law." (I'd been east only four years.) I told him I was not. Little did I know. (Incidentally, if my father felt upset that my picture, not his, ran in the *Times*, he never said a word to me, then or after.)

The press was renamed the Kelmscott/Goudy (or K/G) Press, Kelmscott because Morris himself was not sentimental about machinery (see Fiona McCarthy's magisterial biography of Morris) and Goudy because Goudy was. Reflecting its stay in America, the press was topped off with a miniature Liberty Bell. It was the occasion of many parties, printing assemblages, and other get-togethers. The K/G was never much pressed into service because, as it turned out, it is very cumbersome and difficult to use—one of the most astonishing aspects of the *Chaucer* is that it was produced with such magnificent craftsmanship on such a labor-intensive machine. There was, however, a standing form of a bookmark, into which visitors could set their names. Several hundred people over the years printed a personalized bookmark. Their names and signatures are dutifully inscribed in a small guest book kept by the press. Perhaps the most moving occasion was the arrival one evening of the elderly Alfred A. Knopf, the dean of American publishers, who cared enough about fine typography that at the back of every Knopf book is a colophon listing the typefaces used. Knopf confessed, as he pulled his copy of the bookmark, that it was the first (and undoubtedly the only) time he had ever actually printed anything.



The K/G sits yet in my home in a room downstairs with a door-frame that had to be specially widened to get it in. In an afterword to a book about the K/G (see p. 24), I wrote that I intended to “make plans to put it back into active service. In this day of desktop publishing, digitized type, and laser printers, it seems worthwhile to preserve the old craft by publishing, from time to time, pages that smell of ink and feel the stamp of metal. The K/G has no plans to retire.” Alas, neither do I, and until I do, lord knows how one would work up the stamina and knowledge to actually operate the monster.

That’s largely because of the third revolution in type, the digital revolution. Into my forties I was content to print stationery letterhead or an occasional invitation—the equipment was there, after all, and it was free, and I knew how to use it. But it was a lot of work, and there were inklings of great improvements to come. In August, 1975, I was browsing through the exhibit hall of the American Bar Association’s annual meeting, held that year in Montreal. Among the exhibitors were Xerox and IBM. At one of the booths (I don’t at this remove remember which one), a young woman used a phrase I had never heard before: desktop publishing. She explained the concept to me: you could set type just by typing—in effect, a linotype machine attached to your typewriter. It was a little fuzzier, to me, how you would produce your printed product: if laser printers were on the market I had certainly never heard of them. She might have had in mind taking to a commercial shop the disk file of a finished publication, laid out by some software program sold perhaps by the computer manufacturer. (Late in his career, my father purchased for a large sum of money a photocomposition machine from Itek. It involved inserting some sort of matrix which then, through a keyboard, produced film output, using chemicals, that would eventually make a page. I don’t remember the technology, but it was big and bulky and messy and time-consuming by today’s standards.) In any event, the woman in Montreal was confident that within ten years, and for \$10,000, desktop publishing would be a reality.

As it turned out, that was a fairly accurate prediction. In 1985 desktop computers were beginning to be powerful enough, and an

early version of PageMaker was available for layout and typesetting. It was still a bit too soon, though, for good results at the price named. When I began desktop publishing in 1988, it cost around \$8,000 for a computer and printer with enough power (a 386 Dell), PageMaker 3.0, and an HP Laserjet II to print book pages. In fact, Jo and I produced 600 camera-ready pages for the 25th Reunion Classbook of the Yale Class of 1964. That book looks pretty good, even though it was set at 300 dpi (dots per inch). Most of my home-produced monographs, by contrast, are set at 1,200 dpi (true book quality is around 2,400 dpi). In retrospect, the type programs in those days were crude. A hardware and software package (from Lasermaster) that souped up the printer required individual fonts (face and size) to be generated one at a time from a master file, consuming much time and storage space on the then tiny hard drives. Older folks will remember computers without hard drives. In 1982, my first computer had two floppy drives only. A hard drive would have cost \$1,000 for a single megabyte of storage, meaning that the 60 gigabyte drive in my current computer, a Dell Dimension 8100, would have cost \$60 million (more, in 1982 dollars)—an astonishing price drop in 20 years, quite aside from the far greater computer power now available.

Today, more than a quarter century after my conversation with the woman in Montreal, desktop publishing has fully arrived, with technology far superior to that which she predicted for 1985, and considerably cheaper than \$10,000. For one thing, almost any computer will provide ample speed and power. For another, you no longer need PageMaker (though I have faithfully upgraded at every opportunity), or QuarkXPress, or any of the other major layout programs. The latest versions of WordPerfect are themselves nearly full-fledged layout programs, permitting fairly fine control over both the line of type and the placement of margins on the page for binding purposes. (Not book quality, but close enough—for a pamphlet.) Type itself comes by the virtual armful with all word processing and page layout programs (I never could have lifted or stored the comparable quantity of metal type available on the WordPerfect installation disk—more than 1,000 fonts in four or more weights). High-quality

type can be downloaded, font by font, from the web sites of “foundries.” Also, relatively high-speed color laser printers are available for a few thousand dollars, so that if you have the patience to reload your paper tray every half hour or so, you need no longer produce camera-ready copy or pay for the final printing at a job shop. You can do it all yourself, just as I have done with some copies of this monograph—written, typed, composed, printed, assembled, bound, and trimmed at home. Since it is tedious to bind hundreds of copies that way, however, and recuperation from an illness deterred the physical labor, most of the copies (this one included) were commercially printed and bound from the electronic page files.

No more lead, no more composing sticks, no more hours in front of the type cabinet, no more inks and solvents, no more feeding the press one sheet at a time. The future has arrived, a future not envisioned by anyone until the last three decades. It is the democratization of the print shop. A. J. Liebling’s mordant quip—that the press is free for the person who owns one—is rapidly losing its sting. For print production, photocomposition and digitalization constitute the second great advance since Gutenberg, after the linotype machine itself. You hold in your hand a product of the Second Incunabula (well, post-incunabula; maybe the Second ends after 1999 or 2000).

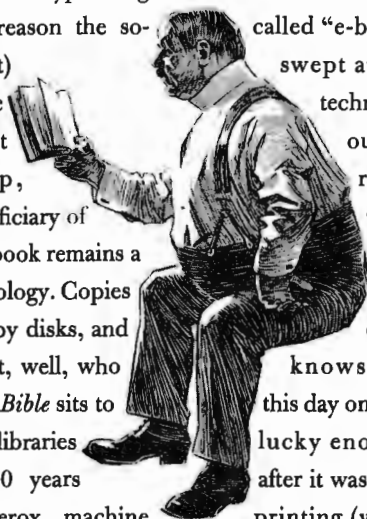
Problems, however, remain. For one thing, the incredible proliferation of typefaces makes it difficult for most people to distinguish good from bad. A huge number of recent digital faces are junky, clunky, or just plain awful, not fit for the printed page (there was a similar profusion of vulgar designs, mostly for advertising, in the late 19th century; and Morris, for one, hated most of the roman faces of the era). Today, designers of all stripes seem to delight in creating faces that at best can stand to be used in posters or advertisements. For another thing, the same faces are being multiplied under different names. That’s largely an artifact of our confused legal system, which does not permit the letterform to be protected by copyright or design patent. The name of a face, however, can be trademarked. So “foundries” and “designers” shamelessly steal the intellectual labor of others and market the same faces under a multitude of names. We



sorely need an up-to-date typeface gazeteer, to learn that what one firm calls “Swiss” and another calls “Arial” (the omnipresent Windows face) is actually an aping of the original Helvetica (which has at least 11 other names to boot).

Yet another problem is the spread of bad design—or no design at all: overused and mismatched faces and terrible layout, to note only the most obvious problems. Probably the most overused face (after Courier) is Times New Roman, designed in 1932 by Stanley Morison for *The Times* of London. A workhorse face (well-proportioned and compact, allowing more text to fit on a page than many previous faces), it has now become a ubiquitous cliché.

More worrisome is the retrograde effect of the Internet. Staring at a computer screen is difficult for many reasons. One important one is the resolution of typefaces, far lower than to what more than half a millennium of metal type design has accustomed us. I suspect that one reason the so-called “e-book” has not (at least not yet) swept away the real thing is that the technology simply cannot present our eyes with clean, sharp, readable type. The major beneficiary of Gutenberg’s revolution, the book remains a marvel of information technology. Copies of text stored on our old floppy disks, and even CD-ROMS, will last, well, who knows how long? The Gutenberg *Bible* sits to this day on the rare book room shelves of libraries lucky enough to own one, nearly 550 years after it was first printed. Unlike the Xerox machine, printing (whether with digital or metal type) allows multiple originals, easily made. Real type—clean, chiseled, elegant, proportional—makes reading not merely utilitarian but pleasurable. Until the new electronics can match what type delivers, the printed artifact will remain secure.



*Jethro K. Lieberman*  
August, 2003



Text and main title type: Bulmer MT 10/12

Subtitle type: Adobe Caslon

Initial cap "A": Designed by William Morris  
for the Kelmscott *Chaucer*

Page number ornaments: Arabesque Ornaments

Cover stock: 80 lb. Howard Linen; text: 80 lb. Finch Vanilla

Composed in WordPerfect 11 & proofed on a Tektronix 740

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pp. 2, 8, 10, 15, 19, 23, 24: old-fashioned woodcuts and drawings are from *Books, Reading & Writing Illustrations*, Dover, 1998.

p. 6: composing stick, from Warren Chappell, see inside back cover; 7: chase and form, from Briar Press website; 11: Linotype machine, from Ilene Strizver, *Type Rules*, North Light Press, 2001; 13: Pilot Press, from Briar Press; 16: Liberty Press, from J. Ben Lieberman, *Printing as a Hobby*; 17: type letter, from *id.*

Back cover: the woodcut of the K/G Press was drawn and cut by John De Pol for the Herity Press; it is reprinted in *The Liberty Bell on the Kelmscott/Goudy Press* (see Sources below).

#### Sources:

p. 11, Mark Twain: "Dr. Loeb's Incredible Discovery," in *Tales, Sketches, and Speeches 1891-1910*, Library of America, 1992, p. 650.

p. 18, migrations of the K/G: "The Liberty Bell on the Kelmscott Goudy Press," *The Black Art*, Summer 1962, or, visually more imposing, a book by the same name, Yellow Barn Press, Council Bluffs, Iowa, 1996.

Printed in an edition of 500 copies  
by Hull Printing, Barre, Vermont, for The Press at James Pond

## DEFINITIONS

- chase*: metal frame into which type is locked and which is locked in the press.
- furniture*: blocks or strips of wood that fill in around the type in the chase.
- incunabula*: Printed books before 1500, or the period roughly between 1440, when Gutenberg was thought to have first invented movable type, and 1500. The term derives from the Latin for cradle or the straps that hold a baby in a cradle, meaning infancy. These earliest printers produced 35,000 titles and an estimated 12 million copies, dwarfing the output of two millennia of scribes making hand-copied manuscripts.
- kerning*: a kern is a piece overhanging the body of the type (for example, the ascenders and descenders of the "f"). Kerns are fragile and tend to break off, so certain letter combinations, called *ligatures*, appear on a single piece of type. Kerning is the individualized spacing of letters that would otherwise appear to be badly spaced in combination—e.g., Ya vs. Ya.
- leading*: spacing between lines.
- ligature*: letter combinations on a single piece of type, especially "ff", "fi", "fl", "ffi", "ffl" (see kerning). Cf. non-ligature ffi with ligature ffi.
- makeready*: final preparation of type in the press to insure even printing.
- quoin*: a device, usually metal, that expands to lock the furniture in the chase.
- serif*: small endings or flourishes on the tips of letters of particular fonts (e.g., the horizontal line at the bottom of the "p" in this font).
- stick* (or *composing stick*): a three-sided metal box for holding type as it is set from the type case.

## WEBSITES

[www.briarpress.org](http://www.briarpress.org)

[www.AlembicPrs/index.htm](http://www.AlembicPrs/index.htm)

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