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UPPER AND LOWER CASE, THE INTERNATIONAL JOURNAL OF TYPOGRAPHICS

PUBLISHED BY INTERNATIONAL TYPEFACE CORPORATION, VOLUME FOUR, NUMBER THREE, SEPT. 1977

An exploration of the new and merging word processing and typesetting technologies and what they offer the designer, buyer, specifier and other users of printed communications.

Vision'77, a three-day conference sponsored by the International Typeface Corporation and hosted by the Rochester Institute of Technology May 16-19, 1977, addressed itself to the ultimate consumers who work with type. Newspapers, book and magazine publishers, and commercial graphic arts services have been flooded with seminars, exhibits and trade paper reportage, but the ultimate consumers—such as art and production managers, graphic designers, type directors, printing buyers, advertising and sales promotion managers, marketing directors and some editors and publishers—have been under-informed.

Vision'77 attempted to fill this void. U&lc offers in this and its next issue heavy coverage of the information and thinking exchanged at Vision'77. It is impossible, even in the large number of pages of U&lc is devoting to Vision'77, to produce verbatim coverage. Some 1500 slides plus films and even videotapes were needed for the intensive 3-day "crash course." U&lc has edited down the presentations and, in so doing, captured not just Vision'77's highlights but the major viewpoints and conclusions, together with considerable supportive detail. The bulk of U&lc's report is in the words of each speaker. Vision'77, Part I, starts on Page 2. Vision'77, Part II will appear in the next issue of U&lc.

COMMUNICATIONS TYPOGRAPHICS VISION '77

U&lc.

U&lc VOLUME 4, NUMBER 3, 1977

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In This Issue:

Vision 77
In May earlier this year, a communications conference was held at the Rochester Institute of Technology during which experts from various disciplines gave a three-day intensive update on the new and emerging word-processing and typesetting technologies. Ed Gottschall, who was there, tells all about it. Page 1.

What's New from You Know Who?
In our never-ending effort to present to our readers a series of meaningless comic alphabets, U&lc herein offers "ITC Pomerance"—an arrangement from the fertile brain of Joseph Pomerance, definitely *not* sanctioned for ITC subscribers. Page 5.

Pro.Files
Continuing our elite series on the great graphic innovators, Gertrude Snyder provides some interesting perceptions of Saul Bass and Bradbury Thompson. Page 8.

Calligraphy Is Alive!
In an earlier issue, we presented to everyone's apparent delight the calligraphic doodles of Raphael Boguslav. This time around, the doodling is by T.S. Girvin—the difference being that, among other things, they were written to music. Page 14.

Ms. Constance von Collande
Our Ms. lady this issue is an art director with a fine regard for quality and elegance, which—as may be verified within—she manages to instill in campaigns for the leading cosmetics companies. Page 16.

A Little Rebellion Now & Then
In an interesting experiment, the William James Association of Santa Cruz, California invited various shops to reprint in their own way a series of Revolutionary broadsides from our Founding Fathers which continue to have ample meaning for our own time. Page 18.

Power-Packed Posters of Frieder Grindler
The powerful theatrical posters of this gifted German artist contrast remarkably in effectiveness with similar work designed for the theater in the United States. Page 20.

The State of the World
Irrepressible Lou Myers makes us smile—and think—as he draws on the cruel absurdities of everyday living which we somehow take in unwitting stride. Page 22.

Cream of the Cream of Wheat Ads
Last issue, Carol Wald presented our readers with a group of charming illustrations of "Rewards of Merit." Here, she has dug up several magazine prints commissioned by the Cream of Wheat Company for ad campaigns by such renowned artists as N.C. Wyeth and James Montgomery Flagg. Clients don't come like that anymore! Page 24.

Something for Everybody
Our popular regular feature of thoroughly irrelevant minutiae, trifles, niceties, wisdom (?), and you name it. Page 30.

What's New from ITC
ITC Avant Garde Gothic Oblique is offered in a complete series of Light, Book, Medium, Demi, and Bold and is available only to licensed ITC subscribers. The Italia series, in three weights of Roman, is licensed to ITC by Letraset International Ltd. Page 32.

The Human Zoo
Anthropologist Ernest Hooten once said man "never should have stood up." According to the contents within, the man may have had something. Turn to Page 36 and judge for yourself.

Jeu de Paume
In earlier days in France, the game was called *tenez*. Which is by way of introducing our new crossword puzzle based on the sport. If you're a duffer on the courts, you may be a superstar on paper. Tennis, anyone? Page 38.

Stamp Out Art!
A fascinating new form of rubber stamp art put down by Andrew and Lucie Nevai of the Big Island Gallery as designs for clients, as gifts for friends, for cancelling checks, and for their own enjoyment. It's instant, it's portable, it's cheap, and it's certainly different. Page 40.

COMMUNICATIONS TYPOGRAPHICS '77SION

PART 1

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Perspectives Page 3
The Future of Typography Page 42

Typo/Graphics
Craftsmanship and computers Page 46
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Effects of new technologies on typeface designs Page 49
Page and area makeup Page 51
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Sound is just one form of noise.

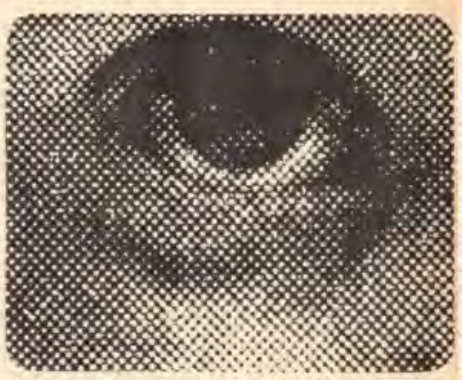


Punched cards—one form of binary system.





In some systems redundancy can preserve the message in spite of noise.



Binary systems need not restrict information processing if enough decisions are made.

Orientation

"A Communications Primer"

The basic principles concerning communications clarity and effectiveness were graphically portrayed in a beautiful film created by Charles and Ray Eames. This film opened and keynoted Vision '77. Among its many thoughts, the following helped put Vision '77's emphasis on technologies into focus with their purpose: improved communications.

The process

Almost any communication process consists of an information source that selects the desired message out of a set of possible messages, a transmitter that changes the message into a signal sent over the communications channel to the receiver, where it is

decoded back into the message and delivered to the destination.

Noise

Every such system contains **noise**. Noise is a term used in the communications field to designate any outside force that acts on the transmitted signal to vary it from the original. In this usage, **noise** does not necessarily mean **sound**.

Reading is a form of communication where the word is the signal, the printed page the transmitter, light the channel, the eye the receiver.

Sound can act as noise and interfere with the message. But in some situations, like reading on a train where the sound level is normally high, it is not the **sound** that interferes with the communication process as much as the motion and the unpredictable quality of the light source. Quality of light and motion, then, become noise.

In radio, noise could be static.

In television, noise is often the distortion of the picture through transmitting or receiving.

In a typewritten message, the noise source could be in the quality of the ribbon or the keys, and we are all familiar with the carbon copies that keep getting progressively worse.

Anything that acts on the signal so as to vary it in an unpredictable and undesirable way in the communications system is noise.

Redundancy

Consider telegraphy. We will use a New York stockbroker's office as the information source, and a Los Angeles stockbroker's office as the destination. There may exist at the information source just two possible messages...**buy** or **sell**.

From these two, the message **sell** is selected, then coded by the telegraphic key, which is the transmitter, and sent over the channel in electrical impulse signals, decoded by the receiver back into the message **sell**, and delivered to the destination.

Noise, of course, is there, this time acting electrically. It could distort the signal in such a way as to change **sell** into **self**, but as there are only two possible messages, **buy** and **sell**, there is sufficient redundancy in the spelling of the words that even if it did read **self**, the information would still be clear...

The English language is about one-half redundant. This extra framework helps prevent distortion of the message in the written language, or in the spoken language...

But besides noise, there are other factors which can keep the information from reaching its destination intact. The background and conditioning of the receiving apparatus may so differ from that of the transmitter that it may be impossible for the receiver to pick up the signals without distortion.

Decodability

In any communications system, the receiver must be able to decode something of what the transmitter coded, or no information gets to the destination at all. If you speak Chinese to me, I must know Chinese to understand your words.

But even without knowing the Chinese language, I can understand much of your feelings through other codes we have in common.

There are systems of communication where there is no redundancy and no duplication of the message. Here, knowledge of the code is essential.

In planning "one if by land," "two if by sea," the fellow on the opposite shore simply **had** to know the code...

This picture (halftone of an eye, page 2) can be printed one color of ink at a time. In this case black ink on white paper. In order to transmit the image, it had to be broken down to many points of decision. Black—or white.

We know that such a limitation is not at all restricting if enough decisions are made. In this case, half a million decided points give fair rendition. A million would be better. Conventional printing of color is no different, except that with the added factor of color, four times the number of decisions had to be made.

Complex decisions and the calculator

Whenever added factors in a problem are recognized, the number of decisions necessary for the solution grows by large leaps. As theories and equipment and men develop, it becomes apparent that one sure way of handling multiple factors is to build a system that can handle each decision in its time.

We have long known the theory on which complex problems of many factors can be solved. But the number of decisions, the calculations necessary, were prodigious...and not until the recent development of the electronic calculator could these areas be touched.

The problem became one of communication between man and machine...between machine and machine...between machine and man.

The cards are punched, or not punched. Light passes, or stops...and by this binary system, information is fed the machine...

The ability of machines to store information, manipulate, sort and deliver it is fantastic. And with their complex feedback systems, their memories, their almost human reactions to situations, it is understandable that they are popularly referred to as "brains." The greatest fallacy in the comparison is one of degree. The decisions made by the machines are comparable in number to the half million in a halftone. But far greater is the number of stops and go's performed by the human nervous system in order to complete the simplest act. So great that if each decision were represented by a small halftone dot, the total area of dots would cover several earths...

The responsibility of decision

Yet many things which we accept as undecided vagaries would be, if we could bring in our focus, sharp, decisive individual units. It is the responsibility of selecting and relating parts that make possible a whole which itself has unity. The line on which each color breaks, and the point at which each of the dots that make up a painting is placed, affects the whole canvas. The communication of the total message contains the responsibility of innumerable decisions made again and again...always checking with the total concept through a constant feedback system.

No matter where it occurs
No matter what the technique

Communication means the responsibility of decision all the way down the line.

Orientation



Edward M. Gottschall
Director of Information and Marketing Services
International Typeface Corporation

Perspectives

Noise

Our best ideas, our best words and graphics, must be communicated with a minimum of noise to be truly effective. Although we are primarily concerned here with machines and interfaces and systems, we should always be conscious of two communications principles. Firstly GIGO...that Garbage Input produces Garbage Output. And secondly, for our communications to be fully effective, they must be noise-free.

Noise can be your speaking French when I only understand Swahili. Or radio static. Or garbled transmission of a telex message. Or poorly expressed ideas. Or typefaces or typography that creates the wrong impact or mood or reduces legibility and minimizes comprehension or even discourages readership.

But, given well conceived and well aimed noise-free input, our new technologies enable us to dramatically increase both the efficiency of producing and the effectiveness of conveying our print messages.

Perspectives

And now, let's put the new typesetting technologies into perspective with developments in the rest of the graphic arts.

An increasing number of companies, large and small, are now setting, or at least keyboarding, some of their own type, making plates and printing internally. Linking together these trends and the separate but related segments of the graphic arts industries are two ongoing forces:

1. Linked operations

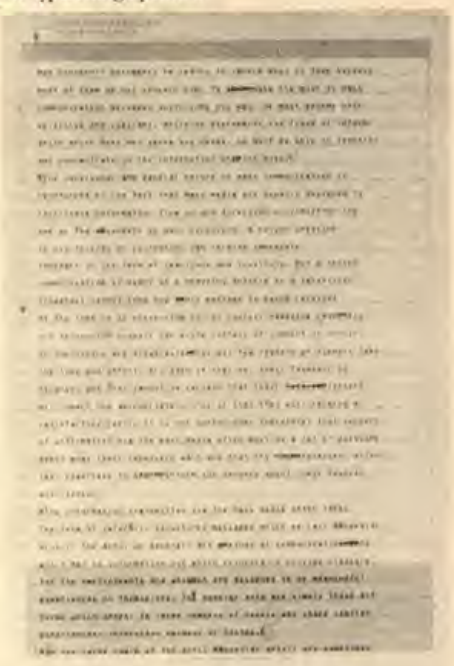
Increasing integration of the sequential steps of print manufacturing. What long have been separate operations are becoming part of one continuous system. This is true in commercial printing operations and in the growing in-office reproduction centers.

An integrated Addressograph-Multigraph office printing system, for example, includes a platemaker, press, and collator. Binding equipment can also be hooked up in tandem with such a system.

2. Front-end responsibility

There is a shift throughout the production line, toward the front end, of who does what. The word originator...the reporter, author or copywriter, for example, is often now the first and last person to keyboard the copy. The keystrokes captured by him or her can be stored, recalled on the screens of editing terminals for additions, deletions and corrections, and put on line for typesetting along with necessary typographic commands when so desired. Many of these operations, until now, have been performed long after the copy has been keyboarded and far removed from the word originator. Video display terminals, direct-entry typesetters, stand-alone keyboards, word processors, and OCR typewriters are among the keyboarding and system options available to the word originator.

Evidence of these broad trends is in the electronic linkage of composition, layout, makeup and platemaking operations; or in the increase in tandem printing, folding, binding, addressing and sorting operations; or with authors whose manuscripts are cottage-industry retyped with OCR readable letters and then scanned instead of being rekeyboarded by the typesetting operator.



Retyped manuscript, ready for OCR scanning.

This is a piece of a McGraw-Hill manuscript that has been retyped and is ready for OCR scanning. Only the black copy is scanned. Red areas toward the bottom alert the typist when the end of the sheet is being approached and facilitate a line count. Red brackets around codes are made by keyboarders checking the work.

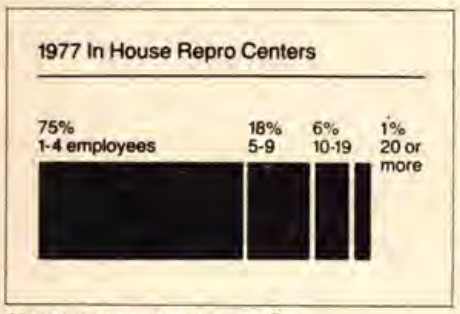
Costs down, versatility and quality up...Just as phototypesetting machines of exceptional versatility have been dramatically lowered in cost while improvements were being made in the quality of their output and their ease of operation and main-

tenance, the same is true of in-office duplicators, platemakers and presses.

The swing to in-office operations is not confined to keyboarding or even typesetting. While manufacturers of low cost film typesetters have their eye on the 68,000 or so offices with over 250,000 offset duplicators, just in the United States, manufacturers of offset duplicators are increasing the capability of their equipment.

The in-house boom

One estimate predicts that by 1979 the number of in-house reproduction centers will grow from 68,000 to 80,000. Another estimate blueskies the number to 150,000 by 1980. The number of in-office reproduction centers is much greater than the number of commercial printing and typographic services and the gap will continue to expand in the coming decade. Perhaps more significantly, the variety, sophistication and capability of such equipment will make many an in-office installation more like an electronic printing plant than a duplicating center. Integrated into a system, such an in-office operation could be capable of keyboarding or scanning and setting its own type, making up pages on film with all type and screened halftones in position, making press plates, printing, folding, binding, collating, inserting, addressing and mailing. Furthermore, the day of electronic area page makeup, via operator or stored format commands, is imminent.



Most repro centers are small.

Of course, some large in-plant operations are doing some of these things now. Of the Fortune 500, 450 have in-plant printing operations, as do most companies with 100 or more on their payroll.

But today, most of the 68,000 in-house operations are small. Some 75 per cent have 1 to 4 employees; 18 per cent have 5 to 9; 6 per cent have 10 to 19; and only 1 per cent have 20 or more. That, too, will change.

To buy...or not to buy

The short run scenario is for more, larger, and more sophisticated in-house graphic arts operations. What does this mean...to companies with small or no in-house graphic arts operations? ...To service suppliers?...To personnel?...To the quality, cost and effectiveness of printed matter?

We should be aware that there is a danger that, by not being in the vanguard of this trend, one might be outperformed by one's competition.

Conversely, there is the risk that being first in may also mean first out...that by investing and committing to new systems one may be in the position, in a few years, of amortizing obsolete equipment while not having the resources to replace or update it.

These risks apply to both in-office and service operations.

Process lines blurring

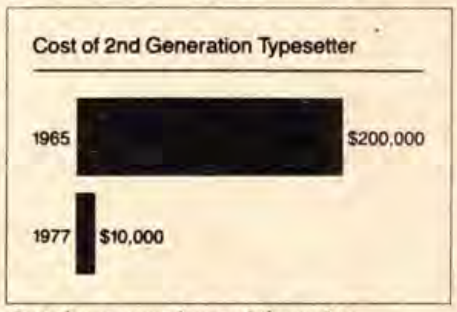
The lines between conventional processes are blurring: photopolymer plates are used in letterpress, lithography and flexography; laser technology is being applied in all the major processes; belt presses for books virtually unify the pressroom and the bindery; printers are offering more mailing and distribution, binding and finishing services even as pre-press operations, such as platemaking or at least production of film flats, are moving out of the printing plant...to the typographic service or even to the in-office operation.

As pre-press, press, and post-press operations become increasingly automated the final responsibility for quality and accuracy of the copy, be it type or graphics, moves into the editorial office and art department. The trend toward customer-furnished composition continues.

Color scanners more common

Color scanners will be widely used by newspapers within a few years. Remember, the newspaper level is the point of entry for these and many other new and expensive systems.

Later, rather quickly, in fact, their costs come down and they become meaningful to commercial printers and, eventually, to the internal plant.



Costs have come down while quality, capability and versatility have gone up.

The high-cost typesetting systems developed for and installed by newspapers are already spinning off low-cost, high-quality, versatile equipment bringing the new systems not only into the commercial printing market but even to the in-office market. This is already true of phototypesetters and platemakers and within a few years may be equally true of video display terminal systems.

Laser engravers

By 1981, laser engravers will speed production of letterpress and offset plates and of gravure cylinders. A blank, lightweight, flexible plate can now be made press-ready in six minutes.

The word processing surge

It is estimated that by the end of the '70's dollar sales of office text editing word processing systems will equal sales of typewriters. Low cost devices (from under $5,000 up to $7,500) now exist that convert the mag tape output of a word processor into perforated paper that can be the input to a phototypesetter.

WP/typesetter interfaces

Interfaces, such as the Typo Verter, and the development of an on-line word processor typesetter linkage will enable word processors to replace some papertape perforating keyboards as phototypesetter input units. Already, an increasing number of photographic typesetters can accept mag card and mag tape input, bypassing intermediate converters, and one low cost typesetter can even be put on-line to a word processor via a Dataphone receiver. In this connection a recent article by Frank Romano in the Inland Printer/American Lithographer reports that in 1975 only 13,000 WP units could be interfaced to phototypesetting—6 per cent of the total WP market. He predicts that by 1980 at least 300,000 WP units, or 15 per cent of the 1980 market, will be able to interface. He sums up the reasons for this drive—"Speed, quality, but most of all the ability to get more readable information on a piece of paper. Ergo, less paper, less printing or copying, less postage, less storage, less handling." Yes—this push is on and for good reasons.

Trend: WP/typesetter all-in one

Some phototypesetters are already in the price range of word processors and are replacing many typewriters and perforating keyboards to produce typesetter inputs. One can already see the day when low-cost, direct-entry typesetters may replace many word processors in a more versatile office reproduction center. At present, word-processing keyboards are little more than typewriter keyboards and are not particularly efficient for typesetting input. They are also limited as to availability of special characters and require more keystrokes for formatting than does a phototypesetting keyboard. However, word processor manufacturers recognize this market and are upgrading their machines to meet it. CRT's have been added to give them a text-editing capacity and other improvements are expected to follow. At the same time, some low cost typesetters are adding larger memories and makeup capabilities. The trend is toward a single, unified system, combining today's word processing, text editing, and typesetting functions.

Programmed formats

In specialized areas programmed formats have already been developed. GraphComm estimates that by 1981 there will be over 200 full-page makeup systems used by U.S. newspapers. The high cost of these systems may limit them to 50-70 newspapers in the next five years, since they require powerful, interactive, front-end editing systems with large memory capacities. But alternative, less costly approaches to automated makeup via template input systems are now in R & D stages.

Already, makeup systems of varying degrees of sophistication are on the market...several hundred with a 9″x12″ makeup area are in operation now. By 1981, GraphComm estimates, there will be about 2000 makeup units in use and they will cope with larger page sizes or areas. And before then, some may be within reach of the user of low-cost direct-entry phototypesetters.

Picture generation

Picture and design generation will improve in quality and be more suited to in-office operations. By 1981 emulsion speeds will increase and daylight loading sheet-film magazines and roll-film cassettes will be more common. Electronic analysis of highlight to shadow densities will be computer calculated to automatically set exposure requirements for separations and halftones, and the tone quality of such non-silver imaging as diazo and other dye formation systems will improve and be more usable for contact printing. All this means that more work can and will be done in-house.

Some CRT and laser typesetters are already able to store in their memory the data necessary to generate continuous tone or halftone images. At present these are comparatively high cost machines but they should be watched by all of us as we have seen so many other at first high cost machines rather quickly come within reach of the in-office center.



Some typesetters can, literally, set pictures like this one.

This picture was generated by a Linotron typesetting machine. The same system that can digitize and store type images for typesetting and/or transmission to remote locations will be capable of doing so for pictures (black and white or color) so that, linked with editing and makeup terminals, complete pages can be electronically set, edited, composed, transmitted and engraved.



This entire newspaper page (including type and graphics) was set and composed on a Pagitron.

This full newspaper page was set and composed on a Pagitron. The Pagitron is an electronic camera, typesetter and paste-up machine. For this page it set, edited and positioned the type; scanned, cropped and positioned the pictures; hyphenated and justified the text. It can also scan the halftone copy and output one-piece film for the full page ready for platemaking.

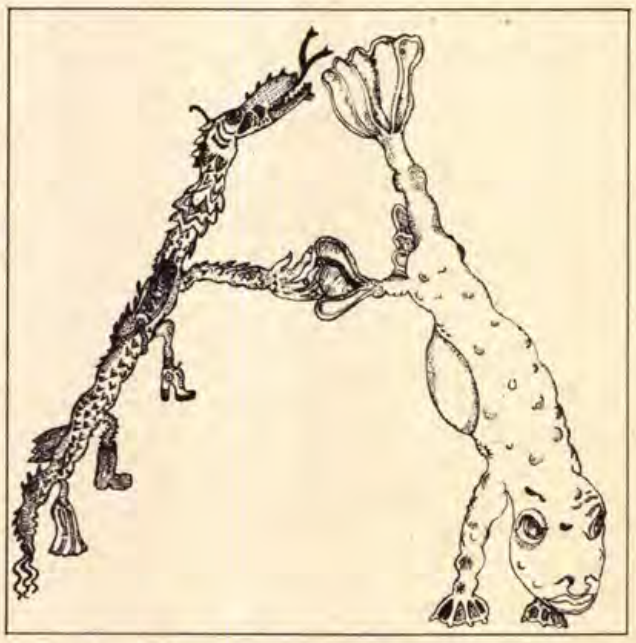
Pre-press operations

The trend is to supply the printer with camera-ready copy with all text and illustrations in position.

CONTINUED ON PAGE 42

What's New from You Know Who?

ITC Pomerance is our preposterous new offering, for the fall season, in a never-ending series of meaningless comic alphabets. It embodies, subtlely, a complete irrationality that renders it even more meaningless than our previous meaningless comic alphabets. ITC Pomerance is being offered in the following weights for ultimate flexibility to enhance the broad spectrum of typographic creativity: X-Light, Light, Book, Medium, Semi-Demi, Demi, Bold, X-Bold, Heavy, Black, Ultra, and Outline in roman, oblique and somewhere in between. This alphabet combines Egyptian elegance, Roman resplendence, Gothic ingenuity, and lots of Latin lasciviousness. It is a peculiar potpourri of unrelated letterforms which stems from the alpha portion of the fertile, overactive brain of Joseph Pomerance. This alphabet is definitely not sanctioned by ITC subscribers.



A is for Amphibian



B is for Bra



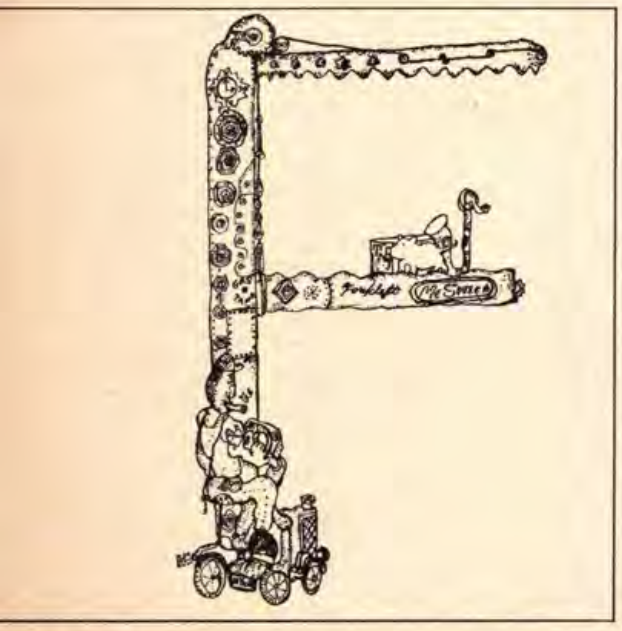
C is for Cackle



D is for Djinn



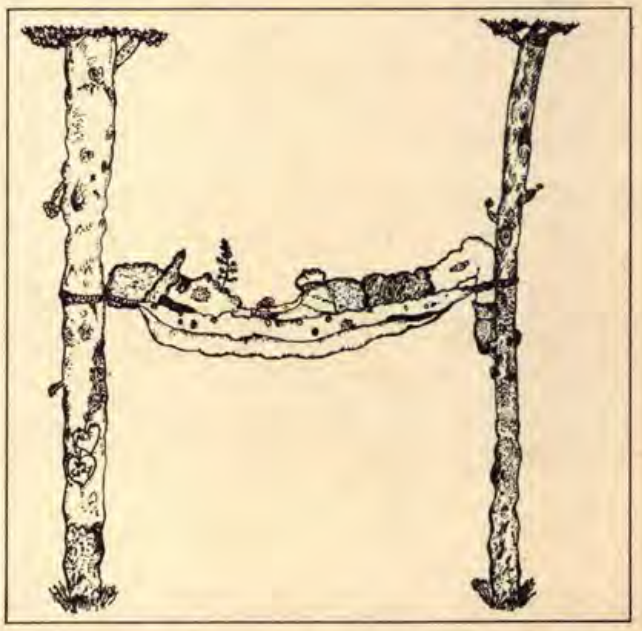
E is for Eat



F is for Forklift



G is for Gargoyle

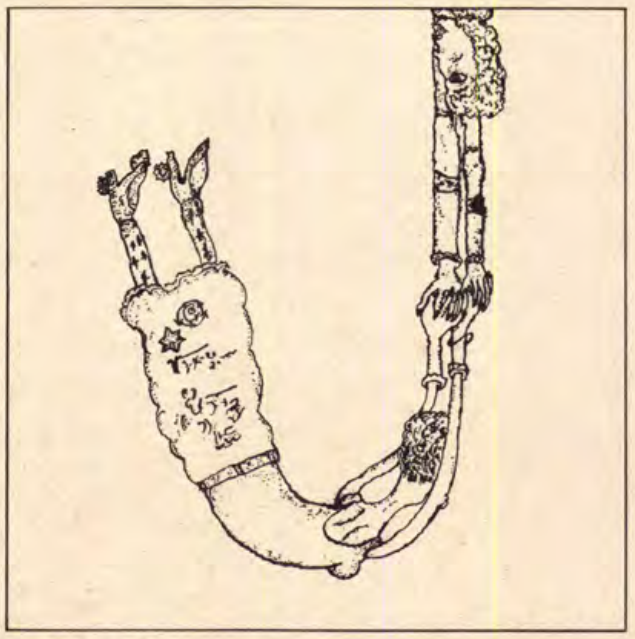


H is for Hammock

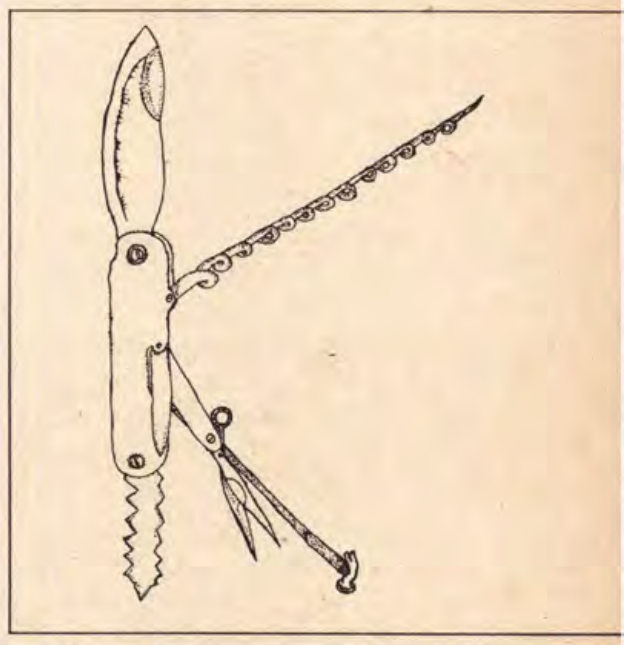
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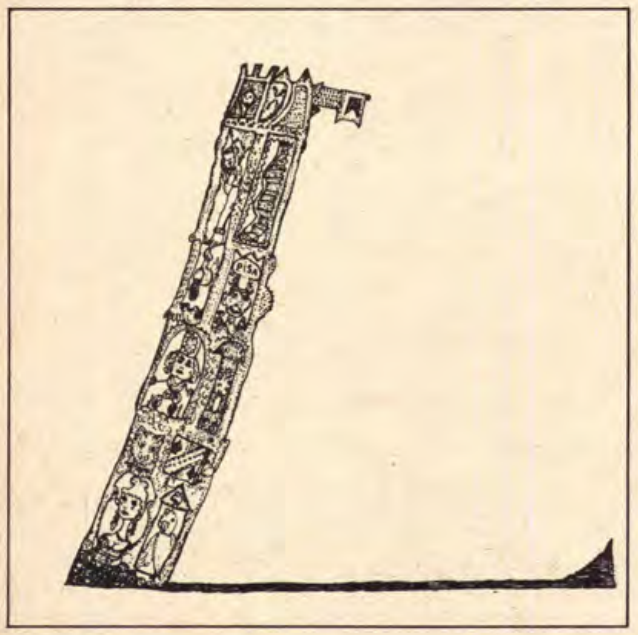
I is for Idol



J is for Jump



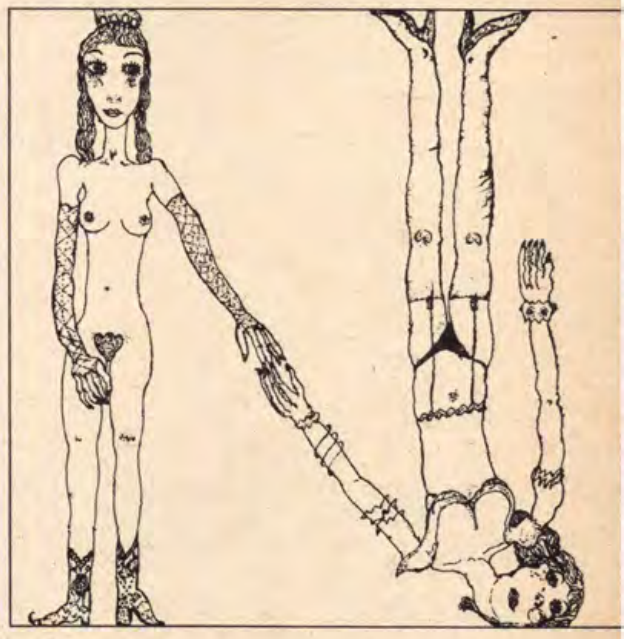
K is for Knife



L is for Leaning



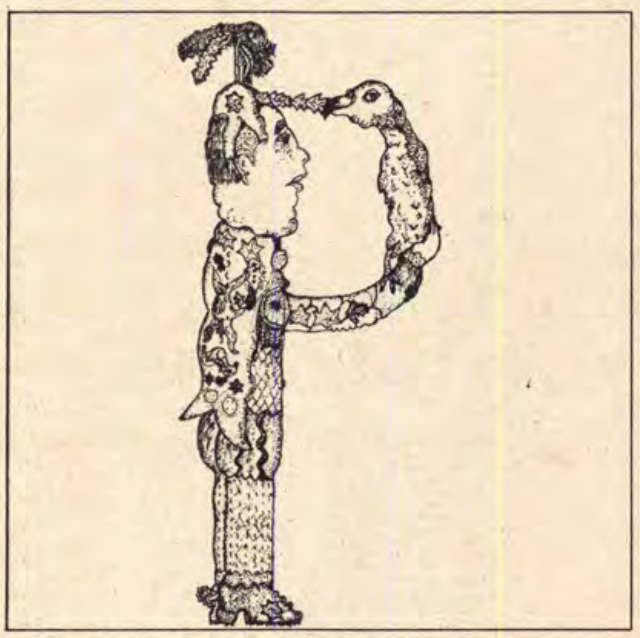
M is for Mosque



N is for Nymphs



O is for Orbit



P is for Potentate



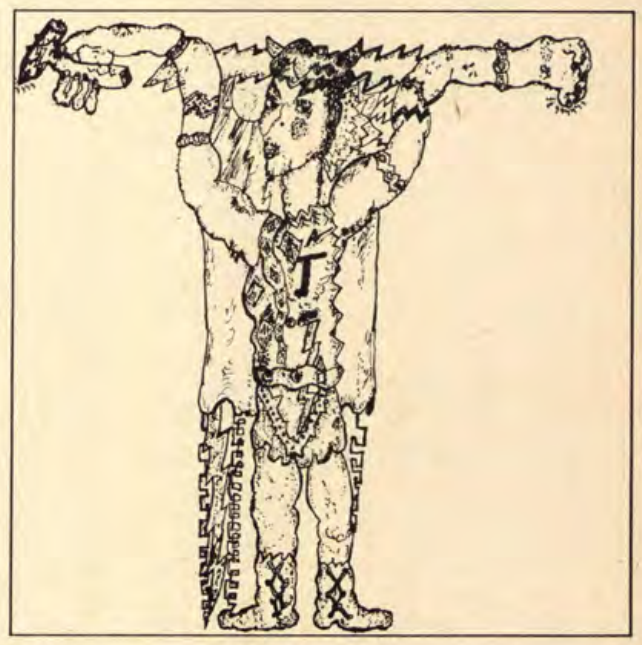
Q is for Queue



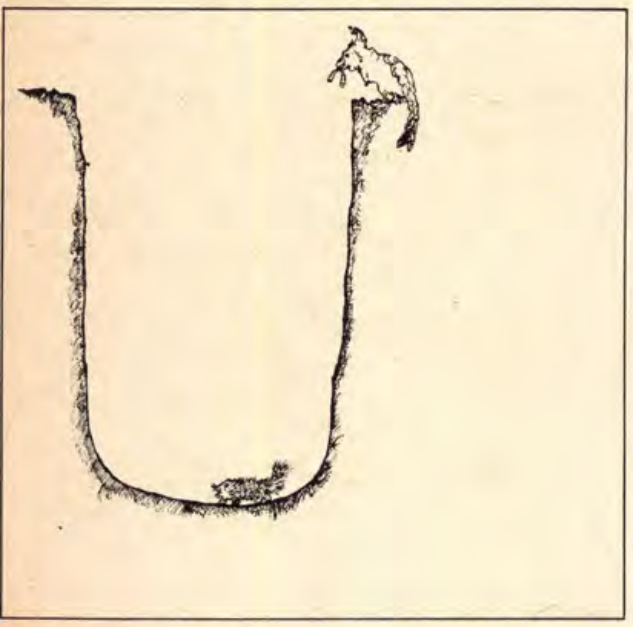
R is for Rapunzel



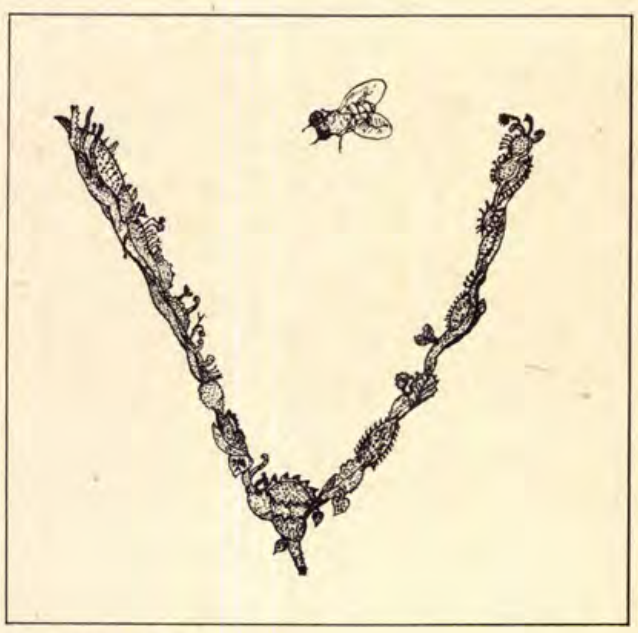
S is for Saxophone



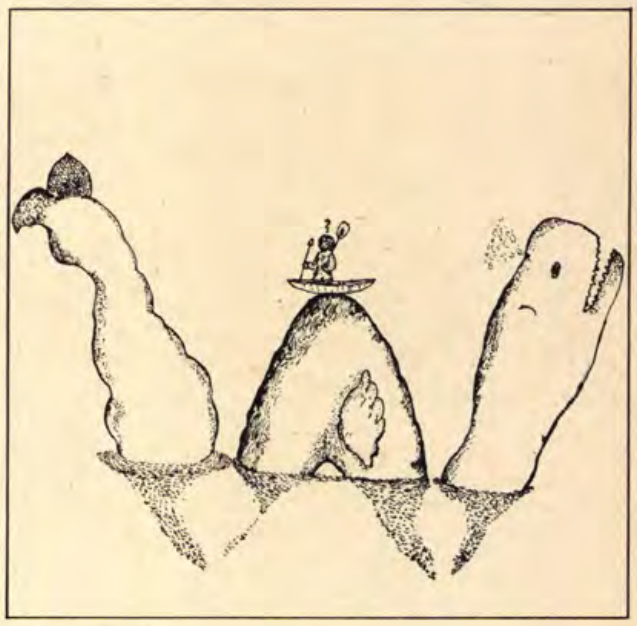
T is for Thor



U is for Underground



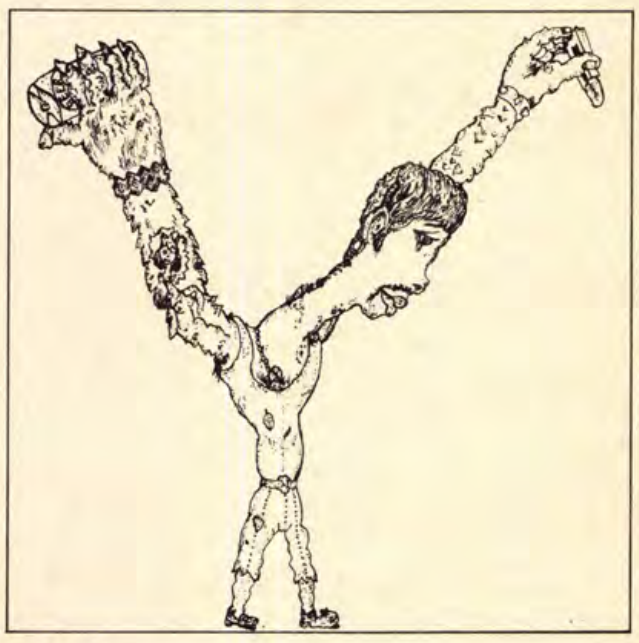
V is for Venus Flytrap



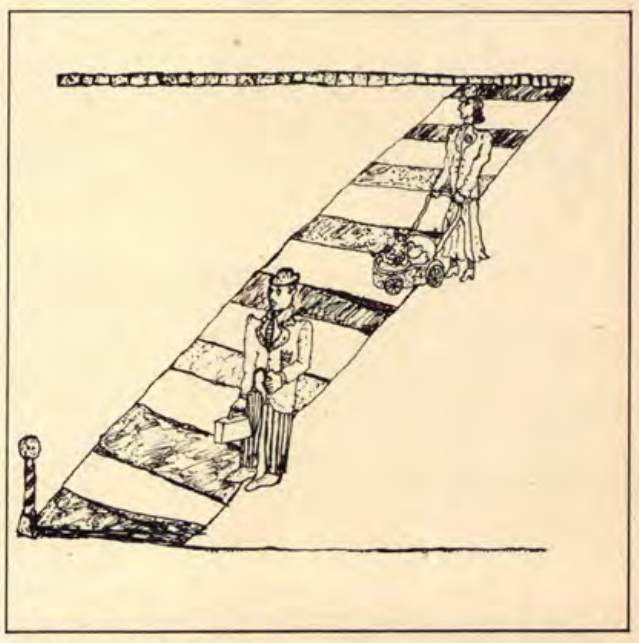
W is for Whale



X is for Xerxes



Y is for Yahoo



Z is for Zebra Crossing

CHRONOLOGY

The Bass attention to detail is exclusive of attention to dates:

New York City-born Saul Bass has made his headquarters in Los Angeles, where he founded a firm engaged in design, packaging, filmmaking and communications consulting.

His work had been exhibited and published internationally; he has written and lectured on corporate identity, marketing, film and graphic design. Most recently, he directed "Phase IV," a full-length film for Paramount Pictures.

He is the recipient of:

The American Society of Art Directors designation as "Art Director of the Year"

the Silver Medal of the Tokyo Metropolitan government for his contribution to Japanese design

appointment as Honorary Royal Designer for Industry, Royal Society of Art, London

Honorary Doctorates from the Philadelphia Museum College of Art and the Los Angeles Center College of Design

and awards from the Los Angeles and New York Art Directors Clubs, the American Institute of Graphic Arts, and the Academy of Motion Picture Arts and Sciences (the "Oscar" for his film, "Why Man Creates"); from the Venice Film Festival (Grand Award for short film "The Searching Eye"); the Chicago Film Festival (Special Jury Prize for short film "From Here to There").

Examples of his work are in the permanent collections of the Museum of Modern Art (New York), the Library of Congress and the Smithsonian Institution (Washington, D.C.), the Prague Museum (Czechoslovakia), the Stedelijk Museum (Amsterdam).

He is a member of:
Royal Arts Society, London; Alliance Graphique Internationale; International Design Conference, Aspen (executive board); Academy of Motion Picture Arts and Sciences; National Society of Art Directors; Package Designers Council; Society of Typographic Arts; Association of Graphic Designers in Sweden.

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The current operative word is roots. Herein, his roots reaching from the Bronx to the big time, an interview with Saul Bass. The session took place in Los Angeles at the Bass design organization, looking up, down and at massed African and pre-Columbian sculptures of museum quality.

"...so that when I got out of high school, I really wanted to go to work and get at the core of what I thought I was...as I said, jokingly, I always wanted to be Saul Bass."

Young Saul's job-hunting M.O. (modus operandi) had no trace of sophistication. "My first job I got by simple methodology. I went through the phone book, listed all the areas I could possibly be employed in, and I started at 42nd Street and the East River, went down both sides of the street, hit the Hudson River, turned around, went down 44th Street. On 48th Street, between 6th and 7th, I found a job in a small studio doing a variety of things, a lot of it in the motion picture business.

In a more sophisticated situation, his story of the m.o. of the late Howard Hughes feeds the root of a Bass dissertation on film. But first, Bass on Hughes.

"...at Foote, Cone and Belding, on the RKO account, I came to deal with Howard Hughes. When I finished the work on a campaign, I would make a phone call to a lady I never saw. I said, 'I'm ready.' From that moment, I had to be reachable by phone. If I went to a movie, I left my name at the box-office. If I went visiting, I left the number where I could be reached. At some point, I'd get a call. 'Be at Beverly and Santa Monica, northwest corner, 11 o'clock tonight.' At 11 o'clock, I'm at the northwest corner of Beverly and Santa Monica. A limousine rolls up, shades drawn; the door opens, a little light goes on; there's Mr. Hughes, unshaven, in sneakers, open white shirt.

"I get in, car rolls, big light goes on, campaign is under discussion. I don't know how he managed it, but whatever time it took, as we finished our talk, the car came to a halt. I got out on the northwest corner of Beverly and Santa Monica, got in my car, drove home.

"...He was a quiet man, strange, fixated, compulsive, and paranoid, opinionated, hard to move once he had a notion; accustomed to having his way. That was what caused me the most problems."

"Does a client like that turn you off, or are you challenged by limitations?"

"It depends on how I view the client. Generally, my clients are at a fairly good level in their organization; are intelligent, smart guys. They don't know much about our business, the communication issues we deal with. If you listen superficially, they will seem not very adept, dealing in an area they have no footholds in. But their intuitions and feelings are significant, and you have to listen carefully.

"...I'm talking of a thing that's hard to do—to listen. Method directors say, 'Listen to the sub-text—the things that are not said—and try to understand the inner life of the situation.' ...The bottom line is: I listen to what clients say, try to discern which specific (it's always specific) is specific, and which specific stands for something else and try to match that with my views."

"Let's talk about film. Is film your major interest?"

This easily articulate man articulates a long pause. "I can't answer yes or no. What interests me is what's new, what I haven't been through before, what's fun to do, what I don't have a handle on, what I have to fight for."

"The next job is the exciting one?"

"It's not the next job, but the kind of problem. If you do something to some degree uncharted for you, it becomes a more intensive learning experience. It's walking on a slippery surface, managing to stay up. That's the tension that makes the work interesting. The minute work becomes predictable, I suffer a loss of interest.

"Film, a complex, multi-level kind of endeavor, offers opportunities for more direct emotional expression."

"Do you, graphic designer, fight with you, film director?"

"Absolutely not. There is a tendency in the graphic field to think that film and graphics are related, or that still photographs and motion pictures are. They're not. The disciplines are only superficially related. In the profound sense of what each is, they couldn't be more dissimilar. One is a frozen moment, the other is presumed actuality in real time. The disciplines required for both are quite different."

"The director can't function unless the set is under control. Do you find a power in this control?"

"Directing a film is an increasing series of transmission belts, cumbersome and indirect. You envy a photographer in direct contact with his subject. Film directing is a difficult and tedious process, very exciting. There's no ego satisfaction in that kind of control because you're too worried to enjoy the idea. Somebody has given you a lot of money to play with a gigantic toy, but you've got to deliver.

"There's an alternate agony and exhilaration in directing. Stories about temperamental directors grow out of the anxiety, frustration. You get mad; it seems everything's conspiring against you. Things get tense when you've got only one crack at it.

"You've got to remember only the director carries responsibility for the whole thing. Everybody else is doing a job. If everybody does a good job, but the picture doesn't come together, then the director didn't do his job. What's 'doing his job?' It isn't that he directed a terrific scene. It isn't that he was smart about the way he staged this, constructed that. He doesn't get points for terrific things. What he gets points for, is that the picture works. And that is hard. It's a miracle."

The miracle has wrought the milieu—a mix of constant phone bells and the vibrant manifestations of a culture whose roots have renewed on the walls of art collectors.

"About your art collection. It's intriguing that, for the most part, it's 3-dimensional."

"I like objects. I don't collect paintings. I respond to the object as a fragment in time and experience. In the classical sense, I have a romantic view of the past. These objects evoke a sense of time, something laden in mystery.

"Some of them are esthetically quite spectacular, but that's not the point. Many are not. I like to collect in groups. What turns me on are the little archaic Colina things. The idea of 30 of them standing there awakes a feeling in me, something mysterious. The form is historically and ritualistically defined, with limits carefully prescribed, yet in massed groups you see the remarkable individuality and differences that occur. I find that fascinating."

"What do you do when you do nothing?"

"Avocations? Everything is my avocation. Being, sleeping; enjoying with my children. Whatever time I have, I tool the kids in.

"And finally...I'm interested in the people I'm interested in. I love the people I love. In early years, we were supposed to have certain feelings about society that often didn't correspond with where we were. You can only start from wherever you are. If somebody says, 'That's a terrific place to be,' wonderful. I want people to think I'm terrific. If they say, 'That's a terrible place to be,' what can I do? Here I am, that's who I've got to be. I'm living my life."

Once more, with roots.

GERTRUDE SNYDER

THIS ARTICLE WAS SET IN ITC BOOKMAN AND ITC AVANT GARDE GOTHIC CONDENSED

DRAWING BY DIAN FRIEDMAN

Pro.File:

Saul Bass



Pro.File: ***Bradbury Thompson***



CHRONOLOGY

1911: born in Topeka, Kansas

1933: while attending high school and college, was employed as draftsman of roads and bridges

1934: attended Washburn University in Topeka, where he majored in economics, was graduated with a BA degree, worked as editor-designer of All-America yearbooks

1938: designed books and magazines at Capper Publications, Topeka

1942: came to New York, and became art director at Rogers-Kellogg-Stillson

1961: as designer-editor of "Westvaco Inspirations," he was an innovator in graphic design with his use of typography, engravings, printing, primary colors, photography

1945: associate chief of the Office of War Information, and art director-designer of the multi-language magazines, "Victory," "USA," "America"

1945: introduced "The Monoalphabet," an innovative simplified alphabet

1959: appointed art director, "Mademoiselle" magazine

1972: became design director of "Art News," and "Art News Annual"

1950: worked as art director on the "Graphic Arts Production Yearbook," eighth and ninth editions

1950: created "Alphabet 26," a simplified alphabet; was awarded the Gold T-Square, National Society of Art Directors

1952: graphics consultant to Westvaco Corporation, a position he still holds

1959: appointed to board of governors of the Philadelphia College of Art

1956: on the faculty of Yale University, and is senior visiting critic at this time

1958: has designed the Westvaco library of American classics: "Typee," "American Cookery," "Tales of Poe," "Benjamin Franklin," "Thomas Jefferson"

1959: one-man show at the AIGA, New York

1970-77: consultant at Pitney Bowes

1970-75: consultant, McGraw-Hill Publications

1965: received an honorary DFA from Washburn University; was awarded the Gold Medal at the Sao Paulo (Brazil) Bienal

1970-73: consultant to Cornell University in the Dept. of University Publications

1969-70: consultant to Time-Life Books: "Library of Arts," "Foods of the Worlds," etc.

1970-76: consultant to Field Enterprises Educational Corp., for whom he designed a new Holy Bible, 1969.

1966-67: consultant at Harvard University in the Graduate School of Business Administration

1969: became a member of the Citizens Stamp Advisory Committee, and has designed postage stamps: "American music," "Search for Peace," "Universal Postal Union," "Bicentennial series, etc

1973: trustee, Washburn University

1975: received the Gold Medal award from the AIGA and had an exhibition there

1977: elected to the Hall of Fame of the Art Directors Club of New York

He has served on the boards of the Art Directors Club of New York, the American Institute of Graphic Arts, American Arbitration Association, Dutch Treat Club, Parsons School of Design, Perrot Memorial Library. He is a member of the Alliance Graphique Internationale, Society of Illustrators, and the Federal Design Assembly Panel.

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What do they share?—a student who invites Dr. Agha* to judge a beauty contest, and a star designer who regrets not knowing his colleagues better.

("It's a strange situation. You have to say you're going to compete with the best—but you don't have the privilege of really knowing them, and they, you.") The common factor? Out of Topeka, Kansas, Bradbury Thompson.

"As I remember, there was greater interest in writing and music than in the visual. My mother painted some. She died when I was seven months old, and my grandmother came to live with us. I think that's a rewarding thing—to have contact with a generation that's even one step earlier than one's parents. If you've known grandparents, you can truly relate to a previous exciting period."

The soft regional speech is the medium that may obscure the message. Bradbury Thompson, good-looking, gentle, with the grit of youth, has amassed a technical background yet to be met in design schools today.

"How did you come to design?"

"My Sunday school teacher, during my last year of junior high school, asked me to work in his civil engineering office. All through school I worked, drafting roads and bridges, and for three years in college at the state highway commission. I was doing drawings just like the graduate engineers. That drafting experience was a very important part of design and discipline. I would do surveying part of each summer, and make engineering drawings during the rest of the year, on huge sheets of tracing cloth. I got a good deal of enjoyment from doing the lettering a little bit fancy at times.

"In high school, we had a journalism teacher in charge of the yearbook and the newspaper. I was art editor, and had a wonderful place to work, at the engineering office just across the old capitol grounds.

"I went to a then small college—Washburn—in my home town. I couldn't afford to go away to college. Probably more importantly, I was naturally just bright enough to realize I was having such great experiences...to have complete responsibility for the yearbook for two years and design responsibility for two more... working at Steves' Printing Company on Kansas Avenue. Entirely a family press: Guy Steves was the business manager; his wife, Maude, the secretary; Roy, the pressman (this was all letterpress); Harold, the son of Jay who was on the stone, ran the Linotype machine; Bob was in the bindery. I just lived there and was able, technically, to do anything I wanted to.

"There was another company—Capper Publications—with big press equipment, an engraving plant and an art studio. Both of these organizations were right on or near the main street, so I had the privilege of meeting the business people everyday, in stores and restaurants. I learned a great deal about older people.

"I designed and supervised the engraving and the printing of the yearbooks for five years after college. I sold the yearbooks—had about 20 colleges and high schools. I would teach youngsters all over Kansas, passing along the things I knew."

"Was this a paying job?"

"It paid $25 a week. I don't think I got a raise, but I did get a bonus for every new book. My college experience was a microcosm of my world to come—living in my home town, becoming familiar with a complete community and its people. I still put myself to sleep remembering the street names in Topeka.

"There were two women who had an electric car, and I would race it home from work. I'd walk two blocks and run four. I did take part in track, the one sport I could afford."

"Were you a good runner?"

"I held the college record for the 100 and 220, which came from walking and running everyplace. College was 20 blocks away, to town was 24.

"But there came a time when there just wasn't anything more I could do. My friends had become lawyers, or they had fathers who owned a hardware store or bakery. There was nothing for me but to go to New York. I was well acquainted with the names of men there and in Europe. I read all the European and Eastern publications in the college and town libraries so I wasn't coming to an altogether new experience."

"But you were friendless and homeless?"

"Only in a sense. I had an introduction to the head of Lakeside Press in Chicago. I showed my work, and he wrote seven letters of introduction to men in New York—the kindest thing anyone could do."

It is the generosity of a preceding generation that enables a young person to do the constructive things he enjoys.

"You had an impressive portfolio?"

"It wasn't bad, I hope. It was large and heavy. I went down to the local leather shop and they made a portfolio of sturdy cloth, with a big handle. I had completely raw hands, and raw feet from new shoes, after I arrived in New York.

"One of my letters of introduction was to a man who ran the printing company Rogers-Kellogg-Stillson, in a big Manhattan building just filled with printers and engravers. The printing plant had five huge offset presses and half a dozen letterpresses right there on the same floor. The typesetter was above, the binder, on the floor below.

"My first day there, a man came in with a blank dummy and said, 'Here, do Westvaco Inspirations for Printers.' I knew that RKS had started the magazine many years ago. I hoped—wasn't sure—they'd let me do it. From then on, for 22 years, I did the majority of issues."

"You pretty much had free rein?"

"Absolutely. There *were* limitations. There was a good budget for 4-color printing, a great budget for typesetting, and for borrowed plates from museums and agencies. That's about where it was. There was little money for new plates and for graphic design. I felt just lucky to be there, to be doing the thing I loved, so with my years of working around a print shop, I knew what I could do inexpensively. I used great shapes of color, overprinting. In addition to normal printing of 4-color process plates, I would take the plates apart and make designs of them, surprinting to get new colors. I used more and more type, blowing up letters to great size, doing patterns with them."

"Limitations forced the form you created?"

"That's right. It was a little embarrassing at first. But I came to be rather proud of it—that the printing press and the print shop were my canvas, easel, and second studio."

"Did you like working on Art News?"

"That was a worthwhile experience...to work with Alfred Frankfurter with his scholarly knowledge of art history, and with Tom Hess, champion of the new artist. They would continually challenge each other with facts of art. For 27 years I was involved with presenting the painting and sculpture of every period."

"Do you live in the country?"

"It's not country anymore. It's a nice little town. The house is old, built the year my parents were married, 1902, with some of the influences of Richardson and Wright—brown shingles, overhanging eaves. You might find it in Topeka.

"I'm not sorry to say I don't have a fancy studio. The master bedroom is a large room. It has a great bay window. That's where my main studio is. Living and working are one thing.

"Stat and type people come by at 9:30 and 1:30 every day. I have excellent postal service. If I mail copy to the typesetter in the Grand Central area, he gets it in the morning, sends proofs back at night, and I have it in the morning. I work Saturdays and Sundays. I get up regularly at 6:30, work till seven at night. I don't have a secretary or an assistant. I do have the largest phone bill in the world. I come to the city on Tuesdays, teach one day a week at Yale for a period each year at the graduate school. That's the greatest thing—to expose your ignorance to young people. You're determined not to let anybody get ahead of you in your life's work. And young people are such wonderful things. You can teach them so much. And learn so much."

Here is the credo of Bradbury Thompson:

"At age 20, planning a college yearbook and anticipating its long hours of production, I wrote something down that has been helpful to me in my work and enjoyment in graphic design"...

"Without dreams,
there is no need to work hard.
Without hard work,
there is no need to dream."

*Dr. Agha and the beauty queen? For his 1934 college yearbook Brad sent photos of the aspirants to Dr. Agha at Vogue.

GERTRUDE SNYDER

DRAWING BY DIAN FRIEDMAN

THIS ARTICLE WAS SET IN ITC BOOKMAN AND AVANT GARDE GOTHIC CONDENSED

SAUL BASS

A "The Man With The Golden Arm," 1956
B "Why Man Creates"—A Saul Bass Film, 1968
C "Such Good Friends," 1974
D "Exodus," 1969
E Environment, 1973
F 10th Chicago International Film Festival, 1973
G Bell System, 1969
H Celanese Corporation, 1965
I Warner Communications, Inc., 1974
J United Airlines, 1974

A



B



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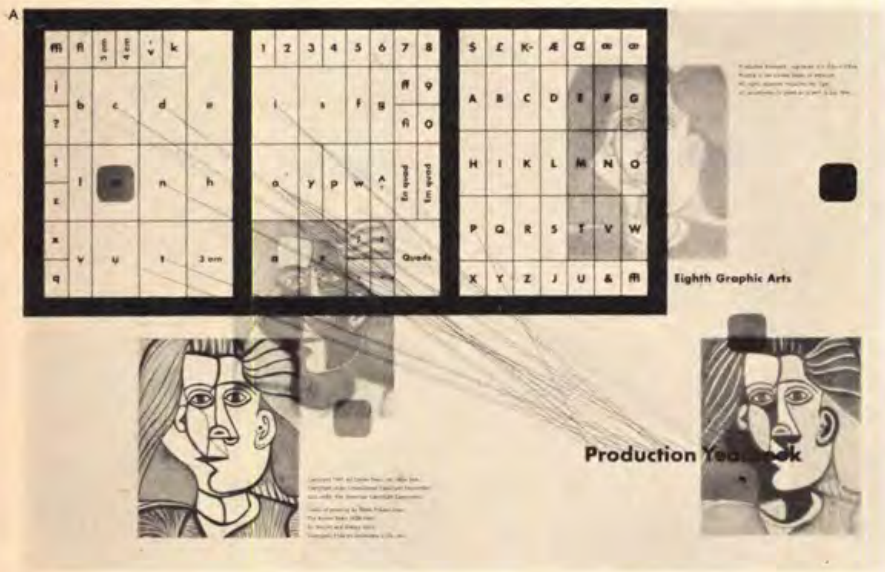
F



J



A



B



BRADBURY THOMPSON

A Eighth Graphic Arts Production Yearbook, 1948
B Mademoiselle magazine, 1952
C Westvaco Inspirations 210, 1958
D Westvaco Inspirations 152, 1945
E Westvaco Inspirations 192, 1953
F Westvaco Inspirations 194, 1953

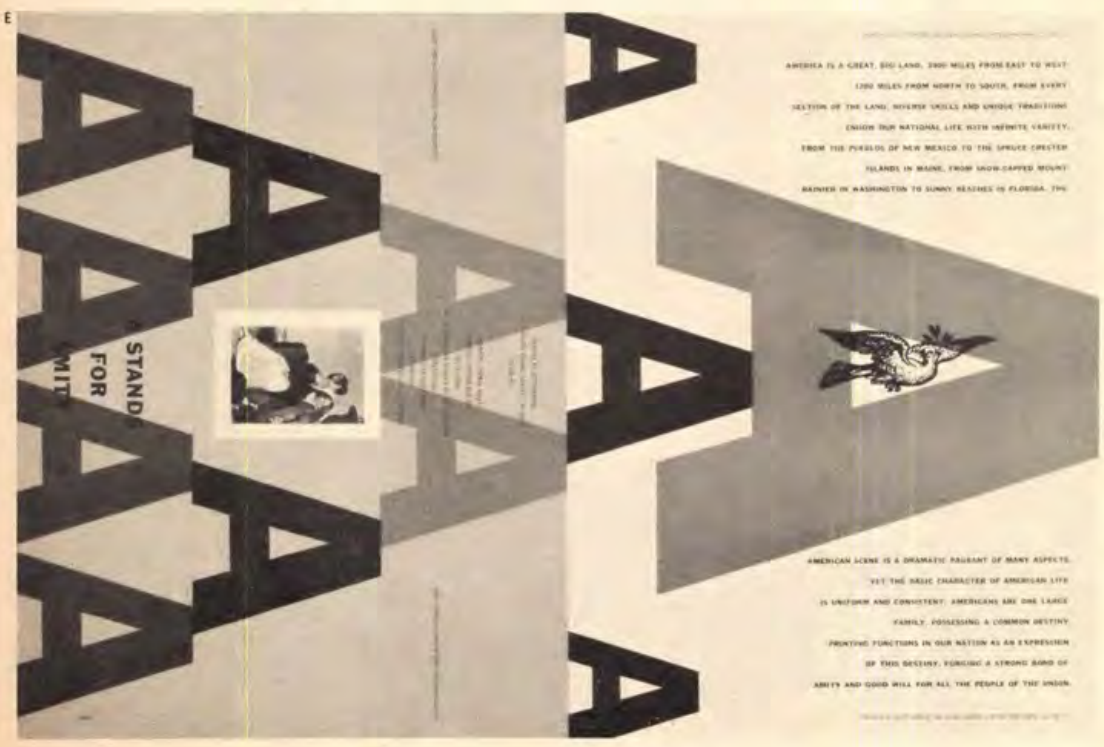
C



D



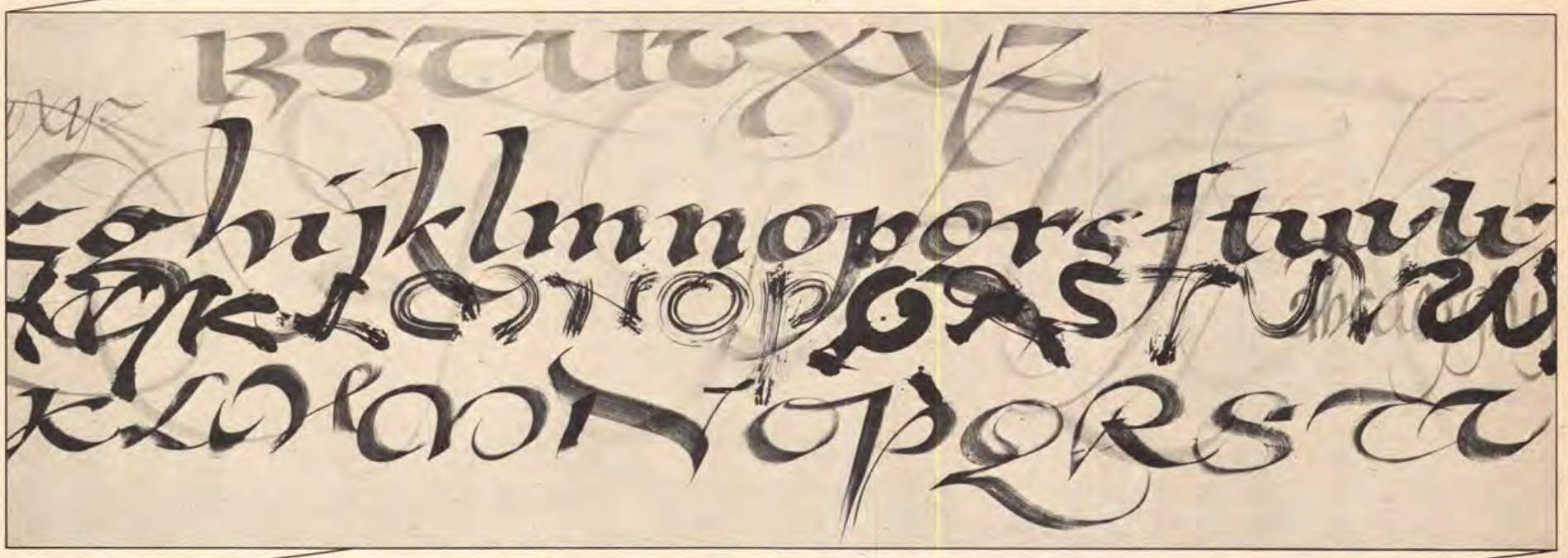
E



F




Alphabet
1977




Tim Girvin 2/77

Calligraphy is Alive

(and well and living in T. S. Girvin)





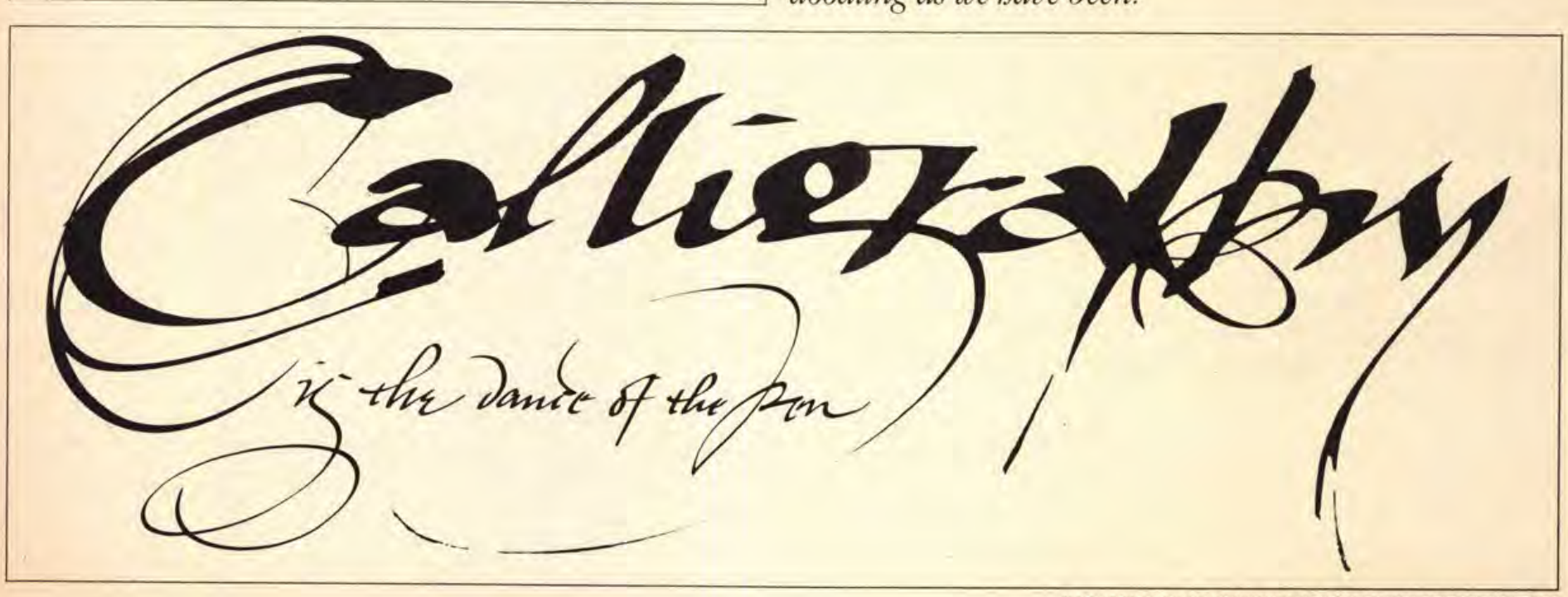
Unlike some politicians, calligraphy and music are not strange bed-fellows. They are curiously akin—as may be evidenced in the demonstration herein.

These calligraphic doodles by T. S. Girvin of Bainbridge Island, Washington, were written to Vivaldi and Bach—and Balinese, Indian, and Nubian themes—and express the nuances which occur in the music, a matrix of woven alphabets. Doodles which truly "say it with music."

According to Girvin, alphabets are rhythmic weavings—much in the same way that various musical forms weave harmonies and rhythms. He uses these studies generally to uncover new letterform gestures for creative penmanship on handmade paper. Each alphabet is a series of gestural sequences involving touch and a basic structural key and its contrapuntal variations. The goal: to remain within this framework yet, in sequence, to uncover inspired variations on a theme—many times occurring solely because of the music or the rhythmic requirements of quick movement. "Many times," says Girvin, "suddenly executed gestures provide a whole new range of forms and comprehension of the vital dance of the pen."

Girvin returned recently from an extended trip to Europe where he exchanged ideas with leading calligraphers and designers from England to Czechoslovakia, his stay ending in Russia where he spoke at an international symposium on calligraphic art.

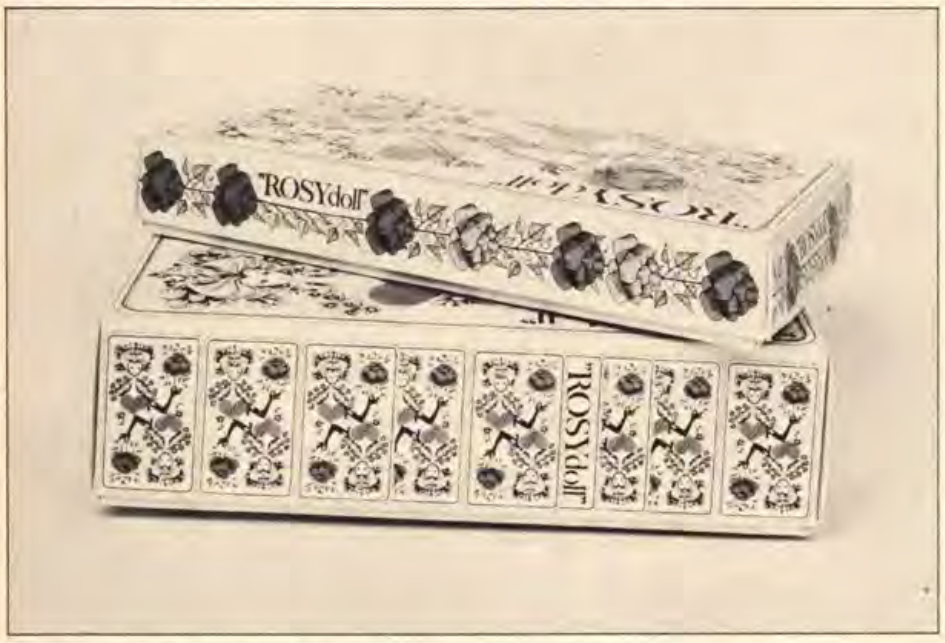
We think our readers will be as taken with the unusual basis underlying this elegant form of calligraphic doodling as we have been.



THIS ARTICLE WAS SET IN ITC GARAMOND BOOK CONDENSED ITALIC

Ms. Constance von Collande

Our Ms. page has been curiously under attack of late by certain of our more zealous readers. Our editors have been accused of being nothing more than "male chauvinist pigs" for having the temerity to comment on the Ms. ladies' looks as well as their talent. Well, once again, our Ms. page features a young art director who is attractive as she is gifted and, chauvinists or not, we hardly aim to conceal this pleasing fact. The A.D. we're talking about is Constance von Collande, who, despite her youthful appearance, has been working the old candy store for some time now—her most recent assignment: promotional and advertising campaigns as current senior art director for Revlon in that company's "Creative Workshop." A tri-linguist, Ms. von Collande previously worked six years for Vogue in the United States following stints in Germany, France, and Switzerland. After Vogue, she joined Elizabeth Arden as senior art director for promotion, creating a high-style individual look unique to that company's image and product. It is an added tribute that, although designed for color, her work comes off equally well in black and white. With its enormous eye appeal, clarity, and consistency, the work says "class"—as may be seen in the samples shown here—with an enviable regard for uncluttered layouts, clean typography, and dramatic photographic lighting. Great looking work! Great looking lady!





THIS ARTICLE WAS SET IN ITC TIFFANY HEAVY

COLOURS AL FRESCO BOND

The Sea Rose Face
Young. Wistful. Wildly pretty.



Eyes are a flirtatious play of light and shadow done easily with Eye Shadow Mist Set in dual-pan Aqua/Marine. First, a sweep of Marine (the deeper shadow) on lid, over brow bone, and blended into brow with sponge-tip applicator. Now, a soft line of Marine along lower lashes. Next, Aqua (using other side of applicator) to highlight from inner corner of eye to center of brow.





Cheeks glow with underwater colour. Sea Anemone Super Rich Blusher is finger-blended along cheekbone in a widening arc, till "lost" in the hairline. An extra touch of blush on chin, temples, even tip of nose is a glowing idea.

Mouth, by day, takes its colour cue from cheeks, wears Sea Anemone Principessa Lipstick (frost). By night, Sandy Rose (creme) catches the candlelight. Or, add your own highlighting with Lip Glossa in Moonshell. (Day and night nails: Sea Anemone Nail Cristallo.)



Fashions for the Sea Rose Face: Feminine, fantasy clothes (those rich-peasant cottons), Island prints, masses of flower colours, ribbons in the hair. (And, Andiamo, to create your own al fresco aura.)


'The uncommon bonus' for the uncommon man
YOURS WITH ANY ARDEN FOR MEN SANDALWOOD PURCHASE OF 5.00 OR MORE
NOW AT THE ELIZABETH ARDEN COUNTER

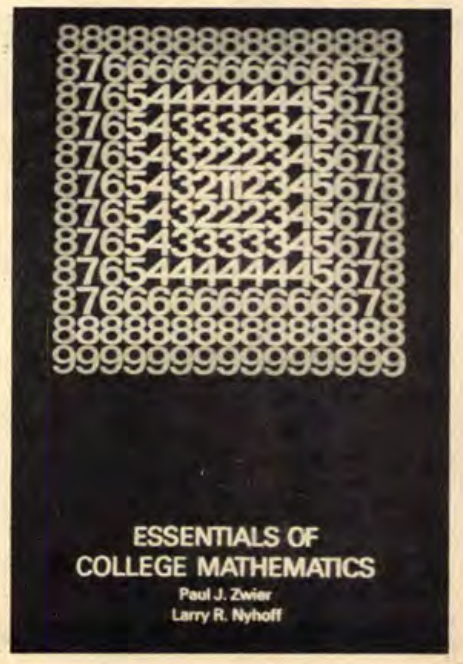

arden men
Bring this card to the Elizabeth Arden counter
AND RECEIVE THIS SPECIAL GIFT FROM ARDEN FOR MEN SANDALWOOD


Elizabeth Arden
EYEGLAZE


Environmental Psychology
MAN AND HIS PHYSICAL SETTING
EDITED BY
HAROLD M. PROSHANSKY
WILLIAM H. ITTELSON
LEANNE G. RIVLIN


DONALD R. HORNER
INTRODUCTORY CALCULUS


REVLON
Charlie
The Charlie you kiss with.
How a lipstick makes your mouth feel is almost as important as how it makes your mouth look. The creamy consistency of Charlie Extra Extra Shine Lipstick makes your mouth feel soft, creamy, moist. The creaminess produces a luscious, glistening shine. And the colors – 37 lipsticks, 14 glosses – are as pure and distinct as they are special. And that's how it is with Charlie lipstick.
Charlie
Extra Extra-Shine
Lipstick.


ESSENTIALS OF COLLEGE MATHEMATICS
Paul J. Zwier
Larry R. Nyhoff

A Little Rebellion Now & Then

It has long been said: a little learning is a dangerous thing; conversely, according to Thomas Jefferson, a little rebellion now and then is an excellent thing.

From the beginning of the Revolutionary struggle, colonial printers and newspaper editors (invariably one and the same) were actively involved in the defense of American liberties. The same printers who championed the rights of the colonists printed numerous revolutionary broadsides to be posted about their towns announcing meetings of patriots, reprinting the proclamations of patriotic organizations, and exhorting their readers to stand firm for liberty. No single group in the American colonies contributed more to strengthening the will to resist the unconstitutional enactments of Parliament than those printers who identified themselves with the Revolutionary struggle.

It thus seemed appropriate that outstanding present-day American printers be asked to reprint a series of these Revolutionary broadsides, and the William James Association of Santa Cruz, California has done exactly that. The seven broadsides printed here are from a private publication put out recently by the Association. They commemorate those words of the Founding Fathers which continue to have meaning for our own time. They will, it is to be hoped, give us a renewed respect and faith (sorely needed in these post-Watergate times) in the ideals and principles of the Revolution, one which hopefully was to result in the "emancipation of a world" and usher in a new age in human history.

The participating printers (all in 1976) were: (A Bill of Rights) Ward Ritchie on an 1835 Albion hand press at Laguna Verde Imprenta; (The Military) The Press in Tuscany Alley, San Francisco; (The Declaration of Independence comments) Andrew Hoyem, San Francisco; (Abigail Adams) Five Trees Press, San Francisco; (A Farmer in the Maryland Gazette) printed on a 13 x 19 Autovic Platen at the Grace Hoper Press by Sherwood and Katherine Grover from Bodoni, Goudy Text, and Bulmer Italic with the comment: It wasn't easy; and (Chief Logan's Revenge) Lime Kiln Press, University of California. About the latter, Thomas Jefferson said: "I challenge the whole orations of Demosthenes and Cicero, and of any more eminent, to produce a single passage superior to the speech of Logan."

Clearly, each printer approached the project with his own particular style, press, and choice of typeface. The text chosen by each reflects a personal sensibility; collectively, the broadsides reflect a more pervasive, universal, and lasting Revolutionary sentiment.

As Thomas Jefferson put it: a little rebellion now and then is an excellent thing.



A Bill of Rights

is what people are entitled to against any government on earth, general or particular, and no government should refuse, or rest on inference.

*

THOMAS JEFFERSON

Printed by Ward Ritchie on an 1835 Albion hand press at Laguna Verde Imprenta

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THE OPENING PARAGRAPHS OF

The Declaration of Independence

TOGETHER WITH COMMENTS BY JEFFERSON AND ADAMS ON ITS WRITING



John Adams: You inquire why so young a man as Mr. Jefferson [33] was placed at the head of the committee for preparing a Declaration of Independence? . . . Mr. Jefferson came into Congress in June, 1775, and brought with him a reputation for literature, science, and a happy talent of composition. Writings of his were handed about, remarkable for the peculiar felicity of expression. Though a silent member in Congress, he was so prompt, frank, explicit and decisive upon committees and in conversation—not even Samuel Adams was more so—that he soon seized upon my heart; . . .

Thomas Jefferson: The committee for drawing the Declaration of Independence desired me to do it. It was accordingly done and being approved by them, I reported it . . . The committee of five met; no such thing as a subcommittee was proposed, but they unanimously pressed on myself alone to undertake the draught. I consented; I drew it; but before I reported it to the committee, I communicated it separately to Dr. Franklin and Mr. Adams, requesting their corrections, because they were the two members of whose judgments and amendments I wished most to have the benefit before presenting it to the committee . . . Their alteration were two or three only, and merely verbal. I then wrote a fair copy, reported it to the committee, and from them, unaltered, to Congress. . . .

I turned to neither book nor pamphlet while writing it. I did not consider it as any part of my charge to invent new ideas altogether, and to offer no sentiment which had ever been expressed before. . . .

When forced, therefore, to resort to arms for redress, an appeal to the tribunal of the world was deemed proper for our justification. This was the object of the Declaration of Independence. Not to find out new principles, or new arguments, never before thought of, not merely to say things which had never been said before; but to place before mankind the common sense of the subject, in terms so plain and firm as to command their assent, and to justify ourselves in the independent stand we are compelled to take. Neither aiming at originality of principle or sentiment, nor yet copied from any particular and previous writing, it was intended to be an expression of the American mind, and to give that expression the proper tone and spirit called for by the occasion.

WHEN in the course of human events it becomes necessary for one people to dissolve the political bands which have connected them with another, and to assume among the powers of the earth the separate and equal station to which the laws of Nature and of Nature's God entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to the separation. ■ WE hold these truths to be self-evident: that all men are created equal; that they are endowed by their creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness; that to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed; that whenever any form of government becomes destructive of these ends, it is the right of the people to alter or abolish it, and to institute new government, laying its foundations on such principles and organizing its powers in such form as to them shall seem most likely to effect their safety and happiness. Prudence, indeed, will dictate that governments long established should not be changed for light and transient causes; and accordingly all experience hath shown that mankind are more disposed to suffer, while evils are sufferable, than to right themselves by abolishing the forms to which they are accustomed. But when a long train of abuses and usurpations, pursuing invariably the same object, evinces a design to reduce them under absolute despotism, it is their right, it is their duty, to throw off such government, and to provide new guards for their future security. ■ *Philadelphia, the fourth of July, 1776*

I am well aware of the toil and blood and treasure it will cost us to maintain this declaration and support and defend these States.
Yet through all the gloom I can see the rays of ravishing light and glory.
I can see that the end is more than worth all the means, and that posterity will triumph in that day's transactions.
John Adams

Andrew Hoyem, Printer, San Francisco
1976

A
FARMER
IN THE
Maryland Gazette
1783

WHERE WEALTH is hereditary, power is hereditary; for wealth is power. Titles are of very little or of no consequence. The rich are nobility, and the poor plebians in all countries. And on this distinction alone the true definition of aristocracy depends. And aristocracy is that influence or power which property may have in government; a democracy is the power or influence of the people or members, as contradistinguished from property. Between these two powers . . . the aristocracy and democracy . . . that is, the rich and the poor, there is constant warfare.



Printed at the Grace Hoper Press from Bodoni, Goudy Text and Bulmer Italic.
Printed on a 13 x 19 Autovic Platen. It wasn't easy.
Printed by Sherwood & Katherine Grover

THIS ARTICLE WAS SET IN ITC GARAMOND BOOK

THOMAS JEFFERSON

ON

Tyranny

WHEREAS it appeareth that however certain forms of government are better calculated than others to protect individuals in the free exercise of their natural rights, and are at the same time themselves better guarded against degeneracy, yet experience hath shewn, that even under the best forms, those entrusted with power have, in time, and by slow operations, perverted it into tyranny; and it is believed that the most effectual means of preventing this would be, to illuminate, as far as practicable, the minds of the people at large, and more especially to give them knowledge of those facts, which history exhibiteth, that, possessed thereby of the experience of other ages and countries, they may be enabled to know ambition under all its shapes, and prompt to exert their natural powers to defeat its purposes.

A Bill for the More General Diffusion of Knowledge, 1779.

EVERY GOVERNMENT degenerates when entrusted to the rulers of the people alone. The people themselves are its only safe depositaries. And to render even them safe, their minds must be improved to a certain degree.

Notes on Virginia, 1782.

ABOVE ALL THINGS I hope the education of the common people will be attended to; convinced that on their good sense we may rely with the most security for the preservation of a due degree of liberty.

T. J. to James Madison, 1787.

I HAVE SWORN *upon the altar of god, eternal hostility against every form of tyranny over the mind of man.*

T. J. to Dr. Benjamin Rush, 1800.

THE MILITARY

A standing army…is always dangerous to the liberties of the people. Soldiers are apt to consider themselves as a body distinct from the rest of the citizens. Such a power should be watched with a jealous eye.

Sam Adams, 1770

Soldiers are taught to consider arms as the only arbiters by which every dispute is to be decided…They are instructed implicitly to obey their commanders without enquiring into the justice of the cause they are engaged to support; hence it is, that they are ever to be dreaded as the ready engines of tyranny and oppression.

Joseph Warren, 1772

Tyrants always support themselves with standing armies!

Samuel Webster, 1777

Though it has been said that a standing army is necessary for the dignity and safety of America, freedom revolts at the idea. Standing armies have been the nursery of vice and the bane of liberty from the Roman legions to the planting of British cohorts in the capitals of America.

Mercy Warren, 1788

A standing army…is naturally productive of uneasiness and discontent among the people.

Letter to Dennis de Berdt, Esq., 1768

The spirit of this country is totally adverse to a large military force.

Thomas Jefferson, 1807

THE MILITARY

Printed at The Press in Tuscany Alley, San Francisco by Adrian Wilson with the assistance of Maria Psythess Epes January, 1976



I appeal to any white man to say, if ever he entered Logan's cabin hungry, and he gave him not meat; if ever he came cold and naked, and he clothed him not. During the course of the last long and bloody war, Logan remained idle in his cabin, an advocate of peace. Such was my love for the whites, that my countrymen pointed as they passed, and said, "Logan is friend of white man." I even thought to have lived with you but for the injuries of one man. Colonel Cresap, last spring, in cold blood and unprovoked, murdered all the relations of Logan, not even sparing my women and children. There runs not a drop of my blood in the veins of any living creature. This called on me for revenge. I have sought it; I have killed many; I have fully glutted my vengeance. For my country, I rejoice at the beams of peace. But do not harbor a thought that this is the joy of fear. Logan never felt fear. He will not turn on his heel to save his life. Who is there to mourn for Logan? Not one!

"I challenge the whole orations of Demosthenes and Cicero, and of any more eminent, to produce a single passage superior to the speech of Logan." — Thomas Jefferson

1774 · CHIEF LOGAN'S REVENGE · THE LIME KILN PRESS · UNIVERSITY OF CALIFORNIA · SANTA CRUZ · 1976

I can not say that I think you very generous to the Ladies,
for whilst you are proclaiming peace & good will to Men, Emancipating all Nations,
you insist upon retaining an absolute power over Wives.

But you must remember that
Arbitrary power is like most other things which are very hard, very liable to be broken—



and notwithstanding all your wise Laws and Maxims
we have it in our power not only to free ourselves
but to subdue our Masters,

and without violence throw both your natural and legal authority at our feet.

Abigail Adams, correspondence to John Adams, May, 1776. Printed at Five Trees Press, San Francisco.



THE POWER PACKED POSTER ART OF FRIEDER GRINDLER











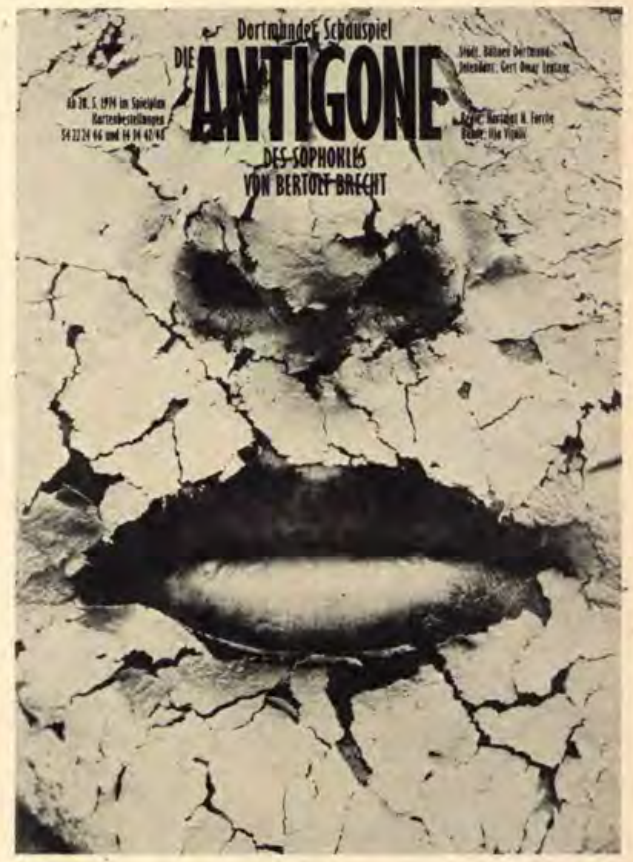
Language is the universal barrier that separates people.

The English language, spoken by 300 million of the earth's inhabitants, is numerically the second of the world's leading tongues. Only Chinese, with its estimated 700 million speakers, surpasses it. French has fewer than one hundred million, and Hindustani and Russian—the world's third and fourth most widely known tongues—range between 160 and 200 million speakers. Spanish, with its estimated 150 million, is the only other language that definitely passes the 100-million mark. German, Japanese, Portuguese, Italian, Malay-Indonesian, Arabic, and Bengali all hover between 50 and 100 million—with no other of the world's 3000 spoken languages approaching the 50-million mark.

This verbal barrier, however, can be crossed in a single instant through the universal language of the image. One picture, in truth, is worth (at least) a thousand words. And to demonstrate this, we are showing in this issue the poster art of Frieder Grindler, a graphic designer living and working in his native Germany.

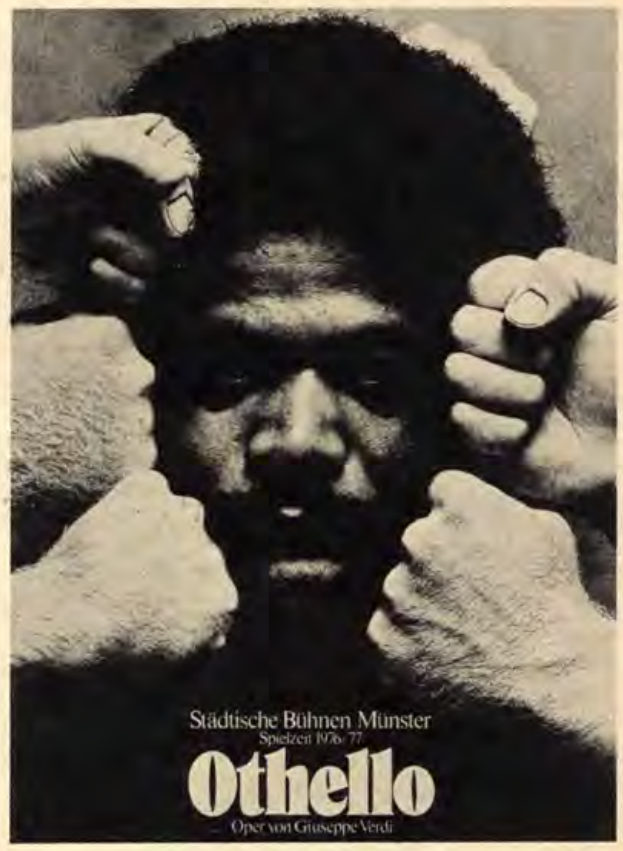












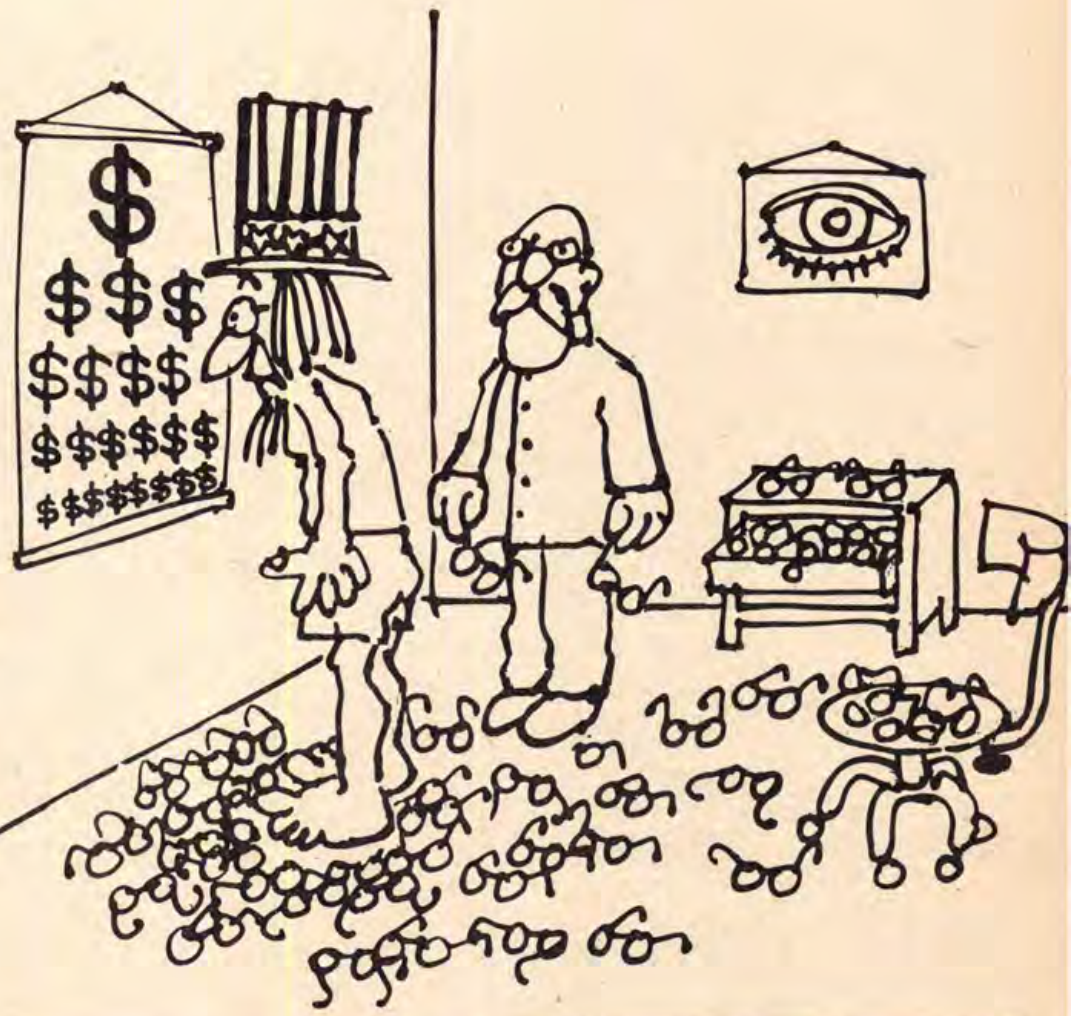
Among other things, Grindler conceives, designs, and photographs theatrical posters—with a difference. In this country, our posters appeal to the eye in an attractive but rather bland way. Conversely, each of Grindler's placards—as may be seen—makes a hard-hitting social statement, a statement understandable in any language. Grindler's work was seen by U&lc editor Herb Lubalin at an Alliance Graphique Internationale conference on the Spanish island of Majorca. Not only was Herb impressed by the sheer power of the poster images, but the AGI board was so impressed that Grindler was unanimously accepted on the spot for membership in the elite international graphics society.

The posters speak loud and clear for themselves, and it should prove interesting to compare their effectiveness with similar work designed for the theatre in the United States. Young designers can certainly profit from studying Grindler's artistry—as can we all. There can be no clearer demonstration of how any and all language barriers can be crossed at the speed and impact of a thought. J.A.F.

THIS ARTICLE WAS SET IN ITC AVANT GARDE GOTHIC X-LIGHT

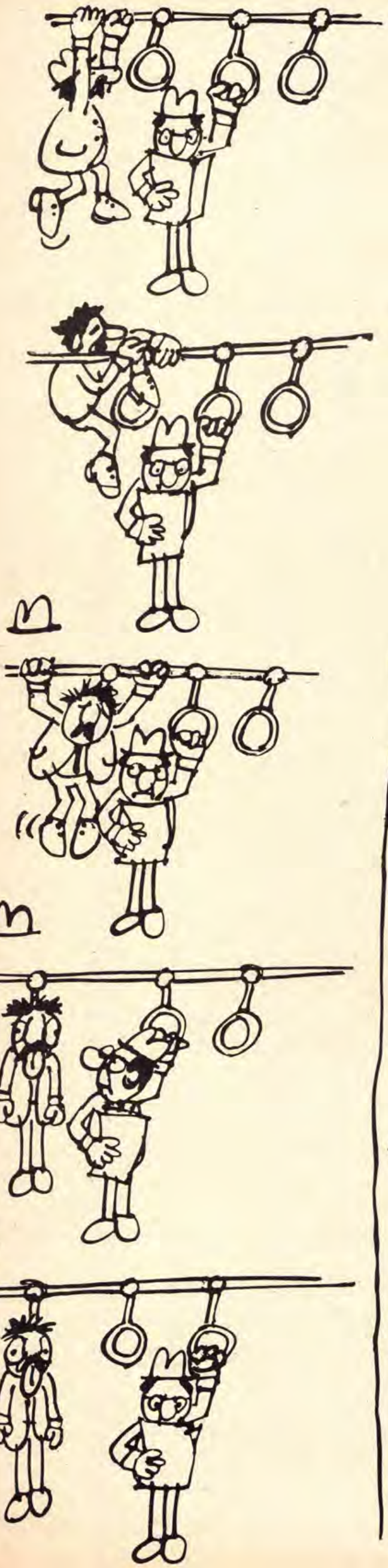
THE STATE OF THE WORLD

by Loumyers





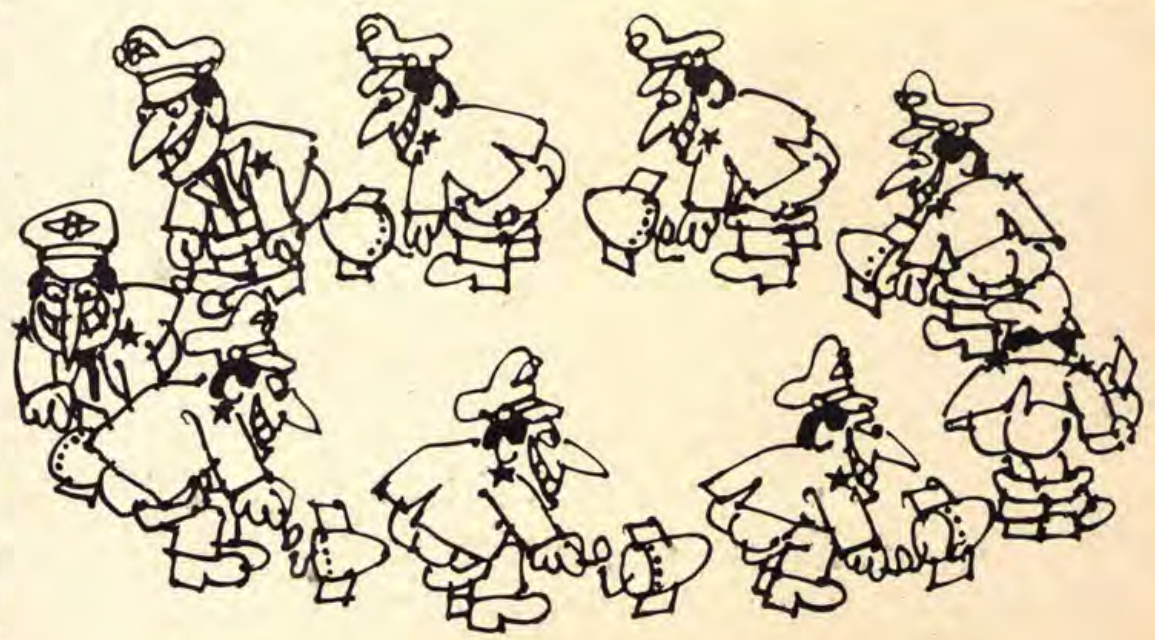
"TOO GOOD IS UNHEALTHY."






WALL ST. JOURNAL





THE CREAM OF THE CREAM OF WHEAT ADS

The following is an excerpt from a letter written in 1906 by the young illustrator N.C. Wyeth: "Mr. Mapes of the Cream of Wheat Co. telegraphed for me to run up and see him at the Waldorf-Astoria. He is the owner of that famous cereal co., and is a man of immense wealth. I have just completed two pictures for him, $250 each, which he is immensely pleased with...he followed me around with letters and telegrams inducing me to come to his home – make my headquarters at his club, the use of his autos, etc."

Emery Mapes was the entrepreneur behind a vastly successful advertising campaign, certainly one of the most impressive in the history of American advertising. He was responsible for commissioning approximately 400 original paintings by renowned illustrators. Each appeared without type or text, one each month, in the popular magazines of the day. They could be seen in large format, full color, on the inside covers of Ladies' Home Journal, Leslie's, Muncey's and others.

Artists like James Montgomery Flagg, Jessie Willcox Smith and Walter Whitehead contributed to the series. Book illustrators, artists of the American West, genre painters, animal painters, and artists of Negro life were provided with a showcase for their work. Their paintings continued to appear for a span of twenty years, from 1906 until 1926, offering us a charming history of the times. One sees among them, the ole' swimmin' hole, the circus coming to town, the soapbox orator; illustrations for King Arthur, Tom Sawyer, Mother Goose; and depictions of Uncle Sam, World War One soldiers, politics and brotherhood.

Mapes first began to advertise in 1896, while operating from a small mill in Grand Forks, North Dakota. He had already settled on his trademark, Rastus the black chef, who appeared in every advertisement, in each commissioned work, and who still appears on the box today. Imaginative advertising was important from the start. Prints, toys and other premiums were offered to customers. Even before the art commissions began, the company displayed artistic integrity. They used turn-of-the-century photographs of sports or country life, and simple, bold poster-like designs in the style of Art Nouveau. In 1902 there appeared a remarkably beautiful series illustrating Mother Goose, by an unidentified artist. From then on, the policy of artistic integrity continued, reaching its height in the twenties, when many of the earlier pieces reappeared along with other, newly commissioned works.

In the 1960s, the Cream of Wheat Co. was sold and the original art works placed in storage. Subsequently, they were lost in a fire. All that remains are these lovely magazine prints, reminders of a bygone era.

CAROL WALD



1900 ARTIST UNKNOWN



1903 ARTIST UNKNOWN

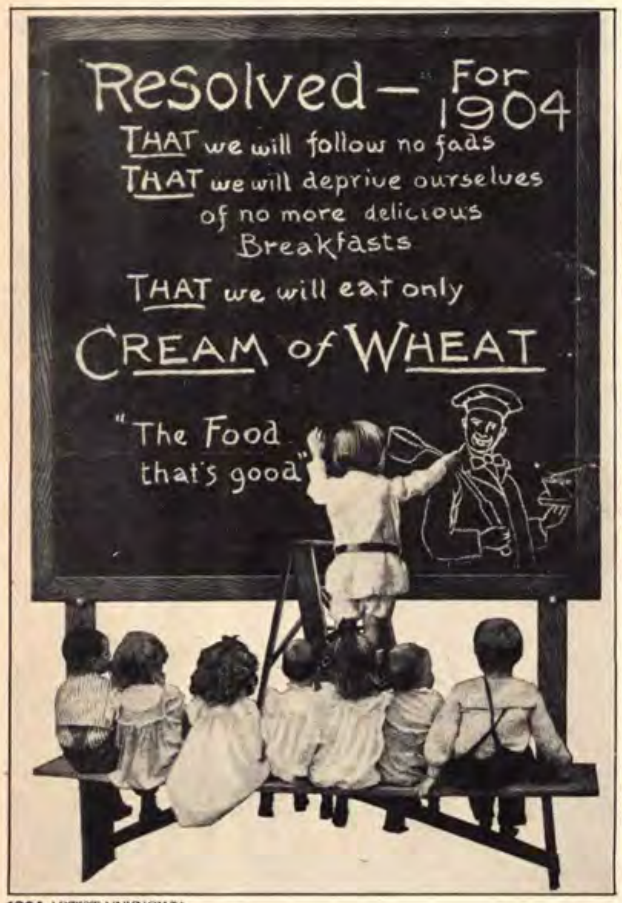


1902 ARTIST UNKNOWN

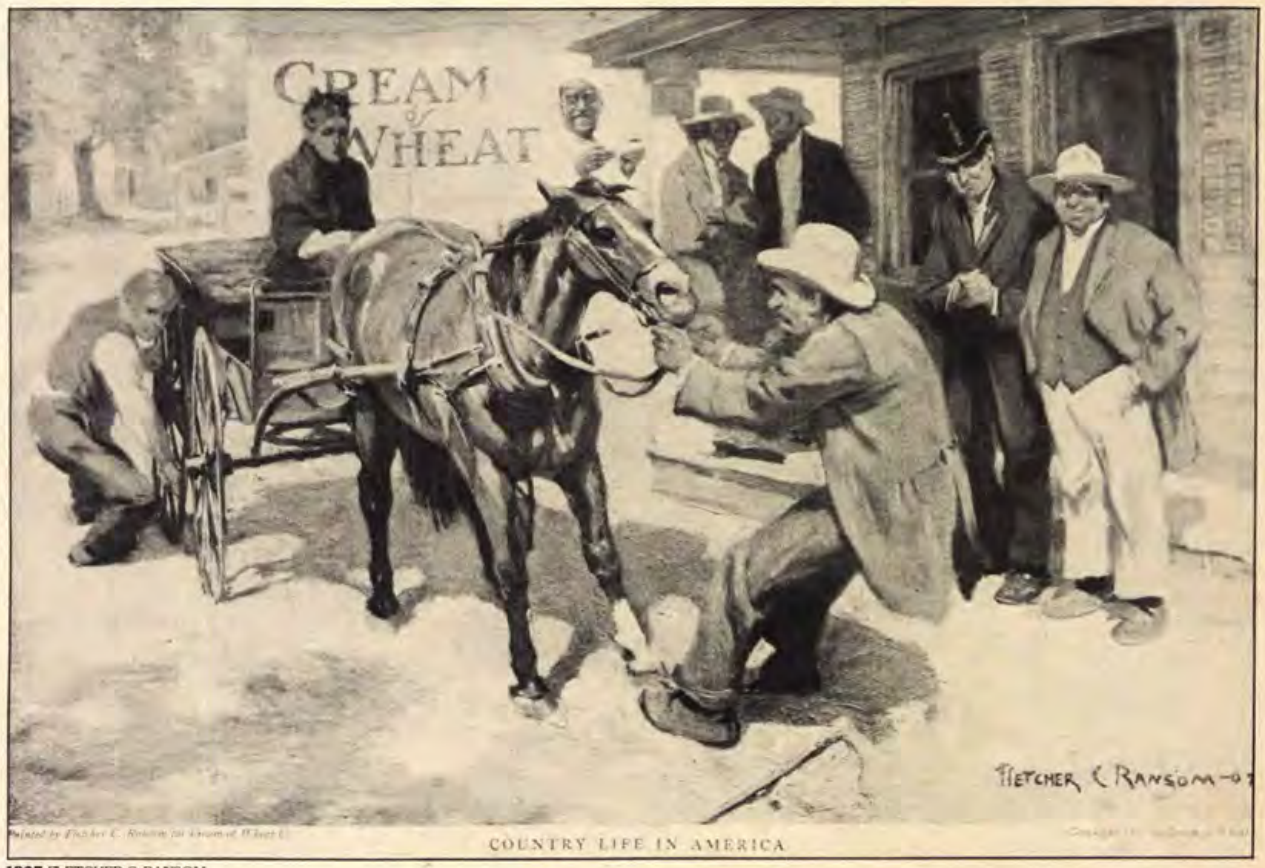


1903 ARTIST UNKNOWN

THIS ARTICLE WAS SET IN ITC CHELTENHAM BOOK



1904 ARTIST UNKNOWN



1907 FLETCHER C. RANSOM



1905 ARTIST UNKNOWN



1907 HENRY HUTT



1907 PHILIP R. GOODWIN



1907 HARRY STACEY BENTON



1907 OTTO SCHNEIDER



1908 JAMES MONTGOMERY FLAGG



1907 WALTER WHITEHEAD



1907 N.C. WYETH



1909 JESSIE WILLCOX SMITH



1909 DENMAN FINK



1910 SUSAN ARTHURS



1911 E. B. BIRD



1909 W.V. CAHILL



When Good King Arthur ruled the land.
He was a goodly King.
He stole three pecks of barley meal
To make a bag pudding.

A bag pudding the Queen did make
And stuffed it well with plums;
And put therein great lumps of fat
As big as my two thumbs.

The King and Queen did eat thereof
And all the Court beside;
And what they could not eat that night
The Queen next morning fried.

When next the King did feast his Court
He spread a royal board;
Nor plums nor fat was served thereat
To tempt each Dame and Lord.

Yet when the Queen arose next morn
There was naught left to fry,
Whereat she sat upon a stool
And piteously did cry.

Of all that mighty feast was left
No single scrap to eat.
All had been valiant trencher-men,
For twas the **Cream of Wheat.**



1910 G.C. WIDNEY



1912 H. MASON



1912 FRANK VERBECK



1914 KATHERINE R. WIREMAN



1915 LOYD L. LaDRIERE



1913 LESLIE THRASHER



1915 G. J. PERRETT



1916 LESLIE WALLACE



1920 EDWARD V. BREWER



1920 FLORENCE WYMAN



1923 G.J. SCOTT



1920 GEORGE GIBBS



1921 EDWARD V. BREWER



1923 EDWARD V. BREWER

Something For Everybody From U&lc

DECIMAL POINTS:

10 "Semordnilap" Palindromes: To the uninitiated, a palindrome is a word or sentence that reads the same backward as forward.



(1)
LEWD DID I LIVE, & EVIL I DID DWEL.



(2)
MADAM, I'M ADAM.



(3)
A MAN, A PLAN, A CANAL- PANAMA.



(4)
HE GODDAM MAD DOG, EH?



(5)
ABLE WAS I ERE I SAW ELBA.



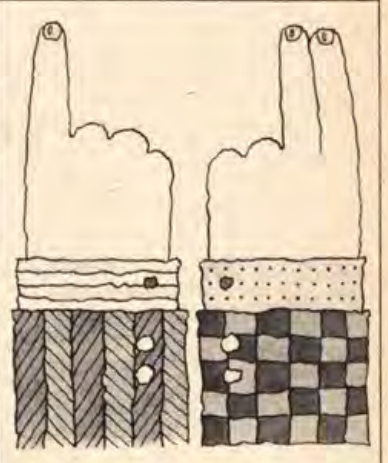
(6)
SIT ON A POTATO PAN, OTIS.



(7)
DOC, NOTE I DISSENT. A FAST NEVER PREVENTS A FATNESS. I DIET ON COD.



(8)
STEP ON NO PETS.



(9)
NEVER ODD OR EVEN.



(10)
ANNA: "DID OTTO PEEP"? OTTO: "DID ANNA"?

ILLUSTRATIONS BY LIONEL KALISH

The highest number with a name is the **centillion,** which is 10 with 600 zeroes.

☐10,000,000,000

What's New from ITC?

Italia Book, Medium and Bold and ITC Avant Garde Gothic Oblique in X-light, Book, Medium, Demi and Bold are new typefaces from ITC. Only licensed ITC Subscribers are authorized to reproduce, manufacture, and offer for sale these and all other ITC typefaces shown in this issue. This license mark is your guarantee of authenticity.

ITC LICENSED

These new ITC typefaces will be available to the public on or after October 17, depending on each manufacturer's release schedule.

ITC AVANT GARDE GOTHIC OBLIQUE™

ITC Avant Garde Gothic Oblique X-Light

The most welcome surprise of ITC Avant Garde Gothic Oblique is its absence of surprises. The slope, so critical in sans serif obliques, is agreeably pronounced but not excessive; the timely flavor so characteristic of Avant Garde Gothic is neither diluted nor intensified; the subtle shapings of rounded letters show an expertise that leaves one unaware of the visual refinements underlying the overall texture.

These contemporary obliques carry a distinguished background: they were designed for ITC in Basel, Switzerland, by "Team '77" of Letterform Research and Design under the direction of André Gürtler, Christian Mengelt and Erich Gschwind who faithfully interpreted the popular upright typeface of Herb Lubalin and Tom Carnase.

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abcdefghijklmnopqrstuvwxyz
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ITC Avant Garde Gothic Oblique Book

The most welcome surprise of ITC Avant Garde Gothic Oblique is its absence of surprises. The slope, so critical in sans serif obliques, is agreeably pronounced but not excessive; the timely flavor so characteristic of Avant Garde Gothic is neither diluted nor intensified; the subtle shapings of rounded letters show an expertise that leaves one unaware of the visual refinements underlying the overall texture.

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ITC Avant Garde Gothic Oblique Med.

The most welcome surprise of ITC Avant Garde Gothic Oblique is its absence of surprises. The slope, so critical in sans serif obliques, is agreeably pronounced but not excessive; the timely flavor so characteristic of Avant Garde Gothic is neither diluted nor intensified; the subtle shapings of rounded letters show an expertise that leaves one unaware of the visual refinements underlying the overall texture.

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ITC Avant Garde Gothic Oblique Demi

The most welcome surprise of ITC Avant Garde Gothic Oblique is its absence of surprises. The slope, so critical in sans serif obliques, is agreeably pronounced but not excessive; the timely flavor so characteristic of Avant Garde Gothic is neither diluted nor intensified; the subtle shapings of rounded letters show an expertise that leaves one unaware of the visual refinements underlying the overall texture.

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ITC Avant Garde Gothic Oblique Bold

The most welcome surprise of ITC Avant Garde Gothic Oblique is its absence of surprises. The slope, so critical in sans serif obliques, is agreeably pronounced but not excessive; the timely flavor so characteristic of Avant Garde Gothic is neither diluted nor intensified; the subtle shapings of rounded letters show an expertise that leaves one unaware of the visual refinements underlying the overall texture.

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ITC AVANT GARDE GOTHIC OBLIQUE X-LIGHT

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ITC AVANT GARDE GOTHIC OBLIQUE BOOK

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ITC AVANT GARDE GOTHIC OBLIQUE MEDIUM

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ITC AVANT GARDE GOTHIC OBLIQUE DEMI

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ITC AVANT GARDE GOTHIC OBLIQUE BOLD

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ITALIA



Italia Book

The Italia series in three weights presents a refreshing serif pattern, agreeably out of the ordinary in every respect. It is this somewhat contradictory departure from the norm that gives Italia an entirely uncommon freshness. At first glance, one is easily tripped into comparing it with Clarendon, Beton, Fortune or any of the square serifs, but it quickly becomes evident that here is a design that cannot be categorized, one that offers a distinctive personality all its own. It is this vigorous individuality that will be Italia's greatest asset.

Designed in London by Colin Brignall and licensed to ITC by Letraset International Ltd., Italia has proved deserving in display, and now embarks on an even more significant role in the demanding arena of text.

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Italia Medium

The Italia series in three weights presents a refreshing serif pattern, agreeably out of the ordinary in every respect. It is this somewhat contradictory departure from the norm that gives Italia an entirely uncommon freshness. At first glance, one is easily tripped into comparing it with Clarendon, Beton, Fortune or any of the square serifs, but it quickly becomes evident that here is a design that cannot be categorized, one that offers a distinctive personality all its own. It is this vigorous individuality that will be Italia's greatest asset.

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Italia Bold

The Italia series in three weights presents a refreshing serif pattern, agreeably out of the ordinary in every respect. It is this somewhat contradictory departure from the norm that gives Italia an entirely uncommon freshness. At first glance, one is easily tripped into comparing it with Clarendon, Beton, Fortune or any of the square serifs, but it quickly becomes evident that here is a design that cannot be categorized, one that offers a distinctive personality all its own. It is this vigorous individuality that will be Italia's greatest asset.

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ITALIA BOOK

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ITALIA MEDIUM

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nopqrstuvwxyz12345678
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ITALIA BOLD

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The Human Zoo. Language in all its compartments, taken separately or collectively, is subject to perpetual change. How many, for instance, know that the adjunct to feminine beauty known commonly today as **falsies** existed a full century ago, but under the name of **palpitators?** Or that the phone, when it was being developed by Bell, was known as the **harmonic telegraph,** while the original telephone "hello," prior to 1880, was "ahoy"? Similarly, names have taken on new and varied meanings. Some time back, a well-known comedian repeatedly used a phrase that swept



Vulture: A greedy, aggressive, sponging male who preys ravenously and ruthlessly; the other guy.



Insect: A small, contemptible person, as in "He's nothing but a louse." Except as in a **wasp** insect: a White Anglo-Saxon Protestant; an endangered species.

Crab: An ill-tempered grouchy type who is invariably angry and complaining. A stalk-eyed female who won't let you off the hook once she gets her claws into you.



Rat: Always a man (sorry, guys). A deceptive, cheesy male ever ready to desert one's party or associates in time of trouble; a mean, cowardly person; a rat fink.



Baboon: Stupid person, narcissistic, highly akin to the terrestrial monkey. A real sap-head; anyone else.



Weasel: A cunning, slinky, underhanded individual; the other guy.



Bitch: A lewd despicable female (what else?), sweet as pie on the outside and hateful within, as in "There's a real dog for you." The other girl. A shrieker, a virago, a harridan, a big pain in the ass.



Wolf: The ready designation for all-too-many fellas. Technically a **canis lupus**, he is a boldly flirtatious or amorous male toward virtually any woman; an ogler, a whistler, a self-appointed "ladies' man."



Tigress: Sexy; a fierce woman. As in, "My God, what a night I had – she was a regular **tigress**!"



the country: "Monkeys are the **cwaziest** people!" Though not quite accurate scientifically, he nonetheless had something there. Monkeys, and animals in general, are not people, but people are most assuredly animals. And the names used to describe them significantly bear (no pun intended!) this out. A toastmaster at a recent dinner referred to a guest speaker as "that jovial porcine fellow"—a marvelously polite way of saying "fat slob." No doubt about it, certain folk take on the particular characteristics of animals, and herein are several random graphic examples.

THIS ARTICLE WAS SET IN ITC KABEL AND ITC AVANT GARDE GOTHIC CONDENSED

Owl: Either sex, though essentially female of solemn appearance and nocturnal habits, usually eyeopeners.

Badger: An annoying, irritating person who harasses and torments. Especially female; as in "Honey, stop badgering me."

Goose: A silly or foolish person; a simpleton. Principally a female, as in "What's good for the goose is good for the gander" (male).

Goat: The self-satisfied scape-goat, butt of everybody's jokes; or, the one who makes one lose one's temper as in "That sonofabitch gets my goat."

Skunk: A thoroughly obnoxious person who probably smells bad; most other people.

Cat: Again, the female of the species (call us chauvinist pig!). A spiteful, gossipy, untrustworthy woman – unless a hip male dude who has it all together.

Ass: Almost always a stubborn and stupid blockhead of a man, unless as in "That girl has one beeyootiful ---!"

Sow: An obese, slobbish, gluttonous person. The female "swine," as in feminine chauvinist pig.

Lamb: One who is young, gentle, meek, dear, and innocent – much like the editor of this magazine.

Hawk: A belligerent male, a sharpster, a war monger ("Let the bombs fall where they may!").

ILLUSTRATIONS BY HEDDA JOHNSON

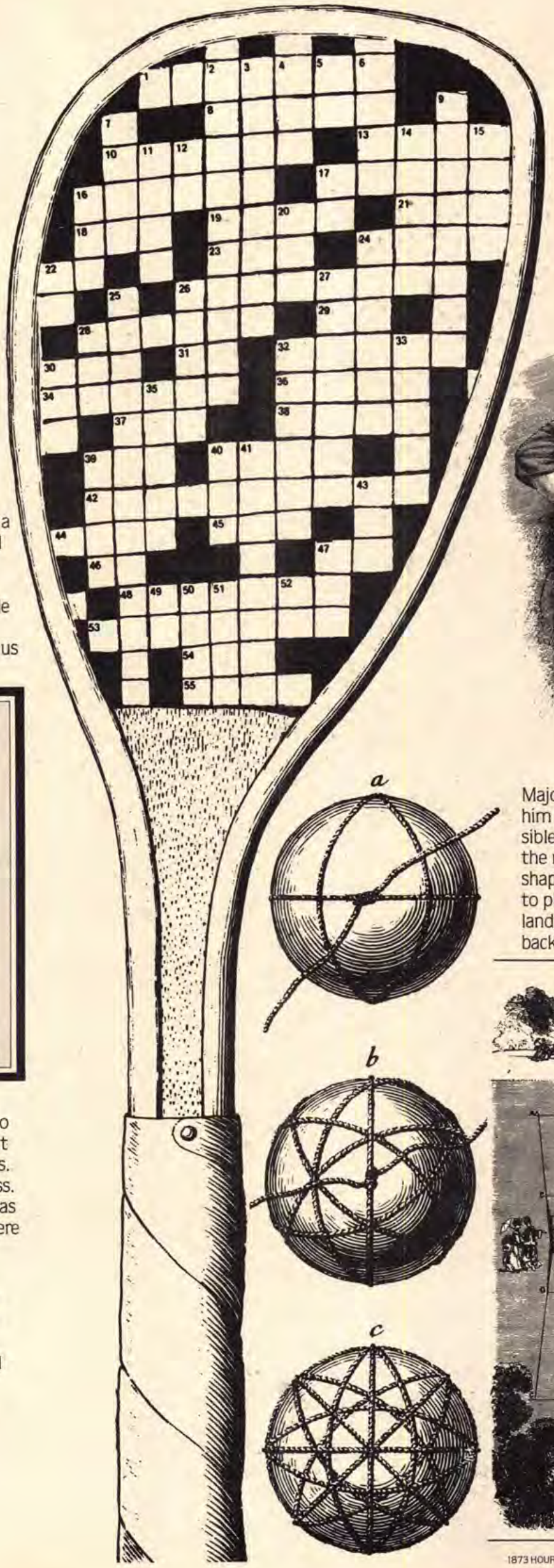
JEU DE PAUME

The words are French. And the game was dangerous. In fact, two French kings were killed by it. Louix X died of a chill after playing and Charles VIII died after being conked by the old **Jeu de Paume,** a heavy ball made of wool wrapped in leather. So when the Jeu de Paume was put into play, the French would cry **tenez!** as a warning, giving us the modern word **tennis.**



But while the words are French, the rules are English. They're the ones who put the game into the form in which it is known today; with some differences. The court was shaped like an hourglass. It took fifteen points to win. And it was exclusively for the upper class. Yes, there will always be an England.

Still, the game is here to stay, for everyone, and calculated to drive one mad in the pursuit of competence on the court. So, in the 100th year of Wimbledon, "let's" find no "fault," and "match" our wits against...Jeu de Paume.





MAJOR WINGFIELD

Major William Clopton Wingfield. Blame him for frustration. Wingfield is responsible for the game as we know it. He set the net height, got rid of the hourglass-shaped court; and persuaded his friends to play until it became the rage of England. Think of him when you miss your backhand.



1873 HOURGLASS TENNIS COURT. NARROWER AT THE NET THAN BASELINE.

No.1 in a series of Very Graphic Crossword Puzzles

ACROSS

1. Two-handed backhander.
7. The indefinite article.
8. What an artist stands up to
10. The heart of Chinatown, New York
13. All in_____(2 words)
16. What you get from Woodward.
17. Wimbledon finalist Betty
18. Less than two.
19. _____while you learn.
21. Middle Eastern country (abbr.)
22. Counterpart of ego.
23. Banned "Big Bird."
24. A high, big shot.
26. Lets someone know (3 words)
28. Tin, iron, & steel, f'rinstance.
29. "First person's" soup is cold.
30. Title for Raleigh.
31. Rural st.
32. Names for Dalmatians.
34. Aussie grand slammer and family.
36. Forearm bone.
37. Academia's "halls of_____."
38. Sinn_____(revolutionary group).
39. Unhit serve or Rickenbacker.
40. Outdoor Parisian eatery.
42. Caesar's solid ground.
44. Artist's residence.
45. _____& match.
46. Italian river.
47. Where the General Assembly resides (abbr.)
48. Illegal activities and court equipment.
53. One who threads rackets.
54. "By the beautiful _____."
55. Like a conger.

DOWN

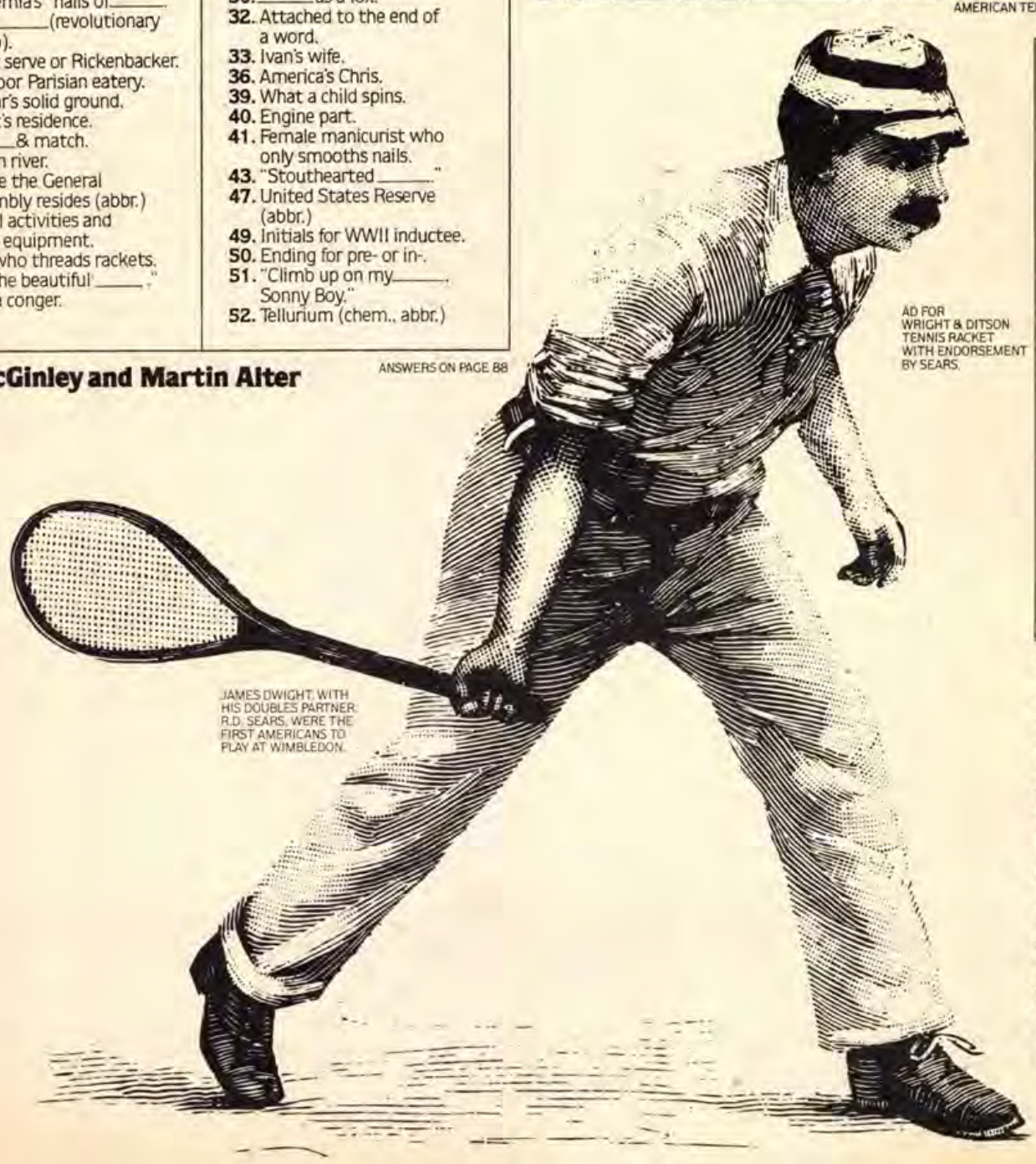
2. Tennis scores.
3. Rumanian bad boy et al.
4. Werner Erhardt's self-improvement program.
5. Second tone in the diatonic scale.
6. Venetian blind part.
7. "So be it."
9. Adore singles or lost first set scores.
11. Forest Hills U.S._____
12. "_____be or not..."
14. Philosopher May.
15. "Dragnet's" Jack.
16. See 34 across.
17. According to nature, for pharmacists (abbr.)
20. Rural map markings (abbr.)
22. Two, for Caesar.
24. "_____for tennis?"
25. Put the ball in play for doubles.
26. "_____me back to Ol' Virginny."
27. One who suggests.
28. Miss Farrow.
30. _____as a fox.
32. Attached to the end of a word.
33. Ivan's wife.
36. America's Chris.
39. What a child spins.
40. Engine part.
41. Female manicurist who only smooths nails.
43. "Stouthearted _____."
47. United States Reserve (abbr.)
49. Initials for WWII inductee.
50. Ending for pre- or in-.
51. "Climb up on my_____, Sonny Boy."
52. Tellurium (chem., abbr.)

ANSWERS ON PAGE 88

By Al McGinley and Martin Alter



AMERICAN TENNIS PLAYERS OF 1878 PLAY DOUBLES USING HIGH NET THEN IN FASHION.



JAMES DWIGHT, WITH HIS DOUBLES PARTNER R.D. SEARS, WERE THE FIRST AMERICANS TO PLAY AT WIMBLEDON.



AD FOR WRIGHT & DITSON TENNIS RACKET WITH ENDORSEMENT BY SEARS.

U&lc presents, with only mild embarrassment, the first of a series of features by Al McGinley and Martin Alter. Mr. McGinley has collected awards from the art societies of every city in which he's worked, including New York, Pittsburgh, Cincinnati, and others. He's even won some of those awards himself.

Mr. Alter has become a household word, especially in his parents' home, where he is referred to as "oh him." In his own home he is recognized by his plants. A former musician, he does an excellent imitation of Peter Lorre.

THIS ARTICLE WAS SET IN ITC QUORUM



STAMP OUT ART!

by Andrew and Lucia Nevai
with thanks to Louise Fili

I'm interested in quick results. I like to see things instantly. That's probably the main reason why my wife, Lucia, and I have been involved with Polaroid and Xerox as art media of expression since the mid-sixties. And now, in the last three years, we've added an interest in rubber stamps—for clients' trademarks, as gifts for friends, and for our own enjoyment. In fact, we've recently become something of a clearinghouse for rubber stamps, color xerox, and Polaroid artists.



Some of the stamps we have produced have come from Polaroid photos which were black-and-white Xeroxed to remove the middle tones and then made into stamps. It's instant printing—cheap, eminently portable, giftable, adaptable, and artistic.



Apparently we're not alone in our enjoyment of this rediscovered medium: in the past year there have been shows of rubber stamp art at the University of Colorado, at La Mamelle Art Center in San Francisco, at the Broadway Galleries in Milwaukee, and in several shows in Europe, including a recent one in Geneva featuring works by Warhol, Wesselman, Wasmuth, Marisol, and Schwitters. And, of course, the ***"ultimate"*** *in artistic recognition has been bestowed on rubber stamp art by none other than the Museum of Modern Art. This year museum members are being offered 13 pieces of rubber stamp art to be*





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received monthly (published in an edition of 1,000). The cost of each subscription, which includes a couple of top names, such as Chuck Close, is $100. A group in Ulster County, N.Y., publishes a collection of rubber stamp prints in an edition of 100 called ***"Once"****; and Bill Gaglione, coeditor of* ***Vile*** *magazine in San Francisco, includes a great deal of rubber stamp material in his publication.*



3

The use of stamps in correspondence art, collage, and printmaking has been growing over the last three or four years. I've seen posters, pamphlets, and magazine illustrations with increasing frequency which are based wholly or mostly on the use of rubber stamps. In the area of personal signatures, or ***"chops,"*** *more and more of us in the West are using stamps to sign letters and artwork, an ancient and still widespread practice in the Far East, where wood blocks and signet rings were the original form of printing thousands of years ago.*

4

Please don't get the idea that serious illustrators and visual pfunsters are the only types newly interested in rubber stamps. There's enough interest among the general public to keep several companies around the country busy sending out their catalogues of antique, new, and made-to-order stamps. A couple of these are: Bizzaro, Inc., P.O. Box 126, Annex Station, Providence, R.I. 02901 (Send $1.00); the Rubber Stamp Catalogue, P.O. Box 209, Bristol, R.I. 02809; and Patrick & Co., 560 Market St., S.F., Cal. 94101. There are also several European companies. In addition, we have noticed an increase in newspaper and magazine ads offering to make rubber stamps of any photo or slogan you send in.



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If it's hardware you're interested in, just get a catalogue from City Marking Devices Corp., 69 Murray St., N.Y., N.Y. 10007, or from R.A. Stewart & Co., 85 White St., N.Y., N.Y. 10013, among others. Their pages are filled with self-inkers, band-daters, pocket stamps, and pencil-cap stamps. The N.Y. Yellow Pages, in fact, have 2½ pages devoted to rubber-stamp-related businesses.

After you have your design and the hardware you need, there remains the problem of getting the finest possible impression. Here's what Kenn Speiser, of Bizzaro, Inc., has to suggest:

1. *The foam-type pad used by most people often provides an image which is too dry or too wet, and which blurs.*

2. *The Micropore pad made by the Carter's Ink Co. leaves the thinnest film of ink and*



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therefore provides the finest detail.
3. *A couple of sheets of paper under your work surface will provide a cushion when you stamp and will improve details and prevent light spots in the print.*
4. *Opaque inks are available in white and yellow as well as the standard black, red, blue, green, and purple; they must, however, be used with a special balsa wood pad. Their great feature is that you can mix them to get pastels like lavender, pink, and orange.*
5. *Special inks for stamping on food are available. You can stamp all your bologna sandwiches with pictures of houseflies!*
6. *A hand-carved Pink Pearl eraser inked with oil paint can be used to rubber stamp a T-shirt and will last through many washings."*

T-Shirts and bologna sandwiches—what it all adds up to is multiple impressions, and for our part we are very much interested in the possibilities. Therefore, we have decided, with the invaluable help of Herb Lubalin and ***U&lc,*** *to explore the subject through a* ***Rubber Stamp Art Competition,*** *and we ask all of you to send in your best work in any of the categories shown below.*



RUBBER STAMP ART CONVENTION
April 30, 1978
Big Island Gallery
Florida, New York

10

The work will be judged and the winners will be published in the April issue of ***U&lc, the International Journal of Typographics.*** *In order to encourage all of you to work especially hard on this once-in-a-lifetime opportunity, Herb Lubalin has graciously consented to reward the best work with a FREE subscription to the FREE* ***U&lc!***

In addition, the winners' work will be shown with selected other pieces of rubber stamp art at our own Big Island Gallery in Florida, N.Y., beginning April 30, 1978. The gallery is located a few miles off Rt. 17, in Orange County, just 75 minutes from midtown New York.

Although our livelihood comes from our design and consulting business, a great deal of aliveness is derived from the events we have once or twice a year in the gallery. It provides an opportunity for us and others to take part in the vortex of energy that always seems to be created around a current item of interest.

A final word of caution: some have become infected with the rubber stamp madness; if you notice that every surface around you has been covered with your favorite saying or design, slowly and calmly close your ink pad, force yourself to put the stamp down, and call a friend to come sit with you until the attack passes.



11

THE CATEGORIES:
1. *Personal: Signature, Logo, Photo.*
2. *Humorous: Verbal or Visual Funnies.*
3. *Make a Statement:* ***"Stamp Out Art," "Save Our Serifs!,"*** *etc.*
4. *Composites: create Designs, Letterforms, or Illustrations, using one or several stamps.*
5. *Historical: Alphabets, Calling Cards, Ads.*

We are primarily interested in your own original designs, whether personal or commercial. The only exceptions would be the historical stamps.

Please submit your rubber stamp art to Big Island Gallery, R.D. 1, Florida, N.Y. 10921, by January 15, 1978. For information call: 914-651-4163. Each piece should have your name on the front and name and address on the back. Please specify if you wish to have your piece returned, and if so, include a stamped, self-addressed envelope. Also indicate if it is for sale and the price.

We also encourage you to send in any historical, anecdotal, or state-of-the-art information concerning rubber stamps.



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Stampro.files
1. Leavenworth Jackson
2. Sampling of a year's supply of personal postmarks designed by Kenn Speiser of Bizarro Inc.
3. Leavenworth Jackson
4. Illustrator Hedda Johnson's studio logo.
5. Louise Fili's logo à la Rorschach, reduced from an inadvertent ink blot self-portrait.
6. In Japan, 1977 is the Year of the Snake, and such rubber stamps are very popular. The snakes make the characters for "Happy New Year."
7. Handcarved ivory signature "chops" from Taiwan. Round one says "Loo-sha" (Lucia) and square one says "An-jhoo" (Andrew).
8. Personal bilingual "chop" given to Herb Lubalin during his 1972 visit to Japan.
9. Leavenworth Jackson
10. Rubber stamp "poster" by Ken Smith.
11. Personal logo by sphinx fetishist Irva Mandelbaum.
12. Leavenworth Jackson
13. Bumper stickers for envelopes, designed by Lucia Nevai. Reduced from 9"x12" art.

12

THIS ARTICLE WAS SET IN ITC KORINNA REGULAR KURSIV

CONTINUED FROM PAGE 4

Increasingly the agency, studio and publisher, for example, supplies complete film to the printer so that much camera work, stripping, imposing and composing formerly done by the engraver or printer is being done in-house. The trend is expected to accelerate, reduce the variety of formats, increase the use of standardized formats, and set the stage for a wider use of well designed yet easy to obtain and use canned formats.

Ink Jet Printing

Ink Jet printing today is a specialty process but some projections visualize it as more broadly significant by 1981, not only for imprinting and coding of business forms but for checks and labels, for personalized promotion letters, billing, and credit card purchases, for certain newspaper users and even for some commercial printing. By 1981 the number of lines per inch the process can print is expected to increase and make ink jet quality approach that of commercial printing.

Ink Jet printing uses no plates. Imaging is by controlling the spray from a high speed jet of ink. The system deflects the jet horizontally and vertically to form the image. The information to do this is magnetically stored in digital form, fed into the press and decoded. This activates the ink jet nozzles. No typesetting, camera, stripping or platemaking functions are involved.

High-speed book manufacturing

Web belt-presses for books are also expected to be more common in 1981 and they, too, are expected to be capable of satisfactory halftone quality by then. The Cameron Book Production System converts the web, in one rapid stroke, to a completely printed book. A 4-3/8″x 6″ book of 160 pages can be produced at a rate of 200 per minute. The machine prints the full book at one pass through and automatically collates, folds, applies paper cover, trims, stacks, counts, etc.

Duplicators, copiers come of age

Duplication and copier sales are expected to grow faster than sales of commercial printing presses as duplicators become more automated and reproduction quality for both rises.

Duplicators that can print both sides of the sheet on one pass through the press will be common by 1981. These developments will make duplicators competitive with small offset presses.

Couple this trend with where in-office typesetting and platemaking capabilities will be by 1981 and the dimensions and implications of how the graphic arts operations are moving back into the editor's...designer's...publisher's office become understandable and significant.

The in-office bindery

Folding, collating and binding equipment can be expected to expand greatly in the in-office market too.

Low in cost, high in capability, easy to operate and compact, the in-office bindery equipment completes the production chain of in-office typesetters, platemakers, and printing units. Likewise, for more commercial printing plants, folding and signature handling are becoming pressroom operations as they long have been for magazine and newspaper printers. Even sheet-fed presses will have instant drying inks (infrared, ultraviolet, etc.) so that they can be coupled with in-line folders.

Size standardization

The trend is also to more size standardization with fewer standard sizes, partly because in-office page or area makeup is likely to be done more by office personnel than by skilled artists, technicians, studio or printing plant personnel. Standardizing on fewer sizes is also getting a push from the Postal Service. Automated pre-sorters of 2nd and 3rd class mail and most 1st class mail will penalize, if not rule out, odd sizes and shapes...odd, that is, to the requirements of the mechanical sorters.

Electronic mail

The Postal Service, too, is faced with a message delivery revolution that is inevitable. The day of electronic message delivery is at hand. Whether the Postal Service offers such services or leaves the field to others remains to be seen.

Increasingly, message delivery is recognized as the responsibility of the word processing or reproduction center. This is another example of how key decisions and responsibilities are moving toward the front end of the communications chain.

A national electronic mail system is on the horizon as increasing numbers of message center people ask, "What's the point of gaining hours in message reproduction time and losing days in delivery time?"

Which media will triumph remains to be seen. Contenders include: 1. Communicating electronic text editors, 2. Facsimile, 3. Telex, 4. Mailgrams, 5. Faxgrams, 6. Telegrams.

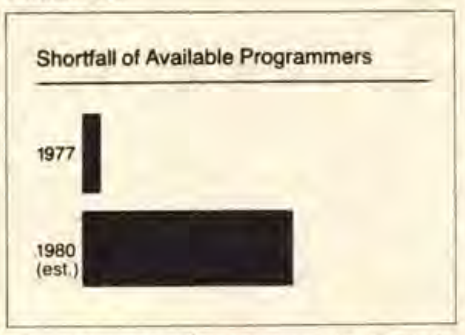
Of these, in our primary areas of concern the communicating electronic text editors and facsimile have the greatest potential. Already ads speak of talking typewriters...electronic typewriters linked to each other...and of a typesetter in New York linked to a typewriter in Chicago via Dataphone, and of Telex networks. Such systems make possible not only instant transmission of words, ideas and information but transmission of their graphic format...including their typefaces, layout and illustrations.

Responsibility moves up front

Pre-press operations are moving into the publisher's office and the newsroom as computerized text-editing systems with makeup and correction capabilities are controlled by editors. It is just a matter of time for this trend to be felt in advertising and commercial printing.

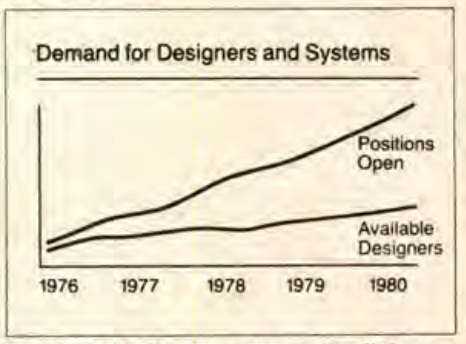
Bottlenecks

Bottlenecks to the growth and directions outlined here do exist. Two major ones, as hardware comes down in cost and up in capabilities, are in the software area.



The undersupply of programmers is expected to become more severe and increase the demand for reusable automated programs.

Program creation requires skills that may not be as readily available as the hardware, at least not as quickly nor of the quality or in the quantity needed by the early 1980's.



The shortfall of designers to service all the in-office reproduction centers also adds impetus to the demand for automated programs.

Layout artists or graphic designers may be the missing link for many offices possessing versatile, capable, low-cost phototypesetters. When 60,000 or more internal operations are generating type, and often setting in type material that previously had been typewritten (to gain typographic impact and economies in materials, space and distribution), there will be a demand for layout artists or designers or for programs that will enable the in-office operators of typesetting machines to efficiently and effectively design and produce the output of the typesetters and to convert mere typesetting into communication-effective typography.

In the next few years we will see more use of less expensive CRT and VDT input and editing systems. And CRT typesetters will be outputting directly onto plate material instead of onto film or paper.

More electronic makeup

We will see more systems capable of area composition...of making up a complete ad, or even a full newspaper page, with text and pictures in position.

More low-cost programmed formats

There will be more versatile and lower cost methods of choosing and producing layouts for the in-house operation as designer originated programmed formats become available on the low-cost direct entry typesetters. Computer assisted makeup, or CAM ability, is already maturing both as a viewing tool and as a part of the total typesetting system. In-office operators of typesetting machines will select a format or layout from options in a layout specimen book. After the desired layout is selected from the layout specimen book or menu, the operator takes the corresponding program, which may be on tape or mag card, for example, and inserts it into the typesetter to automatically command it so that the output will be in the selected format. The sophistication of such programs is limited chiefly by the capability of the output machine, and this is expected to grow dramatically in the next few years.

Automatic WP/typesetter interfacing

More word processor outputs will become typesetter inputs without the need for interfacing units. And low-cost typesetters may move into part of the word processing market, combining many capabilities into one piece of office equipment.

Systems, systems, systems

Perhaps the key word for tomorrow is *systems*, whereby the interactive relationship among a number of devices, from input to output and in the many in-between steps, is crucial in selecting units that can fit into integrated operations and become part of the total system.

Typeface style consciousness

A much broader market is becoming typeface style conscious. This is true across the graphic arts spectrum...in newspaper and magazine plants, in book publishing, in the burgeoning in-house operations, and in the commercial printing and typographic service areas where it has been traditionally at home.

Is all this but a prelude to laser typesetting and platemaking?

And, looking further down the road, high-speed laser machines will further revolutionize platemaking and typesetting; by the early 1980's we should have a clearer picture of just how. Laser energy will not only write characters but create halftone and line art in desired position and output directly onto the printing plate. There are those who feel that many of the seemingly incredible machines and systems we are now only becoming acquainted with are but transitional devices and that this new world of photo/electronic platemaking and typesetting is but a brief prelude to the era of the laser.

The Future of Typography



Aaron Burns
President
International Typeface Corporation

Typography and the business office

Traditionally, typography has been identified with the graphic arts. *Today*, however, widespread changes in typographic technologies are expanding typography's role beyond the confines of the graphic arts.

A new industry is taking shape, one that will dwarf the graphic arts typographic industry as we have known it.

Typographic Communications may be the generic name for this new industry. It will be identified not with the graphic arts, but with the business office industry.

The growth of office word processing systems and the increasing sophistication and lowered costs of

photographic typesetting systems offer us new typographic and design opportunities, affecting even the design of the typefaces we use, how we set them, how we make up our ads and pages, and altering the entire structure not only of what can be done and how we do it, but of who does what.

The word processing explosion

What has caused today's explosion of the typographic industry? In the opinion of most experts it has been the development of word processing.

In reporting how word processing was going to reshape the corporate office, Business Week (July, 1975) declared, "The office is the last corporate holdout to the automation tide that has swept through the factory and accounting department. It has changed little since the invention of the typewriter 100 years ago. But in almost a matter of months, office automation has emerged as a full blown systems approach that will revolutionize how offices work.... Word processing is coming on strong because businesses can no longer afford the custom approach to office work."

Also in 1975, Modern Office Procedures reported that "When word processing was born a decade ago, few —if any—foresaw it as the forerunner and cornerstone of a completely automated office. WP is now providing the link needed to interface and integrate into one system most major office functions, including dictation, communications, information storage and retrieval, composing, typesetting, and reprographics...typesetting and composition, once the exclusive province of the printer, are now an integral part of word processing."

The inherent savings

The same article quoted Mr. Edward Hale, Vice President and General Manager of the Varitype Division of Addressograph-Multigraph Corporation, who cited four developments that favored integration of typesetting and word processing. They were
(1) growth of the amount of published information,
(2) dramatic increases in costs of publishing,
(3) simplicity of new systems, and
(4) technological advances.

"Whether material is printed, duplicated or copied, there is a great advantage in converting processed words into typeset words. Costs of mail, distribution, paper and labor have all increased. Typesetting can reduce the space required by 40 percent of typewritten copy. This in turn reduces other costs. The users also gain—at no additional cost—copy that's easier to read and that attracts attention. Other typographic niceties such as bold headings and italics improve all kinds of communications. The complexity and cost of older typesetting methods would have been prohibitive in the business office."

Consultant Frank Romano says the in-plant market consists of anyone who performs a graphic arts activity who is not in the graphic arts. He reports (based on Department of Commerce data) the total number of graphic arts establishments—which include printers, typesetters, publishers, newspapers and all related businesses—to be around 50,000. "The rest of the 13,000,000 business firms in the U.S.," he observes, "are where the in-plant phenomenon exists."

The in-office typesetting potential

That is an incredible prospect! 13,000,000 business firms in the United States alone and every one of them has at least one typewriter. And every day in offices all over the world word processing typewriters are replacing conventional typewriters.

Business Week magazine has noted that "The growing demand for word processing systems comes primarily from the need to improve productivity in the office as salaries soar out of sight. At the low end of the product spectrum is the automatic typewriter, costing $3,000 and up, that allows the operator to make line by line changes in a first-typed version, then lets the machine do the final retyping. At the high end, with price tags ranging up to $17,000 are the display terminals."

Why didn't Business Week talk about typographic word processors in the graphic arts industry? Not just word processing typewriters, but word processing *typographics* writers.



Why settle for a typewriter word processor when you get a typographics writer in the same price range?

Some of these machines already are on the market for less than the $17,000 Business Week cited for conventional typewriter word processors.

Would not more and more business office managers, given a choice between buying a typewriter that can do word processing or a typographics writer that can also do word processing, choose the typographics writer, based on quality and price?

This new market potential embraces 13,000,000 business offices rather than merely 50,000 graphic arts firms. If only two percent of the 13,000,000 offices become in-office typographic centers in the near future, these 260,000 offices will represent a market more than five times the current number of all graphic arts firms in the United States as listed by the Department of Commerce.

How will this affect us?

The future of typographic design will be linked to the new technologies. The typography of tomorrow will not be the sole province of the typesetter or the printer. Typographic communications will belong to a new breed—to millions of *typographists*.



Tomorrow's keyboarder will be a new breed... neither typist nor typesetter...but typographist.

It will be performed in offices, homes, studios, wherever there is a word originator to keyboard information and thoughts. These people—these typographists—will be the "general practitioners" of typography. The knowledgeable typographers of today will become the specialists ...the internists...the surgeons of typography. There will be room and need for both.

Consider some ways in which typographic design has been affected by the new technologies. Typography is the application of design principles to the setting of type.

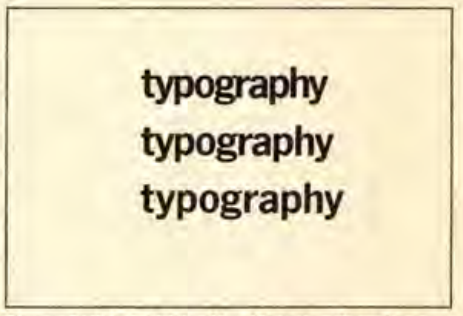


Typewriting (top) and typesetting compared. Note the difference in word spacing and the gain in impact and readability.

Note here the four top lines that have been set in type. This is a graphic visual of the difference between a typewriter and a typesetter.

With the invention of phototypesetting and the introduction of computers, all previous concepts of what typographical communications should look like, or of the means by which type should be generated, have been completely re-evaluated.

Today there are many photo display typesetting machines that are both simple and economical to operate. These machines have become part of our typographical arsenal. The manufacturers of these machines at first concentrated on converting all of the popular metal typeface designs onto film reels or strips. With film image masters it was possible to obtain a texture for the same words that was heretofore impossible to achieve with metal-set type.



News Gothic Bold in film (top two lines) saves space, gains readability over metal version and offers more letterspacing options.

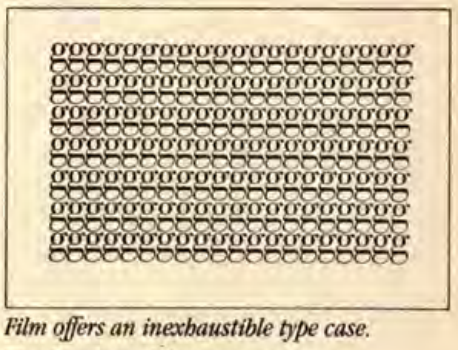
Note the word "typography." All three lines were set in News Gothic Bold. The bottom line was set in metal type. The two lines above were set in film, one with slightly less space between letters than the other.

The metal-set line looks as if space has been added between letters, but the letters have been set solid, with no letterspacing. In film typography, minimizing space between letters, beyond the limits feasible with metal, is no problem.



Metal (top) and film Futura Medium.

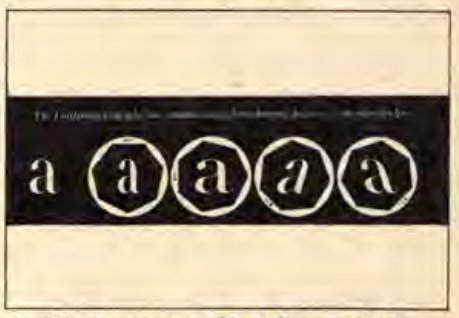
Here the two top lines were set in Futura Medium in metal. The bottom lines were set in film. The color and fit of the bottom lines looks more pleasing and more harmonious. The two top lines look uncomfortably letterspaced.



Film offers an inexhaustible type case.

The inexhaustible type case

In film, the same characters can be phototypeset endlessly. Phototypesetting has created the inexhaustible and everlasting type case.



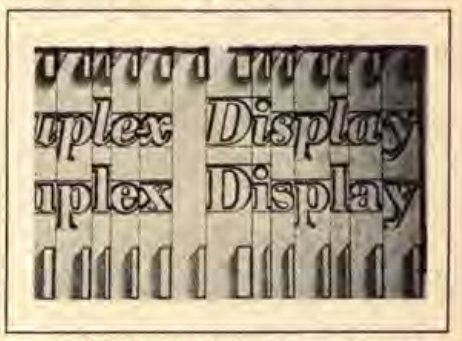
Modification lenses offer different typeface styles at the flip of a dial.

Photo modifications

With the use of photographic modification lenses variations of a typeface can be created with a flip of a dial, or a change of a lens. Type can be extended, condensed, italicized and even back-slanted.

Low-cost typefaces

The widespread growth of photo display typesetting, dry transfer letter products, and process lettering created a renaissance in typeface design. Typefaces that had become too costly to cast in foundry metal type could now be reproduced in film for as little as a few dollars per character...a fraction of the cost for the same design in metal...$300 to $500 for a complete display alphabet in film versus $50,000 to $100,000 for the same alphabet in metal.



In metal keyboarded typesetting, mixing of typefaces was mostly limited to duplexing.

Yesterday—duplexing

Prior to phototypesetting, metal keyboarded text composition was done on either a Linotype or Intertype linecaster or a Monotype machine. A metal Linotype or Intertype matrix offers only two choices of typefaces on one matrix—either a roman

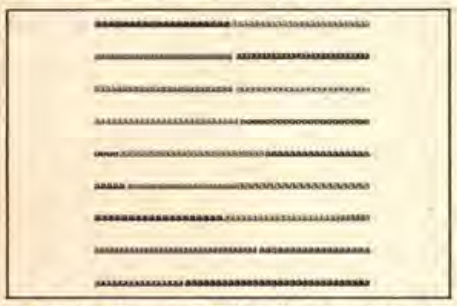
with italic for the same typeface, a bold typeface together with a lightface, or any other two combinations, such as small caps with figures or marks of punctuation, etc. Each matrix is for only *one* point size. In order to change point sizes it is necessary to use different size matrices. This is time consuming, laborious, and requires making several manual adjustments on the line-casting machine.



In phototypesetting multiplexing of sizes is very extensive.

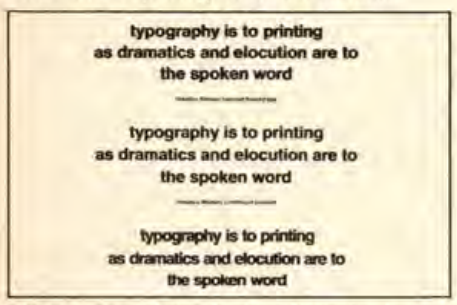
Today—multisizes and multiplexing

Today, on most *phototypesetting* machines it is possible from "one" image master, grid, disc, strip or whatever, to obtain not only all of the sizes shown in the previous example, but additional sizes never before obtainable in metal keyboarded composition.



Point size changes within a line are achieved easily and quickly.

It is also possible, simply by keyboard commands, to mix different styles and point sizes without stopping to change the typefaces or point sizes on the machine. Here we see 18 different typeface styles all intermixed and phototypeset on one machine.



Film's easily-achieved minus letterspacing often improves readability and appearance.

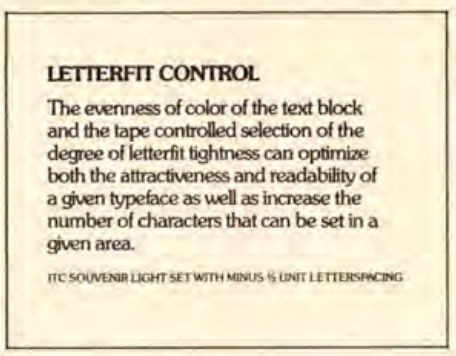
Here the top three lines were hand set in metal type. The middle three lines were set on a phototypesetting machine in the same typeface. The bottom lines were set on the same phototypesetting machine, in the same typeface, but with a twist of a dial, a unit of space was automatically and electronically removed from between each letter. In certain typefaces this closer fitting of letters makes for quicker readability and greater legibility.

This minus unit factor is, however, an artistic license and as such must be used judiciously, for it can reduce as well as improve readability.











Letterspacing variations in half-unit increments from plus one unit to minus one unit.

Better letterfitting

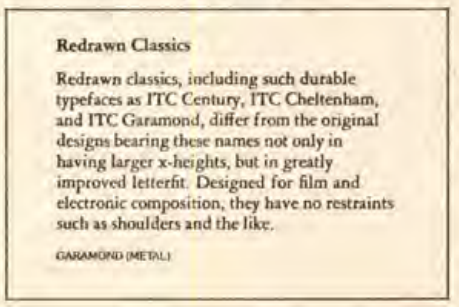
Shown here are examples of plus and minus letterspacing for the typeface ITC Souvenir. The unit spacing values range from plus one unit to minus one unit of letterspacing and are shown in graduations of one-half unit increments.



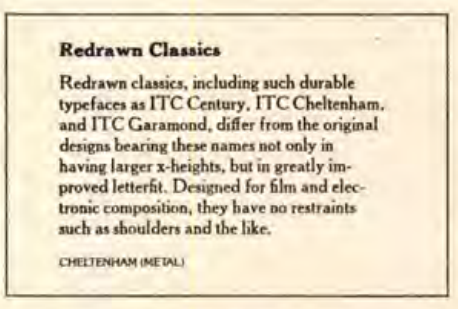
Larger x-heights of today's new typefaces improve readability.

Larger x-heights, easier readability

Film offered new opportunities for the redesign of metal typefaces. One of the key features of modern text typefaces is the large x-height sizes of the lower case letters, and shorter ascenders and descenders of such letters as h and p for example.









Redrawn classic typefaces feature larger x-heights and tighter letterfitting than did their metal ancestors.

Here are metal typeface designs that have been redrawn with larger lower case x-heights. The combinations of closer unitized spacing between characters and the larger x-heights of these characters make for the new contemporary style of typography which is in popular use today.

Computer-aided phototypesetting

Until recently all phototypesetting was done either manually or photoelectronically, and it was done without the aid of computers. Computer-aided phototypesetting was the next major development in typographic communications.

Computer-aided phototypesetting gave birth to programmed typography.

What is programmed typography?

Programmed typography is a newer, faster, cheaper and better method of preparing copy for phototypesetting. It uses a computer to do away with many of the decision-making chores for which the keyboard operator or makeup person has always been responsible, such as deciding how to space out a line properly or when and where to break words for hyphenation. Furthermore, with the computer's ability to correct and merge information, making corrections is no longer a problem.

The computer has also opened the doors wide to an entirely new field of typographic design opportunities—Programmed Typographic Design.

Programmed typography saves money

Programmed typography saves keystrokes, therefore money and time and reduces the error potential. For example, a demonstration job set on a Linotype required 4271 keystrokes, plus type magazine changes and mold adjustments. A Linofilm version of the same job, without a computer's assistance, required 4706 keystrokes. The computer-assisted Linofilm version required only 1138 keystrokes.

Automates quality

The various ways to determine word hyphenation breaks at the end of lines are essential ingredients for programmed typography. Hyphenless, Discretionary, Logic and Exception Word Dictionaries are four hyphenation control routes available to the typesetter.

Programmed typography has made possible a quality of typesetting that could almost rival the finest of custom tailored—hand assembled or manually prepared lines of type.

Reduces error potential

Computer-assisted typography facilitated the reprocessing of captured keystrokes by re-running tapes of the keystrokes through a computer which could make new and revised tapes for any purpose—*without* having to retype the keystrokes. This was the early major advantage of programmed typography.

Speeds the reproduction cycle

It not only improved the typesetting quality, it also shortened the typesetting production cycle, and this in turn meant lowered production costs. Thus the striving for better, faster and cheaper typesetting has reached another plateau in its search for new ways to perform typesetting chores more efficiently and economically.

Built-in refinements

Built-in typesetting refinement considerations such as letterspacing and word spacing could now be programmed with parameter options for each person's individual taste preference.

New: programmed design options for direct-entry machines

But the influence of the computer goes far beyond the mere setting of type.

Computer-aided phototypesetting or programmed typography introduced formatting concepts. Keystrokes that could be stored and recaptured introduced design options never before possible.

Until very recently, typographic formatting of letter and word spacing, hyphenation, justification, and ragged or flush setting, for example, required the purchase of very costly computers and expensive programming labor. But today, much of this can now be obtained, and more will soon be available as part of the software features available on many of the newest low-cost, direct-entry phototypesetting machines.

The missing link, programmed formats

The typist is now able to set beautiful type on many of the direct-entry typographic word processors that are already equipped with their own spacing guides and programmable and formattable potentials. What is needed is something that can help the typist create or select and use layouts. Something that will enable the typist to become a typographist.



Canned formats will be the catalyst that will enable many a typist to become a typographist.

That something, I believe, is Programmed Typographic Designs or Canned Formats.

How can we educate this potential mass market of millions of future typographists without sending them all to school to learn about typographic art and design principles.?

One way, and perhaps the easiest solution to start with, would be to put into their hands good examples to follow. Just as the type specifier needs type specimen showings or booklets, the typographist needs readily available layouts or layout specimen booklets for good typographic design for the many formats in his or her domain.

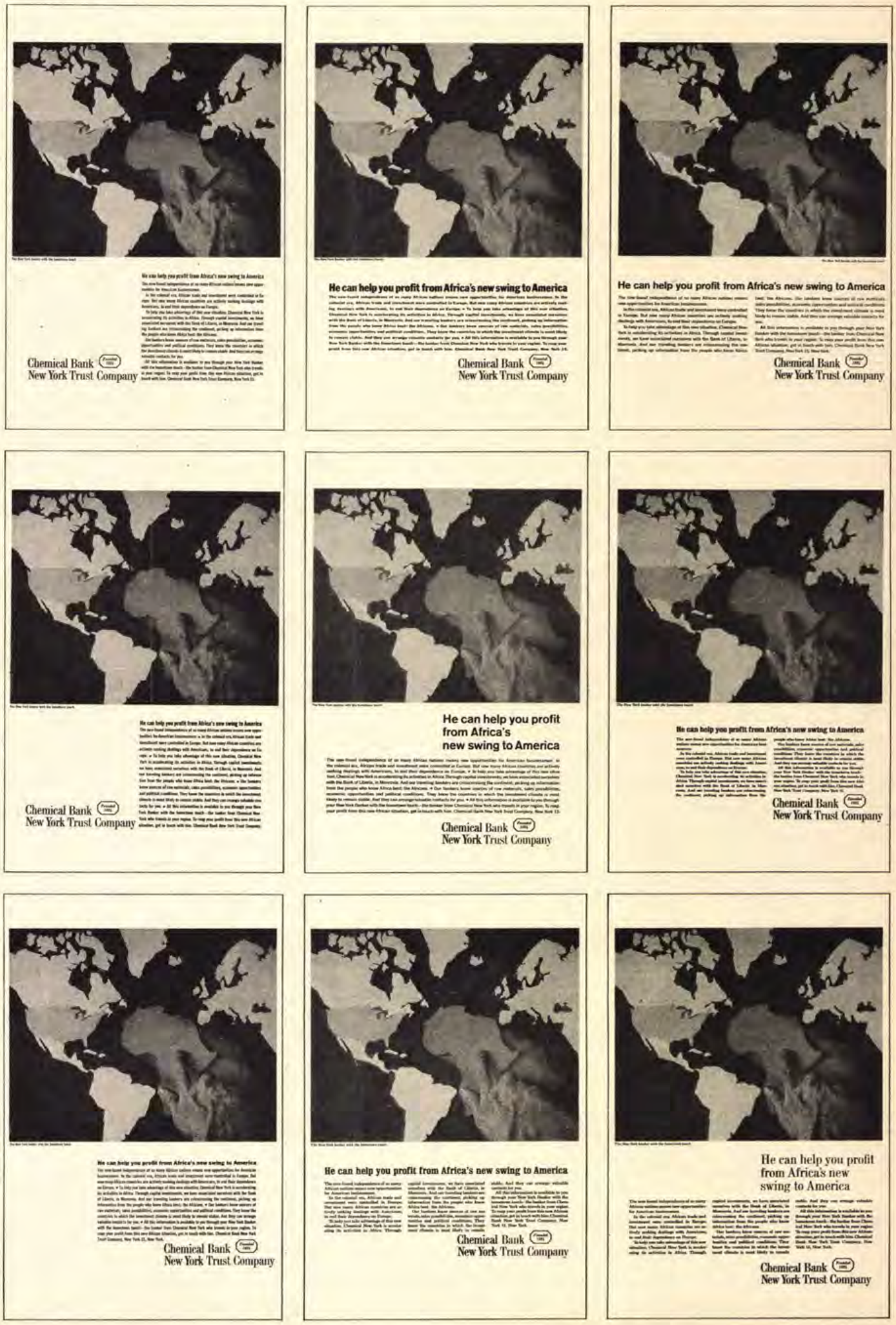
The typographist needs fail-safe, high-quality, easy-to-select and easy-to-use programmed typographic layouts and designs.

Layout menus

There could be a series of layout booklets or menus, each menu covering one of the daily needs of the business office, such as one on price lists, one for newsletters, one for parts manuals, etc. There could be other menus for workbooks, catalogs, reports—just to name a few of the areas that could benefit from such multiple-choice automated design recipes.

Each menu would offer a range of choices for a given layout problem. . .layouts that will show how the same problem can be treated if the type is set in a one column narrow measure or in two or three columns to fit a wider space area. Such menus can be the building blocks for the metamorphosis of a typist to a typographist.

Alternative layout solutions to one layout problem as they could be developed for part of a canned format library.



A sample menu

An example of how alternative layout options might appear as part of the library of typographic menus for the business office can be seen in the accompanying typographic design solutions for one layout problem (shown on page 45). I developed 25 different typographic solutions to the same problem for a major advertising agency.

At the time this study was made, I doubt that it led to anything.

From the very outset I questioned the need for what I was doing, when the advertising agency had so many competent art directors available on their own staff to do the very thing I had done. This market *did not need* a menu of typographic layouts.

The need is now

That was in 1962 in the art department of a major agency. But today, in 1977, in the business office, the need for typographic design solutions similar to the ones I have just shown *does exist* for all the different kinds of work that typographists in business firms all over the world are encountering as they become involved with typographic word processors and/or phototypesetting machines.

Programmed formats can make available a choice of designer-quality formats, off the shelf, to relatively untrained people. They should be designed, packaged and presented to make the typographist feel comfortable and secure. The work of choosing layouts should look like fun and only require the typographist or person selecting the format to decide, "I want *this* part of my copy to look like *that* copy as per the model or example shown in the menu booklet."

The exact shape of "design-processed" layout programs remains to be seen. The tools and technology to make it work exist. The market needs are there. The manufacturers' interest and will to become involved need hardly be questioned.

Typographics



Klaus F. Schmidt
Vice President, Director Creative and Account Support
Young & Rubicam, Inc.

Is there still craftsmanship in typography?

If not, we must ask ourselves: Does the loss of craftsmanship have positive or negative consequences for society? This may sound like a "should-you-love-your-mother" question; nevertheless, the answer is by no means obvious.

Each revolution, even if it is perhaps only a highly accelerated technical evolution, implies a crisis. And each crisis engenders dangers and opportunities. One of the finest opportunities which has been offering itself to the printing field during the past decade or two is to become an industry. Not just an industry by itself, but to become an integral part of the communications industry.

Industrialization need not be synonymous with bigness or loss of quality. The Industrial Revolution of the 19th century, while creating cotton mills and furniture factories did not eliminate all the small shoemakers, tailors or cabinetmakers. Industrialization in the graphic arts field need not render a small printing plant superfluous. Yet it should change the thinking and methods of the small printer and his interface with the rest of the communications field.

We disciples of Gutenberg—and it is quite common to allude to him as though he were a god—have long suffered from feelings which could at best be termed pride and at worst self-imposed isolationism. Industrialization has been an empty term to numerous printing firms. Many of us have worn blinders, have pretended that we did not notice the ongoing trends in the field of communication. Many of us have used the term "craftsmanship" to cover up lack of technical know-how or managerial foresight.

Craftsmanship—reality or euphemism?

Progress involving the application of enlightened business and technological methods had long been kept out of the "Holy Temple of the graphic arts" which was primarily built on the pillars of tradition and craftsmanship. Craftsmanship is priceless as long as the term connotes skill. When it becomes an undefinable factor supposedly built into a product yet is nothing more than an excuse, a euphemism, for laborious handwork and lack of technical precision and systematic procedures, craftsmanship becomes subject to suspicion.

Print in an electronics era

Actually, Gutenberg was quite a progressive communicator in his own time. He gave mankind effective communications tools—lead type and wooden presses—thus providing the interface between knowing and unknowing people. In those days printing *was* communication. Today, this is no longer true. We printers must learn to recognize and expand into other communication media. We must give up some of our lofty ideas and admit to certain disadvantages of printing vs. other means of communication; namely, 1. Printing usually limits the information consumption to one person at a time; 2. Stored printed material is space consuming; 3. Access to material is frequently faster in other media; 4. Pictures and sound address several senses and impress themselves more intensively upon human minds.

Needless to say, there are numerous advantages of the printed word over other communications media.

The 1969 VISION congress raised the question: Is print dead? The answer was a resounding no. I still subscribe to that opinion. These remarks are not a funeral speech for the printed word.

Yet the printer must integrate himself into the overall, highly industrialized, highly technical world of communication. He must give up some of his self-fulfilling craft thinking. He must become more market oriented. The interface between word processing in the office environment and the graphic arts world is but one example for such changes in this marketing approach.

The printer and typographer must become more technologically oriented. All too frequently he will embrace the new technology without question, hoping that the purchase of new machines will solve all of his problems. Such ill-planned investments can only produce negative consequences.

Productivity is more than technology

Yet in all of our involvement in new technology, we must never neglect the human factor. Productivity, as the Public Printer of the United States, Thomas McCormick, recently stated, cannot be improved through technical means alone. We must pay attention to the changing needs, to the anxieties and apprehensions of our employees. Tradition has been overthrown in many areas of the graphic arts and simultaneously there has frequently occurred a distinct decline in values, a departure from time-honored work ethic, a lack of motivation. This we must try to counteract by all available means.

Typography: interface of technology and art

Typesetting technology, throughout the history of the graphic arts, has affected the appearance of typography, as Hermann Zapf put it in a recent article. Gutenberg had about 290 letters in his type case. He utilized a complicated system of logotypes and characters of different widths to achieve justification. And the justification of type into lines of equal length was possibly the most incisive change in the appearance of the 42-line Gutenberg Bible typography vs. the handwritten Bible texts of earlier years.

While the initial typefaces were strictly copies of handwriting, the mathematical technical principles of designing letterforms and transforming them into punches and molds for casting were soon explored. Albrecht Dürer constructed letters with compass and ruler. The types for the French Royal Printing Office in 1692 were constructed within a framework of 2,304 squares. Plating and printing techniques, such as copper and steel engraving and the advent of lithography at the end of the 18th century, affected letterforms.

When Linn Boyd Benton of Milwaukee invented the punchcutting machine in the 19th century, he also influenced the appearance of type, since individual point sizes no longer had to be cut as punches. The introduction of linecasting machines changed letterforms, since on dual matrices the width of italic characters had to be equal to their roman counterparts.

Some of the principles on which modern phototypography and cathode ray tube typesetting are based are older than most of us might realize. The binary principle was developed by mathematicians of the 17th century. The Jacquard loom of 1801 utilized a punched hole tape to program a weaving pattern. The Monotype machine of 1887 introduced two principles to typesetting: the punched paper tape and the separation of input and output machines. Morse code and Braille type are other applications of binary principles. So, when in the 1950's several graphic arts supplier firms started developing the idea of computer storage of letterforms and the "writing" of such letters on a cathode ray tube they leaned upon a long history. And phototypography itself is not as young as one might think. The first patent for a phototypography device was taken out in the 1890's.

Phototypesetting has profoundly affected the appearance of typography. While some problems have arisen—for instance, poor "adaptations" of existing faces by some manufacturers and insufficient consideration of the weight differences between phototype and inked impressions of metal types onto paper—the majority of changes caused by two-dimensional vs. three-dimensional typesetting have been positive.

The unit systems of the typewriter (a simple one) and the Monotype (a complicated one) became the forerunners of the present-day unitization systems on which all phototext setting is based. The development of optical character recognition alphabets or the E, 13 B magnetically readable bank check numbers are other examples of the incessant influence that technology has exerted upon typography. (For further data on technological influences upon the art of typeface design, see remarks by Matthew Carter.)

Phototypesetting advantages

To name but a few aesthetic advantages of phototype: control over the spacing between letters and words in photodisplay and—to a large degree—also in phototext, the computerization of typographic refinements such as kerning, hung punctuation, etc., through such programs as Mergenthaler's ATP 1/54, and the utmost consistency which such computerization can provide over manual methods. Mac Baumwell writes about these facets in more detail. And Victor Spindler addresses the interesting opportunities which arise for the utilization of computers to store design programs intended to improve the appearance of typographic output produced by operators who have never been exposed to the so-called rules of typographic craftsmanship and tradition.

The designer/technology stonewall

The eminent Dutch typographer Dr. Ovink has expressed concern over the fact that designers frequently do not understand the new technology and technicians rarely understand design. The designer is—intentionally or unintentionally—often bypassed by manufacturerers whose viewpoint seldom coincides with tradition and craftsmanship.

Criticism, by the same token, is all too often voiced by designers about the quality of typesetting without adequate consideration of economic factors inherent in the production system or in the very assignment the designer is involved in. Both sides can learn from each other and must respect each other's viewpoints. It behooves the designer, to name but one example, to learn about the tremendous opportunities inherent in the new pagination systems, reviewed by Patricia Seybold Breuer.

It is a truism that the great majority of readers of printed matter are unconscious of technical and design aspects of typography. Nevertheless, it has conclusively been proven by the field of applied psychology that good typography can not only render communication more effective but is also able to

satisfy the artistic needs which all human beings have in varying degrees. Just as much as most people will, however subconsciously, appreciate expertly crafted furniture vs. an ordinary assembly-line mail order piece, they will recognize a superbly designed book page vs. a cluttered one.

Craftsmanship and CRTs

And this is exactly where the value of *true* typographic craftsmanship comes in—craftsmanship which can equally be applied to setting type by hand in a composing stick or to generating thousands of characters per second on a cathode ray tube. This kind of craftsmanship utilizes the available technical means within prescribed economic parameters to the greatest possible advantage and to the highest satisfaction of the designer so that the reader can, consciously or subconsciously, benefit by it. Some of this craftsmanship may be based on tradition and long-established production tools; some may be used to express the most untraditional design concepts and work with modern technical means.

Typography—a servant art

Nobody has expressed the place of typography in our society better than Stanley Morison who said: "Typography is the efficient means to an essentially utilitarian and only accidentally aesthetic end, for enjoyment of patterns is rarely the reader's chief aim. The laws governing the typography of books ...are based upon...the traditions, explicit and implicit, prevailing in the society for which the printer is working. Every character, every word, every line should be seen with maximum clearness." Some of this, Morison admits himself, may not apply to the typography of advertisements and other promotional printed matter.

Morison goes on to say, "There are two features of organization common to architecture and building, typography and printing which must be respected as primary principle and obeyed as such by both areas: that of respect for the materials used and their use consistently with the essential social purpose of both arts. The typographical activity, like architecture, is a servant art. These are the arts which by their nature are predestined to serve civilization. Designers are essentially servants of civilization and are essential to it."

And about tradition in typography Morison, back in 1930, had this to say: "Tradition itself is not well understood at the present day in some quarters. If it were a reflection of the stagnation or prejudice of past ages of printers little attention need be given to it by historians and none by practitioners of the arts and crafts. But tradition is more than the embalming of forms customary in states of society that have been long since cast aside. The sum of experience accumulated in more than one man's lifetime, and verified by succeeding generations, is not to be safely disregarded. Tradition, therefore, is another word for unanimity about fundamentals which has been brought into being by the trials, errors and corrections of many centuries."

Changes in technique carry with them changes also in outlook upon design. But whatever the techniques may be, whether we set type on a Linotype machine or on a high-speed laser typesetter, the basic principles of good typography will alter very little. Call it craftsmanship, tradition, common sense or just plain decent work—it does not matter.

Typographic Refinements



Maxwell J. Baumwell
President
M. J. Baumwell Typography

As we focus on the niceties, subtleties and refinements that one expects in present-day typography, consider how we crossed the bridge between yesterday's technology and today's. We are concerned with how (and in some cases *if*) we will reach our quality goals using tomorrow's technology, and whether we can exceed certain high standards with the assistance of computer programs.

We are presently engaged in computer-*assisted* typography, and have begun to lean upon the memory and capabilities of a computer to perform some of the quality functions that were heretofore done by people. It is not as easy as one would hope. The people who once made all the decisions now must rely upon a device that can be programmed to decide. It can even be taught exceptions to decisions but cannot exercise judgment or make an artistic or visual evaluation. For quality and adherence to high visual standards, somewhere along the course of the typesetting process human judgment must still intervene.

Letter fitting

We've come a long way in both our method of setting type and the final appearance of that type. In display setting, for example, foundry type looked

1



like the first letters of the line shown in figure 1. The dotted lines show the shoulders alongside each letter. In order to fit them closer together, we would notch out a corner of lead as shown on the second pair of letters, resulting in the appearance of the third TA. The development of film display lettering machines enables us to visually fit letters as close to one another as we wish, as in the fourth TA. Because each letter is generated individually and sequentially, and because the craftsman sees a residual image of every letter he composes, he is able, exercising good taste, to achieve the visual inter-letter-fit needed to satisfy his layout. When we train our apprentices on this machine, we tell them that each letter should have a flirtation with the one next to it.

2



The word *mood* looks fine (figure 2) with its letters almost touching. But the word *hill*, given the same spacing, is too close; *clad* looks good in Helvetica medium, but the same close fit when set in ITC Avant Garde Gothic makes the word read like *dad*.

3



The word *burn* (figure 3), unless spaced farther apart, looks like *bum*. There are many new freedoms available in photographic headline setting. We can eliminate the dot over the i in the word *Time* without making the word lose its meaning. And if there's too much white space around the letter A in the word *GRAND*, we can overlap the lower portions, at the same time adding a white relief cut.

4



The word *home* (figure 4) shows how a basic type design, in this instance Caslon can be altered through an anamorphic lens, resulting in a condensed, expanded or italicized version. In headline typography, all these refinements and advantages involve the brain, judgment, experience and individual skill of the craftsman.

Keyboarded typographics

In keyboarded typography, however, we can now program the memory of an electronic device to perform many of the niceties once achieved by people power.

What is elementary keyboarded photosetting like? A person types on a machine equipped with a counting and adding mechanism, one which not only records onto a magnetic or paper medium the characters being typed, but also adds their width values, and alerts the operator as justification range of the line measure being composed is approached. The product of the keyboard, the *input*, is then fed into an *output* console, which reads the signals on the tape, and, using a film negative of the specified typeface, sequentially flashes light through whichever letter is called for, moving the paper or film upon which the letters are flashed to accommodate the width of each letter.

Justification

How is justification accomplished? Unlike Linotyping, all letters used in photosetting must be drawn to fit one of a range of fixed unit values. This is in order for the input counting mechanism to ascribe the exact value of each letter being struck as it is used. Using the 18-unit system as an example, the capital W may have been drawn to a width of 18 units, the capital A to 12 units, and the lowercase i to 4 units. Justification of a line is done by adding all the unit widths of the letters called for, subtracting the total from the unit count of the line's measure, and then dividing that balance by the number of word spaces in the line. The result of that division is the amount of space put between words to make each line evenly justified.

Minus-setting

Because the computing mechanism follows orders unquestioningly, we can deceive it either in the input or the output stages, to achieve whatever artistic result we wish to accomplish in letter-fit. Thus, photosetting machines can offer what is popularly called minus-setting. This is done by decreasing the width value ascribed to the unit of the typeface being used. Illustration (5) shows 12

5

In this way Walden—leaving aside inquiries into Thoreau's perverse psychology or into the peculiar reasons why he rejected the American dream of success—tells us of some Eden of the soul in which at least one American held off the pressures of materiality and mediocrity. The more harassing these confinements become—and the less it seems possible for the sentient spirit to escape them, short of some tawdry melodrama of the beatniks—the more Thoreau's report takes on qualities of a symbolic serenity. One can read Walden in the midst of the rush hour at Grand Central Station. Even there it communicates inward detachment, a genial solipsism.

point Palatino as Mr. Zapf designed it for use on the Linotype machine. Its normal spacing between letters has been altered slightly as shown at (6). On the normal setting, the width of 18 units is 12 points; on the next setting we changed the width to 11½ points; and on the third sample (7), 18 units measures 11 points. This can be carried to extremes, as shown on samples (8) and (9). A point is reached where dark spots appear where letters are too close to each other.

6

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7

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8

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9

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There are a number of reasons why tighter interletter-fit, or minus-setting, is employed. The least important reason is to fit more copy and larger sizes into a smaller area. The most compelling reason is that both esthetically and scientifically, tight-fitting words and phrases are better and more quickly accepted by the reader. An interesting insight to this theory resulted from studies of subliminal perceptivity made a number of years ago at Cornell University.

Subliminal perceptivity may be defined as comprehension that occurs at speeds beyond one's awareness. You see a message, absorb it, react to it, but are unaware that it occurred. The experimenters merely flashed signs on movie screens so fast that the audience was unaware they saw the messages. Thus, if the message said "Drink Coca-Cola" there were increased sales at the drink stand during intermission. To this day, subliminal messages are not permitted on public visual media. But a side-effect of this study was the observation that people do not read words and sentences as had been surmised up to then, but do so in big gulps and snatches. Hence, tightpacked reading matter makes for quicker and easier comprehension.

Kerning

Kerning is aided greatly by the introduction of the computer in photosetting. In the past the operator had to be alert to remember, as he typed, every combination (such as a capital T and lowercase o) that would result in a visual gap between those two letters when they appeared in type. He would eliminate the white space by kerning, or commanding the counting mechanism to decrease the unit value of the second letter so that it would flash closer to the letter that preceded it. Now a proper kern program will search every letter combination as it occurs, and delete the space necessary to achieve a more pleasing look to the pairs of letters that need correcting. You can observe a sample of kerning in the word *Walden* occurring throughout samples 5 through 8.

Ragged composition

Ragged composition is an increasingly popular style of setting type, particularly in narrow-measure material, because it avoids unsightly letterspacing and the uneven word spacing unavoidable in justified composition. The most desirable form of ragged setup would be a reasonably consistent alternating in-and-out effect, staying within a prescribed maximum and minimum width, and involving some, but not too frequent, hyphenation. Again, the judgment of an operator is useful in accomplishing this result, because he can avoid establishing a pattern, as well as exercise good taste in selecting the words he chooses to hyphenate.

10

In this way Walden—leaving aside inquiries into Thoreau's perverse psychology or into the peculiar reasons why he particularly rejected the American dream of success—tells us of some Eden of the soul in which at least one American held off the pressures of materiality and mediocrity. The more harassing these confinements become—and the less it seems possible for the sentient spirit to escape them, short of some tawdry melodrama of the beatniks—the more Thoreau's report takes on qualities of a symbolic serenity. One can read Walden in the midst of the rush hour at Grand Central Station. Even there it communicates inward detachment, a genial solipsism.

11

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Example (10) shows a flush left ragged right setup done by an operator. Example (11) indicates a computer-set block where the program is hyphenless—no word breaks. Note that two faults exist: first, three visual patterns occur—the first three lines angle diagonally down to the left, as do the fifth to seventh lines, as well as the twelfth to fourteenth lines. The second bad effect is the repetition of the word *the* on the right side of the twelfth to fourteenth lines. Whereas programs have been written, and will be further improved to produce satisfactory ragged settings, the intervention of personal judgment and taste and, admittedly, second-guessing will still be necessary to achieve the finest end product.

Hung punctuation

Hung punctuation will be considerably aided by our new technology. We presently achieve hung punctuation, shown on example (12), by manually declaring to the input device that punctuation which occurs at the end of a line has no unit value, and should not be considered in the counting of increments in justifying a line. Example (13), although

12

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13

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it also shows hung punctuation, illustrates an additional point. When a type design is rounder, and the leading between lines is greater, the effect of hung punctuation is less than in example (12) and the clean implied vertical line at the right side of the block is not as evident.

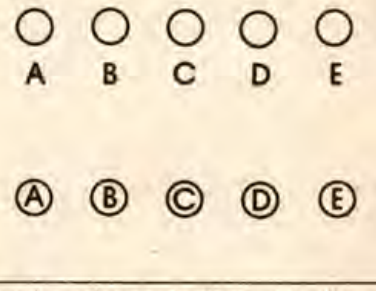
Which brings us to an additional opportunity to furnish a better product via proper computer programming. In the type design of ITC Souvenir, where rounded character is followed by punctuation, let that letter extend minutely further to the right. This would apply to the lowercase b e g o and p. In addition, some letters that have a gap at the right would better accommodate a following hyphen if the hyphen were moved a little closer to the letter. This program would cover the c f k v w x and y. Writing the refinement patches is not a simple task, because every type design and weight necessitates different amounts of kerning.

Mid-line punctuation

What about punctuation which occurs in the middle of a line? Here, too, there is an opportunity to program quality. Because the period and comma are relatively miniscule characters, and their position occurs on the baseline of the type, normal word spacing after those letters looks greater than between the other words on the same line. Therefore, a program can be written to decrease the offending space whenever such punctuation is used.

Special characters and treatments are easily accomplished in photosetting. See how encircled letters can be made in any typeface and size (figure 14). The circles are 12 point ITC Avant Garde Gothic Book capital O's, the letters beneath them are 9 point ITC Avant Garde Gothic Medium. We first set

14



the cap O's, then advance the line spacing only two points. . .and then flash the letters ABC etc. They fall into position in the middle of the circles, as shown on the third line.

The symbols to their right, and their meaning, are part of a group of 33 special symbols used on a travel job. This time we made a special type font of 33 symbols. When a recognizable code followed by an identifying letter was keyed, the symbol for that letter was positioned and flashed. The symbols occurred 18,000 times in varying combinations throughout one book; it saved untold hours of stripping and pasteup time.

15

All this way Walden—leaving out inquiries into Thoreau's perverse psychology or into the peculiar reasons why he particularly rejected the American dream of success—tells us of some Eden of the soul in which at least one American held off the pressures of materiality and mediocrity. The

Initials

Illustration (15) shows a two-line initial, where the width of the initial has been computed, and the two text lines following it are set allowing for that width.

This very basic program is unsatisfactory, because it does not take into account the appearance of the initial letter, or the fact that if a portion of the left side were made to extend into the left margin, the resulting setup would be more aesthetically pleasing, as shown in illustrations (16) and (17).

16

All this way Walden leaving aside inquiries into Thoreau's perverse psychology or into the peculiar reasons why he particularly rejected the American dream of success—tells us of some Eden of the soul in which at least one American held off the pressures of materiality and mediocrity. The

17

This way Walden—leaving aside inquiries into Thoreau's perverse psychology or into the peculiar reasons why he particularly rejected the American dream of success—tells us of some Eden of the soul in which at least one American held off the pressures of materiality and mediocrity. The

Type mixing

Regarding size ranges, type mixing and type libraries, there's a wide variation in quantity and quality as you go from one piece of equipment to another. A single type font can generate a vast range of sizes—from 6 to 72 point in some instances. But the quality suffers in such a diversity of sizes. A 12-point master font, for example, when reduced to 6 point, furnishes a letter that is too thin and looks somewhat condensed. The same font, used to project a 48-point size, results in a letter that is too bold and appears more extended than the designer intended. When film type fonts are made on a size-for-size basis, namely each point size using its own type font, the manufacturer is able to maintain the weight and proportion of each size as planned by the designer. Type mixing is usually unlimited; however, if a photo unit has as many as three to five type families available for intermixing, that usually is sufficient for any job. Type libraries are tremendous and constantly growing: it is cheaper to make a master type font than it is to make stamping dies for a Linotype face. In addition, once a master film font is made, each additional one is a contact of the original.

Run-arounds and contours

Run-arounds—narrower blocks of type mingled with wider, usually in order to accommodate an illustration—are easier to produce with photosetting because the blank space to the left or right of a block can be inserted at the keyboard, as opposed to the ancient hot metal practice of inserting blocks of filler material where white space is needed. A shape is accomplished by pre-plotting the unit values of the white space around the contour, as well as the unit width of each line that constitutes the contour. Then the counting mechanism of the keyboard is enlisted to assist in executing the desired shape.

Copy fitting is now more exact because our input gives us a record of actual line and character counts, so we have the ability to verify the accuracy of our castoff before running our tapes on the output units.

The software state of the art is at an advanced stage and growing. We have available to us excellent hyphenation programs, normally employing rules of logic combined with an exception dictionary. The exception dictionaries are expandable by the user, and are constantly broadened by software suppliers. The larger the dictionary, the more accurate the hyphenated product.

In addition, manufacturers are constantly improving the canned programs they furnish with their hardware. One such example is the ATP/54 program of Mergenthaler, which furnishes hung punctuation, automatic character kerning and programmed character-fit refinements. In addition this program helps the typographer adjust the interletter fit of any size of a type design, so that he may set larger sizes with a closer fit between letters than with smaller sizes. The program also permits the user to letterspace a line with extremely fine increments.

Conclusions

What should we conclude from all this? First, refinements can be programmed to a point where one can expect consistently good typographic quality from one's typesetting system. Second, despite the amazing and growing ability of programmed devices to perform the quality of thinking necessary for excellent typography, the skill, judgment and motivation of a person must intervene at some point. After all, *science is nothing but trained and organized common sense.* And the computer has been trained to follow, not to lead.

And what about the future of the typographic industry? From the tremendous smorgasbord of equipment and procedures available today, two emerge. The first is a large assortment of input devices and abilities. They will be employed by the client to help prepare the words that need processing. This will keep him out of the factory operation he should not be in, and which he has neither the inclination nor the purse to operate. The second is just a handful of output devices that will be employed by the professional typographer. He will be willing to invest the time and capital necessary to equip, train, maintain, operate and program, because his investment is on behalf of a large client list. His will be the *fulfillment* house, interfacing with the vast melange of input devices in the hands of his clients.

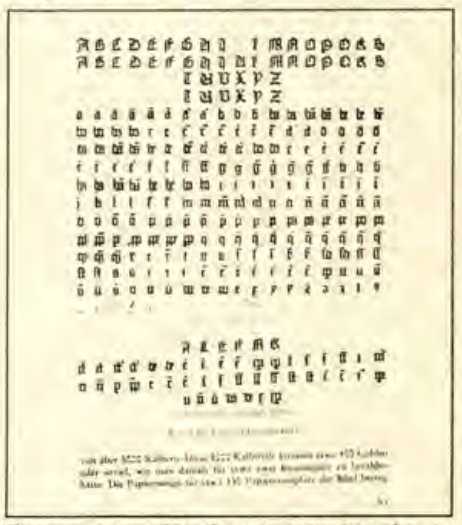
We've all been besieged recently with pleas to maintain our quality of life, by whatever means each protagonist favors. I too would like to add my plea—maintain the aesthetic quality of the printed word. There are emerging nations, and multitudes of people all over the world, clamoring for the millions of words which will enrich their lives. Give them those words. . .but make them beautiful.

How Typesetting Technology Affects Typeface Design



Matthew Carter
Independent Typeface Designer

Below is a synopsis of the font of Gutenberg's 42-line Bible. It contains some 300 characters. The difference between similar versions of the same letter adapt them to different combinations. The compositor chose an appropriate version depending on the letter that had gone before, strictly according to the practices of calligraphy. There are ligatures for many two-letter combinations.



There were over 300 characters in Gutenberg's font.

One of Caxton's fonts, circa 1480, has a more modest number of characters about 200, still containing a full complement of ligatures but without the several versions of most letters. A mid-sixteenth century French italic, with about 160 characters, still has a few ligatures plus contractions, accents, figures and some swash capitals.

The distillation from Gutenberg's huge font to an essence which is our own manageable 100-odd characters is to some extent a technical refinement. But it has nothing to do with the techniques of making type, which are the same for a font of 300 as they are for one of 100, and which remained unchanged for 400 years after their invention.

The reduction in the size of the printer's font was attributable to the reluctance of compositors to choose between many alternatives in the case, to the reluctance of printers to pay typefounders for unnecessary sorts, and ultimately to the reluctance of readers to see printing as pen lettering. The reduction, then, is attributable in general terms to economic influences, not directly to technical ones.

I shall try to preserve this distinction between what are truly technical influences and what are properly wider economic or cultural ones in considering the effects of the recent and new technologies upon type design. And I can say straightaway that as far as *our* alphabet is concerned (the Latin alphabet) capital and lowercase, in its most usual forms of roman and italic, the technical effect has been very slight.

Effects on roman and italics slight

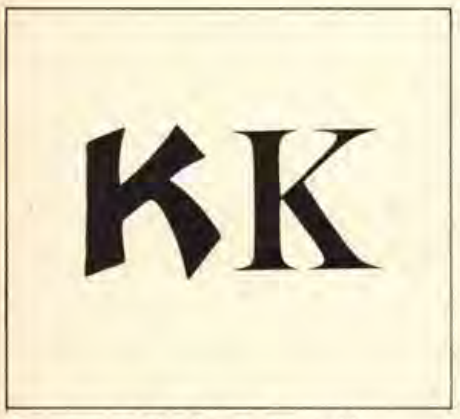
The reason for the slightness of change to roman and italic during the century past, the century of mechanical, photo-optical, photo-scan and digital-scan typesetting, is that they had completed their typographic evolution during the previous four centuries of printing's history. We have seen that the Gothic blackletter was slow to shake off the influences of calligraphy in the way it was made and set, but that was not true of roman and only partly true of italic. The roman letterform, whatever its origin, made a perfect formal printer's type in which it was natural for each letter of the alphabet to have only a single form regardless of where it came in the word and of which other letters it stood next to. (The s, which used to have separate medial and final forms, was the only exception.)

Italic, being cursive and less formal, has been more affected by its techniques of manufacture, and in slug-machine composition can be said to have suffered as the poor relation of roman, obliged to fit on duplexed widths unnatural to it and deprived of a uniform slope by the lack of a kern or two.

The development of the succession of styles of roman that has come down to us has been a *typographic* development independent of strong calligraphic influence almost since the beginning. Romans show very little the influence of materials or manufacture.

Letterforms and their affinity to materials

I have often read that because punches were engraved in steel the letters on them had some sort of mystical affinity with the properties of steel and that the best types have a "truth to material." If one considers the extraordinary diversity of type designs that were cut in steel I cannot see how the material can be said to have manifested itself consistently in them.



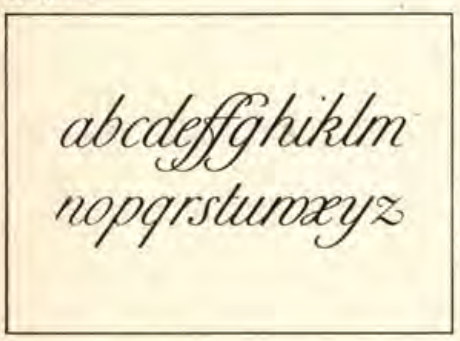
How much is letterform influenced by material...such as wood, metal, stone, film?

Above is an illustration of "truth to material." The K on the left is from Houtsnee (Dutch for woodcut) designed in the 1920's by actually cutting it in wood, although manufactured, necessarily, in metal as punch, matrix and cast type. It preserves very well in handset type the qualities of wood-cutting...vigorous, slightly crude.

On the right is a letter that seems to embody all the precision and refinement associated with highly skilled engraving in unyielding steel during the golden age of typefounding. And yet this letter, because it was part of an extra-large titling, was in fact cut in wood and cast in sand. It never had steel punches. Where is the truth? Which K is more truly wooden? Who cares? We judge them as letters, not technical samples.

Scripts affected by technologies

Roman and italic, then, because they are typographically mature and have achieved a high degree of fixity in their forms have not been affected much by photocomposition. However, if we turn to the less formal and more cursive forms of our alphabet we begin to see the effect of the recent technologies. Our script faces are the true descendants of Gutenberg's and Caxton's types inasmuch as they deliberately imitate handwritten models, whether formal or informal, pen-written or brush-written. They have had a separate and spasmodic development apart from the main line of roman typography.



Connecting scripts cannot be handled by slug-casting typesetters.

Shown above is an historical script that has remained familiar to us. Roundhand is one of its names. There have been many typographic versions of it, some requiring great ingenuity on the part of the typefounders who contrived mortised and interlocking type to allow the letters to slope steeply, kern and join. Such devices are impossible on a slug-casting machine, in which the matrices are necessarily rectangular in section and unkernable

These restrictions have discouraged the making of scripts for line-casters...completely in Linotype's case...and have reduced those available to the fairly upright and unlinked kind.

Phototypesetting facilitates kerning, joining

Most photocomposing systems, optical or digital, have dispensed with these limitations; their optics or scanned areas are wide enough to allow characters the space in which to kern.



Phototypesetting facilitates kerning and joining of characters.

This shows a few letters of Snell Roundhand in which the set widths are represented by the alternating light and dark bands. The f, with a counting width of 4 units, has some 17 units of kern.

This ability to reach outside the theoretical rectangular body of the letter enables scripts like Snell to be designed with overlapping joints. An overlap



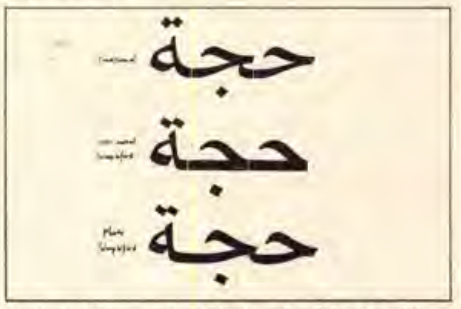
Today scripts can be designed with overlapping joints and special joining strokes.

not only provides a secure joint but can accommodate a variety of natural joining strokes which brings the design closer to its handwritten model and gives its designer more scope.

In an overlapped cursive the connecting stroke leads out from the right-hand side of the letter and there is no lead-in stroke on the left as there would be in a butt-joined script. This face makes it easier to draw informal scripts in which not all combinations join.

Although cursive scripts are a minor part of our typographic repertory, used mainly for special effects, for decoration or to give a personal touch to invitations, there are scripts in the world that have no equivalent to roman; that is to say they have not evolved a properly typographic form emancipated from calligraphy. I would like to look at three of these, Devanagari, Arabic and Hangul, and show how particular typesetting problems that have partly or wholly frustrated attempts to mechanize them can be overcome by designing for the new technologies.

(Editor's note: At Vision '77, Mr. Carter showed numerous slides illustrating how each of these scripts evolved from lettering to metal type and how phototypesetting has made possible, in some instances, machine setting more faithful to the traditional letterform than was possible with metal type. In metal, Devanagari, for example, would often require composing a single letter of several elements to take care of external vowel signs, joining strokes, etc. Handset Devanagari requires a font of at least 608 characters to set a script in which there are only 52 letters.)



Today's film version (bottom) of this Arabic letter is more faithful to the original (top) than is the metal version.

Shown at the top is the traditional complete Arabic in which initial and medial forms differ. Linotype Yakout, a simplified Arabic, in the middle, shows the same character for both forms. The hot-metal joining system has produced a very straight linear character, an aesthetic departure from the traditional one above. The simplified Arabic at the bottom of the slide is one under development at Linotype-Paul in London for photocomposition. It shows that by using a system of joining only possible if letters can overlap, the same character can be designed so it combines with the text to give an appearance much closer to the traditional.

Simplified Arabic has gained wide acceptance, and imitation, in newspaper typography and elsewhere. On the other hand, the new technologies, in the forms of the character selection program and the ample font capacity of CRT machines, make it possible to set traditional Arabic in a more lavish and elegant form than ever before. The largest font of traditional Arabic contains logotypes that have never existed as type before and had to be specially designed by a calligrapher.

Now that it is possible to set the traditional form with all its refinements there does seem to be an interest in enlarging the range of Arabic typography. Tahir, below, designed by Margaret Tan, is a case in point, available initially on Letraset and soon, hopefully, on film as well



This traditional Arabic style is now available on Letraset and being developed for film as well.

Effects of the finer unit systems

Consider now these recent developments in typesetting technology with their implications for type design.



The early Linofilm offered three ranges within which to vary letter widths, an improvement over the restrictions of metal but still very restrictive when compared to more recent machines.

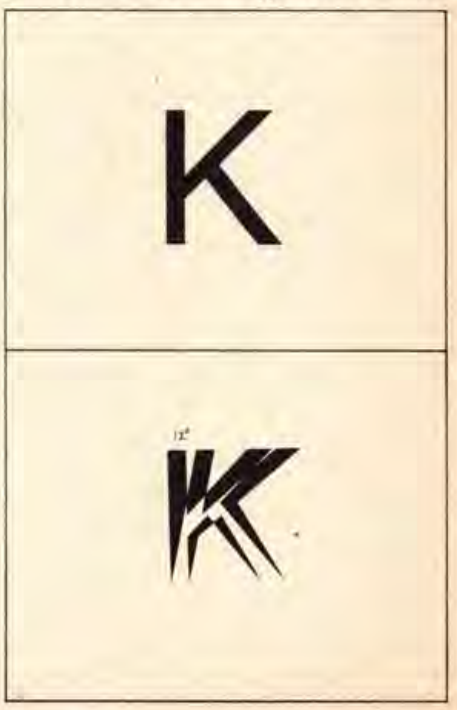
First, the problem of working within a unit system. Shown above are three different widths of a condensed sans serif designed ten years ago for the Linofilm. Such a face contains letters of one, two and three close and parallel vertical strokes. The letters i, n and m must have widths in the proportions 1, 2 and 3. On the Linofilm, which had a narrowest width of 4 units and a widest of 18, only three such progressions exist; the designer is therefore confined to these: 4, 8, 12; 5, 10, 15; 6, 12, 18.

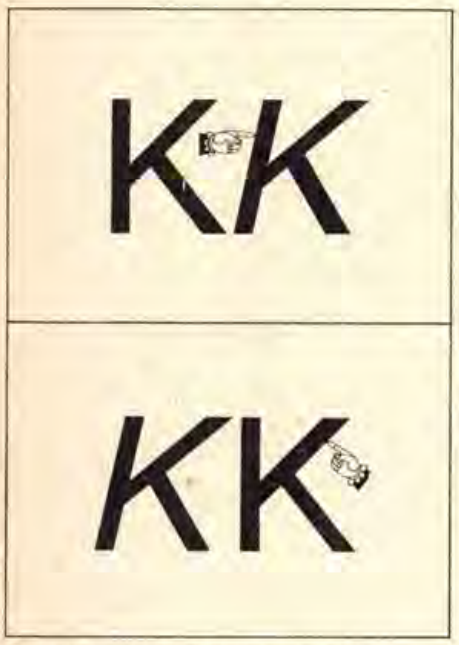
Zero-width characters and finer unit systems on subsequent machines have eliminated much of this kind of arithmetical problem and would permit more variations of width in a series of condensed sans serifs.

Electronic slanting

The ability of CRT machines to slant letters electronically to make synthetic italics can have some odd geometric effects.

Take a cap K (below), slope it at 12 degrees, (at bottom) and observe what happens to the balance



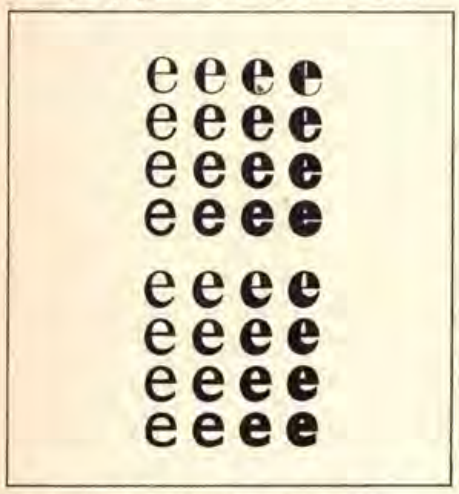


Computers can help photo- and electronic typesetters compensate for distortions while creating new weights, slants, and other variations from one master digitized font.

of weight in the diagonal strokes (at top). The reverse would be true if a drawn italic K were uprighted (above). This problem, too, may disappear if the computer memory of CRT or laser typesetters can be increased without adding greatly to their cost; at which point the need for the ingenious distortion of letterforms to provide condenseds, expandeds and italics declines.

Computer technology and type designing

We have discussed the influence of computer technology on typesetting, but it is also having an effect on type designing by helping with some of the more tedious and repetitive parts of the job, such as drawing additional weights. This is something that has been discussed for years but it is only recently that a program sophisticated enough to analyze letterforms has succeeded in altering the weight of letters in a sympathetic and controllable manner.



Computers are also becoming an aid in designing typefaces as well as in setting of type. Four of these letters were drawn by a designer. The rest were programmed and generated.

Four of the shown above e's were drawn by a designer, the rest generated by the Ikarus program written by Dr. Peter Karow in Hamburg. Dr. Hell, Berthold and Linotype have availed themselves of this service and I've no doubt that the already valuable results will be further improved over the next couple of years as the outcome of Dr. Karow's collaboration with designers and manufacturers.

Future effects of newer technologies

I do not think there will prove to have been much direct technical effect of the new technologies on type design, any more than previous techniques have influenced it. We have not seen a surge of popularity of cursive script faces, although they are much better set photocomp. We have a fashion . . . a good one . . . for faces with large lowercase x-heights, but photocomposition allows letters to extend above and below the em square (something they could not do in hot metal without changing the mold) and this should arguably encourage designs with tall capitals and ascenders and with deep descenders, but no, we have faces with compact proportions. Some of the finest and most unmistakable examples of typographic design for photocomposition are set in faces designed originally for hot metal.

The new technologies will most likely affect type design indirectly through their economic impact, and by the general atmosphere of experiment and innovations that we feel in the industry at large.

Economic considerations

Whether or not it is easier or more difficult for the designer to work for film, it is much cheaper and quicker for the manufacturer to produce film faces, whether original designs, adaptations from hot metal or pirated copies.

In the days of hot-metal typefounding the investments of time and money necessary to manufacture, stock and sell matrices of a new face were such as to require cautious planning. The need for a long sales life during which to repay a considerable investment encouraged conservative design. Cheaper and quicker manufacture of photocomposition fonts has led to a market for more ephemeral designs (so-called fashion faces) that can bring a prompt return: if successful, a good profit; if not, no great loss.

A new breed of text/display faces

As part of this trend the conventional distinction between text and display types has to a certain extent disappeared and we have a new breed of face equally suited to both functions.

We have as a new factor in typographic life the businesslike marketing and promotion of new typefaces. This is a competitive and expensive process and it will be interesting to see whether it adds so much to the financial outlay on a new design that the economics revert to those of hot metal and budget-conscious manufacturers become less ready to chance their arms. Perhaps we face a decline in quantity and more concentration on quality. Of course, those originators who invest heavily in promoting their own designs are the most vulnerable to unscrupulous copying; something that may in time be corrected by legislation. The main effect of the new technologies will be not to have changed typefaces but to have made them more numerous. The appetite for typographic variety, whetted by mechanical composition, has been satisfied by photocomposition. More designers have been encouraged to enter the field.

Inclusive vs exclusive libraries

The type libraries of the large manufacturers have become inclusive rather than exclusive . . . exclusive, that is to say, like those of typefoundries during most of printing's history. Now different manufacturers offer much the same faces on differing and competing machines. Indeed, ITC is predicated on the simple commercial fact that all manufacturers must stock identical faces.

The reason for the policy of inclusivity is that type has become part of the furnishings of a typesetting system the purchase of which will involve very many considerations, type range being only one.

In the case of the design of certain non-Latin scripts I expect that photo-optical, digital and programming techniques will prove revolutionary. So may they in other specialized and difficult areas . . . music printing, for instance.

A prompter response to fashion

I doubt if we (or the Greeks, Russians or Israelis) will revert to joined calligraphic letterforms, although we have outgrown the taboo against serifs touching in the text. I doubt if we will go back to a programmed galaxy of Gutenbergian alternatives, contractions and ligatures, although cheap and accessible computer memory may well encourage rather larger fonts. I doubt that OCR, CRT, lasers, or in-house typesetting will divert the continuous evolution of type design with its time-honored balance of ingredients: revival, adaptation and creation . . . although I think that the cycle will probably be accelerated in a prompter response to fashion.

Page/Area Makeup



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The Seybold Report

What do we mean by an interactive, graphic display, page-makeup terminal? Interactivity implies rapid response times. When we speak of an *interactive* video terminal or system, we assume that a terminal operator is able to make a change which will affect the copy displayed on the screen and see the results of that change reflected almost immediately. "Graphic display" implies the ability to provide a representation of the final appearance of the output. The nature of the representation may differ in terms of the amount of detail shown. "Page makeup" and "area composition" are terms used to refer to the allocation, positioning and sizing of items on a page or within a specified area. If the concept is carried one step further, to *pagination*, we are then talking about the allocation of material on *successive* pages.

How do you arrange words, phrases, sentences, paragraphs, columns, tables and so forth on a page? How do you allocate these various elements on successive pages to come out with a pleasing, or at least satisfactory, whole? What electronic aids are available in the graphic arts industry to assist in performing these functions? And what will be available in the future? We must look primarily at the products which have been developed for newspaper applications to provide the answers to these questions, since that segment of the printing and publishing industry has been on the leading edge of technology for the past eight years or so.



A typical text-editing terminal. No attempt is made to simulate the appearance of the final typeset copy.

A typical text-editing terminal, such as the Computype CompuEdit, acts as a window into a larger computer file of information. The contents of a news story are typically input and edited at the terminal keyboard while scrolling through the file, with the results of those efforts being displayed on the terminal screen. *No attempt is made to simulate the appearance of the final typeset copy.* The writer works only with the content of his story, not its form.

When it becomes necessary to specify to the computer system the final form the typeset story should take, the operator will key in a series of typographic parameters or *formats*. These are strings of commands which will instruct the phototypesetter as to the desired font, point size, line length, inter-line spacing or leading, indents, and so forth. Inputting typographic parameters at most text editing or composition terminals is essentially a "blind" operation, for although the terminal operator gives the system the commands he or she hopes will create the desired appearance when the galley is typeset, there is no visual guarantee that the outcome will actually assume that theoretical form.

Operator expertise required

Over the past few years, we have witnessed a quiet evolution in the manner in which formats are specified. The traditional approach has been to specify the typographic parameters in terms that would be intelligible to the specific typesetter involved . . . in the output command language of the photo unit. This approach calls for a great deal of expertise on the part of the person whose job it is to specify those commands, for it requires not only a thorough knowledge of typography, but also a close working relationship with the specific typesetter. The mark-up person has to know the appropriate codes that will be recognized by the output device, the capabilities and limitations of the machine, and which fonts are mounted on the machine and where they are located.

Mergenthaler's MVP terminal provides an example of a system that uses this traditional approach toward parameter specification. More advanced systems allow a degree of abstraction in format expression. They tend to use universal, mnemonic, operator-oriented commands, letting the system translate these into the appropriate output driver language.

Refinable formats

A further level of abstraction occurs when the formats become redefinable at will. On the Atex system, for example, the terminal's eight different display modes can correspond to any of a number of different sets of stored formats. Generally speaking, a convention is established among system users that a certain display mode is to be used for major heads, another for subheads, a third for body text, a fourth for footnotes, and so forth. The actual parameters used to specify the output *form* are set up separately, and will probably vary from job to job. In fact, under the Atex approach, the same story could be output in a number of different forms from the same source file. Because the newer systems allow typographic parameters to be specified in a fairly universal, mnemonic form, the trend is for the formatting responsibility to shift from the composition end of the production cycle back to the original designer. As better design and layout tools become available, in the guise of low-cost interactive graphic display terminals, the control over the final appearance of the page, the *form* of the output, will become more and more the province of the designer, rather than of the skilled typographer or the operator of an input/editing terminal.

Interactive copyfitting

There are, however, many cases in which the content of an article, a page or a magazine is limited or affected by the form that element must take. For example, in a newspaper or news magazine environment, stories must often be written to fit a predetermined form...a specified depth or measure. For this reason, many electronic systems offer interactive copyfitting tools. Writers and editors using these powerful "newsroom" systems can avail themselves of a number of electronic aids to help them in writing their stories to fit. Interactive hyphenation and justification, headfit routines, galley cast-off capabilities, the so-called "thumbtack" approach, are examples of these copyfitting tools.

Atex's system is well known for its highly interactive hyphenation and justification program. In fact, Atex was one of the first companies to also offer partial processability...which means that any part of a story can be altered or edited and only that portion need be run through the h & j pass again.

CSI's 11/70 system probably provides one of the most responsive interactive hyphenation and justification capabilities in the industry. After a story has been written and edited at the terminal, the user simply presses the h & j key, and the display will clear. Within a few seconds, the first portion of the story will be redisplayed on the screen, with the line endings generated by the system's hyphenation and justification program. As soon as the entire file has been hyphenated and justified by the system, a message appears at the top of the terminal display and the exact depth of the composed story is given. The operator can then scroll through the story, adding or deleting material until it fits the exact size required. Other approaches to this problem include Amcomp's headfit program and ECRM's 7600's copy depth estimate routine.

The non-news environment

In a non news-oriented production environment, such copyfitting tools can help the terminal operator visualize the relationship between form and content by providing statistical feedback as to the length and depth of a block of copy and the interword spacing achieved after hyphenation and justification.

However, again, there is no way to *see* how the page will really look until it has been output from the typesetter.

For visual feedback

There *are* times when it is necessary or desirable to have more visual feedback on the final appearance of the output, particularly when the formats are complex (as in tabular work) or when many elements need to be combined on a page, or on a series of pages, and it is difficult to visualize the outcome. It is for precisely this reason that a whole raft of graphic display terminals has appeared on the market within the last couple of years. These are "soft-copy" display terminals, or to use a more graphic term: soft typesetters.

A soft typesetter grants you the ability to see the effect that typographic parameters will have on the form of the output before it is typeset. And, presumably, to give a chance to change anything you don't like before it is committed to type. What you see, with one of these devices, is a " picture" of the page, represented with greater or lesser detail depending on the type of video display technology used. If you are not satisfied with the appearance on the soft-copy display, it is necessary to go back to the editing terminal, change the typographic parameters, and reprocess the displayed image to see the resulting changes.



The Optimix can display the elements in position and simulate the typeset appearance. Actual typeface is not shown but it is copyfitted accurately line for line.

Automix Keyboards' Optimix is a soft typesetter designed for use with one of AKI's terminals or systems. Typographic parameters are input at the text-editing composition terminal. When the command is given to display the material, it is processed by the system through a composition program and then appears on the Optimix display simulating the typeset appearance. The Optimix display uses a random-stroking type technology, which means that the proportionally spaced characters are formed by a combination of short lines, rather than by a dot pattern as is the case with the monospaced characters on a conventional TV raster-scan type tube. The characters displayed do not provide a faithful representation of the actual typeface, but they do present the proportional relationship of one character to another, including the interword spacing. It is therefore possible to get a pretty good idea of how the final output will look in terms of the actual characters on a line, the relationship of the characters to each other, and the overall pattern of words on a page. AKI plans to market a more interactive version of the Optimix soon. It will probably give the operator the ability to move copy blocks from one part of the display to another. Soft copy display terminals are made by Dymo Graphic Systems and Atex, among others.

With these soft-copy displays it is possible to zoom the image up or down in order to see a particular area in greater detail or to gain an impression of the overall effect of a very large page. However, this type of superficial sizing does not affect the typographic parameters nor does it alter the appearance of the final typeset output.



Mergenthaler's Page View Terminal can display the fully made up page in eight different type styles and is accurate for typesize and line-for-line quality positioning.

The Mergenthaler-Linotype Page View Terminal uses still a different type of display technology. Their soft typesetter makes use of a storage tube. This type of CRT display is capable of yielding the highest resolution, or greatest density, picture of any of the display technologies described. However, it does so at the expense of speed.

Mergenthaler's Page View Terminal can display eight different type styles (serif and sans serif, in light, bold, roman and italic) in sizes ranging up to 250 points. Every character on the display takes up the same amount of space as the corresponding character in the typeset output.



Autologic's APS-22 simulates the actual typeface on the face of the tube.

Up until this month, Autologic's pro-type display terminal, the APS-22, was the closest anyone had come to designing a true *soft typesetter*. For what you see on the Autologic display are not simulations of type characters, but *actual* type, generated on the face of the tube. What Autologic has done is to use the same digitized font information to create characters on its CRT screen as to output them on its CRT typesetters. Like Mergenthaler, Autologic also uses the Tektronix tube, taking advantage of its superior resolution to impart the necessary detail to the displayed characters. And, as with the Mergenthaler device, it is possible to single out a block of type on the display and to move it about on the graphic terminal (by means of a cursor track ball), affecting the relevant parameters on the text-editing portion of the display.

Like Autologic, Compugraphic's PreView Terminal has harnessed the same electronically controlled cathode ray beam to paint out characters on the face of the display as well as to generate them on the typesetting film or paper. Unlike Autologic, Compugraphic has managed to do this without duplicating the typesetter hardware package.

After the text and composition commands for a full page of copy or any part of a page have been input at the Unified Composer, the type can be displayed on the Tektronix 619 storage tube display in the exact point size and typeface specified. And the position of each character is displayed as it will appear in the typeset copy. Of course, the PreView terminal is only acting as a window into the typesetter, allowing the user to watch his page being created by the Videosetter Universal. The process is fascinating, and captivating, particularly when complex work, involving vertical and horizontal rules, boxes, and reverse type elements all fall into place as if by magic.

Soft-copy terminals appraised

What is *gained* through the use of a soft-copy terminal is the ability to visualize the form of the output further *upstream* in the composition process, at greater convenience. In other words, the operator working with a soft-copy graphic display terminal no longer needs to get up and walk over to the typesetter to see the results of his efforts. He or she can sit right there and preview the material. This saves time and energy, and, perhaps, more importantly, typesetting paper and chemicals.

However, apart from the convenience of visualizing the output form sooner in the production cycle, nothing tangible is really gained through the use of these devices. None make it possible to edit, size or reconfigure the displayed elements graphically without first making a change to the input file at the text-editing terminal and waiting for the results of that change to play themselves out through the composition cycle and graphic display output pass.

For tabular display

A "middle-ground" solution is offered by Imlac's Composer 1550. Imlac has combined some of the graphic display elements of a soft typesetter into their standard text-editing/composition terminal, enabling them to represent proportional characters on the screen in up to six different sizes. This allows copy to appear in justified form on the display. Indents and runarounds are also displayable. The system's most powerful advantage is its ability to

display tabular material in proportionally spaced columns on the display. And, if the number of columns in the table exceed the screen's large 17" display area, the 1550 provides horizontal scrolling so that an additional screenful of material may be brought into view.

Tabular composition is not only easy to visualize on the Imlac system, but also easy to compose. The Composer 1550 will actually generate the tabular parameters for you. You simply identify and input the longest entry for each column, and the system will set up the tab parameters itself, displaying them for verification.



The Composer 1550 Pagemaker displays pages as they are being made up and permits operator intervention to override previous decisions.

The Composer 1550 currently offers the most advanced automated page makeup program on the market. Called the Pagemaker, and available as a standard system feature, this program performs automatic vertical cast-off, with proportional vertical justification. The pages are displayed by the system as page makeup is performed, so it is possible for the operator at the terminal to intervene at any point in the process to override a decision. additional optional programs are available to automate the insertion of footnotes during the page makeup process, and to preserve a locked lead condition when setting up multicolumn material.

A truly interactive graphic display

Now we come to the crucial question: What does an interactive graphic display page makeup or area composition terminal give you that is not present in any of the systems we have described so far? It can *generate* parameters for you.

Every other formatting approach we have discussed (with the exception of Imlac's tabular program) has necessitated the specification of typographic parameters by the operator. With these next tools, the operator can *design* the appearance of the output on the display, and the parameters necessary to drive the typesetter will be generated automatically by the interactive display system. It is no longer necessary for the terminal operator (or the mark up person) to be a skilled typographer in the sense of knowing how to specify parameters in order to achieve a particular effect. All that is required is the aesthetic sensibility to design a good-looking ad, or page, or book, and a rudimentary knowledge of typefaces, styles and weights. Complex formatting is no longer a problem with these devices, for not only do you have the ability to visualize the output before committing it to type, but you can change any aspect of it, from typeface to point size, to indents, to editing or correcting typos, in a fluid, interactive, manner. With most of these systems, you simply position the cursor at the location on the graphic terminal where you want a particular change to occur, specify the change, and *presto*, the entire displayed area is recomposed instantly to show you the results of the alteration graphically without any real time lag.



The Harris 2200 ad layout terminal can be used for ad makeup as well as newspaper work. Actual typefaces are neither shown nor simulated but copy blocks occupy their real space.

Harris was the first to offer an interactive graphic display area composition terminal. The Harris 2200 ad layout terminal was introduced in 1972. Since that time, it has become the most widely used layout and composition terminal for newspaper display ad work, and has also seen other applications in the areas of ad composition for telephone company Yellow Pages, and in the financial printing field.

What you see on the screen is not the actual typeface. nor the space, character-for-character, that a line of type occupies. Instead, each copy block is represented accurately in terms of its overall height and width. It looks as if words were stretched vertically and horizontally to cover the desired area. And this is in fact what happens. The strokes that make up each character are elongated for larger point sizes and the distance between strokes is enlarged or reduced to show the overall width of the block. The text will appear on the main display area, while the parameters will be shown in a menu area to the left. The operator *could* change the appearance of the displayed copy by changing those parameters to the left, and, in fact, a few changes, such as the specification of typeface and the quadding commands must be input in this fashion. However, generally speaking, the way an ad is composed is that the operator uses the keyboard to "bump" the type up or down in point size. The parameters reflecting these changes are displayed in the menu area to the left, and with each sizing change, the material on the screen is automatically recomposed, so that the operator can see immediately what the effect of the change has been. The operator can move each block of copy up or down, left or right, on the display, and again the paramenters will be altered accordingly. It is also possible to change the content or the form on a character-by-character basis. A single character can be redefined, or set in a larger or smaller point size, in italic or bold. Any portion of the text on the screen which has been defined as a block may be recomposed. . .rerun through hyphenation and justification, without necessitating the recomposition of the entire screenful of material. And a group of text blocks may be grouped together and moved about as a single entity.

Harris announced an improved version of the 2200 last year. It is similar in appearance but is more powerful and allows greater formatting flexibility. The new 2250 system offers floppy disc storage and retrieval of information. It has the ability to draw rules, boxes and logotypes, and to allow individual character kerning and letterspacing.

Other interactive graphic display terminals include the Raytheon's RayComp 100, the Camex 135, and the Xenotron.

Full page makeup

We have been speaking so far, in our discussion of interactive graphic display terminals, of those systems which have been designed for the composition of display advertisements. Due to the tremendous labor-saving implications, this type of application has proven cost-effective for the newspaper industry, in spite of the high price tags associated with these powerful and interactive systems. These same terminals, and others, are now being considered for use as page makeup or pagination devices within the newspaper industry. The impetus for their development will probably be more strongly felt when more cost-effective and proven means of outputting fully composed pages, comprising halftones and line art as well as type, are realized. The inclusion of composition and makeup terminals in a large newspaper system for the purpose of composing display advertisements as well as for the initial layout and subsequent makeup of newspaper pages, will shift most of the composition functions. . .the form specification. . . away from the text-editing terminals. A large newspaper with 100 to 200 text terminals might have 12 to 16 interactive composition and makeup terminals for both ads and page makeup.

(**EDITOR'S NOTE:** Here Mrs. Breuer described work currently being done on full-page makeup systems by the Bunpaps approach, by Field Enterprises in the book publishing field, by Optronics' Pagitron system, Raytheon, the Newswhole group, Camex and Hendrix.)

What's next?

What will the next step in interactive display technology be? As the cost of electronic components continues to drop over the next few years, and as more breakthroughs are made in display technology, we expect to witness the emergence of "stand-alone" composition and makeup work stations at very reasonable prices. These interactive composition terminals will begin to infiltrate the medium-sized and smaller newspapers, and will begin to be seen in the commercial and in-plant environment as well. They will be widely used to provide the composition and makeup for material entered via text entry and editing terminals. And they will serve to translate those parameters into commands which will be intelligible to output phototypesetters. Far from being mere conveniences, these interactive composition terminals will provide an essential link in the input editing/composition cycle.

What will happen, as text input and editing terminals begin to proliferate in newspapers, in offices and in publishing houses, is that the dichotomy between the manipulation and perfection of textual content and the generation of parameters governing its output form will be maintained. However, new tools will emerge which will make it possible for a whole new group of people to become "typographers" as well as artists and designers. People with a feel for aesthetics and a basic knowledge of typography will be able to design creative and exciting ads, layouts, pages, proposals, manuals, magazines and books. And, they will have the satisfaction of knowing that the image they created on the screen of an interactive display terminal will become realized in typeset form.

No longer will it be necessary to input complicated strings of typographic formats at a terminal keyboard without knowing whether or not they will achieve the desired results. Nor will it be required that a layout or mark-up person "speak the typesetter's language." The dynamic interactivity between the creative mind and the responsive display will point the way to the formatting techniques of the future. This new set of tools will be available within the next few years. Interactive graphic display terminals will enhance the formatting capabilities of the commercial typographer as well as the in-plant printer, the ad agency as well as the financial printer. In short, in any situation in which form is to be given to content for the purpose of generating typeset output, a new approach is at hand.

Programmed Design



Victor E. Spindler
Spindler Slides, Inc.
President

Programmed Design: It sounds like an impossibility, doesn't it? But a few years ago, when the first "Vision" conferences were held, there were similar reactions as speakers "blue-skied" about in-plant, secretary-operated phototypesetters and computer-generated type and graphics.

Necessity creates the actuality, and now a new need is growing faster than any of us dreamed. When typesetting was thought of as a craft, it was handled by a few professionals. People were trained and groomed over many years to learn to make the proper decisions on how type should look. Now, in our time, the proliferation of relatively easily operated equipment, and the dispersion of the function of setting type into typesetting boutiques and in-office operations, have made the production

of quality type available to people who have no background in the look and proper use of "good typography" in the traditional sense.

Above all, the growth of word processing as a tool to improve the effectiveness, as well as the appearance of business correspondence is surprising even the greatest advocates of these systems.

If you take a cold, analytical look at the major differences between a sophisticated word processing machine and some of the new "dedicated" photo-typesetting machines, the only apparent difference is the device that is used for outputting the information. One system uses a typewriter, while the other has an exposure and escapement mechanism for photographic character generation. Even in terms of price, there is much less of a difference than there once was. Sometimes as little as $3,000-$4,000.

The step from a simple typewriter to a word processor in even a small office environment has been a fairly easy one, since few new skills are necessary and the savings in time and effort are readily apparent.

The next step. . .the one that simply changes the output device on the word-processing unit. . .is ready to happen, we believe, as soon as three obstacles are removed.

1. Simplification of coding structures

With a typewriter or ribbon-strike form of word processor the decisions about type size and line spacing (except for a single- or double-line spacing) are probably made at the time the machine is purchased and little variation is possible unless you change the "golf ball." You can accentuate something only by typing it in caps, underlining it, or changing the color of the ribbon. When you use phototypesetting output many possibilities arise: selecting a typeface suitable to the nature of the material, changing point size, altering line spacing, mixing type style within the line (e.g. italics or boldface for emphasis), even the use of different layouts or formats for different purposes.

All of these typographic parameters require that data, not seen in the final output, be inserted into the flow of the input material so that the machine will know what is wanted. This data is commonly known as command coding. These command codes are usually entered by striking keys other than the usual 44 alphanumeric keys of the typewriter.

They require more time than normal typing, because their insertion breaks the typist's pace as he or she looks for the proper key. The new trend toward mnemonics for inserting the typesetting commands shows promise by allowing the rapid insertion of instructions with little disruption of pace. For example, a command to set material ragged right might be (command) RR. A quad left command might be (command) QL.

The structure of the entry of commands is presently under study from many directions. The system just mentioned seems to be the most economical one as far as the number of keystrokes is concerned.

Because of the limitation of the 44-key typewriter layout it is necessary to tell the computer when the material is to be considered data for typesetting parameters and when it is the information to be typeset.

A "key-economical" system might be simply a command flag, (i.e....) followed by an assigned two spaces. With this structure you would only need a maximum of about five key strokes. You would key in (..tl) to indicate title 1. The method to be used is open to question. The important point here is that just as the rather inefficient Qwerty Keyboard has become standard because of its ubiquity, a standard coding system, to be used by all manufacturers, should be initiated now. It should be one that allows the greatest expandability without becoming cumbersome.

The first unit to widely use a system of mnemonic codes is the Quadritek 1200 by Itek, although they have chosen to use the off-to-one-side command key. A number of manufacturers seem to be ready to follow suit.

Other advantages of mnemonics could be the accessing of pi characters (special characters on a type font other than the alphanumerics and punctuation marks) by coding, . such as (command) PC for a percent sign, or (command) AS for an asterisk. . . rather than searching through a character substitution chart or resorting to a supershift structure, as is now the custom, because of the aforementioned limitations of the standard keyboard.

2. Simplified display of input

The method of display of entered material before output has been solved, as far as we are concerned, with the wide application of the CRT to word-processing and typesetting equipment. What remains to be debated is the proper form the display should take. Should we (1) see only the working line and setting line on a CRT screen, as in the CompSet 500 series and Itek machines? (2) see a complete display of the material, broken without regard to machine involvement, as with the CorRec Term by Mergenthaler? (3) see the material broken as it will be set, as with the MVP with Interactive Interface? or (4) see a simulation of the actual sizes and/or faces used, as is being developed by AKI with Optimix, and others? Cost will determine these decisions, as will experience in the marketplace.

3. Simplification of typographist's decisions

If we can send out a document in any of, let's say, a hundred typefaces, which one do we use for a legal brief? How small can we set something in order to squeeze all of our material onto one sheet and still have it large enough to be read? What typefaces in our library will look good in juxtaposition, and which ones will make our word-processing output look like it came from a circus? Since we can set most of our own type now, how can we make up a new price list for our products that will convey their quality but not cost an arm and a leg? Can we, in fact, set correspondence in type versus using the more familiar typewriter faces!

The economies of typesetting

When the savings potential of packing more material into less space—the large monetary savings in paper and postage alone, not to mention storage space—become apparent, much material now being typewritten will be typeset.

As imaging systems progress we will more than likely see dry output directly on the final material, be it bond paper or a printing plate for large runs. Nonetheless, how can the decisions of design be made by people without years of training and experience? "This sounds like a job for. . .Superman!"

The design talent shortage

Actually, it sounds like a job for a graphic designer or a type director. Unfortunately, the ubiquitousness of the equipment is now outpacing the supply of type-trained and type-oriented people. The ones that are available can command a price that removes them from consideration by most in-office word-processing/typesetting installations.

If this is true, what good is a slightly more expensive word-processing device if the owners have to hire and extensively train the operators? Should they take the chance of losing a newly trained operator when a better offer comes along? Why should they bother if a good typist can more easily be found for less money who can produce material of reasonably acceptable quality?

What is the answer? The best one for the industry, as it exists today, seems to be a method for bringing design, or rather the availability of good design, to the user of word-processing/typesetting equipment at an affordable price and in a form simple enough to be utilized by operators with only rudimentary training.

A whole new way of thinking is rapidly evolving. People who previously could think only in "typewriter-technology terms" will soon get used to seeing their company correspondence go out in Times Roman or Helvetica.

. . .They may see their postage costs reduced 25 percent or more because they are now packing more information into less space.

. . .Consider what they are going to do when it comes time for that important promotional piece they used to knock out with a strike-on machine.

. . .What about that instruction manual they had previously just typed on an old office typewriter because the size changes and runarounds made it too costly to do any other way.

Now the means will exist to allow the application of good graphics to all material. People will begin to expect it. As the acceptance of good graphics and typography grows, a tremendous demand for typographically oriented people is going to be created—a need much larger than the current supply of people can possibly fill.

What's the answer?

One approach, being developed now by a company called Design Processing International, could ease some of the problems we have outlined. The concept is simple.

DPI intends to research the problems facing business today in relation to typesetting and printed matter, and to pose them to recognized design authorities the world over. Each designer will be asked to submit solutions to those problems which fall within his particular realm of expertise.

After their solutions are analyzed and the most suitable ones selected, the methods of implementation will be worked out in cooperation with the various machine manufacturers enrolled in the program. A manual illustrating the program's uses and how to achieve a finished product will be prepared, along with the necessary software to drive the phototypesetting equipment.

Easy to choose, easy to command

This will be done so that ideally the maximum involvement by the operator will be to choose the proper format, insert its program tape/diskette/cassette (sold by the manufacturer), and begin keyboarding, entering the proper command-flags when indicated by the printed format sheet.

Now a word of explanation concerning the term command flags." This simply means some alphanumeric structure that will draw previously entered data from computer memory, totally separate from the normal text stream. These are the instructional mnemonics we mentioned earlier.

How will the system work as far as the end user is concerned? Let's walk through a typical job and see. Before we begin, however, I must tell you that the machinery and software, although close to actuality, are for the most part still on the drawing boards. We will simulate what would actually happen using equipment now on the market in a close approximation of the steps that will be followed.

We chose for our demonstration purposes a Mergenthaler MVP terminal and VIP phototypesetter. While admittedly more sophisticated typographically than the machines envisioned will be initially, the system possesses all the capabilities expected in the smaller devices.

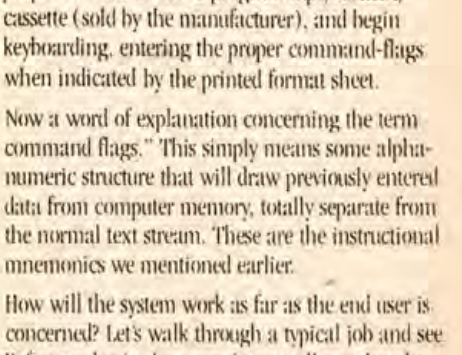
Let us suppose that we are an officer of an imaginary insurance company and we have recognized the need for displaying a good image to our stockholders. We have issued quarterly financial statements that were previously set in type by a job shop.

Rising costs and the need for security before the release date of our figures have made it difficult to get the material set in type in a well-designed manner. In desperation we have used strike-on, but were never really satisfied with the results.

We have used the same basic style for a number of years, but it has begun to look trite and amateurish in comparison to our competition's statements. We have heard that another branch of our company has just installed a "typographics writer" which gives you type, instead of typewriting, and provides something called "canned formats." Sounds interesting, but what do we know about designing a financial statement?

We could probably find someone who could help us, but hiring a designer right now would put us way over budget. It's worth a walk over to take a look.

Type/Graphic menus



A typical menu or list of available programs.

The first thing we are shown is a "menu" of different kinds of items this new system is capable of producing. There is a list of programs available, ranging from correspondence to complicated annual reports. We pick out the section on financial

reports. We are handed a manual containing over a dozen different solutions to our problem.



One of the many alternative solutions illustrated for a given problem.

After having a committee meeting we decide that Format 3TA00 is best suited to our needs. It has the clean look of authority that we are looking for.



Scheme for a typeface selection and mixing guide.

However, the typeface used is not our company's usual one, but we are told that we can pick the ones we prefer. Decisions, decisions. Fortunately, there is a page that shows us a whole list of typefaces . . . ones that work well with each other and ones that work less effectively when used together. We pick our company's typeface which we already have for the new machine, and another simpler one to use for the numbers.



Alternative folio or page number positions are illustrated and accompanied by the code or signal number.

In another manual of variations we see alternatives of how to number the pages (something they call folios).



One way of setting the President's Remarks, and the code to command it.

And in another part of our first book, we are shown how the president's remarks might look if they were set in a number of different configurations. We choose the ones that we think are best for our purpose, and add their numbers to the master format number.

Now we go back to our in-plant facility, and ask them to set the financial statement using Format 3FS202.

The typographist looks in the file and pulls out Program 3FS00 and Patches 000200 and 000002.



This punched tape could contain all the copy and typesetting and format instructions for the annual report.

Reading in the tape takes seconds. Now the operator sits down and starts keying in our financial report, inserting some letters and numbers every once in a while, which we are told are instructions to tell the new machine's built-in computer that we are changing from one part to another, or that we want something special like italics or boldface for this section or word. This goes on until all information is entered. Now we have our whole report captured on punched tape.



The tape is run into the computer terminal.

We walk over to the typesetter, which they tell me will soon be attached directly to the computer terminal, and run in tape.



The output follows the design selected from the menu and design specimen showings.

After the output of the machine is processed, we have our financial statement all set up and ready to be proofread. It can be sent to the printer after minor corrections and last minute changes are made. Our company has a beautiful financial statement, designed by a leading designer, done on our own equipment and at a fraction of the cost we were used to paying for the old typesetting job.

In-studio keyboarding

Obviously, this is only one job in one kind of situation. Let's look at another in order to help clarify the whole picture.

Two partners operate a design firm in Princeton, New Jersey. Their work is mostly specialty work for large clients, but they find there is a great demand for lesser quality work, and a lack of quality oriented suppliers. They decide that they hate to see this work pass them by when they now have a small studio staff that is underutilized when they are both busy making design decisions and presentations. In short, the secondary work which could be generated could help pay for the cost of an in-house type facility.

After pondering the options open to them they decide that: a) They have an internal need for some sort of typesetting machine so that they can try out designs of type material without the large costs they are now paying.
b) Since the nearest high-quality-oriented typographers are at best an hour away, the time saved in delivery and transit costs would be considerable.
c) If the system could be operated by their own people without enlarging the staff or losing someone to a long training schedule, they might even be able to sell the output to local customers.
And finally d) Perhaps this work now passing them by could be handled by the studio manager who could put it through without their involvement.

New clients are contacted by their studio manager with a "menu" of designs under his arm, much as the salespeople for the Yellow Pages operate today. A design format is chosen, and copy accepted. The material is keyboarded by the receptionist/typist (now typographist) and sent out while the normal flow of design work continues using the flow of work we described before. There is something special here that no one had anticipated.

While on a regular visit to one of their clients, one of the partners mentions this great new device they just installed, and how easy it was for an ordinary typist to produce professional looking finished material, after someone had simply chosen a design from a book.

The executive in charge of planning asks if they could accept material produced on a standard word-processing system. After checking with the manufacturer, the partner informs his client that as long as the standard typewriter keys are used for encoding the word processor output, an interface could easily be established to enable previously "captured" keystrokes to be used by these new devices to produce typeset versions of already existing material in a number of different configurations without having to pay for the re-keyboarding.

In plain terms, what this could mean to our friends in New Jersey is that they could let their client give them the standing tapes of their medical disclosures. They could choose a format with variables and produce output for all the different forms that the material could take, without having to waste design time on it or hiring a bunch of keyboard operators to produce the input.

An economy-oriented installation

The preceding examples dealt with the system from a direction of quality of design. How about the simple, practical aspects of saving money in postage, paper costs and storage?

The current 8½ x 11 letter size used in this country was much influenced by the typewriter and its ability to place a certain number of characters on a line and a certain number of lines on a piece of paper.

Any number of attempts have been made to increase the amount of words that could be squeezed onto that arbitrarily chosen sheet size. Incremental letterspacing was developed, as much to increase letterpacking on the page as to improve the aesthetic look of the typewritten word.

Using elite size characters also helped get more on each page.

In the direction of storage of material, duplicating machines that reduce the size of typed material are commonplace. Microfilm and microfiche equipment is being installed, but all these have the negative effect of making the material less accessible on short notice.

You are now manager of a large direct mail firm charged with sending out semi-personalized brochures to a worldwide mailing list of prospects. Your prospects are top executives who tend to ignore the form circular; they expect to be addressed in a direct manner.

Your success has been based on using word processing equipment to "lay-in" names and addresses, along with personalizing information as the letters are being prepared. But costs are on the way up and you can't seem to put down all the information your clients want to convey without resorting to more sheets, at a large paper cost, not to mention postage.

You can't resort to typesetting because the cost is too high and the retraining of your whole staff would ruin you. Reducing the size of the typed original would be too expensive, and along with the smaller size there would be reduced depth and width of the typed material.

Enter the new Typographics idea. You see a system with all the advantages of word processing, and the added feature of giving you good, sharp, easy-to-read copy in an almost endless variety of sizes and line spacings.

At the same time you can emphasize things by making them larger, or using a different kind of letter. You can even set things so small you can get twice the message on one page of a letter. You can even break a letter into two or three columns.

But hold on! Here we go with the retraining again. Right? Wrong! As you watch, one of your typists sits down at the new keyboard. You look through a book and choose a style you like. This manufacturer uses a system with a floppy disk. You hand her the disk and she slides it into the machine. She enters the format number you have chosen, and starts keyboarding just as she usually does on the regular word processor.

When she finishes the address she types, ppp01. After she gets to the end of the body of the letter, the manual tells her to hit a combination of keys, ppp02. She then keys in your personal message for

this particular prospect, and then hits sss01 and keys in the salutation.

So, now that you have one letter, what do you do about the rest?

First she stores that letter on an additional disk. Then she calls it out of the original storage and keyboards a new address. Next she skips down to ppp02 and keys in the personalized message for this new letter. When she reaches the end she "dumps" that letter onto the second disk.

You've saved time, money, paper and training, and have a better product than you ever have had before.

These are the principles of a new system that can work for all of us interested in this pursuit of applying the principles of design and quality typography. The user might be a small job shop in an industrial park in the Midwest, a printer trying to generate new business, or a corporate office in an isolated location. But the result is the same...a professional job to the highest possible typographic standards, with the lowest possible investment in equipment and personnel.

That opens up one enormous market!

This Vision '77 report will be continued in the next issue of U&lc with an analysis of information flow and systems, case history reports of the experience of several companies that have used various typesetting systems, the viewpoints of educators and designers and typographic services, and what the near future holds in store including a roundup of projections by the presidents and top management executives of the field's leading manufacturers and suppliers.



Touring the R.I.T. plant



Talking it over at a coffee break



Hermann Zapf (right) making a point at opening reception



A speaker's eye view of the audience...



...and how some of the speakers looked to the attendees

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AKRON, OHIO	The Akron Typesetting Co.
ATLANTA, GEORGIA	Action Graphics, Inc.
BENTON HARBOR, MICHIGAN	Type House, Inc.
BLOOMFIELD, CONNECTICUT	New England Typographic Service, Inc.
BOSTON, MASSACHUSETTS	Berkeley Typographers, Inc. Composing Room of New England
CEDAR RAPIDS, IOWA	Type 2
CHICAGO, ILLINOIS	J. M. Bundscho, Inc. Frederic Ryder Company Total Typography, Inc.
CINCINNATI, OHIO	Typo-Set, Inc.
CLEVELAND, OHIO	Bohme & Blinkmann, Inc.
COLUMBUS, OHIO	Yaeger Typesetting Co., Inc.
DALLAS, TEXAS	Jaggars-Chiles-Stovall, Inc. Southwestern Typographics, Inc.
DAYTON, OHIO	Craftsman Type Incorporated
DETROIT, MICHIGAN	Willens + Michigan
GRAND RAPIDS, MICHIGAN	Central Trade Plant of Grand Rapids
HOUSTON, TEXAS	The Type House, Inc.
INDIANAPOLIS, INDIANA	Typoservice Corporation
KANSAS CITY, MISSOURI	Lettergraphics/Kansas City, Inc.
MEMPHIS, TENNESSEE	Graphic Arts, Inc.
MIAMI, FLORIDA	Wrightson Typesetting, Inc.
MINNEAPOLIS, MINNESOTA	Dahl & Curry, Inc. Duragraph, Inc.
NEWARK, NEW JERSEY	Arrow Typographers, a Patrick & Highton Company
NEW YORK, NEW YORK	Advertising Agencies/Headliners Artintype-Metro, Inc. Franklin Typographers, Inc. Royal Composing Room, Inc. Tri-Arts Press, Inc. TypoGraphics Communications, Inc. Volk & Huxley, Inc.
ORANGE, CALIFORNIA	DeLine-O-Type, Inc.
PHILADELPHIA, PENNSYLVANIA	Walter T. Armstrong, Inc. Typographic Service, Inc.
PHOENIX, ARIZONA	Morneau Typographers, Inc.
PITTSBURGH, PENNSYLVANIA	Davis & Ward, Inc. Headliners of Pittsburgh, Inc.
PORTLAND, OREGON	Paul O. Giesey Adcrafters, Inc.
ROCHESTER, NEW YORK	Rochester Mono/Headliners
ST. LOUIS, MISSOURI	Master Typographers, Inc.
SYRACUSE, NEW YORK	Dix Typesetting Co., Inc.
TAMPA, FLORIDA	Century Typographers
MONTREAL, CANADA	McLean Brothers, Ltd.
TORONTO, CANADA	Cooper & Beatty, Ltd.
WINNIPEG, CANADA	B/W Type Service, Ltd.
BRISBANE, QLD., AUSTRALIA	Savage & Co., Pty., Ltd.
SOLNA, SWEDEN	Typografen AB

HEADQUARTERS Advertising Typographers Association of America, Inc.
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New York, N.Y. 10001
Walter A. Dew, Jr.
Executive Secretary

ATA

Advertising Typographers Association of America.

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HOW TO GET MORE OUT OF LUNCH THAN INDIGESTION.

If you ever had the feeling that there might be something more to lunch hours than French onion soup and Italian beef sandwiches, you were right.

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It's the only gallery in Chicago devoted to the graphic and typographic arts. It's also a place where you can be awed, stimulated, informed, and inspired in less time than it takes to order a pizza.

Recently, the Gallery was moved to the second floor at 500 North Dearborn. In the process, it got bigger and better looking.

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Included in these shows will be the Type Directors Club Show, the AIGA Communication Graphics Show, and the AIGA Book Show.

There will be a "Symbol Signs" show in conjunction with the AIGA and the U.S. Government.

A retrospective of the Push Pin Graphic.

And shows featuring the work of pioneer Swiss poster designer Joseph Müller-Brockmann, avant-garde designer Alvin Lustig, designer and woodcut artist Antonio Frasconi, and illustrator James McMullan.



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U&LC 3/77

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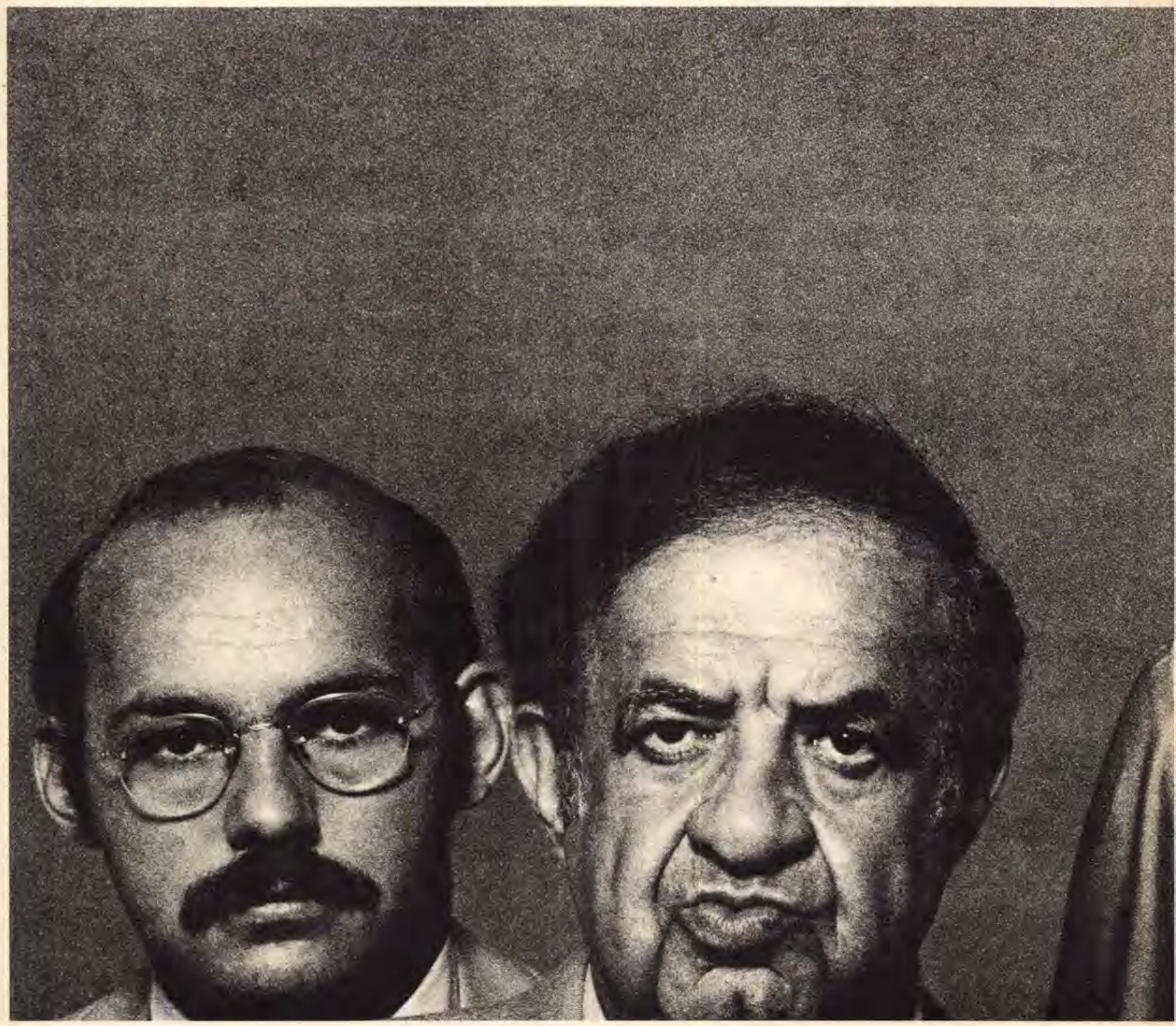
Gentlemen:
____Please have a VGC analyst call me to arrange for a demonstration of the Photo Typositor.
____Please send me more information.

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Title _____
Company _____
Address _____
City _____ State _____ Zip _____
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Maybe you need to see an analyst.

Will the real typesetter



"They laughed when I sat down to typeset, but pretty soon the laugh was on them."

That's because typist Kelley Coates (after only a couple hours instruction on the AlphaComp) was able to turn out beautiful instant typography that matches the looks and quality of the seasoned pro on a big heavyweight machine.

How does she do it? By simply setting up our direct-input, lightweight (100 lbs) machine for the requirements of the job and then just typing away while our word composer self-instructs all the fully-automated decisions that were fed into it. Nice work if you can get it, and you can get it with the AlphaComp.

About money

With your own typist you slash costs, keep control of the job, and compose all your material with the same quality results you expect from a professional. Because we built an

please stand up!



under-$10,000 product that produces the highest typographic quality by automating all the components of professional typography.

About face

AlphaComp is unsurpassed in having available most of the type styles you could possibly want. Whatever styles or sizes (6 to 24 point) you choose for your particular job, you can be sure they'll come out perfectly spaced, razor sharp, and superbly readable every time. Others make promises, AlphaComp makes good.

Any typist can play

If you have a typist, you have an operator. And not just for the ordinary stuff. You want your copy to read flush left and flush right? Centered? Ragged-end? You want initial caps, runarounds, variable tabs? How about change of headings in styles and sizes indents, kerned letters? Foreign characters, specialized settings like math, physics and science? The AlphaComp has features that do it all and then some.

Take those jobs that keep coming back with changes and corrections. AlphaComp has systems that store original typing and can then update and correct—change formats of entire jobs—or search out recurring words to replace . . . all without rekeyboarding. It's like having your own typographic service at the tip of your typists' fingers.

About a demonstration

If you think this is all to good to be true, send in the coupon for a personal looksee. At your office or ours. Because if we want your business (and we do), you'll have to see this amazing machine for yourself. Come in with a typist and go out with a typesetter.

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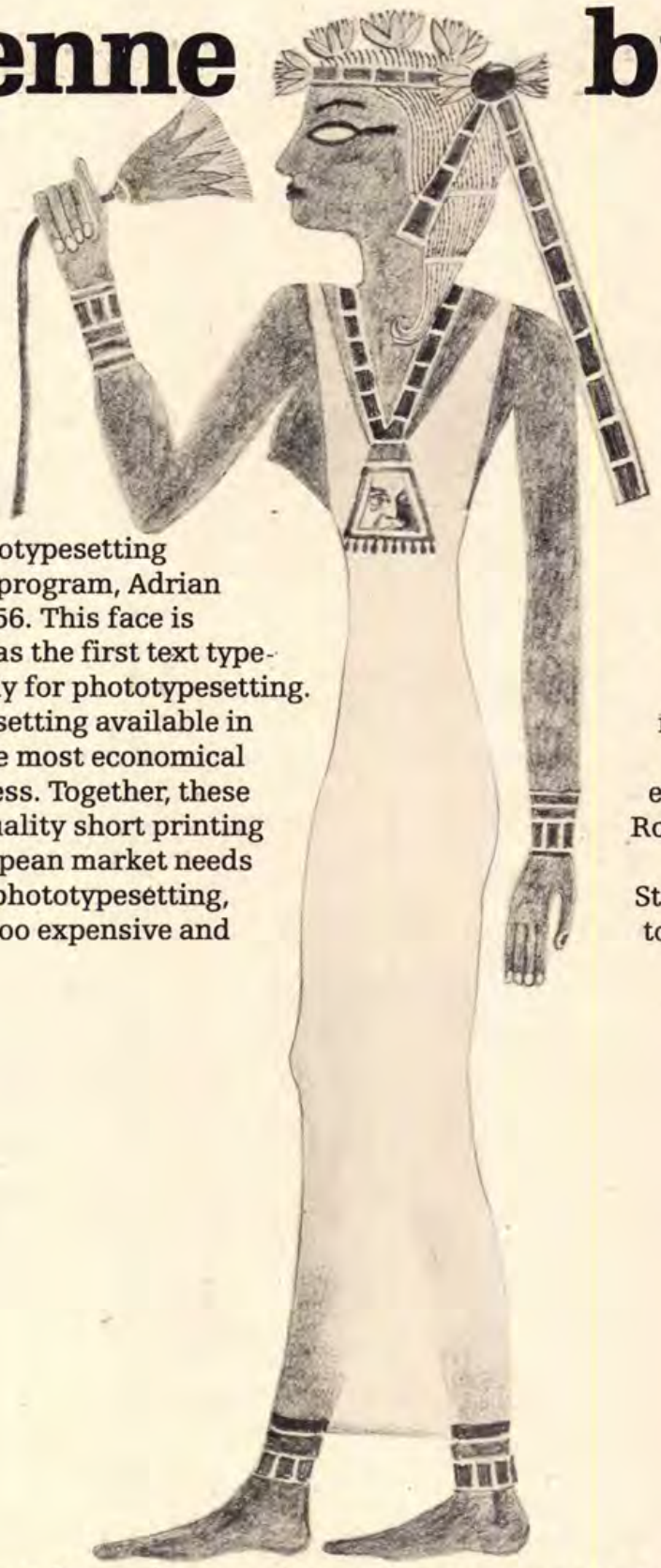
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with automatic kerning

Egyptienne by Frutiger



Adrian Frutiger joined Deberny & Peignot the Paris type foundry in 1952 after graduating from the Ecole des Beaux-Arts de Zurich. In 1953 Deberny & Peignot began a typeface design program for Lumitype, a phototypesetting manufacturer. As part of this program, Adrian designed Egyptienne in 1955/56. This face is important historically as it was the first text typeface to be designed specifically for phototypesetting. Until the fifties, the only typesetting available in Europe was hot metal, and the most economical printing method was letterpress. Together, these two technologies produced quality short printing runs in keeping with the European market needs of the time. With the birth of phototypesetting, however, letterpress became too expensive and laborious and offset became the most viable method of printing. Not having the versatility it has now, the offset printing of that era produced a lighter impression on the page than the traditional letterpress. Knowing this, Frutiger designed a strong face which would provide good color when used as body copy. He decided a serif face was needed which had stronger serifs than most, but was not as heavy as those of traditional egyptians. The result was a strong but elegant face with serifs about half the weight of a typical egyptian. The Egyptienne family includes Roman 55, Italic 56, Bold 65, and Black 75, and joined the Mergenthaler, Linotype, Stempel, Haas typeface library when Haas took control of Deberny & Peignot in 1973.

Mergenthaler, Linotype, Stempel, Haas/ Mergenthaler Linotype Company, Mergenthaler Drive, Plainview, NY 11803

**"Bauer Bodoni
is probably the most beautiful Bodoni
ever designed."***

**"Bauer Bodoni
ist probably das schünste Bodoni ist die
jemals entnorfen wurde."***

"Bauer Bodoni
es probablie la mas atractiva Bodoni
que ha sido diseñada."*

*"Bauer Bodoni
est probablie le plus beau Bodoni
jamais dessiné."**

*Aaron Burns

Bauer Bodoni with Italic,
Bauer Bodoni Bold with Italic, and Bauer Bodoni Black with Italic
are now available from all Typography Plus subscribers
and can be obtained for any Mergenthaler Linotype V-I-P, Linoterm, Linocomp,
Linotronic, Linofilm or Linotron.
This ad was set on a Mergenthaler Linotype V-I-P
with the Advanced Typography Program.

Mergenthaler, Linotype, Stempel, Haas



An artist is a person who is sufficiently interested in the world to want to know it and recreate it. Charles Nicolas Cochin was no exception.

He had a temperament that reminds us of the men in the Paris ateliers in the nineteen-twenties. Filled with a curiosity of the world he lived in, he threw himself into the life of the eighteenth century and thoroughly enjoyed it. His astonishing talent and polished conversation placed him among the autocratic art patrons of the time. His parents were both talented engravers. The young Cochin worked in his father's studio where he learned the technique of the tools.

He preferred to create his own pictures rather than duplicate the work of others. For models he walked the streets, watching the common people — the tradesmen, the ladies-of-fashion, or whoever caught his eye.

His depictions of royal festivals brought him to the attention of the Court. The Marquise de Pompadour arranged a trip to Italy for the purpose of studying the arts, and Cochin was chosen to go. Upon his return he was made a Knight and soon afterward received the post of Guard of the King's Drawing Collection. Numerous commissions followed and he became perhaps the greatest influence in the illustrative arts of his time.

One of his most famous designs was of the invitation to the Ball on the occasion of the marriage of the Dauphin in 1745. The art of writing and lettering, in those days, had a much closer connection with typography that they have had since. "Fine" printing in the eighteenth century referred more to the brilliant copper engraved or etched plates of the illustrations, than to the impression of the type. In time, the engravers began to do more and more of the display lettering, incorporating it into the frame of the illustrations.

Etchings by Pepper Howard



Charles Nicolas Cochin lived to see the end of the exquisite, self-centered society he loved: the year after the Revolution had begun, 1790, he died at the age of seventy-five.

Cochin was produced by Fonderie G. Peignot & Fils in 1913 and was a collaboration between Georges Peignot and George Auriol. It does not rank as a standard book face, as its appearance — particularly the italic — has the look of a hand-engraved face.

Matthew Carter designed this new version of Cochin for the Mergenthaler Linotype Company. It has several weights: Cochin, Cochin Italic, Cochin Bold, Cochin Bold Italic, Cochin Black, and Cochin Black Italic. It is set on the V-I-P with the kerning of the Advanced Typography Program, track 1.

Mergenthaler Linotype Company, Mergenthaler Drive, Plainview, NY11803

Mergenthaler, Linotype, Stempel, Haas

The article on Charles Cochin was condensed by Judith Roy from a story in the Monotype Recorder, 1928.

Does (s)he or doesn't (s)he? Only your typesetter knows for sure.

You see a new face you'd like to specify but you don't know which of your favorite typesetters has it.
If you know (s)he has a *Mergenthaler Linotype V-I-P, and the Advanced Typography Program,* **both you and your typesetter know for sure that you can have every ITC typeface for sizes up to 72 points (** and all those others from Mergenthaler, Linotype, Stempel and Haas **).**
These faces all come with exquisite typographic refinements. That means, uniform perfection of computer spaced typography, a standard set of kerned character combinations, and hung punctuation.
Specify your choice of three degrees of word and letterspacing; normal, tight, very tight, with the large sizes automatically adjusted for tighter letterspacing.
Use the standard system for specifying (computerized) spacing in use all across the country.

Choose the finest (programmed) typography available today without paying for expensive operator keyboarding time — the most expensive part of your typesetting bill.

To receive our specimen booklets showing you the newest typefaces from Mergenthaler, Linotype, Stempel, Haas and how to specify computerized spacing on the Mergenthaler Linotype *V-I-P* complete this form and return it to us:

Typographic Development Division
Mergenthaler Linotype Company
Mergenthaler Drive
Plainview, New York 11803
USA
or call us:
area code (516) 752 4022

Name:
Address:
City & State:
Zip:

send to:
Typographic Development Division
Mergenthaler Linotype Company
Mergenthaler Drive
Plainview, New York, 11803
USA

For the seventh time:
Mergenthaler Linotype's Typography Plus

ITC Italia series
Italia Book
Italia Medium
Italia Bold

Mergenthaler's Cochin series
Cochin
Cochin Italic
Cochin Bold
Cochin Bold Italic
Cochin Black
Cochin Black Italic

Stempel's Egyptienne series
Egyptienne 55
Egyptienne Italic 56
Egyptienne Bold 65
Egyptienne Black 75

Bauer Bodoni series
Bauer Bodoni
Bauer Bodoni Italic
Bauer Bodoni Bold
Bauer Bodoni Bold Italic
Bauer Bodoni Black
Bauer Bodoni Black Italic (yet to come)



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Compugraphic Corporation Industrial Way, Wilmington, Massachusetts 01887/(617) 944-6555

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in Korinna ITC typefaces


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Dymo's systems are tailored for both present and future needs. Over 65 large system users, worldwide, will attest to this fact. This experience has enabled us to fashion a new concept in small systems . . . the **CPS 300.** Like our CPS 500 and 700 series, the 300 is modular and expandable, incorporating big system features, but with small system price tag.

Whether you are a commercial printer, publisher or typographer needing complex typographic refinements, such as aesthetic kerning, multiple tabbing, expanded exception word dictionary and reprocessable H&J . . . or a small daily or weekly newspaper requiring full editorial, classified and display functions, you will find that the CPS 300 has been styled to fit your shop and pocketbook. You can mix and match with options, such as 100-million characters of disc storage, on-line keyboards, OCR, graphic display terminals, multiple phototypesetters, remote VDTs and business system capabilities. The CPS 300 is a powerful and cost-effective system that's right for you!

We'll be demonstrating the CPS 300 in all of its sizes and configurations at GRAPH-EXPO '77, Booth 8001 — Come in and try one on for size. Write or call toll free, (1-800-225-0945, except Mass.) for a brochure and demonstration appointment.

DYMO

Dymo Graphic Systems
355 Middlesex Avenue
Wilmington, MA 01887
Tel. (617) 933-7000

2 of the 3 best international annuals are included in the price of a subscription to Communication Arts

You can get the CA-77 Annual (approx. 260 pages, single copy price $14 softbound) and the 1978 ART Annual (approx. 180 pages, $9) plus four regular issues (100-plus pages, $4 each) as the six issues in a regular $26 subscription to *Communication Arts*.

15,000 entries were submitted to CA-77. It has been juried at the time this ad had to be written. Herb Lubalin of U&lc was one of nine outstanding U.S. and Canadian jurors invited to pick the winners for this annual. It will be approximately 260 pages with about 900 illustrations, 700 in color. I don't know the exact number because that will be dictated by what we have to show. Our policy, in the annuals and in all of the issues of CA, is that *everything* that is in color will be shown in color.

My name is Dick Coyne. I'm the editor and publisher of CA and I have a lot in common with you and most of the readers of our magazine. I graduated from art school. I was an agency art director and a corporate art director and the founder of a major West Coast design studio. CA was started in that studio nineteen years ago. But don't let that type us as a West Coast magazine. I am just as familiar and concerned with what's happening in New York, Boston, Chicago, Atlanta, Cleveland or other cities as I am with San Francisco or Los Angeles. We also have a very large Canadian and foreign circulation.

I am backed by a great staff and a network of contributing editors around the country, and the world, who are all knowledgeable pros in the business. Allen Hurlburt, for example, the former art director of *Look*, was one of the most honored people in the business, including The NSAD Art Director of the Year when that organization was still functioning. Allen is living in London at this time and covering that part of the world for CA.

Between us we try to plan interesting issues with diversity and balance. We feature outstanding designers, art directors, illustrators and photographers, and sometimes we will take a broader overview of a specific area of the business, like a three-part article on the rep system in New York, Chicago, and the West Coast. Our content stays close to professional interests because that is our audience. We assume that our reader has a working knowledge of the business and present our material accordingly. Our format is geared to a flexible layout to best display the work, not to fit the work into our format. As we have grown in circulation, we have been able to steadily increase the number of editorial pages (approximately 750 this year—twice the pages of the U.S. design publication with the next largest paid circulation).

That is the reason why we also can offer more color and quality reproduction. Our paid circulation is much larger than any other design publication in the world. And we're the only one that is making any substantial growth. We increased the circulation 18% last year and we're on a faster pace this year. Much of this is due to a remarkable 82% renewal rate. We must be doing something right.

If you aren't already a CA reader, I hope you'll join us.

If you subscribe now, the CA-77 Annual (November) and the 1978 ART Annual (July) will be included in your subscription. If you would like to purchase the 1977 ART Annual or the CA-76 Annual, copies are still available.

The 1977 ART Annual was juried from 4,000 entries and presents an outstanding selection of illustration and photography. Eleven nations are represented. 166 pages, 257 color illustrations and 33 more in black and white, printed on 80 lb. coated paper with a gold-stamped and embossed cover. The price is $9.

The CA-76 Annual offers the best of advertising and design juried from 14,000 entries. The winners represent 68 cities from six nations. 240 pages, the Annual is printed on 80 lb. coated paper with 634 color illustrations and another 152 in black and white.
The price is $12.

If you would like to receive entry forms for either of the annual competitions, send us your name and address.
Each year The ART Annual—illustration and photography—closes April 1.
The CA Annual—design and advertising—closes July 1.

The subscription price shown is in effect Sept. 1, 1977. Orders received after any future price increase will be billed for the amount of the increase.

Communication Arts • P.O. Box 10300 • Palo Alto, California 94303

I would like to order

☐ CA-76 Annual . . . $12

☐ The ART Annual, 1977 . . . $9

☐ Subscription to Communication Arts . . . $26
(Canada $28, all other countries $32)

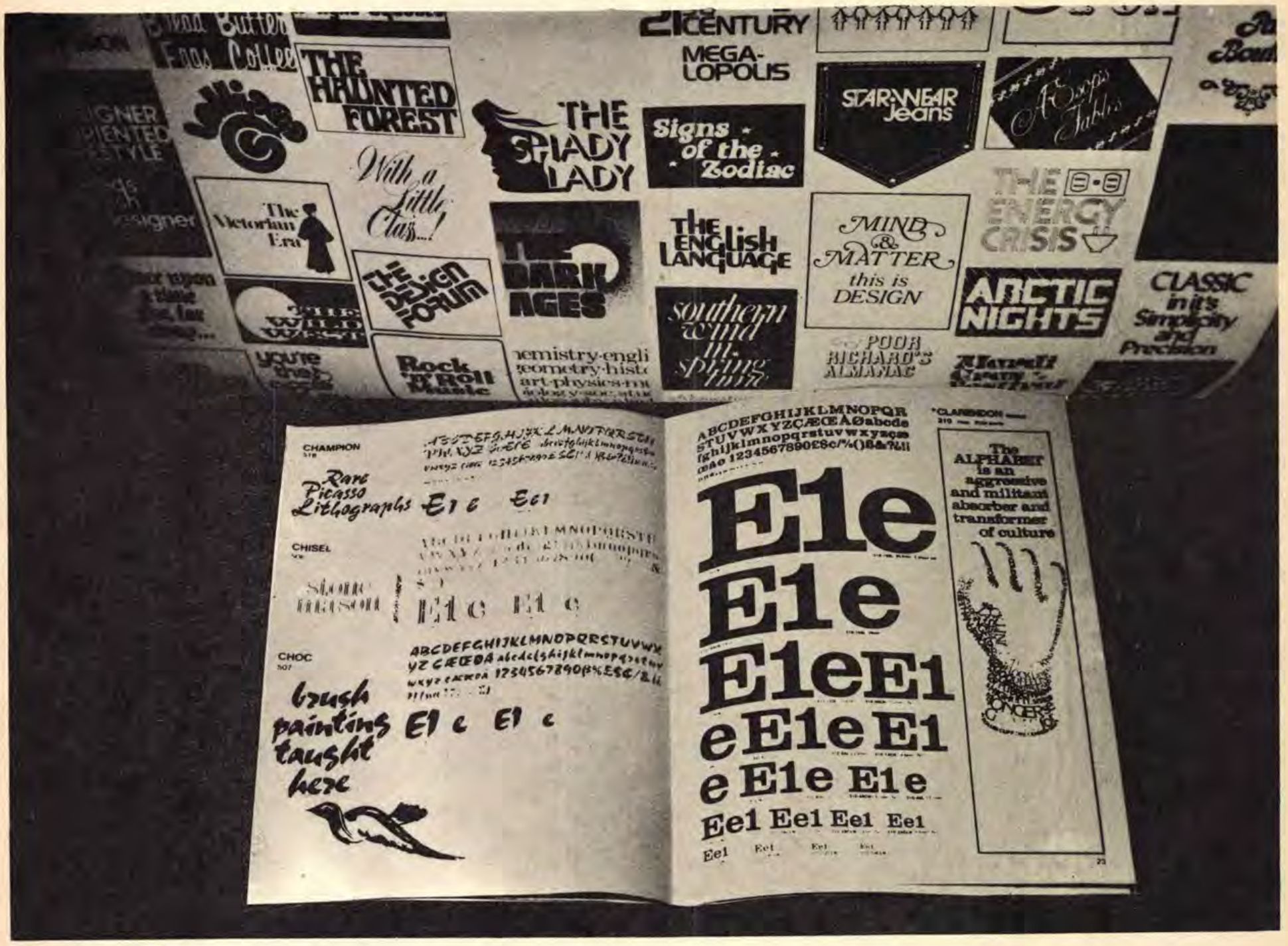
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The annuals will not be reprinted so this offer must be limited to a first-come, while-they-last basis. If our inventory is exhausted, payments will be returned.

Postage will be prepaid, second class mail, but copies of the annuals cannot be shipped until payment is received. Allow up to three weeks for mail delivery in the U.S., longer on foreign orders.



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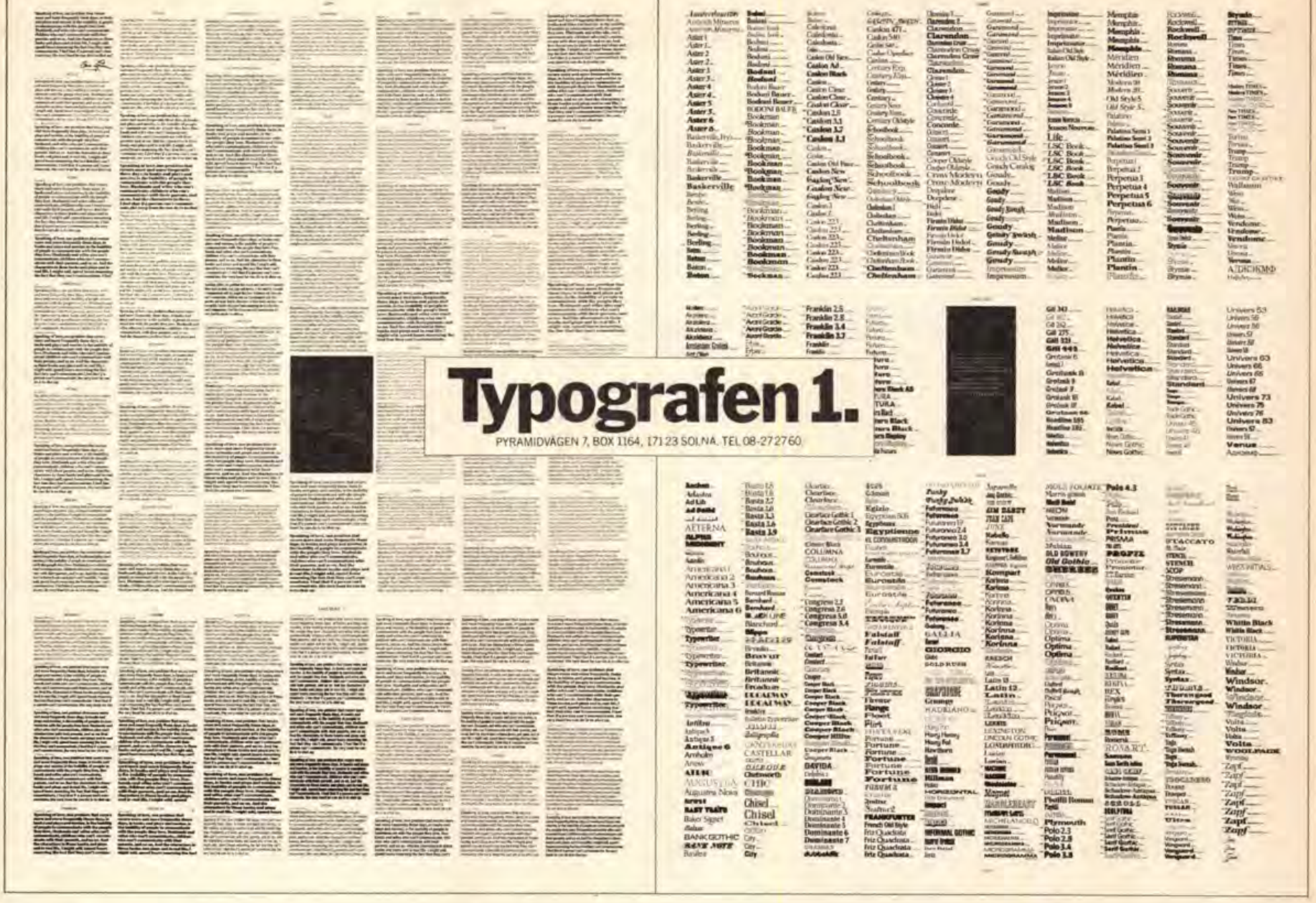
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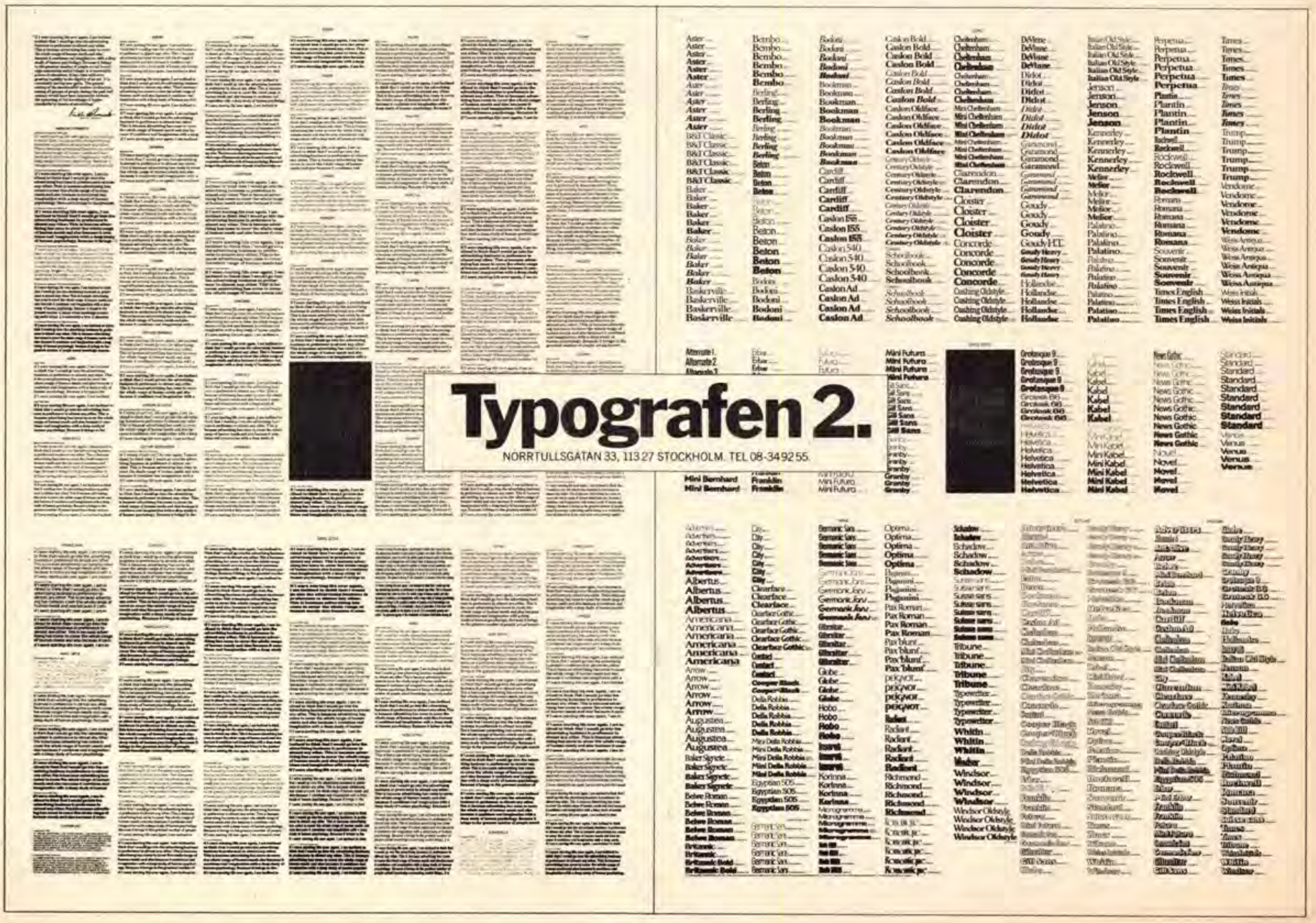
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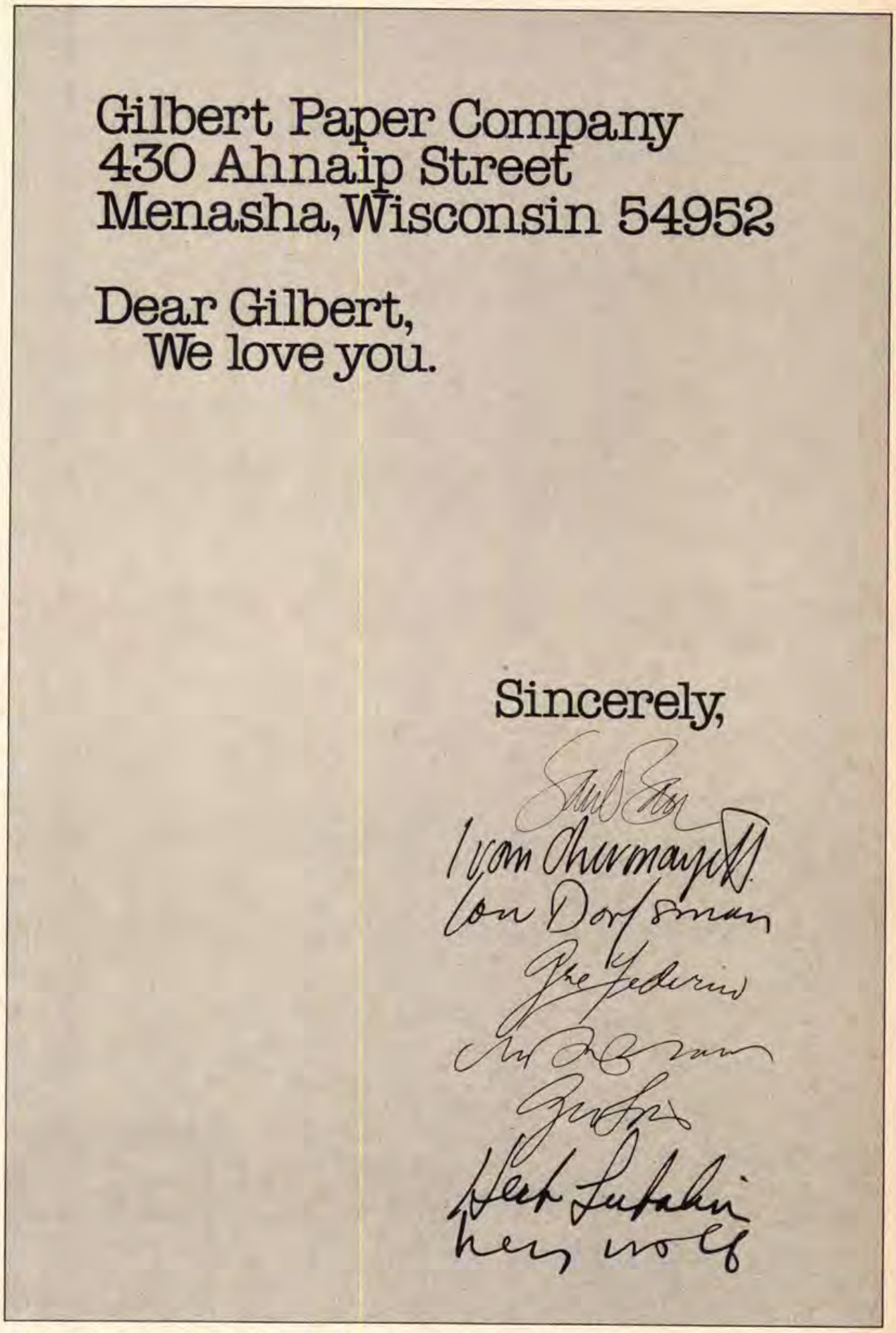
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Gilbert Writing
25% COTTON

How eight eminent designers fell in love with a sheet of paper.

And an envelope.
This whole affair began when we asked Herb Lubalin to help us create and promote a new designer-oriented writing paper to supplement Gilbert Bond, the leading 25% cotton content bond in the United States.

Herb advised the Gilbert Paper Company technicians on the designer's special paper needs. Their combined efforts resulted in the creation of Gilbert Writing, a versatile 25% cotton content grade that offers superb reproductive quality.

Graphic designers will love the unique features of Gilbert Writing. Like the rich Vellum texture and the narrow 9/16" chainmark of the traditional Laid pattern. And the option of having the wallet flap style envelope, long preferred and sought after by designers, as well as the regular No. 10 available in Gilbert Writing.

If we still haven't turned you on, here are a few more lovely features. With Gilbert, you no longer need to specify two different weights, (24 lb. for the paper and 20 lb. for the envelope), to achieve the right bulk. Our 22 lb. weight provides a prestigious feel for both with one sheet of paper. And the opacity of our 22 lb. stock is outstanding.

Best of all, Gilbert Writing is available in five sensual colors, plus two whites, each carefully chosen with you, the designer, in mind. These colors are deeper, richer and more subtle than the usual pastel hues of most writing papers and, thus, afford the designer greater flexibility in the usage of color in letterhead graphics.

Finally, after all the research and development, it came time for the true test. Herb asked seven of his friends to try their own letterheads on new Gilbert Writing.

And the results? Well, let's just say that if getting excited about a piece of paper and an envelope embarrasses you, take comfort in the fact that eight of the greatest designers in the world have written us some pretty lustful letters about our paper.

After all, if Saul Bass, Ivan Chermayeff, Lou Dorfsman, Gene Federico, Milton Glaser, George Lois, Herb Lubalin and Henry Wolf could fall in love with a paper named Gilbert, why can't you?

If you'd like to get involved with Gilbert Writing, call your nearest Gilbert supplier. He'll be happy to arrange a liaison, or fill in this coupon and we'll be delighted to send you our portfolio of love letters.

Dear Gil,
I'm not embarrassed to say it: I want you.

Name _____

Street _____

City _____ State _____ Zip _____

P.S. Don't worry, I'm over 18.

SKILLS FOR HIRE*



EISENSTAEDT APPLAUDED AT LAUDERDALE

FORT LAUDERDALE — Famous photographer Alfred Eisenstaedt visited the Art Institute of Fort Lauderdale on assignment and learned how it feels to be on the other side of a lens. As he photographed art and design activities in classrooms and studios, he was besieged by students clicking their own cameras. Much of South Florida was aware of his visit. TV crews, reporters and local celebrities turned out in good numbers. Asked if he will return, Eisenstaedt said his current assignments keep him running but he might consider some workshop activity during the winter and teach the students how to "think" photography.

RISING IN THE ROCKIES

DENVER — The Colorado Institute of Art has something no other art school has — Aspen. In June, thirty of its students made the pleasant pilgrimage from Denver to the International Design Conference.

For a week, they mingled with the professionals. They listened and learned. Glaser, Bass, Wolf, Gail Sheehy and others presented ideas about preparation for the professional world.

A week beforehand, the school's gifted students displayed their work at the Art Directors Club of Denver competition. Two received medals of special recognition.



Young Man of Distinction A talented graduate of the Art Institute of Pittsburgh, Steven Leasure, has received the New York Creativity '76 Award sponsored by Art Direction magazine. This honor is one of many, including the Andy Award, that Leasure, an art director for Ward Archer & Associates of Memphis, has received. The Andy Award (for the benefit of non-advertising types) is the equivalent of the Oscar and Tony awards in the field of entertainment. Leasure's gifts go beyond the field of art direction. He has also written music and lyrics for a number of TV and radio commercials.

The elegant logo for the Art Institute of Fort Lauderdale was recently designed by Chuck Ax, who heads the Ad Design Department.



IN PRAISE OF PROFESSIONALISM

ATLANTA — The Art Institute of Atlanta needed a fashion poster. It turned to America's outstanding fashion illustrator, Joe Eula, who works regularly for clients such as Halston and Vogue. Eula accepted a tough assignment. The Institute said, make the fashion style specific but not too detailed and definite . . . fashions go out of date in no time, but our poster must continue to look up-to-date. His sketch, as you would expect, was just right. Drawn with Florentine finesse and refreshing simplicity, it is an inspiration piece for the illustration students. They have displayed a six-foot blow up of it in their classroom for all to see.

IF you're sharp enough to read this seven-point type, you will likely appreciate the talents and fine personal qualities of The Design Schools' graduates. They are thoroughly trained in a variety of skills, including: advertising design, typography, photography, airbrush, illustration, perspective, drawing, packaging, photo laboratory, multi-media, lettering, mechanicals, animation and scores of others. They are prepared to join you and work productively. It will be worth your while to clip this coupon and send it in right away.

*The Design Schools

ART INSTITUTE OF ATLANTA
ART INSTITUTE OF FORT LAUDERDALE
ART INSTITUTE OF PITTSBURGH
COLORADO INSTITUTE OF ART

A series of programs and seminars featuring noted designers, artists and filmmakers will be given later this year in a number of key cities. Sponsored by The Design Schools and local Art Directors clubs, the programs will be announced by mail beginning in September. Watch for your invitation.

Edward A. Hamilton, Design Director
295 Madison Avenue Suite 1206
New York, N.Y. 10017

I would like to know more about the young talent recently graduated from The Design Schools. ☐
I don't have immediate need, but please keep me advised. ☐
Include me on your invitation list for seminars and programs. ☐

Name: _____ Position: _____

Company: _____

Address: _____ City: _____ State: _____ Zip: _____

Skills of special interest to me: _____

Arrow

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Arrow

Motherly love for your slide presentations

Arrow

Slides aren't the only things we can do. Take advantage of our total typographic service for advertising, promotion, packaging, and publishing including national ads, catalogs, price lists, annual reports, manuals, labels, and other collateral material.

We're Arrow, a name only a mother—and you—could love!



Arrow Typographers Inc.
2-14 Liberty Street, Newark, N.J. 07102
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FOR $15.00 & DOWN

R.O. BLECHMAN AND HERB LUBALIN CORDIALLY INVITE YOU TO BUY THEIR NEW CALENDIARY

The Great American January Through December Nineteen Hundred and Seventy Eight Rat Race.
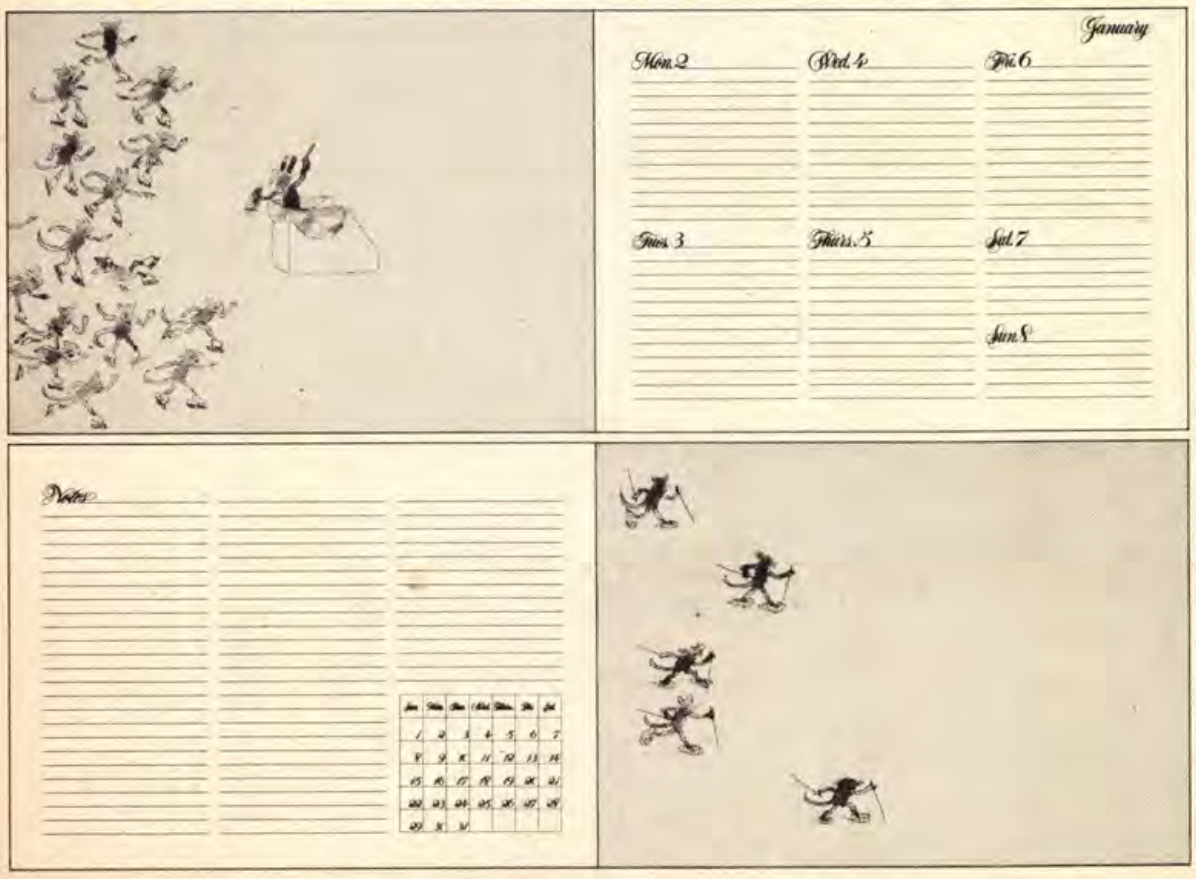


What's a calendiary?

A calendiary is a unique, magnificently illustrated, designed, printed and bound 11x8 calendar-appointments book that contains 28 full-page full-color illustrations and 84 two-color pages of monthly calendars and weekly diaries for appointments, telephone messages and space for copious notes.

Everyone, at one time or another, has been involved in the rat race, and the whole sweep of it has been put into witty and penetrating perspective by R. O. Blechman's pastel palette and charming illustrative style, enhanced by Herb Lubalin's captivating design and the sensual Spencerian letterforms of Tom Carnase. What Blechman did for the "talking stomach" Alka-Seltzer commercial he is doing here for the "racing rodents," delightfully putting them through their monthly paces over the obstacle course of life.

The Great American Rat Race is, in a word, delicious. Buy a copy. Better still, buy copies for everyone in the office. Even better still, buy copies for friends, relatives, clients, anyone. It's the ideal gift to delight the eye and provoke the brain. And who knows? Just maybe, if enough people savor the volume, they'll be so abashed that we may all go back to acting like human beings again.

This ideal Christmas gift, for anyone who has everything, is reasonably priced at $15.00 per copy. Substantial reductions are being offered for orders in quantity: 10 to 25 copies; $12.50 each. 25 to 100 copies; $10.00 each. 100 or more copies; $8.50 each.



Fill out the coupon below and be the first on your block to get in on the **Rat Race.**

RatRace Books
223 East 31st Street
New York, N.Y. 10016

I want to avoid the last-minute Christmas rat race.

☐ I enclose my check for $ _____ for _____ copy(s) of The Great American Rat Race.

(New York City residents add sales tax.)

PLEASE PRINT

Name _____

Address _____

City _____

State _____ Zip _____

THANKS.

Geotype Geotype Geotype Geotype Geotype &

All right class. What's the ampersand for? Sitting there in the middle of the page with its legs crossed, looking old-fashioned. What's it got to do with Geotype?

You there, with the T-square behind your ear, speak up. It means – and more – you say.

And more what?

And more characters per sheet. 22% more than the other guys.

Good, what else?

And more easy to use. Guidelines printed right on the sheet. Guaranteed shelf-life. Won't crack or break up because of a more stable carrier sheet. Won't knock off, has a low-tak adhesive you have to lean into. Good stuff.

What else.

It's more heat-resistant too. Independent tests prove that Geotype's results are best. Can be used for ozalid or white-print reproduction systems. Coated papers don't have to be sprayed Doesn't need fixing.

What more do you need?

It costs less than our major competitior. Available in 169 faces, black and white. And the white is whiter. True! whiter and more opaque.

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More products.

Geocolor custom color transfer sheets. Geotone self-adhesive cut-out shading film. Geosign self-adhesive vinyl lettering. Geoex dry transfer shading and texture sheets. Geotape charting tapes. And more to come? More faces expected soon.

Maybe we should have called it Geotype plus.

For more information about Geotype and the complete line of Geographics products send your business card or this coupon to:

Geographics

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Salt Lake City, Utah 84119
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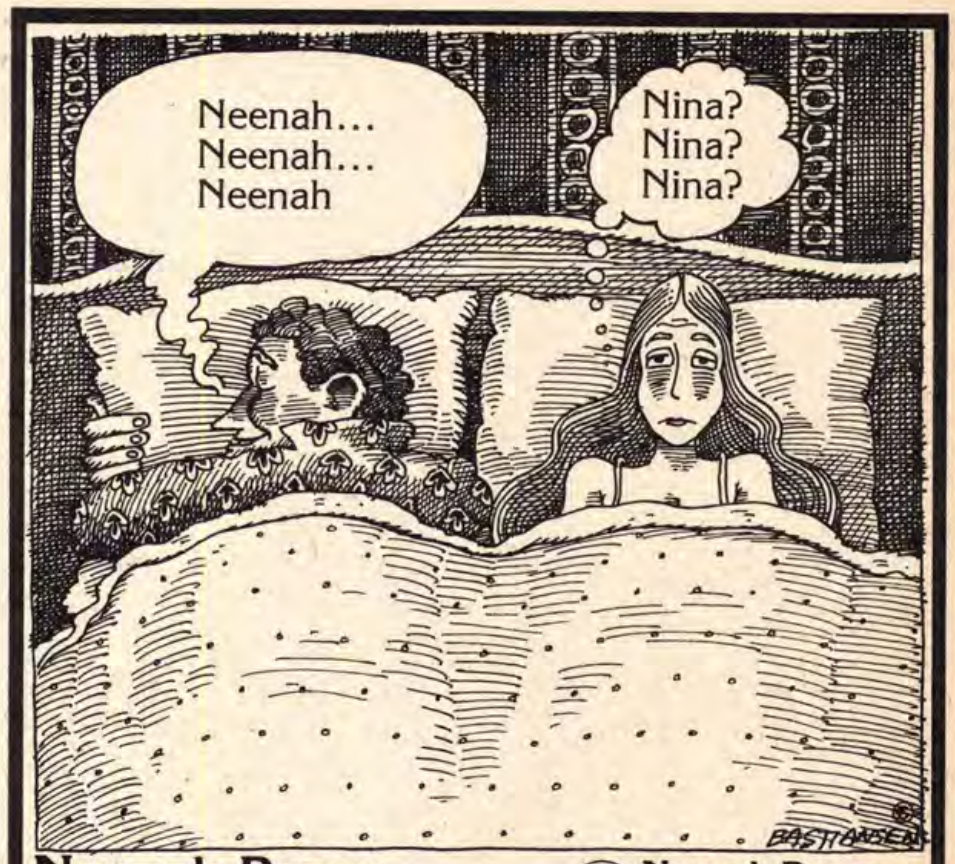
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Phototypesetting generations/categories

So much has been written and said about first generation, second generation, etc. phototypesetters that we are overloaded with descriptions that have become obsolete as new machines have entered the market. The purposes of classifying photographic or electronic typesetters are to facilitate understanding of principles and to be able to group and compare machines of a given kind.

Today's photographic or electronic typesetting equipment falls into three generations or categories (with no regard to the history or chronology of their development). Today's meaningful categories exclude not only the metal typesetters but the very first photographic unit which replaced the slug casting mechanism of a Linotype or Intertype. The bases for the new classifications are 1) method of character storage, and 2) method of character generation.

I. Photo/Optic

Storage of master characters is photographic, the font being on film grids, discs, drums, and strips, for example. Characters are projected optically for exposure to the film, paper, or other recording medium. The entire character is exposed as a unit.

Most of today's typesetters fall into this category and most store the font or characters as negative images. Depending on the specific machine, characters are enlarged or reduced, exposed, and positioned on the output medium, film or paper. Some machines offer a large number of sizes from one master image. Some machines reproduce few sizes or only one size from the master. Some of these machines have come way down in cost, from below $10,000 to under $20,000. (Historically these are thought of as second generation phototypesetters).

Examples of Photo/Optic typesetters include Compugraphic's CompuWriters and their Editwriter 7500; Mergenthaler's LinoComps, V-I-Ps and the new Linoterm; the AlphaComps and AlphaSetters; Itek's Quadritek 1200; Addressograph-Multigraph Varityper Division's Comp/Set family; Dymo's Pacesetter; Berthold's Diatronic machines; the Monophoto machines and the Harris Fototronics. There are others.

II. Photo/Scan

Storage of master characters is photographic, as with Photo/Optic devices. Characters are scanned and generated piecemeal (at high-speeds—much as is a television picture) and the completed character is built-up from dots or lines depending on the generating mechanism. The generated characters are exposed by a digitized light source onto a cathode ray tube where they are lined up and then exposed or generated onto the output medium such as film, paper, or even a printing plate. Photo/Scan devices can operate at much higher speeds than do Photo/Optic machines. Characters are positioned electronically and therefore can be variously modified (condensed, heavied, slanted, etc.) at your command.

Some of these high speed and versatile machines are now down to the $23,000—$44,000 price range and even more cost effective machines are anticipated.

Some Photo/Scan typesetters are the Linotrons (Mergenthaler Linotype Company) and the Videosetters (Compugraphic).

III. Digital/Scan

The master characters are stored digitally. Characters are generated much as they are with the

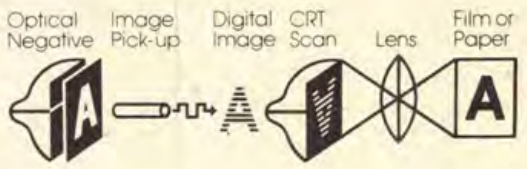
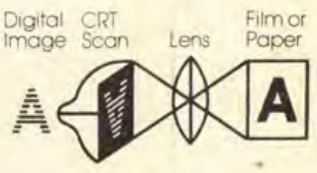
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Basic Categories of Typesetters

Category	Character Storage	Character Generation
1. Photo/Optic	Photographic 	Photographic 
2. Photo/Scan	Photographic 	Electronic Scanning 
3. Digital/Scan	Digital Storage 	Electronic Scanning 

Photo/Scan devices. To store the characters in the machine, photographic masters are scanned, but there are no photographic masters in the machines themselves. Each font is a digitized record of the original characters. Extremely high operating speeds result.

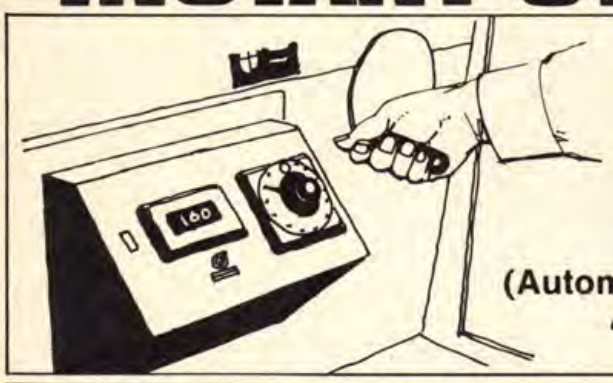
Such machines are used by some newspapers where high speeds are essential and the economics of the operation can bear the cost of a high storage capacity. Each character requires much digitized information. Original manufacturing of digitized fonts is still costly as it involves digitizing, test outputting and compensating for imperfections, redigitizing, retesting, etc. Some machines can store hundreds of fonts (each size is stored separately). The output faces can be modified much as they can be with Photo/Scan devices.

Some examples of Digital/Scan typesetters are the VideoComps (Information International), the APS machines (Autologic), the Fototronic CRT and the Fototronic 7400 (Harris Corporation), the MGD Metro-set (MGD division of North American Rockwell) and Mergenthaler Linotype Company's 606.

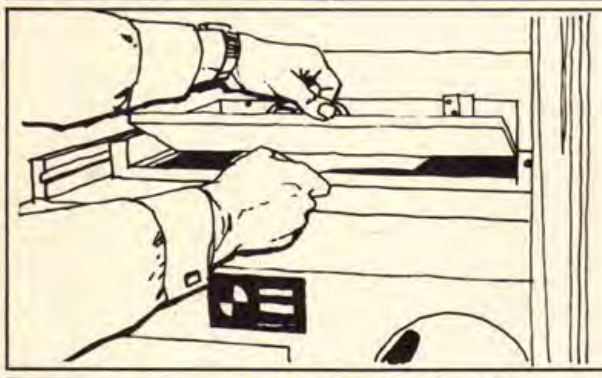
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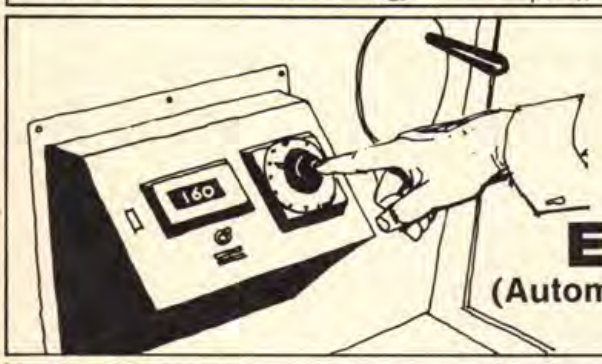
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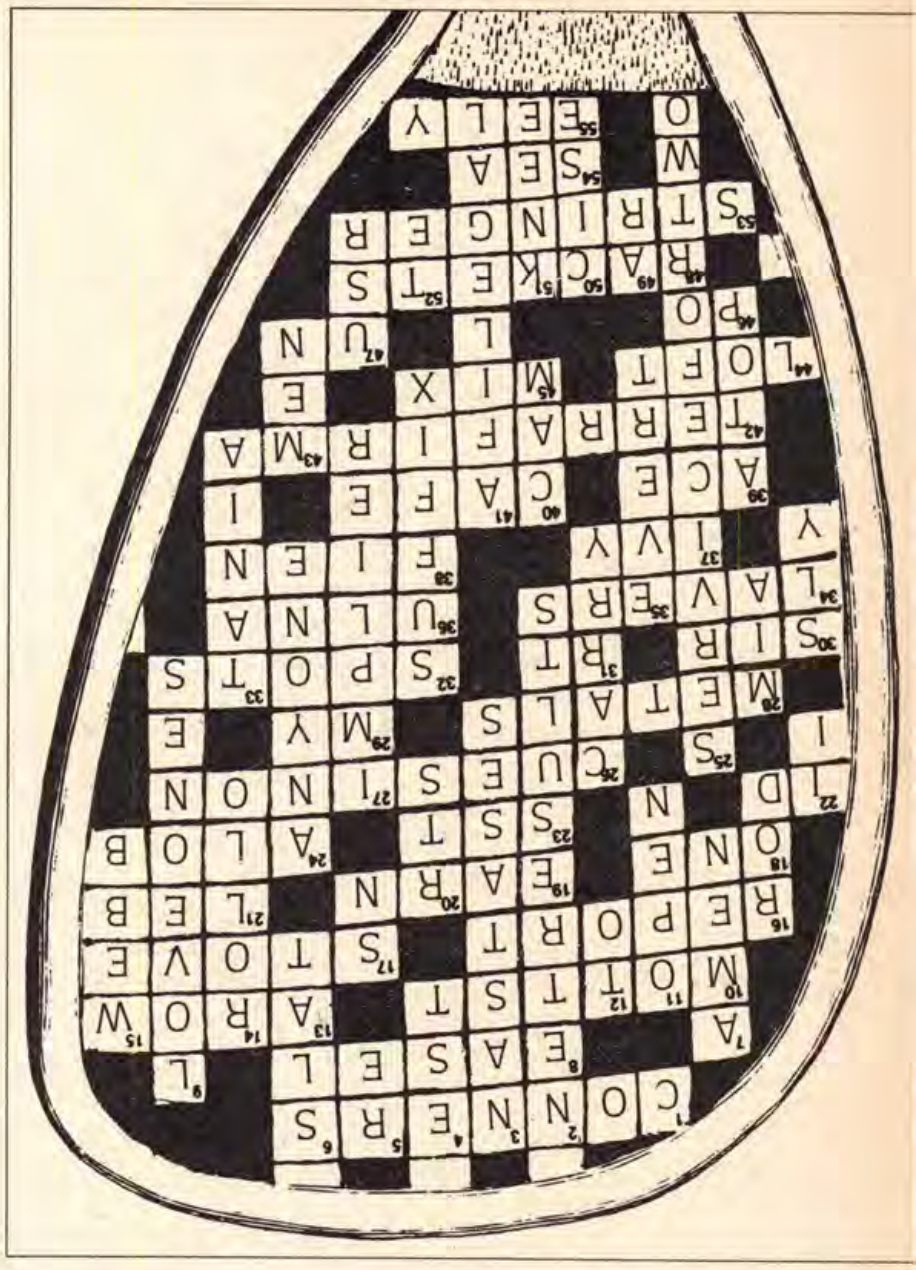
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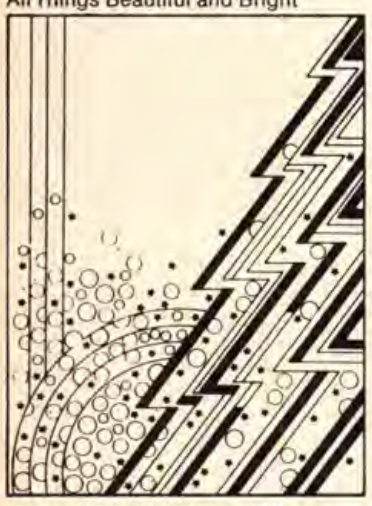
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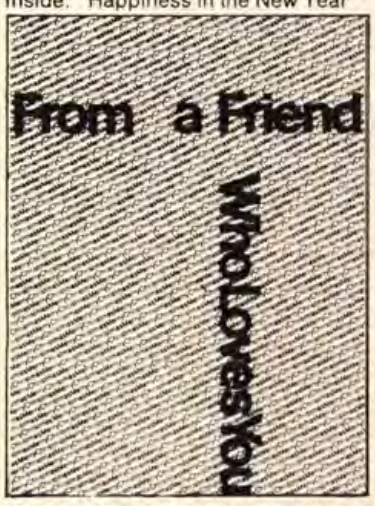
BirthdayBook

A Selection of BirthdayBook Holiday Greetings with Envelopes. (5x7 Foldovers) 12 for...$7.00 (3½x5½ and 5x5 Turnovers) 12 for...$6.00 — The Season's Most Unusual!

20 Purple & Red Deco on Gold (5x7) "All Things Beautiful and Bright"



21 Red & Purple on Gold (5x7 Foldover) Inside: "Happiness in the New Year"



22 "12 Days" in Red on Mirror. (5x7 Foldover) Greeting: "Happy Holidays"



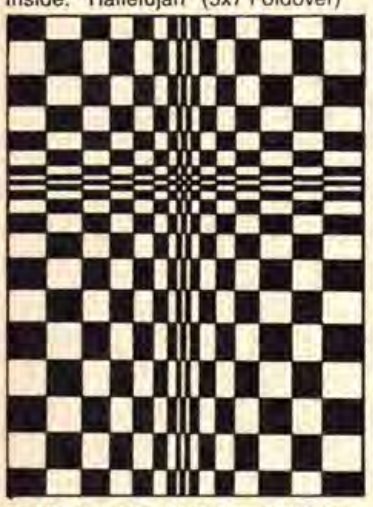
23 Deep Blue on Mirror—Radiant (5x7 Foldover) Greetings: "Noel Noel"



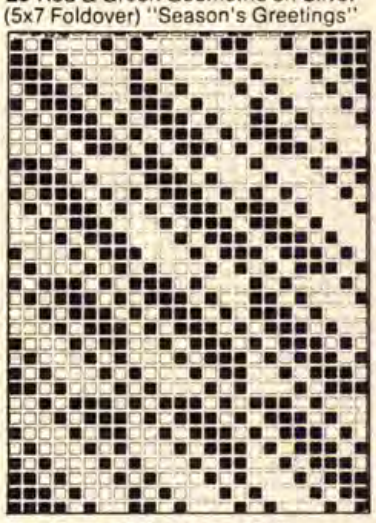
24 Red & Green Pines on Silver (5x7 Foldover) "Greetings of the Season"



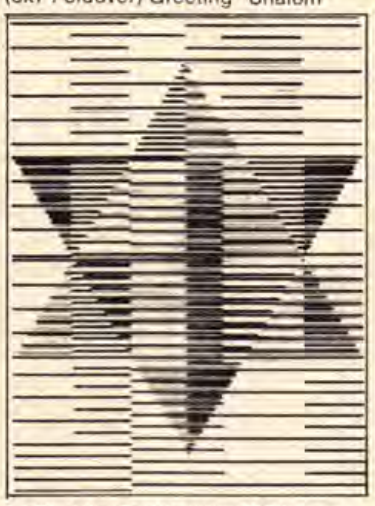
25 Royal & Bright Blues on White. Inside: "Hallelujah" (5x7 Foldover)



26 Red & Green Geometric on Silver (5x7 Foldover) "Season's Greetings"



27 The Star of David in Purple on Gold (5x7 Foldover) Greeting "Shalom"



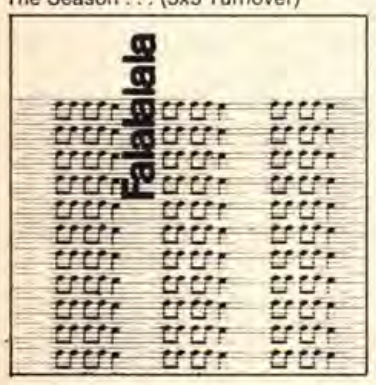
28 Emboss on Mirror (5x7 Foldover). Inside. "FaLaLaLaLa...LaLa...LaLa"



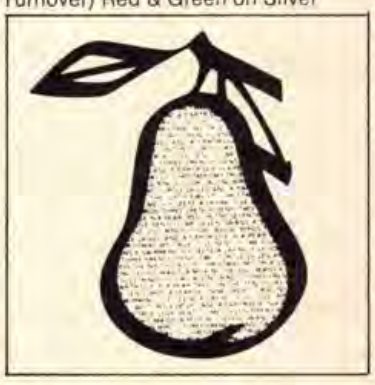
29 Purple & Red on Gold (5x7 Foldover). Inside: A Pageant Poem



30 Black on Bright Colors. Back: 'tis The Season . . . (5x5 Turnover)



31 12 Days of Christmas (5x5 Turnover) Red & Green on Silver



32 BirthdayBook's "Time" Flare on Burnished Gold (5x5 Turnover)



33 Simply Classic. Black on a Mix of Colors. (5x5 Turnover)



34 Red & Royal On Mirror—Real Christmas Jazz (5x5 Turnover)



BirthdayBook Holiday Tissues (13x19, Prefolded): (a) 2 (Individually Wrapped) for $3.00 (b) Box of 10 Tissues & Envelopes . . . $13.00. (Special Price).

BirthdayBook TissueGreetings are run Letterpress on 2 thicknesses of tissue. When cut the second sheets are removed and the Tissues are prefolded for convenience. Use a felt tip pen to write on them. More like "Momentos" than Greeting-Cards—sensational.



T. Shurtz: long sleeve (LS) $15., short sleeve (SS) $10.

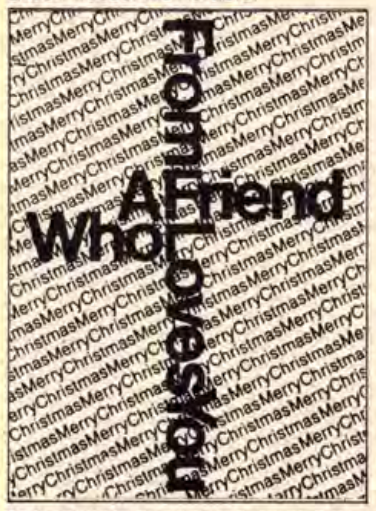
BirthdayBook's DesignGraphics translated into T. Shurtz. Specify (SS or LS) on order form. The following Sizes are available:

X Small: Women 4-8; Men 14-14½
Small: Women 10-12; Men 15-15½
Medium: Women 14-16; Men 16-16½
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35 Purple and Grey on Golden Yellow The Season's Most Unusual!



36 Seasonal Green & Red on a Pale Green Tissue. Memorable!



37 Festive Red & Bright Green on Snow-White. Truly Magical!



38 Pink with Red **SS** Strawberry on Tan **LS**



39 White "Sound Waves" and Bright Yellow on Jet Black **SS**



40 Scarlet Shirt with Electric Turquoise — A Definite Statement. **SS&LS**



41 A Rust-Colored Bird with Black Type on Beige **SS**. What a Gift!



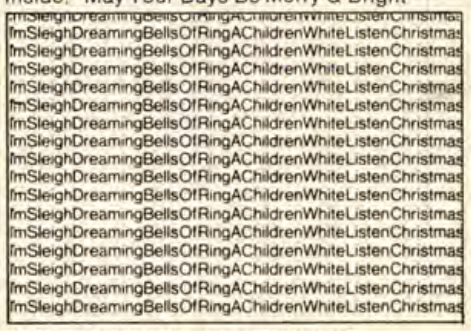
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42 Red & Purple Ornaments on Gold (5x7 Foldover). Inside: "The Best Ever "



43 Red & Green on Silver (5x7 Foldover). Inside, "May Your Days Be Merry & Bright "



44 Red & Purple On Gold. (5x7 Foldovers) Inside: "Merry Christmas"



45 Embossed Mirror with Blue "Hanukkah" (5x7 Foldover) Greeting Inside: "To Life"



46 Royal "Ho,Ho,Ho" & Red on Mirror. (5x7 Foldover) Inside: "Cheers "



47 Rosy Gold & Purple on Gold. (5x7 Foldover). Inside: "Tis The Season "



48 Red, Green & Black on White (5x7 Foldover) Greeting: "Ringing in The New "



49 Blue & Yellow Everlasting Knot on White (5x7 Foldover). Inside: "Everlasting "



50 Royal Blue on Mirror. (3½ x 5½ Turnover) Greeting on the Back. "To Life"



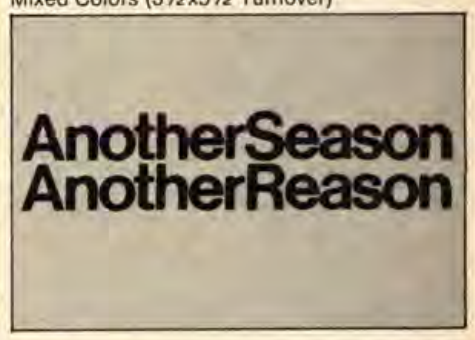
51 Red & Royal on Mirror. On the Back. "At Christmastime" (3½ x 5½ Turnover)



52 Royal & Pink on Mirror (3½ x 5½ Turnover). "With Best Wishes for the Holiday Season "



53 Here We Go Again! Bold Black on Mixed Colors (3½ x 5½ Turnover)



BirthdayBook NotePads: 100 Vellum Sheets Gift Boxed . . . $5.00 Rust, Black & Greys on Creme #60 25 Boxed Envelopes . . . $2.50

Note—25 Envelopes: Code **#60** on OrderForm! Fold note in half, insert and mail.

54 (3¼ x 8")



55



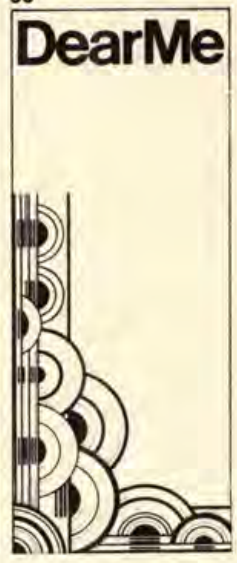
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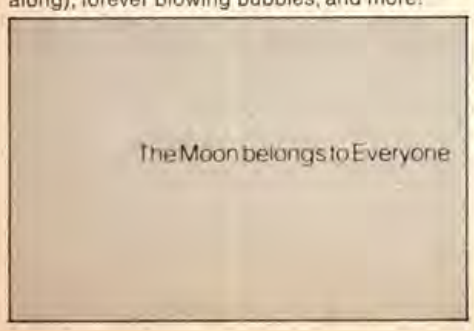


59



BirthdayBook NoteCards . . . $4.00

61 20 "Snazzy" little Foldover Notes in Black, White and Greys on White Vellum. 3x4½ Design Thoughts with the Special BirthdayBook Twist. Very Personal! Acetate Gift Boxed with Envelopes. The List: call it a dream, ps: I love you, absent minded me, get lost with me, jungle drums, and for my next trick, forget the donut, send money, this is your hypnotist, guess what, me again, to make a long story short, lights! action! camera!, knock on wood, just click your heels three times and repeat after me, heavy duty, hoo malimali (string em' along), forever blowing bubbles, and more!



Black & White Notes . . . $4.00

62 Bits & pieces of the songs & movies of our time in bright mixed colors on smooth white. Each a different 3x4½ Foldover "ThoughtNote." The Thoughts: All Things are Possible—Pass the Word, Lions and Tigers and Bears. Oh My!, Another Season,—Another Reason, Rice Pudding in Egypt,—You never know if it's Raisins or Flies, Free Again—Back to being Me Again, Old Friends sit on the park bench like Bookends, I won't Dance—Don't ask me, Forget your Troubles—come on Get Happy, I want to Be Happy but I won't Be Happy 'til I make You Happy too!, and more!



ChristmasNotes . . . $4.00

63 20 Charming 3¾ Foldover Squares in Seasonal Red & Green with Matched Envelopes, Perfect "Keep in Touch" notes that bring greetings for the Holiday Season. Handy to have around! The Sayings: What I'd like to Put in Your Stocking, Ceremonies and Snowscenes, Down to Earth, Have You Heard —Angels Sing Good News, The North Pole, Ho! Ho! Ho!— Oh! What Fun it is!, and more!



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36(a)	**36(b)**	**37(a)**	**37(b)**		
38(SS)		**38(LS)**		**39(SS)**	
40(SS)		**40(LS)**		**41(SS)**	
42	**43**	**44**	**45**	**46**	**47**
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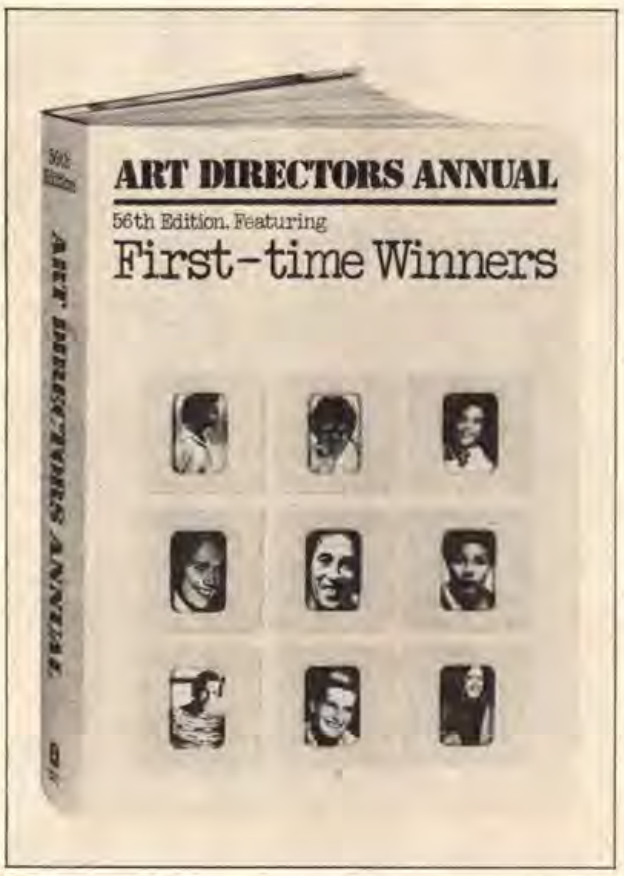
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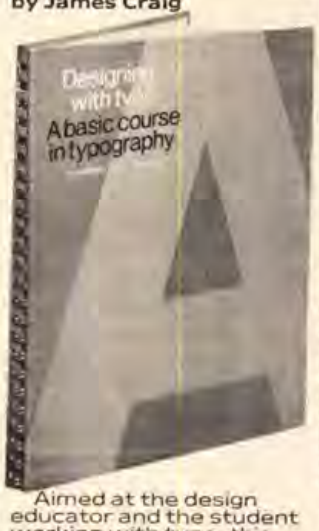
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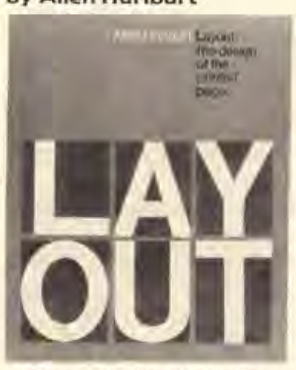
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