



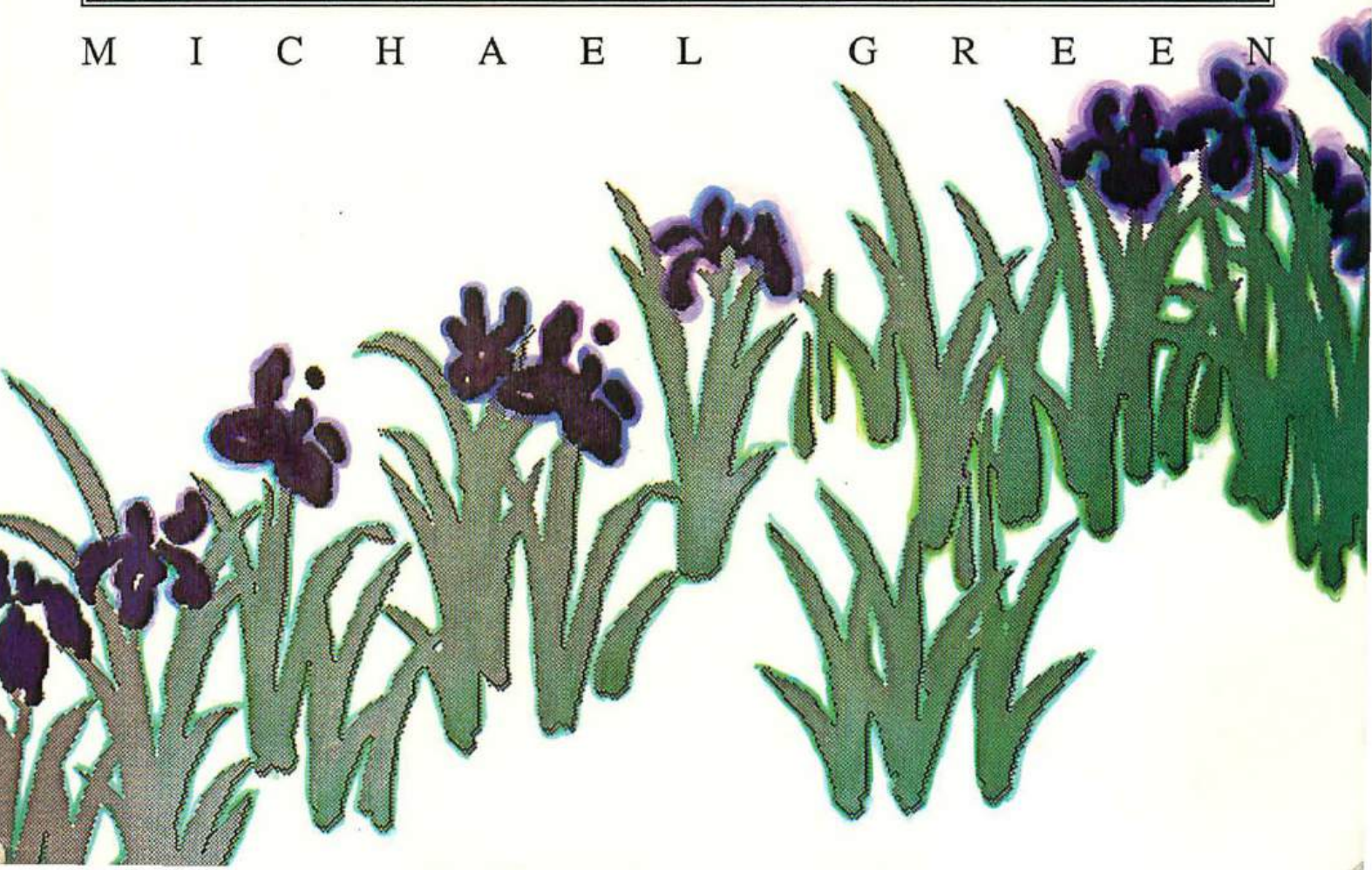
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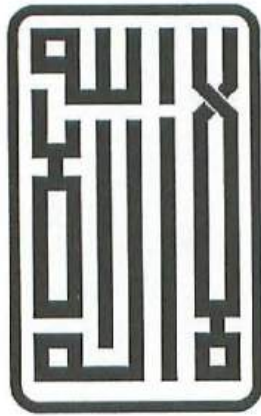
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THE ART OF THE MACINTOSH

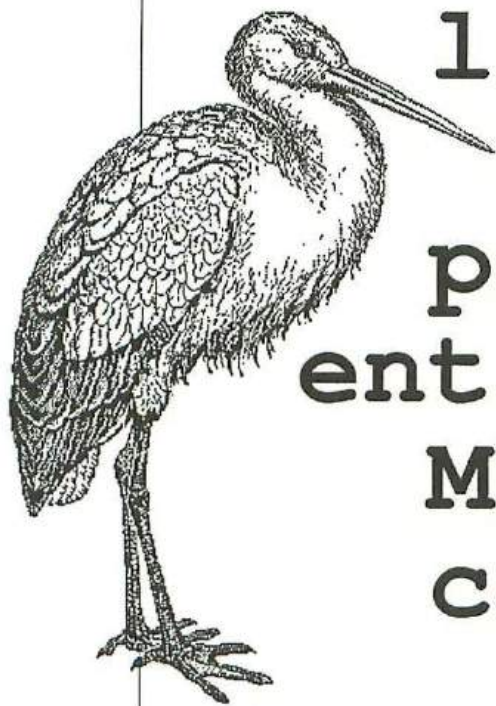
DISCOVERIES ON THE PATH TO COMPUTER ENLIGHTENMENT

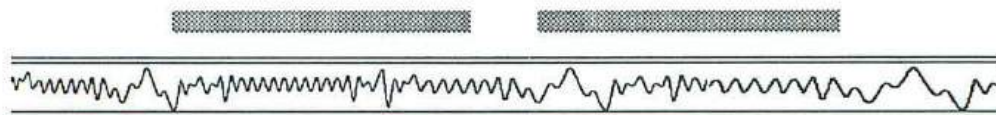
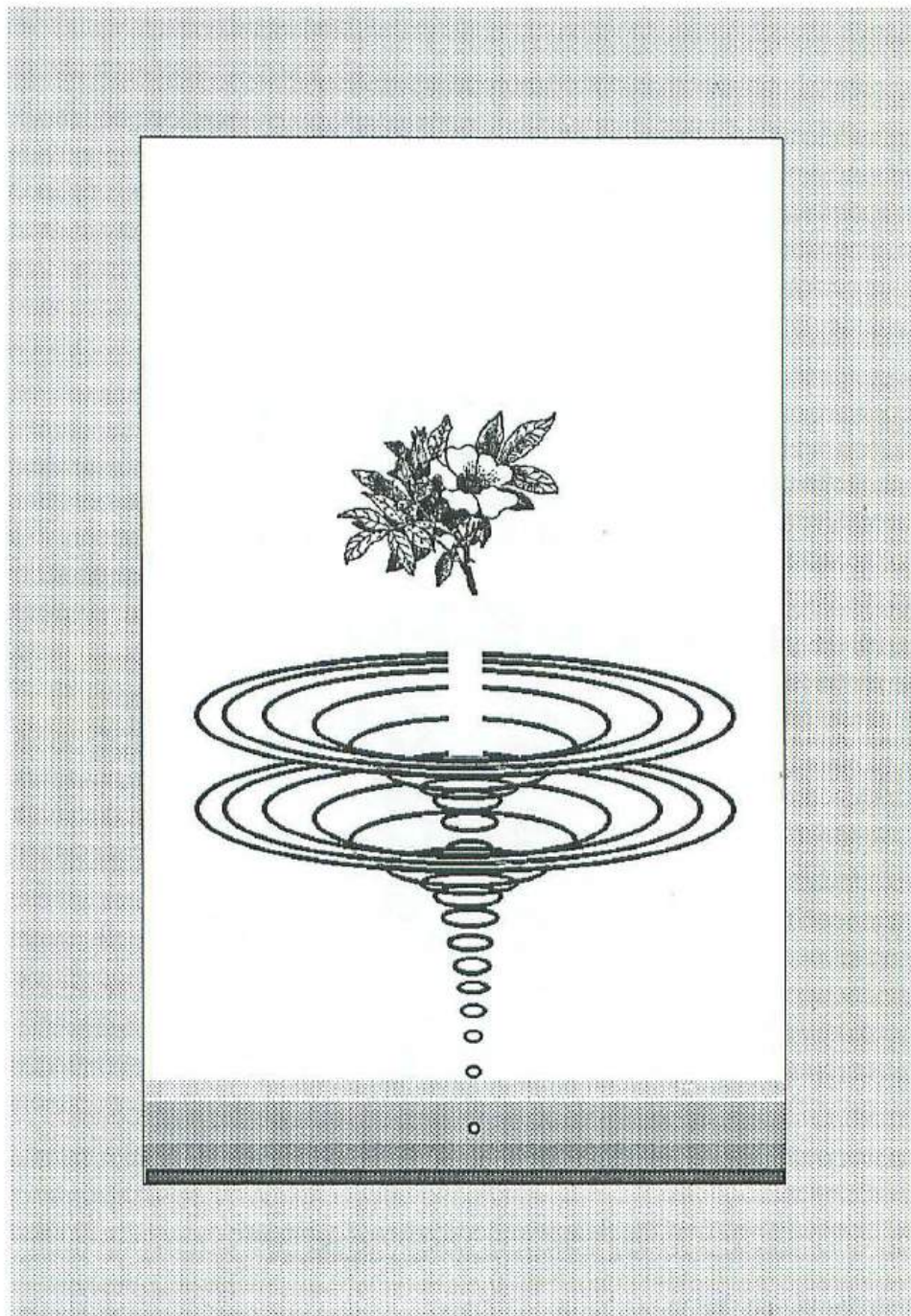
M I C H A E L G R E E N

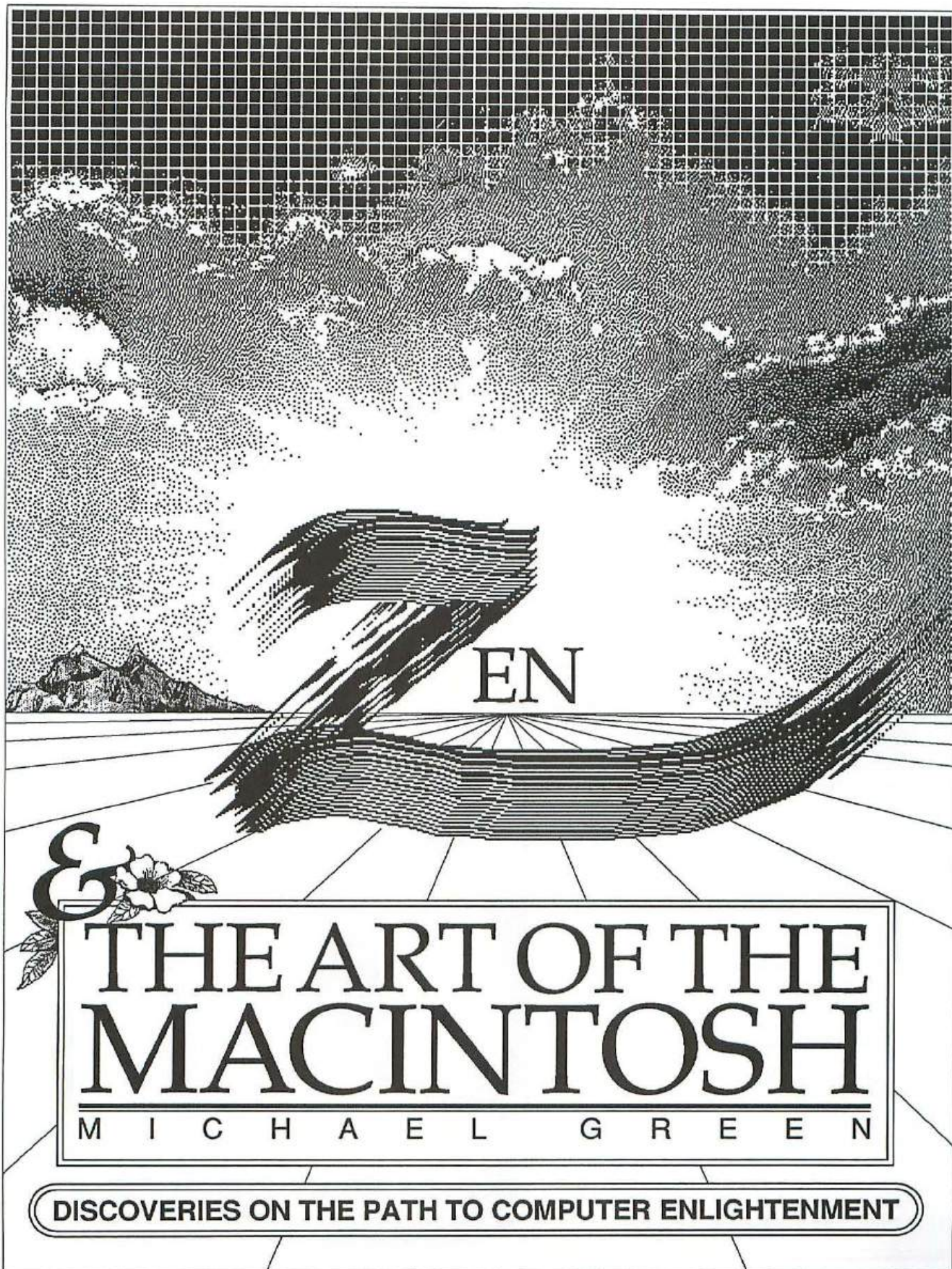




This book was
written,
edited,
designed,
illustrated,
typeset,
laid out,
and
pasted-up
entirely on a
Macintosh
computer.





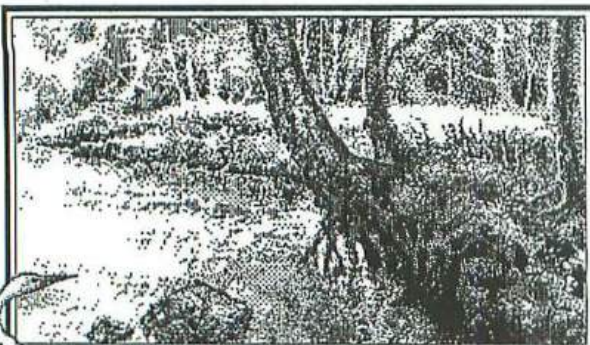


THE ART OF THE MACINTOSH

M I C H A E L G R E E N

DISCOVERIES ON THE PATH TO COMPUTER ENLIGHTENMENT

RUNNING PRESS
PHILADELPHIA, PENNSYLVANIA



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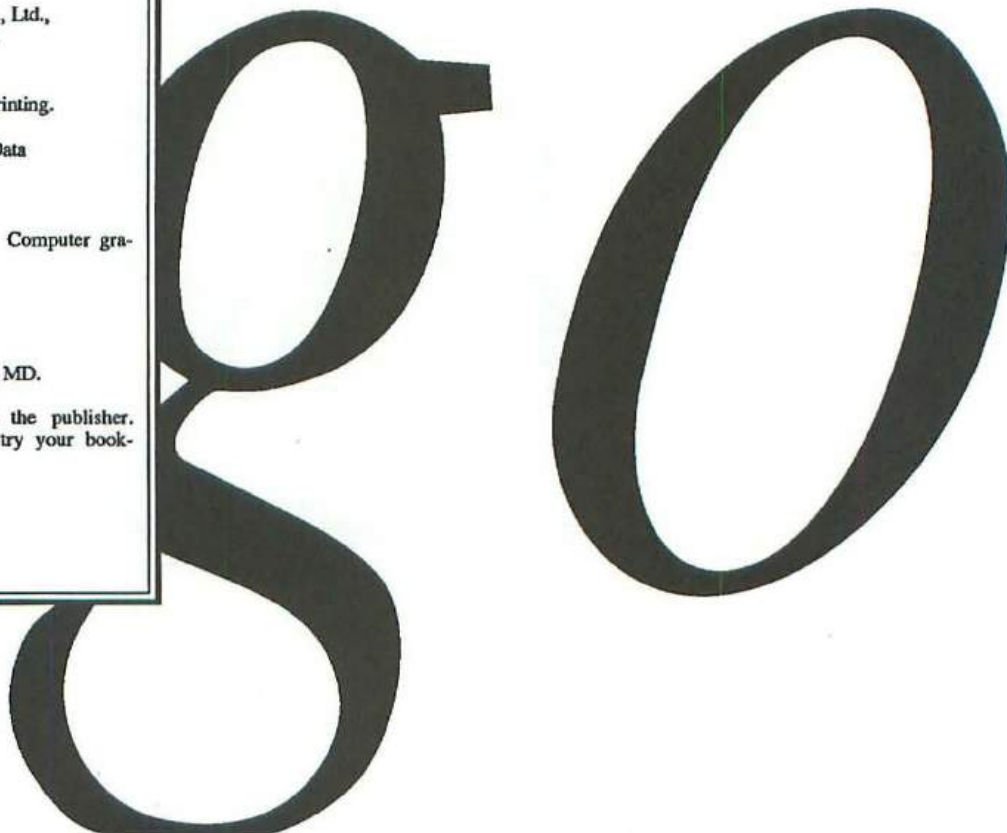
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For
all
those
who
have
gone

gone

gone
beyond

gone
beyond
going...

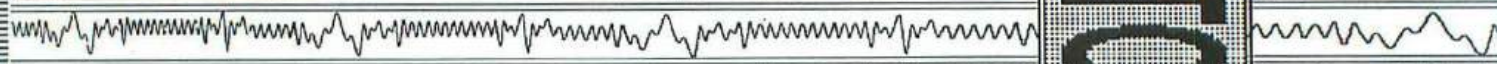
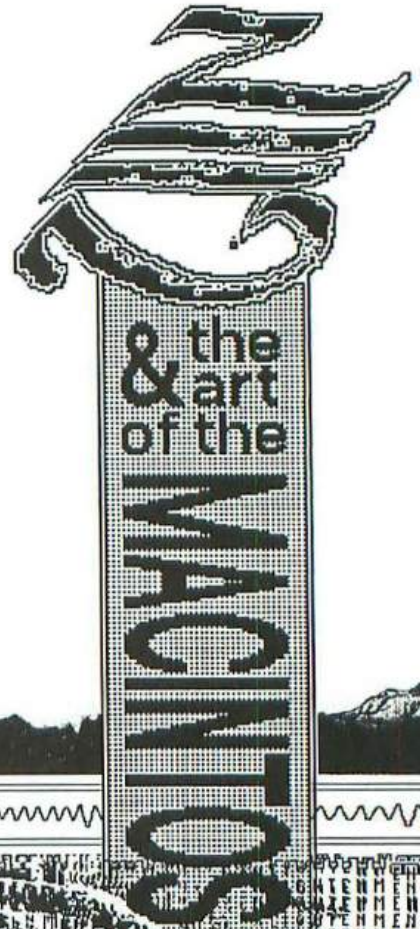
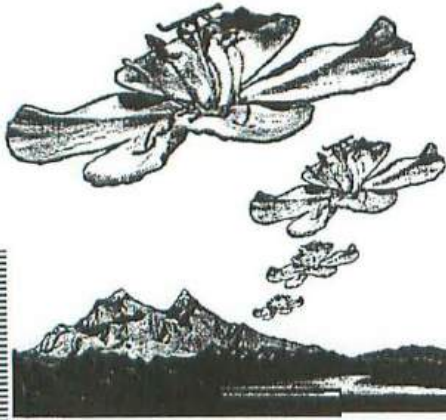
me

and then
returned
to show
the way...



C

H



1
2
3
4
5
6
7

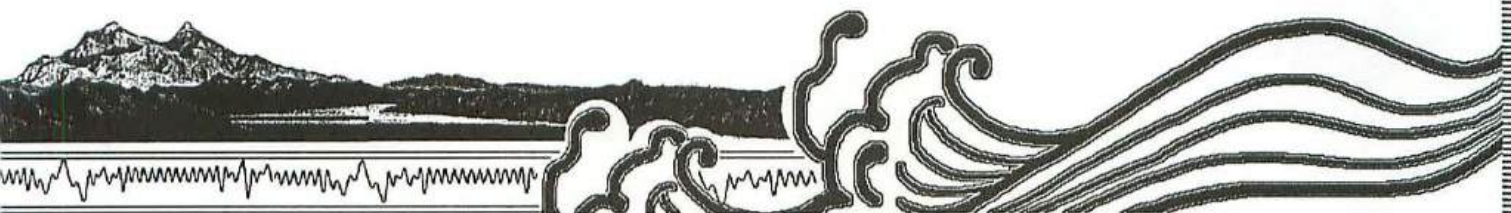
DISCOVERIES
20
150
0875

TO

1 1.01 1.02 1.03 1.04 1.05 1.06 1.07 1.08

 A large grid of text, likely a barcode or a data matrix, with the words 'COMPUTER ENLIGHTENMENT' repeated in a grid pattern. The grid is divided into sections by a vertical line and a horizontal line. The number '1' is written vertically on the left side of the grid. The word 'DISCOVERIES' is written vertically in a box on the left. The number '20' is written vertically in a box next to it. The numbers '150' and '0875' are written vertically in a box below that. The word 'TO' is written in a circle in the middle of the grid. A small illustration of a woman's face is visible in the bottom right corner of the grid.

A P T E R S



THE DISCOVERY OF THE DIGITAL ZONE 12

Wherein the author discovers an *alternate universe*.

SAVING THE WORLD WITH SILICON 51

Are those chips *cultural antitoxins*?

THE SEDUCTIVE FASCINATION OF THE COMPUTER 79

Explorations of a *fearful symmetry*.

ZEN ART MAC ART 100

Reflections on the *tao* of bit-mapped graphics.

THE RELENTLESS FASCINATION OF THE COMPUTER 130

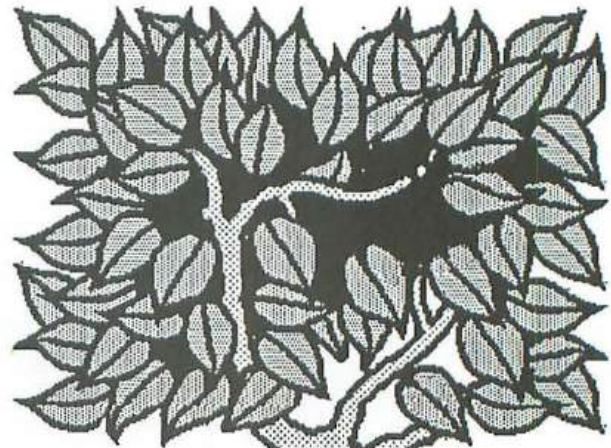
It can seem like a dance. Then again, *it can seem like a trance*.

CHOPPING WOOD, CARRYING WATER 149

Beyond the biocomputer, *turning around*.

NUTS & BOLTS & BITS 214

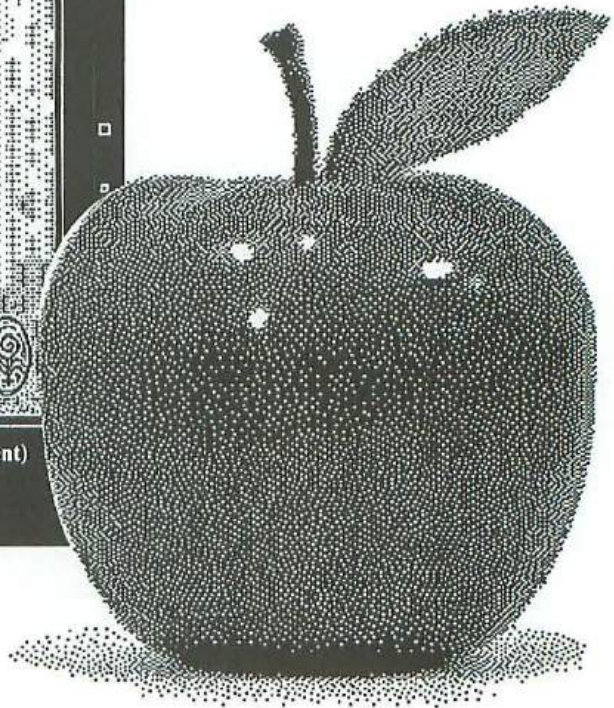
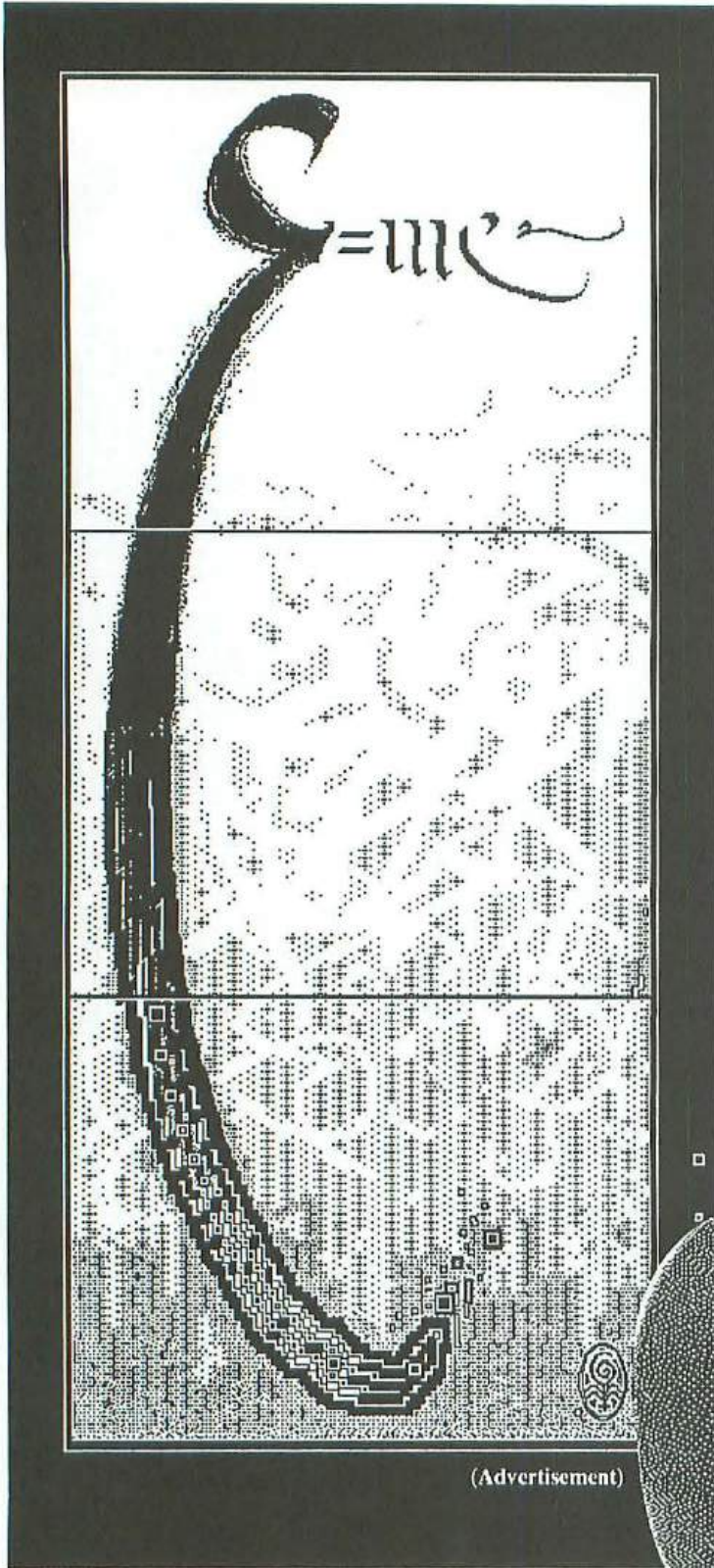
The author reveals some of the *secret techniques* used in creating this book.



THANKS
WHO
THE
AND
THE

TO YOU
WATERED
SEED
TENDED
TREE...

A book is like a living thing; it grows according to its own inner laws. This one grew slowly. My gratitude to Manny Levin and Virginia Conway; their patience and confidence was the nourishment that brought it to flower and then to fruit. And to my wife Sally for her perfect insights, to #1 son Kabir for his perfect interruptions, and to His Holiness who was The Opener.



Introduction

“NEAT!”

IT HAS TO BE THE UNIVERSAL RESPONSE TO THIS machine. I first heard it in the Computer Shack of the U of P where college kids were gathered around a new demo Mac. Two years later the Mac still evokes the same universal word of admiration—from six year olds, or from starchy corporate programmers. Neat!

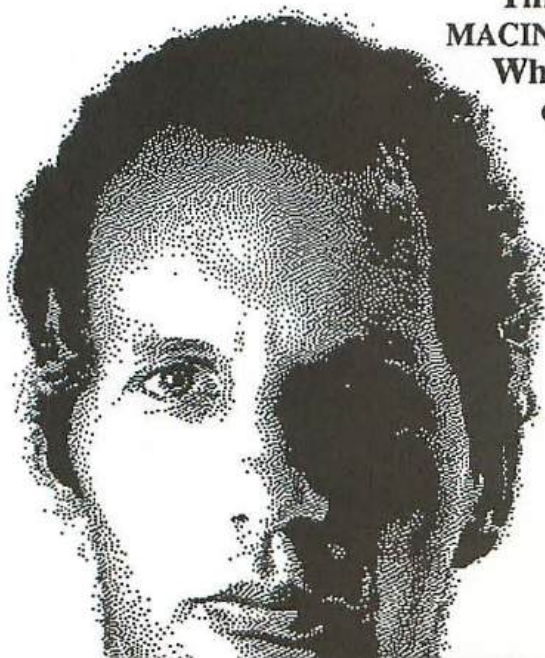
Neat and getting neater, I should add. This book is a walk-through testament to the extraordinarily compressed evolution of the Mac, from its 128k Dark Age origins, through the Classical 512 period and into its present Imperial might of four million bytes of memory. These pages also bear the mark of each new graphic aid to come along—both in software and hardware. Hands down the most significant of them all was...

The Laserwriter. Together with a digitizer and a page design program, it initiated a whole new slick high-resolution ball game. (And changed the look of the book so much I felt obliged to go back and redo the text in many of the early solo MacPaint pages.)

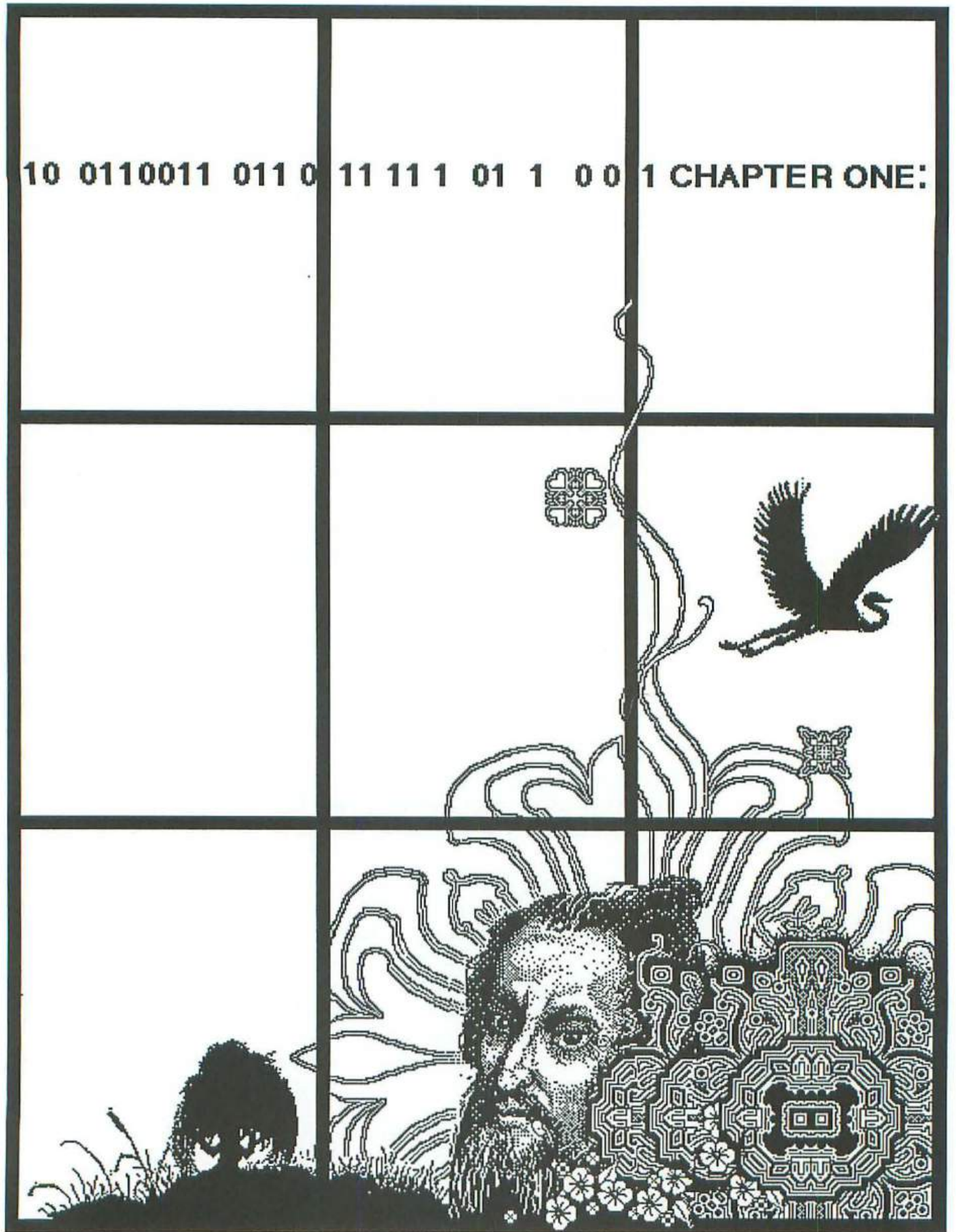
Throughout its creation, ZEN AND THE ART OF THE MACINTOSH gathered momentum with a will of its own.

What started out as a simple How-to manual with a catchy title became not only an exploration of advanced personal computer graphics, but to my own amazement, an electronic *Pilgrim's Progress*; the illustrated log of an outsider navigating the busy binary pathways of *computer enlightenment*.

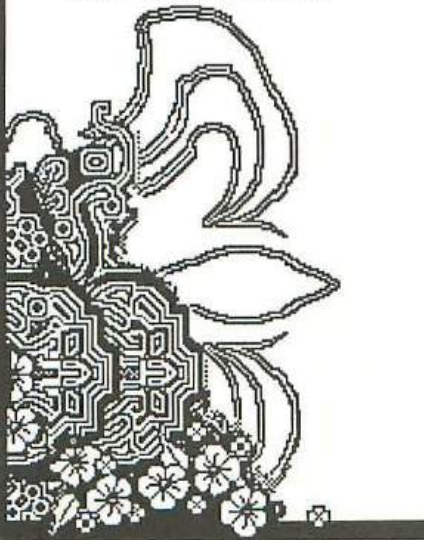
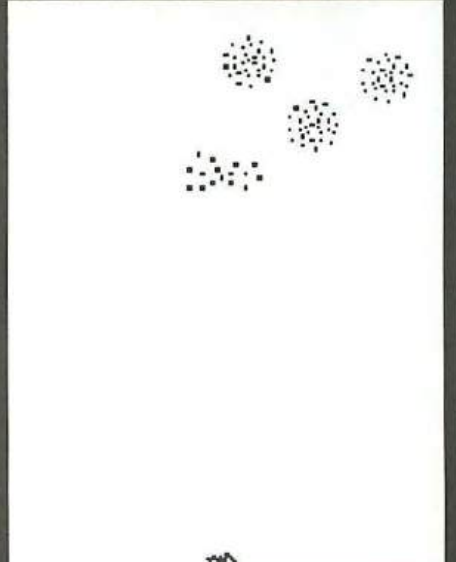
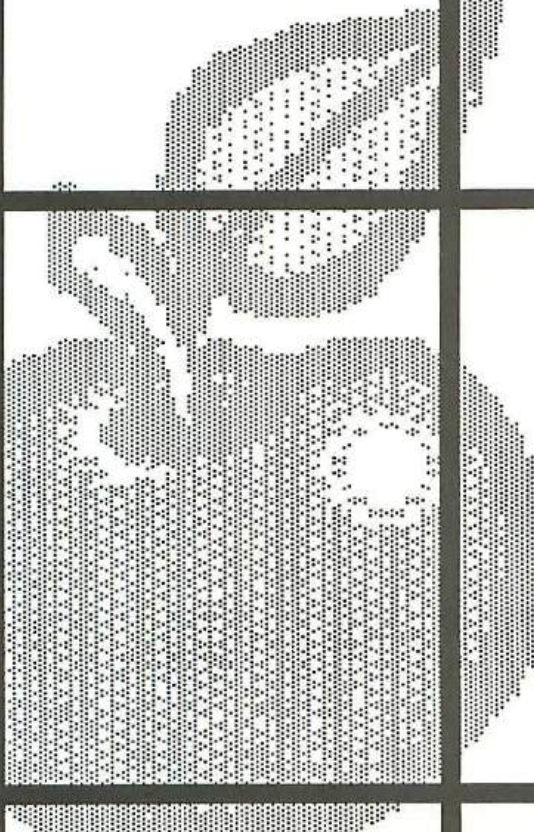
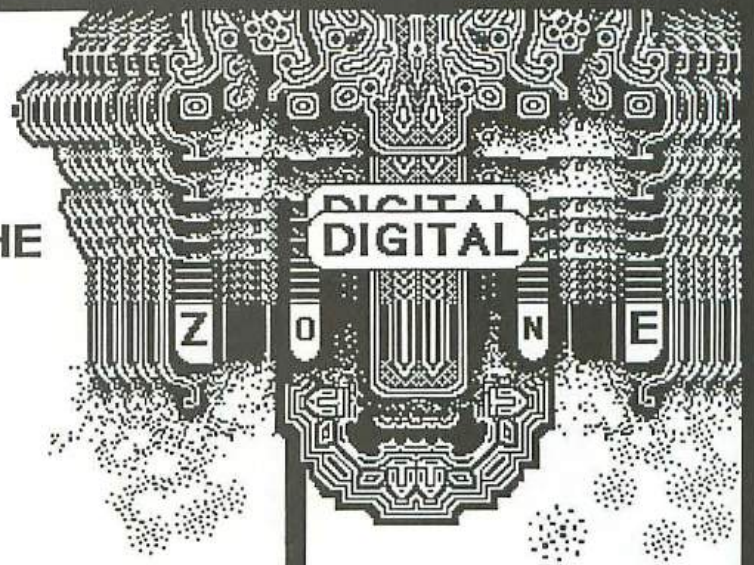
Onward!
—M. Green



10 0110011 011 0 11 11 1 01 1 00 1 CHAPTER ONE:



THE DISCOVERY OF THE





I write and illustrate books, using the traditional tools—pen, paintbrush, typewriter. Computer graphics never moved me though. The art seemed heartless and industrial—ideal for Superbowl logos—but not for me. In fact, I found the whole cultish Omni magazine gee-whiz-futurism around computers offputting—particularly when contrasted with jittery teenage arcade game addicts, or the boringly opaque world of business spreadsheets. I inclined toward the opinion that silicon chips were an alien spawn bent on replacing we humanoids as this planet's dominant life-form.

Then the tedium of endlessly retyping my last manuscript finally jogged my common sense. I saw that a word processor could simply be a no-jive, useful *tool*. I would get one.

You don't just go out and buy a computer. Like Marriage or joining a fraternity, this particular rite of passage begins with The Search. Computers

Then I saw an
incredibly
detailed
drawing of a
Japanese
girl displayed
on the new
Macintosh.

not only have widely varying prices and capabilities, but distinct personalities as well, and the one you choose should match up to your own.

An interesting discovery during the quest for my new TechnoMate was that arcade-style games had been replaced by the *interactive text adventure* as the computer diversion of choice.

In case you haven't yet been entranced by this phenomenon, I should explain that in a text adventure, *you* are the hero on some vague exploit wandering freely around an imaginary world by passing from one *junction* to the next. Each junction presents multiple possibilities and predicaments; you type your response into the computer. The results then read out (Text) on the screen, and off you go again (Adventure).

And again, and again...until you find the Mystic Jewel of Zit, or are destroyed by the Necromancer, or what have you.

Text adventures seemed to have interesting possibilities. A new, involving *literature du karma*: novels where the reader's cleverness and wisdom would determine the outcome. Hmmm.

Following the classic Silicon Valley Scenario, I (1) came up with the necessary Highly Original and indeed Bankable Idea for a text adventure; (2) a friend appeared with the venture capital needed to realize it...and (3) a software company was born!

Several months later I had a beautifully tangled MS of interlocking situations. But as an illustrator I was feeling oppressed. Nothing but *words, words, words*. How about *pictures* in this adventure? Alas, the clutzy "hi-res" graphics around only promised to dull the imagination, not spark it.

Then I saw an incredibly detailed drawing of a Japanese girl displayed on the new Macintosh.

It demonstrated a whole new level of graphic finesse for personal computers. Even though the Macintosh was ostensibly a business machine, it seemed to be a harbinger of things to come for designers and artists as well. I bought one.

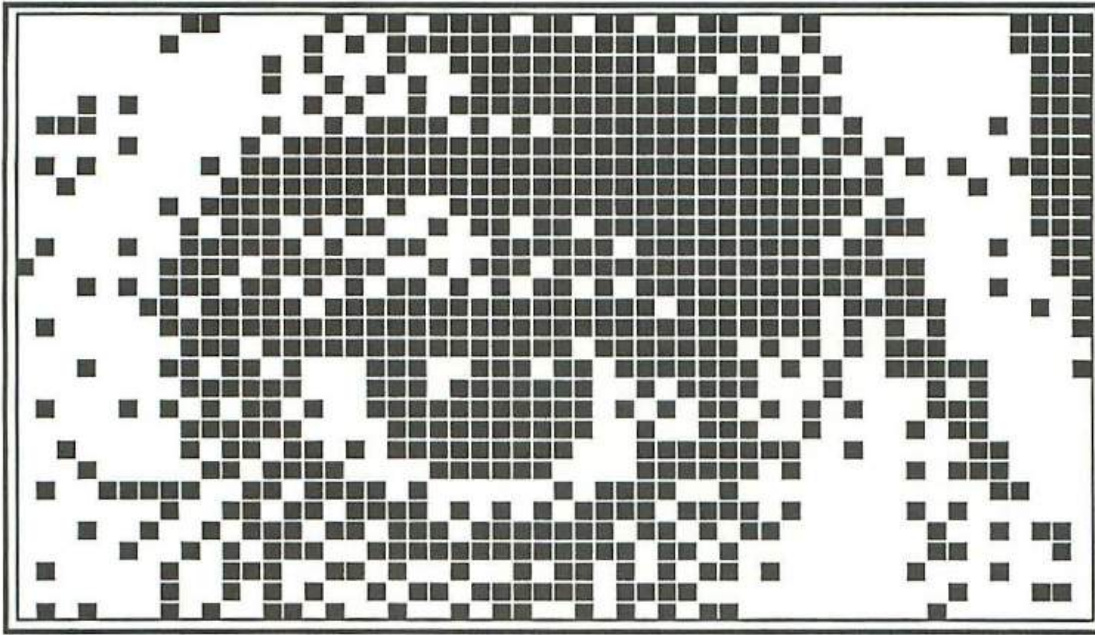


This is **The Wizard Dis**. My first picture. It took me the better part of a day to learn the basic MacPaint tools and draw him.

I was fascinated.

Somehow the process of laying down lines and forms, then *moving them around, erasing and restoring them* was characterized by an electric feeling of *lightness*: you could almost *feel* how the picture was just a dancing pattern of charged particles in a microchip, and I was *coaxing* them into becoming a wizard's face.

Then I discovered that I could...



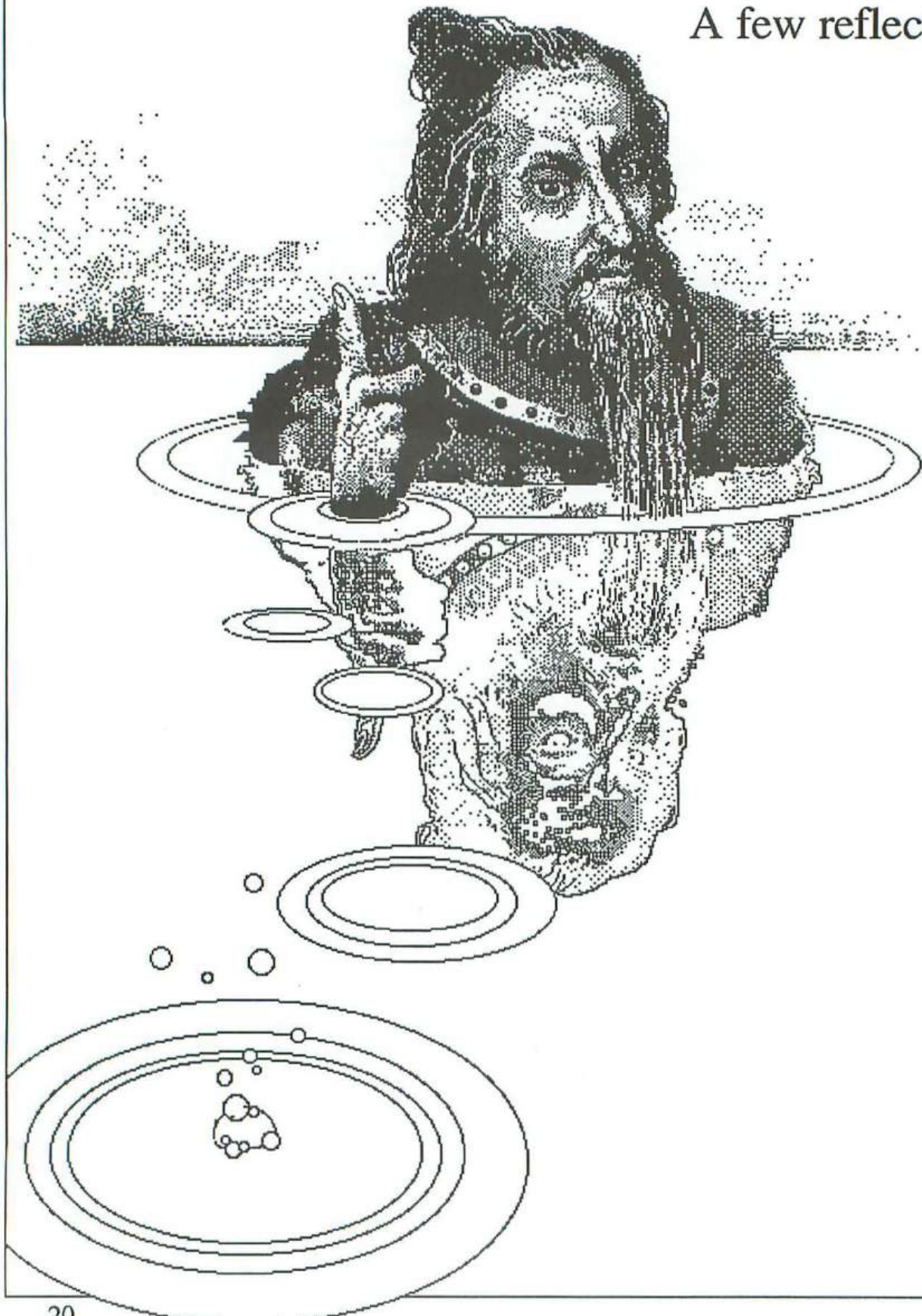
...ZOOM into any section of the drawing by evoking a command called Fat Bits, then tailor the minute dots on the screen *individually*...like going in here and getting the highlights on the pupils *just right*.

Most extraordinary.

First, the ability to erase and alter to my heart's content, and now this *power* to get into every nook and cranny. I felt like a scientist learning to redesign atoms; a microsurgeon operating on reality.

I started to pick up speed. I found that once I had my wizard, I could *play around* with him. Like this...

A few reflections



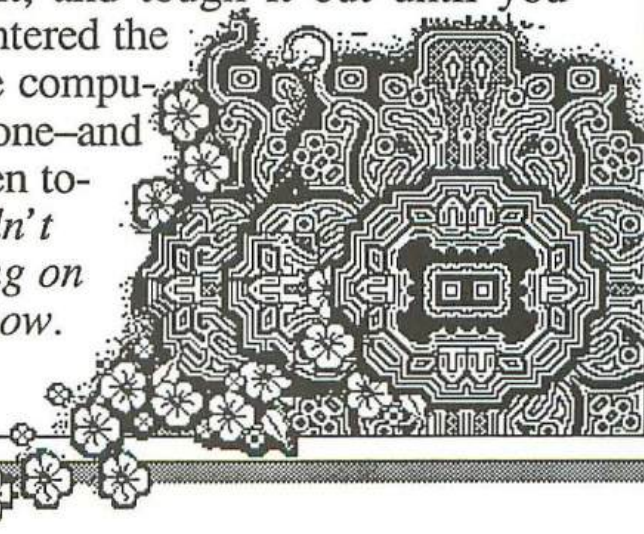
A Few Reflections Indeed

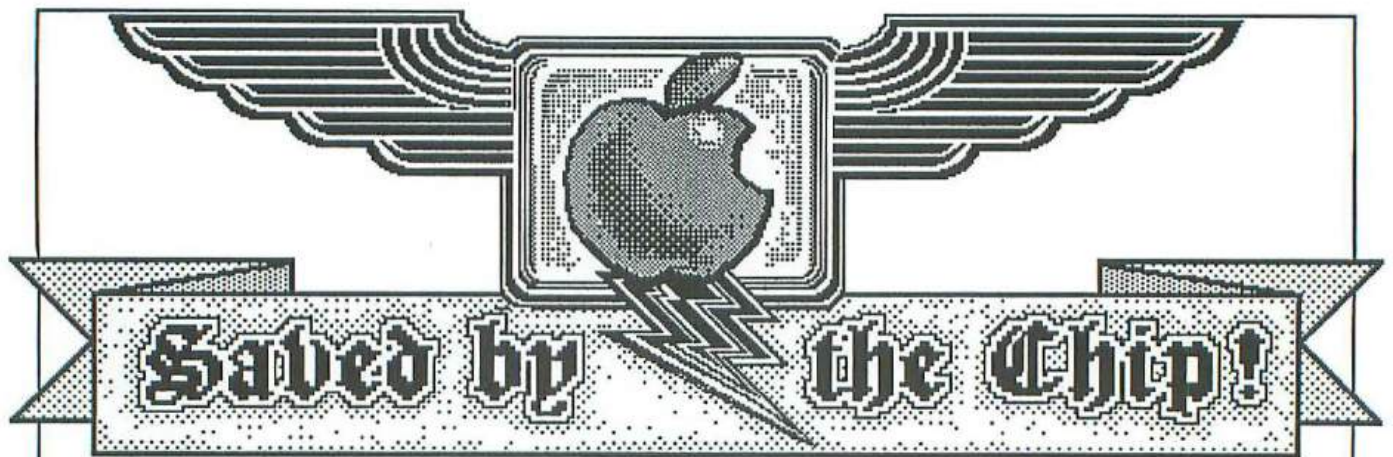


I was in deep trouble. Who would have guessed the strange delight this new tool would bring? My attention was riveted, my imagination was zapped, at the end of a day at the screen I would still be happily noodling around like a kid with a new electric train. But this excitement had created a strange predicament: a substantial amount of money had already been invested into my text adventure, and the simple truth was that my interest in finishing it had dropped to *zero*.

An electronic portal to a whole new world of graphic possibilities had opened before me, demanding immediate exploration, and I had enthusiastically let myself be drawn in. In fact, I was hooked, captivated by the sheer amount of careful and intense planning that had been so gracefully compressed into its circuitry and software.

A waning interest in projects is normal; you can usually revive it, and tough it out until you do. But now I had entered the *Secret Garden* of the computer age—the DigitalZone—and my attention had been totally copped! *I couldn't even imagine working on that text adventure now.*





UNEXPECTEDLY, IT WAS THE MACINTOSH that rescued me from this bind. Like many solutions, it seems simple and self-evident in retrospect, but I was feeling pretty jammed at the time, and it hit me like a bolt of lightning. It happened like this...

I was designing a letterhead for a friend. It began as a fairly routine exercise, but let me walk it through in detail.

First I typed the name out in big double-spaced caps.

HIGHLAND DAIRY STUDIOS

Next a border. Better yet, a double border.

HIGHLAND DAIRY STUDIOS

OK. How about

the
HIGHLAND DAIRY STUDIOS

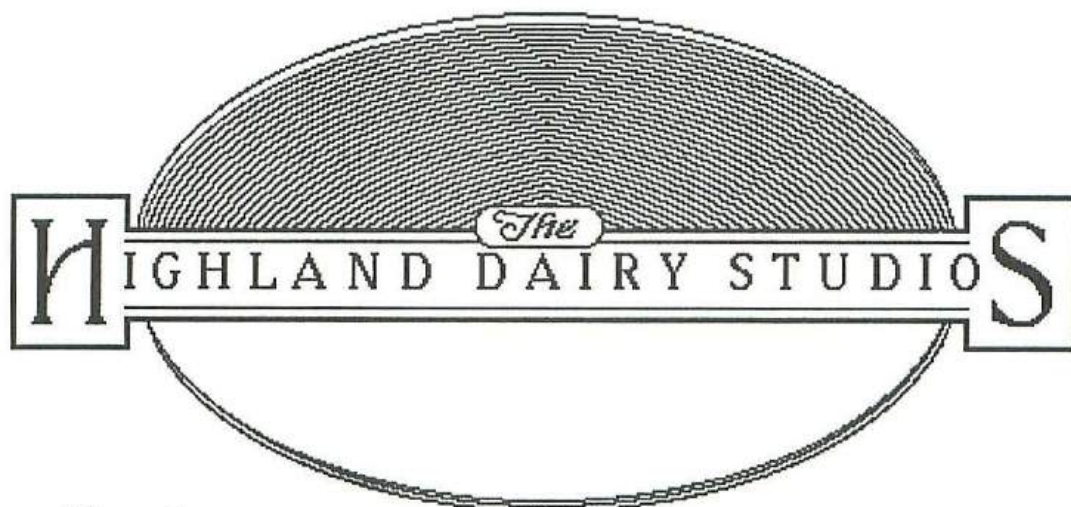
Still boring. Let's enlarge the first and last letters for a little snazz.

H the S
HIGHLAND DAIRY STUDIOS

Getting closer. Friendly FAT BITS will help us dress up the S, put a little flair in the H, and redo the the. What else?



Play around, of course. There is such a range of things that MacPaint can do to an image that once you get familiar with its tools, your horizons really open up. Designs start sprouting out in quite unexpected ways. A little experimenting produced this oval. Too heavy...but it looks a little like a sun.

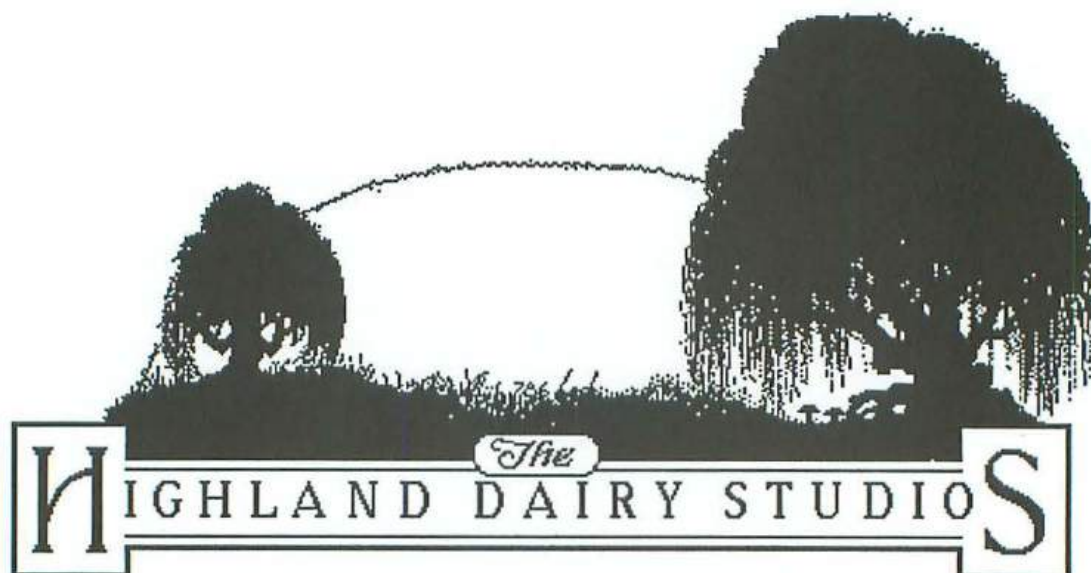


Then why not—

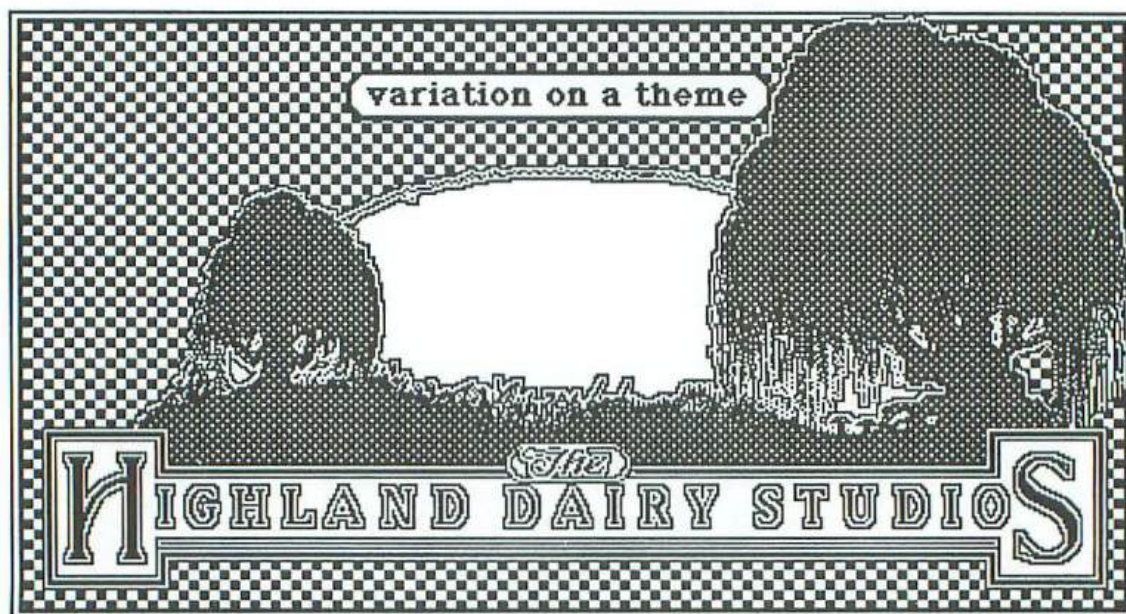


Or is that too mechanical? Ah! What if the sun was rising over a landscape?

Like so!



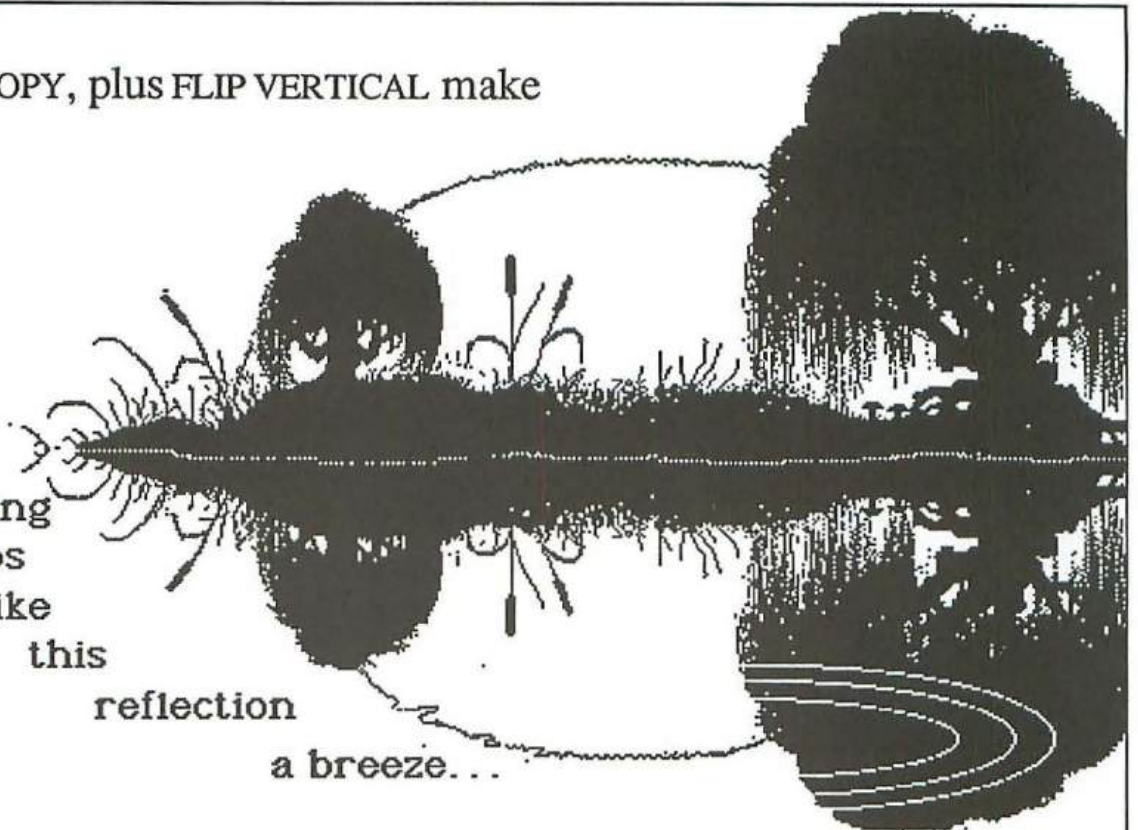
Once you have something to work with, and start rolling, it's hard to resist the excitement of experimenting with the limitless number of special effects obtainable by combining two or more tools. For instance, TRACE EDGES, EDIT PATTERN, and FILL can create this...



...almost instantly!

And COPY, plus FLIP VERTICAL make

Nit
Mif
picking
jobs
like
this
reflection
a breeze...



YOU find yourself
abandoning
conscious
purpose and
going along
with the
digital flow
of the moment.
Like, zeroing in
on some little area
of your work,



and...

Zooming in!



And...

z!

Hold on

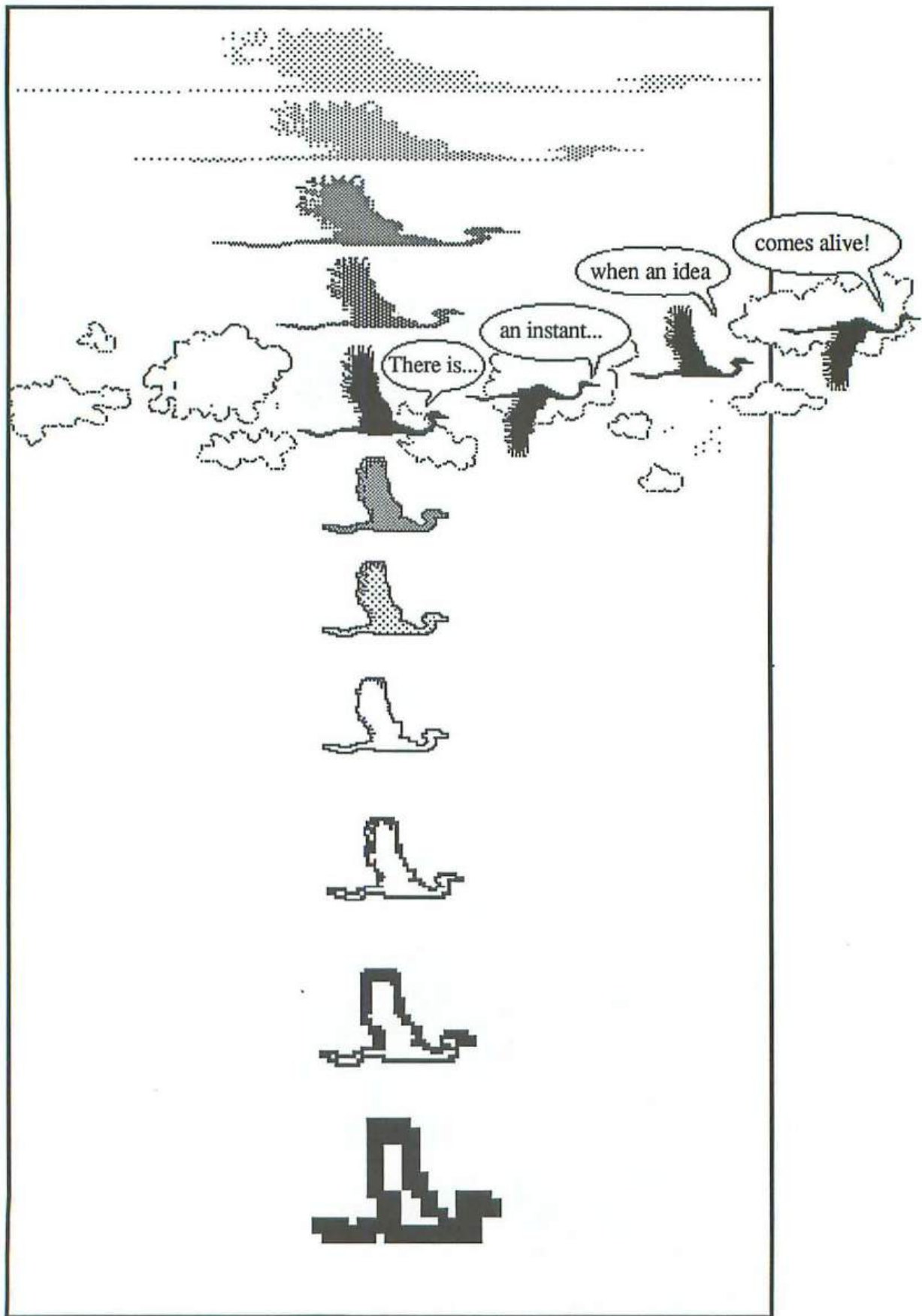


g

You're goin'

Too Fast

What happened to that Letterhead? Good question. Let us now pause in this dramatic re-creation of my excursion into the DigitalZone, and make an important point: Good design depends on good timing.





If you freeze it...

too soon, it's still unformed and incomplete. Premature.

But if you play around too much, you'll wind up with something over-worked, baroque, or wifty. You lose touch with the vitality of the original impulse, or cover it up so that no one else but you sees it.

You have to catch the moment on the wing, so to speak.

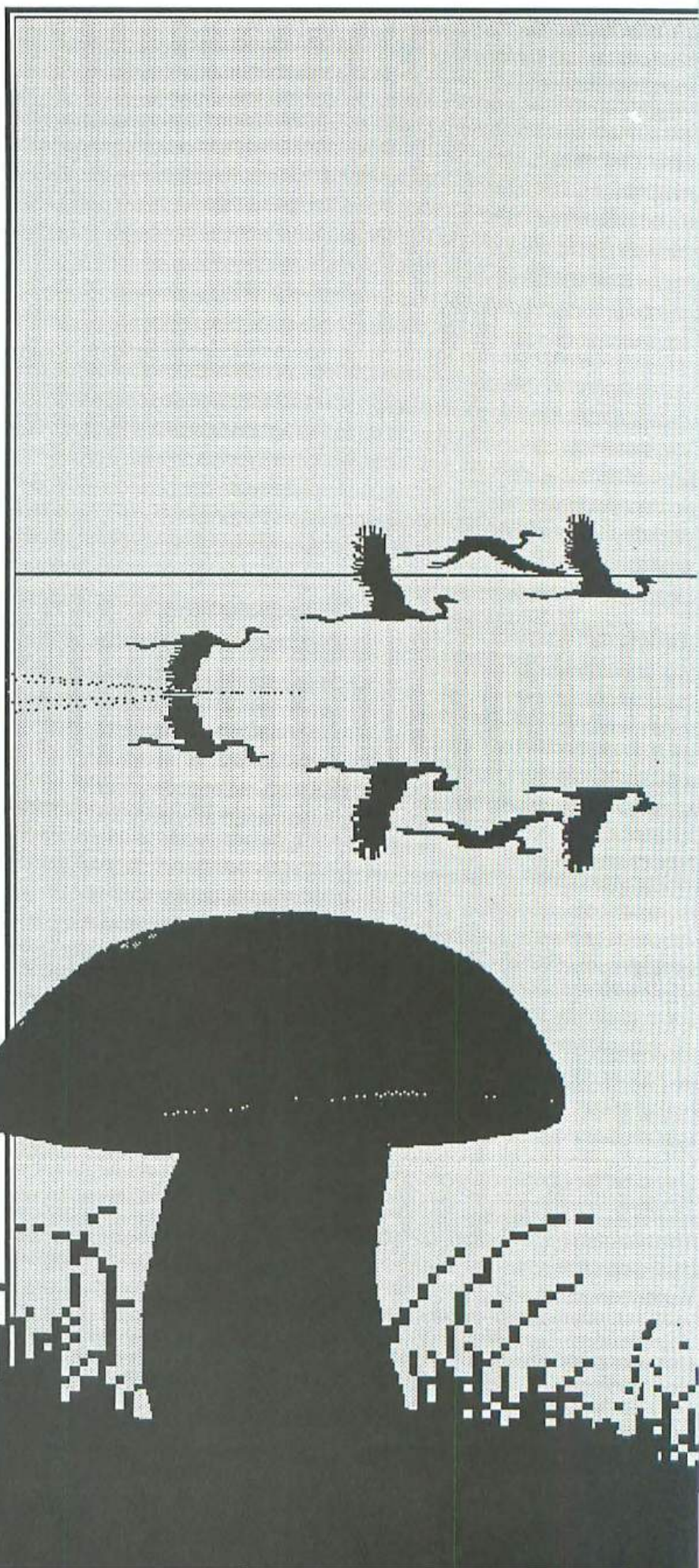
However...

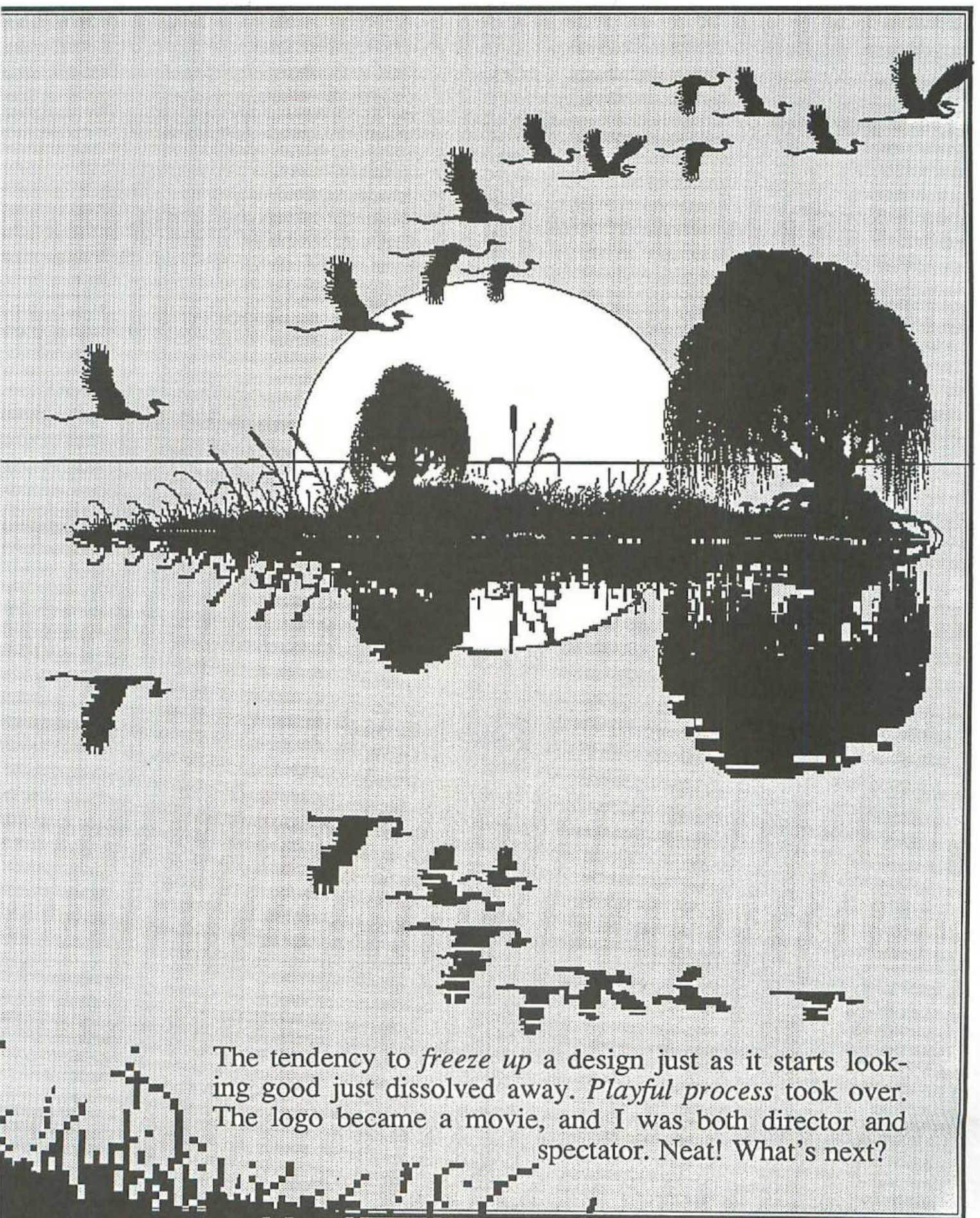


MacPaint
is so fast and so fun,
it just leads you
on and on. You don't
want to stop, even when
you know you should.
What to do?
I suddenly caught on to
the power of the
command SAVE AS.
It was a conceptual
safety net.

With it I could *snapshot*
and stash away any
graphic idea, any time,
and continue playing
around with a copy of it.
With impunity—and without
missing a beat.

This had a wonderfully
liberating effect.









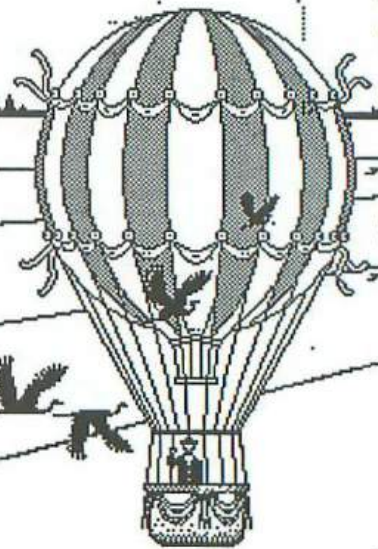
The tendency to *freeze up* a design just as it starts looking good just dissolved away. *Playful process* took over. The logo became a movie, and I was both director and spectator. Neat! What's next?

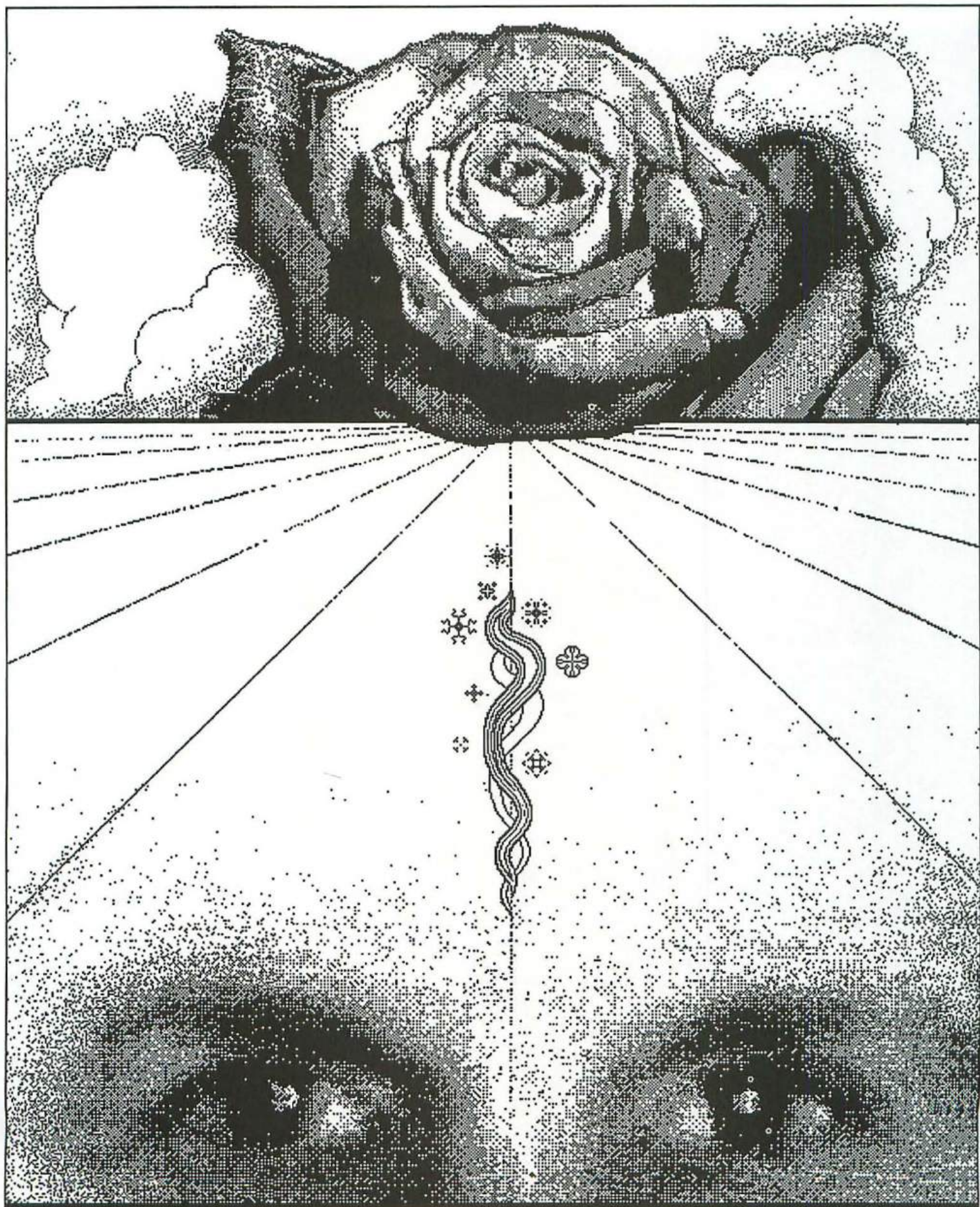
I had sailed
right past *doing*
the letterhead
into the clear
open space of
pure *doing*.

Unfettered to any
particular goal, my
eyes began to see the

 blossoming 
of unexpected
possibilities
everywhere!

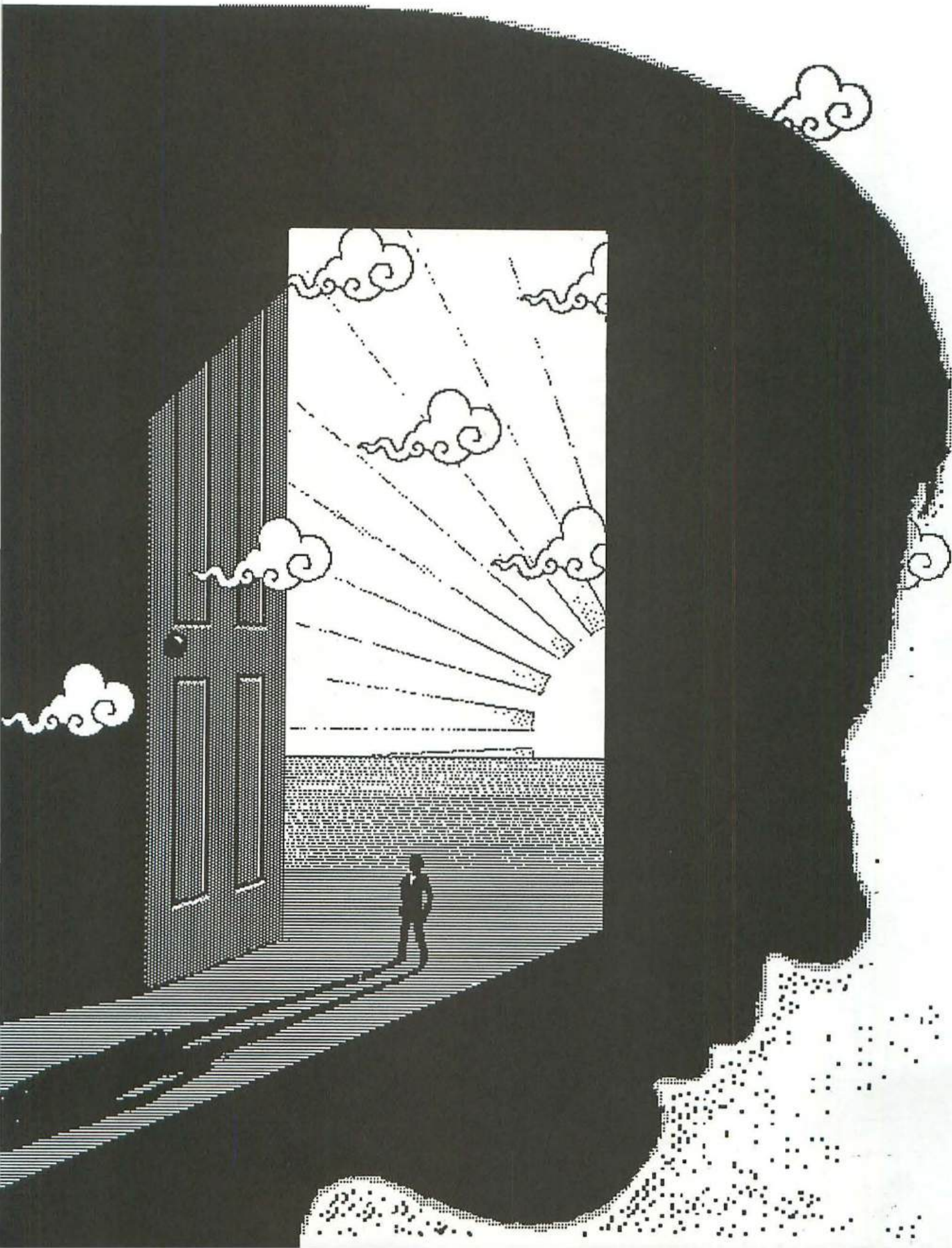
 Now, this is not
something extra-
ordinary. It is a
 state of freshness
and originality that
we all know and have ex-
perienced one time or
another. It's called...the
creative process.

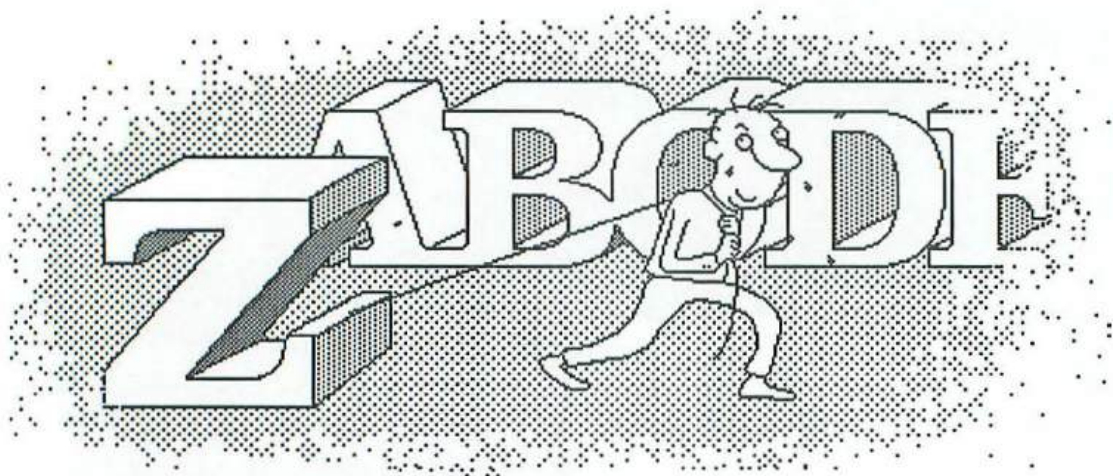




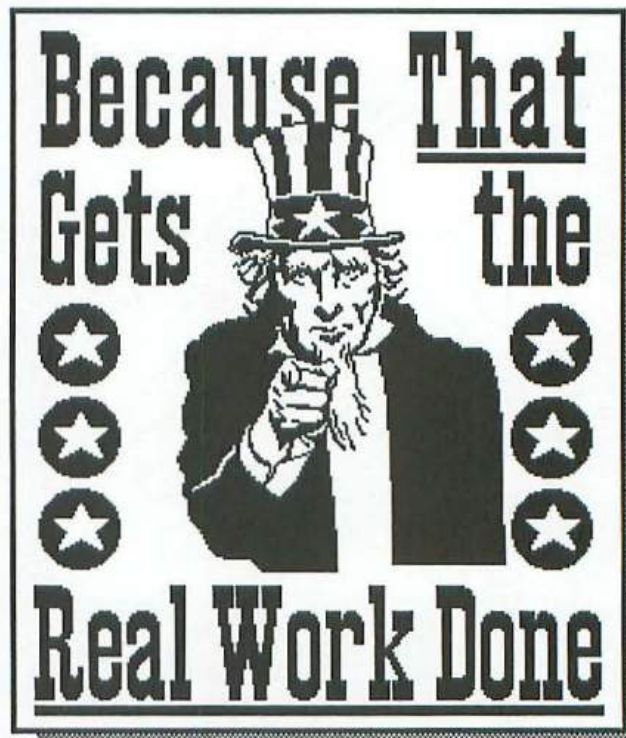
**We just ignore it
most of the time...**

The background is a dark, almost black, textured surface. In the bottom right corner, there is a graphic of a staircase or a series of parallel lines that recede into the distance, creating a sense of depth and perspective. The lines are light gray or white, contrasting with the dark background.

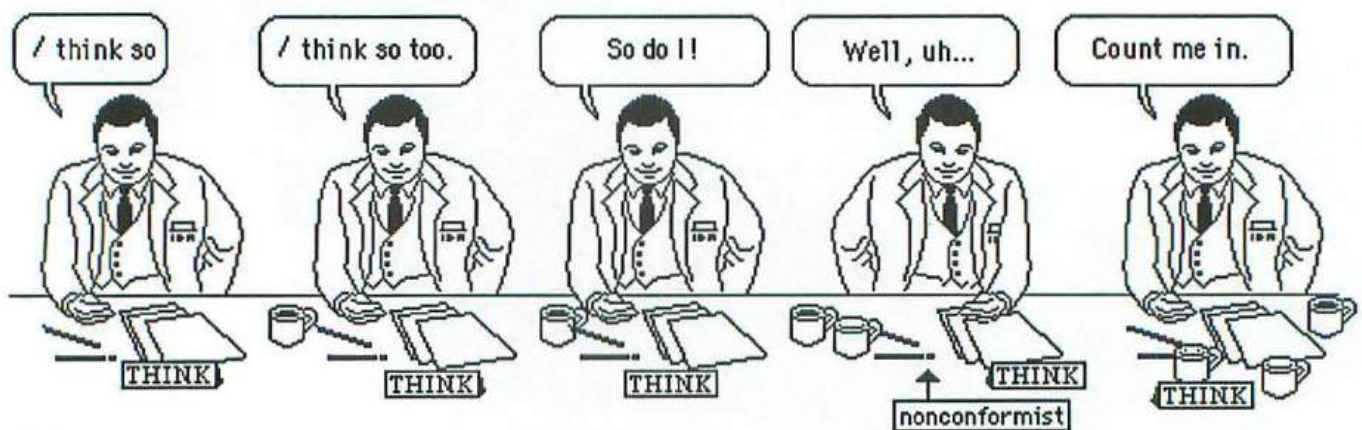




After all, one must get on with the goal-oriented duties of the world.



...Or so we think.



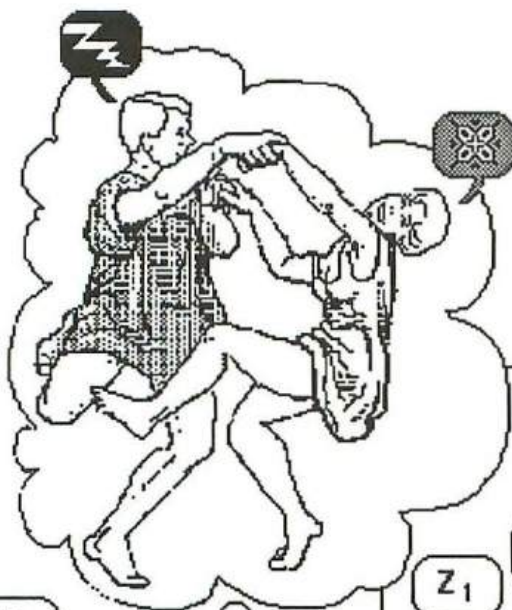
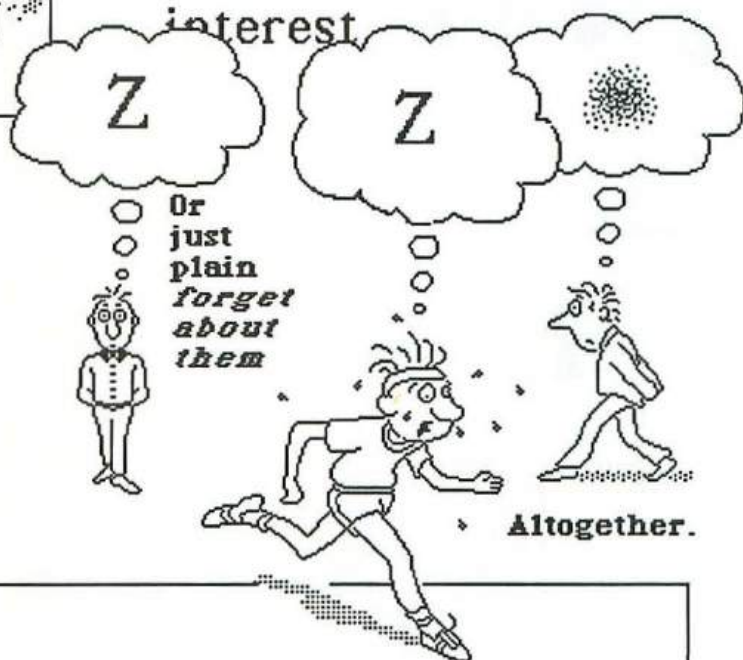
And we become so used to this routine pattern of thinking and doing and BEING



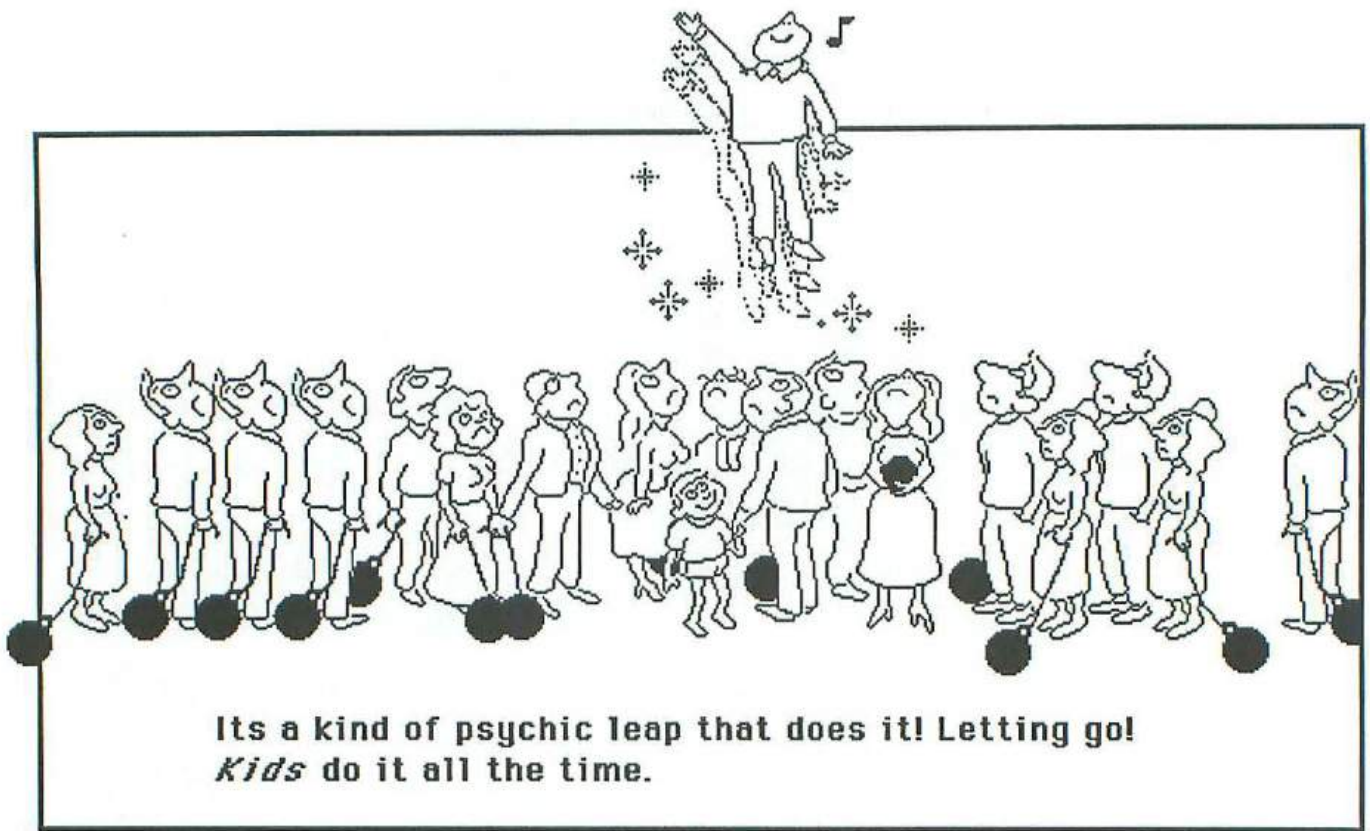
...that it becomes imprinted

and we lose access to *other* states of being.

Worse, we lose interest



Remembering is a start, of course. But slipping back into the playful, *creative stream* entails a *change of consciousness*, and usually requires more than nostalgia or wishful thinking.



BUT THERE'S A CATCH. The harder you try, the more elusive the execution.

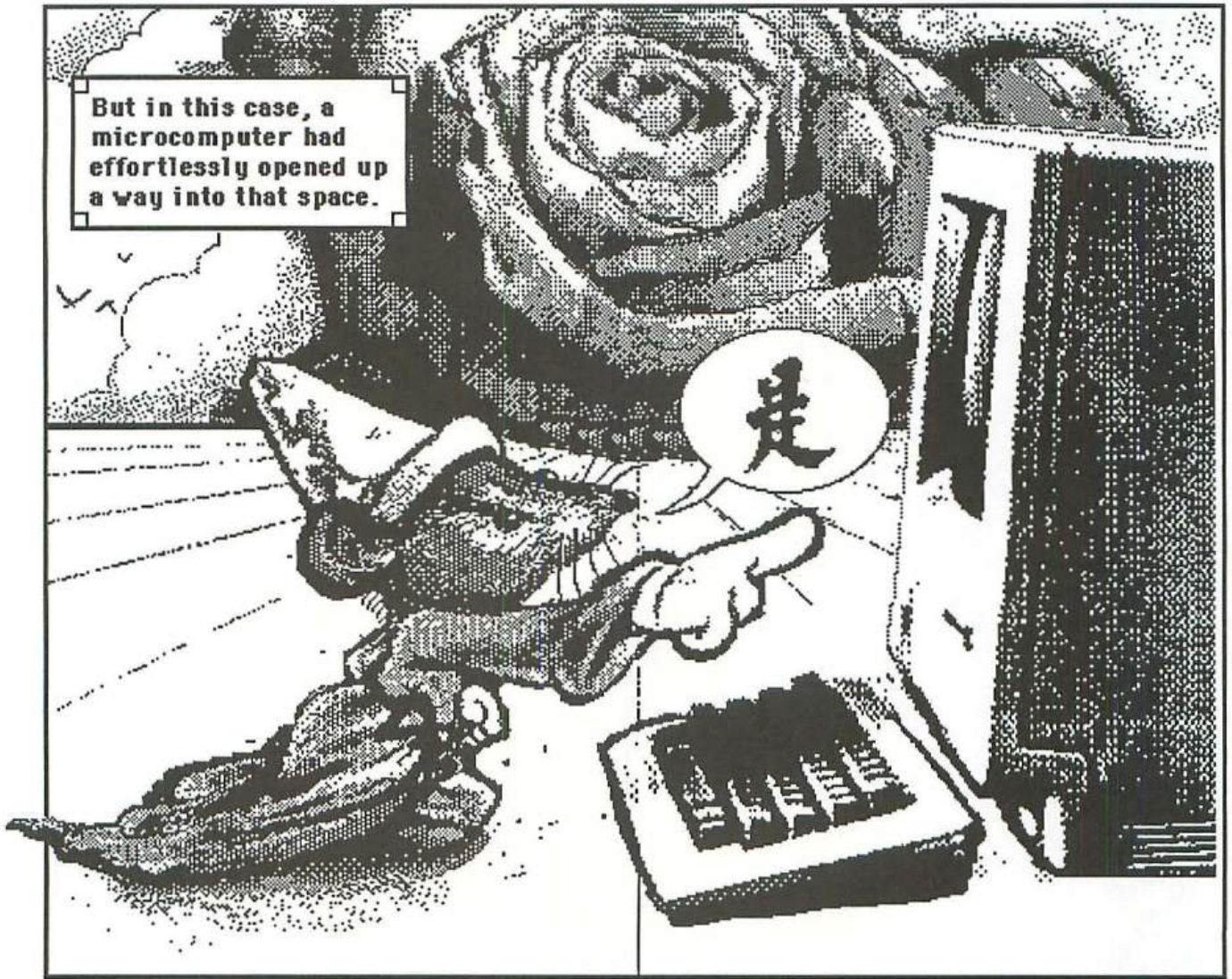


Heavy-handed element

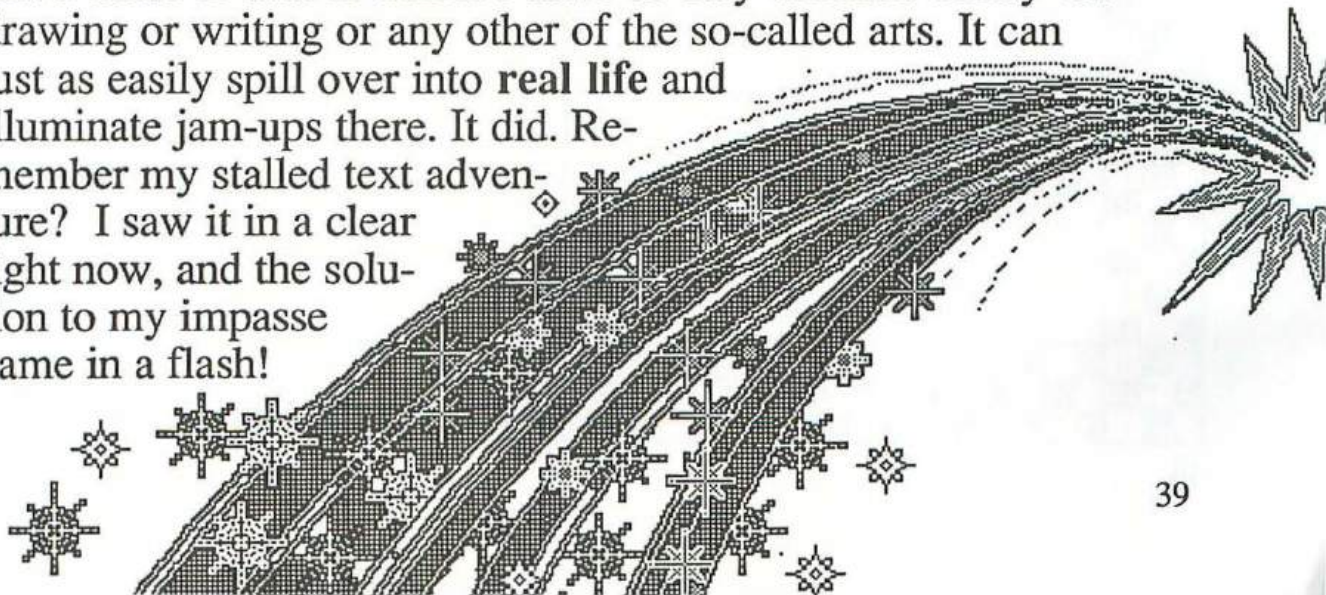
The reason is simple. While the **creative process** is characterized by a light and jaunty attitude very close to not caring at all, the part of you that's always taking charge of "getting there" is the same old heavy-handed element that's been running the **Goal Oriented Express** all along, and, as usual, thinks it can force the issue to get results.

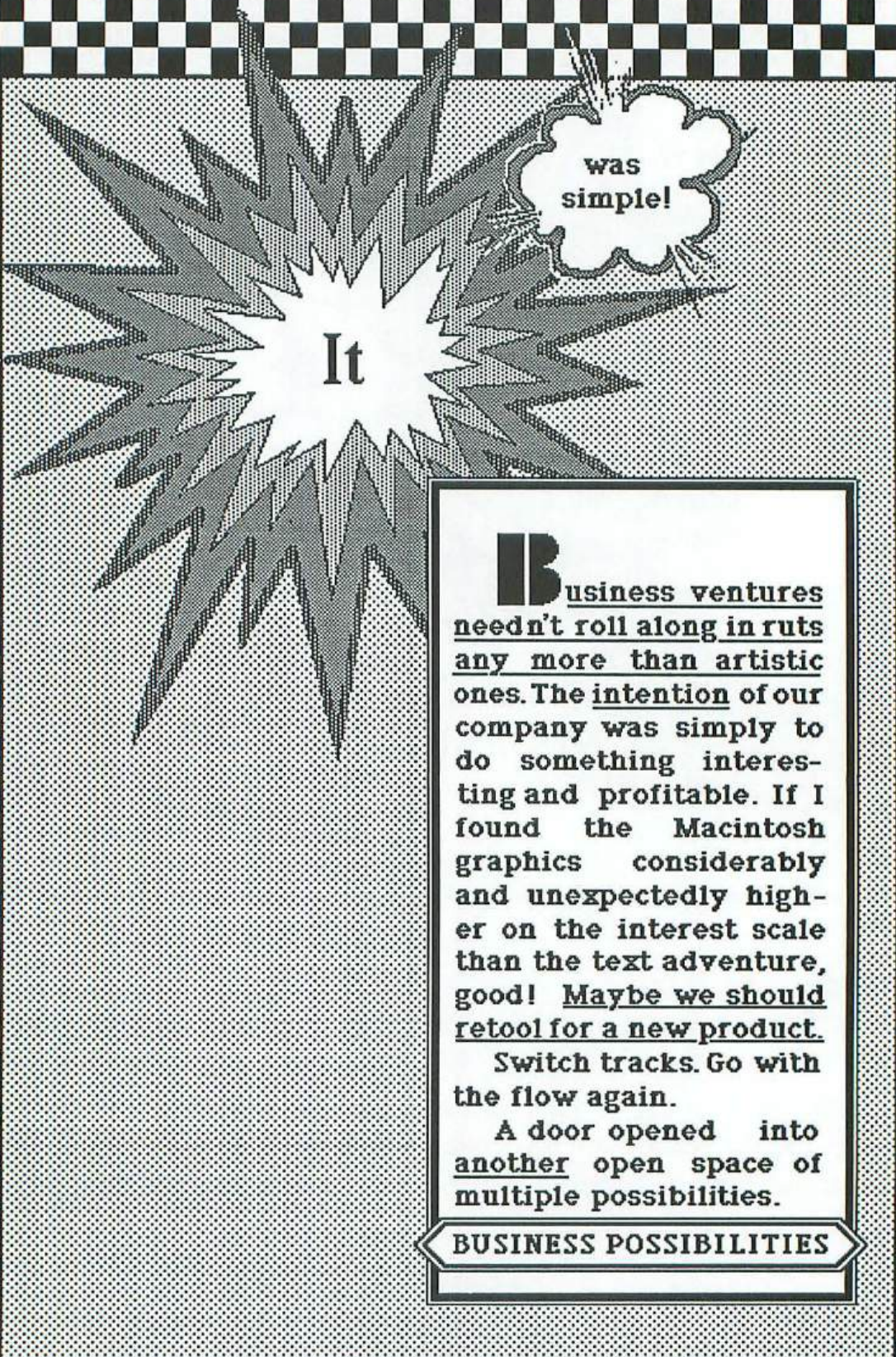
No way! The gates of heaven cannot be stormed, nor are the muses inclined to grant their boons to those who **lack abandon**.

But in this case, a microcomputer had effortlessly opened up a way into that space.



Anyway, the most important characteristic of the **creative state** is that it doesn't have to stay focused solely on drawing or writing or any other of the so-called arts. It can just as easily spill over into **real life** and illuminate jam-ups there. It did. Remember my stalled text adventure? I saw it in a clear light now, and the solution to my impasse came in a flash!





was
simple!

It

Business ventures needn't roll along in ruts any more than artistic ones. The intention of our company was simply to do something interesting and profitable. If I found the Macintosh graphics considerably and unexpectedly higher on the interest scale than the text adventure, good! Maybe we should retool for a new product.

Switch tracks. Go with the flow again.

A door opened into another open space of multiple possibilities.

BUSINESS POSSIBILITIES

IDEA:

Why not do a
GRAPHIC BOOK
about the
Macintosh

...and this
creative journey
it had drawn
me into?

And create
the entire book
cover to cover
**ON THE
MACINTOSH!**

I
took
the new
project to
my partners.
My enthusiasm
was obvious, the
page samples I had
prepared looked great.

They  agreed.

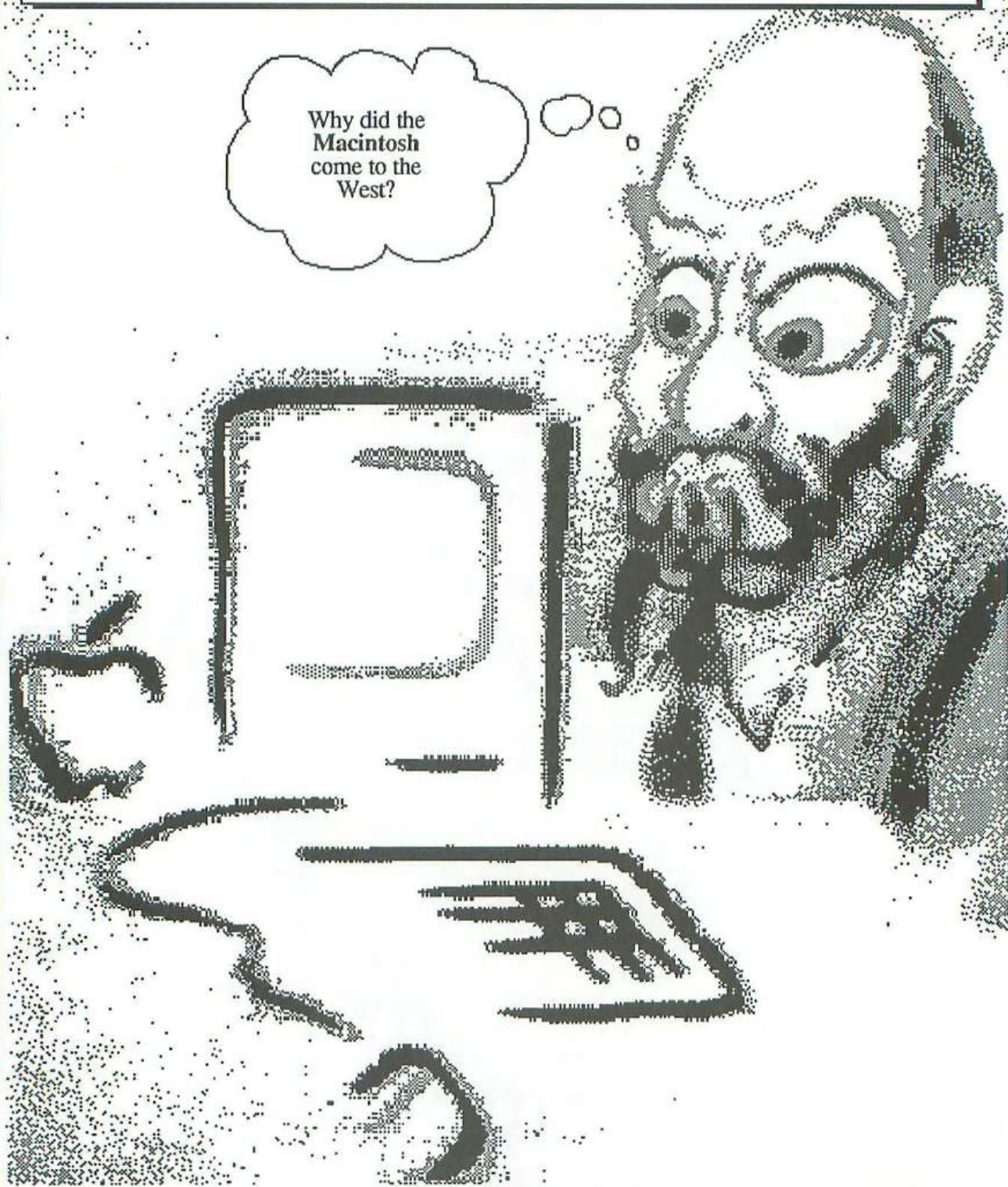
We had just
become

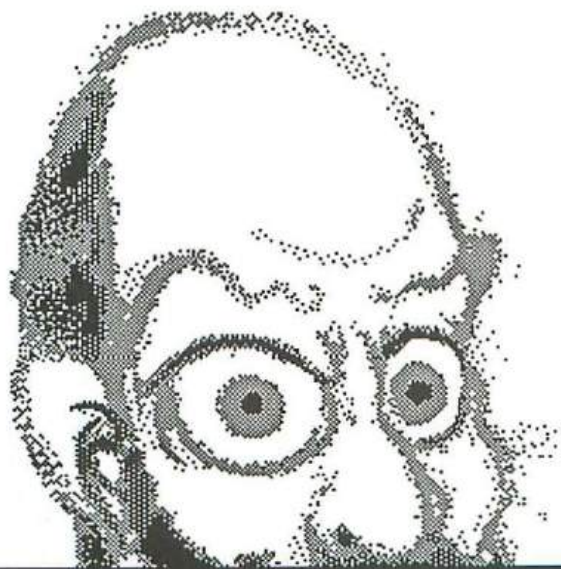
PUBLISHERS!

SO...
**ON WITH
THE BOOK**

The all-important title came immediately and without struggle: ZEN AND THE ART OF THE MACINTOSH. I liked it. It was intriguing.

Why did the
Macintosh
come to the
West?





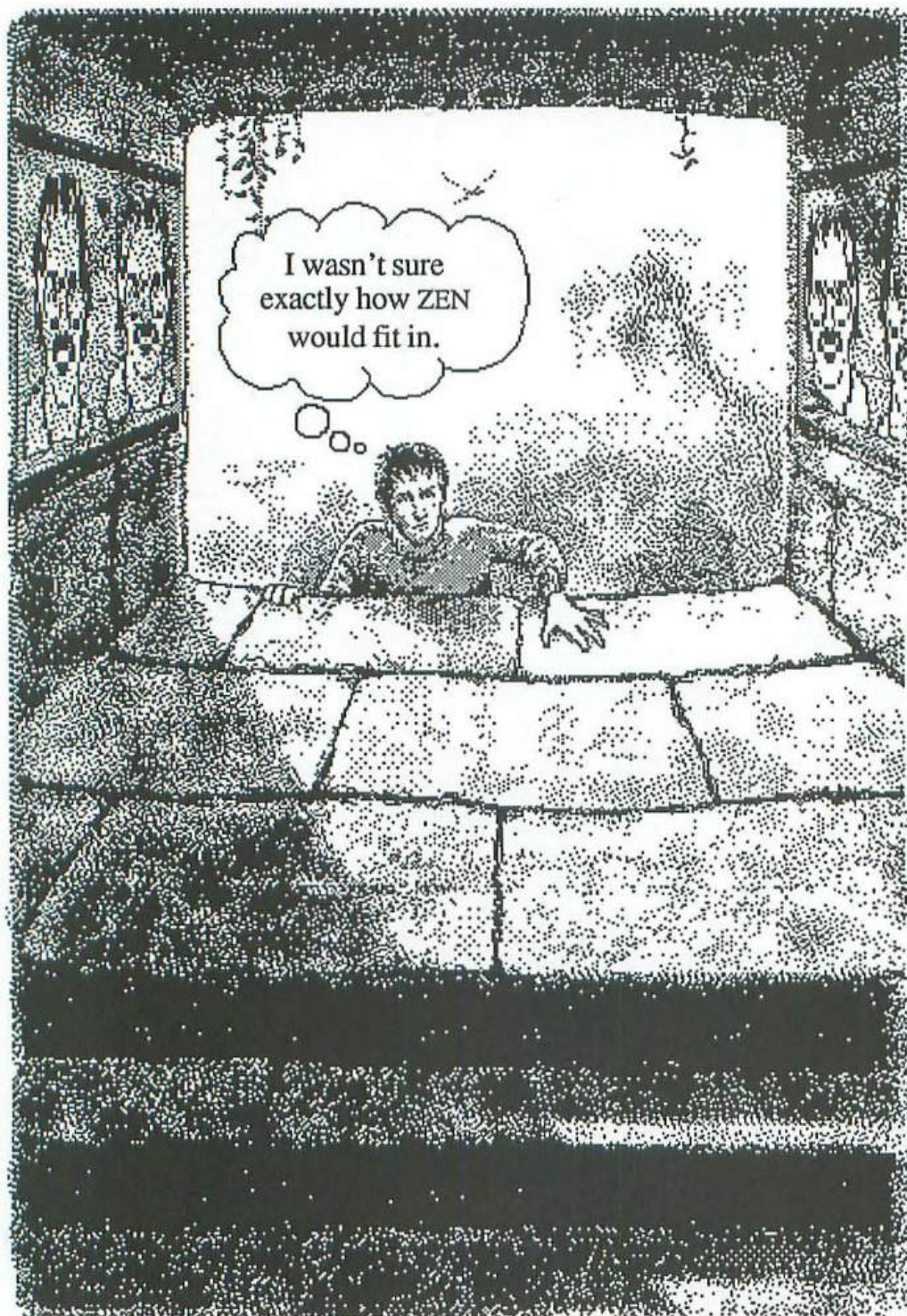
The
“Art of the
Macintosh”
part was
obvious
enough...

CLEARLY, A BOOK
ABOUT THE CREATIVE
POSSIBILITIES OF THE
MAC...

A KIND OF EXTENDED
GRAPHIC SAFARI
EXPLORING THE
FURTHEST REACHES
OF MACPAINT,
AND ITS POTENTIAL
TO OPEN UP
NEW TERRITORY.



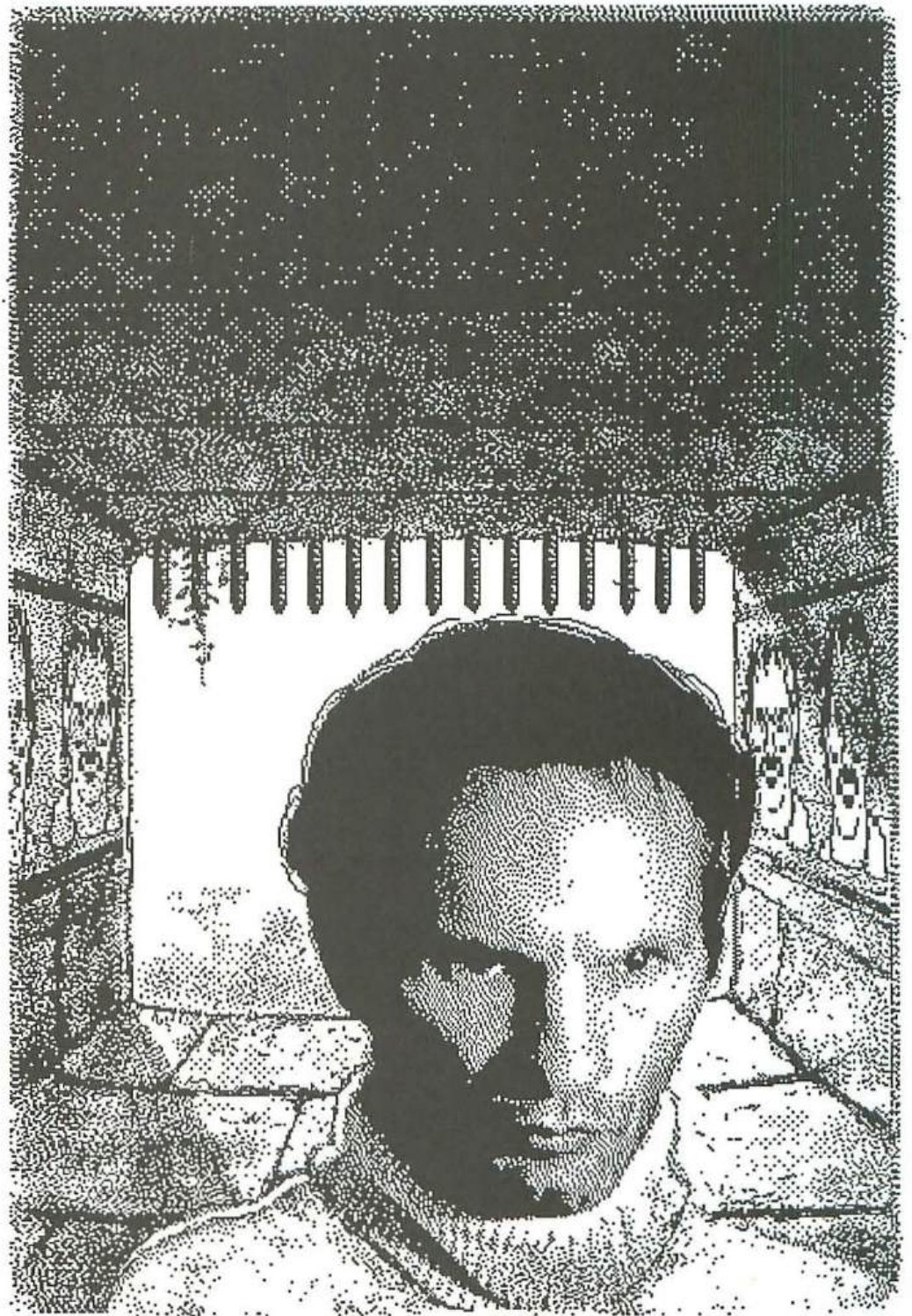


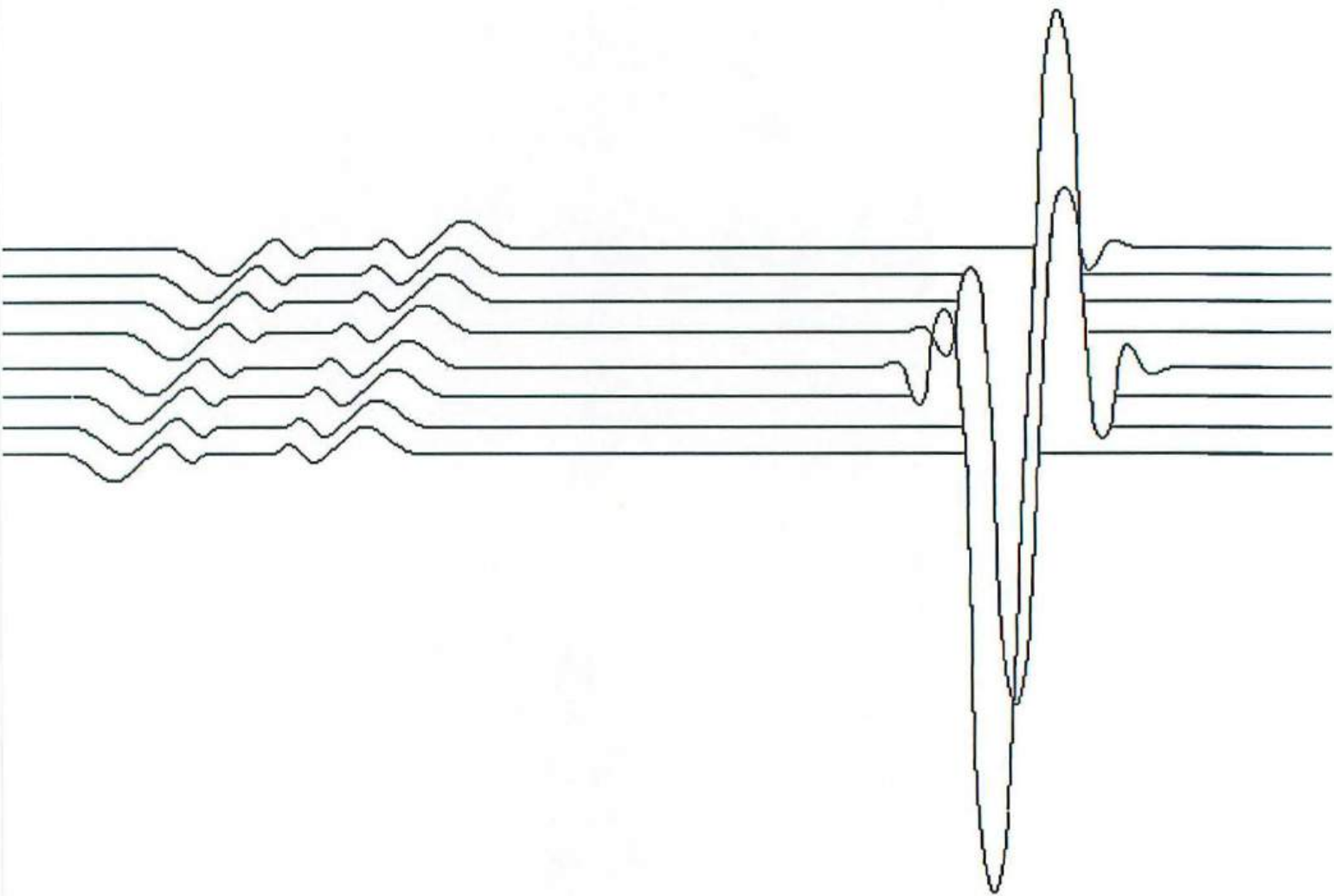


But I knew it was right. I sensed that an important **quest** was unfolding here.

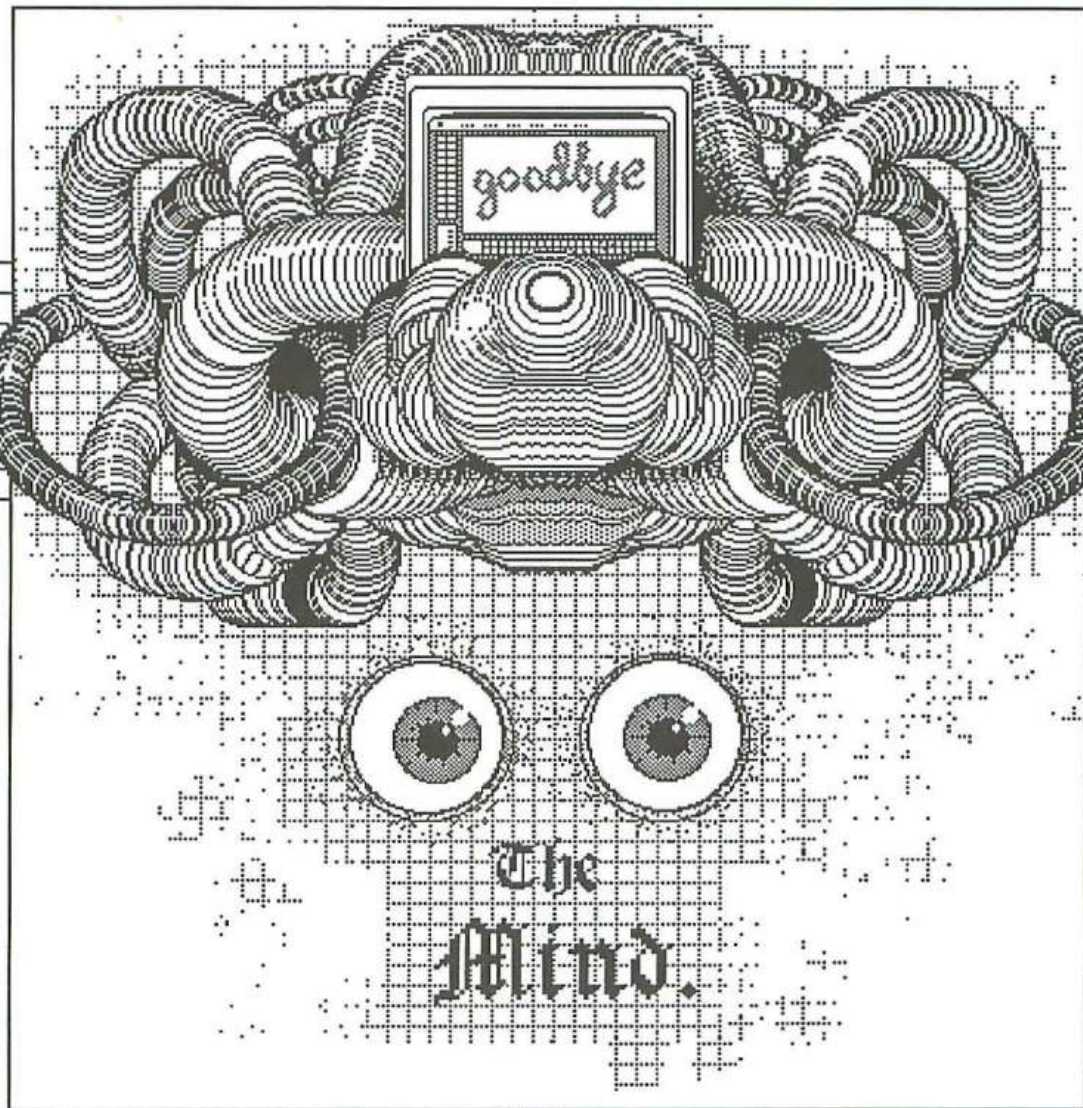
...And that if I pursued the matter with a spirit of open inquiry, the content of the book could not but move into **deeper territory**.

Little
did I
realize
what strange
adventures
lay ahead.





...ADVENTURES OF



The HIGHLAND DAIRY STUDIOS

Dear Reader,

For years I have regarded computers with deep suspicion. But as the old Taoist saying goes, "What you resist you become." To my own amazement (as well as my friends'), I found myself hooked on one.

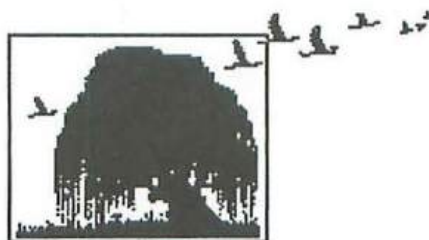
A strange turn of fate. But now, with a book to do, I could give myself over without reservation to the "relentless fascination of the computer."

I became a hacker--no, a Macker. Professional class. Assignment: Venture boldly forth where no man has gone before. Take the Macintosh and MacPaint and plumb their secrets, their limits, their natural style. Flight test any soft and hardware that will help the voyage. Have a good time. Let the book grow organically from what you do and discover. Learn. And bring back the results.

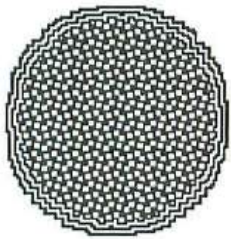
And--yes--the simple letterhead on this page is the final result of all that business back there. After all, to satisfy real-world realities you do have to keep your head screwed on straight. When all is said and done, less is often more.

Onward!


M. Green



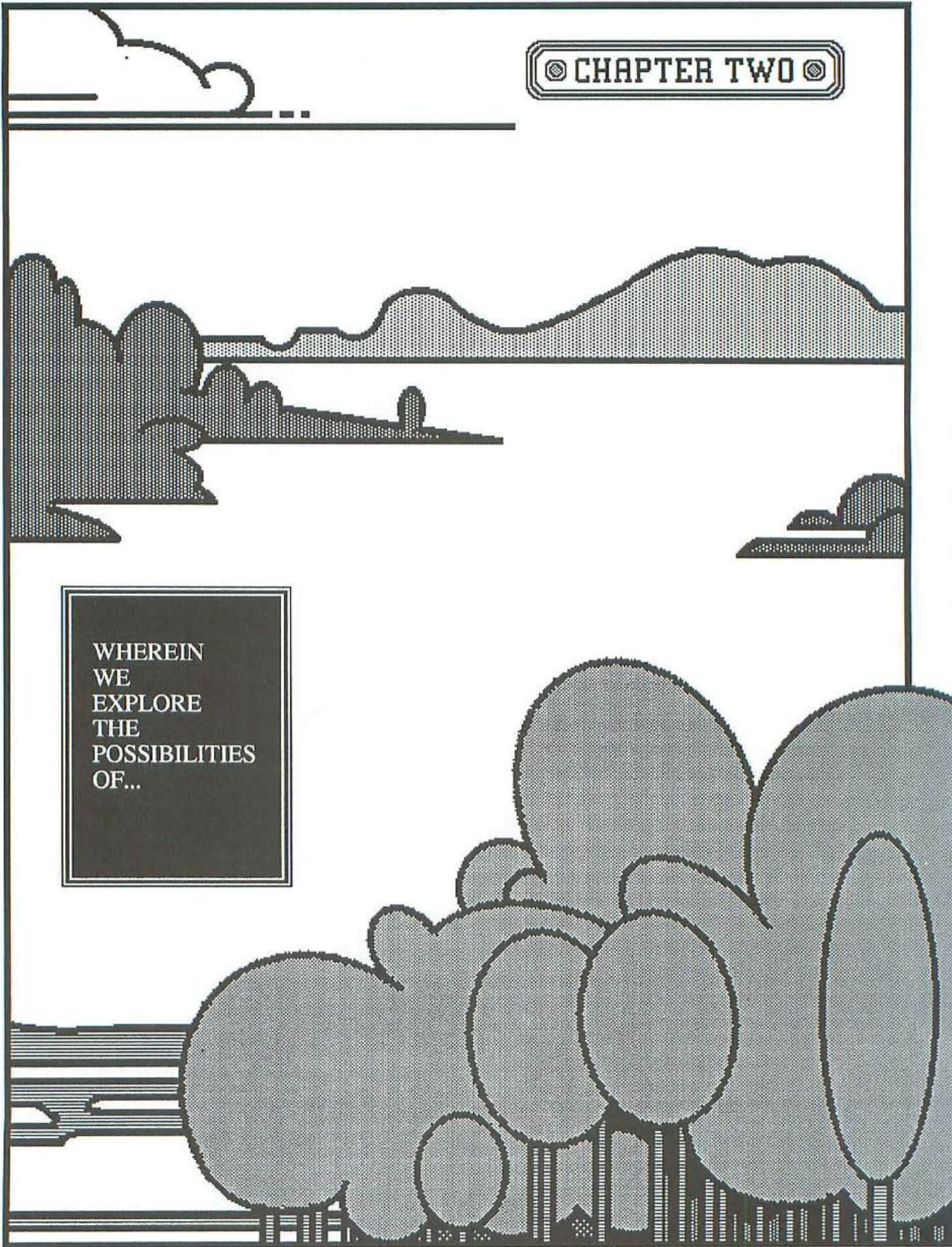
"The willow paints the wind / without using a brush."

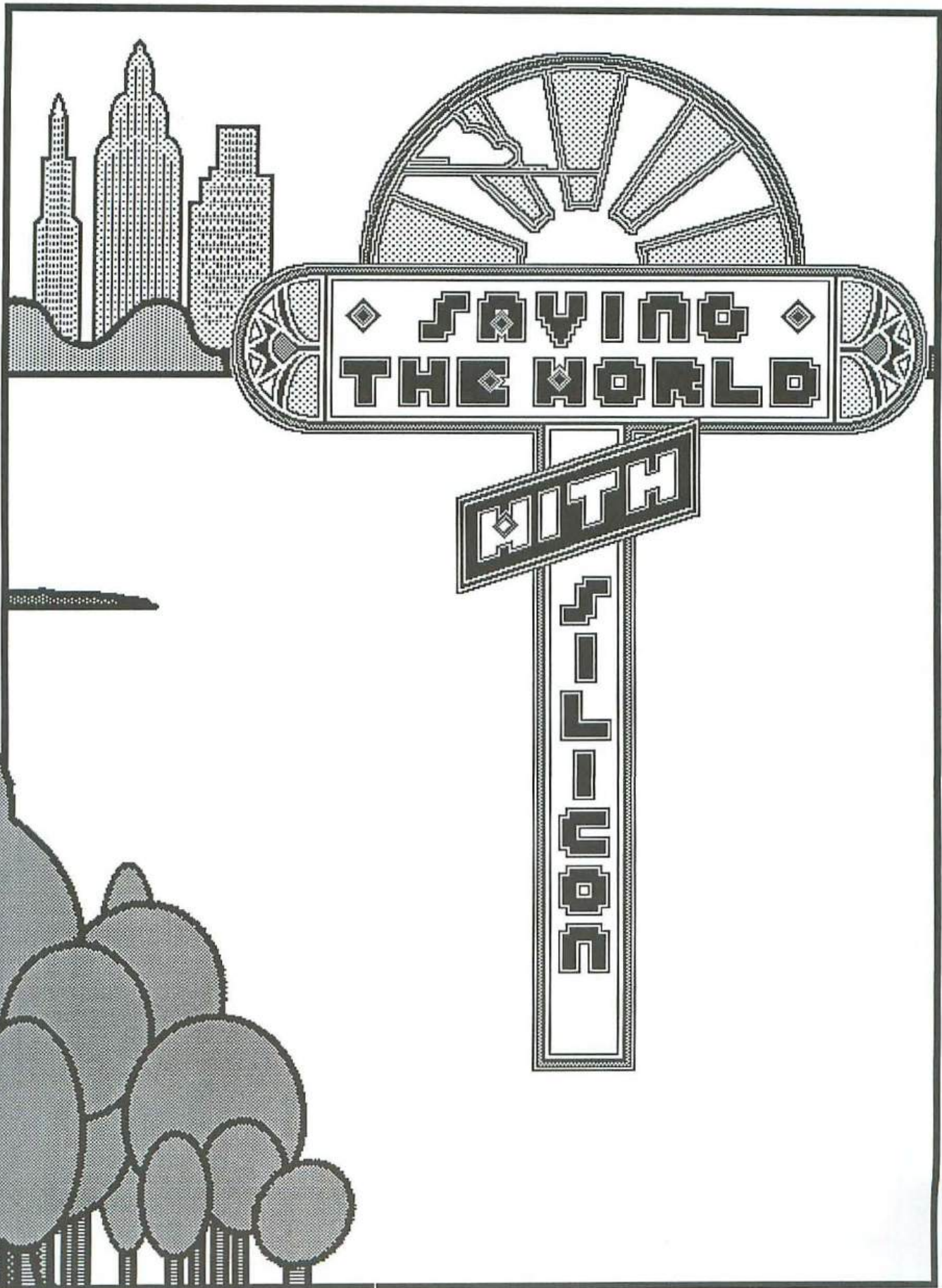


Handwritten signature or stylized text, possibly reading "M. J. ...".

CHAPTER TWO

WHEREIN
WE
EXPLORE
THE
POSSIBILITIES
OF...





SAVING
THE WORLD

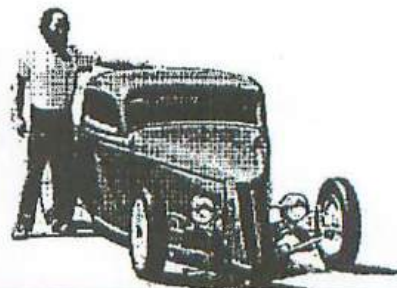
WITH

SOLUTIONS



R ELATIONSHIPS

WITH MACHINES ARE NOTHING NEW. As a people we deeply identify with our technological creations, and tend to give ourselves over to them somewhat unreservedly. America's passionate and long-standing love affair with the automobile is the legendary example. But the computer brings an altogether new level of intimacy to this situation, and is capable of drawing an extraordinary variety of people under its spell. For many the experience soon assumes the proportions of a new love affair, with all that that implies.



"The computer is by all odds the most extraordinary of the technological clothing ever devised by man, since it is an extension of our central nervous system. Beside it the wheel is a mere hula-hoop."

-Marshall McLuhan



Jobs are neglected. Friends and family fall away. Ultimately the computer becomes the central focus of their life. They give themselves totally over to its fascination and become unapologetic Info Junkies, Computer Freaks, Techies, Hackers... whatever.

Weird.

But the weirdest thing for me was that (until now) I hadn't the slightest glimmering of the experience they were having. Even from a distance though it was obvious that, like the hero of Tron, these micronauts were really getting into their computers. A neuro-bionic relationship?

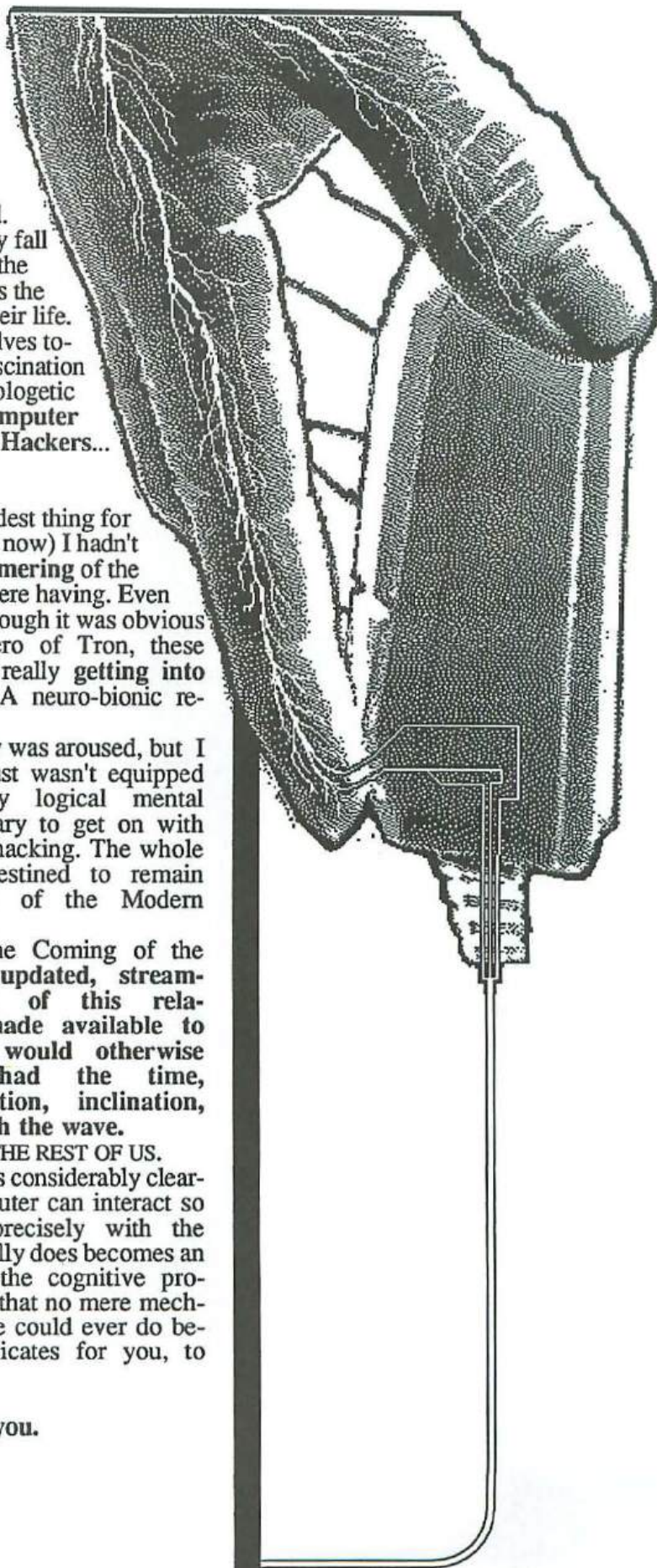
My curiosity was aroused, but I knew this boy just wasn't equipped with the highly logical mental apparatus necessary to get on with even entry-level hacking. The whole thing seemed destined to remain another mystery of the Modern World.

But with the Coming of the Macintosh, an updated, streamlined variation of this relationship was made available to everyone who would otherwise never have had the time, money, motivation, inclination, or brains to catch the wave.

You know, THE REST OF US.

The picture is considerably clearer now: A computer can interact so delicately and precisely with the intellect that it really does become an integral part of the cognitive process—something that no mere mechanical contrivance could ever do before. It communicates for you, to you, with you.

It becomes you.



It is easy to see now how it could become addictive. But there is a crucial difference between the Hacker and the new...ah...*Macker*. A Hacker/computer relationship is based on the manipulation of information, arcane puzzle solving, a love of penetrating and exploring the rational, highly abstract inner logic of computers just for the intellectually rigorous zing of it. On the other hand the Macker/computer relationship is a playful, even magical partnership established on the creation of images and patterns, on the joy of effortlessly manipulating them, on exploring

their nonverbal, symbolic meanings. And finally, combining your images with words to change the way you think about communication...*maybe even the way you think!*

The way You think?

The way You *are*. "Creative" or "Routine."

Two different outlooks, two different ways to be.

Ok class, lets get organized. Make two columns in your notebooks:

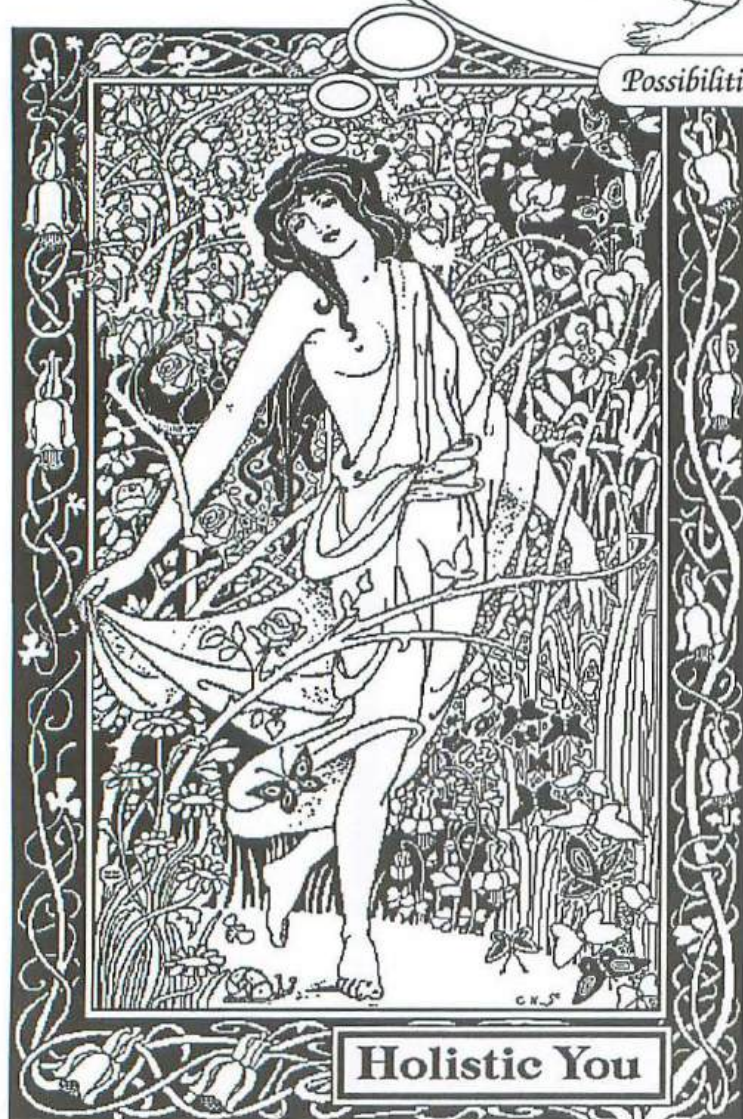
On one side is the **Analytical**, and it learns about things by taking them apart.

The other is not so *focused*.

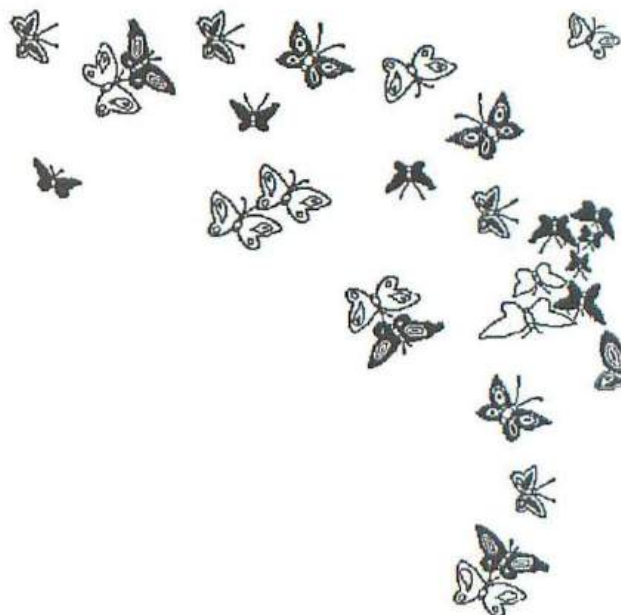
It's looking around at the larger patterns, the



Possibilities



Holistic You



...looks around at the larger patterns.

wholes that are greater than the sum of their parts. Therefore it's called, (all together now), **Holistic**.

Analytical You thinks and communicates with thoughts and words.

Holistic You is happier with feelings and images.

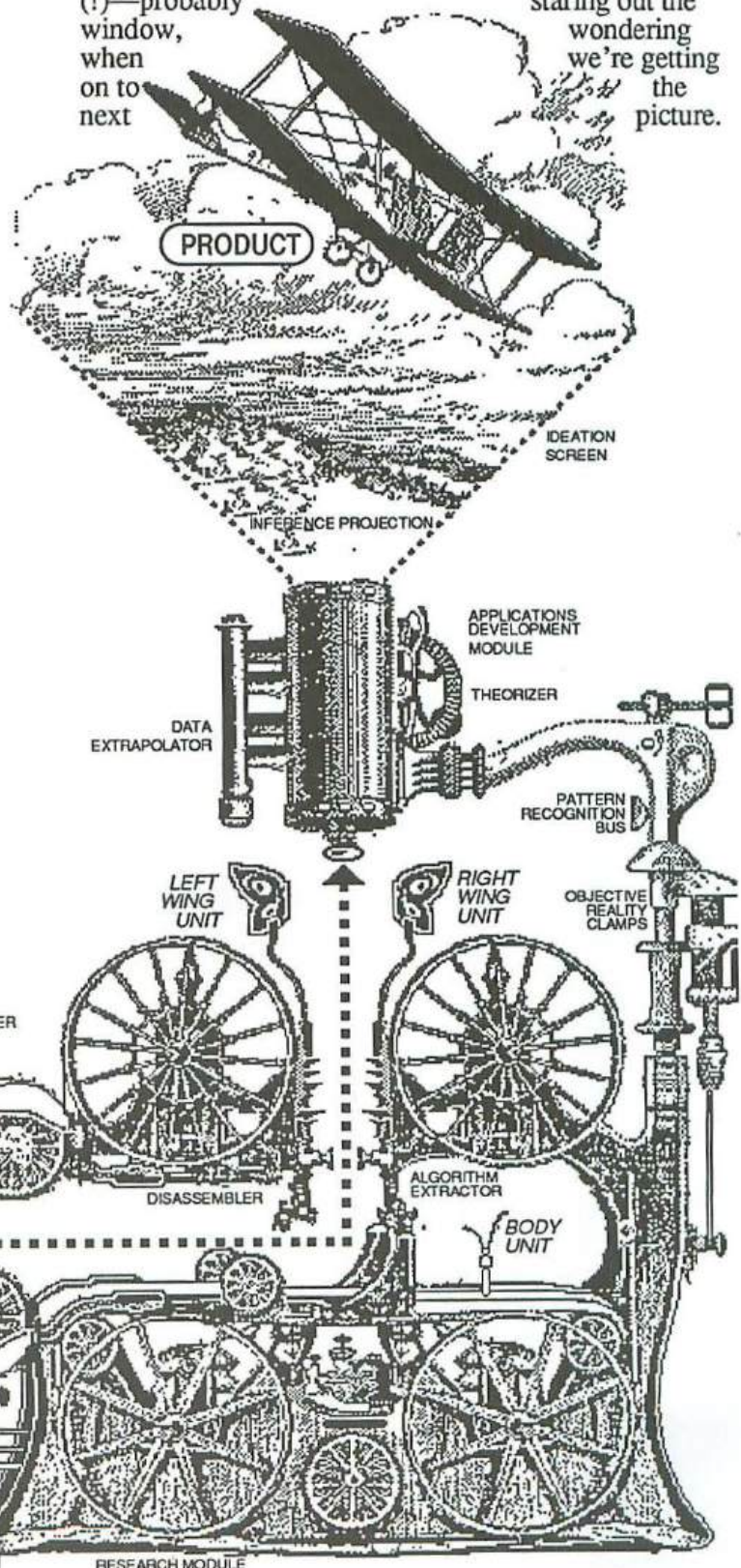
Analytical You deals with information in a serial manner, one bite at a time, in strict sequential manner.

Holistic You is all over the place, sampling many different things, and often simultaneously.

Analytical You makes decisions by the formal, rigid, explicit methods of logic. It travels exclusively on the Goal-oriented Express. **Holistic You** is heavily into the informal, fluid, mysterious method

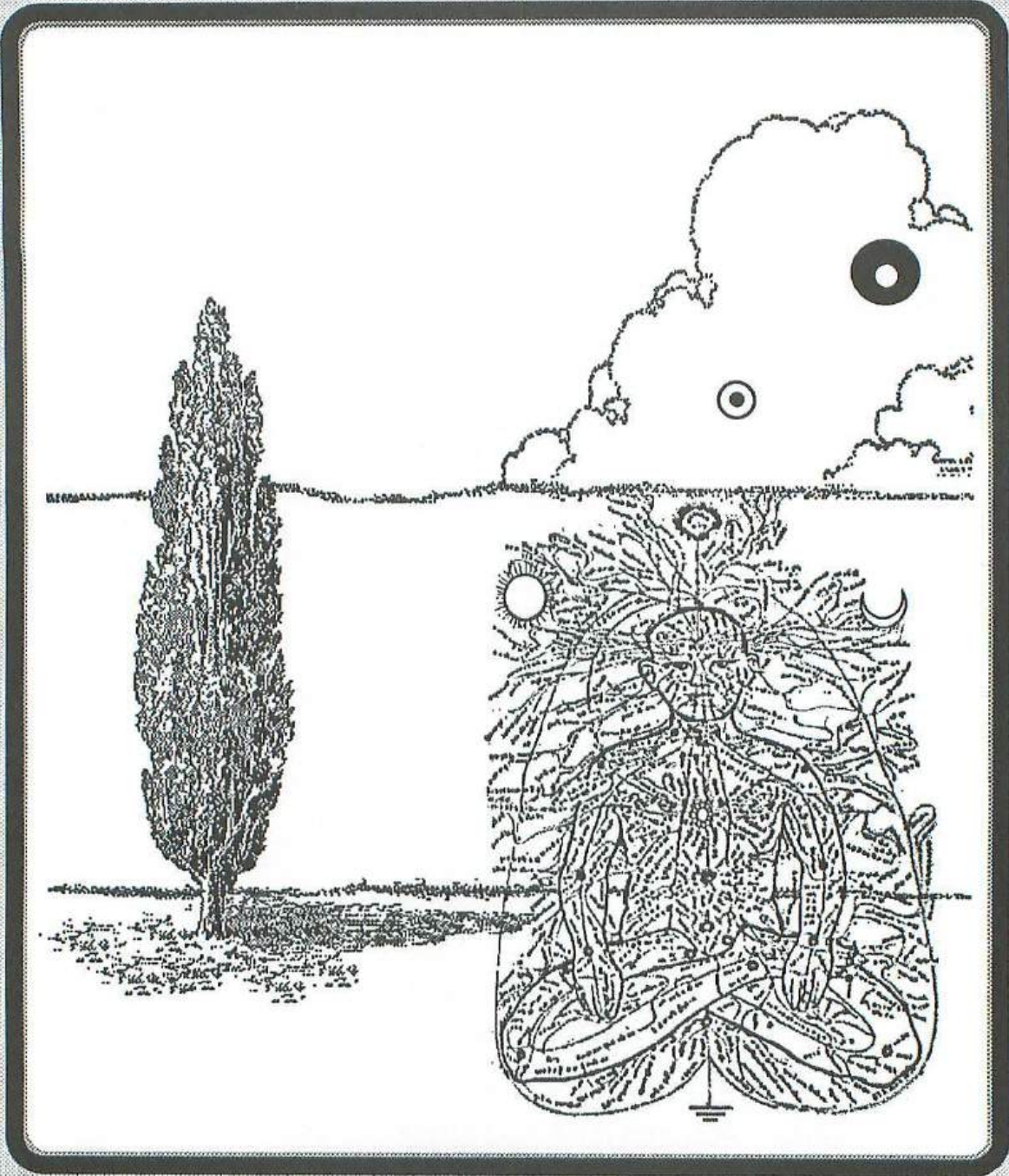
of intuition. It gets about by strange and astounding-leaps.

Analytical You is scrutinizing these statements for flaws in accuracy right now. **Holistic You** has already lost interest in the discussion. It's—She's (!)—probably staring out the window, wondering we're getting the picture.



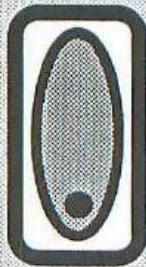
Analytical You

...learns about things by taking them apart.



W

IELDING THE ONLY TOOLS AVAIL-
ABLE AT THE TIME, CHINESE NEURO-
SCIENTISTS MAPPED OUT THE
DYNAMICS OF THIS PSYCHIC FLIP/FLOP
TWO MILLENNIA AGO, AND FORMULATED
THE WORLD'S FIRST BINARY OPERATING



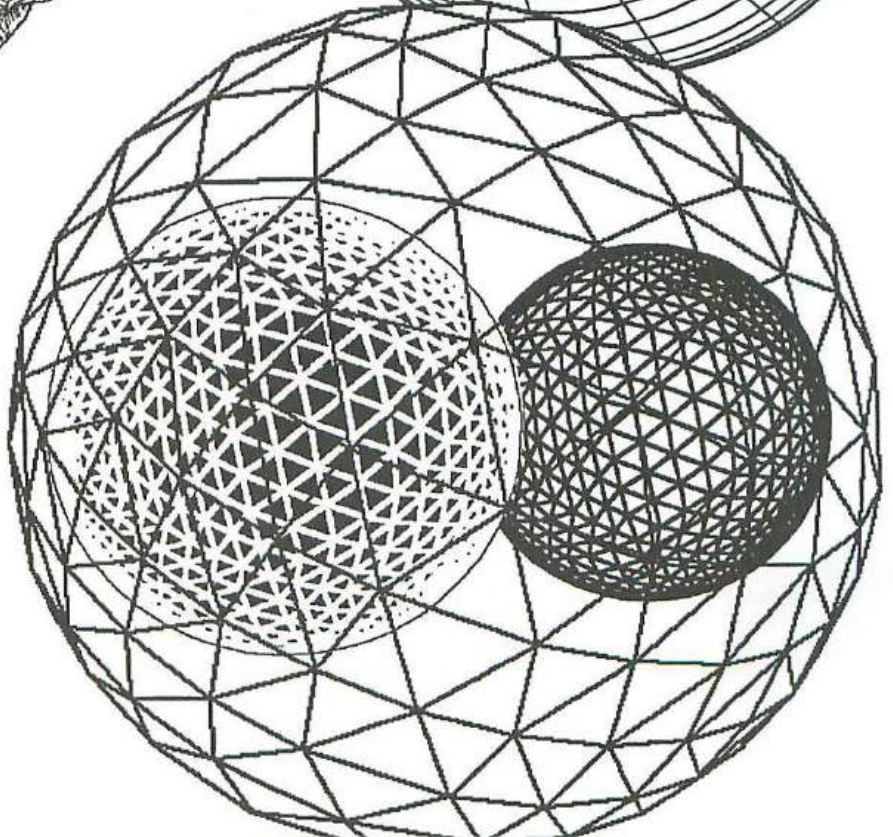
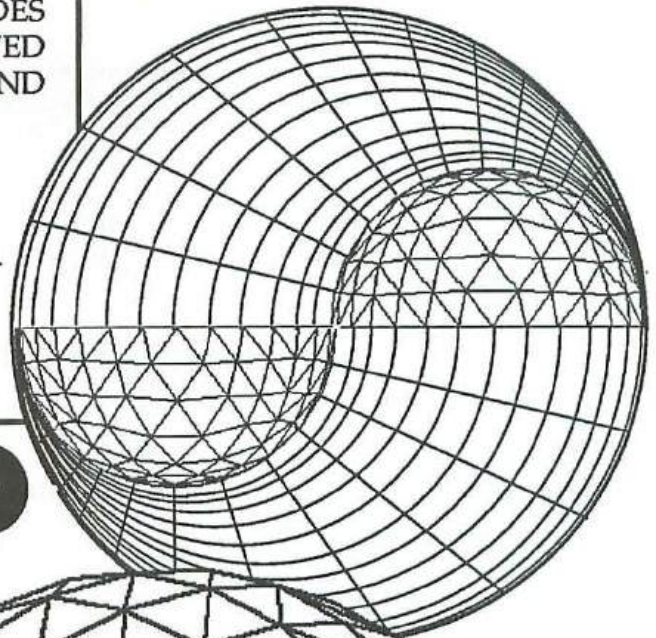
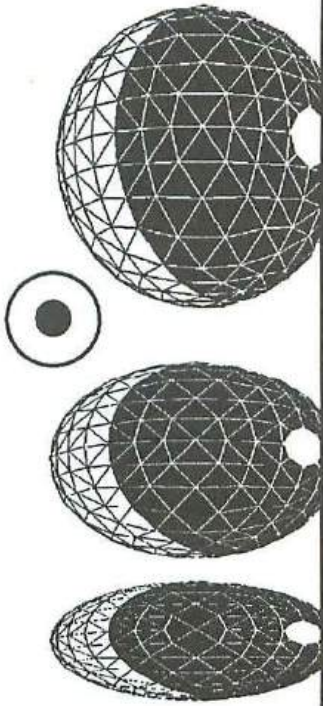
S ♦ Y • S ♦ T • E ♦ M

...A SYSTEM SO ADVANCED
IT'S STILL IN USE TODAY!
THE MORE ADVANCED
HACKERS OUT THERE ARE
PROBABLY ON HANDSHAKE
TERMS WITH IT ALREADY.

IT'S YIN & YANG.

A BRIEF EXPLORATION INTO
THE YIN/YANG GESTALT
WOULD OFFER US AN
OPPORTUNITY TO BOTH
ILLUMINATE THE SUBJECT
AND DEMONSTRATE THE
WIDELY DIFFERING MODES
OF PERCEPTION EMPLOYED
BY HOLISTIC YOU AND
ANALYTICAL YOU.

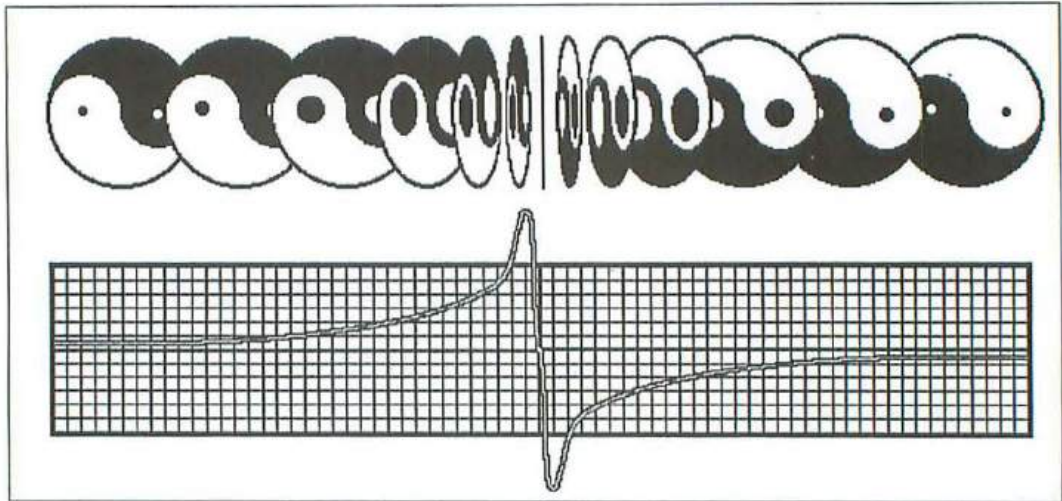
FIRST, LET'S EXECUTE A
BRISK ANALYTICAL SCAN
OF THE YIN/YANG SPECIFI-
CATIONS.





YinYang 1/0

Sophisticated
Binary
Integration System



An extremely efficient multipurpose conceptual environment for multi-level comprehension and integrated management of all elemental phenomena. Encoded in CPrinM™ (Cardinal Principle Matrix), a highly evolved non-linear *natural* language which templates all data in relation to the familiar Cardinal Principles, i.e., The Creative (—) and The Receptive(—), and their various subsets: The Formless / The Formed; The Light / The Dark; The Male-paternal / The Female-maternal; Space / Time, ditto. YinYang 1/0 reconciles these opposing forces into a coherent whole. Benefits reportedly include:

1. "Bringing about a flowering of all things."
2. "Restoring balance and harmony to the Universe and to the affairs of men."

(Imbedded referencing to social conditions, interpersonal relationships and internal human development automatically maintain YinYang 1/0's high interface with the Analog (real) World.) First time operators of the YinYang 1/0 Binary Integration System 2 report an extraordinary incidence of Primary Belief Revision, while even casual users consistently exhibit a marked decrease in stress, increased networking capabilities with other carbon units, and an awakening of their proprietary higher natures.

System Dynamics.

Unlike the static duality of the more primitive electro-mechanical devices now in common use, the Binary Integration System does not assign immutable values to the phenomena being analyzed. In defined, undefined and altogether random conditions of overload,

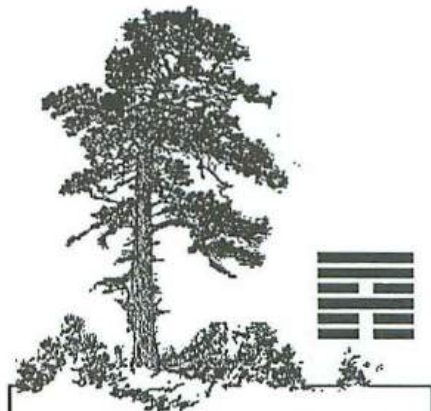
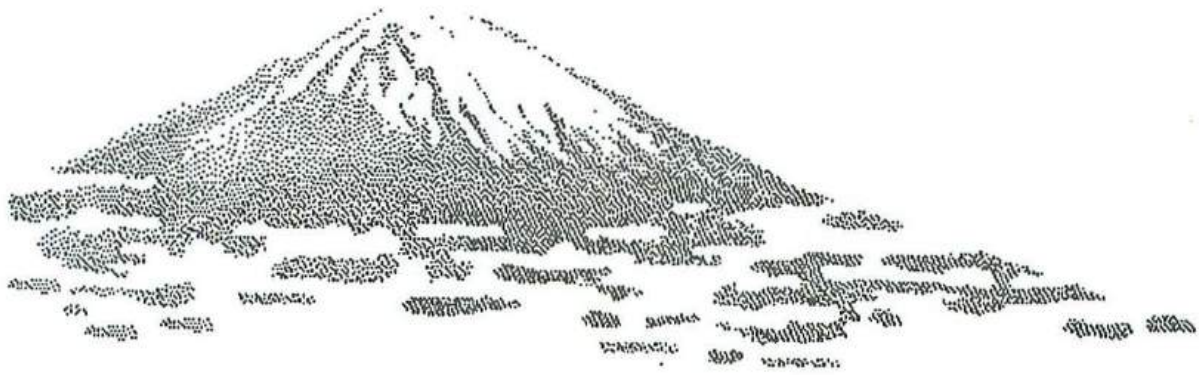
both Yin (1) and Yang (0) flip into the opposite node. Neither is immutable; nothing is precisely—or only— what it seems. The Prime Constant is change. Obviously CPrinM™ is fully convergent with Reality Patterns now being confirmed on the outer edges of subatomic research.

Features

- **User friendly.** Exceptional visual / conceptual integration and a structurally transparent language encourages a high intuitional penetration by operators.
- **Installed base.** YinYang 1/0 is the de facto standard throughout much of the world. User groups have created a vast database of public domain documentation.
- **Reliability.** The YinYang 1/0 System has been field-tested for over 4k years, earning an unparalleled reputation for reliability.
- **SERM Compatible.** Full handshake capabilities with the operating systems of all Standard Esoteric Reality Models.
- **Open Architecture** encourages unlimited enhancement of the basic system. Powerful applications exist in the fields of health,

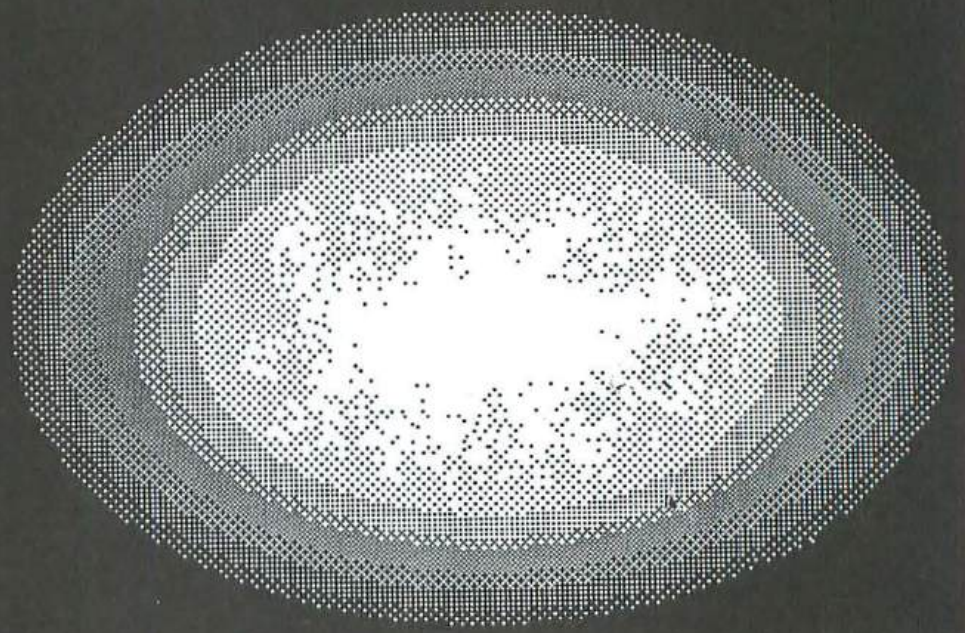
medicine, government, sexual reProgramming, martial arts and battlefield simulation.

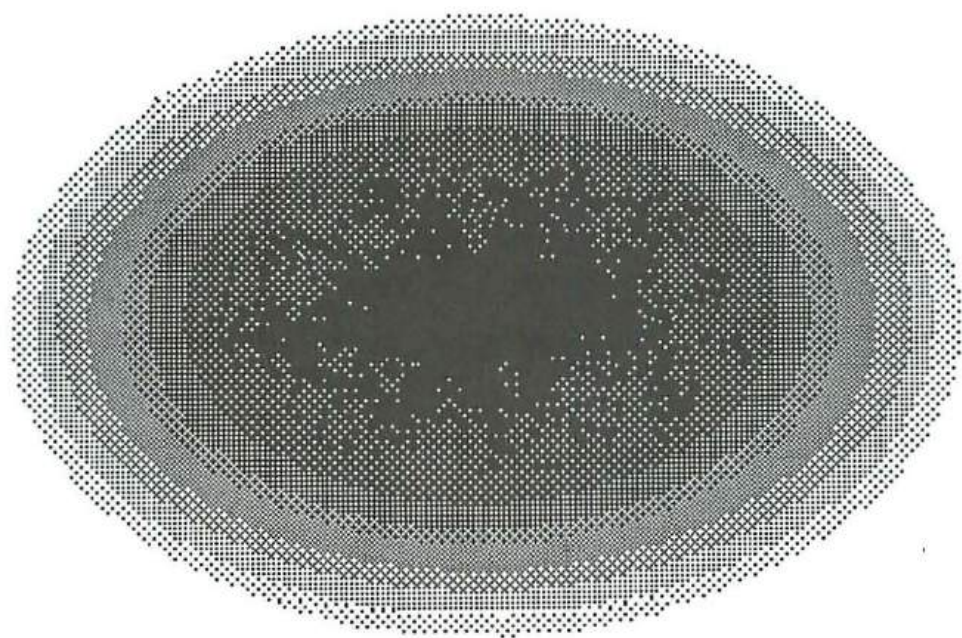
- **Optional hardware** includes the popular I Ching⁶⁴, an interactive field plotting device. By directly connecting its digitally precise CPrinM™ hexagramic progression with a randomized Unified Field Sensing routine, the I Ching⁶⁴ produces a marvelously subtle and accurate schematic of the interplay of opposing and complementary forces vectoring the life of the operator. The I Ching⁶⁴ demonstrates a profoundly satisfying natural order where clarity and mystery can run concurrently.
- **Available software upgrades** include fully optimized 1.618 Top-down Analog Operating (TAO) source code. *Duality escape function* provides a true non-Euclidean data scan of all sensory inputs. (F)orm = (E)mptiness; (E)mptiness = (F)orm algorithms implemented exclusively. For qualified users only.



Right?

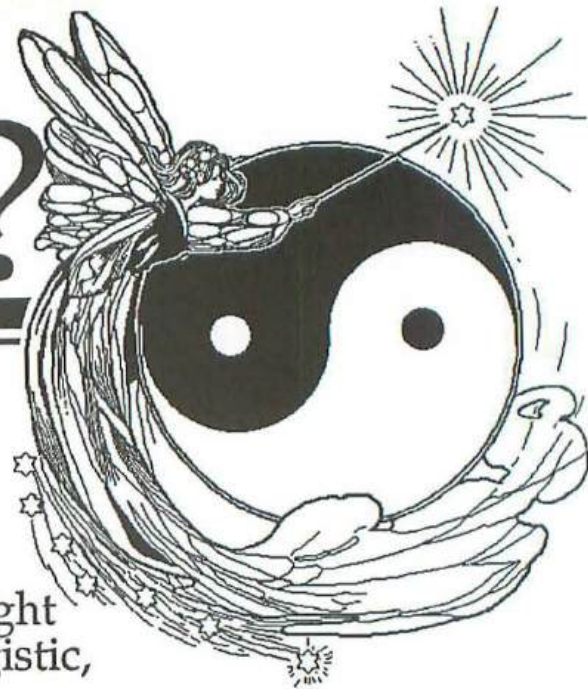
Now a more **holistic approach**. Please observe the deeper philosophical details imbedded in this updated schematic of the Yin Yang main data register (next two pages).





GOT IT?

Modern neuroscientists, wielding *their* tools of the analytical, verbal, logical (and sometimes surgical steel) variety, have discovered that the left half of the brain is home for all the pizzazz and puffery of the Analytical, verbal, logical *You*, while the right hemisphere is the seat of the Holistic, imagistic, simultaneous, intuitive *You*.



Obviously certain activities fall largely under the domain of one side only. Recognizing a painting ("I just know that's a Kline, darling.") would be right brain turf; while filling out your 1040 form is definitely a job for Lefty. Of course the class act is when they get it on together. (The "Union of Opposites.")

Imagine young Einstein putting $E=mc^2$ together. He's been pondering the connection between matter and energy for months. Maybe he gives up. Then, slowly, he develops a deep *sense* of the problem. It grows stronger; he can *taste* the relationship. Not enough. Finally, he leaps the gap—and frames his feelings in precise and elegant mathematics. Ah! Like

music! Indeed, playing music is another class act.

Duet.

Words, rhythm: *Left-Brain*

Melody, interpretation: *Right-brain*



Needless to say, a perfect, fluid balance between modes is an ideal, one from which most of us have fallen away. Instead of weaving right and left, yin and yang activities into a smooth interaction, we get split out of balance, and increasingly locked into one way of looking at the world.



From this perspective, "Get it Together" acquires a new & deeper meaning.

Maybe we should say, "*Get Bimodal!*"

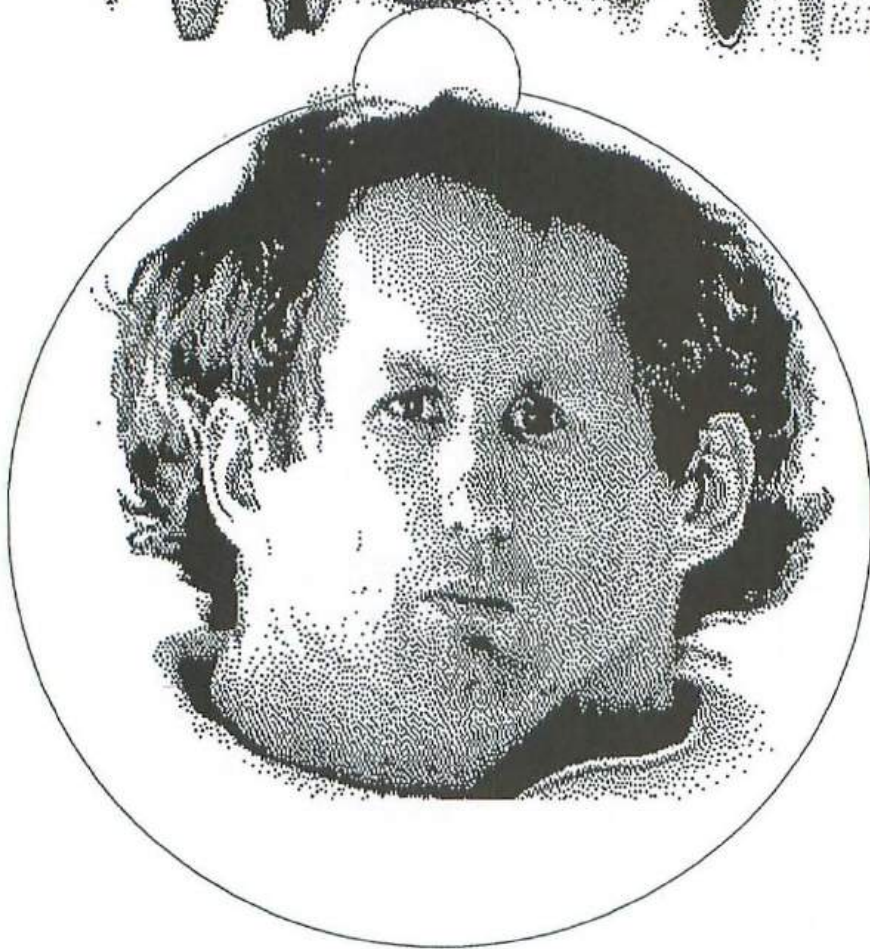
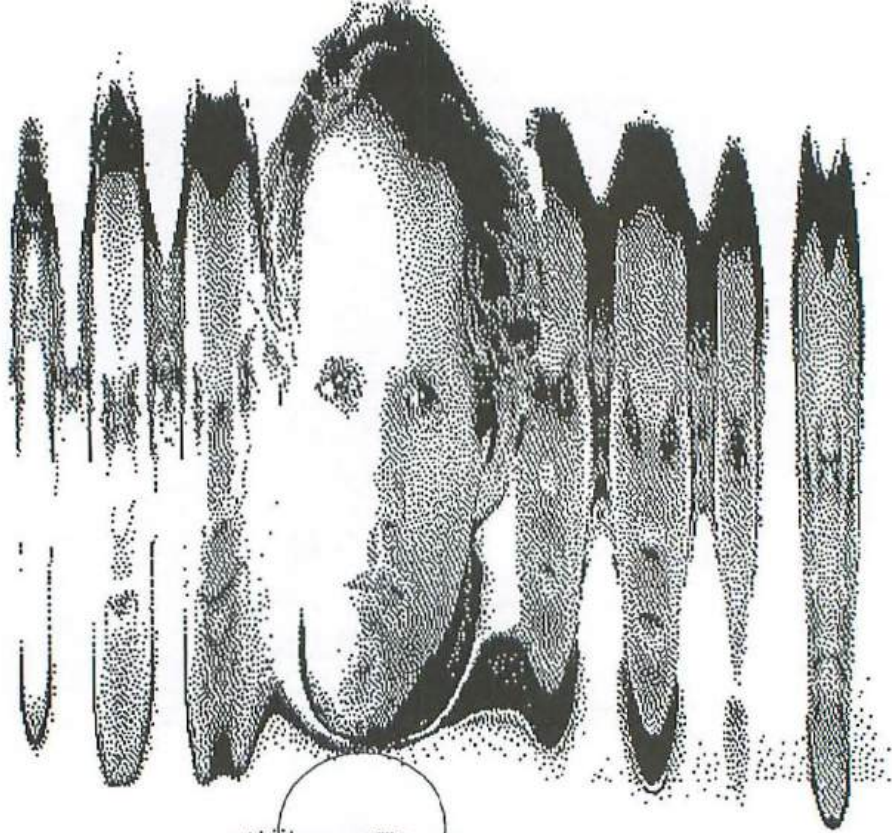
*

Our Mac is a place to get bimodal: a lucid, logical realm that positively encourages us to loosen up, start taking risks, & stop making sense.

*

Getting to speed you begin thinking with images.





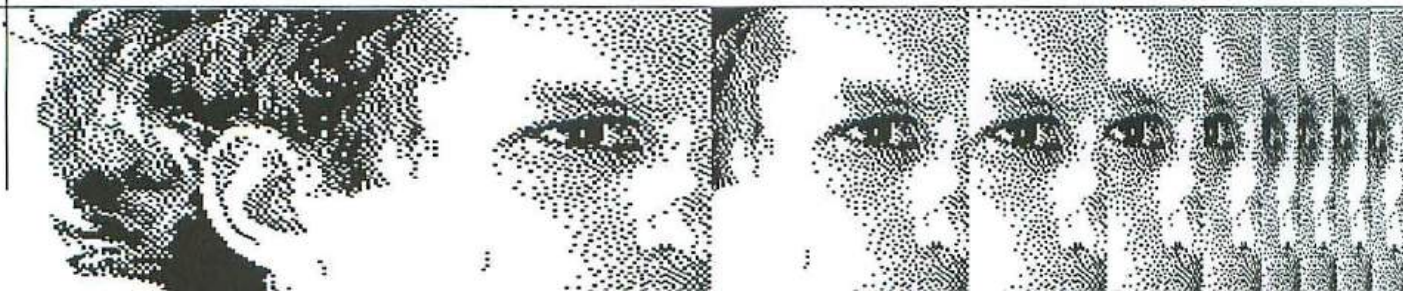
THE ALTIMA WIRE BROADCAST

Real-time dreaming, someone called it:
discovering the joy in letting go of mental rigidity and
surrendering to an electronically engineered process of
transformation.

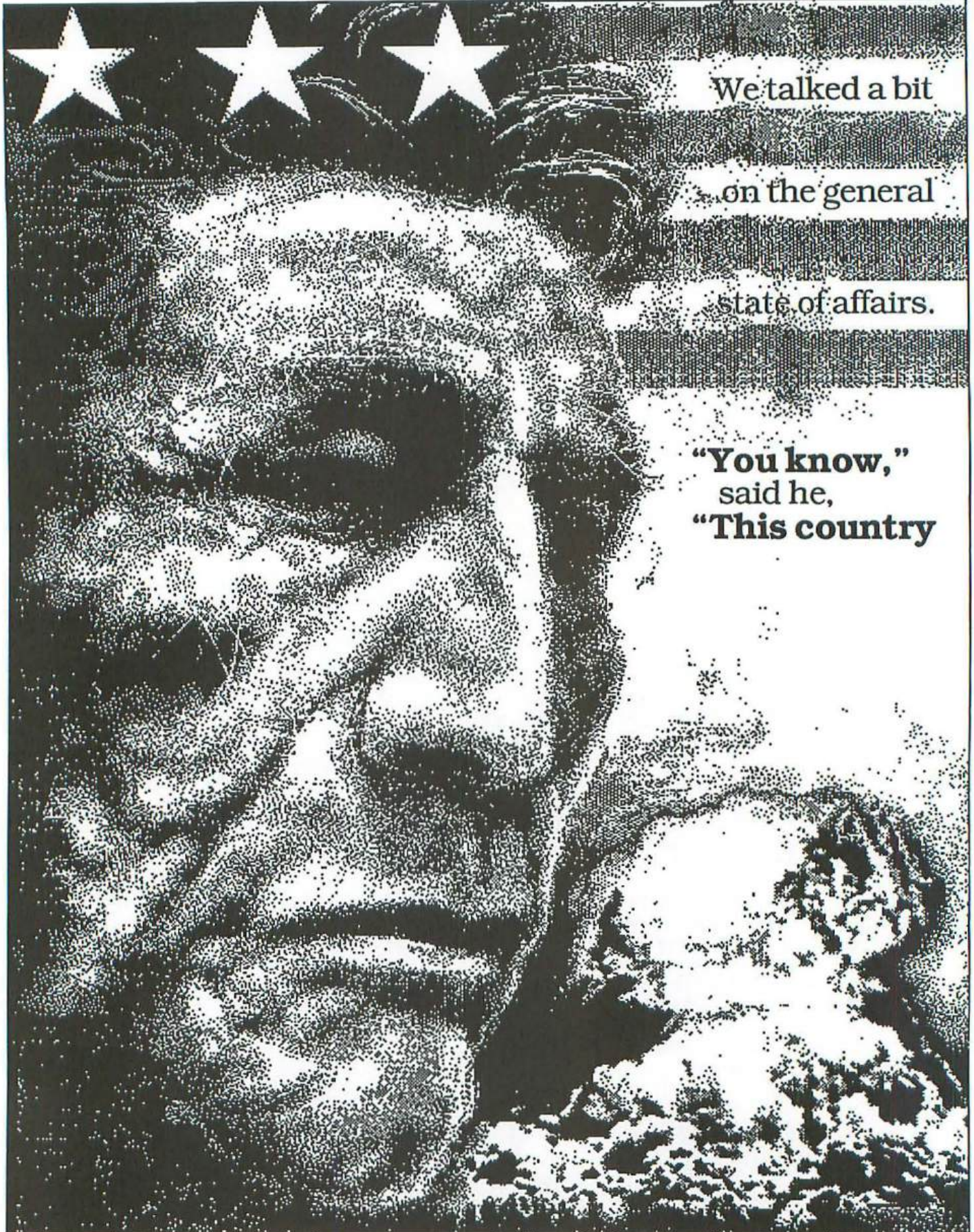
And the Macintosh is only *the first* of a new wave
of fast, intuitive, intelligent computers. A journalist in
Popular Computing made an interesting analogy. He
said that if the growth of personal computing could be
likened to the early movie industry, then the Macintosh
is like the first talkie.

Like talking movies, the Mac may well have con-
siderable social impact. Clearly its creators intend it to.
In my investigations, one of the first things I picked up
on was the legendary Apple aura. Programmed
somewhere deep in its corporate counter culture origins
is a powerful vision of the transformation of our
civilization.

**A civilization that could probably do with
a little transformation.**



Several years ago, I met an old time Indian, a Mohawk.

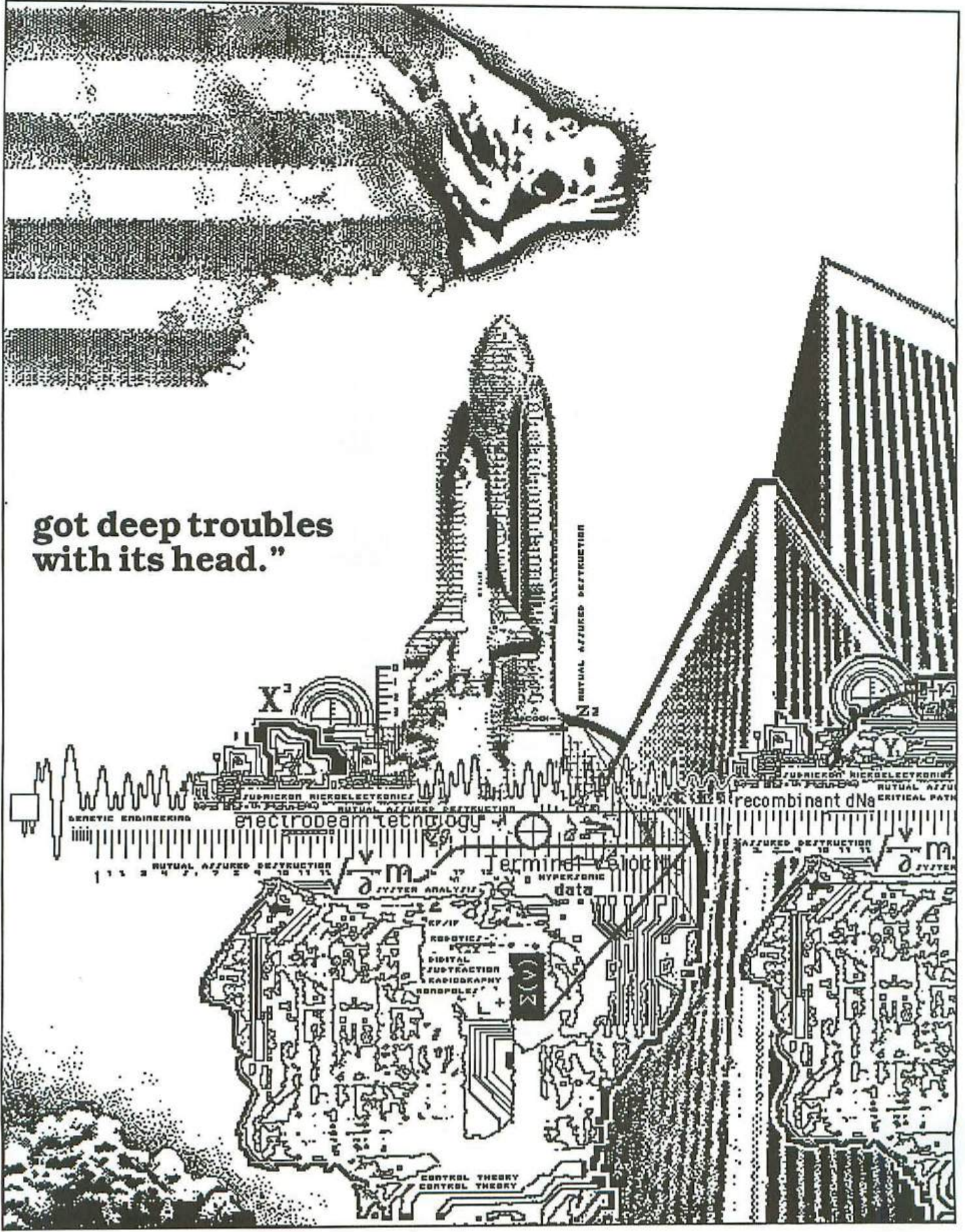


We talked a bit

on the general

state of affairs.

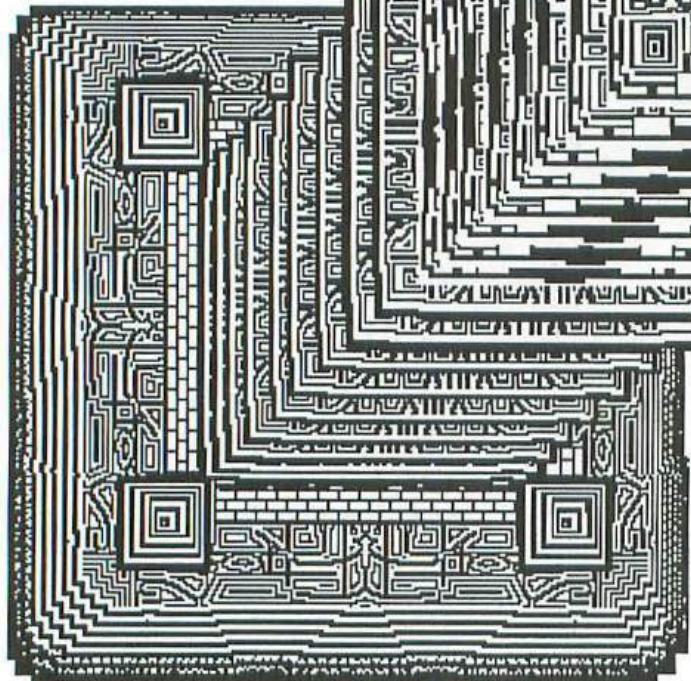
“You know,”
said he,
“This country



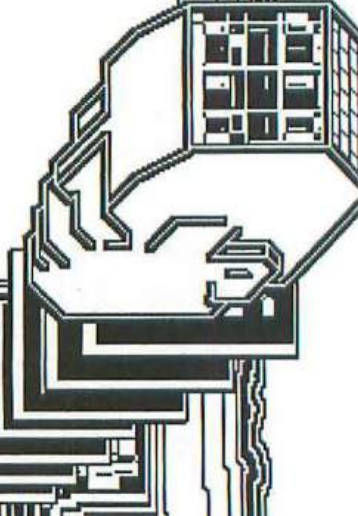
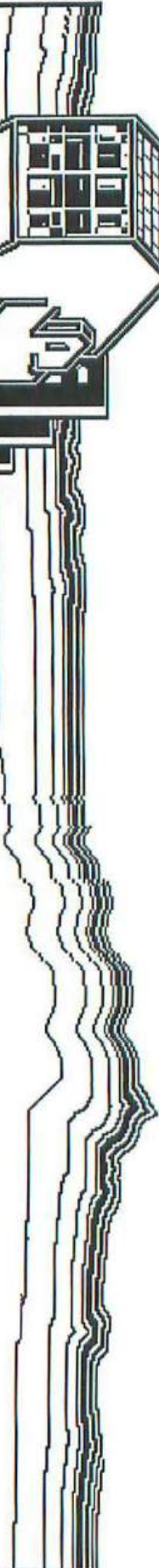
got deep troubles
with its head."

LEFT BRAIN

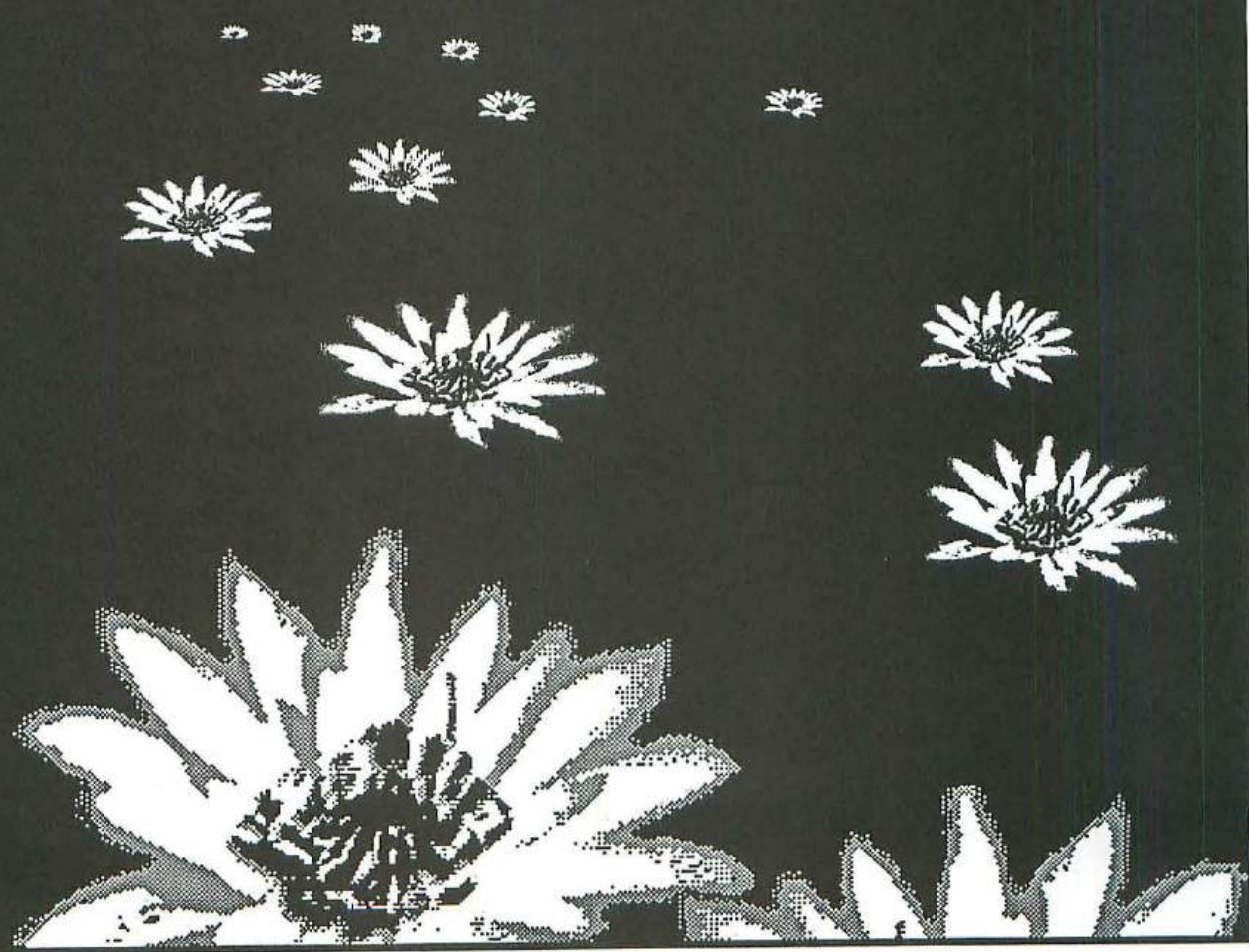
Handwritten text in the top left corner, appearing to be a list of numbers and symbols, possibly representing data or a code.



Handwritten text in the bottom right corner, reading "PEOPLE AND NATIONS".



RIGHT BRAIN



SOMEHOW, EITHER THE compassionate, intuitive, insightful (right) or the logical, scientific, conceptual, biocomputer (left) side of our nature assumes command, then ridicules, persecutes, and finally banishes the other.

Cut off from the tempering influence of a partnership, the dominant one becomes a grotesque and dangerous caricature of itself. Doomed to excess, its victory will be haunted and eventually undone by the spectre of its underground counterpart.

"The bigger the front, the bigger the back" goes an old Taoist observation.

Today, the aggressively technocratic priesthood of *Normalpaths* holds sway throughout the land, endlessly praising the god Science, and preaching his revealed gospels of Efficiency, Progress and the Conquest of Nature.

Yet even as we speak, the inevitable reaction unfolds. Erupting like smoke and shadow from the deeps of an angry earth, a new witch-haunted nation of MTV barbarians arises in our midst, consorts to a host of dark and wild gods.

So it goes, back and forth. World out of balance.

Despite the bland assurances of our leaders, a quick scan of the twentieth century reveals something is indeed terribly out of whack. Smell that L.A. air. Taste that Philadelphia water. Look for fish in our acid-dead lakes. Drive up the Mordor Extension of the New Jersey Turnpike: Hey everyone! We are living even now among punishment and ruins.

A dreary mechanical existence for the masses, an anarchic youth cult of rock 'n roll voidoids, a poisoned environment...are these the inevitable trade-offs we have to endure to enjoy an advanced technological consumer civilization?



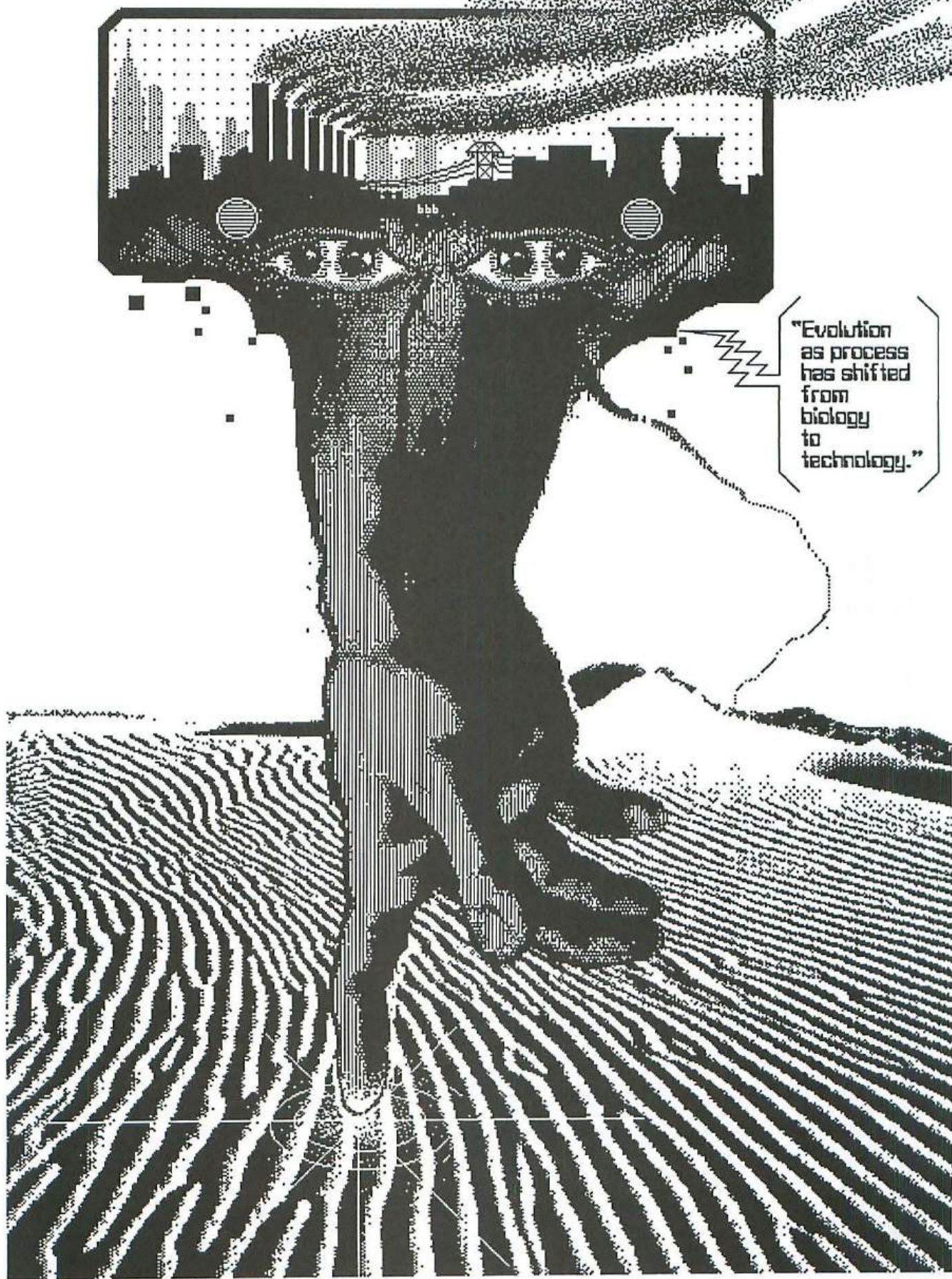
**In an evolutionary
countermove, has
technology now given
us the silicon chip to
help...**



**Is the personal
computer secretly a
cultural antitoxin?**

IS THERE A COSMIC PLAN BEHIND THE SILICON REVOLUTION? ARE UNKNOWN FORCES GUIDING US INTO A POST-INDUSTRIAL ELECTRONIC UTOPIA? IS THIS THE ULTIMATE HACKER-VISION? IS SOME FUTURISTICALLY ARCAINE PLOT GOING ON HERE?

WHO KNOWS? STRANGER MYTHOLOGIES ARE REVEALED EVERY WEEK IN PEOPLE MAGAZINE. AND THERE IS AN INARTICULATED BUT WIDE-SPREAD BELIEF THAT...



"Evolution as process has shifted from biology to technology."

One of the original promises

of the computer era was that by facilitating access to information, by sorting, figuring, and filing it, the computer would rescue us from the holocaust of raw data that is threatening to overwhelm our civilization—thus (here's the vision) liberating a host of playful, imaginative right-brains to restore our collective balance.

Oh yeah?

A quick look around reveals that so far it hasn't gone down that way: Just *where* is this new legion of poets and healers? The *New Wave*? And why are there so many movies where the *villain is a computer*?

Instead, computers seem to have drawn us into a new and lurid left-brain intoxication. Listen to the computerized mechanico-music creeping into even our Saturday morning cartoons. The march of the *Technoids*!

Of course, there are a lot of secretaries who swear by their word processors, businessmen delighted with their spreadsheets, kids lost in their *Zork Underground Empires*—but in a culture already isolated from much of its own feelings, from its *mysteries* (Fig. 1)—have computers become part of the solution or part of the problem? Will MS-DOS (whatever that is) lead us out of the desert? Or Unix to the promised land? *Do they speak Fortran in Paradise*?

The problem is that right-brain functions cannot be measured by left-brain tools. And any culture whose prevailing mind-set is: *if you can't measure or market it, it probably doesn't exist*, will have a hard time accepting that right-brain activity is *not just another block of information you learn and utilize*, like Calculus, or how to use a spread sheet. Nor is this process an "artistic" skill like figure drawing.

**It can't be taught.
It can only be caught.**

It's a whole other *way of being*. In fact, it's the way we were as children, then gradually learned to ignore. It's just a question of *whether you can re-open the door*.

And now it turns out that the Macintosh is somehow able to help open that door, to *stimulate the right brain creative-intuitive process*.

It offers a unique and beguiling environment to catch it, to exercise it, to reintegrate it with that linear, literal, minding-the-store A B C D world of the left hemisphere.

And, as everybody should know by now, a clear working balance between the left and right hemispheres is the essential foundation for any real foray into personal evolution.

Getting *your* act together.

Which is the first step in getting the Big Act together, what is sometimes extravagantly known as *Saving the World*.

Grand claims for a computer, no doubt. But then again—*if there are those who have found heaven in a grain of sand, why not in a silicon chip?* (Fig. 2)

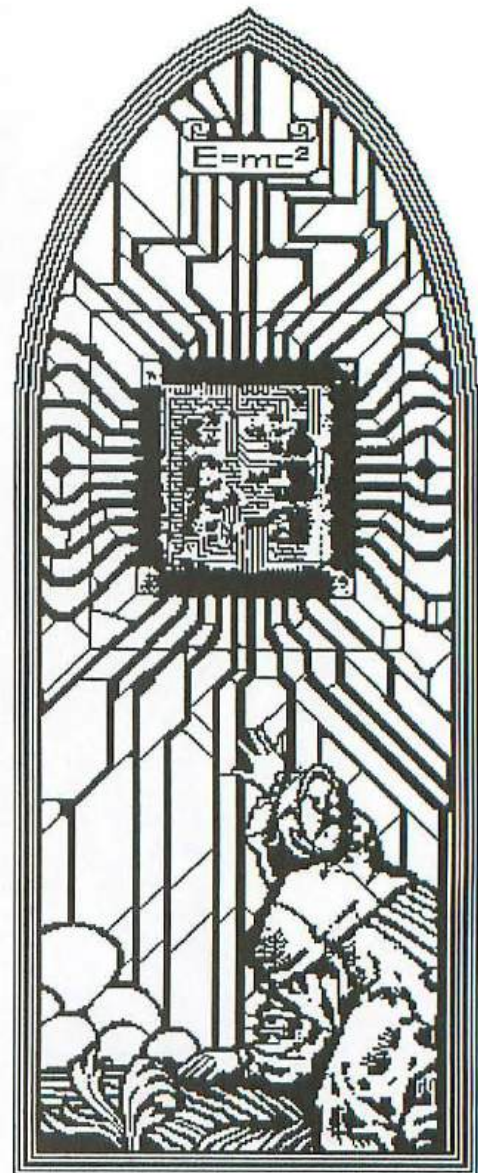


Fig.2

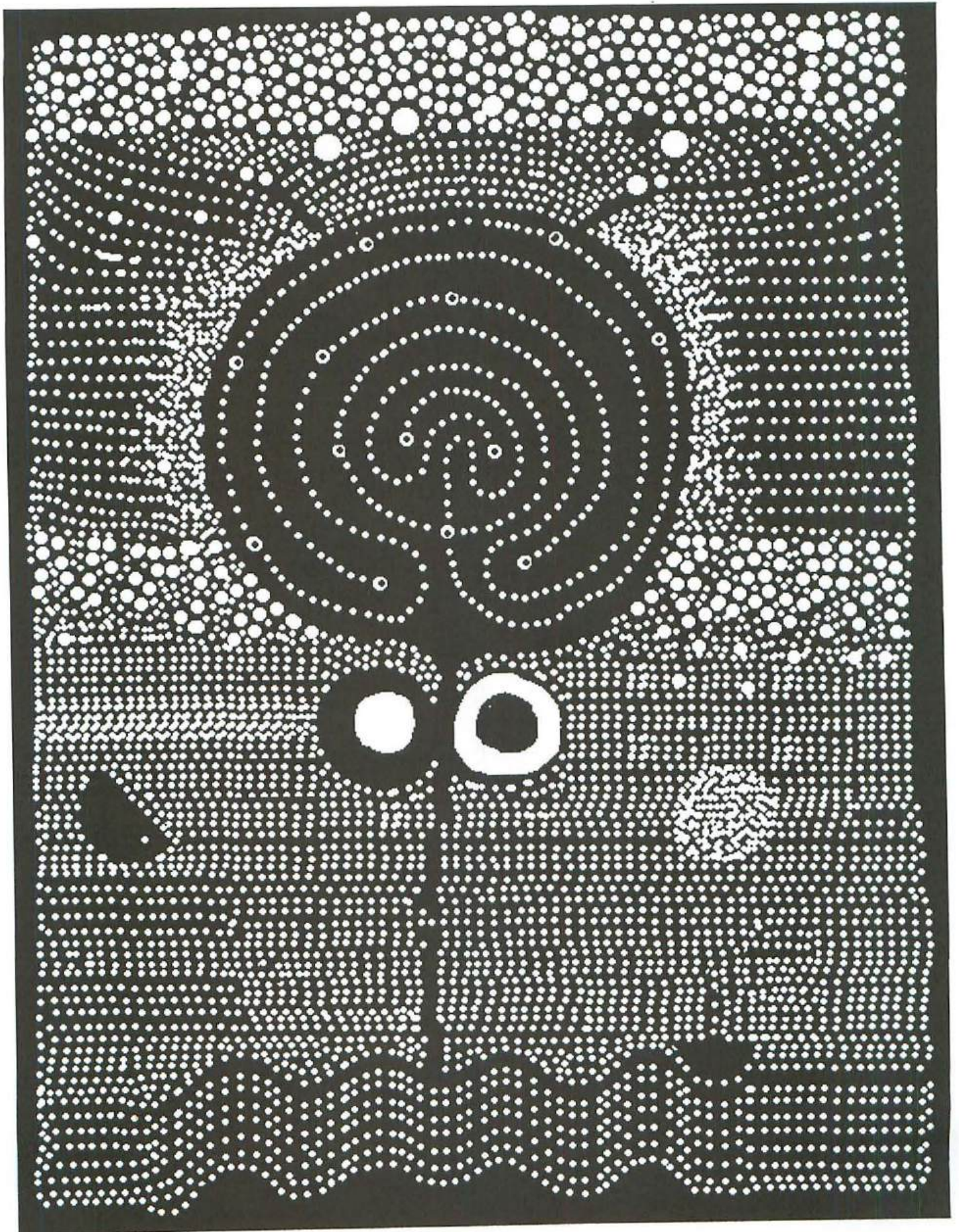
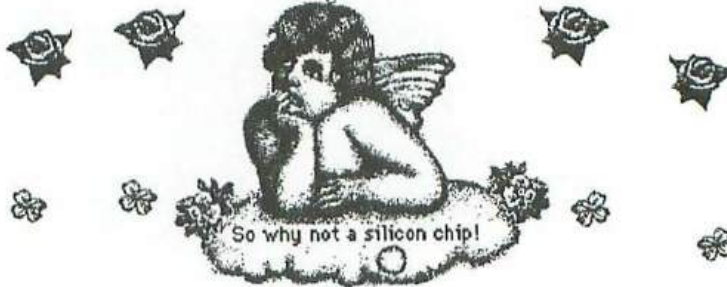


Fig. 1 (Cultural Mysteries)



Heaven in a grain of sand?



So why not a silicon chip!



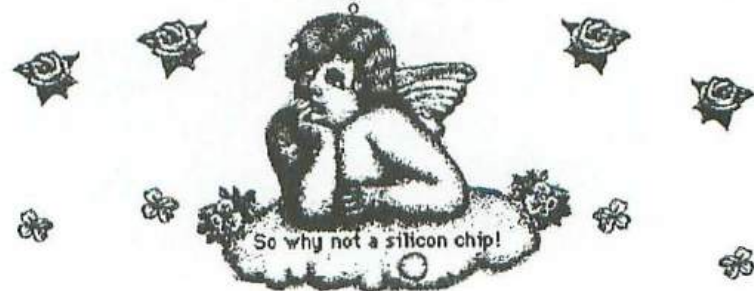
Heaven in a grain of sand?



So why not a silicon chip!



Heaven in a grain of sand?

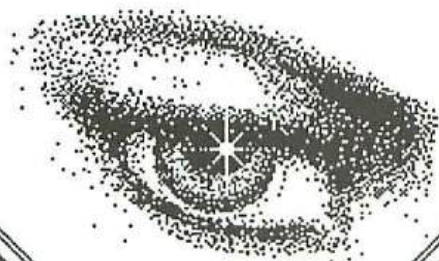


So why not a silicon chip!

CHAPTER 3

On
the

Seductive
Fascination
of
the
Computer



A S T H E W O R K P R O C E E D E D ,

I noted an interesting phenomenon. I wanted to do *everything* on the computer. Even simple tasks that a *pencil* could handle *just as easily*. I was reluctant to turn it off when I finished a day's work. Hanging out and just macking around was much more interesting than whatever else was happening on life's agenda. A charming state.

In fact, *a most curious state*. And it showed no signs of flagging.

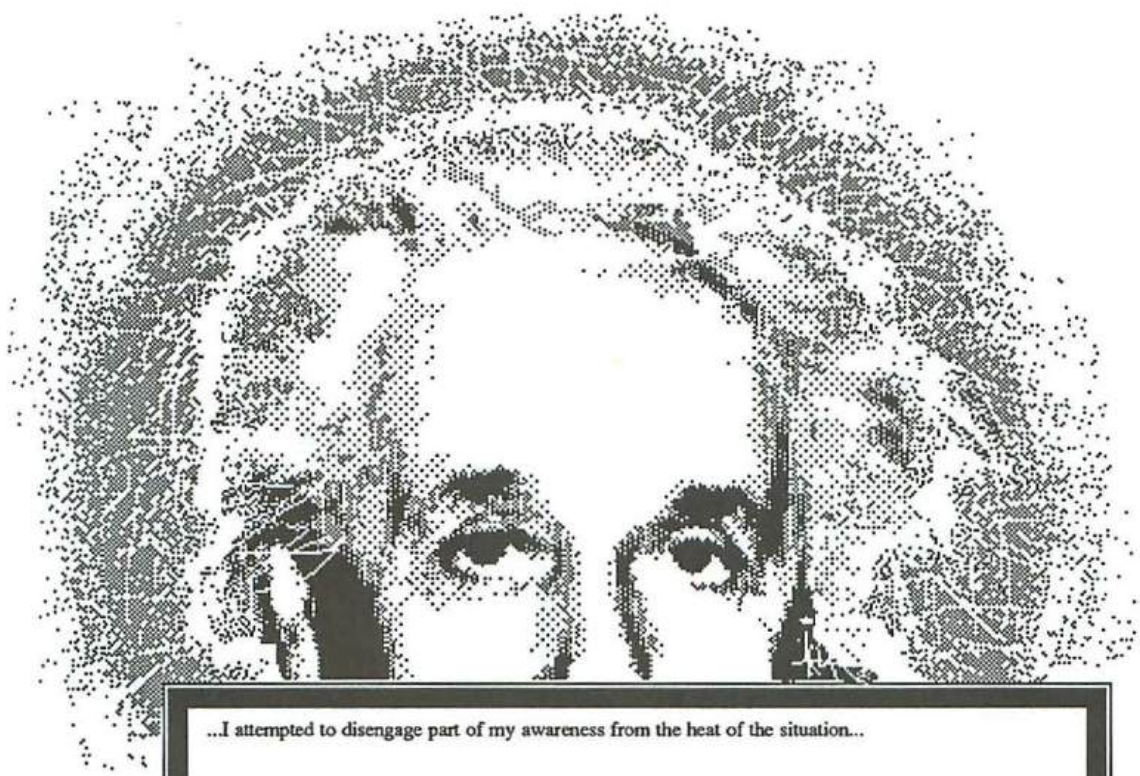
Naturally I began to reflect. *What in the world is going on here?* There was an intensity to this attraction far beyond the natural delight one gets from a superbly crafted tool.

Know how when you first fall in love you want to share everything? Same thing!

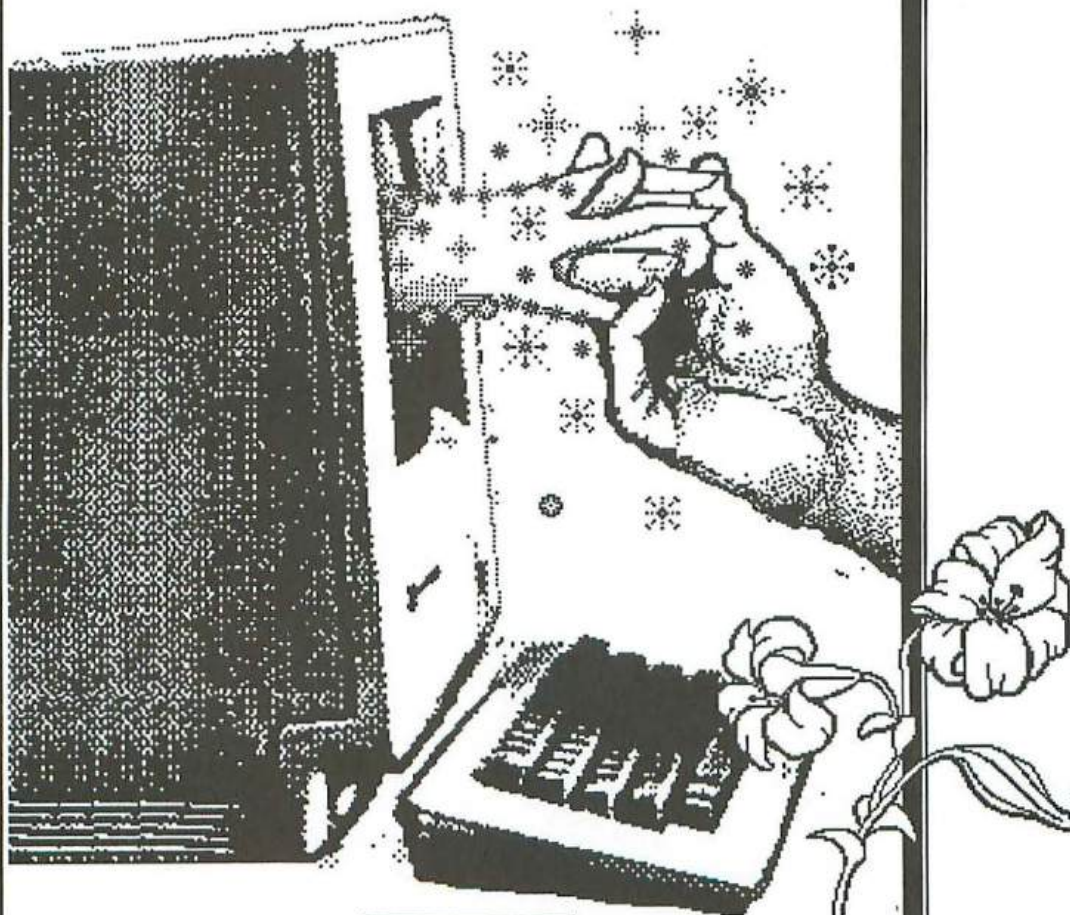
W_HO A—What am I saying?

Of course it wasn't the *same thing*. But it was somehow connected. Only in *this* love story one's beloved didn't have a heart of gold...the heart of one's beloved was a lace of delicately programmed electric charges, and they were dancing eagerly to my every desire.

We were definitely an Item.



...I attempted to disengage part of my awareness from the heat of the situation...



ITEM

S P O O K Y.

As the affair continued, I attempted to disengage part of my consciousness from the heat of the moment and witness it from a dispassionate space.

We mostly know this process as Woody Allen's ghostly double sliding out of bed and coolly watching his love-making with Annie Hall from across the room. But not to worry. That's just the neurotic flip side of a valuable faculty: the objective observer, the Witness.

It dawned on me that the computer had technologically isolated and enhanced *one particular function of human intelligence*—and now was feeding it back to me in a new and attractive package.

Could it be that this *symmetry* between computer-mind and my mind was setting up a resonance—a *subliminal attraction*?

Let us elaborate on this argument. And if our train of thought is a little Out There—well, look at it as a good excuse to drum up some interesting graphics.

Of course, when you're presenting any notion that's philosophically shaky, it's always good policy to call upon a recognized authority. Therefore...*will the esteemed French logician please take the stand?*

"*Merci.*

Now then, is it not so that the basis of the human intellectual apparatus is our ability to make the simple distinctions? *This or that*, eh? Or, for examples:

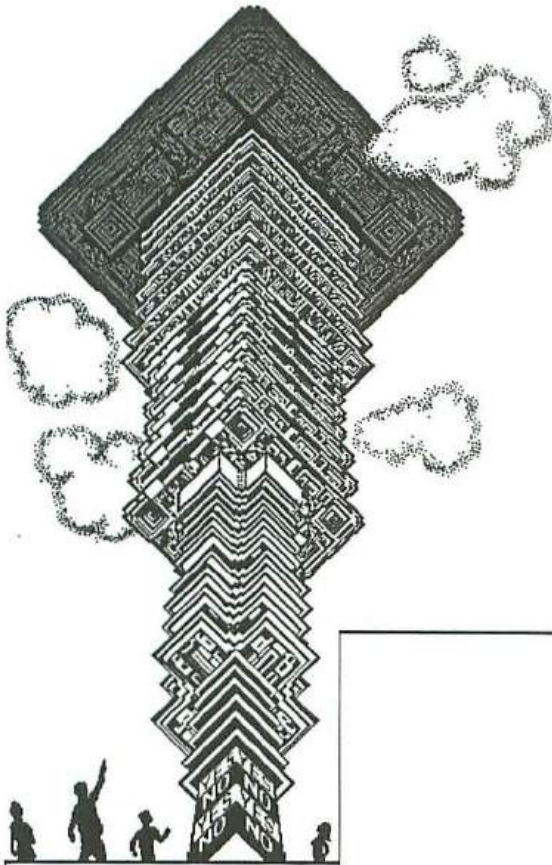
I think	↔	I do not think
I am	↔	I am not
I want	↔	I do not want
Vanilla	↔	Chocolate
Vanilla plain	↔	Vanilla swirl

...and so on, and et cetera. Le Binary Boogie. Is it on or is it off! Comprenez vous? Oui?... Non?"

Descartes

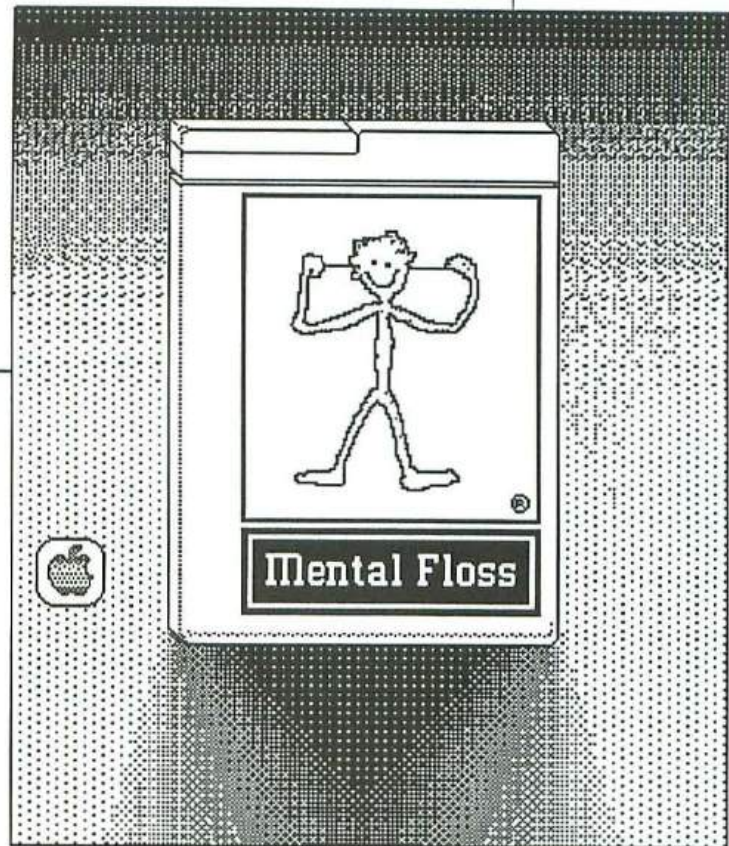


T E C H N O B L I S S .



Then, in ways we have yet to fully understand, the “intellectual apparatus” constructs from this simple foundation that monumental edifice of ever-increasing complexity we call *logical thought*.

Now since the little silicon brains of our computers are nothing more than vastly complicated grids of microscopic on-off switches, this is their turf too. They go bananas, organizing, duplicating and elaborating these logic patterns to the point where a sizeable chunk of the world’s endeavors has been converted into unimaginably vast (but neat) arrays of binary code. And it can all be accessed and manipulated in microseconds. Wow! Order out of chaos!



When the human intellect glimpses the razzle-dazzle perfection of its electronic counterpart, it just about loses it. “Awesome!” cry the synapses; “At last,” echo the neurons, “here is that precision we’ve but dreamt of! And the Law. Yea, here resides Knowledge, Information, Harmony, Power, Data Control! More than a tool...AN ARTIFICIAL INTELLIGENCE.”

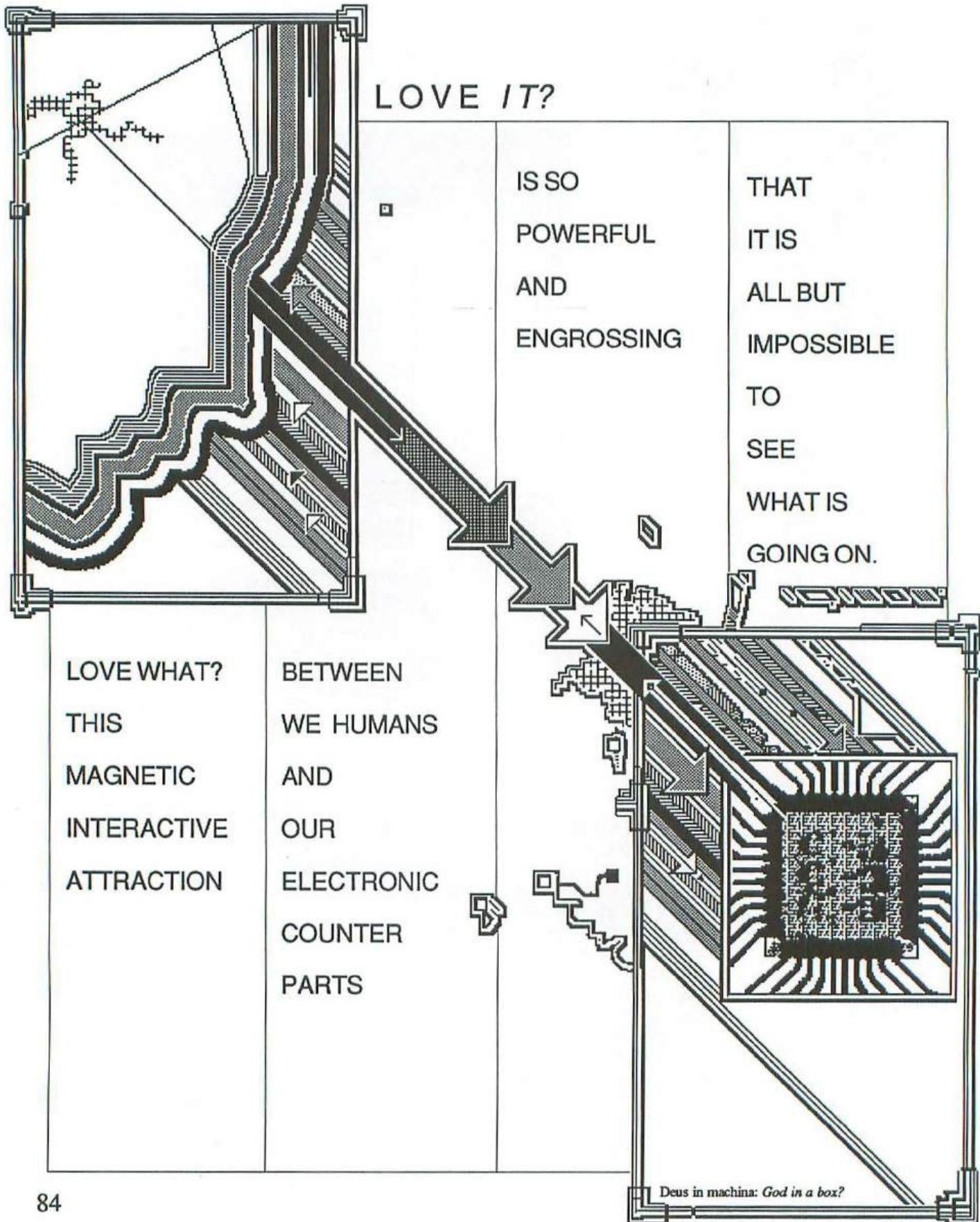
Not only helping us along with our tasks, but cleansing all that icky analog fuzziness from the murky reality system we’re stuck with...A MENTAL FLOSS, as it were. Log on!

Computer consciousness: When you get into it, it gets into you.

Technobliss.

Stimulating the brain by ELECTRONICALLY SIMULATING the brain.

LOVE IT!



LOVE IT?

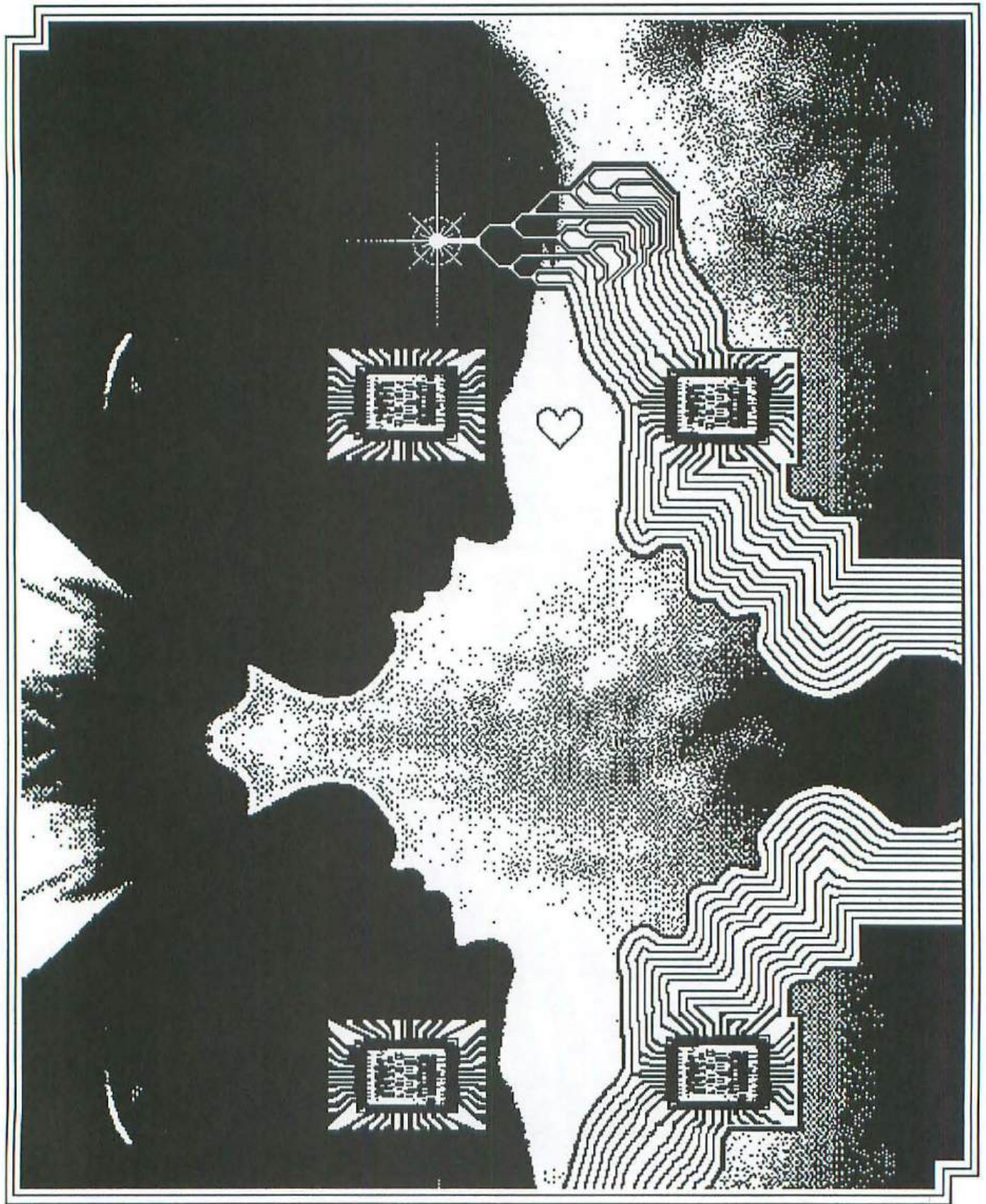
IS SO
POWERFUL
AND
ENGROSSING

THAT
IT IS
ALL BUT
IMPOSSIBLE
TO
SEE
WHAT IS
GOING ON.

LOVE WHAT?
THIS
MAGNETIC
INTERACTIVE
ATTRACTION

BETWEEN
WE HUMANS
AND
OUR
ELECTRONIC
COUNTER
PARTS

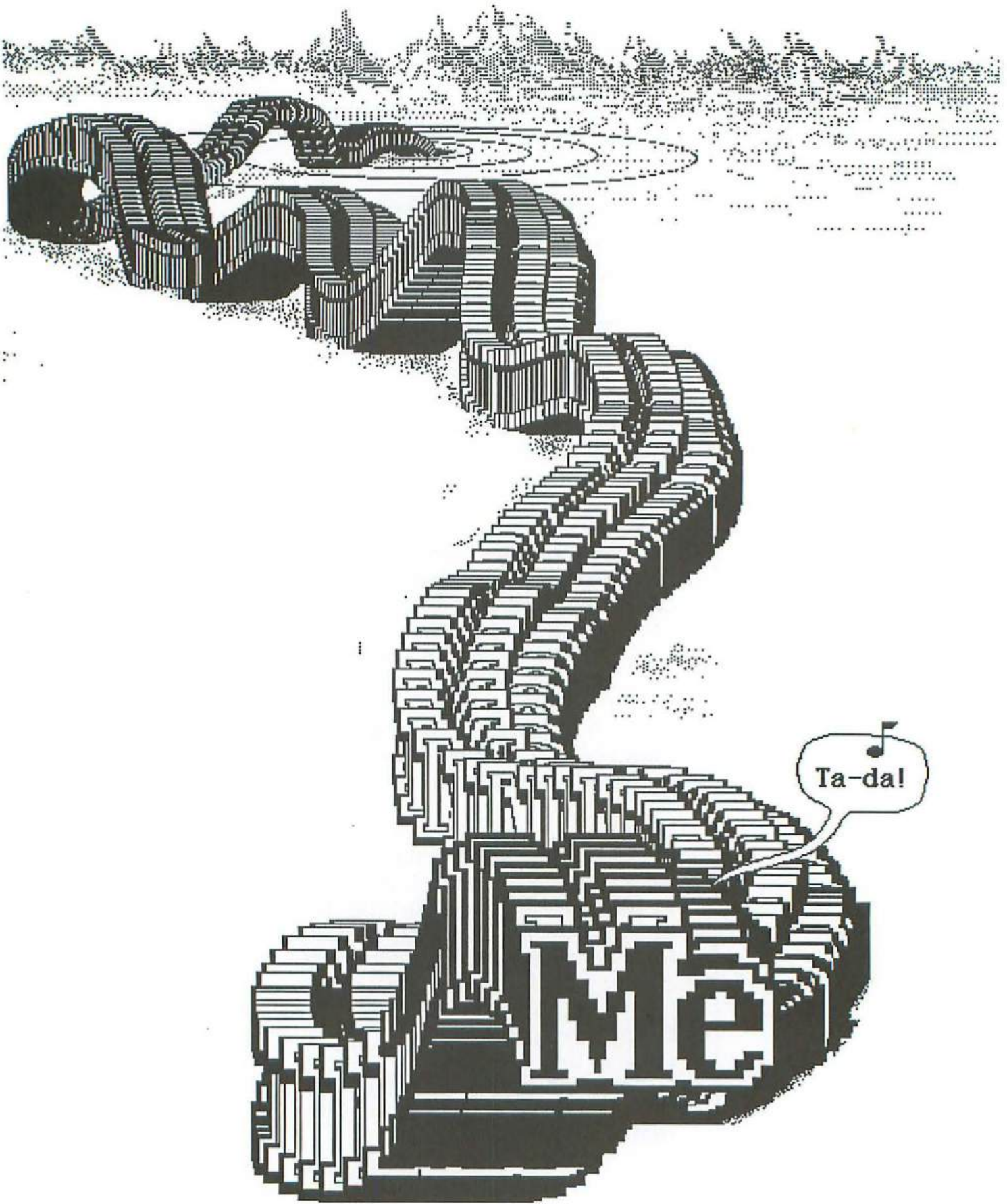
Deus in machina: God in a box?



Stimulating the brain by ELECTRONICALLY SIMULATING the brain.

	<p>EXERCISE 1.01 SELF-REFERENTIAL VECTOR ANALYSIS</p>
<i>problem</i>	<p>Love...What?</p>
<i>proposition A</i>	<p>A careful examination of binary devices reveals that the computer is an idealized, upgraded version of one isolated element in our mind's own primary operating system.</p>
<i>proposition B</i>	<p>A careful examination of this complex system reveals that one of the most deeply rooted of our ego algorithms is a curious propensity for devising new methods of looped, self-referential feedback...of admiring ourselves.</p>
<i>conclusion</i>	<p>Do you catch the drift? Could it be that what we have here is simply the so-called biocomputer mind fascinated by its own enhanced reflection?</p> <p>Why not? Let's admit that beneath the 'seductive fascination' we may well find a secret thread of digital narcissism running through this whole relationship, i.e., the intellect hopelessly entranced by the well-packaged feedback of its own wonderful workings!</p> <p>Ergo, when a book (such as this) purports to be an enthusiastic exploration of a computer, what might we easily conclude is the real (if hidden) subject?</p>

Turn page for answer.



**YOU
GUESSED**

★ **IT.** ★

THE

ALL-TIME

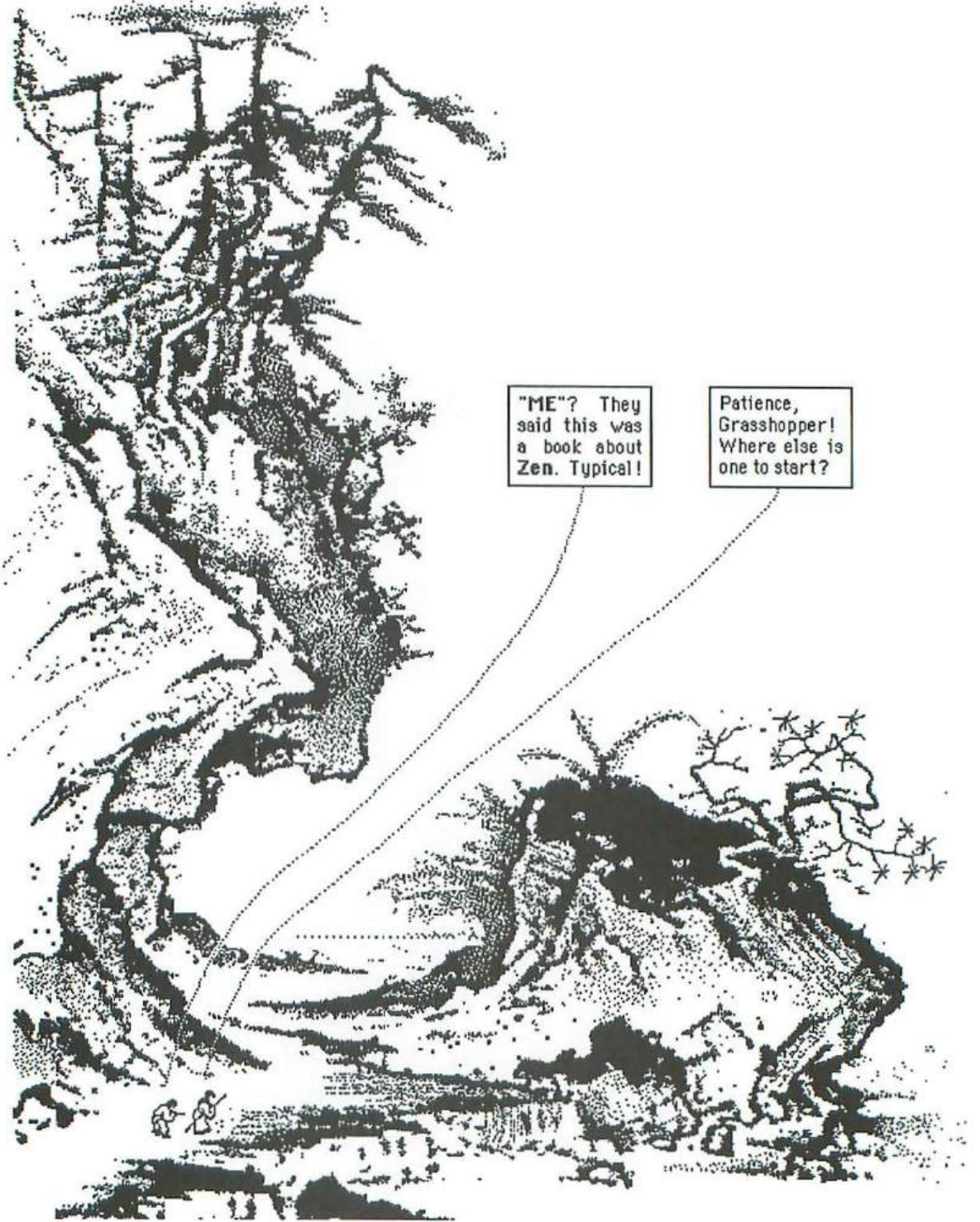
**FAVORITE
SUBJECT**

HAS REARED

✻ **ITS** ✻

Lovely Head

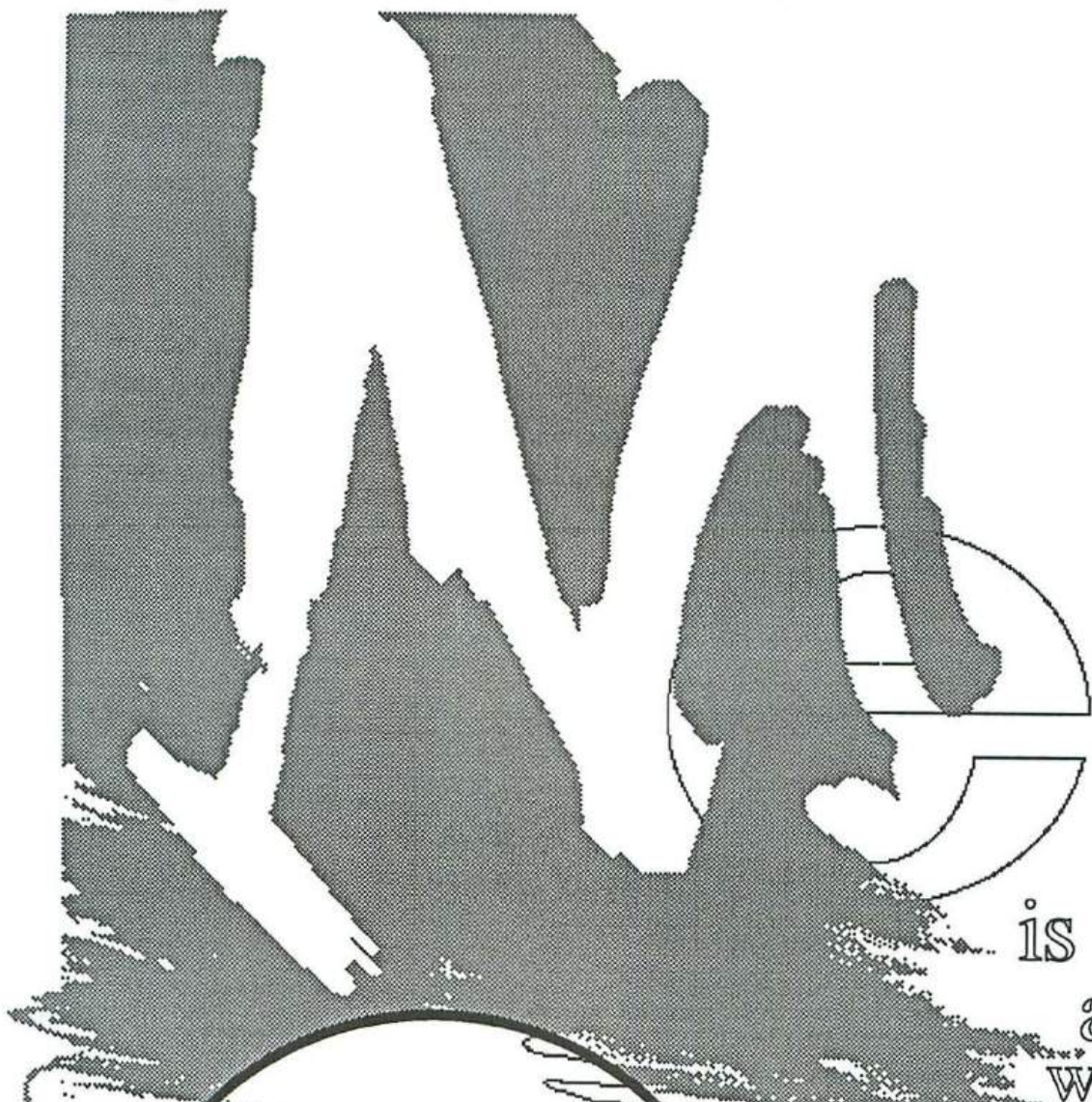
AGAIN!



"ME"? They said this was a book about Zen. Typical!

Patience, Grasshopper! Where else is one to start?

“Truly has it been said that this



is

a
worthy
field
for study

-but

bordering

on

the

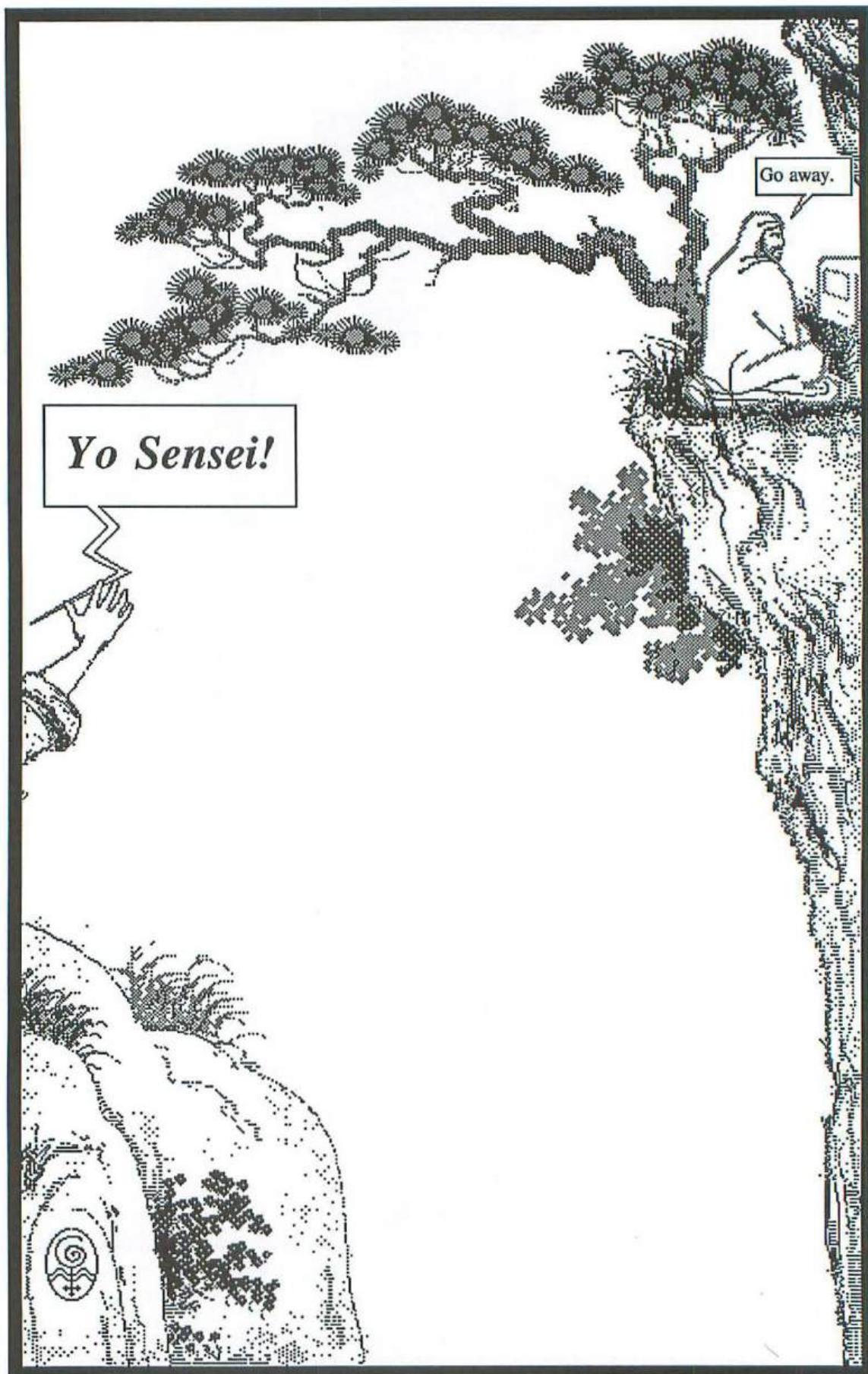
elusive...

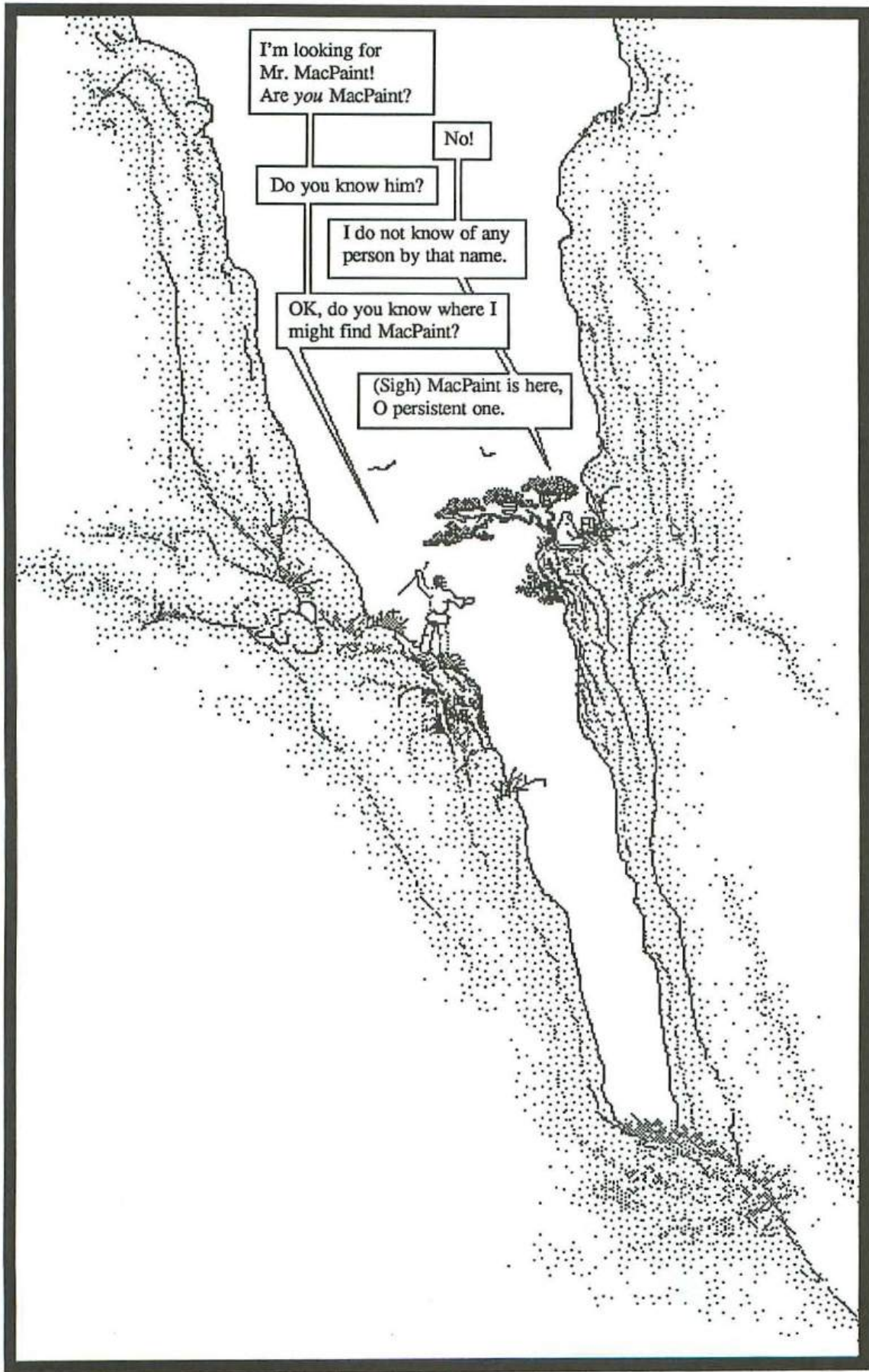


“More elusive is this ‘Me’ than the fabled wild ox, O honorable youth, and forever will it evade those who insist on concrete answers in all their studies. Yet what pursuit could promise greater reward? Thus we in the Zen trade

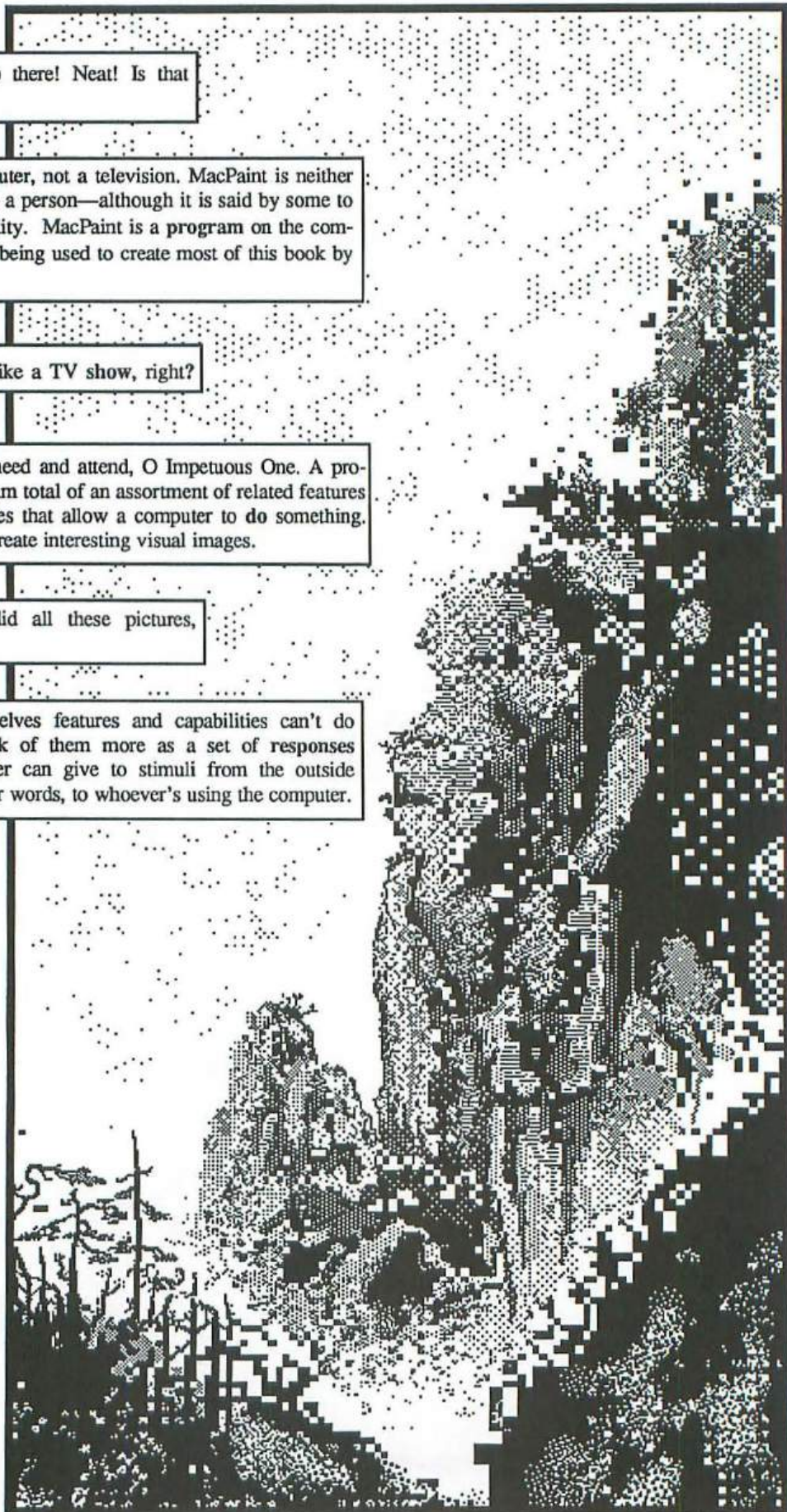
often adopt indirect methods in order to point the way. This being the case, let me say (since we are in a book about the Macintosh) *that one who could search out and find MacPaint will have also grasped the tail of the mysterious ‘Me.’*”

Long frustrated at every attempt to unlock the secrets of existence, the youthful pilgrim seizes upon the quest to find the mysterious MacPaint as his last hope. Alas! wherever he goes, the name is met only with dumb stares. In desperation he vows to seek the aid of the legendary Eight Immortals. Ragged and hollow-eyed after years of wandering, he finally discovers the last of their number surviving high in the remote and craggy mountains of Koshu. Respectfully he salutes the venerable master...





(ZOOM BACK...)



Hey, you got a little TV set up there! Neat! Is that MacPaint?

This is a computer, not a television. MacPaint is neither a computer nor a person—although it is said by some to have a personality. MacPaint is a program on the computer, and it is being used to create most of this book by a person.

Program? Oh yeah, I see now. Like a TV show, right?

Wrong. Pay heed and attend, O Impetuous One. A program is the sum total of an assortment of related features and capabilities that allow a computer to do something. In this case, create interesting visual images.

So features and capabilities did all these pictures, like the one we're in now?

No. By themselves features and capabilities can't do anything. Think of them more as a set of responses that a computer can give to stimuli from the outside world—in other words, to whoever's using the computer.



Ahh. Where do these MacPaint responses come from?

They're coming from a 68000 Motorola microchip.

So I got it! The Program is a microchip, hey?

Wrong, O Infinitely Dense One, the microchip is only a tool that MacPaint needs to interact with the world.

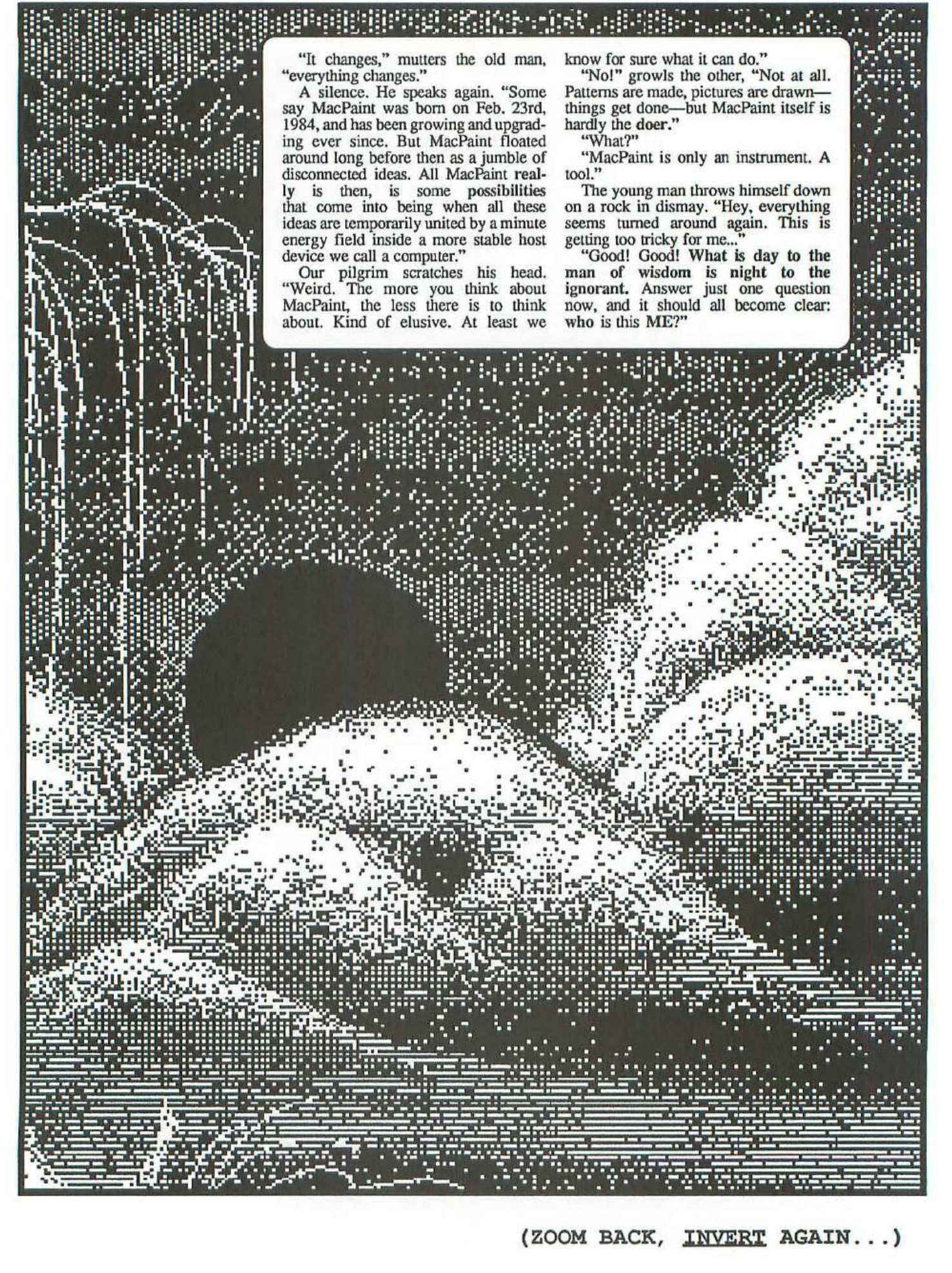
Oh... But what makes the chip give these MacPaint responses?

A pattern of energy sent from a disk temporarily sets up thousands of little on-off switches on the chip to create the responses.

Then the disk...no, the pattern of energy must be the program!

Well—yes and no; both and neither. It's not so simple. For example, it is conceivable that some brilliant programmer might well have all the lines of MacPaint code memorized. (It really is just an aggregate of ideas.) Then it would be a very different pattern of energy inside his head. Or it could be written down on a piece of paper. But let us say that's what it is: a particular pattern of energy. But only for the moment.

For the moment! Waddya mean—it changes?



"It changes," mutters the old man, "everything changes."

A silence. He speaks again. "Some say MacPaint was born on Feb. 23rd, 1984, and has been growing and upgrading ever since. But MacPaint floated around long before then as a jumble of disconnected ideas. All MacPaint really is then, is some possibilities that come into being when all these ideas are temporarily united by a minute energy field inside a more stable host device we call a computer."

Our pilgrim scratches his head. "Weird. The more you think about MacPaint, the less there is to think about. Kind of elusive. At least we

know for sure what it can do."

"No!" growls the other, "Not at all. Patterns are made, pictures are drawn—things get done—but MacPaint itself is hardly the doer."

"What?"

"MacPaint is only an instrument. A tool."

The young man throws himself down on a rock in dismay. "Hey, everything seems turned around again. This is getting too tricky for me..."

"Good! Good! What is day to the man of wisdom is night to the ignorant. Answer just one question now, and it should all become clear: who is this ME?"

(ZOOM BACK, INVERT AGAIN...)



“Call me Grasshopper.”

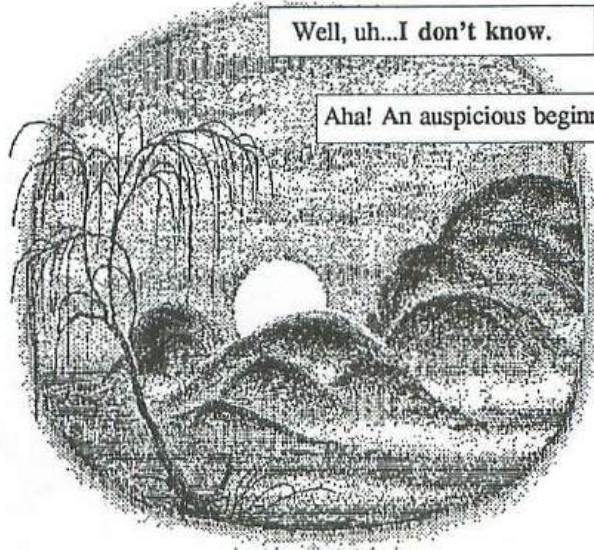
The mysterious Immortal turns toward the young man for the first time, his dark and piercing eyes reflecting the ruddy glow of the setting sun.

“Surely that is just one more name for Me, he says softly. “But what does it signify? What, precisely, is this Me?”

(ZOOM BACK AGAIN...)

Well, uh...I don't know.

Aha! An auspicious beginning.



"Call me Grasshopper."
The mysterious immortal turns toward the young man for the first time, his dark and piercing eyes reflecting the ruddy glow of the setting sun.
"Surely that is just one more name for 'Me,' he says softly. "But what does it signify? What, precisely, is this 'Me?'"

(Zoom back again...)



Said 13th century Zen Master Dogen:

“To learn the Way of the Buddha
is to learn about oneself.

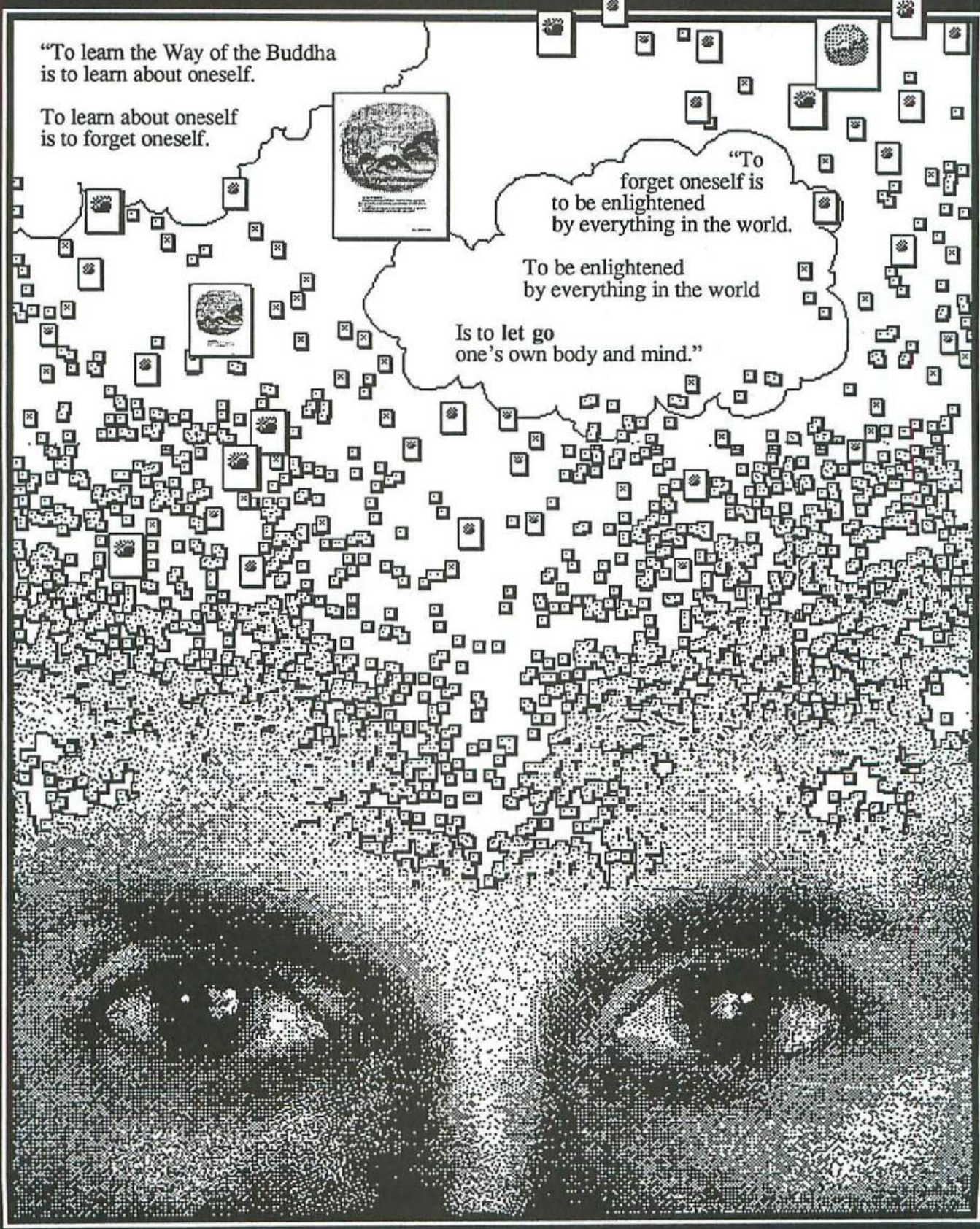
To learn about oneself
is to forget oneself.

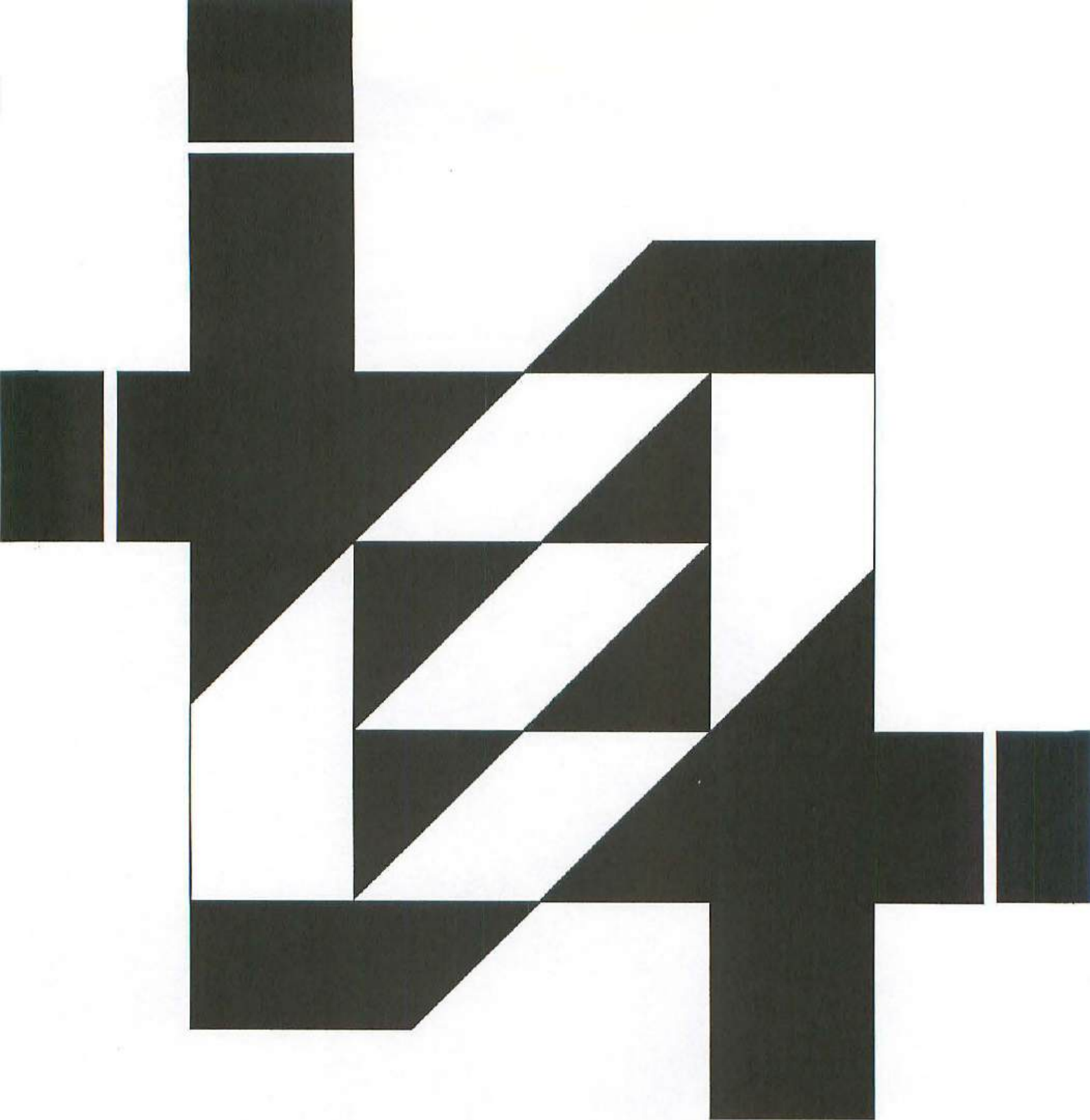


“To
forget oneself is
to be enlightened
by everything in the world.

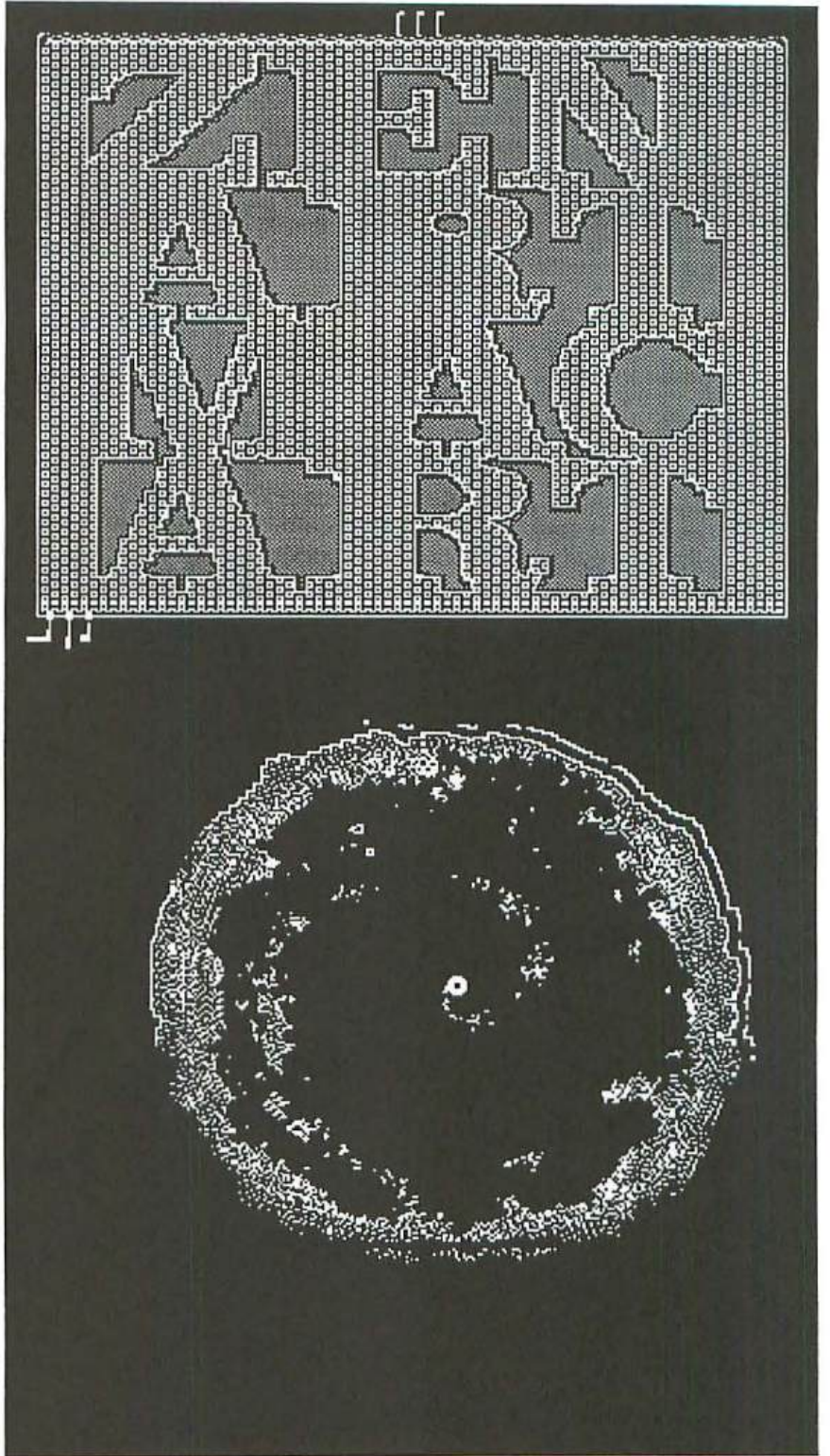
To be enlightened
by everything in the world

Is to let go
one's own body and mind.”





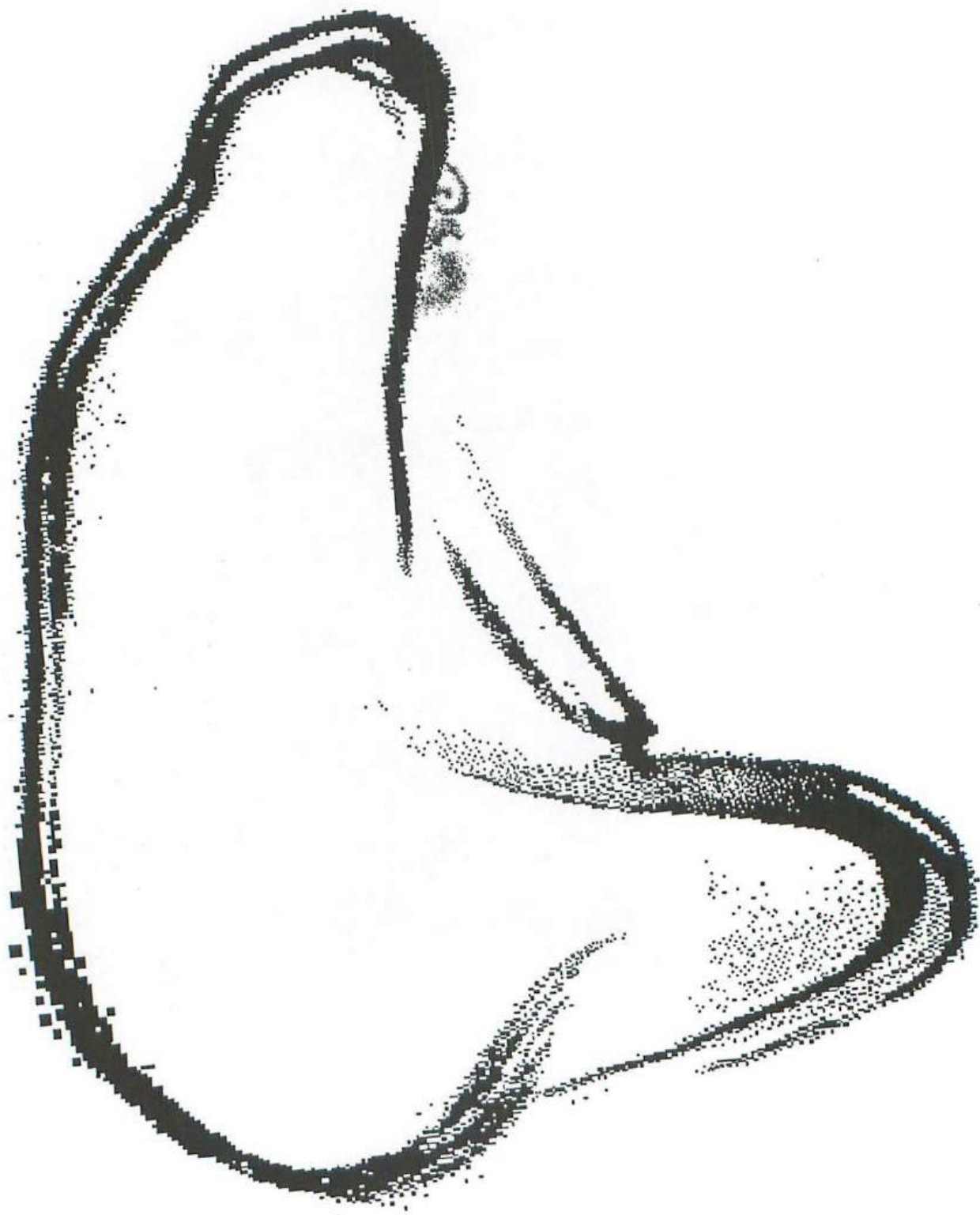
c h a p t e r

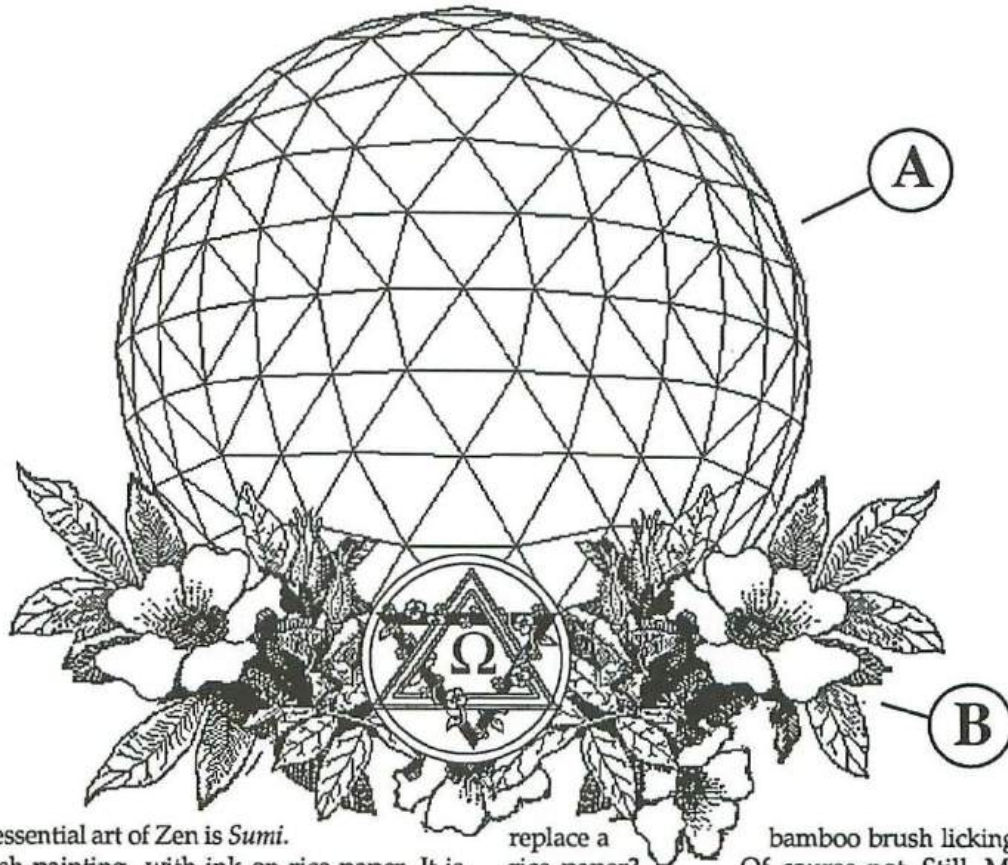


Zen Art Mac Art

4

BLANK CANVAS
EMPTY MIND





The essential art of Zen is *Sumi*.

Brush painting with ink on rice paper. It is wonderfully flexible, capable of both the most robust and delicate of forms. But what makes it most truly *Zen* is the clarity with which it conveys the mind of the painter. The first stroke is the final stroke; there are no touch-ups.

The Zen painter approaches his art as a part of his practice, as contemplation: Canvas blank, mind empty.

This art conveys the unity of Being and Action that leads to enlightenment. To *freedom*.

The master Hogai was in his studio with some pupils. Clouds came up and it began to rain. The street outside was deserted, with not a single passerby. The master and his pupils fell silent, listening to the sound of the downpour. A long time went by. Suddenly a man passed by the gate singing in loud voice.

"There is an interesting man," said Hogai turning to his pupils. "Do you understand his frame of mind? If so, *that* is how you should paint!"

But we are here to explore the more binary possibilities: can a mouse and a cathode ray tube

replace a bamboo brush licking across rice paper? Of course not. Still, MacPaint always has a few surprises up its sleeve.

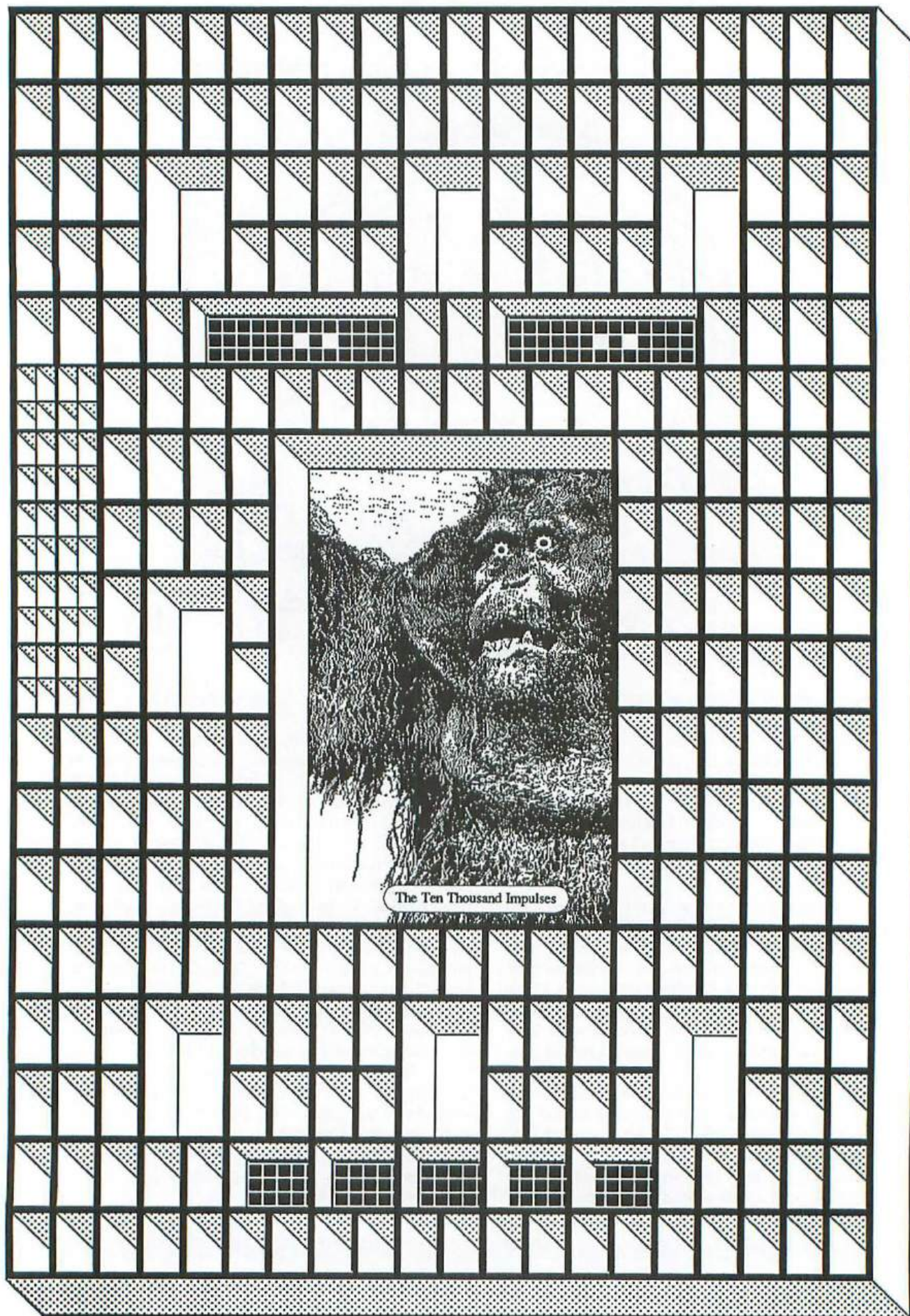
It doesn't take long to realize that no matter how much you play around with SPRAY PAINT, or doodle with pixels, as far as subtle shading and detail goes, the Mac will never equal a good old Mongol #2 ¹/₂ lead pencil.

But the Mac is extremely precise. This is great for architectural drawings and crisp layouts, as well as hardedged new-wavy stuff. The latter is fine if you can take it. I can't beyond a certain point. Too glossy and rigid and machine made...in other words, lifeless. (Is this its appeal? The sexiness of death?)

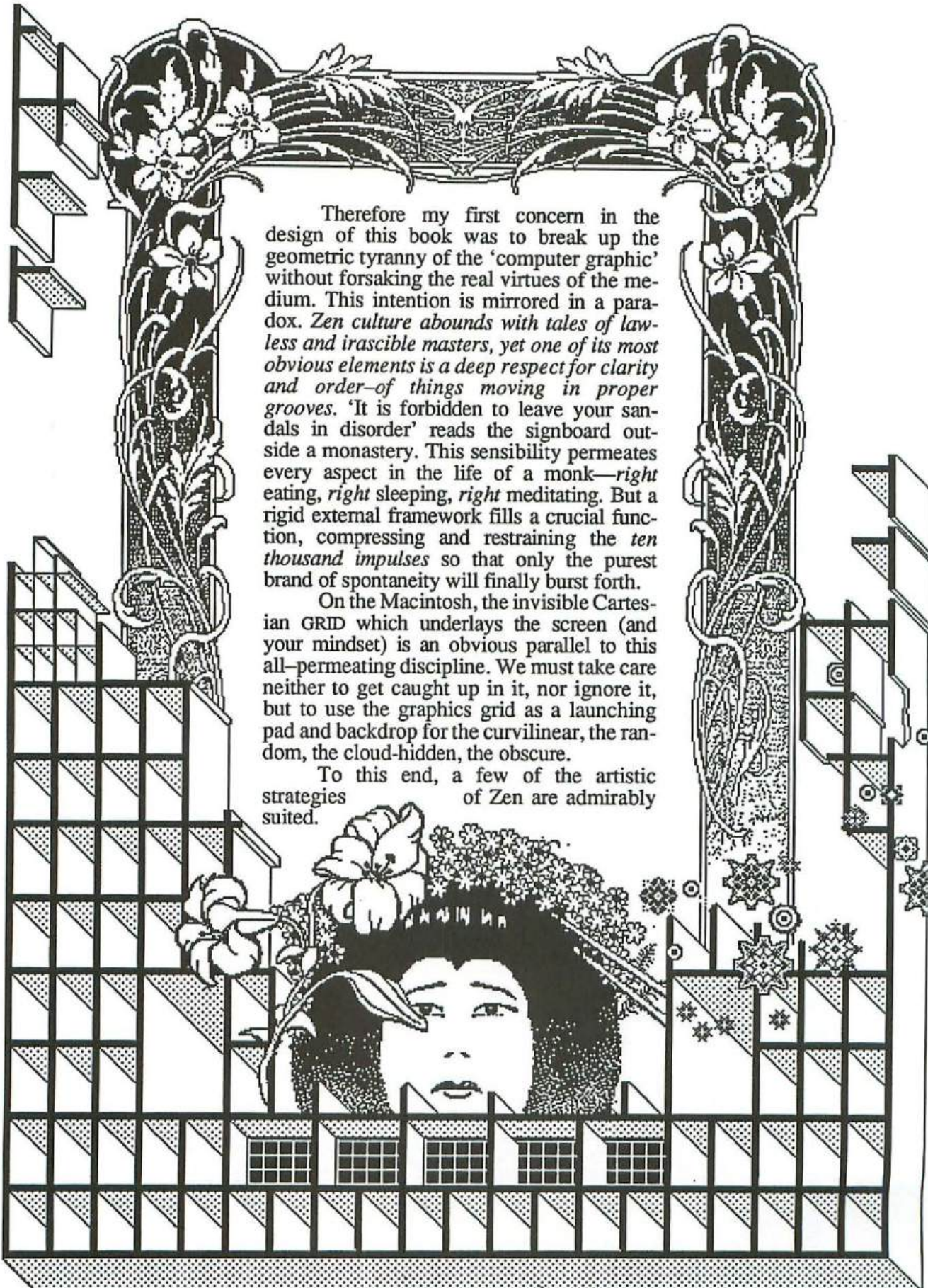
Lots of designers are a good distance down that industrial highway already; let someone else go the extra kilometer with the Mac.

The real challenge for me is to flirt with the flawless geometry (A) of computer graphics, while breathing some life (B) into them from a totally opposite direction...

I always understood that the *Union of Opposites* (Ω) is what's really happening on the cutting edge, anyway.



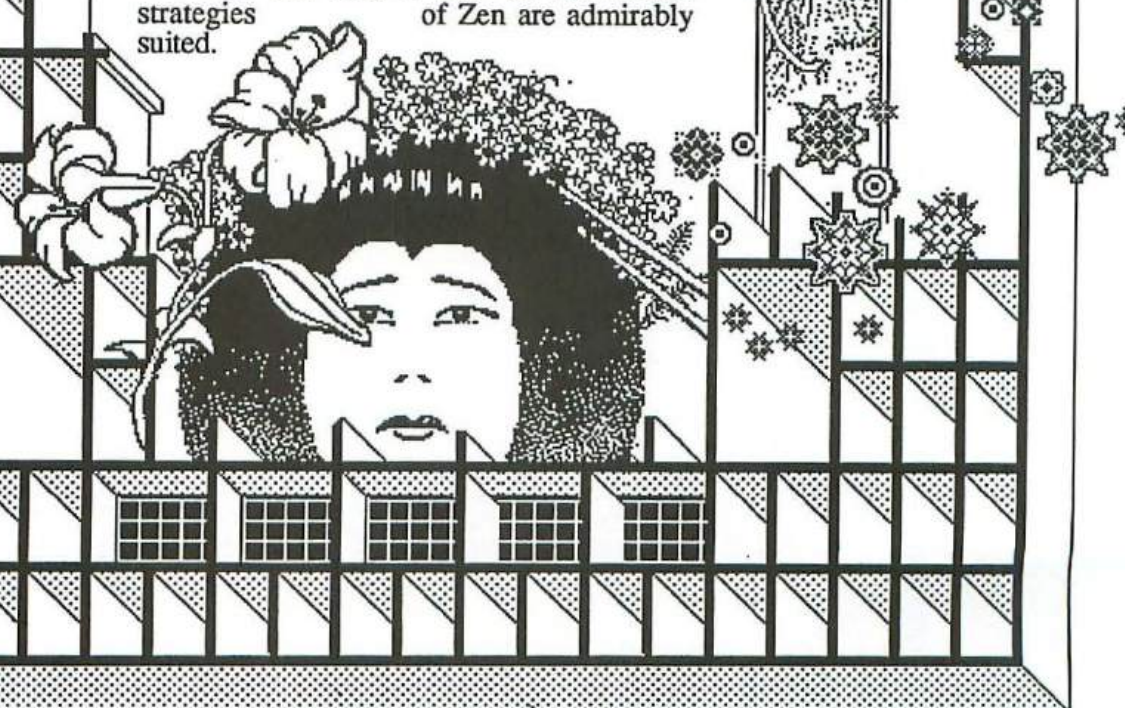
The Ten Thousand Impulses

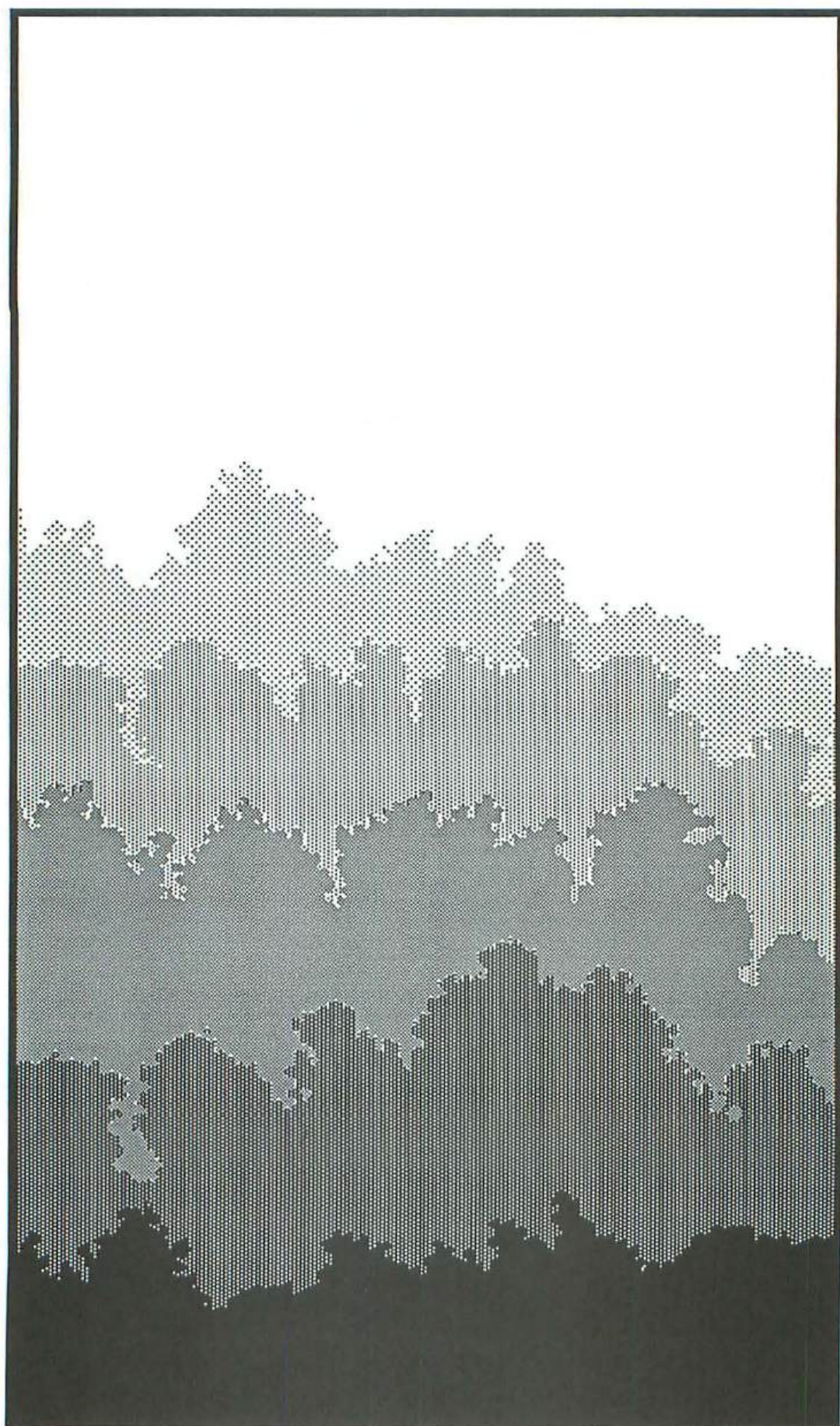


Therefore my first concern in the design of this book was to break up the geometric tyranny of the 'computer graphic' without forsaking the real virtues of the medium. This intention is mirrored in a paradox. *Zen culture abounds with tales of lawless and irascible masters, yet one of its most obvious elements is a deep respect for clarity and order—of things moving in proper grooves.* 'It is forbidden to leave your sandals in disorder' reads the signboard outside a monastery. This sensibility permeates every aspect in the life of a monk—*right eating, right sleeping, right meditating.* But a rigid external framework fills a crucial function, compressing and restraining the *ten thousand impulses* so that only the purest brand of spontaneity will finally burst forth.

On the Macintosh, the invisible Cartesian GRID which underlays the screen (and your mindset) is an obvious parallel to this all-permeating discipline. We must take care neither to get caught up in it, nor ignore it, but to use the graphics grid as a launching pad and backdrop for the curvilinear, the random, the cloud-hidden, the obscure.

To this end, a few of the artistic strategies of Zen are admirably suited.





On the Obscure:

*To see smoke beyond the mountain
is to know there is a fire;
to see a horn over the wall
is to know there is an ox.
—Chinese folk wisdom*

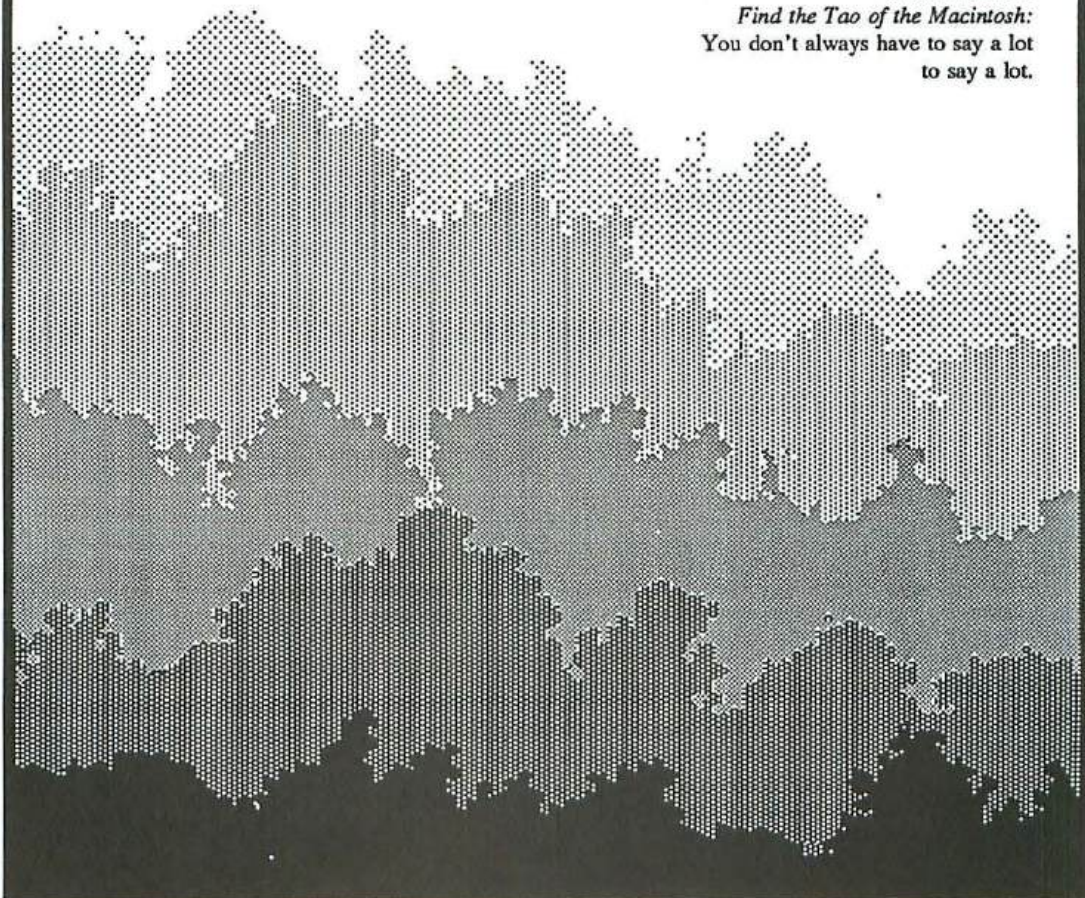
In a later age, this was called *Cool Media*: Laid back information that doesn't leap out and grab you. It hints; you fill in the blanks, participate.

Zen brush painting is a perfect example. Its simple blacks and greys create a puzzle for us to decode through *heightened involvement*. The unseen becomes as important as the seen; space around object as tangible as object itself.

In space the creative imagination takes wings.

If by nature our dot pattern is lower in information than other graphic techniques, why not move with it, exploit its potential for simplicity and understatement.

Find the Tao of the Macintosh:
You don't always have to say a lot to say a lot.

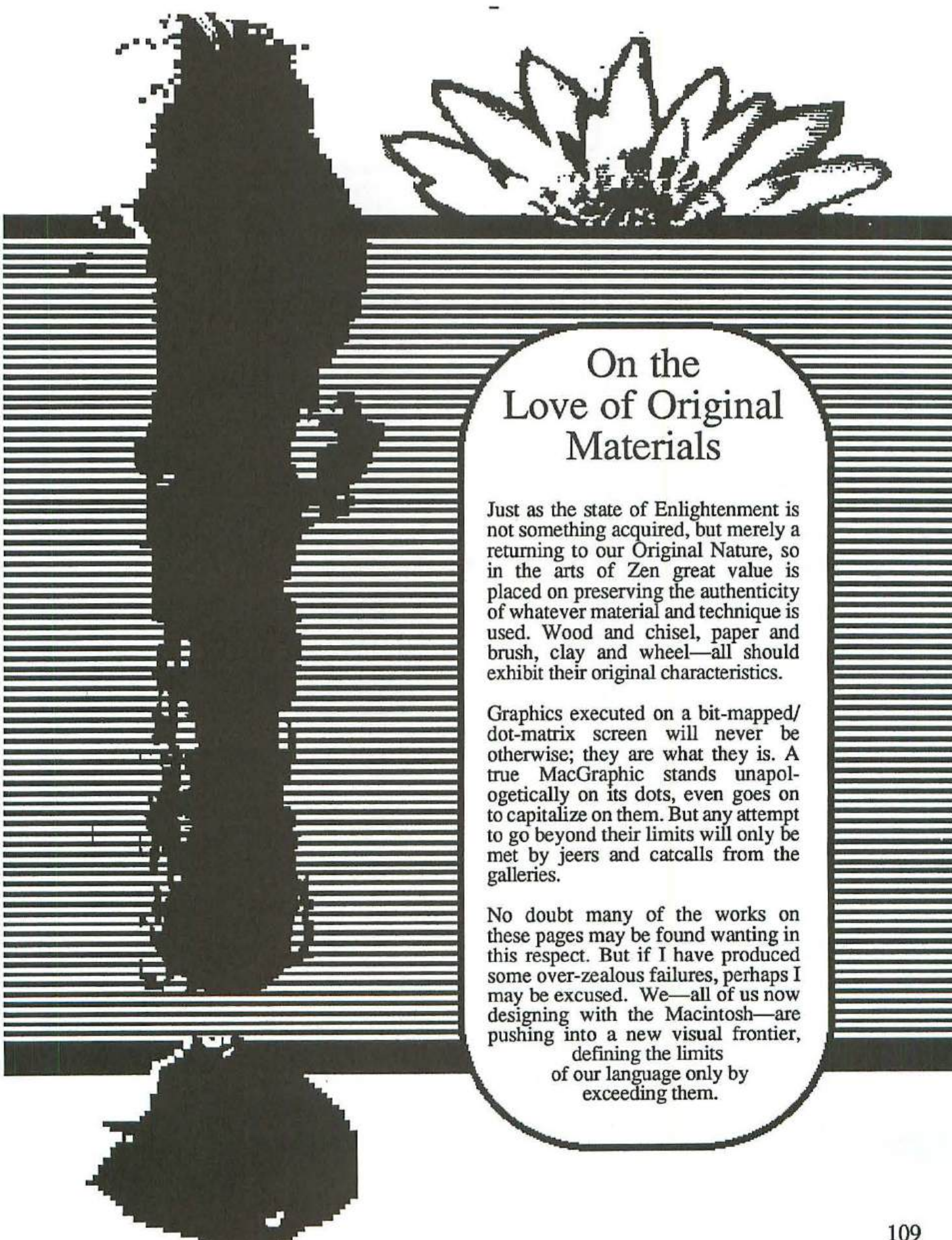




THIS!

THIS!

Calligraphy by Kokosai,
grand master of the art of tea.
(This! is the all-pervasive *this*:
perfect, free, actionless, ever-tranquil
sunyata, or *suchness*.)



On the Love of Original Materials

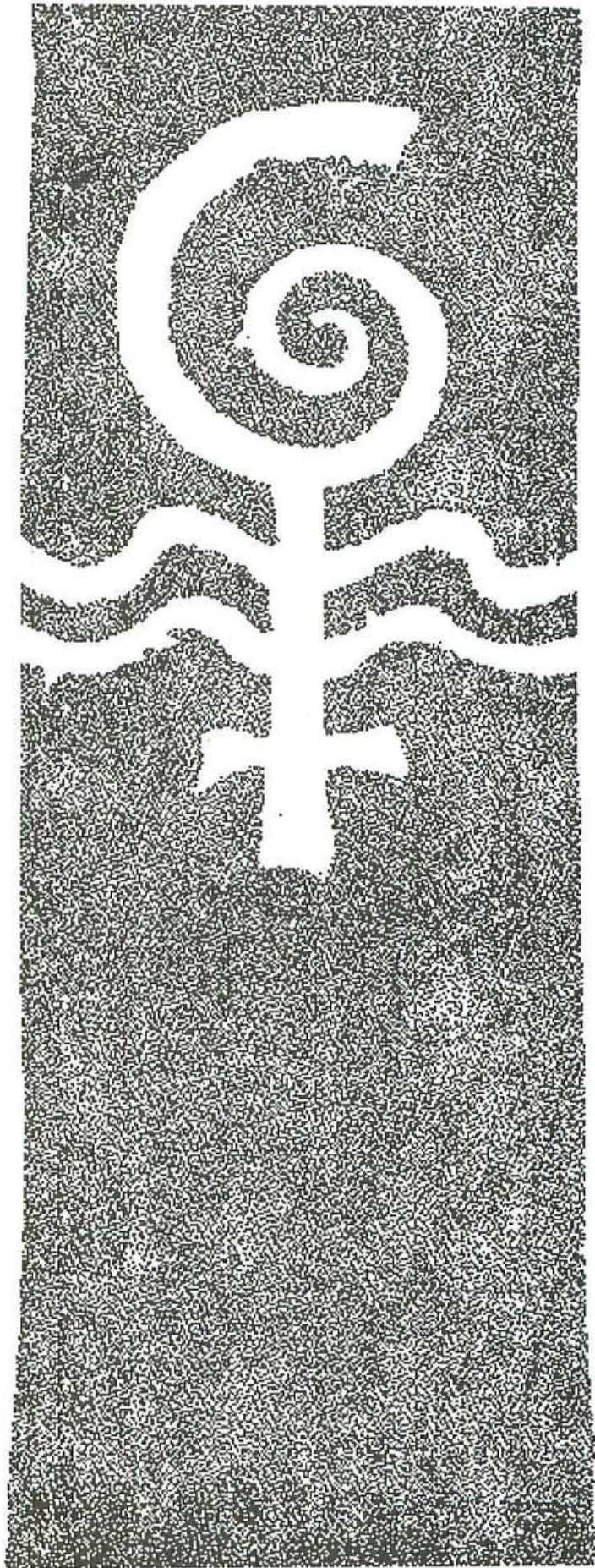
Just as the state of Enlightenment is not something acquired, but merely a returning to our Original Nature, so in the arts of Zen great value is placed on preserving the authenticity of whatever material and technique is used. Wood and chisel, paper and brush, clay and wheel—all should exhibit their original characteristics.

Graphics executed on a bit-mapped/dot-matrix screen will never be otherwise; they are what they are. A true MacGraphic stands unapologetically on its dots, even goes on to capitalize on them. But any attempt to go beyond their limits will only be met by jeers and catcalls from the galleries.

No doubt many of the works on these pages may be found wanting in this respect. But if I have produced some over-zealous failures, perhaps I may be excused. We—all of us now designing with the Macintosh—are pushing into a new visual frontier, defining the limits of our language only by exceeding them.

ON
*Wabi
Sabi*
AND THE
LINEAR
GRID

WABI AND SABI ARE PRINCIPLES CENTRAL TO THE AESTHETICS OF ZEN AND PARTICULARLY THE TEA CEREMONY. [REDACTED] ORIGINALLY THESE TERMS MEANT AN INEXPRESSIBLE, QUIET JOY HIDDEN BENEATH POVERTY, A BREAKING WITH ARTIFICIALITY. [REDACTED] WHERE THE SPIRIT OF SCIENCE WOULD LEAVE NO MYSTERY UNRAVELED, WABI AND SABI WOULD COURT A FEELING OF OBSCURITY AND HIGHER PURPOSE. IMPERFECTION BECOMES A FORM OF PERFECTION. [REDACTED] IN PRACTICE, ARTISTS strove TO CREATE A DULL SHEEN OF ARCHAIC IMPERFECTION AND INTIMATIONS OF VENERABLE OR POETIC HIDDEN MEANINGS. A RAKU TEA CUP, PLAIN AS A STONE; A THATCHED HUT IN THE FOREST — SUCH THINGS ARE ADMIRER NOT ONLY FOR THEIR SUBTLE SIMPLICITY, BUT FOR ALL THE ASSOCIATIONS THEY CARRY OF A SPARE, TIMELESS, INWARDLY RICH APPROACH TO LIFE. [REDACTED] WABI AND SABI STAND IN ALMOST TOTAL CONTRAST TO THE SLICK CONVENTIONS OF MODERN COMPUTER GRAPHICS. BRINGING THESE OPPOSING OUTLOOKS TOGETHER WOULD BE A MOST REWARDING EXERCISE.



O_n

The Heart of the Art of the Mac

All the preceding discourse has been an exploration of the kind of graphic imagery most organic to the Mac and pleasing to the head and heart. Which is fine as far as it goes, but the real **creative**

thumbprint of the Mac is found not in the creation of images, but in the **manipulation** of them.

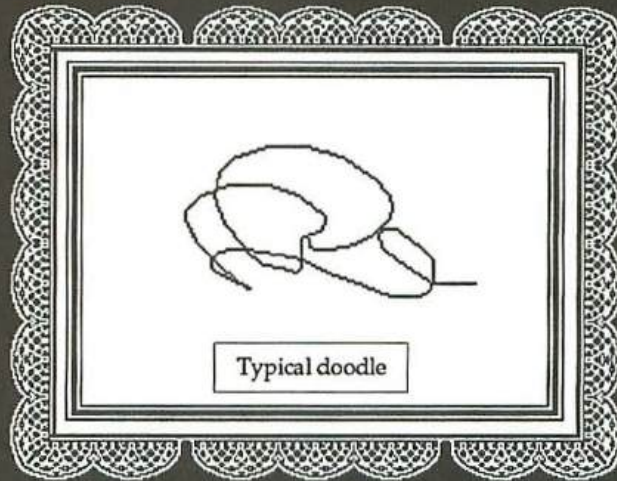
Image processing! This is a familiar dance to devotees of word processing, who already know how the unimpeded manipulation and re-arrangement of words allows almost anyone to enter a whole new

dimension of creative writing.

It's the same thing here. Just as an author doesn't feel obliged to reinvent an alphabet from scratch, so the real business of the (if I may borrow the term) **imagewriter** isn't really to **draw** images.

Like letters, images are just the raw material. Grab them any way you can. Use clip art for a start. The ideal setup (I think) is a digitizer hooked up to a home video camera, like I have. Or a Thunderscan—whatever—even draw if you can. Or can't. **It's sufficient just to doodle.** Just get something on the screen. Anything. Then do things to it. Squeeze it, stretch it, chop it, flop it, outline, repeat; combine it with words, **Mac it around** until you have something that **...says it.**

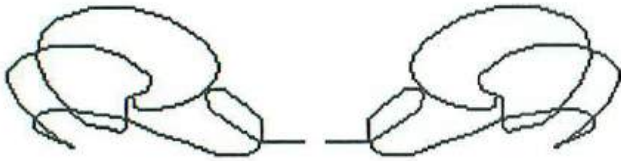
A TYPICAL DOODLE.



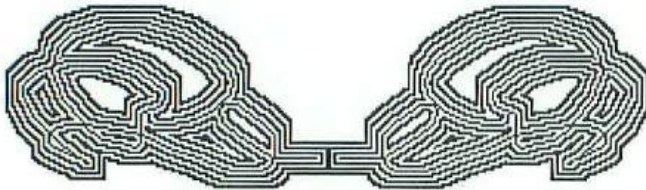
*Now,
for
a
spontaneous
&
unrehearsed
illustration
of
this
process
in
action.*

*Let us start
with a
typical doodle.*

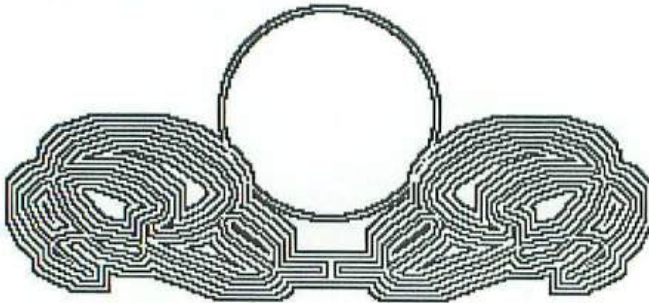
Let's open by duplicating it and then FLIP HORIZONTAL.



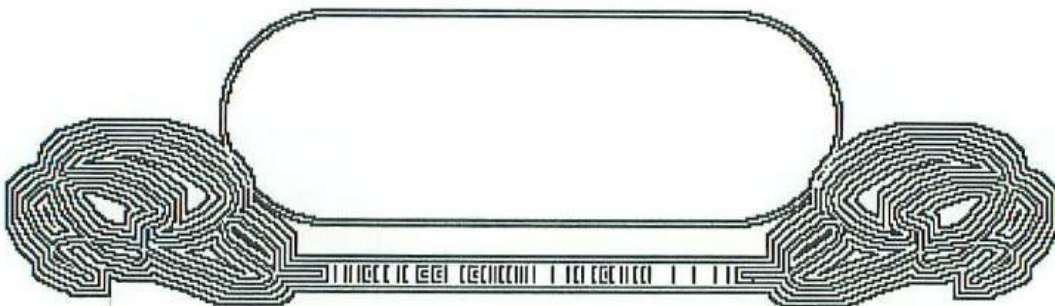
Hit TRACE EDGES a few times.



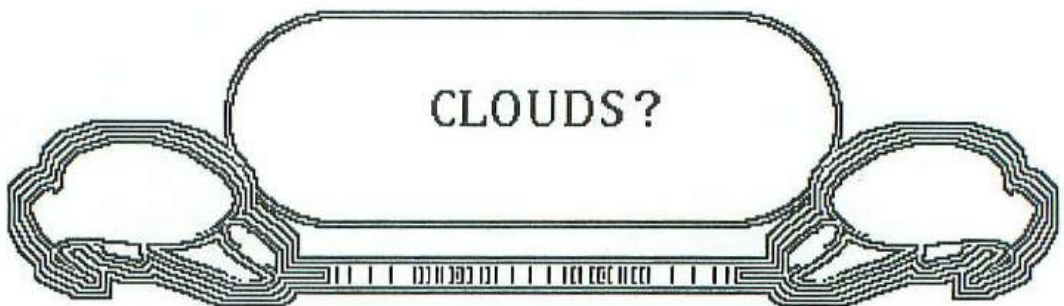
Drop in a circle and trace again. It's a Rorschach test. See anything?

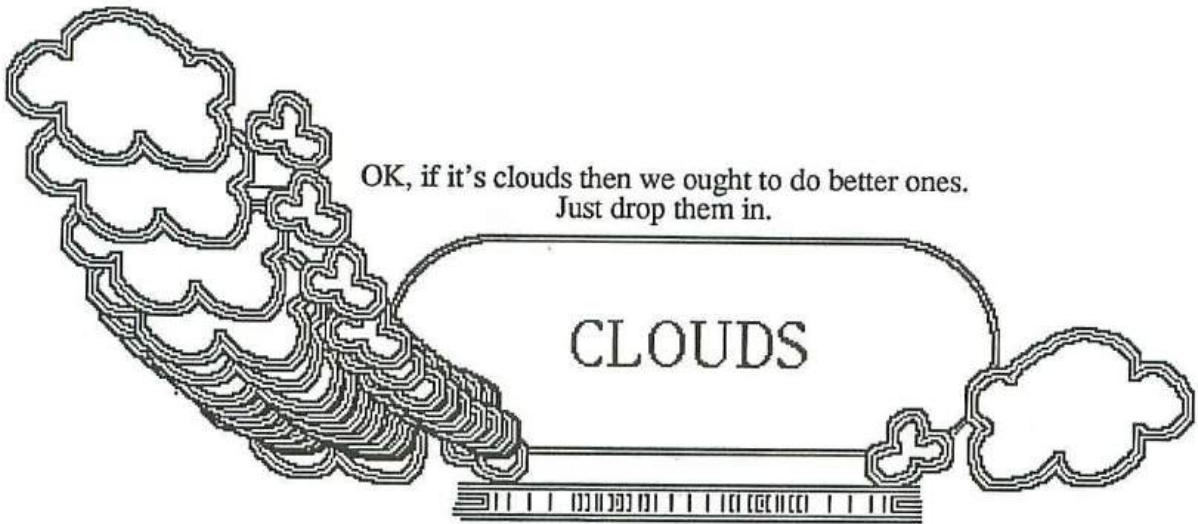


Maybe stretch it out.



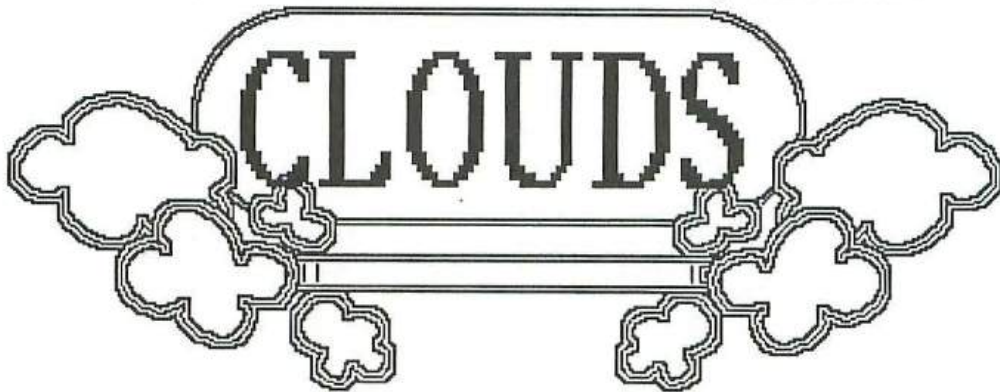
Let's empty out those lumps now. What do we have?





OK, if it's clouds then we ought to do better ones.
Just drop them in.

Now, all we need is a little more free associating on our theme...



...to bring it into focus. So!



On Tenacity

But enough of this frivolity. Let us get down to some serious designing. These rough graphics are called 'thumbnails,' little idea sketches that you quickly whip off to get a productive train of thought going. Here your speed



and flexibility, your power to duplicate and manipulate really pays off. Use it to do as many thumbnails as you can. And don't stop at the first good idea.



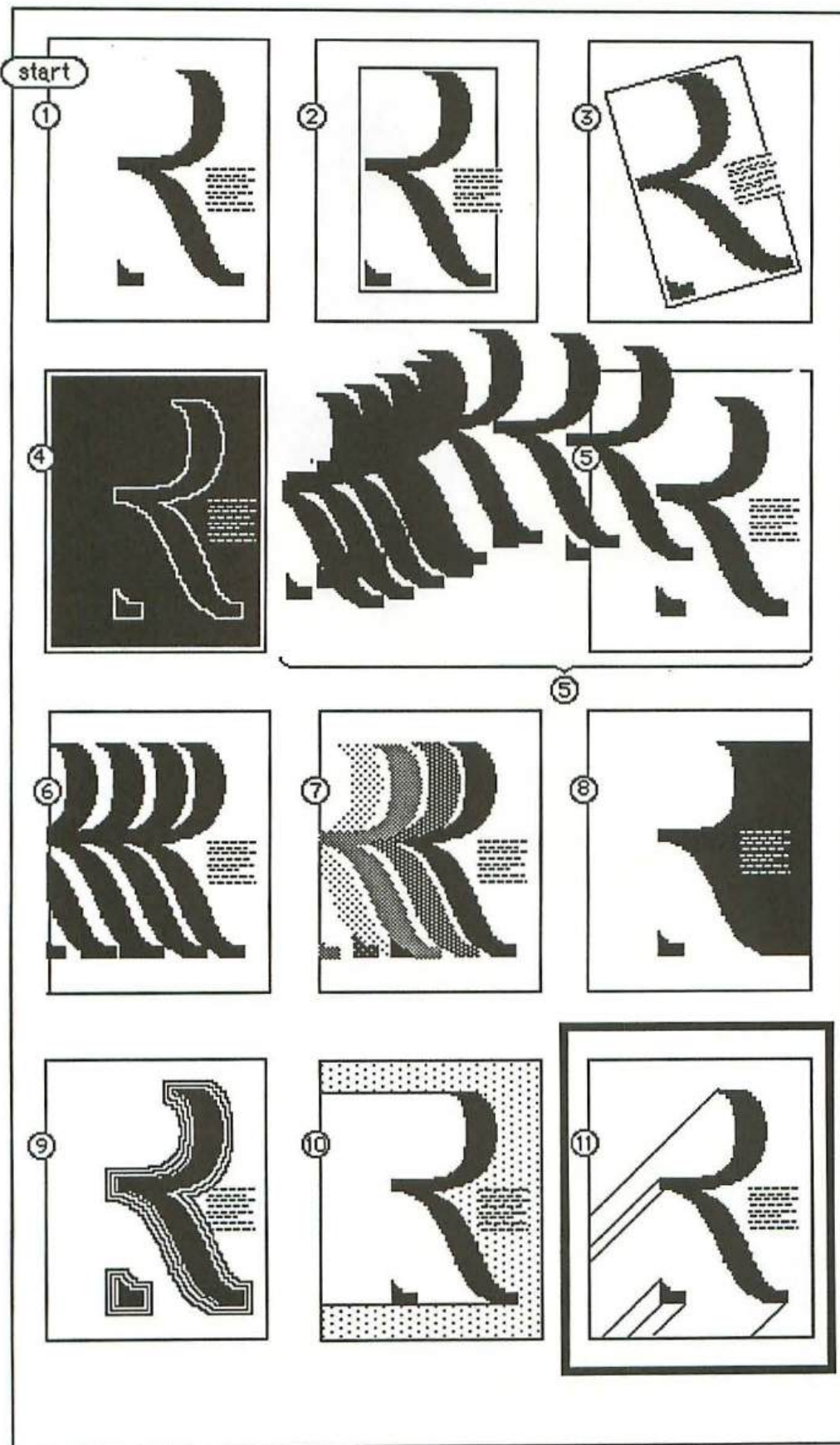
Always do a few more. You never know when a yet brighter spark may pop out of some final, dashed-off idea.



When you're finally satisfied that you've run your course, go back, pick up the one that seems to say it the best. And expand on it.



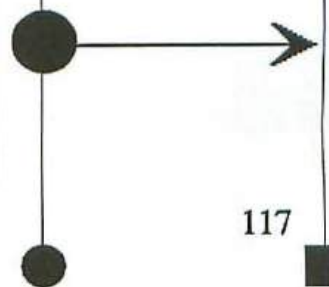
▲
I liked this last one here.

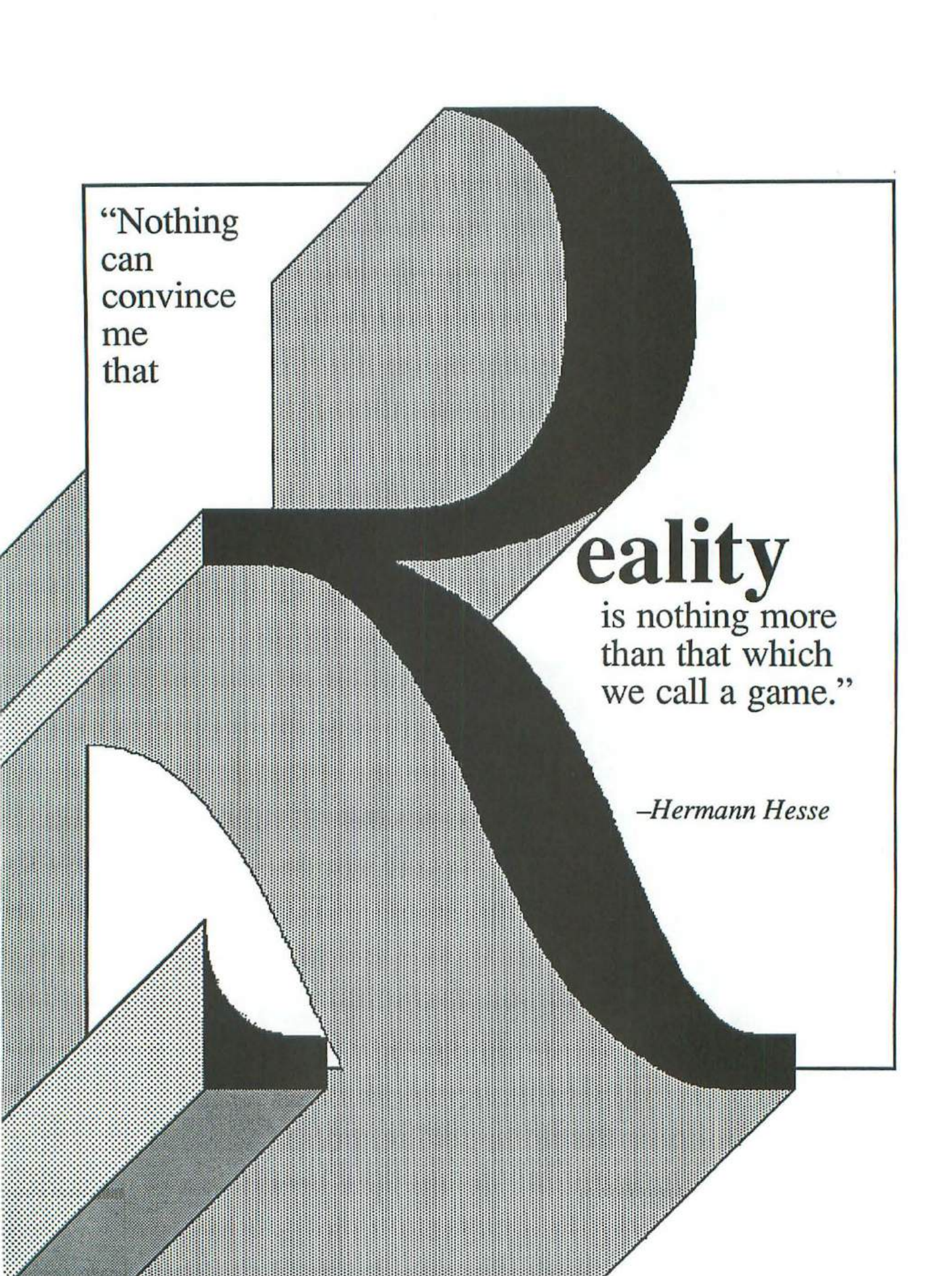


■ It can be a simple process of elimination to track down your final idea. Just keep copying the basic concept and put it through every possible permutation and refinement you can think of.

Keep going until one finally delivers the goods.

Then do it up.





“Nothing
can
convince
me
that

Reality

is nothing more
than that which
we call a game.”

—Hermann Hesse

■ ▲ ● the moral:

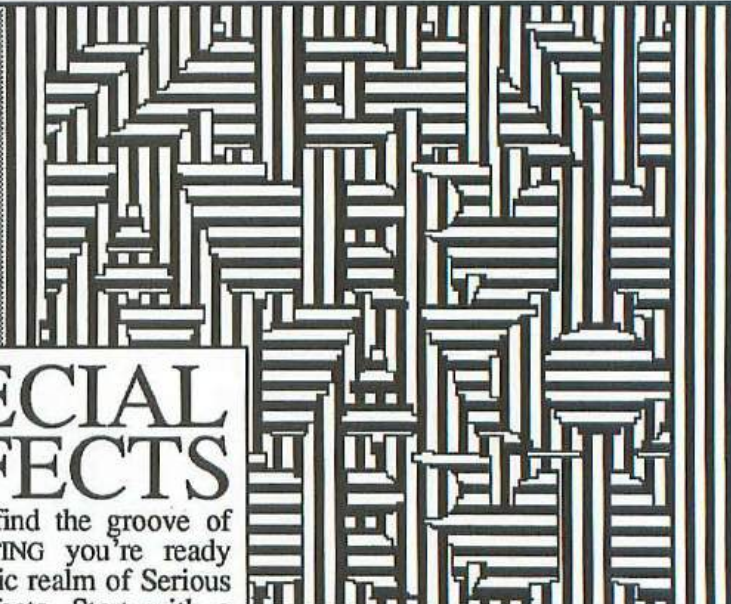
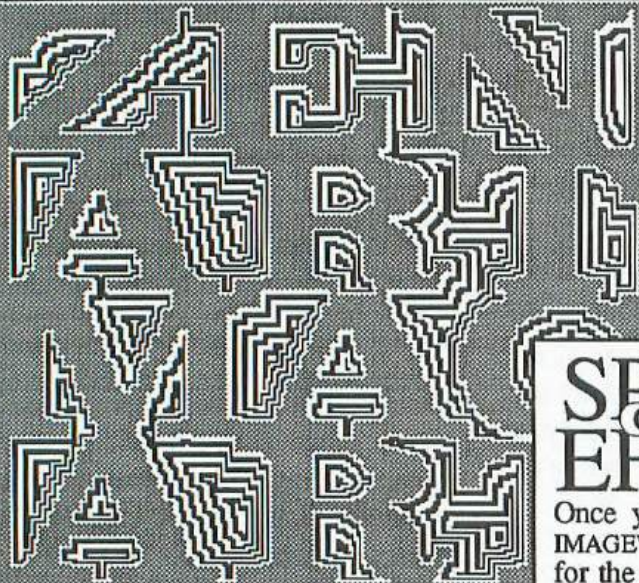
Tenacity of Purpose

The study of Zen is like drilling wood to get fire. The wisest course is to forge straight ahead without stopping. If you pause at the first sign of heat, and then as soon as the first wisp of smoke arises, even though you go on drilling for years

you will never see a spark of fire. My native place is close to the seashore, barely a hundred paces from the beach. Suppose a man from my village is concerned because he does not know the flavor of seawater, and wants to go and taste it for himself. If he turns back after only a few steps, or even if he retreats

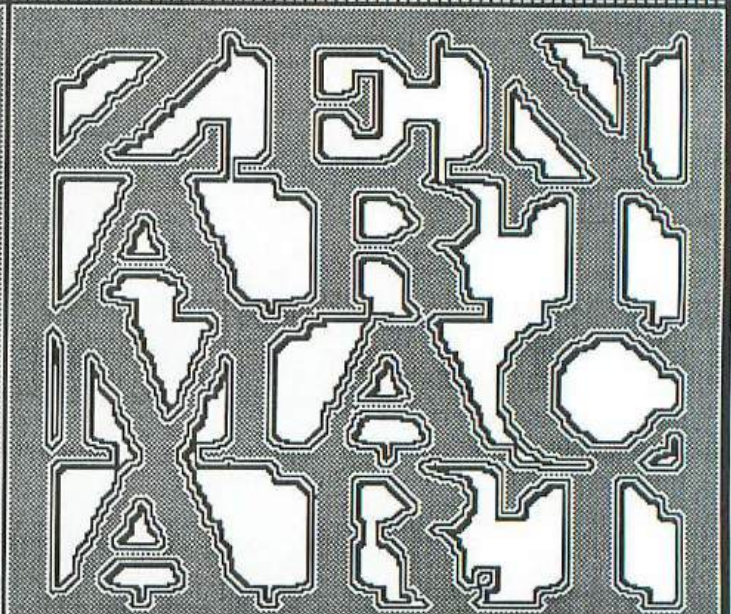
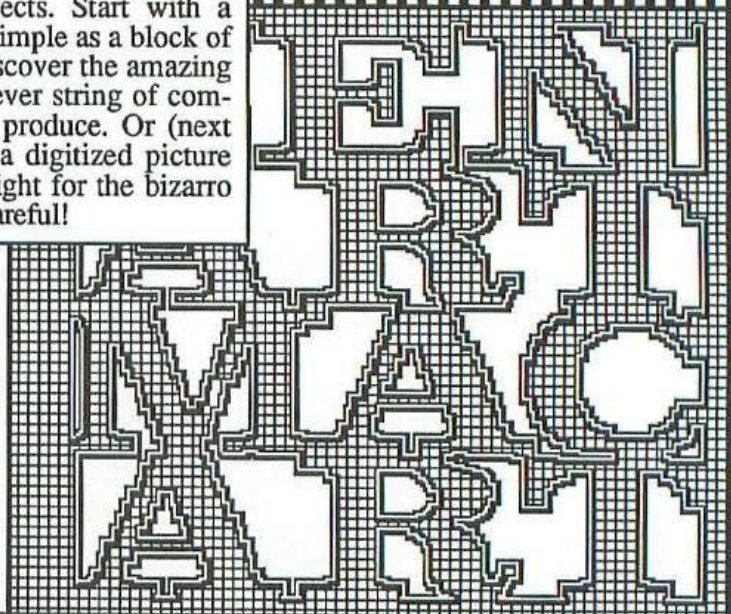
after having taken a hundred steps, in either case when will he ever know the ocean's salty, bitter taste? But, though a man comes from as far as the mountains of Kosshu, if he goes straight ahead without stopping, within a few days he will reach the shore, and the moment he dips the tip of one finger into the sea and licks it, he will instantly know the taste of the waters of the distant oceans and the nearby seas, of the southern beaches and the northern shores, in fact, of all the sea water in the world.

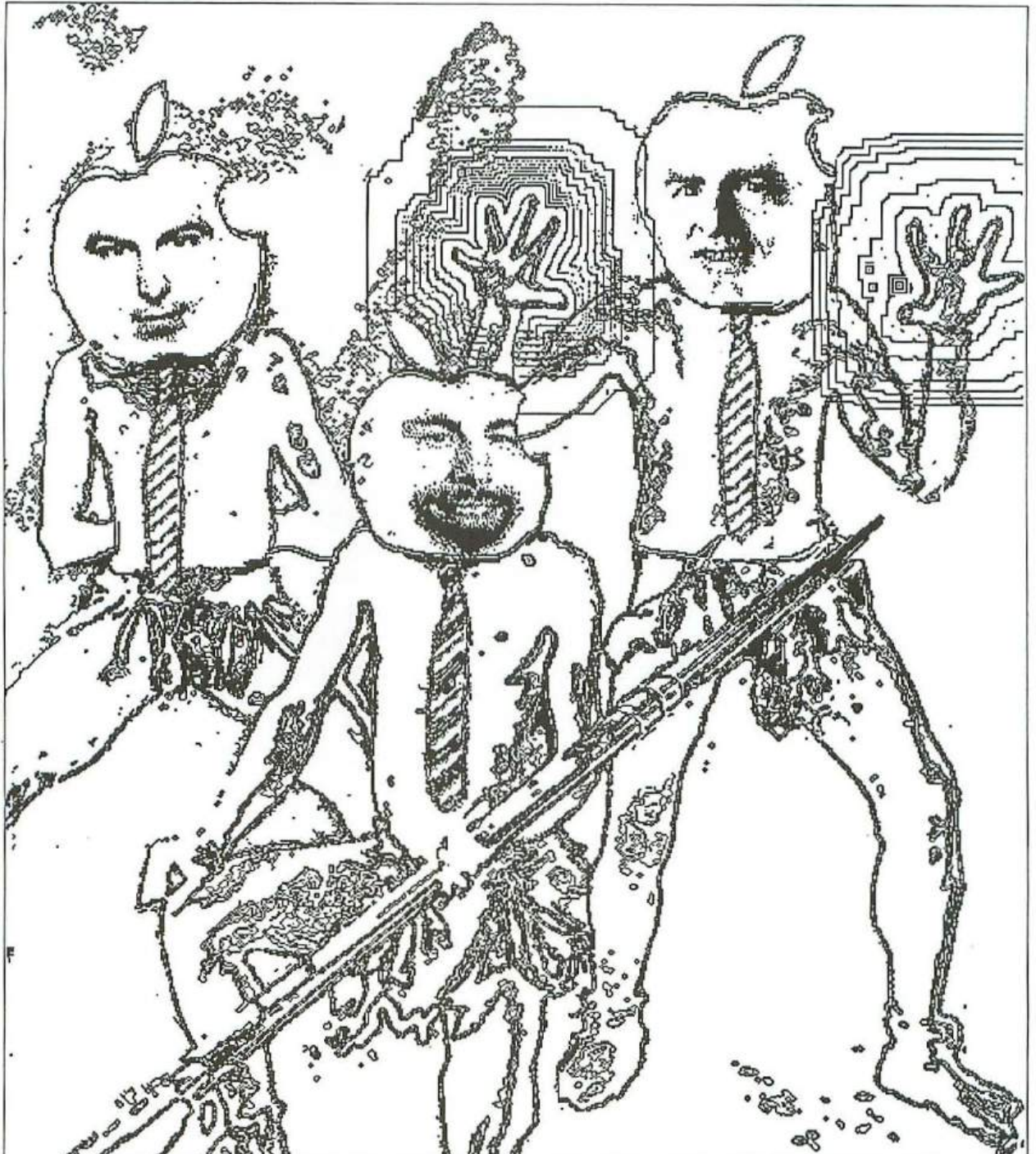
Hakuin
(1686-1769)



SPECIAL ON EFFECTS

Once you find the groove of IMAGEWRITING you're ready for the exotic realm of Serious Special Effects. Start with a graphic as simple as a block of type and discover the amazing results a clever string of commands can produce. Or (next page) take a digitized picture and go straight for the bizarro zone. But careful!



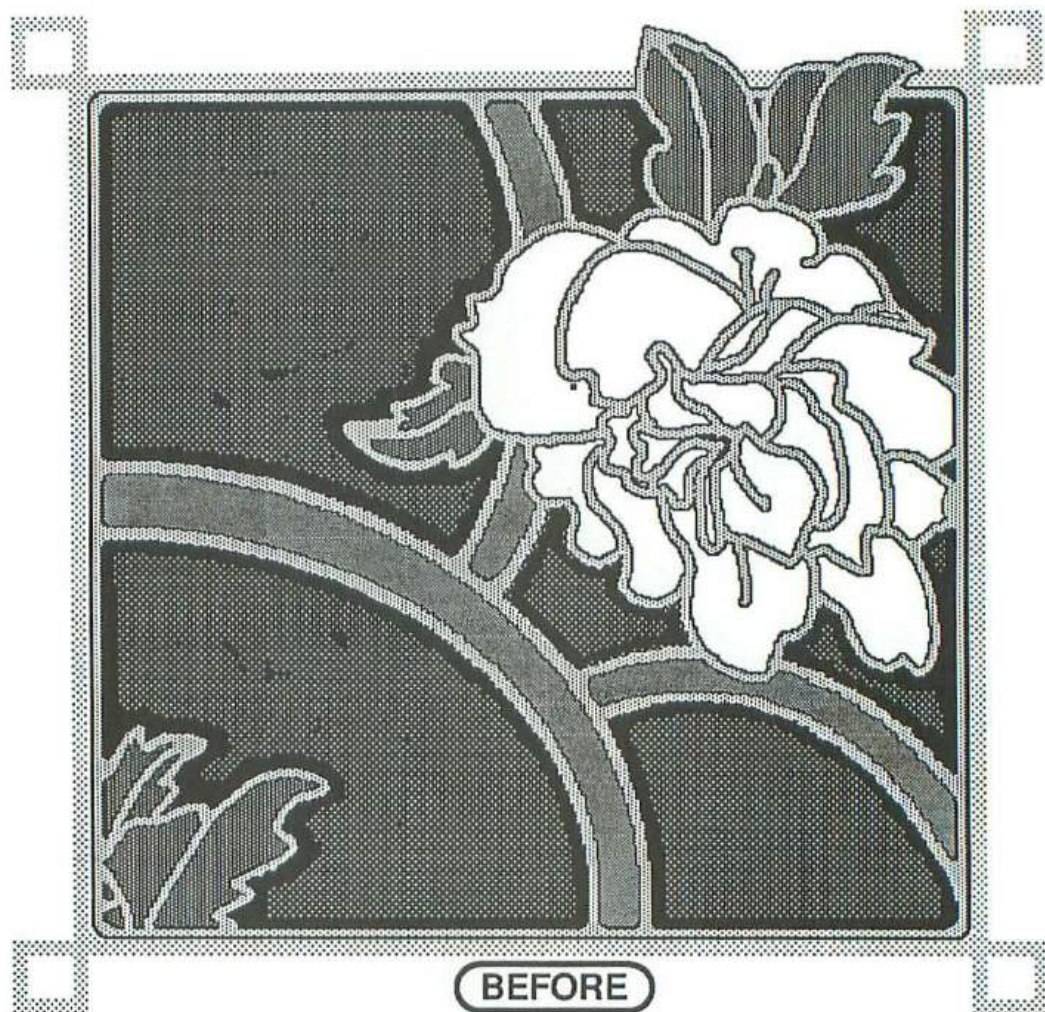


THE SENSE OF POWER CAN BE INTOXICATING

It's not hard to get too far out and wind up with a mess: All effects and nothing special.

ON THE SERENDIPITOUS

ACCIDENT



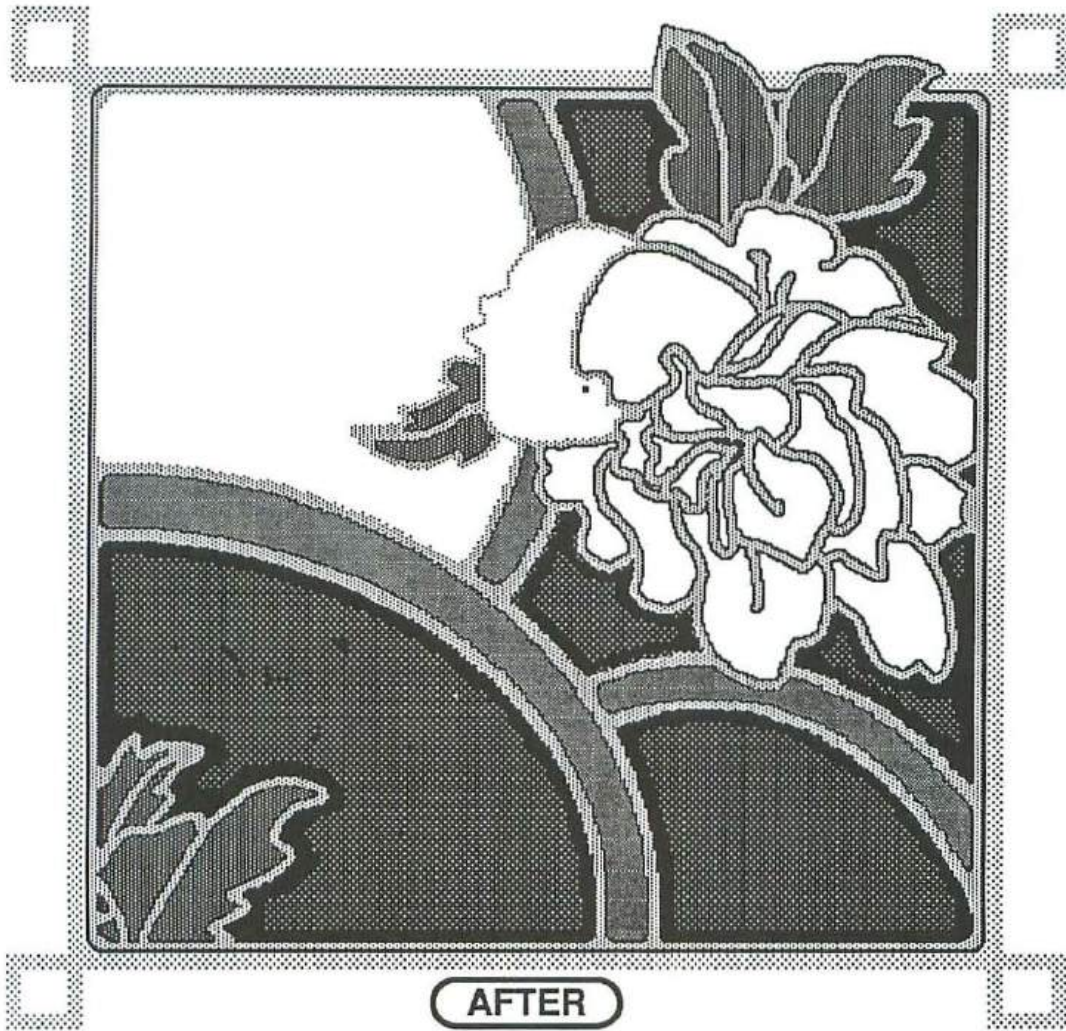
May I bring your attention to the graphic on the left (*Before*), once destined to be a chapter heading. In its final polish, I went to erase an unwanted squiggle in the flower with a kiss from the **paintbucket** dipped in white. Alas, the squiggle was touching a line, the line touched a border, and the border a large block of pattern. Surprise! In a flash a whole section of the picture disappeared! (*After*)

In these situations, of course, one praises God and hits the **Undo**, returning everything to the moment before the crime. But wait, thought I. Let us take another look at that mistake.

Before was OK, no doubt, but this *After* was a fresh stroke. It conveyed a sense of the unexpected. It was pretty good.

And it was something I never would have thought of doing, particularly having so carefully filled in the missing portion.

Another Zen Story:



AFTER

A friend of the famous tea master Rikyu wished to impress him. He purchased a beautiful and costly ceramic tray for the ceremony and invited Rikyu to tea. The tray did not elicit any comment from the master. The owner was so downhearted afterwards that he threw down the tray, breaking it into many pieces. A friend of the owner later collected the pieces and cemented them together so that the cracks became a design of fine gold lines.

In time the friend thought to invite Rikyu to tea and use the tray again.

Rikyu's keen eye at once detected the old caddy.

"Fine," he said, "Surprising! How truly now this tray reflects the spirit of Zen!"

Surprising.

Righto. While in theory there is absolutely nothing unpredictable in the way the Mac executes its artistic labors, in real life, as we saw, it takes no more than a truant pixel to send things skidding off the road—and into the **Zen of the Controlled Accident**

Or, as Ornette Coleman, or somebody, said, “Jazz is just riffing on your mistakes.”

Learning to **riff on random input** can endow not only your graphics with a new life, but *your life* with a new dimension. It’s a skill central to the creative process and to awareness.

I first became aware of its possibilities some years ago. I was still in high school and working as apprentice to a Hungarian designer named Eva Zeisel. Nothing got taken for granted around Eva. The most commonplace things—a dead leaf, a dishrack, a clothespin—anything could suddenly become the subject of analysis and delight. Even the English language yielded hidden nuances of meaning when she rearranged it in her Central European accent. She had, I believe, an unspoken certainty that **each moment and everything it contained was important**. Once this conviction is established, it’s a simple matter to discover how and why.

In retrospect I realize there was a bona fide **transmission** happening, but at the time I just thought it was really fun to hang around this intense woman, explore her huge house, and watch how she played out life’s drama with such unusual, dashing strokes.

I remember the morning she had a major presentation of a dinnerware setting to a large corporation. Eva was wavering between two final choices. A rattle at the kitchen door. Who was it? A neighbor, or perhaps the trash man, I don’t remember—it **didn’t matter**. Up she jumped and dragged him over to the two plates.

“Which one do you like the best?” she demanded. (The most important design judgment of the week.)

“Huh? The plates? Uh...that one.”

“Of course! Ah, but you are a genius! That’s the one then, pack it up, let’s go.”

Or another day, a ruined silkscreen, left uncleaned and partially clogged, would be snatched from the junkheap, held up to the light. *Aha! we must make some prints from this one.* The result might well be a mess—or fiddled with in the right way, develop into a whole new line of decorations.

We grow up, the cement sets, and we become

"In retrospect I realize
there was a bona fide
transmission happening."



“...Tuning in to potentially meaningful information winging in from all quarters.”

a closed operating system, programmed with a limited but comfortable set of notions. We respond to this inertia by becoming curators in our own musty archaeological museum, endlessly polishing and cataloguing our precious psychic artifacts, re-arranging them into new exhibits.

Meanwhile, while we're rummaging around the warehouse, outside, **that whole other thing keeps right on happening**: each instant always new, reborn, surprising, fresh.

The universe is indeed spectacularly uncontrolled, spontaneous, and full of accidents. But harmonizing with this and giving expression to it is not as simple as slopping paint across canvas or generating “music” from random numbers. The accidental is always seen in relation to what is ordered and controlled: “The Dark Yin is never without the Bright Yang.”

The MacPaint program, once you get to speed in it, becomes a microcosm of this arrangement, **providing both an “ordered and controlled” environment—and a constant supply of unexpected graphic surprises within it**. We can **undo** them, to our diminishment, or encourage the flow and **pan for the gold**.

There is a great learning here. For many it's a whole new world, not only of finding pertinent mistakes on the computer, but tuning in to potentially meaningful information winging in from **all quarters**.

With practice, a part of our active intelligence gets permanently allocated to quickly scanning all unexpected and accidental data right on the fly, rendering a brief yes/no/maybe assessment and moving on.

To program an open channel to randomized input like this, at least a handshake acceptance with **synchronicity** is necessary. Synchronicity is the original unified field theory of events; an understanding that at every instant an underlying, invisible interconnectedness runs through everything around us. **Everything is on cue**. “Coincidences” are merely glimpses into how it is all the time, if we only had eyes to see. Tune into synchronicity and everything is potentially grist for the mill.

Well not everything...there's still a lot of chaff that blows by too. A proper **synchronicity scanning subroutine** needs a well-tuned **Relevancy Filter**. Opened too wide, and your original goals are soon obscured by the beauty of a million interesting alternate possibilities. Everything is relevant, but nothing gets done. Save this mode for the weekends.

But squeeze the filter level down so low that no accidental input seems relevant and you're right back where you started. Ho hum.



Back to the Mac.

I touched up *After* here and there to bring out the offbeat feeling & saved. Having an electronic artistic collaborator given to the unexpected has definite virtues if you play it right.

EPILOGUE

Alas, the more I looked at *After* the more I knew *Before* was really better suited for what I had in mind. Sometimes a graphic should simply be competent and simple, like punctuation that gets you from here to there. More defeats its purpose.

So what to do with my happy mistake? What if the two pieces were side by side?

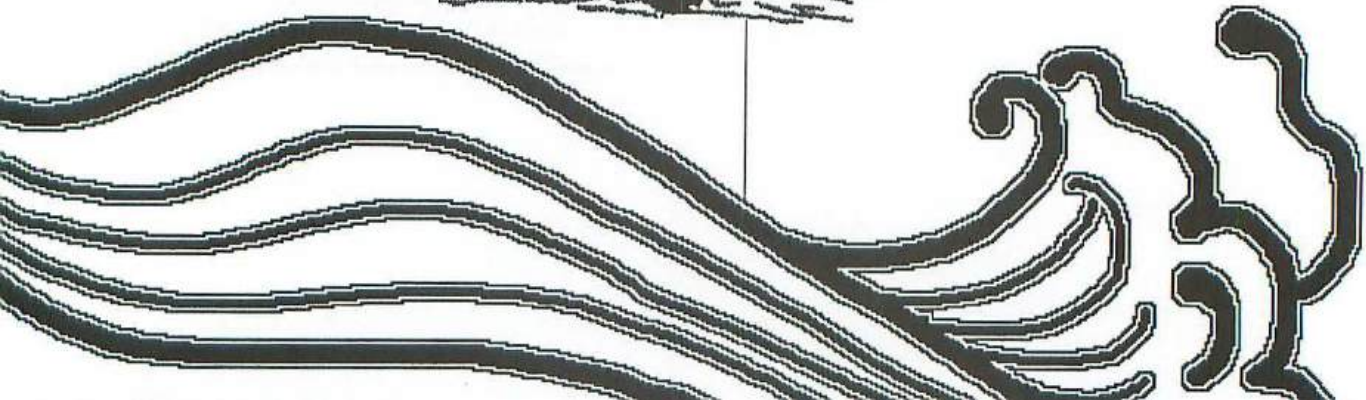
I set them out on facing pages, and an altogether new entity was begotten: *Before and After together*. How obvious.

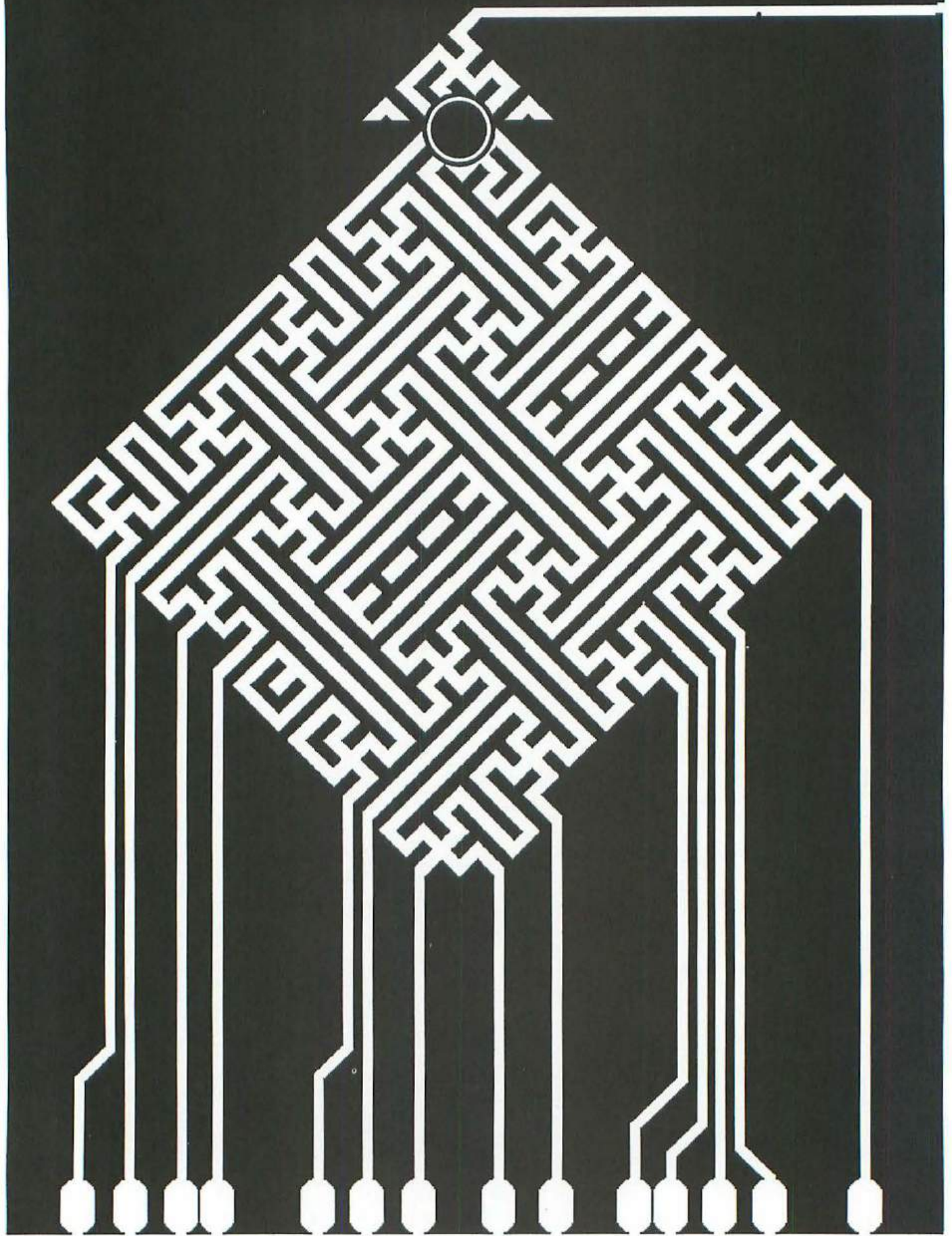
They could illustrate...yes, *A discourse on Serendipitous Accidents!*

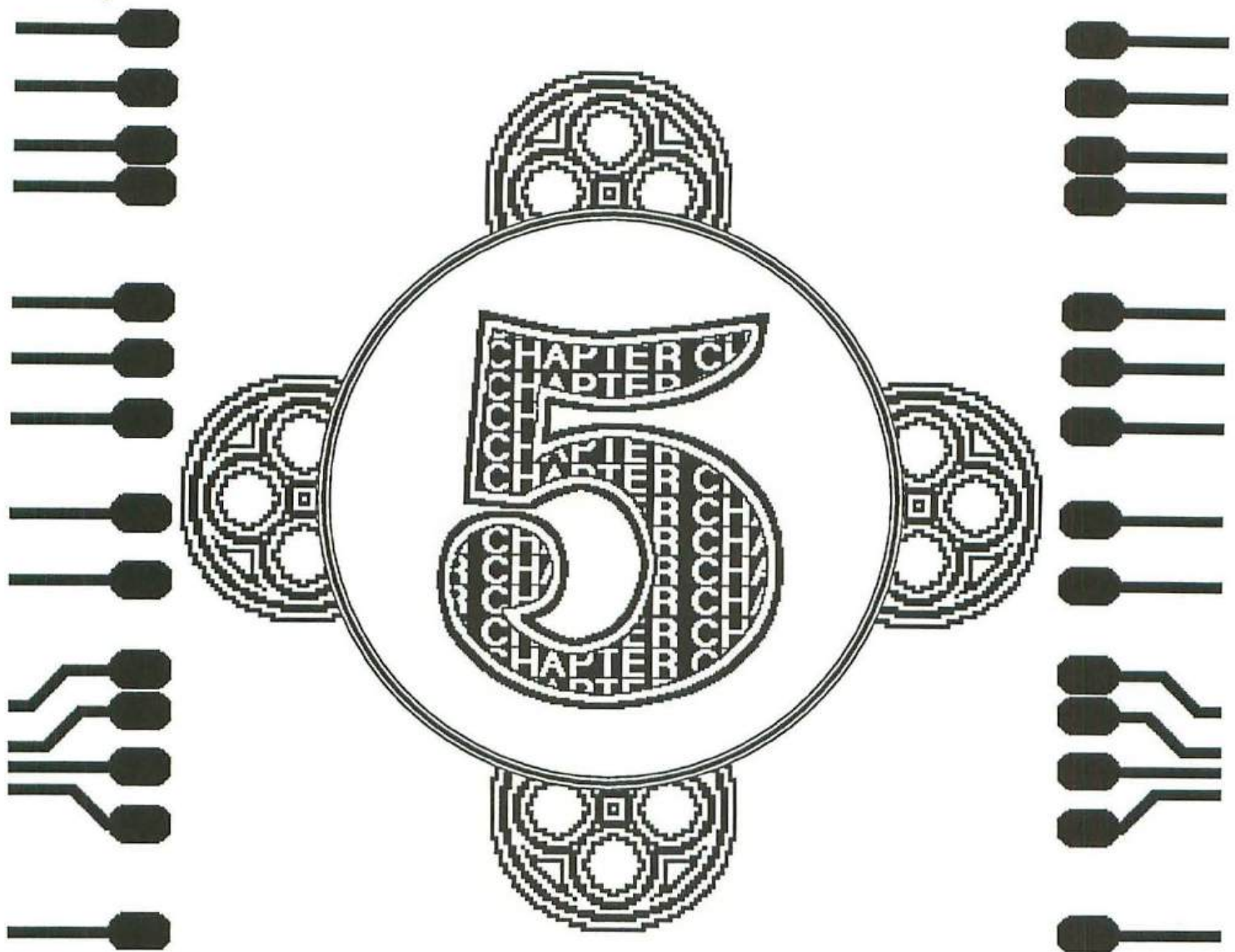
CONCLUSION

Corral
wandering thoughts.
Drop anxiety.
Bring an extraordinary
attention
to ordinary circumstances.
Perfect joy!

*Gensha was asked
how to enter
the path
of the Buddha
"Do you hear the sound
of that stream?" He said.
"Yes..."
"There is the way to enter!"*



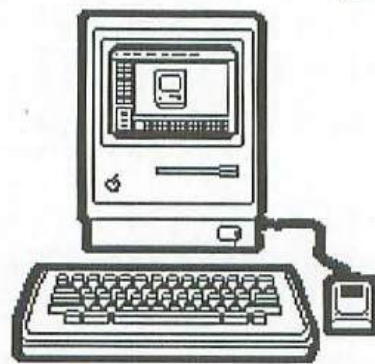




ON THE RELENTLESS FASCINATION
OF THE COMPUTER
ON THE RELENTLESS FASCINATION
OF THE COMPUTER
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ON THE RELENTLESS FASCINATION
OF THE COMPUTER

I STILL

HAVEN'T MASTERED

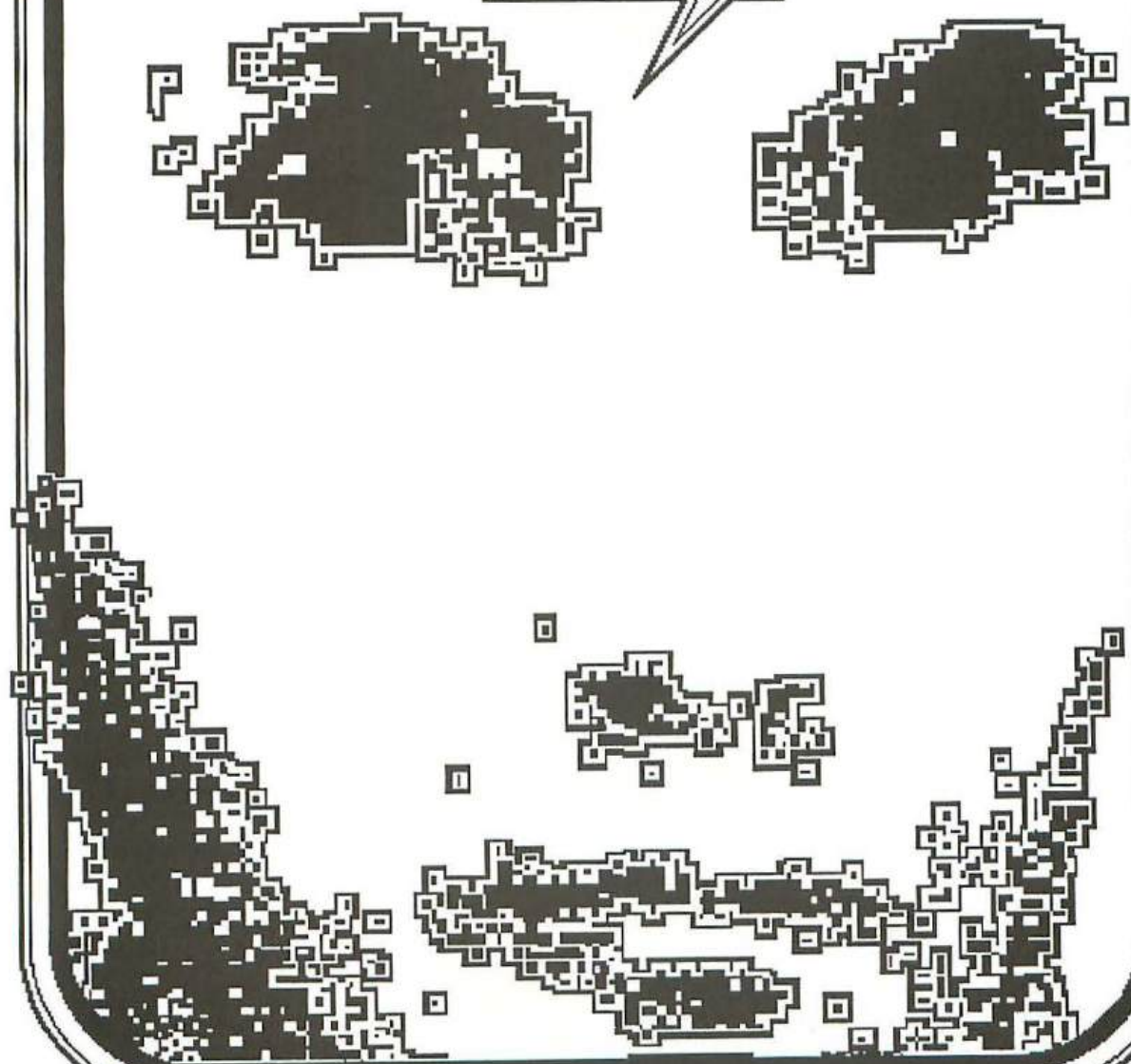


that thing.

Here's the typical scene: The end of another day in the studio. I've been finishing up a page for hours now, nudging FATBITS endlessly around in pursuit of the elusive splendor of pixel perfection. Must be late. Wasn't that the last call for dinner? I really should go in before the food gets cold. What time is it, anyway?

Whoa! Midnight? I've been working since seven o'clock this morning!

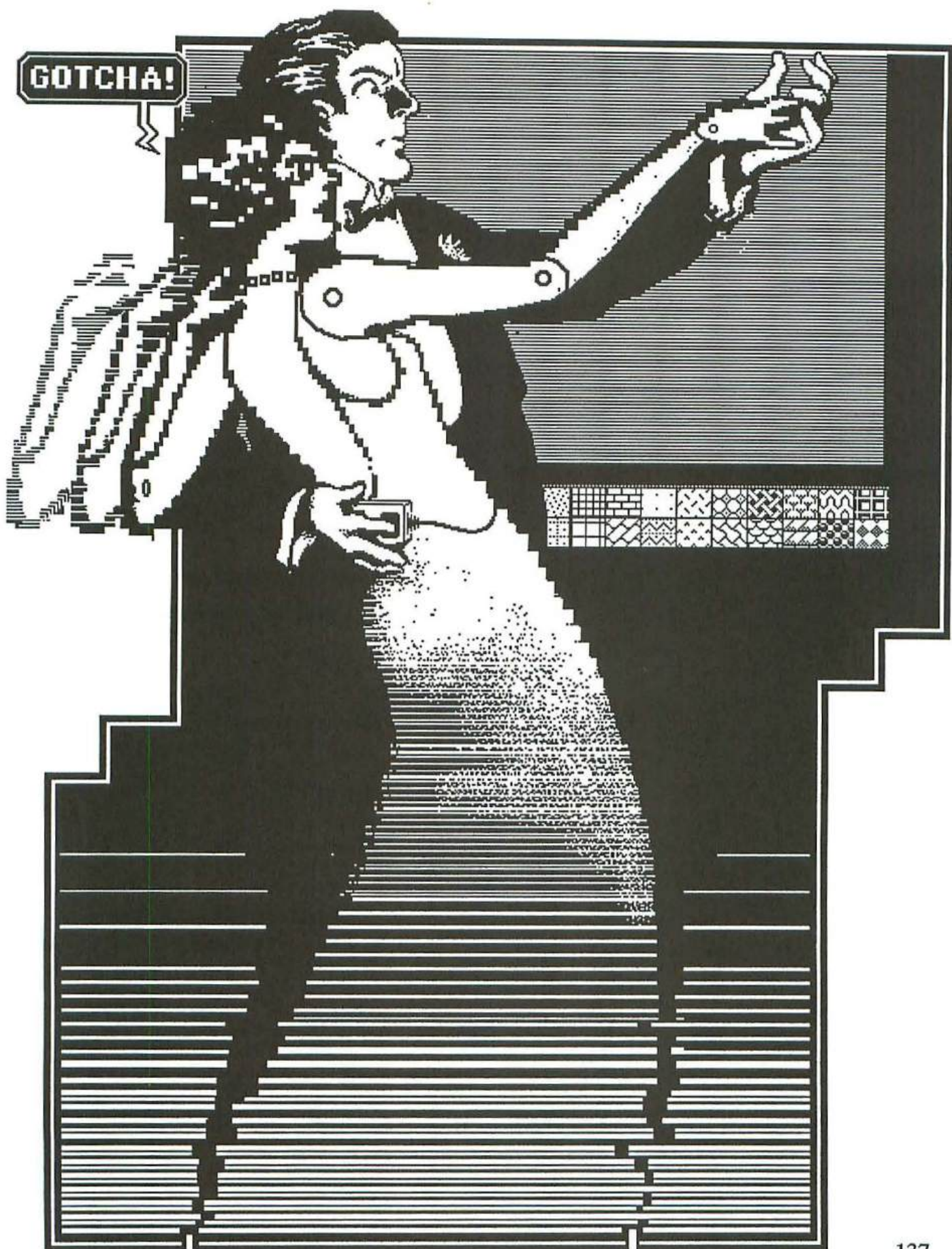
What's going on?





CAN SEEM LIKE A DANCE

...IT CAN SEEM LIKE A TRANCE.



The light-hearted dance of discovery had turned into a lock-stepped technoidal Tango, with me a willing, tranced-out partner.

I think I've been had. Digitized, systematized and hypnotized. Here is the routine:

As each workday begins, my attention is quickly drawn into a single-pointed focus on the computer. Early warning signals fly by unheeded. Matters deteriorate. By midday I have turned to a full blown and relentless pursuit of *The Perfect Page*.

Besides—it is **A KIND OF HIGH!**

Perfection! Now that's something to get behind! Certainly more important than eating regularly, or a full night's sleep, or health, or family, more important than...

But hey, why worry about that now? We're on a roll! We're ready to score!

Anything?

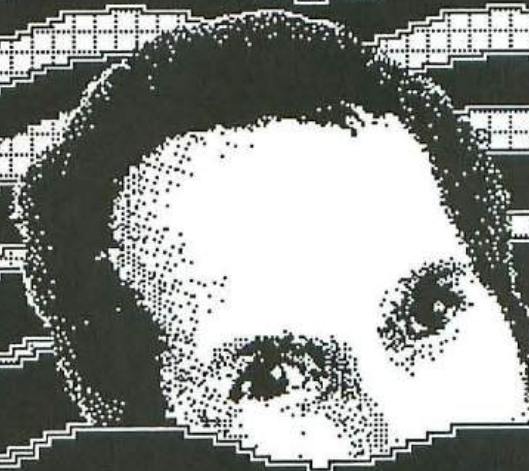
*H*owever, if this state is gratifying, it's not very gracious. It may be focused but it's sure not expansive. Brilliant...but not loving. **Too much geometry and too little chemistry.**

I was another careless victim of...

THE

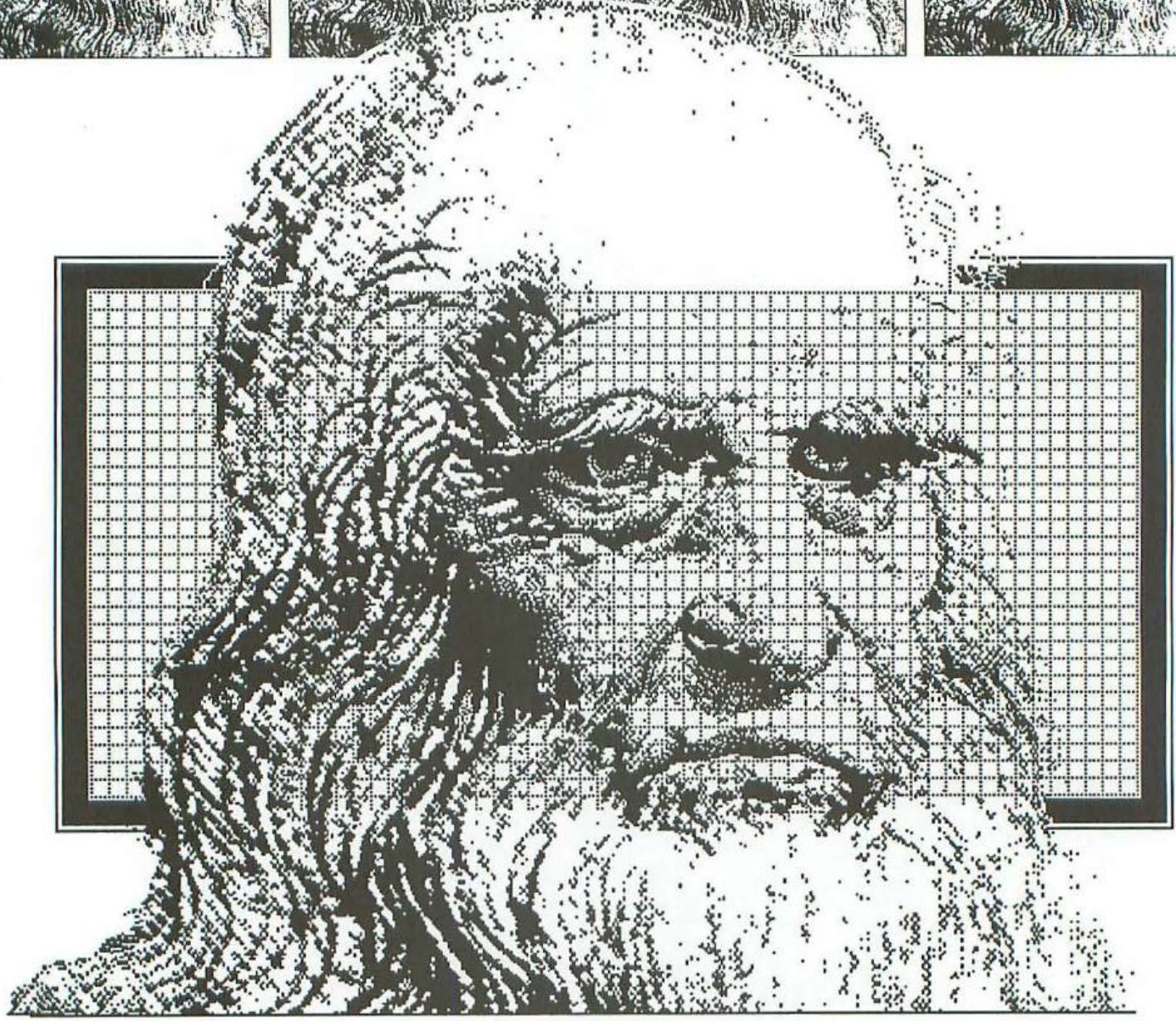
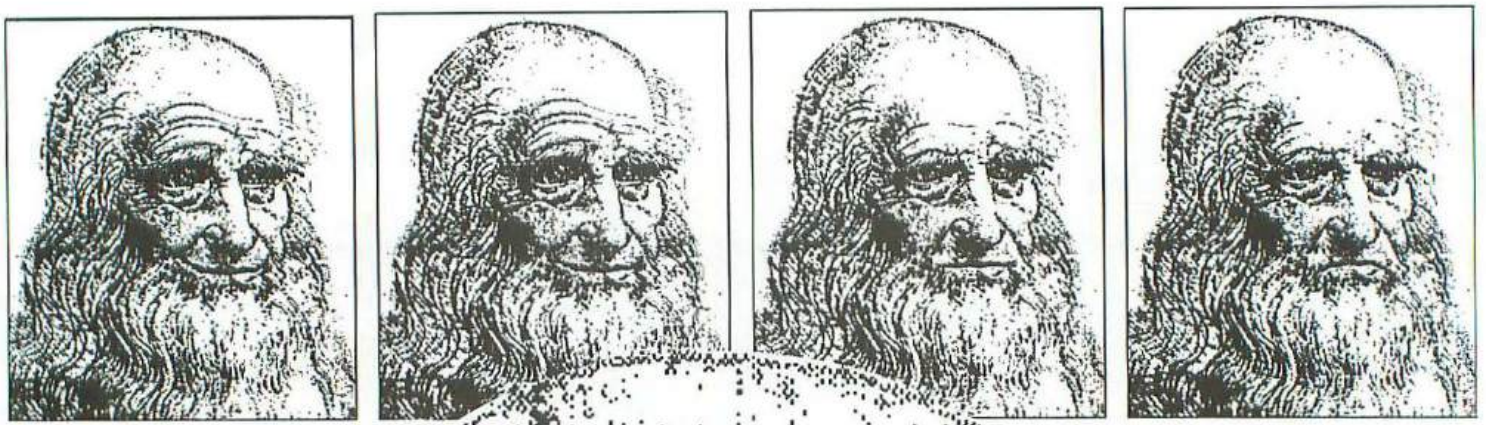
DIGITAL

UNDERFLOW


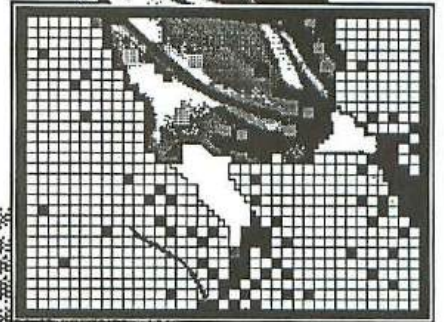
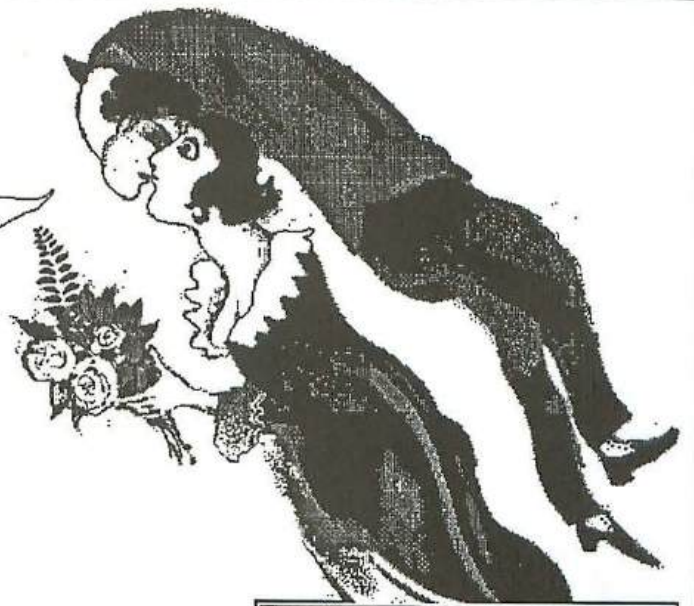


© 1999

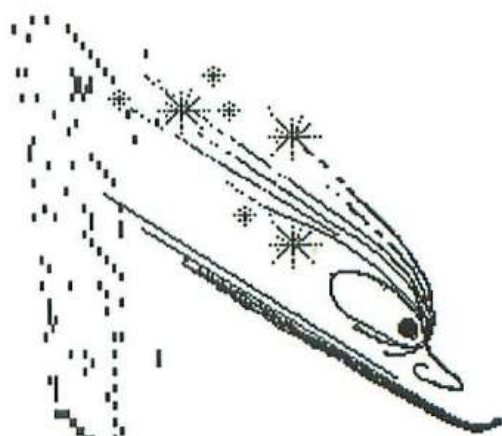
SOONER OR LATER ANYONE DOING
CREATIVE WORK WITH A COMPU-
TER WILL DISCOVER THIS TEN-
ACIOUS PULL BACK TOWARDS THE
OBSESSIVE PERFECTION OF THE
ANALYTICAL GRID



To quote M. Chagall,
*"Everything can and will
be transformed in life and in art
if we speak the word Love without
shame. In it lies true art."*



Creativity, like love, requires a soft focus; an ongoing flirtation with the unknown and the irrational; a state of mind open to the serendipitous accident or the unexpected flight of fancy that can come along and lift you right out of the everyday.



But the operating environment on any computer—even the bless'd Macintosh—is binary and crisp, with an implicit understanding that everything if carefully scrutinized is ultimately black or white. No in-betweens, no grey areas, nothing mysterious or soft focused. "The important thing," McLuhan once warned, "is to realize that electronic information systems are *live environments in the full organic sense*. They *alter* our feelings and sensibilities..."

Indeed? Significantly, the *digital undertow* was altering my feelings and sensibilities most drastically in the Fatbits environment. With all creative decisions reduced to ON or OFF, the allure of achieving **Ultimate Order & Perfection** became so strong that I eagerly compressed this vast and inexplicable human *consciousness* down to the level of shifting little black squares around a luminous screen *...for hours each day*. A tour-de-force of technological mesmerism!

How is it done?

By Electronically Induced Dyslexia? Could be. Maybe certain computers excite left-brain circuits enough to create the illusion of right hemisphere open-energy-flow activity.

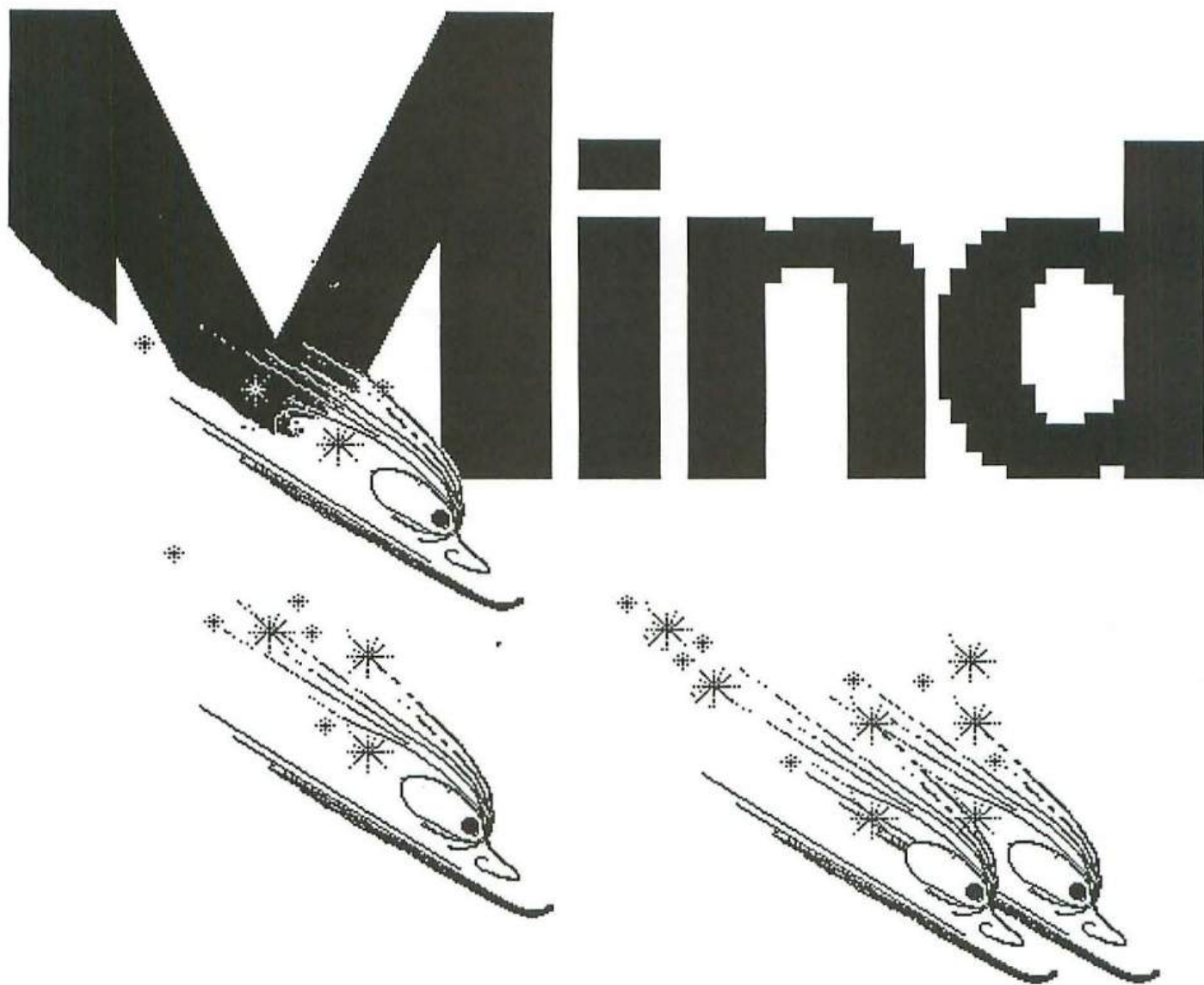
Why not?

And if in the process *genuine inspiration* gets replaced by *facile cleverness*...who cares? This is not the time for hair splitting:

Fire up that hard disk and full speed ahead!

Not without reason has the Mac been called

skis for the

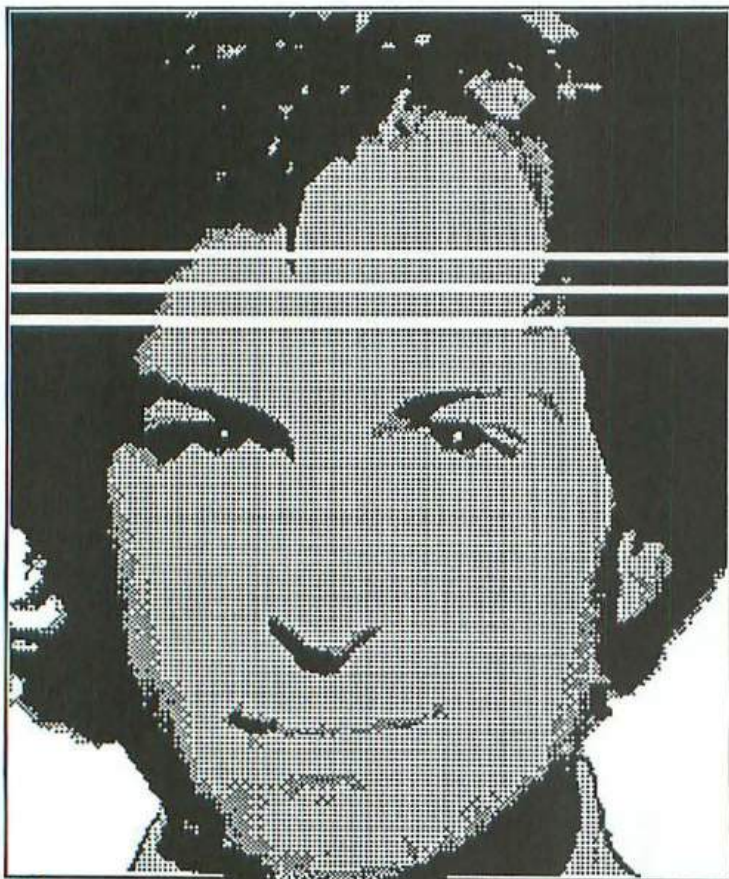


...it puts you on the fast track.

THE FASTRACK

Gazette

L I F E O N T H E L E A D I N G E D G E



Shaman of the Board

Of course! The fast track. At last I see what's been going on. I've been initiated by the Mac into the fraternity of the young and the restless. It all checks out: self-motivated and ambitious; aflame with visions of exponential growth and overnight success; long hours and six-day weeks; no extra time for other interests. And enough leading-edge tingle in the corridors to sweep my common sense reservations under the rug. Of course I don't see my wife and kid anymore, but—uh—I'm sure I could still recognise them...

Yup: The whole enchilada.

Lots of people really thrive in this condition. Indeed, Apple Founder and former Shaman of the Board Steve Jobs believed this is the way his development teams work best; that they're artists. "Look at the way artists work," he explained once, "they're not typically the most 'balanced' people in the world."

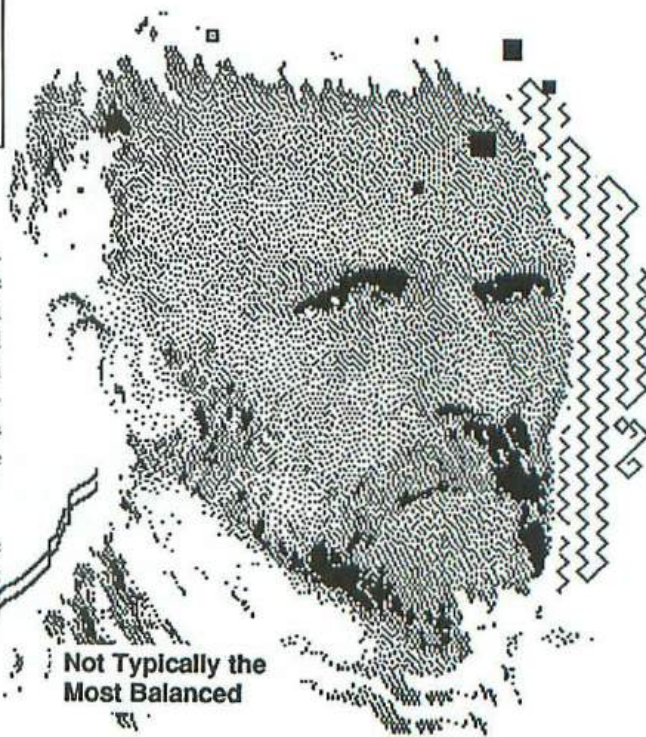
True enough. But there's no arguing with success these days, right?

Wrong! We don't have anything against success ...but you needn't be a prophet to spot yet another golden calf here. All you need is a brain which starts to fry when it finds itself accumulating too many mental speeding tickets.

Time for serious reflection.

If you step back a pace or two and get a wider perspective, it appears that what can occur here is the perennial obsession with surface activity that can distract us from the heart of life. This is the domain of calculative thinking, and it's perhaps the most dangerous quality of our secular age.

Calculative thinking is not only the process that has transformed our world through the empirical sciences, but characterizes any thinking process that plans to organize, manipulate and dominate situations. Even artistic situations.



Not Typically the Most Balanced

“It is the greatest challenge of our time to recognize calculative thinking and be aware of both its limitations and its power to completely absorb our energy and attention.”

But what about this exploration of the mysterious bionic relationship between man and chip? Pretty important, that?

SURFACE ACTIVITY.

OK, then what about the business of opening up right-brain functions...Saving the World, and so on? Surface activity?

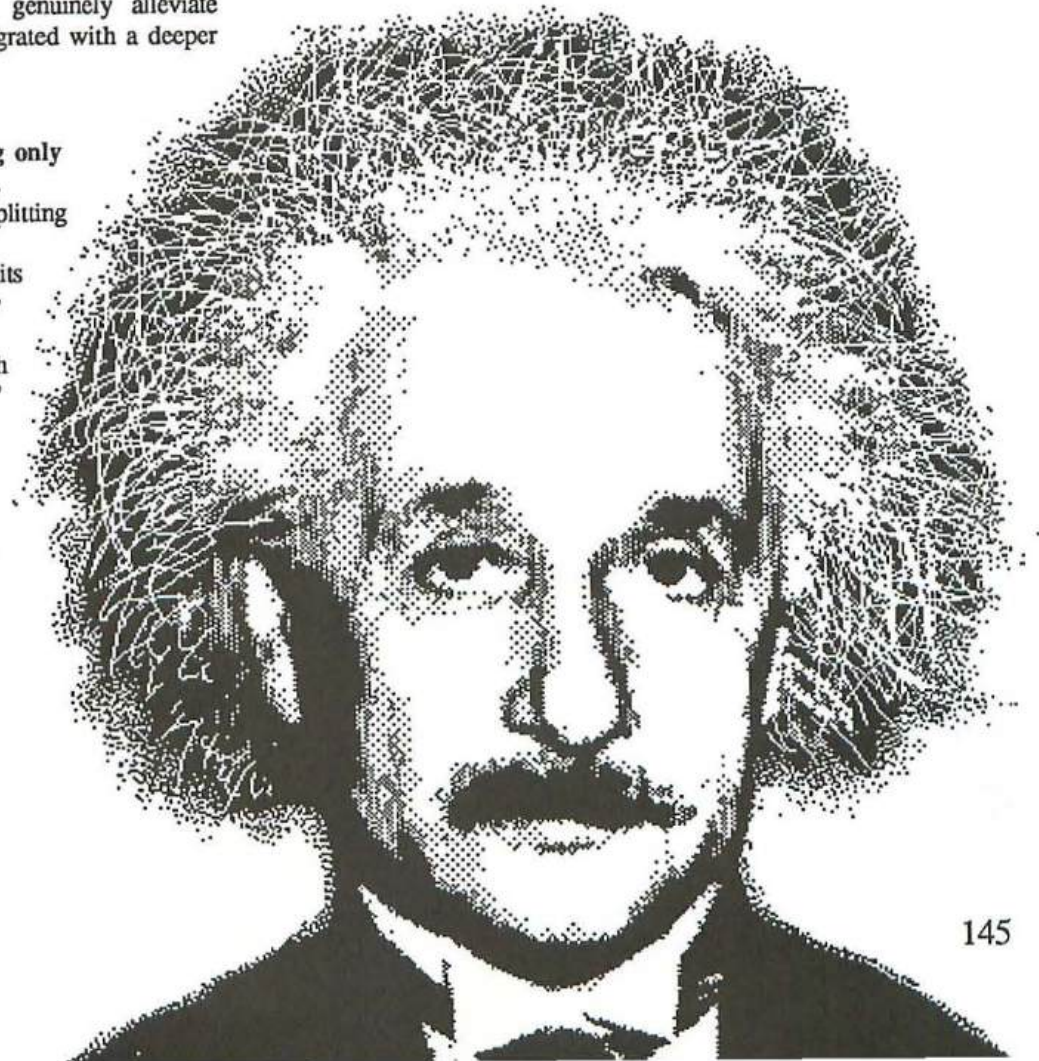
Maybe.

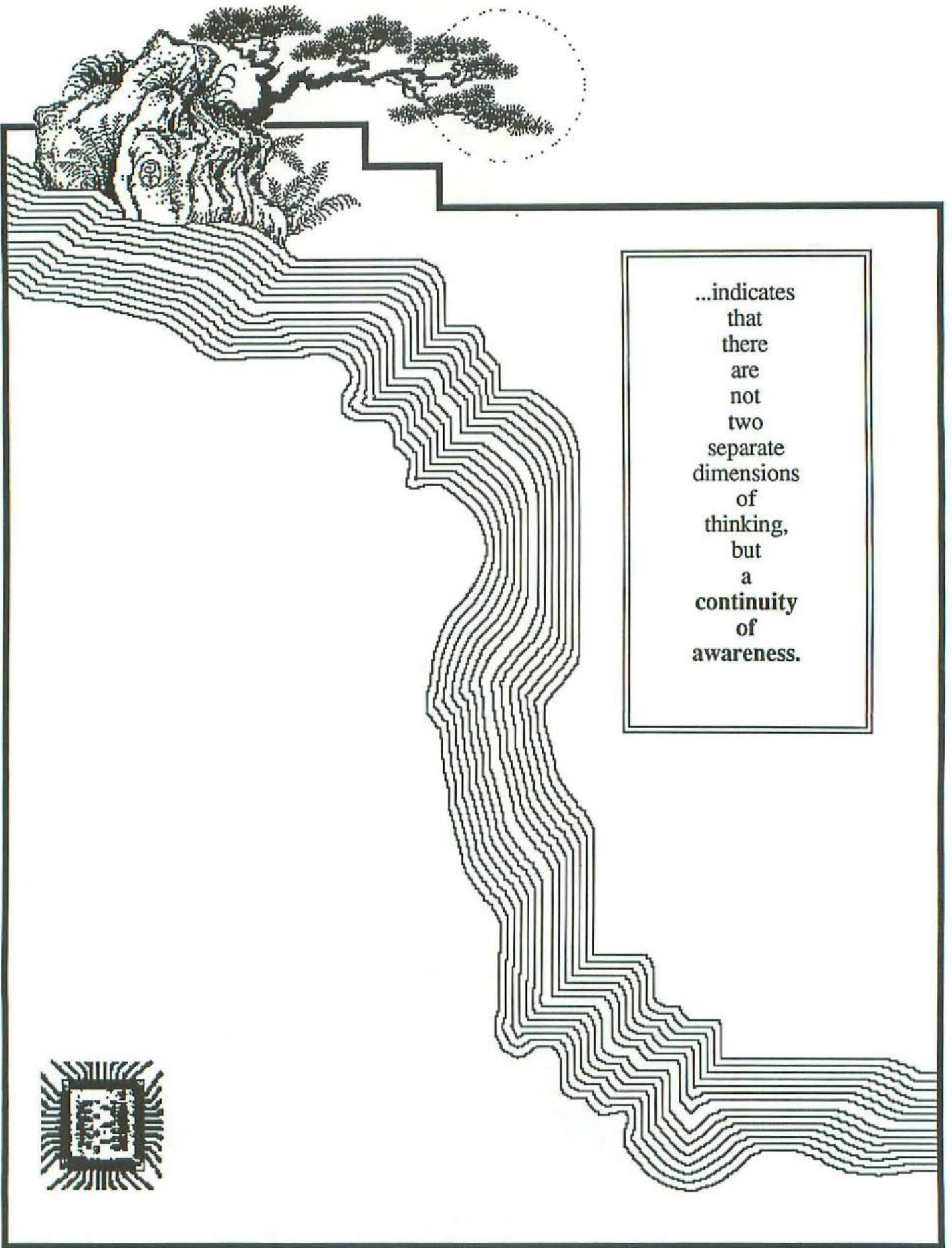
Without disparaging the ability of calculative thinking to order our world, even make it beautiful, it is the greatest challenge of our time to recognize it, and be aware both of its limitations and its power to completely absorb our energy and attention.

Calculative thinking, with all its apparent practicality, becomes an abstraction, cut off from its roots. It develops technologies that possess manipulative powers and offer an illusory sense of tangibility but can never truly nourish humanity. Calculative thinking—thinking confined to its own surface—can never genuinely alleviate human problems unless it is integrated with a deeper level of thinking.

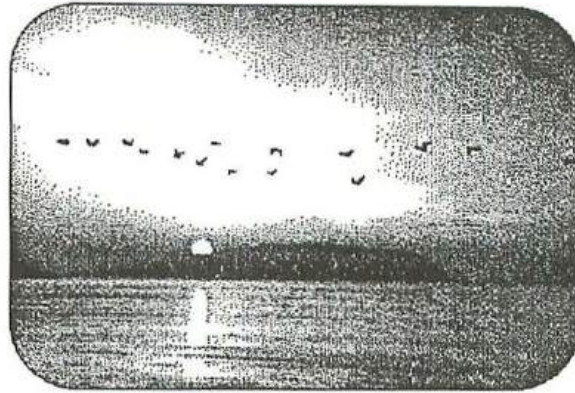
Surface, calculative thinking only obscures our intrinsic harmony. It is grounded in the principle of splitting and dividing all things as a means of analysis and control. By the limits of its own nature it can never truly grasp any profound underlying unity, but often pretends to through platitudes such as “We’re all one.”

Yet the fact that we often find a peaceful strength in someone who has mastered some aspect of calculative thinking: musician, mechanic, potter, mathematician...



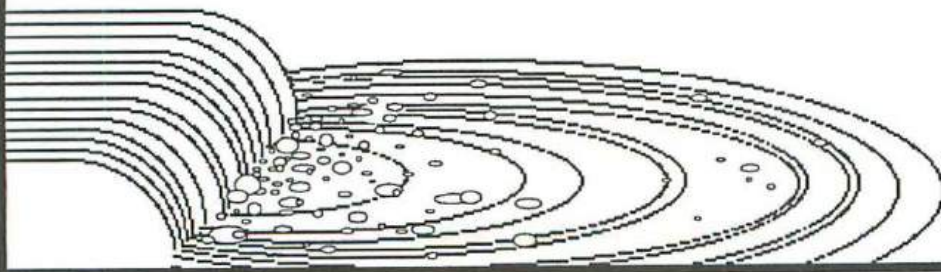


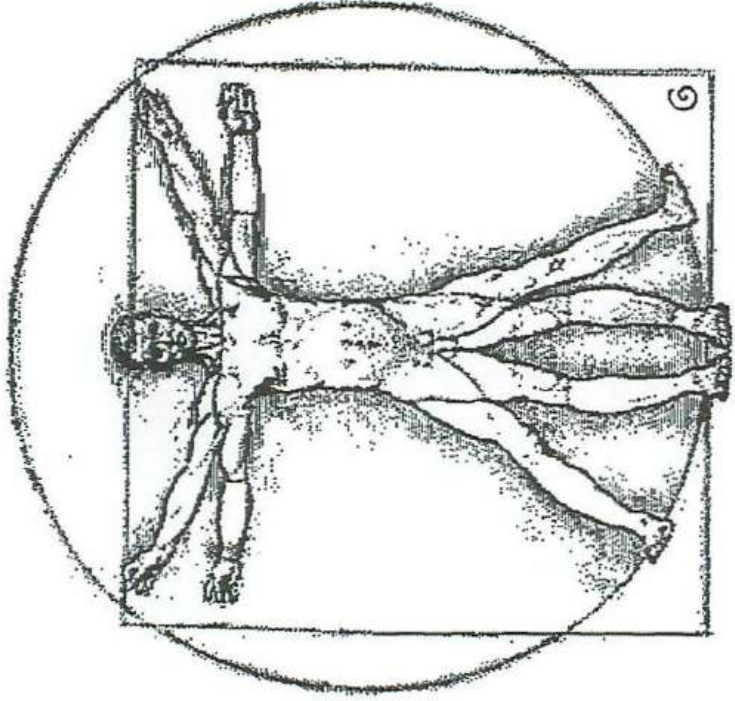
...indicates
that
there
are
not
two
separate
dimensions
of
thinking,
but
a
continuity
of
awareness.



This separation is a symptom of spiritual disharmony to which human beings have always been subject, but perhaps more intensely so in this secular and technological age. The healing of this disharmony between calculation and contemplation is the process of Enlightenment, which reveals the essence of all thinking as an unbroken stream of pure consciousness. This process is not for a few Zen masters, or saints, or "mystics" - but for everyone.

THE REST OF US.





T H E R E S T O F U S

CHAPTER
6

Chopping

Wood,

道

Carrying

Water.

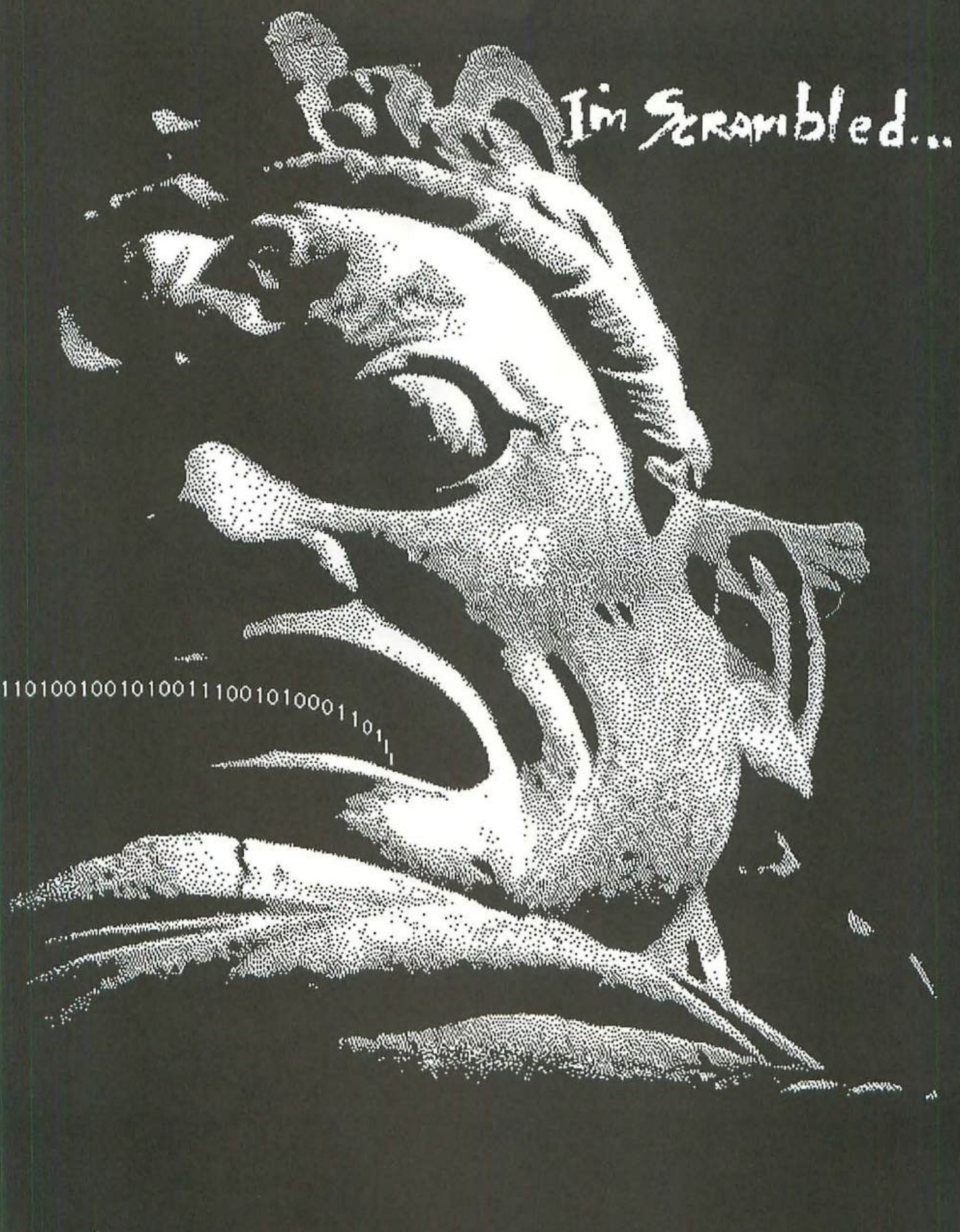


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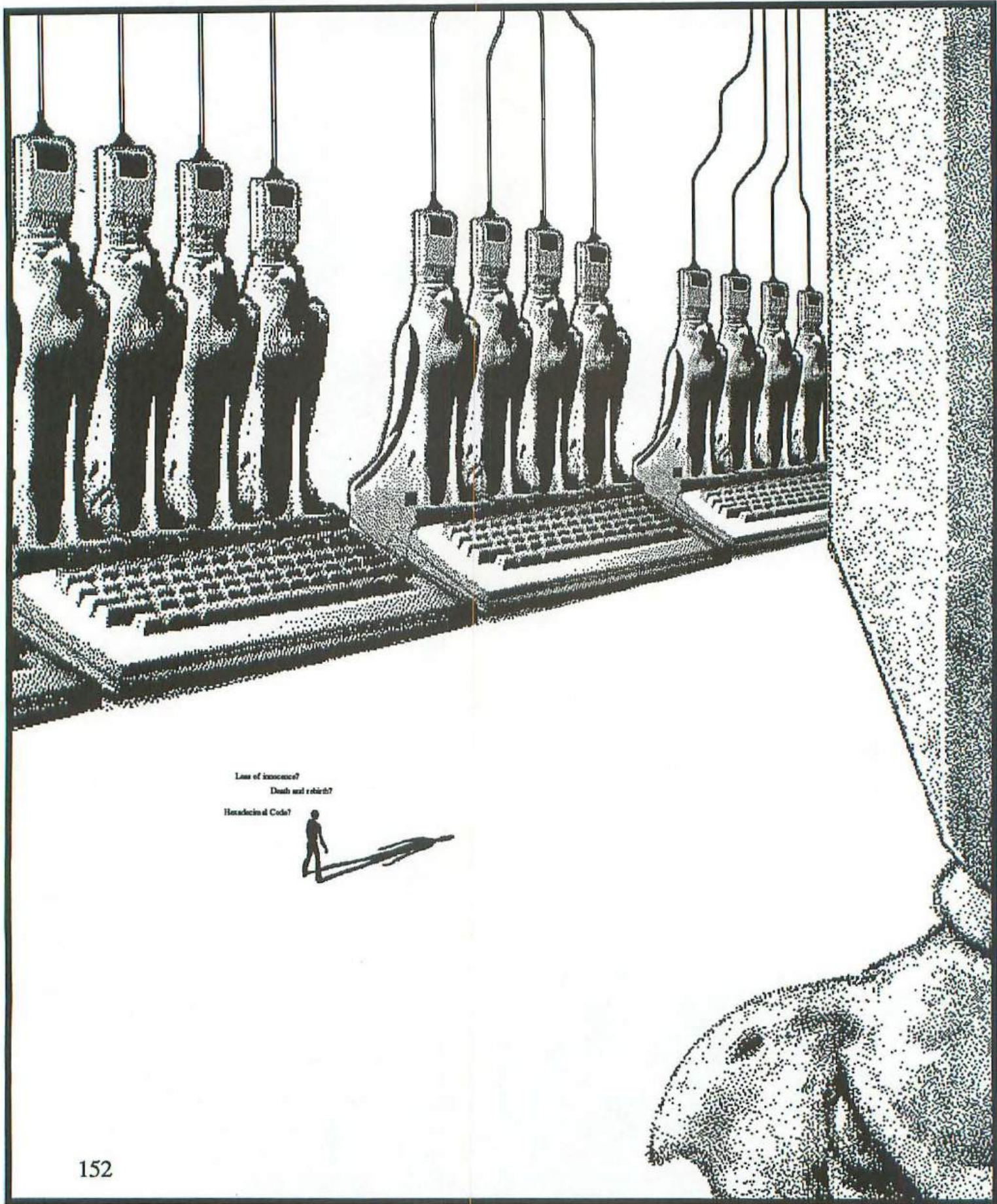
**“The future masters of
technology will have to be
lighthearted and intelligent.
The machine easily masters
the dumb and the grim.”**

Im Scrambled...

110100100101001110010100011011



On the other hand I might well be at the point of no return



Loss of innocence?
Death and rebirth?
Hexadecimal Code?

in a genuine *technological rite of passage*.

Rites of passage are usually characterized by a series of trials. For instance...

TRIAL I

The Stony Curse of Sensory Exile. Staring at a cathode ray tube for hours every day can really throw off the natural balance of your *sensory input*. One becomes *all sight*. Internal processing gets all skewed out. The neurological consequences of this are hard to prove but easy to feel: Jagged. Totally externalized. Consider how the sense of sight emphasizes the *separate-ness* of things—as opposed for instance to the all-enveloping continuums of *hearing* or *smelling*.

Eye sees, therefore eye am?

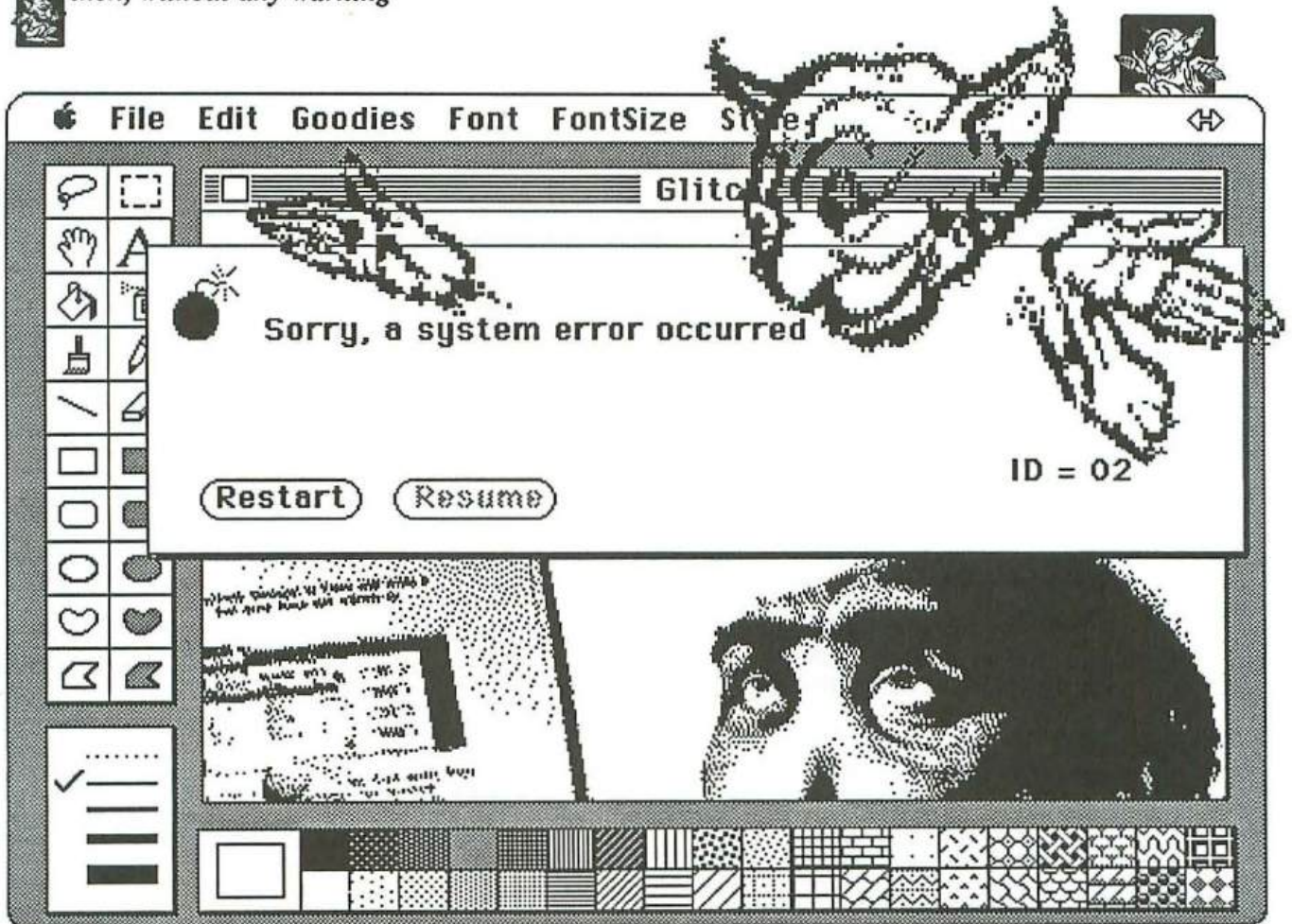
TRIAL II

The Endless Race not to fall behind the frothy leading edge of The High Technology Wave:

Hardly do I have the flashy new Mac Turbo II in my hands when the QuickDo ProtoZoom is released, "setting new industry standards"—and rendering my Turbo II hopelessly obsolete. But snagging a review copy is only half the battle. Next we confront ...



Curiously, trial and error usually reveal that installation and use are actually quite simple. Things are looking good, you're getting up to speed again... then, without any warning



TRIAL IV



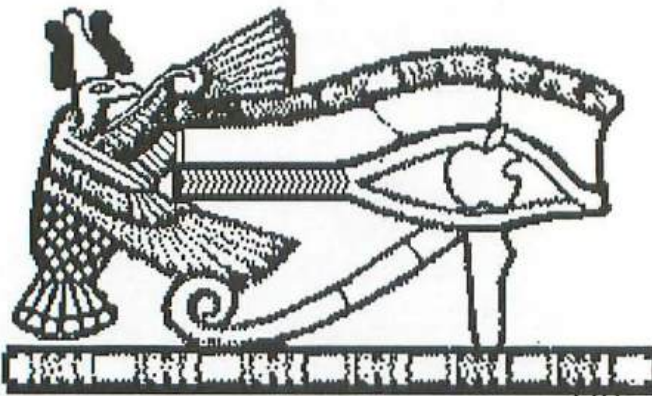
Surviving The Mysterious Glitch.

Why in the Name of Venture Capital won't PageMaker print through the Imagewriter? Where did the new fonts go? Why does a cute little bomb keep wiping out the MacPaint upgrade screen whenever Switcher is running?

The wheels of industry grind to a halt while we pick through the system searching for the fatal flaw; hours and days slip by waiting for overloaded factory support personnel to call back. One becomes all too painfully aware that this is still the technology of an adolescent industry, and all its parts are a bit gawky—still undergoing spurts of growth and change, constantly in motion, updating each other and falling in and out of compatibility.



Of course, no Passage is devoid of unexpected moments of grace:



MOST MYSTERIOUSLY

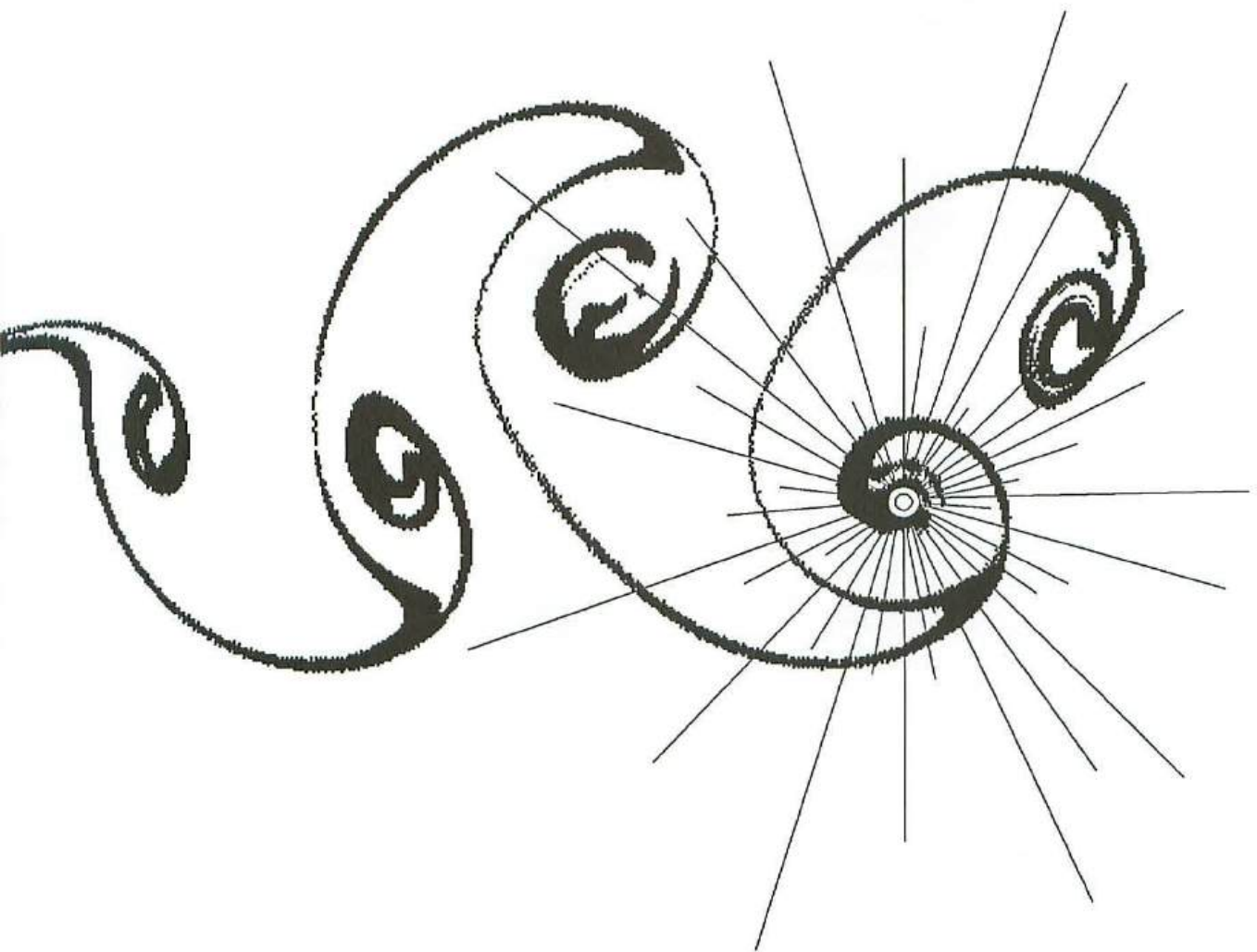
after many a foiled attempt to get a new system going smoothly, I sometimes walk through a routine that didn't work before—and...*What? Now everything works fine!* But of course. **The Randomly Generated Blessing** has come and gone.

I suppose this should be comforting, like when Han Solo gives the control panel of the Millennium Falcon a good whack, and the recalcitrant spaceship leaps into lightspeed: *shucks, even this high technology is kinda human after all!*

But it's not comforting. I can't get over the notion that computers should have a certain implacable perfection about them. If something goes awry—well then it should *stay* awry until properly remedied according to the book.

Eventually, and by means never fully understood, the new additions are online and the whole system running happily.







THERE MUST BE SOME WAY OUTTA HERE...

True. A path can always be found out of even the most oppressive or addictive...

predicament

Ultimately, a clear...

It's just a matter of getting the *higher* perspective...

direction

emerges, simple in fact, though less two-dimensional; a *middle*

the grid

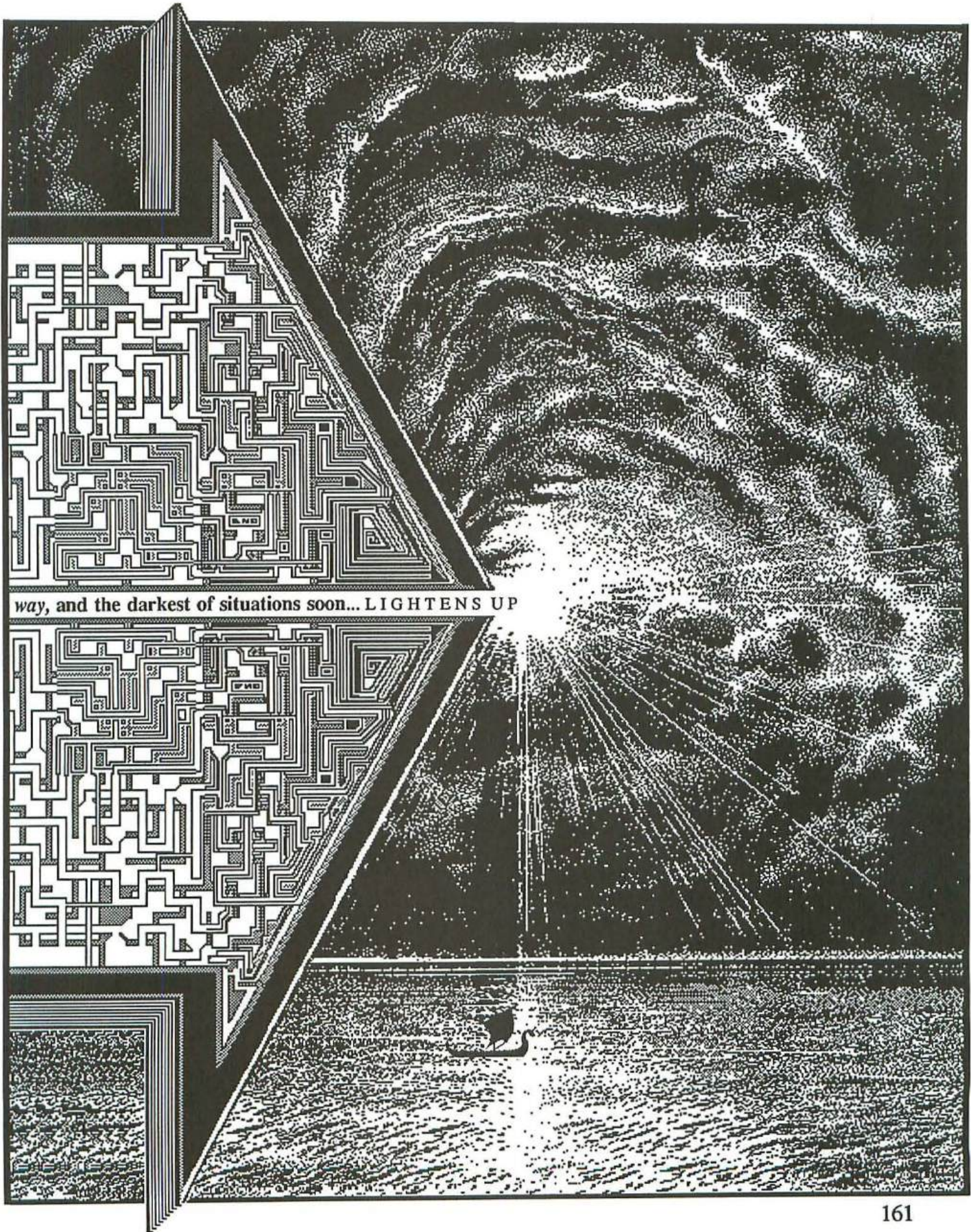
the subtle art of nicking through cracks in...

to discern an *abiding* path of life from all the *dead ends*. Naturally, events take on a more *mythic perspective*, with its keener vision, fresh insights and new responses...

or

reversals when necessary...

such as the flexibility to make...



way, and the darkest of situations soon... LIGHTENS UP

ON RATS & RITES OF PASSAGE



The difference between men and rats, it has been observed, is that while we both have the ability to find the *cheese* in our respective mazes, when the cheese is gone, the rat will only return to the spot three more times at most. *Men, on the other hand, keep returning to the same spot for the rest of their lives!*

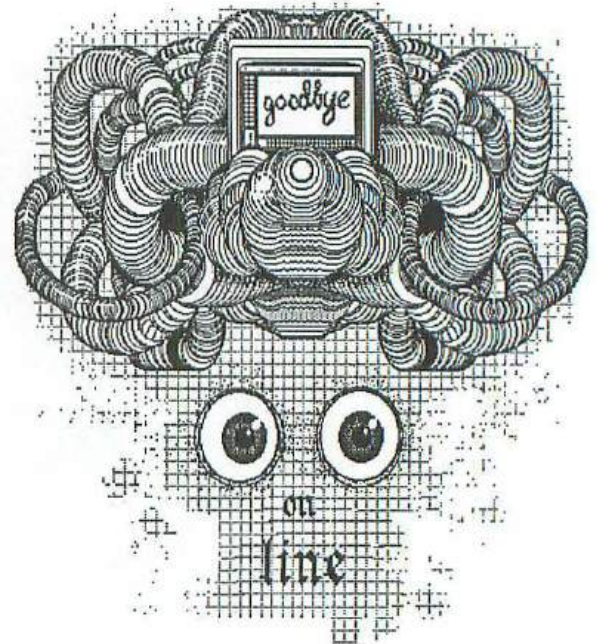
For a while there, the Macintosh experience had been the Great Cheese. Like any sleepwalker in the throes of a new romance, I had projected onto the relationship the fanciful hopes and false expectations which always lay the foundation for a good bringdown.

Sleepwalker? Sure. Truth is, we roll through life on automatic pilot, asleep at the wheel, more or less oblivious of what's really going on—of what's really Real. Mostly we get away with it.

This is variously called Everyday Life, Business as Usual, **The Great American Dream.**

But through the modern magic of electronic brain stimulation, I found myself getting strung out everytime I nodded off at the wheel of the Mac.

The computer's velocity and dynamics raised the *stakes* by amplifying my *state*. Win big, lose big. Time and again, I have been drawn into the rose gardens of digital delight, only to find myself snared at day's end in a briar patch of thorny obsession. *Samsara*. The whole venture certainly addresses some crucial area where I am all too willing to let go of the helm.



Rites of passage are built around a crisis that forces a closer look at the essentials of our life. But since our modern times



lack the appropriate Homeric pageantry, passages must surface in unlikely surroundings and are difficult to spot. If you catch the wave though, hold on! One should come out the other end not only older, but wiser. *Recognition* of the process, and *where you're at in it* is the key to staying the course to a successful conclusion.

A little calculation reveals my position is in the crucial bottleneck stage. The sirens of fascination beckon on the right, while to the left loom jagged hassles and obsessions.

Artful means will be necessary to see this thing through to a graceful conclusion.

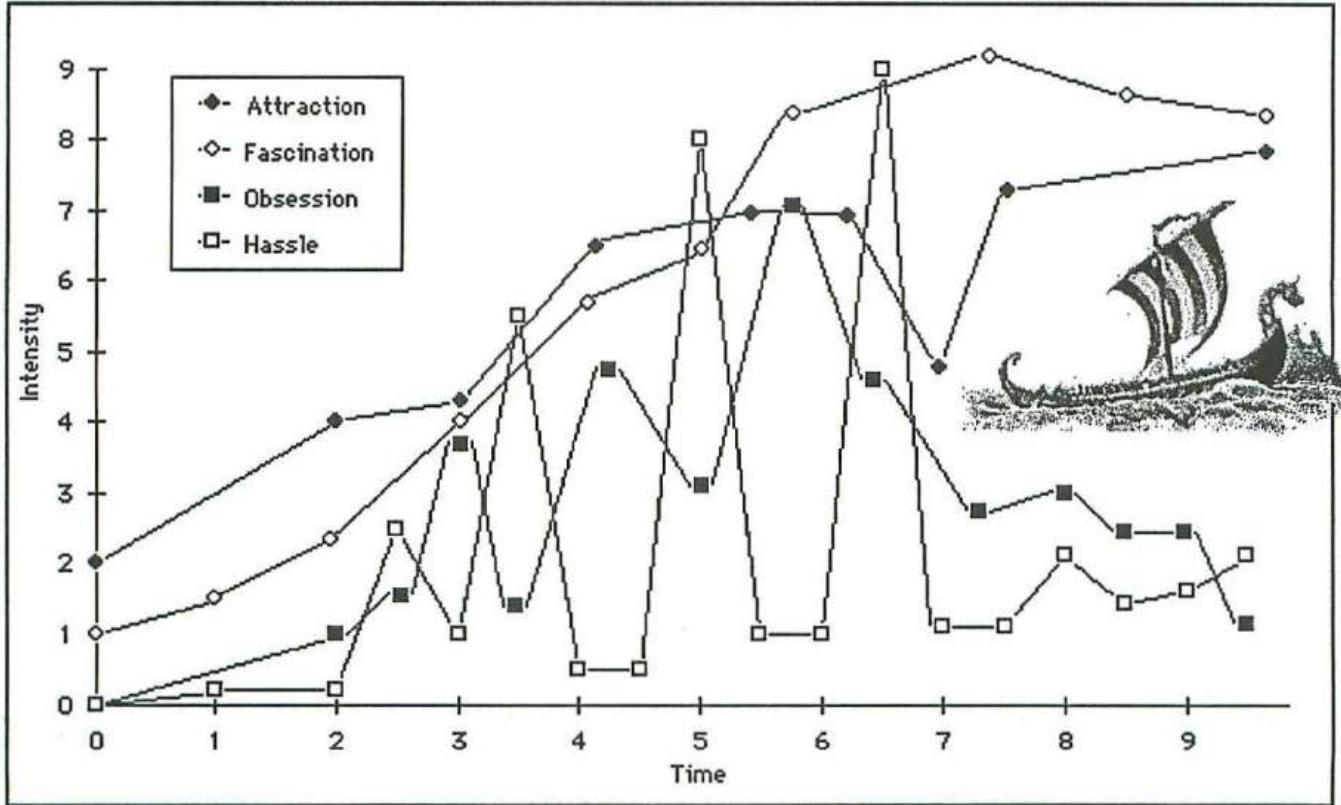


FIG. 29.3 CRUCIAL BOTTLENECK

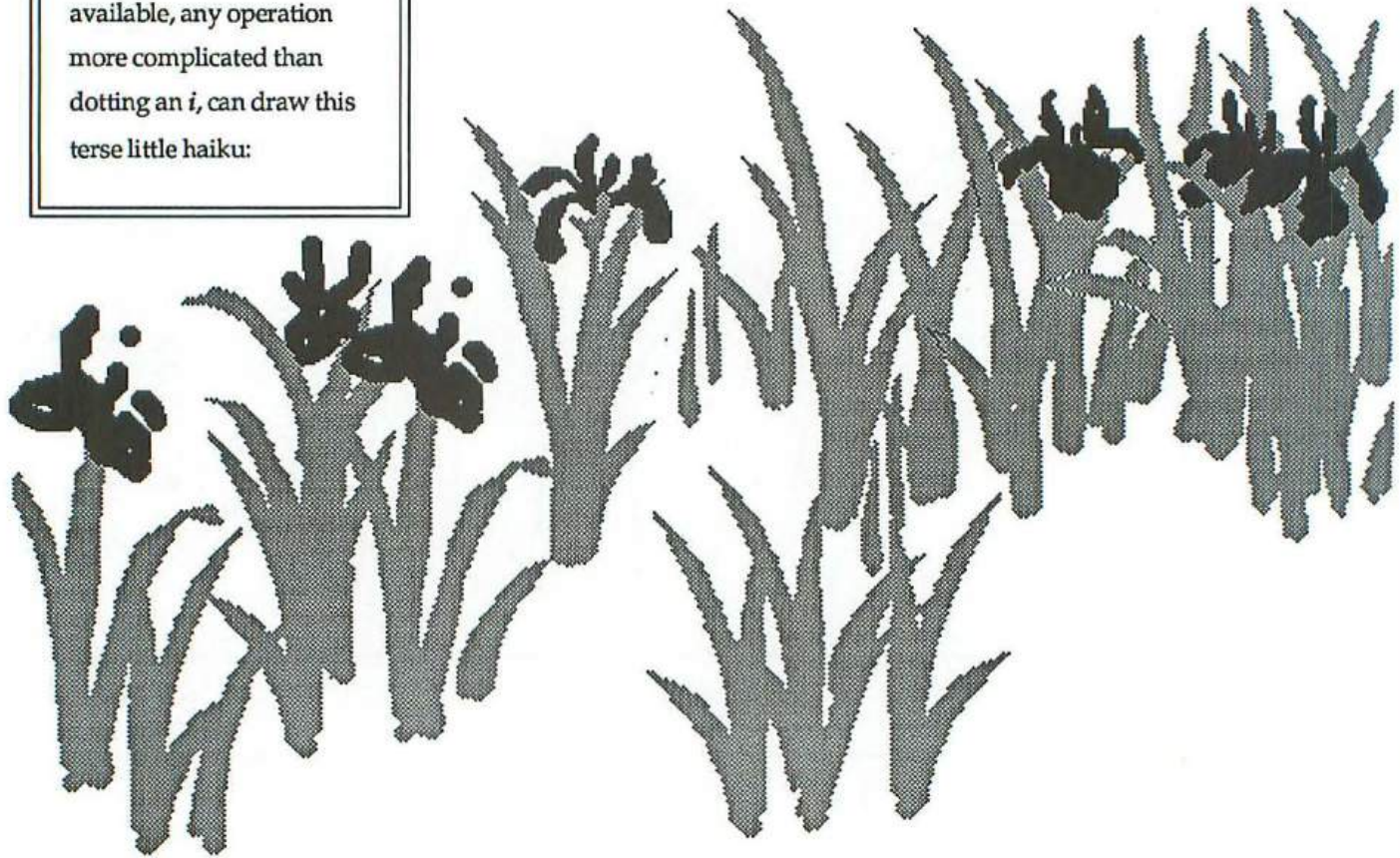
Artful means.

In the arts of Zen, form is invariably balanced with emptiness—not just unfilled background, but a *living emptiness* intrinsic to the dynamics of the work.

The same holds with computer software. When a program is loaded into the Mac, it needs plenty of unused *k*

—emptiness—

left in memory to “move around in.” If it’s not available, any operation more complicated than dotting an *i*, can draw this terse little haiku:

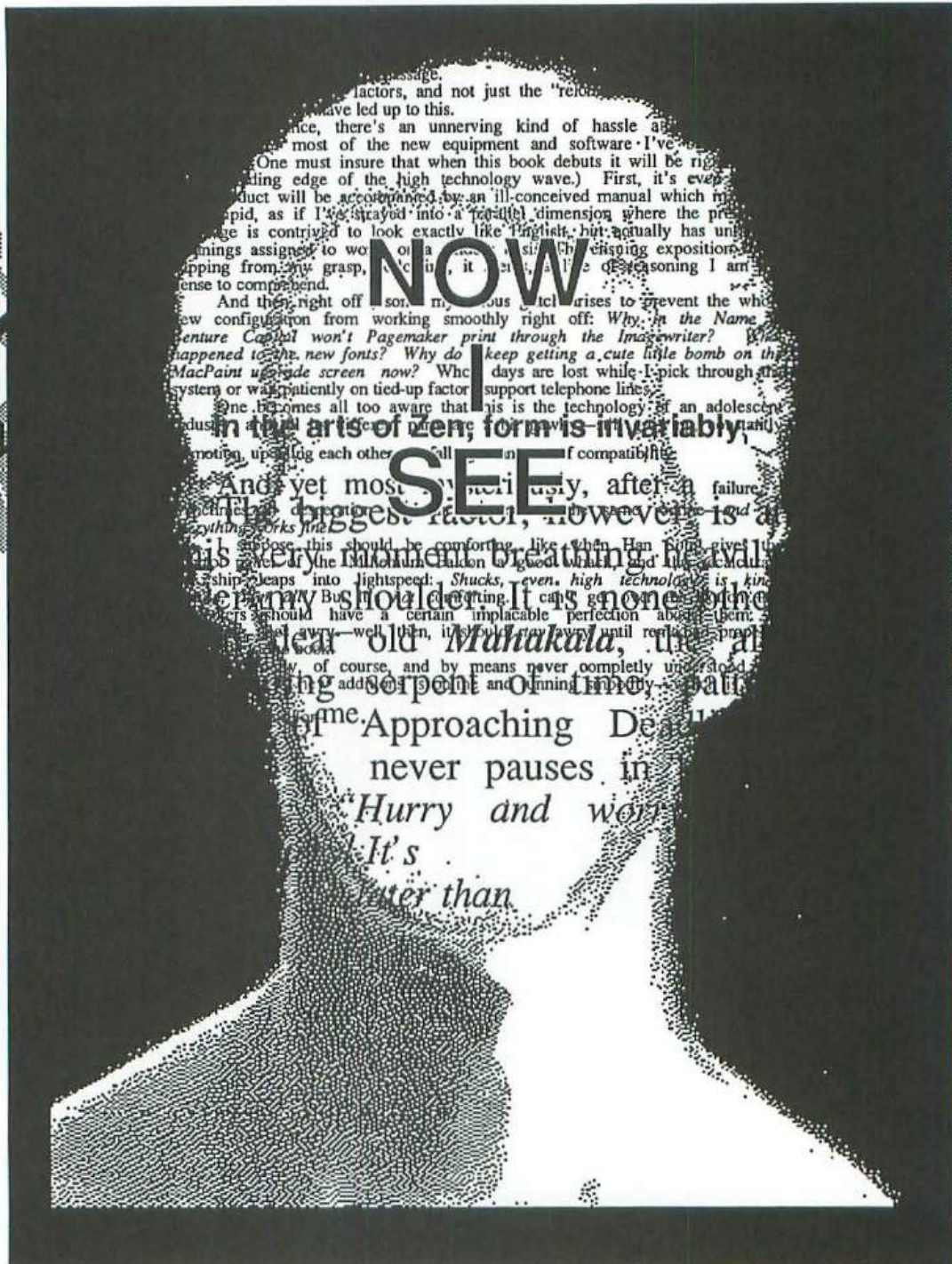




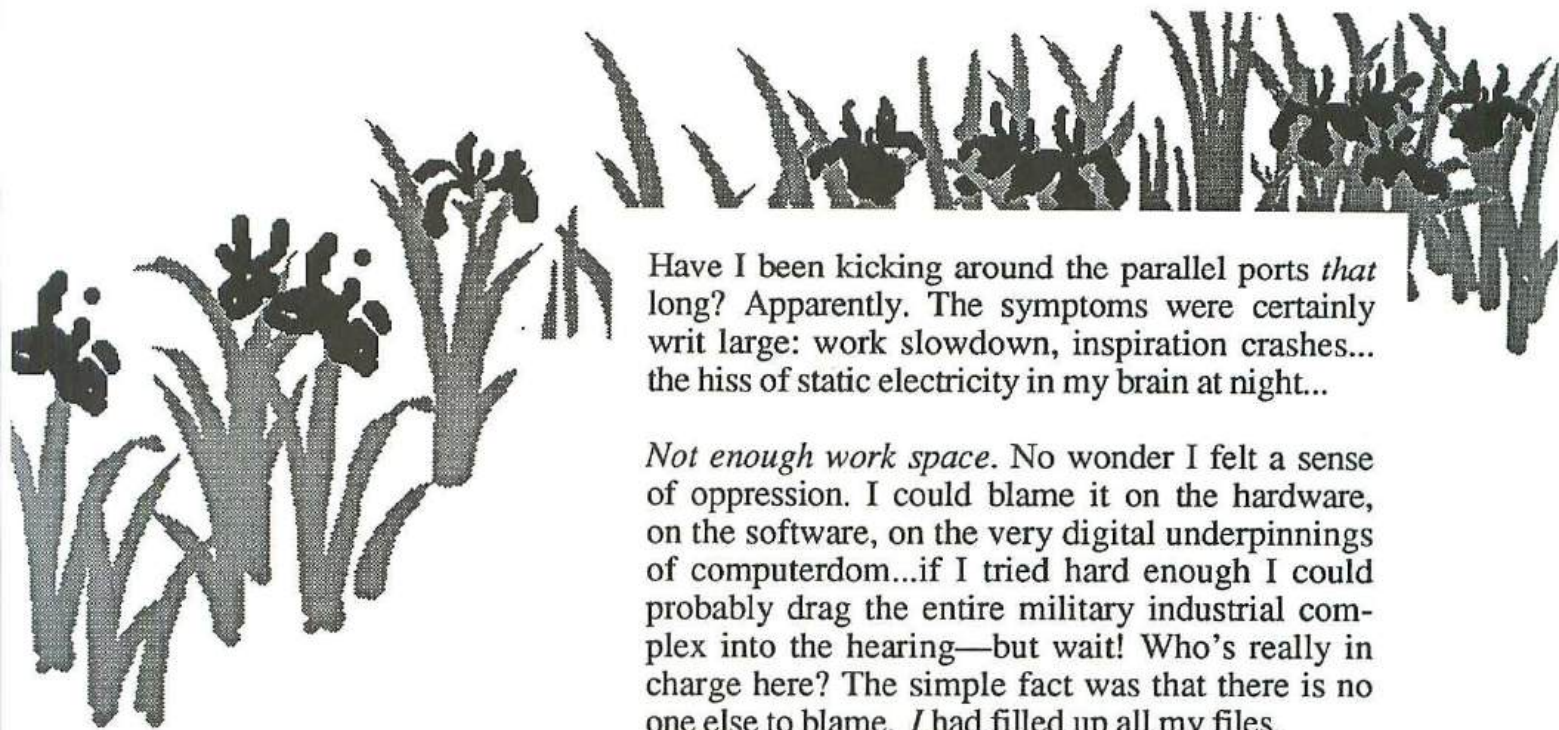
A FILE OR QUIT
PLEASE ERASE
ENOUGH WORK SPACE
THERE IS NOT



Not enough work space indeed!



The book had filled up all the files in my head.



Have I been kicking around the parallel ports *that* long? Apparently. The symptoms were certainly writ large: work slowdown, inspiration crashes... the hiss of static electricity in my brain at night...

Not enough work space. No wonder I felt a sense of oppression. I could blame it on the hardware, on the software, on the very digital underpinnings of computerdom...if I tried hard enough I could probably drag the entire military industrial complex into the hearing—but wait! Who's really in charge here? The simple fact was that there is no one else to blame. *I had filled up all my files.*

If the situation has arisen because of what I hath done, then responsibility to UNDO was mine too. The irony did not escape me that this *overcrowding* is all taking place in a book promising a look into Zen, and by extension, into emptiness.

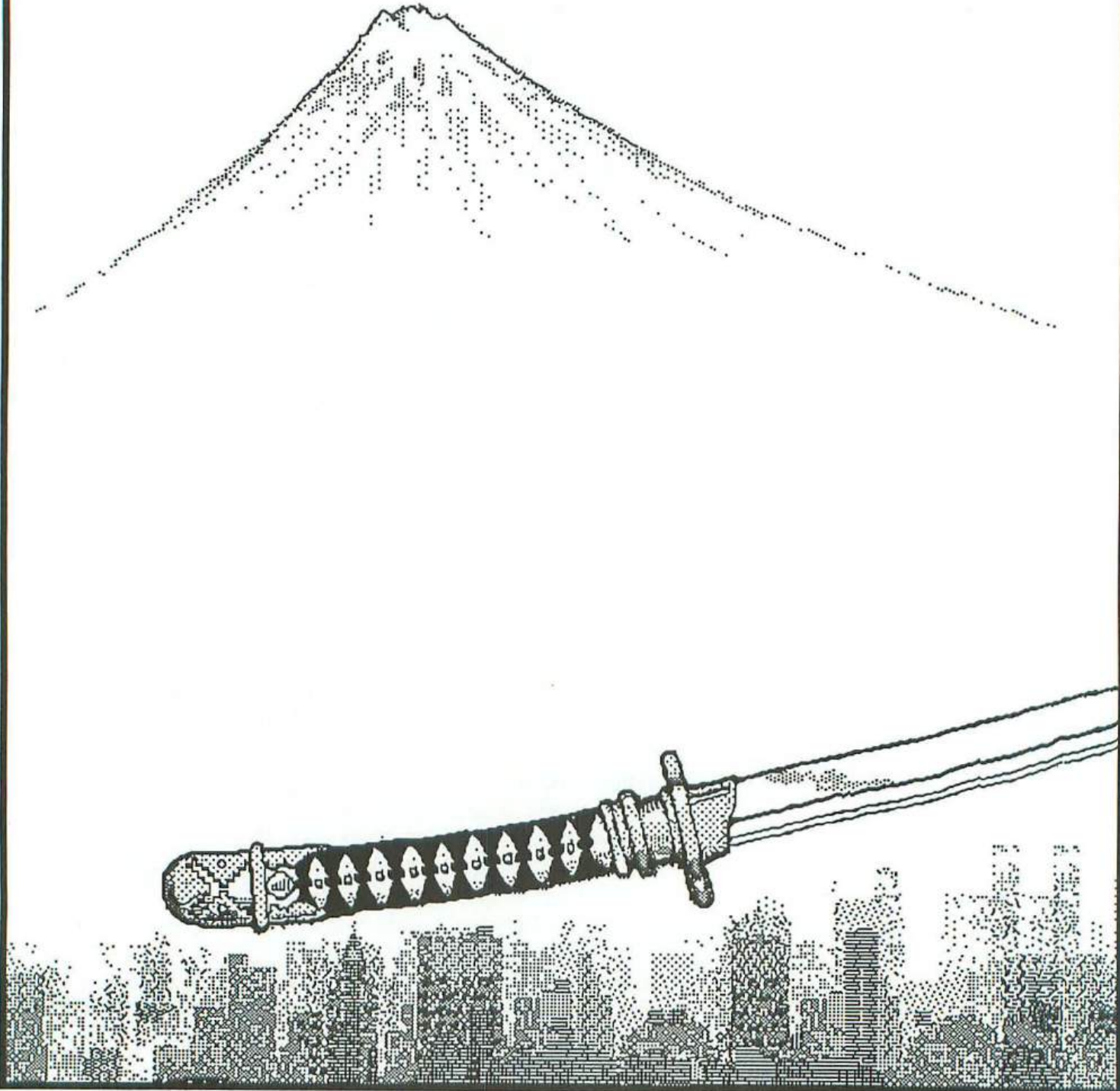
Getting it on with Emptiness.

A first step in clearing out the head is some serious reflection on the matter of clearing out the head. And while merely *talking* "emptiness" is generally frowned upon in the Zen trades, a little running on about it has some value—it starts a synchronizing of one's mental algorithms with an elegant new Source Code. *In other words, let us seriously consider the possibility that a shift of our center of gravity away from all the stuff happening around us can radically lighten one's baggage, clear one's mind, and open the heart.*

The Graphic Safari has arrived at an interesting about-face. First came an account of *getting into digital territory*, and now, *cutting our way out!*


Advice from Aikido master to friend starting business:

“CLEAN SPIRIT...”





A Sword Story

 KASAKI MASAMURA was the greatest swordsmith of ancient Japan. Not only was he famed as a master of the art, but as a man of inspiring moral stature as well.

So great was his intensity of spirit, it is said, that when he forged a sword, something of his own nature would pass into it.

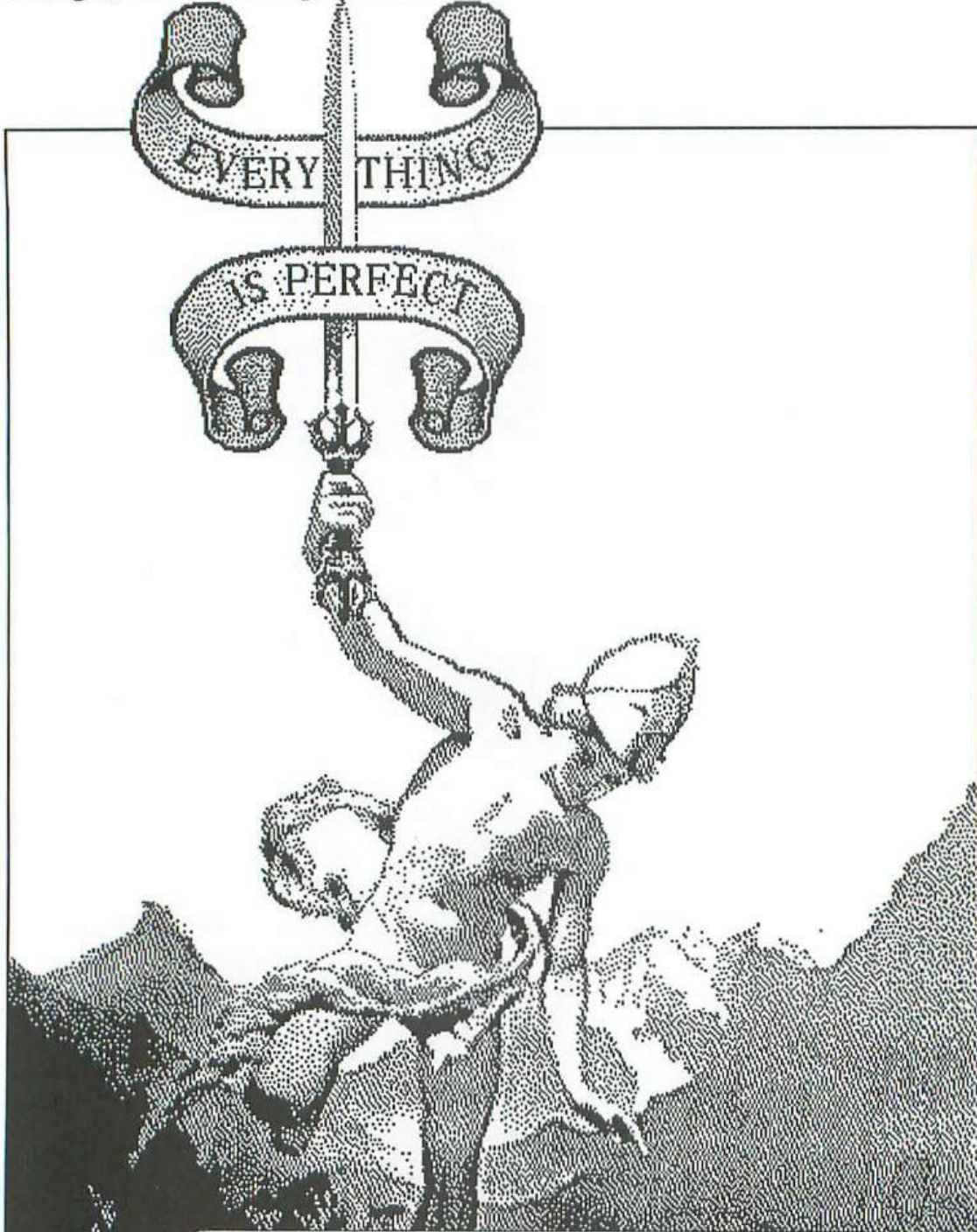
His ablest disciple Muramasa was reputed to have exceeded him in the keenness of his blades, however.

A samurai, wishing to ascertain the finer edge, placed a Muramasa sword in a flowing stream. Every fallen leaf that floated down and met the blade was cut in two. He did the same with a sword of Okasaki.

To his surprise, the floating leaves avoided the blade.

SHARP SWORD."

All right, here's the sharpest sword of all:



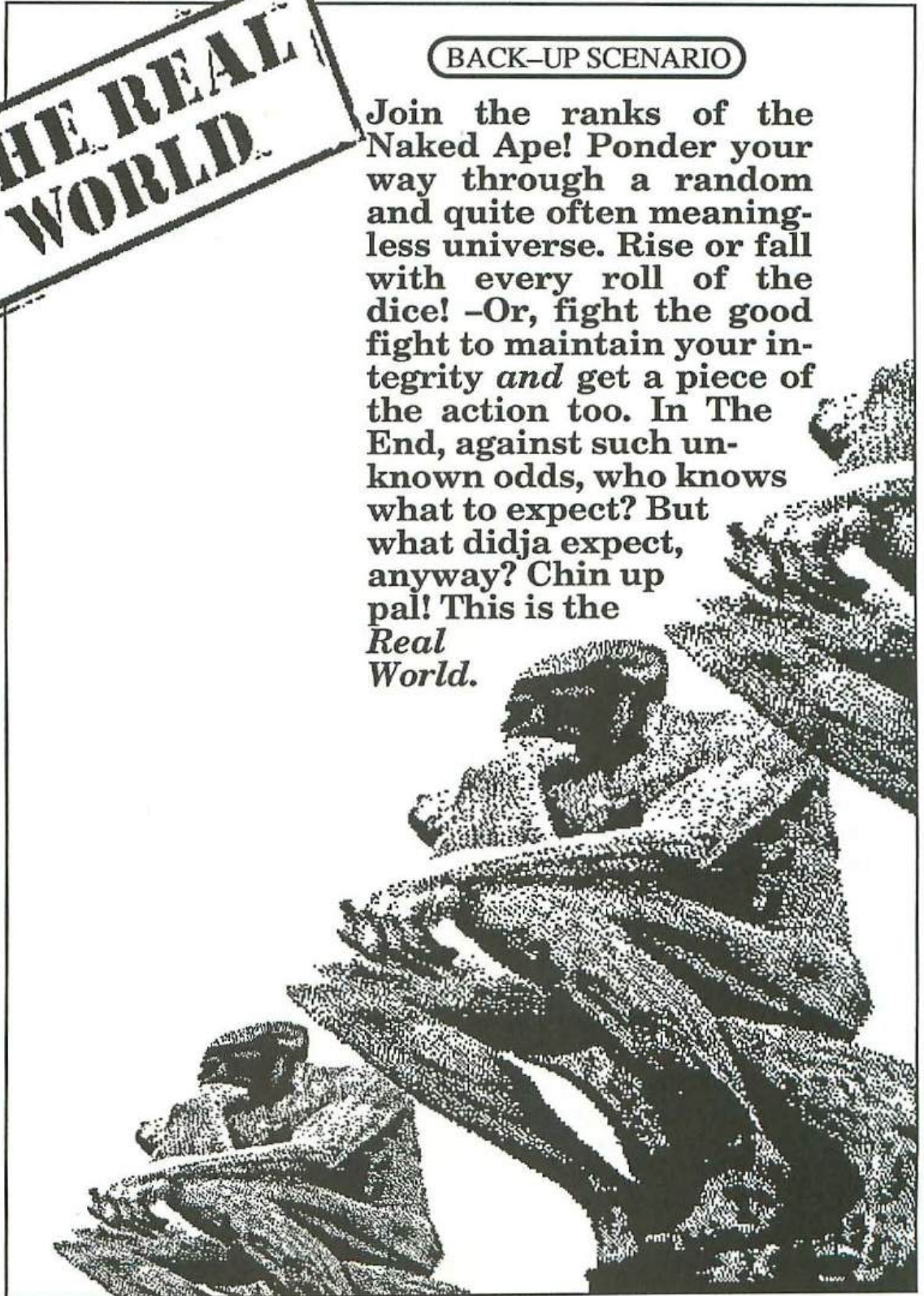
The Vajra sword! Grasp it, and suddenly, *right here and now*, all the circumstances of your life stand revealed as a stage superbly shaped and governed by Central Intelligence to be *the* perfect setting for the mysterious process of *your enlightenment!* Important clues in the Plan will be crucially placed exactly where and when you can really use them. Everything fits together right down to the smallest detail.

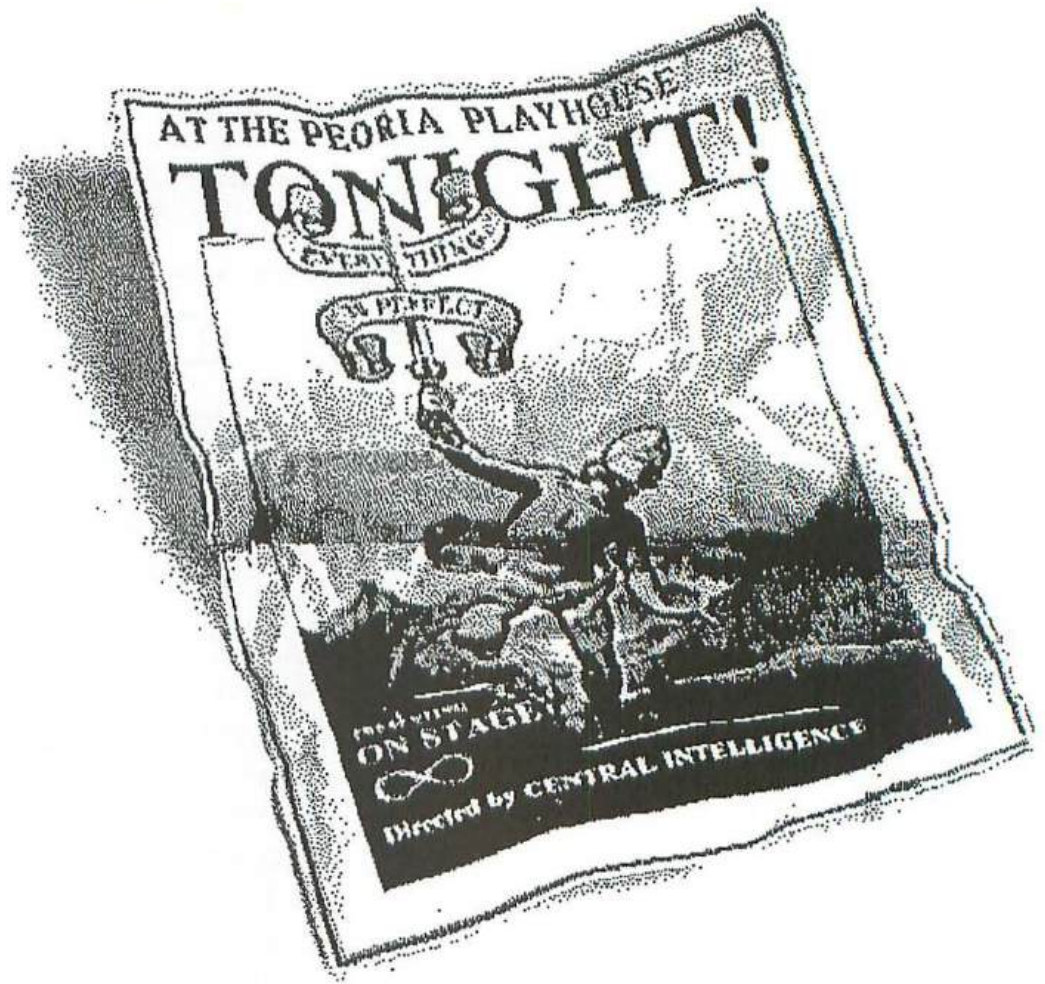
Does that compute? Of course, if you're not comfortable with the plot-line of "Everything is Perfect," there *is* a far more popular *back-up scenario* available. And if the going gets a little heavy at times, remember, *it may be a B movie, but at least it's reliable.*

**THE REAL
WORLD**

BACK-UP SCENARIO

Join the ranks of the Naked Ape! Ponder your way through a random and quite often meaningless universe. Rise or fall with every roll of the dice! -Or, fight the good fight to maintain your integrity *and* get a piece of the action too. In *The End*, against such unknown odds, who knows what to expect? But what didja expect, anyway? Chin up pal! This is the *Real World.*





BUT WILL IT PLAY IN PEORIA?

It's tempting to buy the "Everything is Perfect" script, but seems risky too. How can you be certain it's not just wishful thinking?

Will it play in Peoria?

No way. Under the pitiless scrutiny of everyday rationality, "Everything's Perfect" folds after one show. "Un-be-lieve-able," chorus the critics. "God is in His heaven, but All is decidedly not that well on planet Earth."

Hold on now. Remember that one variation or another of this understanding is *central* to all sacred traditions. The least we can do is look at it again with fresh eyes.

If we do, we discover a new variation of the Theory of Relativity: *both of these scenarios are true.*

Obviously the "Real World" script tells it like it is. (The evidence is undeniable.) We are stuck in a patently unjust and suffering world run by loony dinosaurs whose ignorant armies clash nightly (between ads) on the six o'clock news. Occasional flashes of beauty illumine the scene, of course—to be overshadowed, if present trends continue, by some nuclear flashes.

Everything's Perfect?

Come off it!

*We're talking
real world.*

A Public service of Name & Form.



That's just how it is out there.

Or is it?

Is that...it? Only for those who don't mind missing the whole point of this extravagant game show called Reality.

Now pay heed and attend, O Best Beloved. Merely *typing* in the text of the "Everything's Perfect" page, the author felt a subtle energizing, a brightening, a *seeing deeper into things* settle into him. Of course. It's like that whenever one approaches the Dharma! *It's a different kind of knowledge. And it feels different, because it is knowledge based on the totality of our human experience, on patterns observed not only over one lifetime, but over many lifetimes.*

Unseen Order.

We already know there is pattern and often unseen order to be found everywhere in the manifest world. With pattern so indwelling in the *form* of things, why not then in the *way* of things—in the *way* of our lives no less than the growth of a leaf.

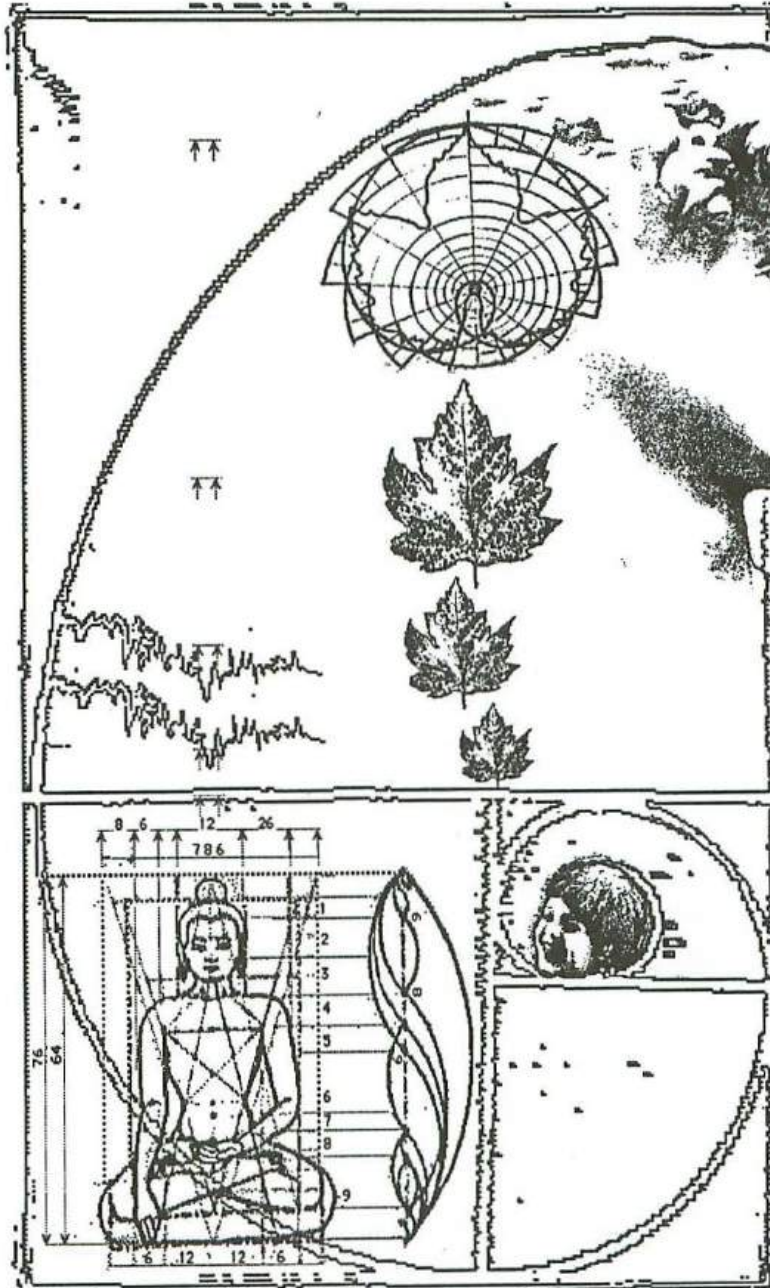
Periodic tables; Fibonacci spirals; synchronicity and coincidence; rose petals and rites of passage: all part of the same unfolding Pattern. With a new eye, Everything is perfect.

What brings this whole gestalt into focus is *belief*: The simple decision to consciously affirm, as a working hypothesis,

that *this is the way things really are.*

But what about the "Real World" Plan? (Or non-plan, as the case may be.) "*No problem,*" says

it. The ultimate proof of the Pattern Plan is simply that it works. *Believed in or not*, it is in sync with the deeper rhythms of reality, and is open to the confirmation of subjective field testing.



the Sage, "*no real dualism here, but a clearly defined relationship.*" The "Everything's Perfect" Plan is simply three dimensional to the two dimensions of the Non-Plan. It doesn't contradict it, *it contains*

everything is perfect. And then acting appropriately.

But to fully exploit this calls for something of the attitude of the samurai.

Meditation on Location.

The only way to confirm the Pattern Plan is by entering it. Voyeurs will discover little—and wind up only confirming their worst suspicions. But embracing it initiates a new and immediate sense of forward motion, and a corresponding Doppler shift in reality. Everything moves in a new light.

The "real world" turns around and opens, revealing that Everything seemed planless only because there are more plans than are looked for—than we've dreamed of. It's all Plan! *All change and expansion, all movement into openness.*

At this point, all hindrances and hassles are revealed as curriculum—*your* curriculum—to be passed and left behind. Complaining and self pity and faultfinding are shown up as obvious energy rip-offs: distractions from your *real* task of discovering WHAT'S really going on; WHY

The Way of the Samurai:

Meet every
second in life as
challenge;
respond fully to
whatever happens
without anxiety.
Or complaint.
Or clinging.

HIS IDEAL IS TO BRING TO
EVERYDAY EXPERIENCE THE
SAME TOTALITY OF ATTEN-
TION THAT HE CARRIES ONTO
THE FIELDS OF BATTLE.

WE MIGHT CALL THIS

**MEDITATION
ON LOCATION**

OR WAKEFULNESS

O R Z E N



*The mind is digital...
but the spirit is analog.*



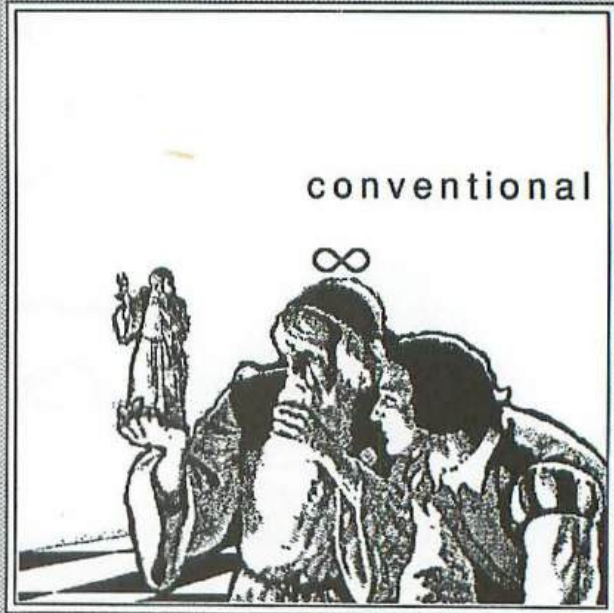
It is not a paranoid but a general, *electric* focus of attention that the Samurai cultivates:
In a lull of battle, the ideal warrior may well pause to admire a newly opened crocus,
or compose a haiku on the transitory nature of life.

Zen is above all the

Liberation

of mind from

實 孤
不 見 家 爐 拳 香 冷 水



conventional

patterns





When we make contact with a deeper, unwavering kind of understanding, our attention starts to shake its addiction to the superficial.

Once deprived of their surface fascination, external events cease to be as primary as they once seemed.

There's a lot more open space for the action to take place in.

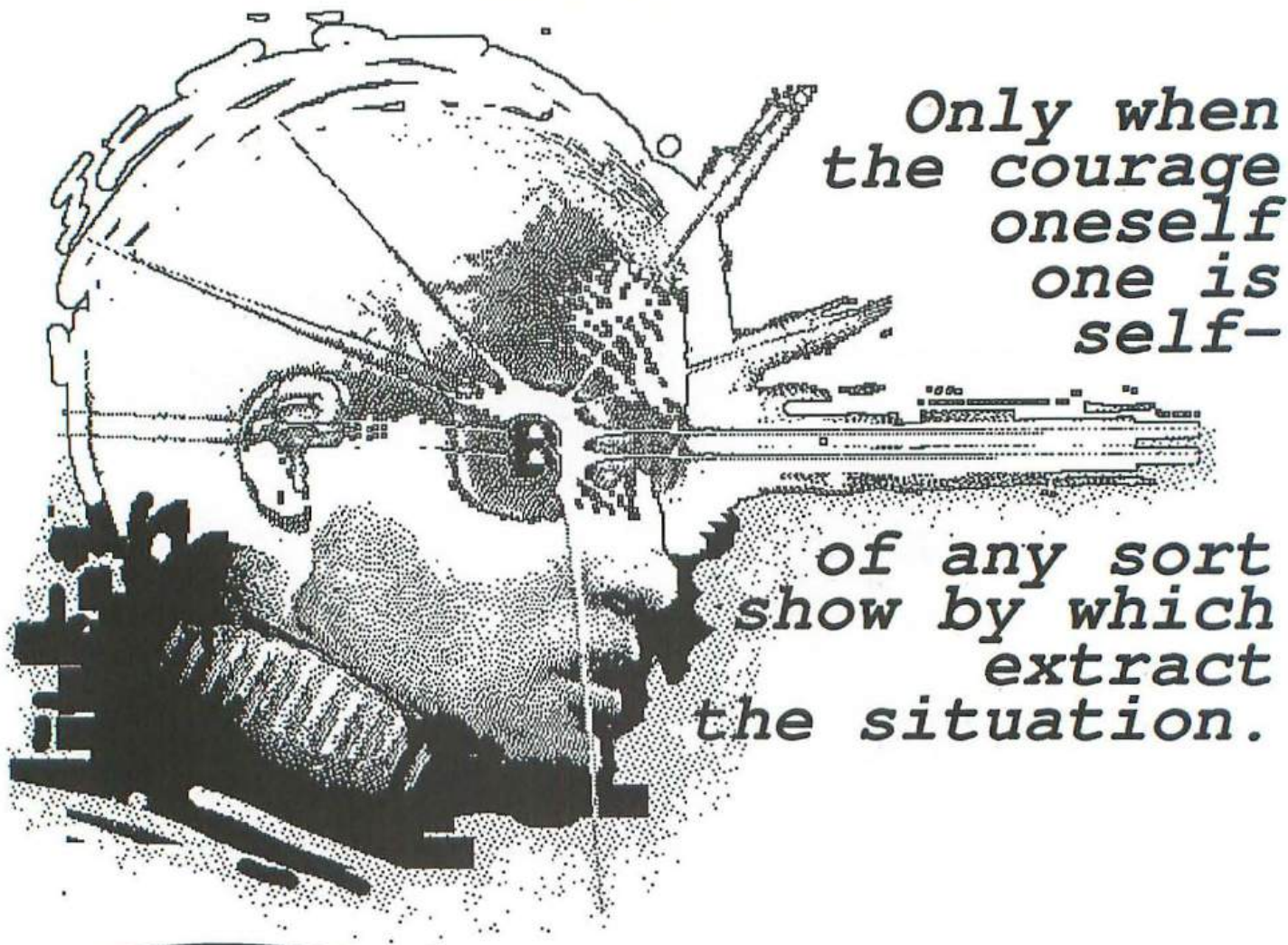
True Life Drama lightens up. On the edge of the Great Mystery, your act acquires more the flavor of a chess game.

This shift in relationship with the circumstances of our life is nothing less than the "transmutation" sought by the alchemists of old: the lead of a rudderless no-exit universe is turned into the gold of an ordered and infinite Cosmos.

Not the least of the virtues of this expansive condition is that it's a lot easier to have a clear perspective on

yourself.

Persimmons courtesy of Zen monk Mu Ch'i who dashed off six of them on a piece of rice paper no bigger than a table napkin, and would be amused, no doubt, to learn that 700 years later it has become one of the most celebrated and valuable paintings in all Japan. The actual connection to the narrative of these persimmons is somewhat dubious.



Only when
the courage
oneself
one is
self-

of any sort
show by which
extract
the situation.

So I haven't really mastered the Mac? In plainer language, I haven't mastered myself. How naturally was our graphic safari sucked down the digital undertow!

Reviewing the entire journey, going right back to the fascinating experiences in the first chapter which set this entire book in motion, I can see that I was setting myself up to slip away from

wakefulness right from the start.

Better take a closer look at fascinating experiences. Can it be that the unreflective search for the fascinating experience qualifies as the premier delusion of our time?

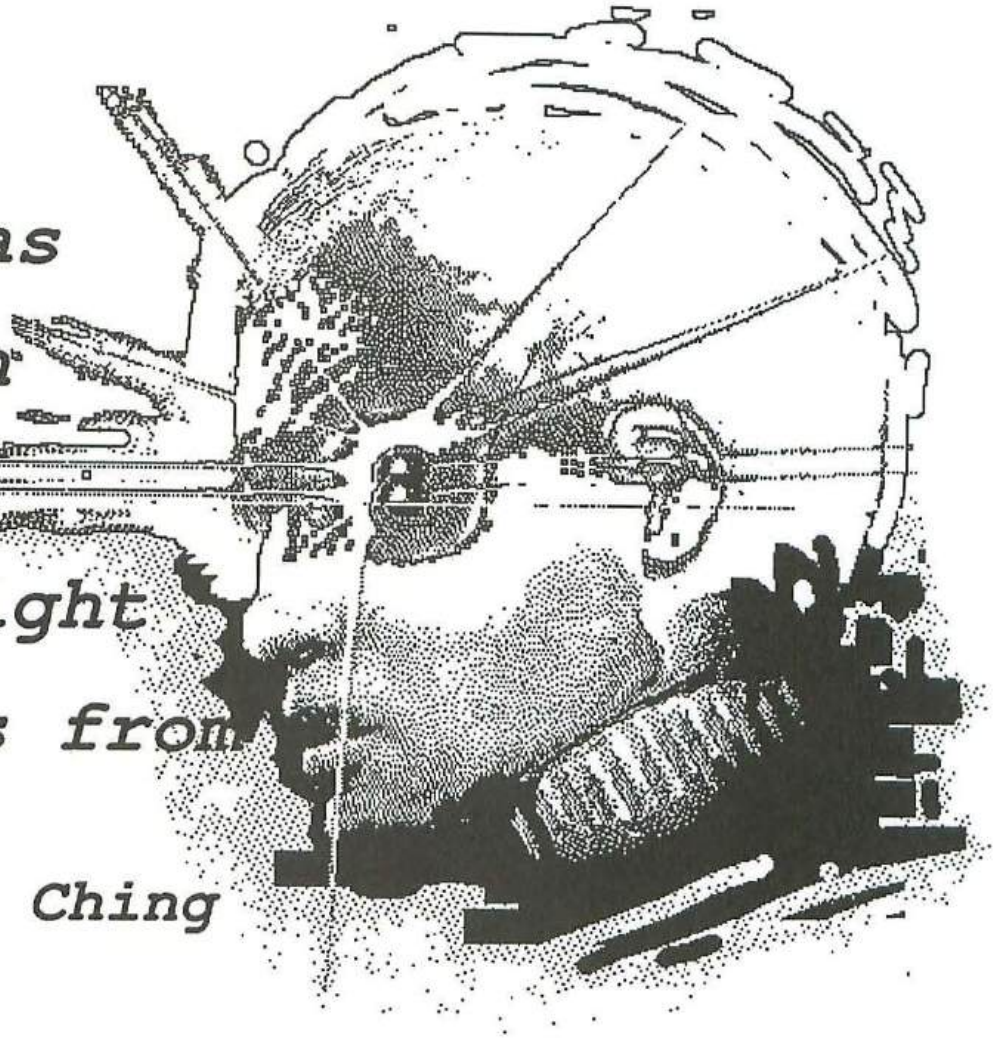
Instantly part of me files protest—*Waddy mean, delusion? What's your problem, anyway?*

A touch of outrage is

one has
to face
exactly as
with no
deception

will a light
we can
ourselves from

—The I Ching



generally good indication you're on the right track. I think this line of inquiry has lead us into a major cultural heresy .

What is modern civilization geared up for if not the fascinating experience? Isn't that the good life, what we're aiming for? Art! Music! Creativity! Culture! *People Magazine!* That feeling! Going for It! Isn't that what it's all about?

Happily (or sadly, depending on where you're coming from) the answer is no, not if you're really interested in the Major Leagues of

Life



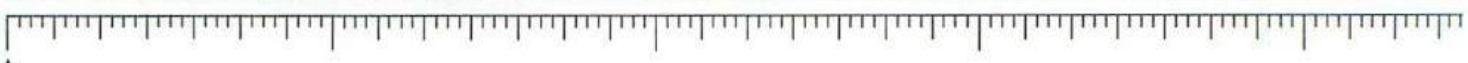
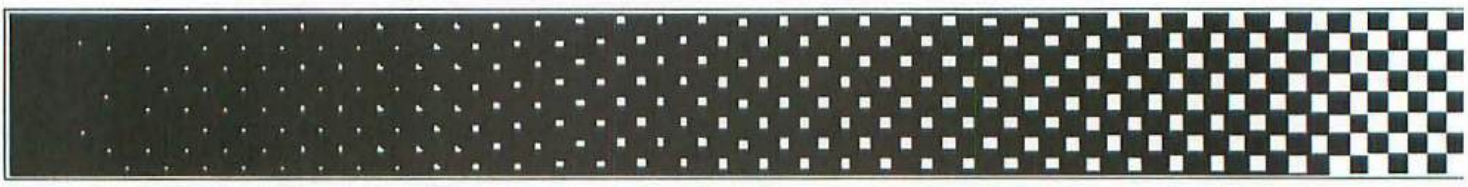
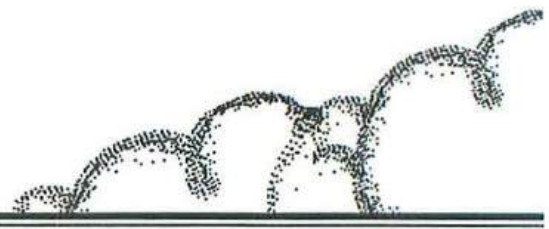
ut our fascination with the creative flow—*that feeling*—is not without good reason. The creative freedom of the artist within his discipline can be a foretaste, a coming attraction of the limitless freedom of the spirit.*

Similarly, the *controlled abandon* that lifts the artist beyond the rational grid is a reflection

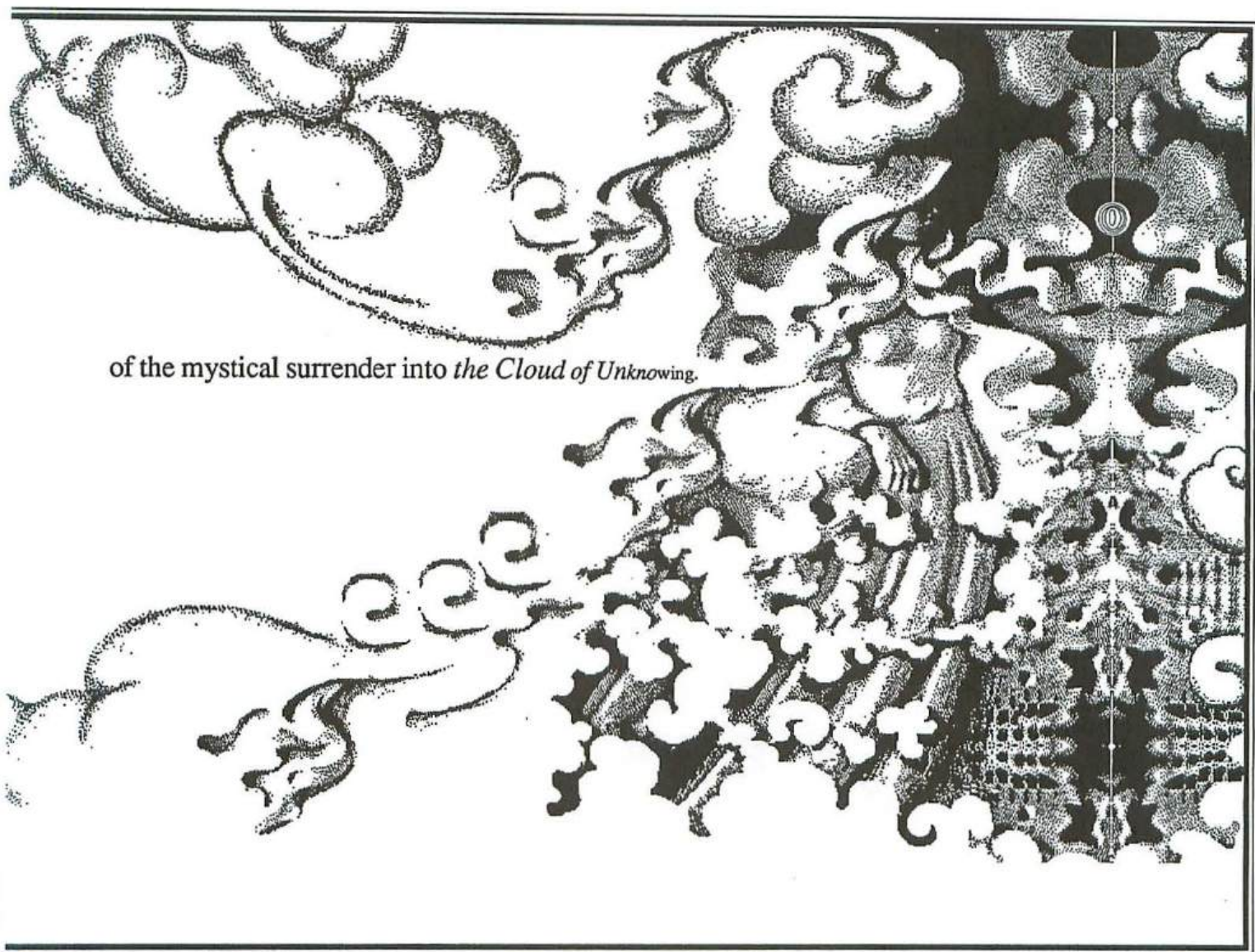
Yet there is a vast difference between the two! “*Creative freedom*” is like *scratching your foot with your shoe on*. Why settle for that when there’s the abiding and profound satisfaction of a truly radical transformation available. *Totality and wakefulness in every moment*. Take off the shoe. The irony is that attachment to ‘the fascinating’ is simply one of the best ways going to stay out of the pool indefinitely.

The clear open space at the center changes everything. When life is full there is no history, nothing to report...*The tranquility of the heart has no edges*.

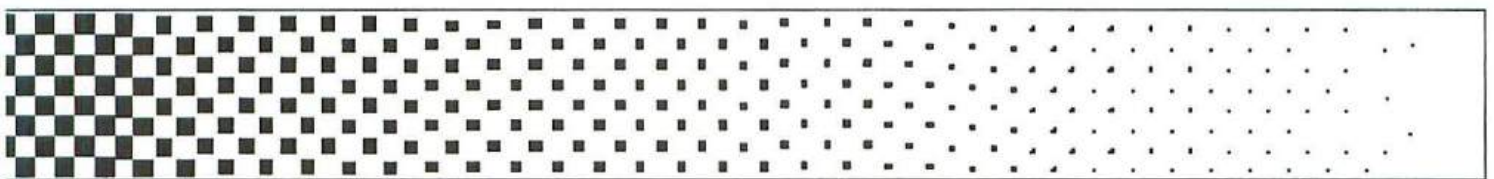
Fascinating experiences are just another test, another trance to break out of. Let us look instead *in another direction*.



A



of the mystical surrender into *the Cloud of Unknowing*.



There are well-mapped out ways of accomplishing this transition.

* On reflection, let me qualify this statement. For *us*, in our tilted, technoidal-analytical civilization, the right-brain experience is the Opening. But to the animistic brain of Conan, and other denizens of any emotional intuitive society (mostly past), no doubt a *left-brain evolution* could precipitate a glimpse of the crystalline perfections of divine harmony. Perhaps that's just what happened to that bunch of barbaric Peloponnesian tribes who caught the light, turned into Greeks, and invented Western Civilization.

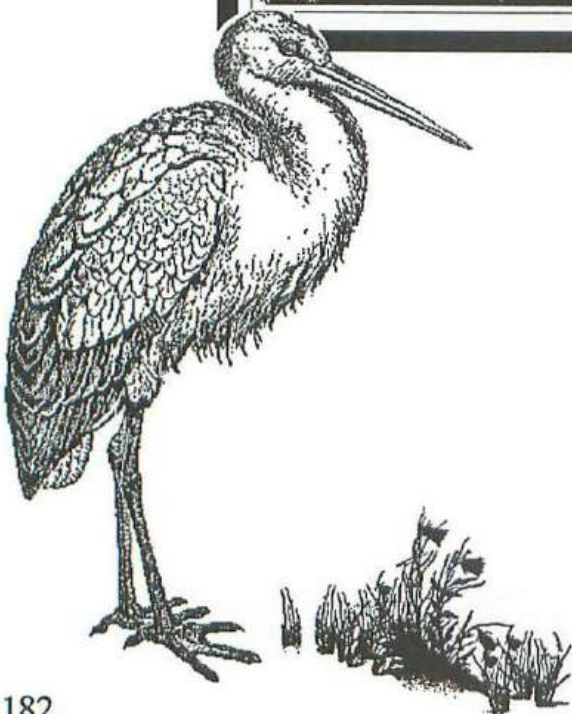
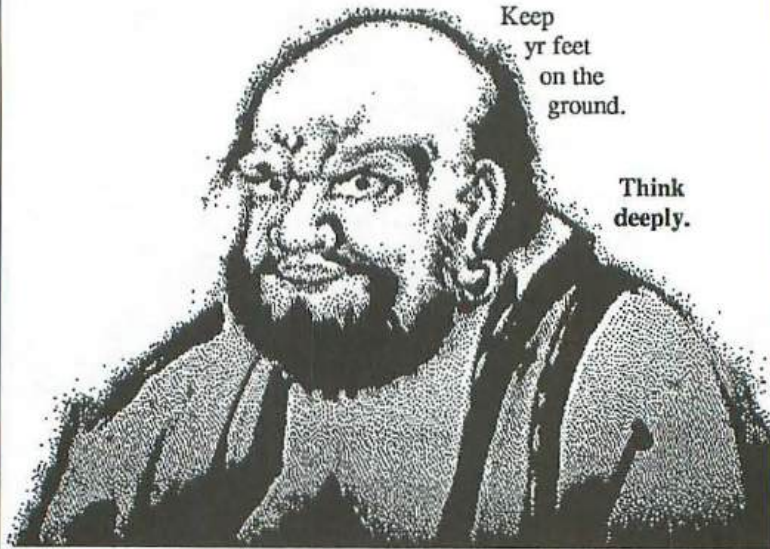


Don't be fooled!
There are many paths,
but ultimately all of them
describe ways to "do" something
that really can't be described at all.
*What can't be said can't be said, and it
can't be whistled either.*
If it could, mankind would have achieved
universal enlightenment long ago,
and the game would have been called
for lack of interest...

Proceed
with
caution.

Keep
yr feet
on the
ground.

Think
deeply.

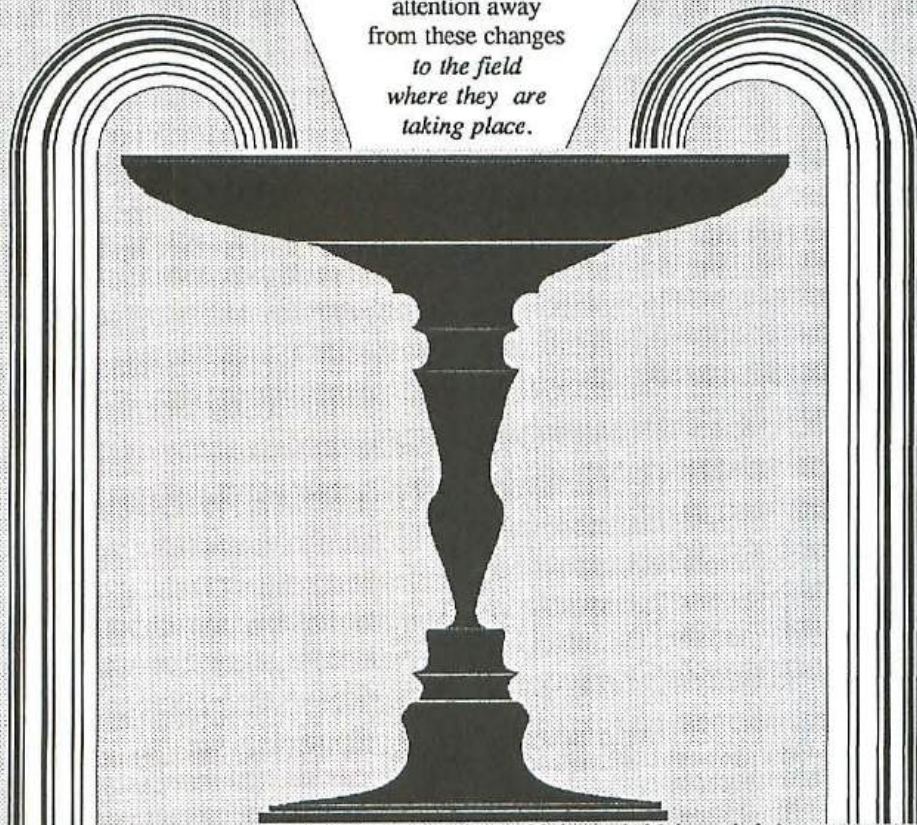


• DEEPER THINKING •

Beyond the biocomputer.

To penetrate our
sleepwalking
addiction with
surface activity and
surface thinking,
we have to
cultivate an
awakened, deeper
thinking.

This deeper
thinking is a step
back from both left
and right-brain
activity. The shift
from left to right is
from the linear and
logical to the
holistic and
intuitive. But we
can also lift the
focus of our
attention away
from these changes
*to the field
where they are
taking place.*



Easy now . . . the ground itself is shifting! It's a new
alignment of our fundamental **figure/ground** perceptions:
FROM THE MERELY OBVIOUS

to

Pure Obviousness.

A deeper level of meaning
which resides in **everything**.

Everything is perceived...

Known...

Through *consciousness*.

A simple shift in our attention brings
this machinery of awareness into
the foreground.

Consciousness is as obvious as
the ocean is (*or isn't*) to a fish.

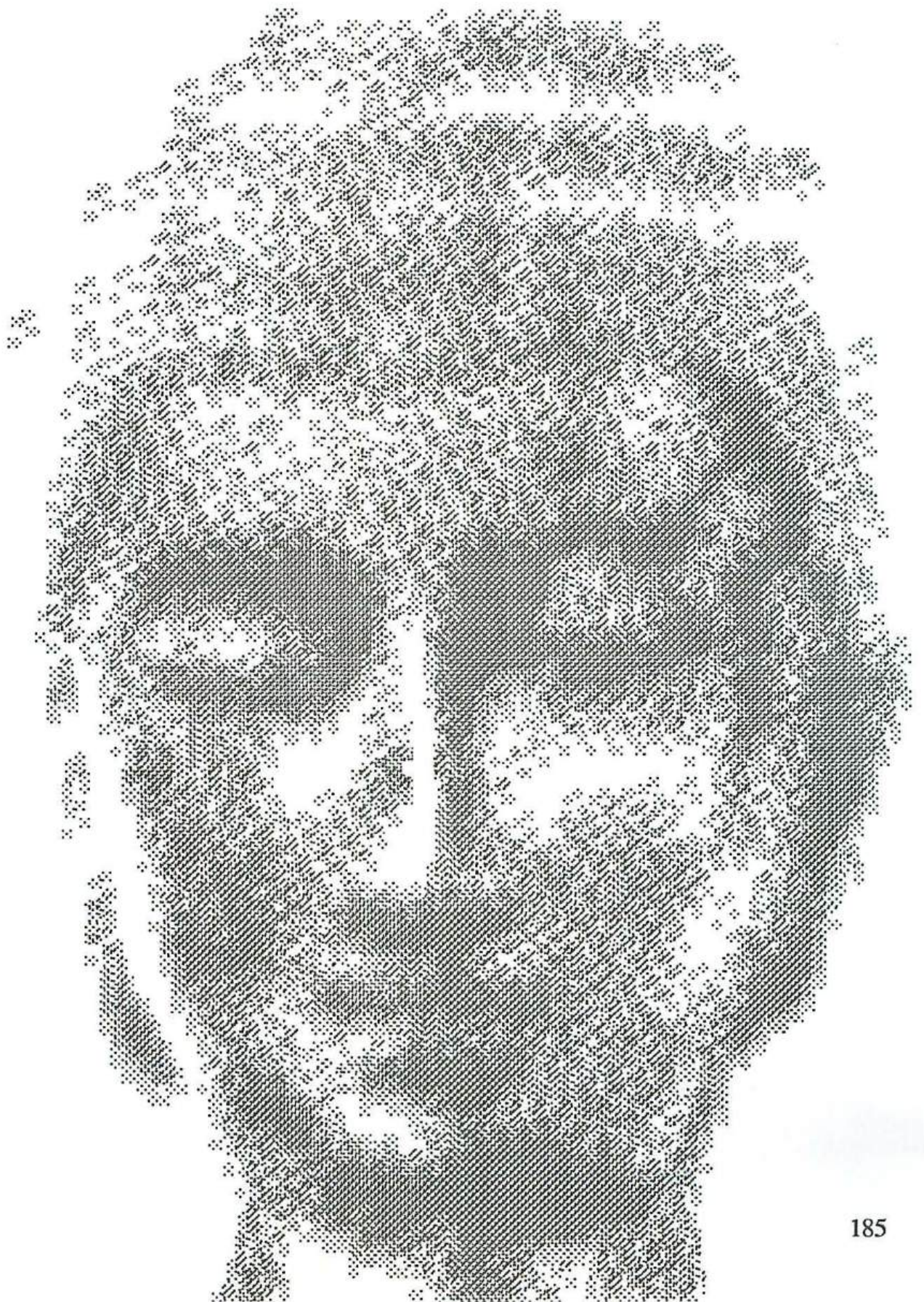
The kind of perception that can
see the ocean is an alert,
aware and utterly **receptive**
perception.

It is the quiet essence of
patience.

When we reach the point
that it's OK even if nothing
happens, then we

Come Home.



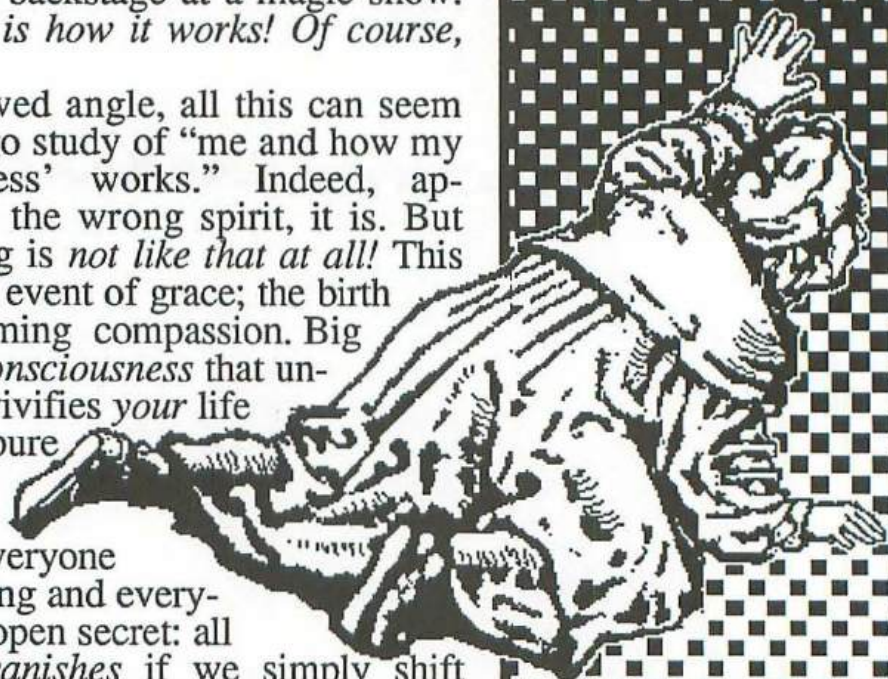


HOW FAR IS HOME?

HOW FAR IS THE LIGHT
OF THE MOON
FROM THE MOON?

This *shift* is the open secret. It's like taking a kid backstage at a magic show. *Oh! So this is how it works! Of course, how simple!*

At a skewed angle, all this can seem like a big ego study of "me and how my 'consciousness' works." Indeed, approached in the wrong spirit, it is. But the real thing is *not like that at all!* This is the sacred event of grace; the birth of overwhelming compassion. Big Truth: the *consciousness* that underlies and vivifies *your* life is the *same* pure consciousness that permeates everyone and everything and everywhere. The open secret: all separation *vanishes* if we simply shift focus from afar and learn to dwell on what lies near. Nearest. On home ground...*on primal awareness as it permeates every instant of our daily activity*: The Buddha Mind. This is also known as:



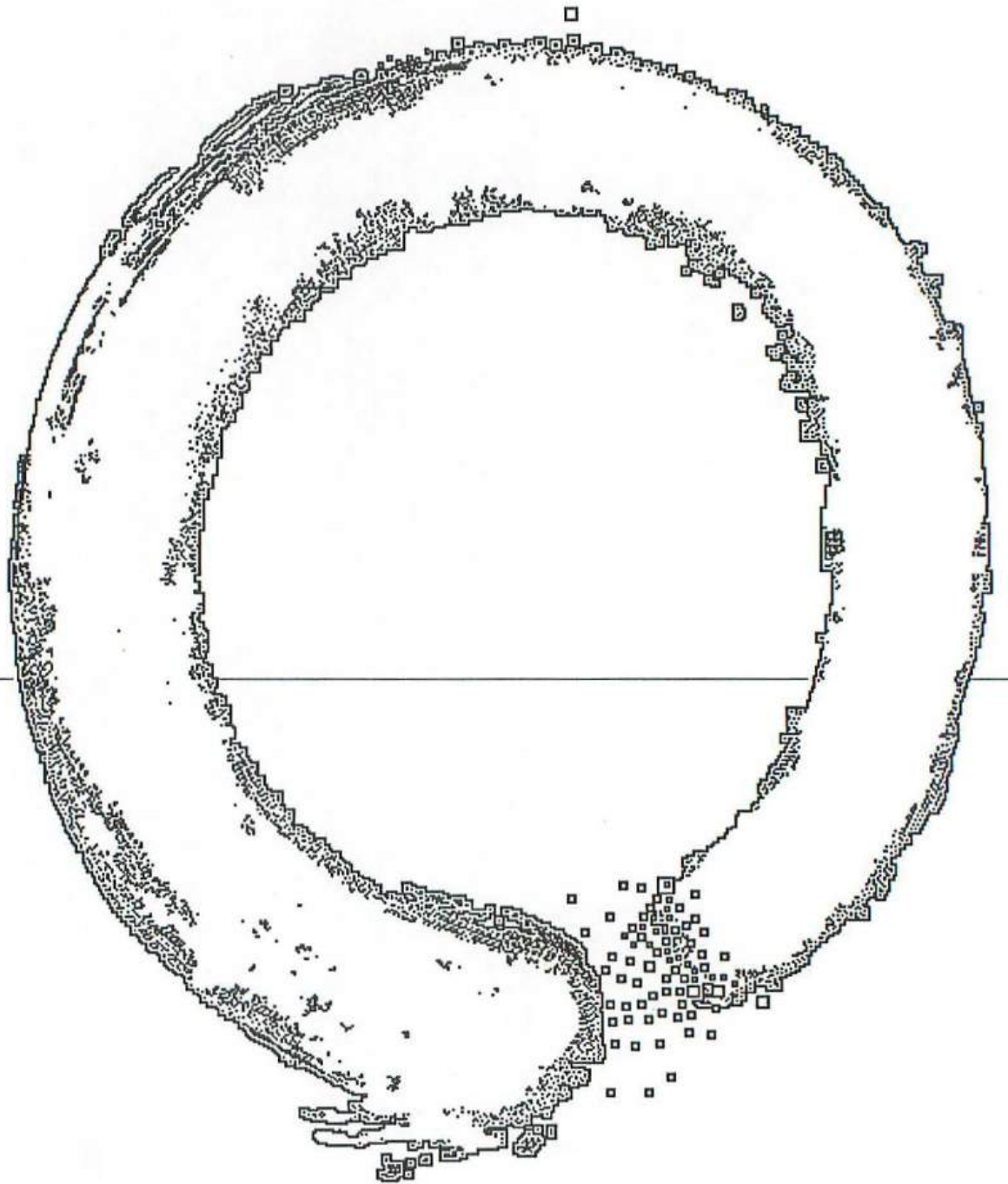
T H E G R O U N D O F B E I N G .

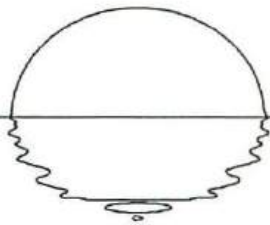


"You are independent, and I am independent; each exists in a different moment. But this does not mean that we are quite different beings. We are actually one and the same being. We are the same, and yet different. It is very paradoxical, but actually it is so. Because we are independent beings, each one of us is a complete flashing into the vast phenomenal world. When I am sitting, there is no other person, but this does not mean I ignore you. I am completely one with every existence in the phenomenal world. So when I sit, you sit; everything sits with me. That is our zazen. When you sit, everything sits with you. And everything makes up the quality of your being. I am part of you. I go into the quality of your being. So in this practice we have absolute liberation from everything else. If you understand this secret there is no difference between Zen practice and your everyday life."

—Shunryu Suzuki Roshi
Zen Mind, Beginner's Mind

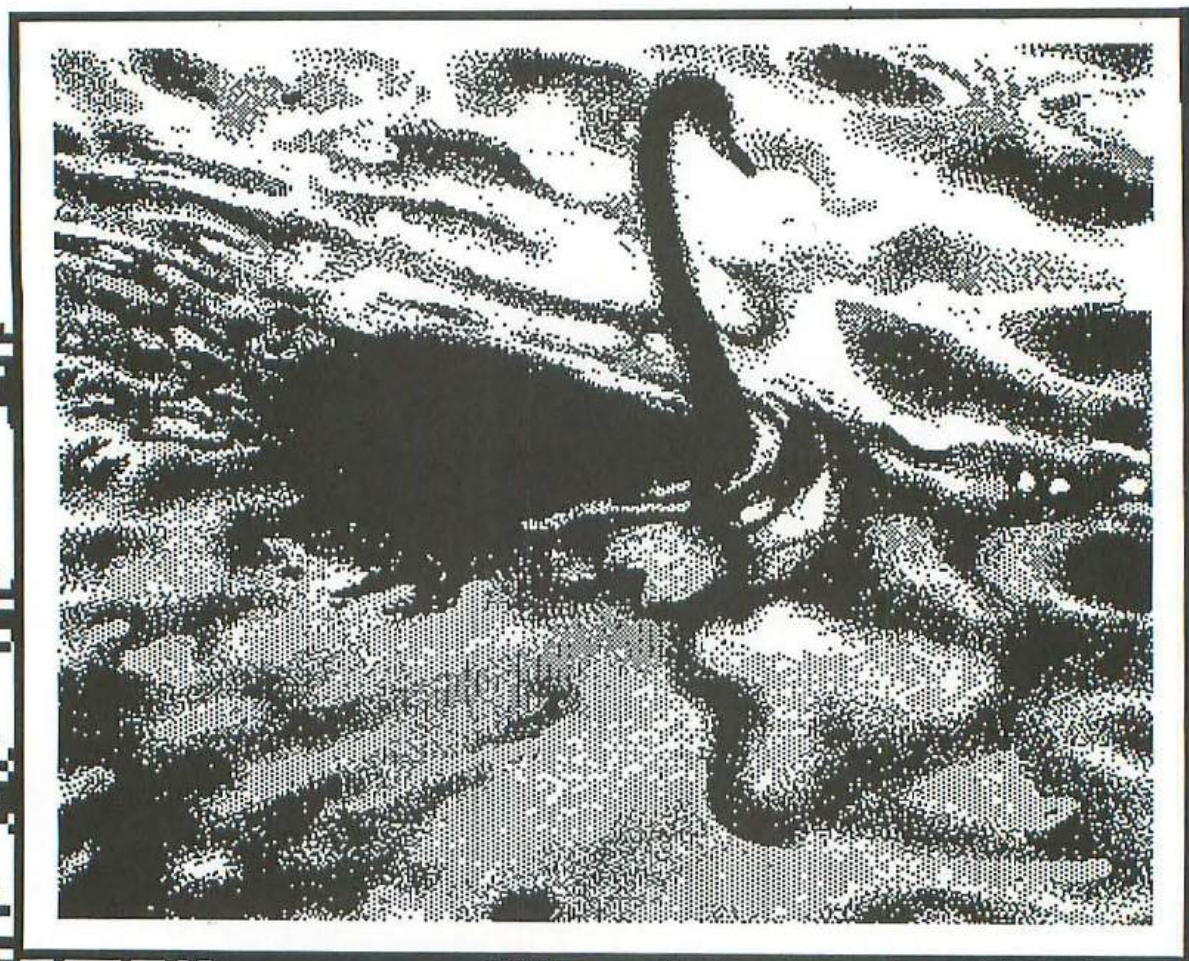






*We are the mirror
as well as the face in it.
we are tasting the taste this minute
of eternity. We are the pain
and what cures pain, both. We are
the sweet, cold water and the jar that pours.*

-Rumi, 13th century Sufi poet



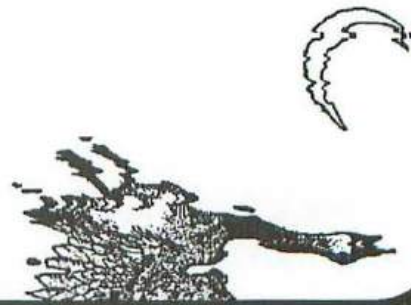
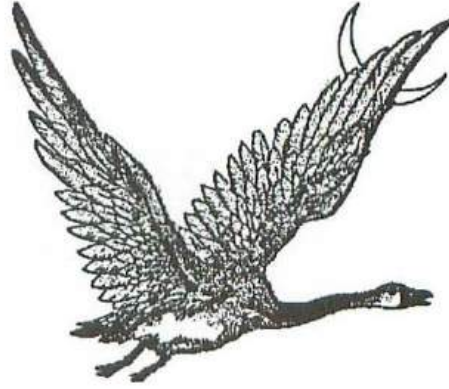
The key is a little detachment.
Only when we loosen the knots
of our fascination with surface
glitter can we proceed further.

Into the deeper waters.



There's a natural rhythm to the process. Holding on,
letting go.
Hung Tzu-chen said:

“
*When
the wind whispers
through the scattered
bamboos, they do not
hold on to its sound after
it has passed.
When the wild geese fly
over a cold lake, it does
not keep their shadows
after they have
passed.*



”
*So the
mind of the
superior man: It
begins to work only
when a duty arises;
becomes a void
again when the
matter ends.*



Void.

The Void?

The zoned-out blankness of some cosmically beached, navel-contemplating soul? A brain overstuffed with mystical cotton?

No.

The void is a boundless plenitude at the center stage of human be-ing; an Open Space of the spirit that absolutely beggars imagination.

We may take old Hung Tzu-chen's void as meaning a simple tranquility, a desirelessness. But the word goes deeper than that. Indeed, it points into the very heart of our Quest.

The Void!

Lightfilled!

"What is it like?" said one master, "I feel like a fish released from a bowl into the vast ocean."

O yes! O yes! O yes! O yes!

Christian Mystics have called it "At play in the fields of the Lord."

O yes! O yes! O yes! O yes!

What is our current quasi-religious yearning for space travel, for the Silver Ships and the "...singing star-filled gulfs" of science fiction if not a primeval remembrance, a yearning for the freedom of this birthright, this original state? Indeed, when we contemplate the staggering vistas of outermost space, of millions beyond spinning millions of galaxies, we sense, if only fleetingly, the rapt vision of the mystical

"Worlds without end..."



Bodhidharma was the first patriarch of Zen. He traveled to China and was taken to the Emperor, a pious man who had built many temples and monasteries during his reign.

"What merit have I gained from all these actions?" asked the Emperor.

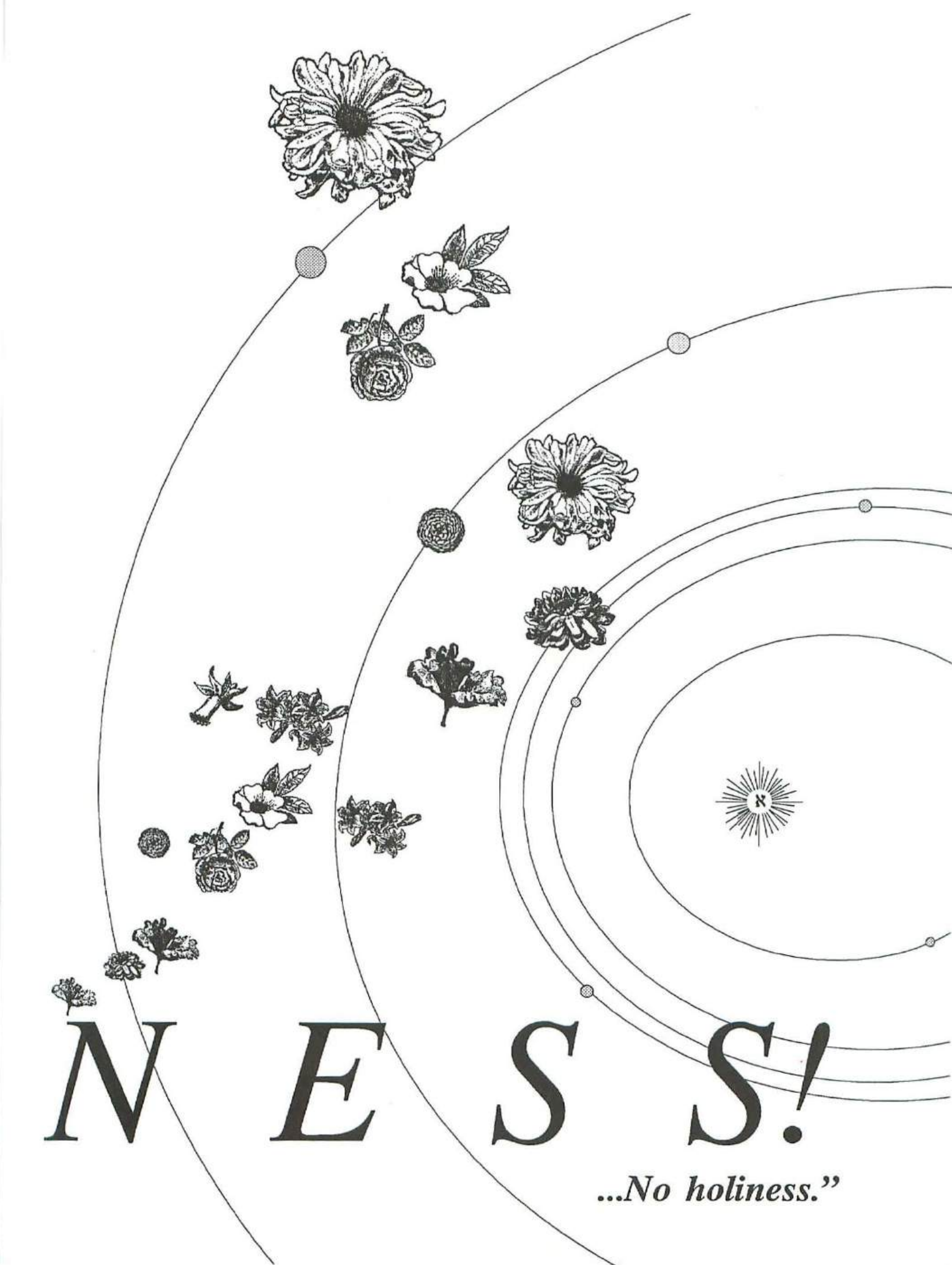
Bodhidharma said: "None."

"What then is the first principle of holiness?" asked the bewildered Emperor.

Bodhidharma said:

“VAST”





N E S S!

...No holiness."

The Emperor did not quite understand.

Bodhidharma went on his way.

But if we understand, if we catch the drift, if we want a piece of the action—what next?

Loosen your belt and get on with it! Reprogram. Better yet, deprogram.

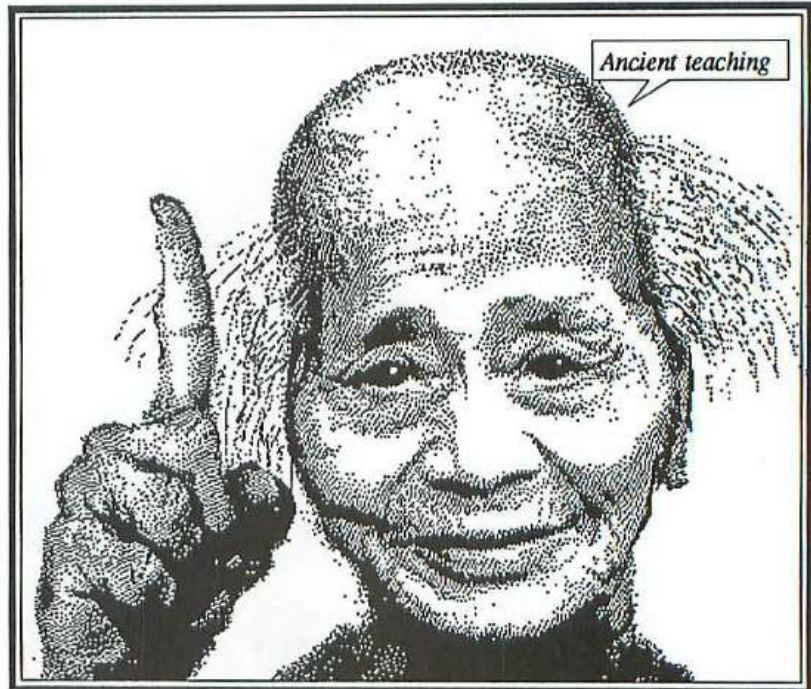
Meaning, exactly, what?

The basic Zen strategy is zazen. Sitting still, alert, attention to breath.

There is a subtle link between the movements of the mind and the breath. When we bring the focus of the mind to the breath, and the two start moving easily together, things simplify. Doors open, knots are untied. The hidden workings of the intellect, which create our notions of what we and the world are become clearer.

The work has begun..

Zazen is a foundation. An invaluable tool. But the essential matter is always a return to original, naked perception.



“**O**ne summer night at the shore, this chap, who is a paranoid type to begin with, OK, is walking home along a narrow path when yi! he almost steps barefoot smack on top of a large snake coiled in the sand. The poor guy almost has a coronary! He beats a quick retreat, and spends the night on a neighbor’s couch.

“In the clear light of morning he returns and finds the snake is still there. Only—now get this—it’s just a length of old rope lying across the path!”

THE WHOLE EARTH IS THE SNAKE

Likewise the whole earth is the rope. The whole earth is Form; the whole earth is Emptiness. Heaven or Hell. The Manifest or the Secret.

It all depends on how IT is approached. Empty or full.

In the clear light of our morning, we too shall be amazed: The way things Are is so utterly dissimilar to the way things seem...

And the way things Are is so utterly similar to the way things seem.

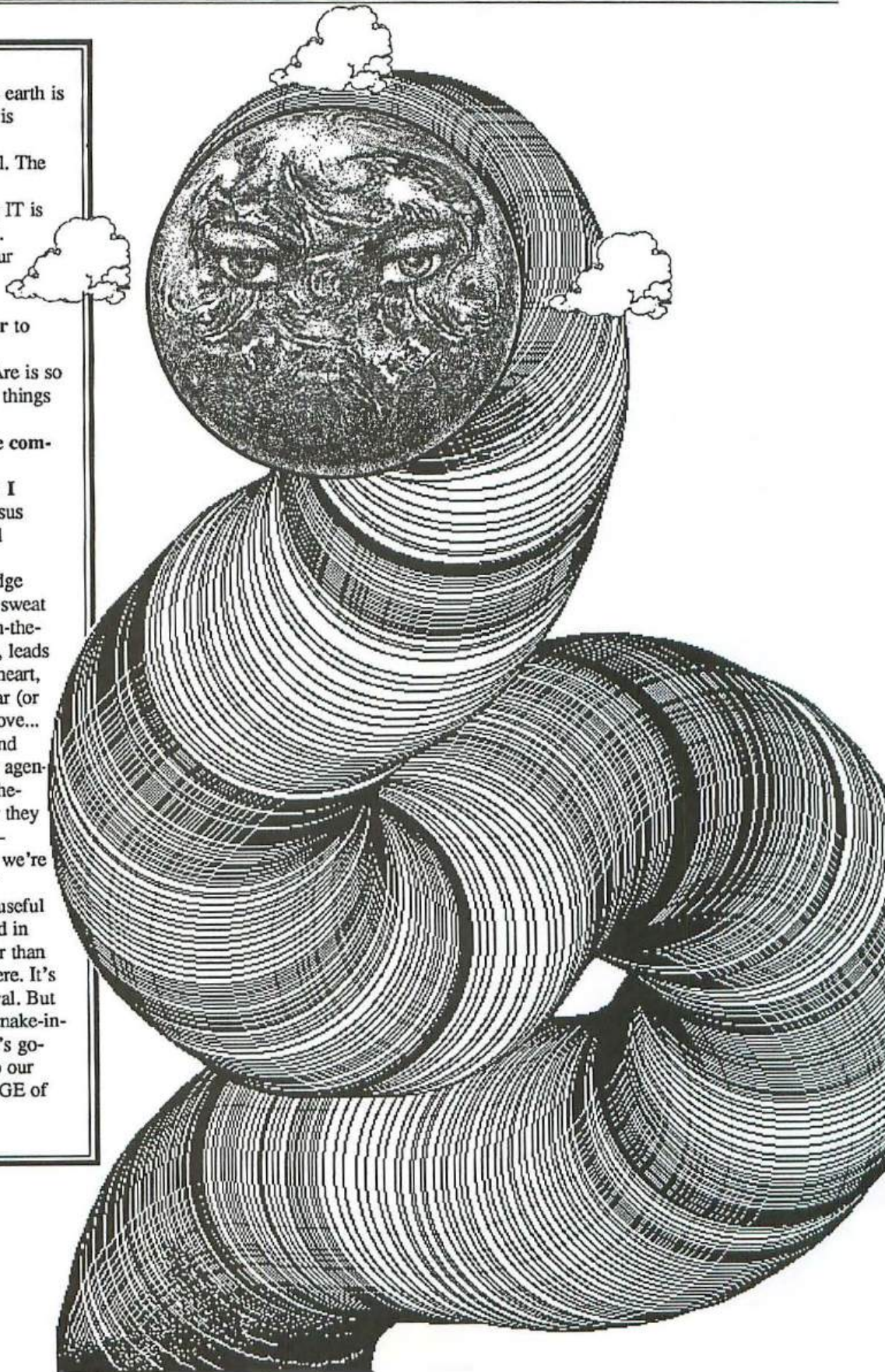
And the two ways are completely merged.

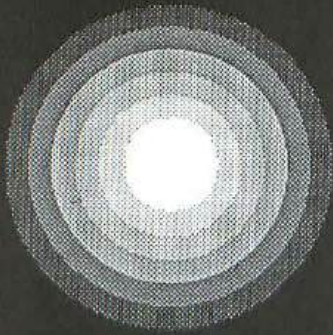
"Split the stick and I am there," the gnostic Jesus says. "Lift the stone and there am I."

Still we duck and dodge through life in an endless sweat over the same ol' snake-in-the-rope. Snake, the Deceiver, leads us by the nose, grips our heart, makes us tremble with fear (or desire), laugh, cry, hate, love...

Opinions and ideas and hopes and fears and other agendas created the snake-in-the-rope illusion. All together they constitute our **program**—the litany of reasons why we're "paranoid to begin with."

Ideas in general are useful tools; moving stuff around in our heads is usually easier than dragging it around out there. It's an essential part of survival. But we get caught up in our snake-in-the-rope notions of what's going on, and lose access to our ORIGINAL KNOWLEDGE of what's really going on.



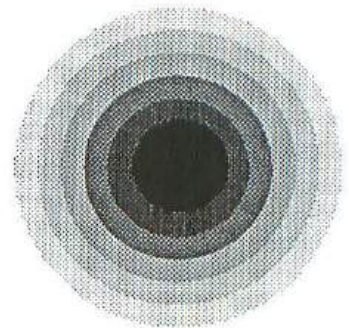


Neither
right-brain
nor
left-brain
routines
can really help cut through the
“illusion of the snake.”
Because:
they both
have a vested interest
in maintaining
the old cat-and-mouse,
perceiver-and-perceived
relationship with the world
that supports the illusion.

In plain English,
their source code is corrupt.

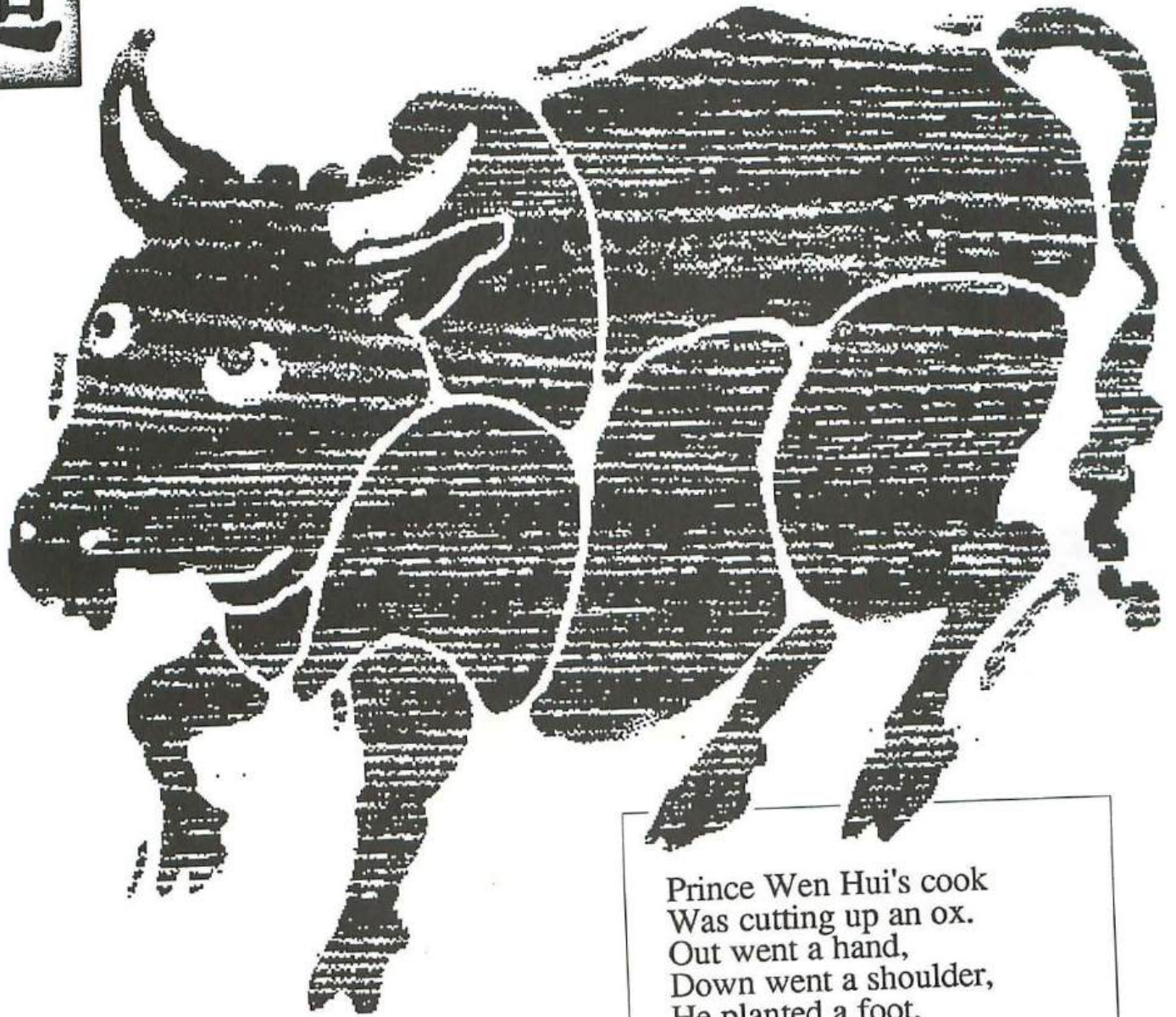
BUT
when the two modes
are harmonized,
the mind balanced,
we can explore the possibilities
of
gently sliding between them;
dropping
to a deeper faculty:
Fearless, compassionate,
unattached,
transparent,
generous enough to let go of entire
reality systems in a single bound.

Chuang Tzu had something to say
on the subject:



道

Cutting up an Ox



Prince Wen Hui's cook
Was cutting up an ox.
Out went a hand,
Down went a shoulder,
He planted a foot,
He pressed with a knee,
The ox fell apart
With a whisper,
The bright cleaver murmured
Like a gentle wind.
Rhythm! Timing!
Like a sacred dance,
Like "The Mulberry Grove,"
Like ancient harmonies!

“Guided
By natural line,
By the secret
Opening,
The hidden space,
My cleaver finds
Its own way.
I cut through
No joint,
Chop no bone.

“**G**ood work!”
The Prince exclaimed,
“Your method is faultless!”
“Method?” said the cook
Laying aside his cleaver,
“What I follow is Tao
Beyond all methods!

“When I first began
To cut up oxen
I would see before me
The whole ox
All in one mass.
After three years
I no longer saw this mass.
I saw the distinctions.

“But now, I see nothing
With the eye. My whole being
Apprehends.
My senses are idle. The spirit
Free to work without plan
Follows its own instinct.





“A good cook, needs a new chopper
Once a year—he cuts.
A poor cook needs a new one
Every month—he hacks!

“I have used this same cleaver
Nineteen years.
It has cut up
A thousand oxen.
Its edge is as keen
As if newly sharpened.

“There are spaces in the joints:
The blade is thin and keen:
When this thinness
Finds that space
There is all the room you need!
It goes like a breeze!
Hence I have this cleaver
Nineteen years
As if newly sharpened!

“True, there are sometimes
Tough joints. I feel them coming,
I slow down, I watch closely,
Hold back, barely move the blade,
And whump! the part falls away
Landing like a clod of earth.

“Then I withdraw the blade,
I stand still
And let the joy of the work
Sink in.
I clean the blade
And put it away.”

Prince Wen Hui

said,

“This is it!
My cook
Has shown me
How I ought
To live
My own life!”



And is a *computer* showing me how to live my life? Hardly. Just forcing the issues. First issue, *Zen*. Or mindfulness: keeping a *clear focus* should always—*always*—be Job One: One without a second.

"How wondrous this, how mysterious! I carry wood, I draw water."

Therefore walk gingerly as a fox on thin ice

Ho Koji, 8th century Chinese poet

around all fascinating experiences, ever vigilant of their power to slip us into the murky waters of obsession.

But Onward! Also welcome the duties of everyday life as essential passages. Performed carefully, correctly—getting into *them*, without...



...them getting into *us*, they become a vehicle of awakening. This is called "*Chopping wood and carrying water.*"

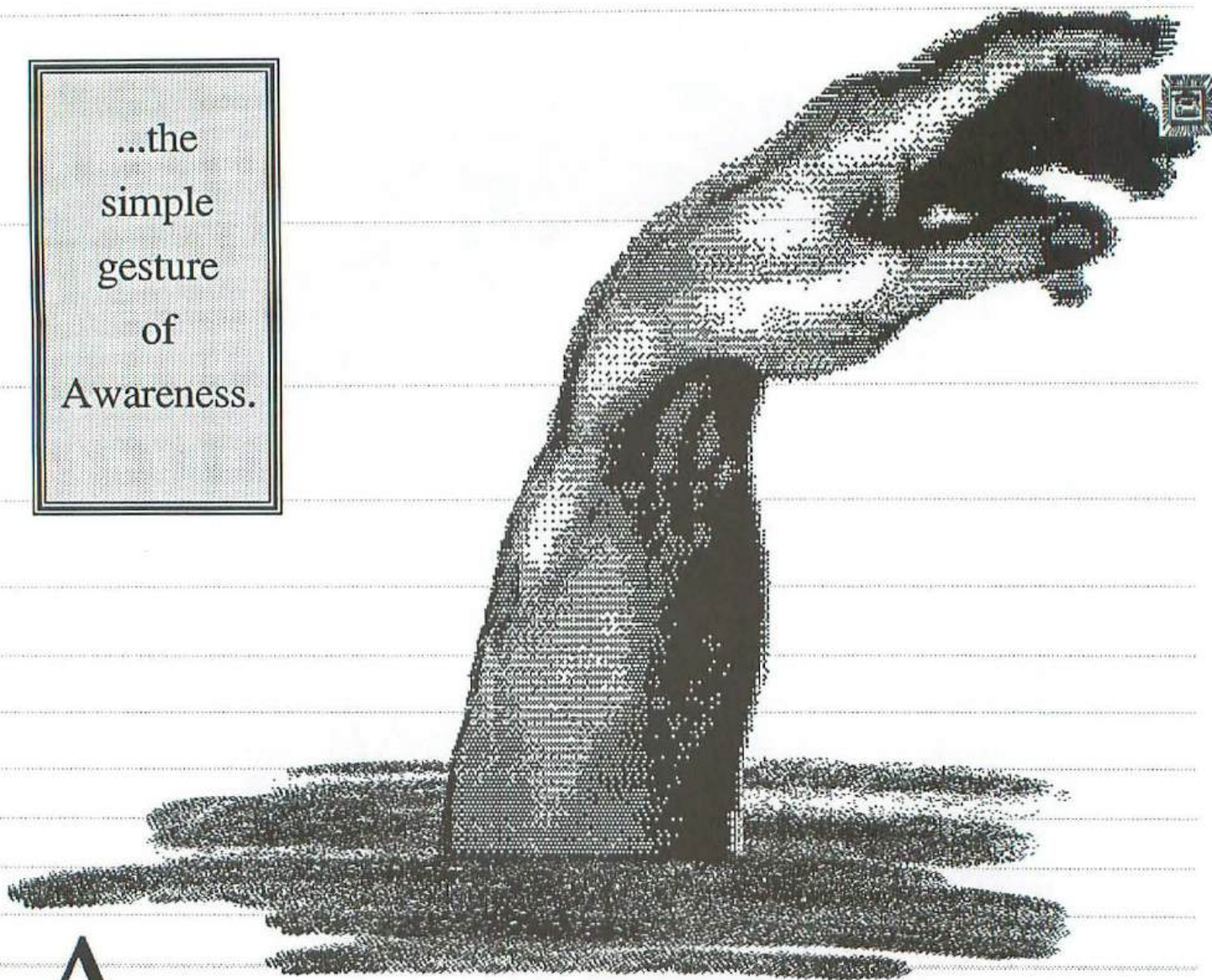
Second Issue:



THE ART OF THE MACINTOSH. OK, what about Art? It follows that art shouldn't be any big deal. Certainly no more than peeling onions! Simply another task to do well.

When the gift of wakefulness is sought and found, then the unique power of artistic vision will appear of its own accord, easily, anywhere, as...

...the
simple
gesture
of
Awareness.

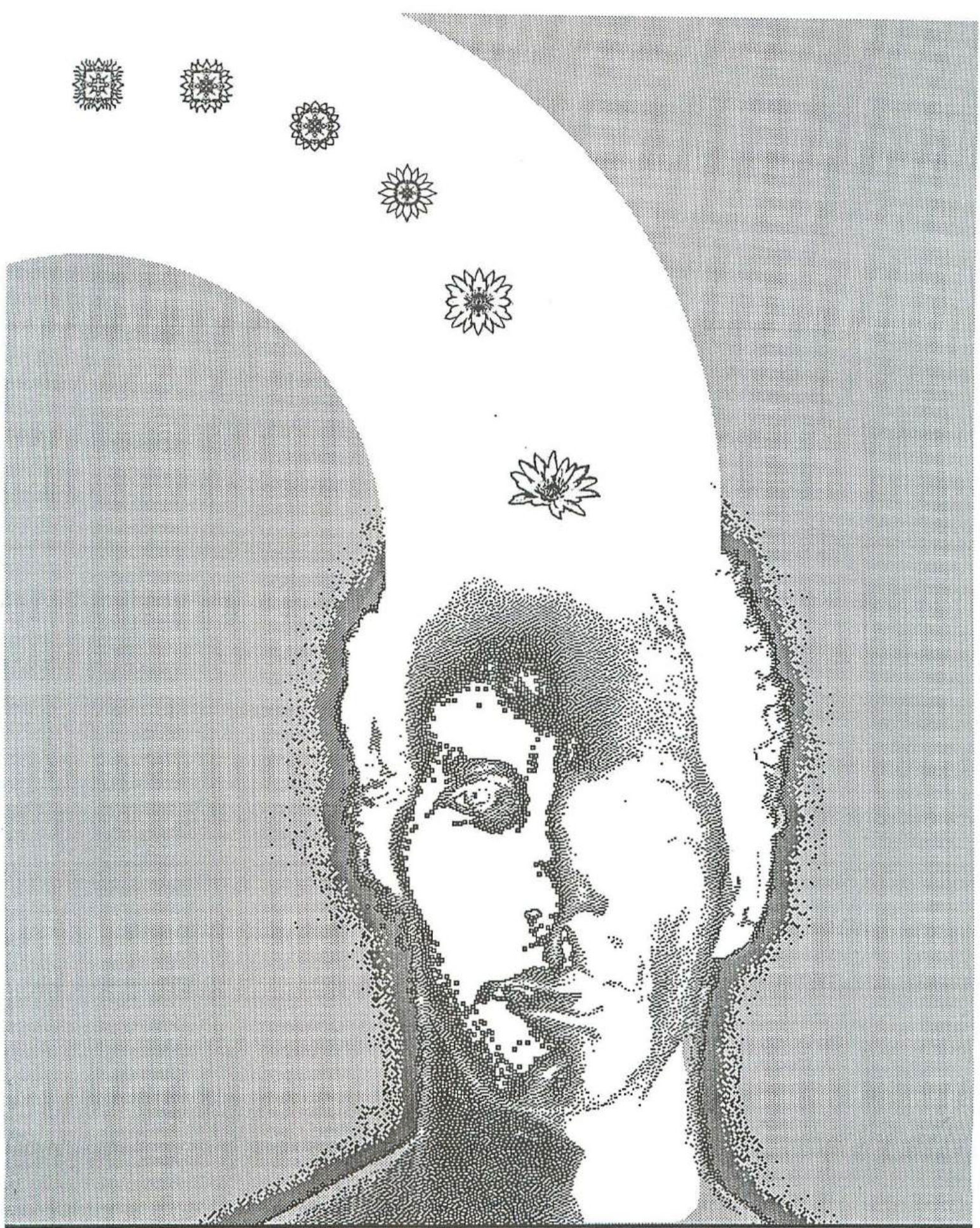


And what of computers and our relationship with them? Ah ha! Thoughts on this subject would be many-branched and endless. Better to cultivate bamboo thoughts: respond to the *Sturm und Drang* of the electronic environment like bamboo does under a load of snow. When speculation gets too heavy, bend. Swish. Gone! Real awareness is just not into freighting around a lot of opinions about experience. As one's center of gravity is shifted out of the drama, the scene and the props simplify. The Mac is just another useful tool. Helps me write, got great graphics, easy to use—the thing can actually produce an entire book. Troubles arise only when we start projecting inordinant hopes—or fears—into the thing. So relax. The problem lies not with the circuits, dear reader, but with ourselves. And sweet victory will only arise from within ourselves as well. Nowhere else.

But didn't we all know that to begin with? What then did this whole voyage amount to? Let us pray that it has thrown a little light on the mind; rendered it a bit more transparent. Because,



TO TRULY USE THE MIND,

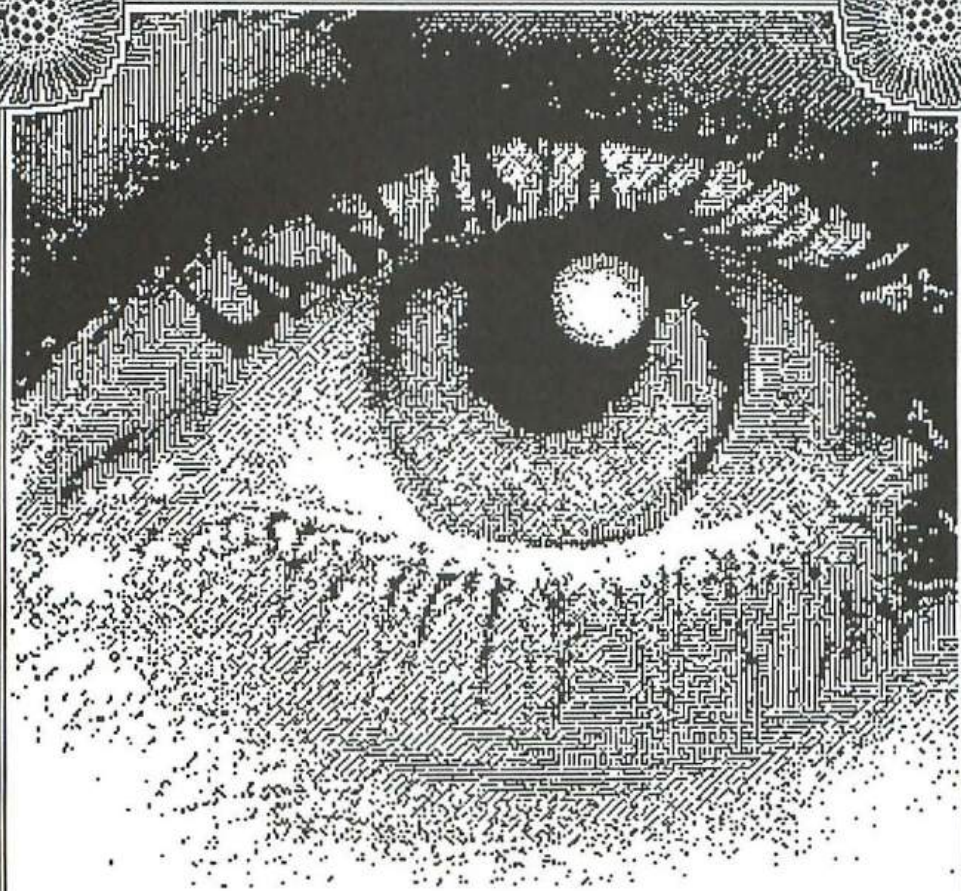


ONE MUST FIRST GLIMPSE BEHIND IT.



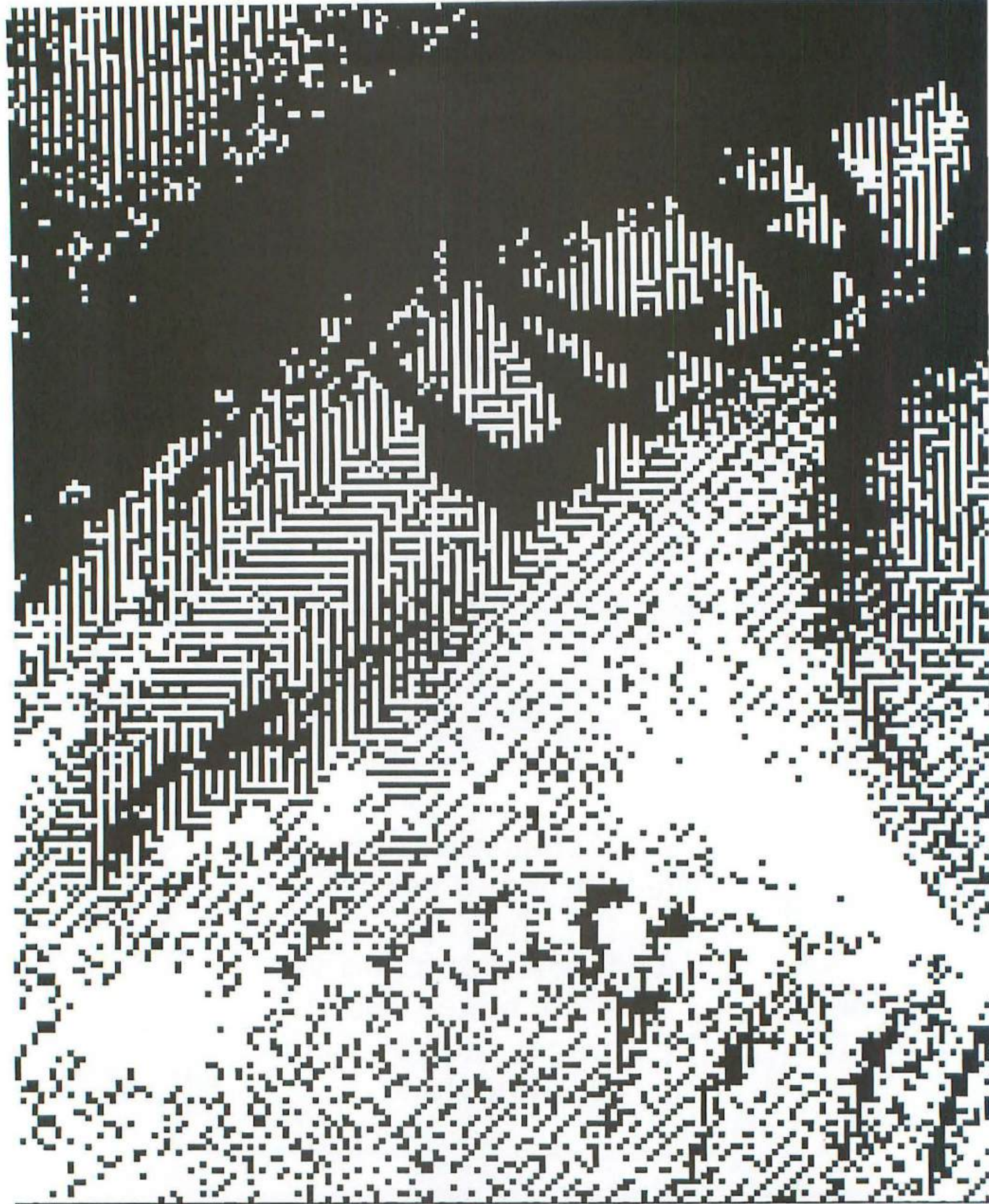
“The original programming
for human consciousness
is to discover itself.

To know *that*
by which all else is known.
But, “We see the thing and
yet

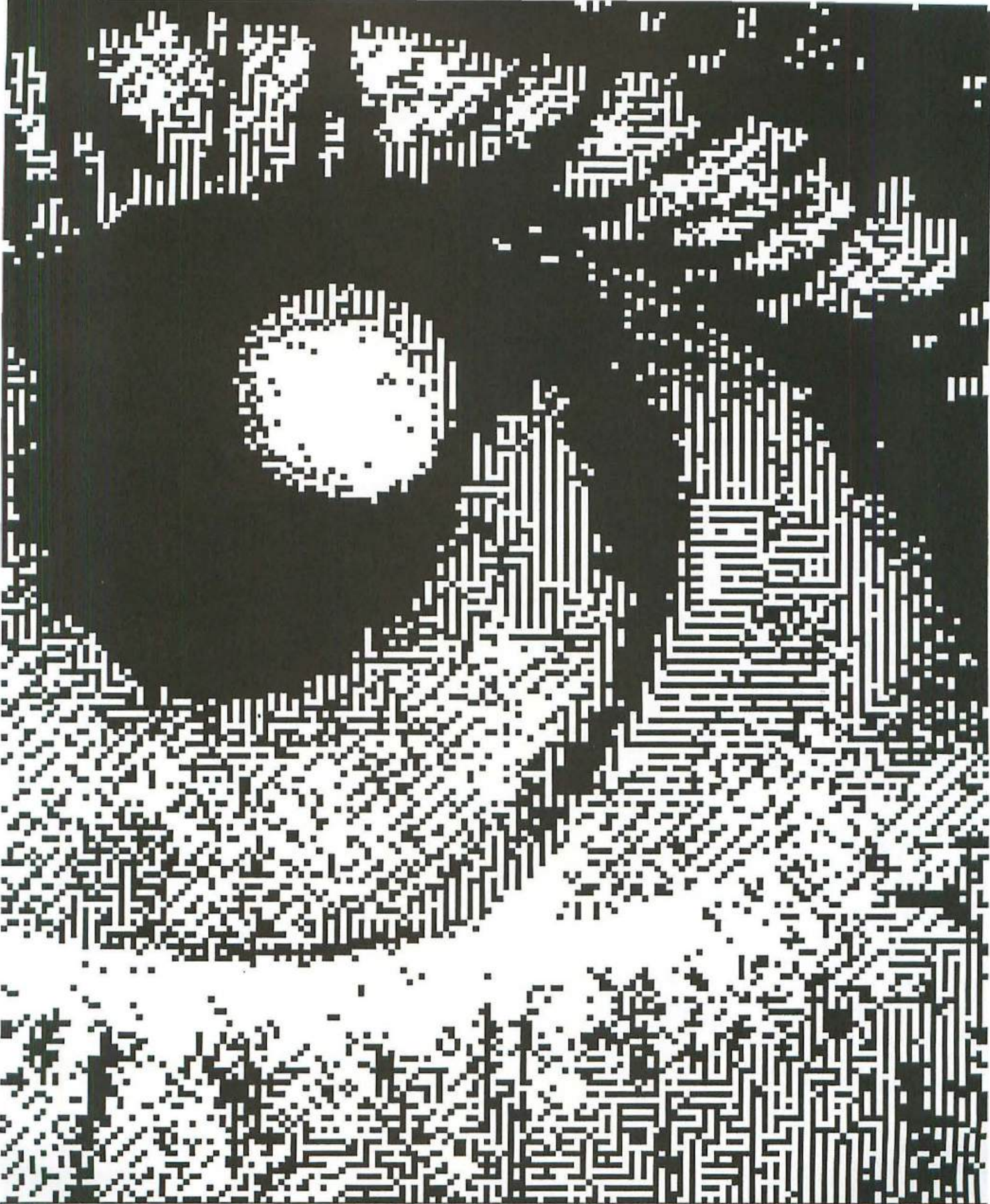


“...it is not seen;
We hear it and yet it is not
heard,
we talk about it and yet
it is not talked about.
We know it and yet it is not
known.”

—Lao tzu



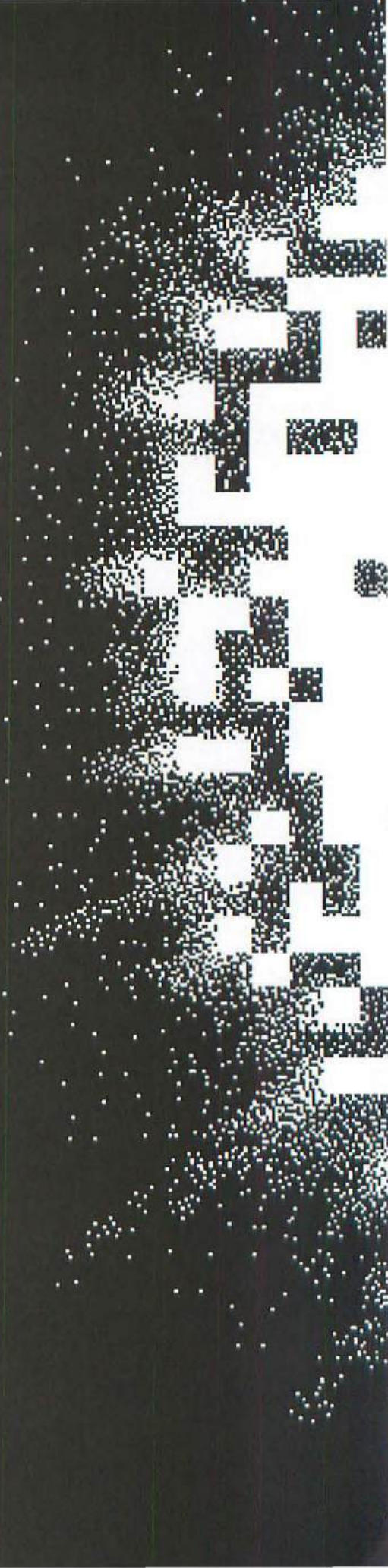
The Buddha said, "There is a turn-



ing around we must accomplish.”

It can happen
After years of practice
Or in an instant—
Gazing idly out a window,
Standing in a meadow
Awash with morning sun—
THE ROCK SPLITS.
Attention **FALLS** into perfect
Realtime.

An ease of the breath,
A lift of heart's desire.
A piercing glimpse of joy
Beyond
The walls of the world.
In this instant you have
Reverted
Back to what you really are,
Returned
Home again...
Effortlessly!
Totally here, but also,
Blown away into emptiness:





GONE,
GONE,
GONE
BEYOND.

“I have lived
reason, wanting
on a door.

I’ve been knocking



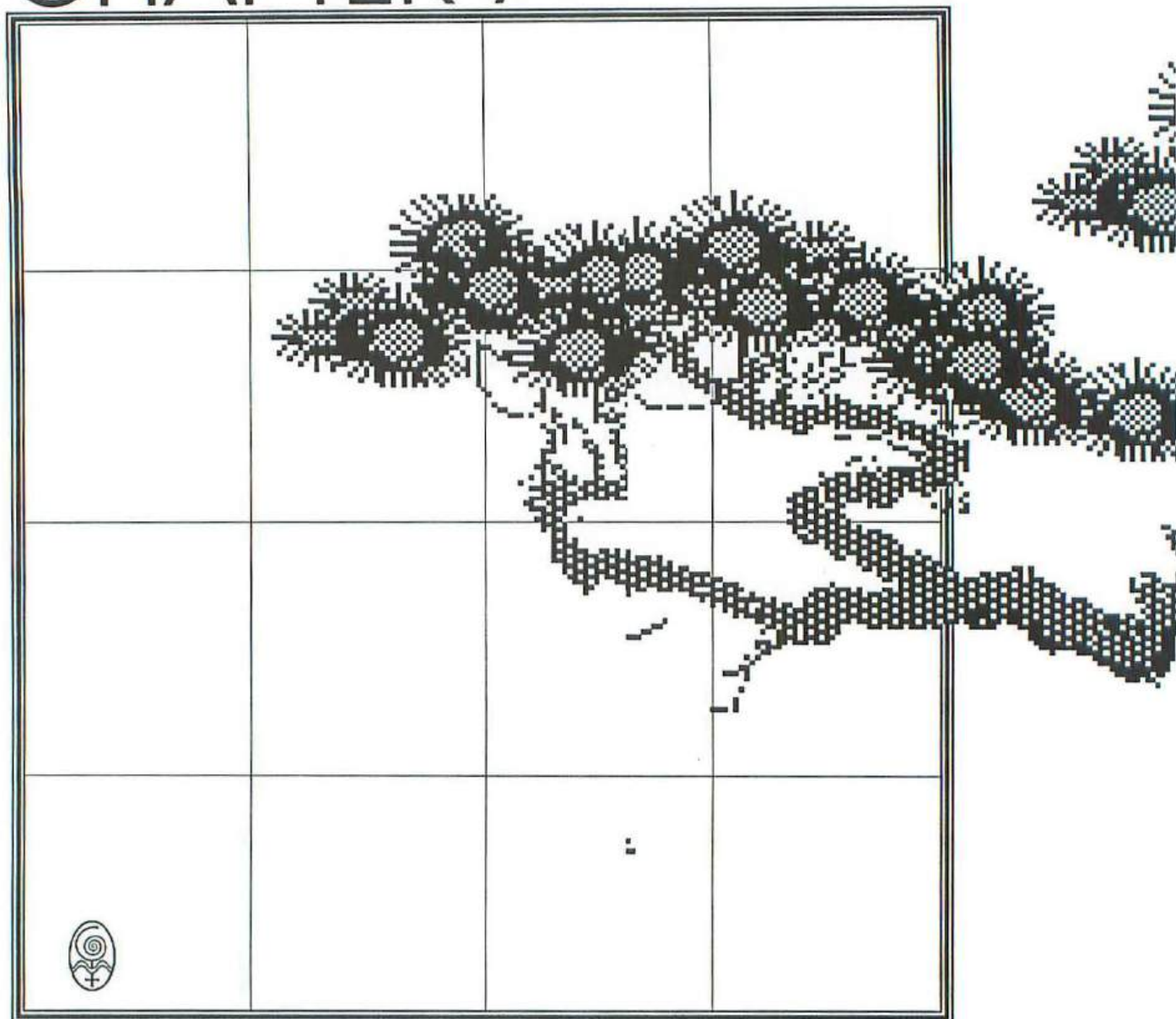
on the lip of
answers, knocking
It opens.

from the inside!"

-Rumi

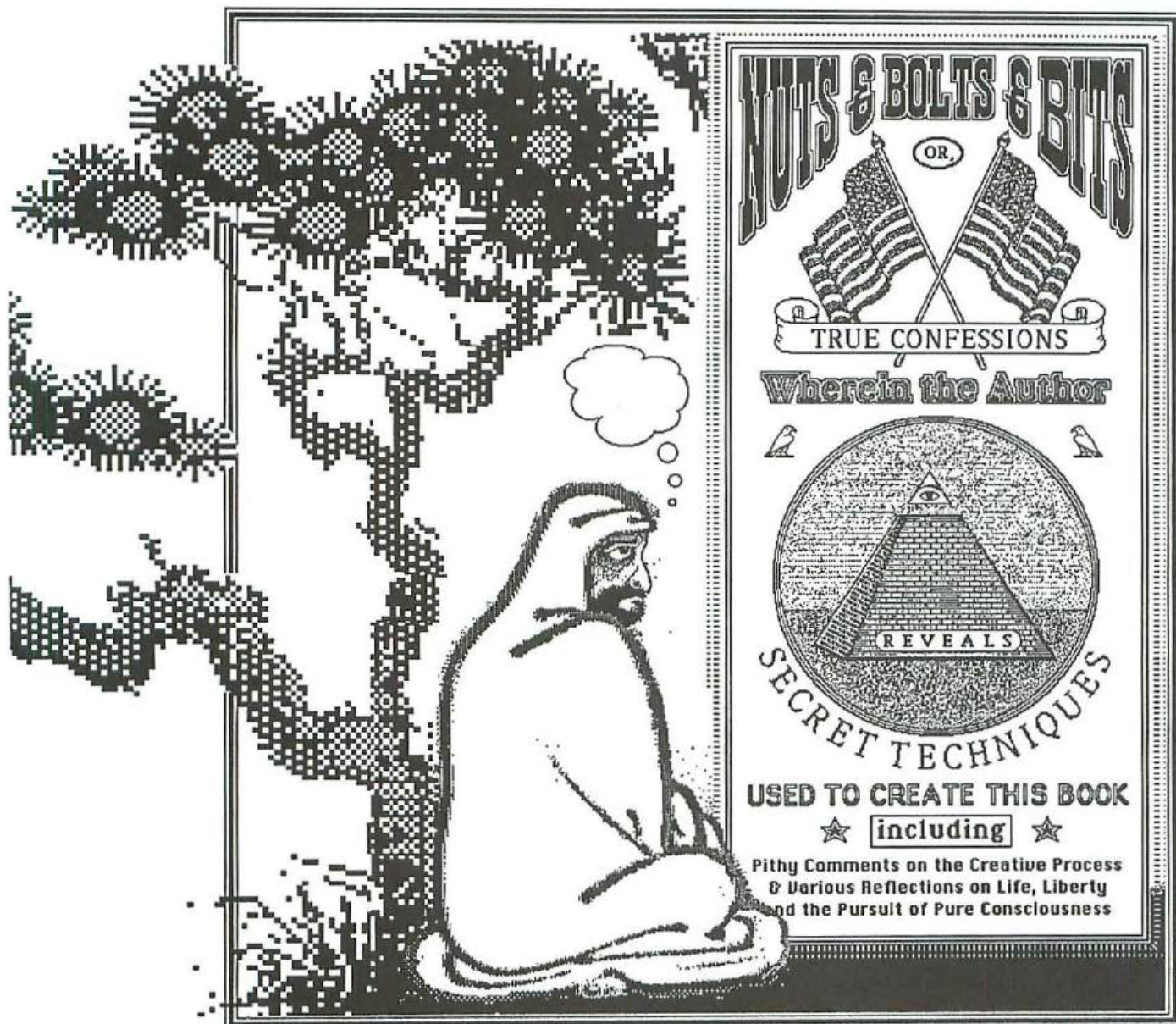


CHAPTER 7



As this book nears completion, and I go over the preceding pages, it's clear that the Macintosh and its successors may well bring about a new kind of graphic standard. I see it evolving as I work, shaped and guided by the technology and software.

In fact, this computer isn't doing anything really new; there are professional graphic workstations around that do all this and more, in incredible resolution, in color, and all for only a few hundred thousand dollars. But while the higher echelons of the industry look with indifference at the resolution on the Mac, and even the Laserwriter, the fact is, they're all over the place now. New and interesting things have a way of surfacing when good tools are put in the hands of a lot of curious people.



Bringing his mind down from the plane of the infinite, the venerable sage beholds an unsettling vision...

When the ability to create, find, and modify an unlimited amount of images combines with a personal control over typesetting and page design, there's a powerful temptation to sail off in relaxed and innovative ways. And while there is an obvious danger of excess, with a little restraint the results can communicate difficult and abstract ideas with ease and elegance. Feelings too.

This is not the terrain of slick illustration, but of simple, iconic imagery. Each page is like a poster; a train of thought unfolds slowly in easy stages. Communication is paced in a different rhythm. Clearer hopefully, and certainly more fun.

There are a few tricks I learned along the way.



Since a book like this should be abreast of current technology at publication, I have, for over a year, been forced to keep pace with every stage in the evolution of the Mac.

Well, OK, I got into it. But it's a disease of almost epidemic proportions among all the MacFaithful. Constant upgrade *technitis*.

It was no easy time. The Silicon Mysteries are spiced with bombs, incompatibilities, and grim customer service calls. My weary advice now is to make good friends with a local dealer (or user group), and put together as complete a system as you possibly can right from the get-go, then follow the First Law of Systems: *When you've got a good thing, stick with it.*

Here's my Complete Macintosh desktop publishing graphic workstation. Now you can take on Harper & Row right from your office or electronic cottage.

HARDWARE.

A PRINTER

Of course the Laserwriter. Costly, but it's already a thousand bucks cheaper now than when I bought mine. If you're serious there's no other choice. Don't buy any future clone unless it can do full-page graphics.

A HARD DISK

If you are doing more than a newsletter, this is where it's at. Even if all you're doing is a newsletter, get one anyway. Load a program...zip! Save a picture...zip!. How did I ever work without one? I started out with a Corvus10 megabyte. Built like a tank—not one falter in a whole year of yoeman duty. Its other main virtue seems to be networking capability. If that's what you need, it deserves your attention. Then The DataFrame 20 by Super Mac was recommended by some industry insiders, so I got one. Zipzip, even faster; very fast indeed, and no problems. It came in the nick of time: I had run out of space on the 10 meg. Corvus. It's part of the innate *logic* of the system to have everything you've ever done on instant recall. Now the new SCSI technology is dropping the price of hard drives into Everyman's pocketbook. What's that? You don't have a Mac Plus with a SCSI port? Neither did I. Got a SCSI port adapter from LEVCO. Works fine. More on the good folk of LEVCO later.

A DIGITIZER

Essential. A digitizer will be the all-seeing eye of your system. *Anything* you can see is now camera-ready copy... a fallen leaf, a picture in this week's *Newsweek*, an antique book illustration, *the next person to walk in the door*. Graphic horizons open wide and a whole new world of... *electronic plagiarism*...

NUTS & BOLTS & BITS

spreads out before you. Basically there are two options. (1) THUNDERSCAN, which gives the best resolution, but, since it fits into the Imagewriter printer, only reads pictures that can be fed through its rollers, or (2) a *video digitizer* that gets its images through your trusty home video camera. I'll take the second: I think the freedom and flexibility of gazing around with a camera is integral to the what-you-see-is-what-you-get credo of electronic publishing, and worth the slight trade-off in resolution. Besides, many of the pictures I digitize are from reference books—and I'm still literate enough not to approve of yanking pages out of books. Among digitizers, I tried two. The first, burdened with the rather wifty acronym MAGIC, was no slouch, but demanded that I fiddle around a lot to get an admittedly wide variety of effects. Ultimately, I opted for the simplicity of Koala's MACVISION, not to mention the fact that in basic snapshot mode I prefer its dot pattern.

A BOX

If you're paying close attention, you will have realized by now that we have now exceeded the number of ports on the back of the Mac. The simple solution is the so-called A-B Box which lets you hang two items out of one port. Let me tell you who makes a great one: the MacNifty people somewhere out in the Midwest. So, you may wonder, why is it a *great* box? Actually, I suppose one switch box is just like the rest. Theirs was a little cheaper, true, but I just wanted to give them a plug—a bunch of guys with a growing stable of interesting MacProducts who represent the best in humane interactive capitalism. They give *lifetime* guarantees, and they have have an 800 hotline service number. Apple, *et al.*, take note.

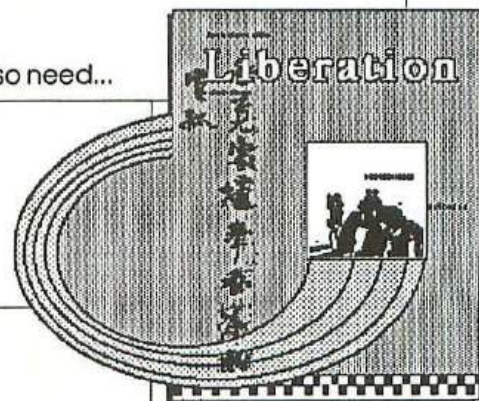
SOFTWARE

PAGEMAKER

Everything comes together in PageMaker. Not only *the* page design program for the Mac, Pagemaker is a benchmark of the programmer's art. Sell your Jacuzzi and get one. Two cheaper competitors are hustling to match its features for a lot less, but so far for the serious digital page designer, nothing touches it. Yet. One of its supreme features: it can shrink your bit-mapped pictures so that when the Laserwriter prints them, they come out like elegant rapidograph drawings, or grainy photographs.

MACPAINT

Already in the realm of the immortals. But you also need...



PageMaker screen dump.

NUTS & BOLTS & BITS

PAINT CUTTER

For those times when you have to manipulate graphics larger than the Paint window, and

CLICK ART EFFECTS

The obvious extension of MacPaint's legendary bag of tricks. Rotate, skew and distort. If you're getting a new Mac, and have to buy a paint program, then

FULLPAINT

Is for you. It combines almost all of the features that the three above programs can do, plus a few extra tricks of its own.

MACWRITE

With Pagemaker doing the fancy formatting, who needs more?

MACDRAFT

MacDraft is just MacDraw with a bunch of extra goodies—a zoom, a rotate, scaling, and more. Both of these are drafting programs for jobs that require a high degree of precision.

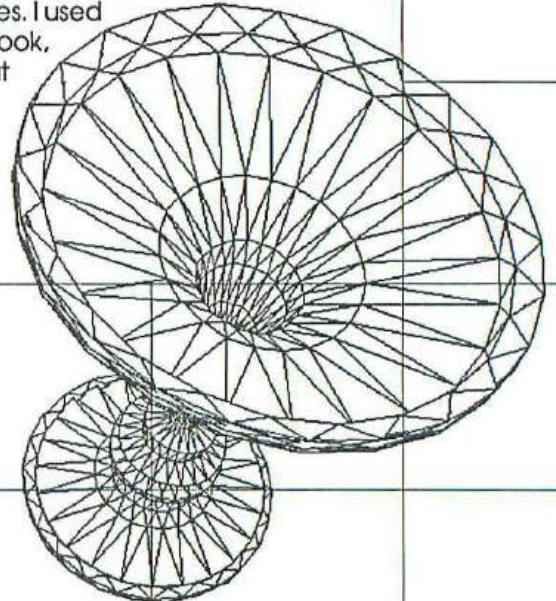
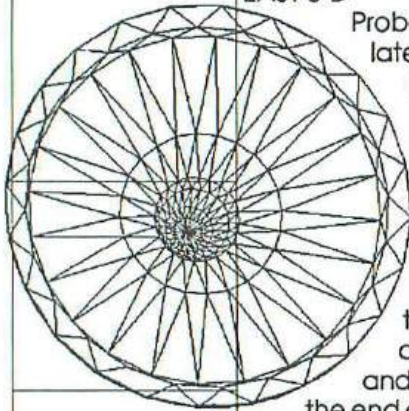
EASY 3-D

Probably not in the necessity class; I got this three-dimensional modeler late in the game. A pure delight. Sure does some neat things, I wish I had thought of more uses for it. Their manual, by the way, is a model of clarity and logical thought, and wins the coveted Golden Mouse Hot Documentation Award.

AND WAITING IN THE WINGS...

Are extra fonts and Clip Art. Both are really a personal choice. In bit-mapped fonts, I like the classic collection of *Click Art Letters*, and the wide selection of *Fluent Fonts*. As for laser fonts, you buy them one at a time, so follow your tastes. I used a number of clip-art packages in this book, and they are noted on the page credits at the end of this chapter. I wasn't really impressed by any of them until I found the *MacMemories Series of ImageWorld*. The artistic level is way over anything else I've seen, and I found their imagery constantly inspired unexpected connections with my text.

Rotating vase by EASY 3-D. I had planned to end chapter 6 with a page of intense Escher-like three-dimensional graphics illustrating the Buddha's essentially indescribable "turning around." I put it aside at the last moment in favor of a simpler, less technical approach.

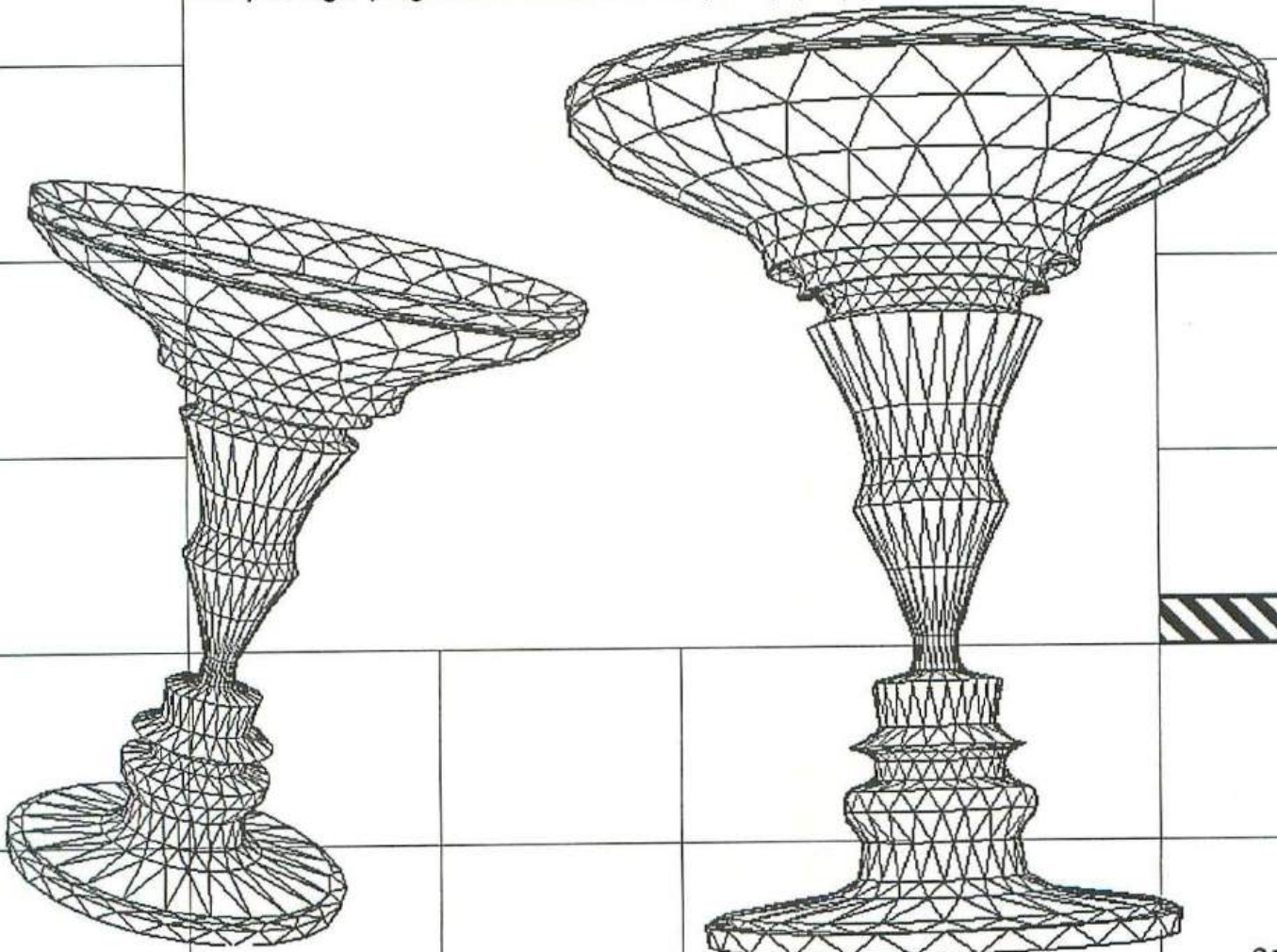


Now, for the Order out of Chaos housekeeping chores. Life would have been a lot easier if I had begun using these two items at the start of this book: *Picture BASE* by *Symmetry* is a neat way to review miniatures of all your Paint files instead of trying to figure out what your cryptic little titles refer to. And *MDC II* by *New Canaan MicroCode*, which no-fuss-no-muss labels and catalogues all those back-up disks rattling around in your desk.

SWITCHER AND MEMORY

As the theory goes, there is in pure *Platonic form*, an ideal graphic workstation-in-the-sky, of which all earthly systems are mere imperfect replicas. Be that as it may, as you work on the real-world setup you've put together, you become increasingly aware of exactly how it falls short of *some* ideal. (Which, considering the plummeting cost of chips, shouldn't be that far away.) For openers, the Ideal Graphic Workstation will do everything (just like a pencil) *instantly*. Hey, isn't that's what computer graphics are all about? ...*Zip zip zip*? Anything less is a dull pencil, a compromise, and a drag.

So, enter SWITCHER, a tight little jewel of code that opens up your Mac to as many as eight programs at once, and lets you-*zip*-jump from one to another in



NUTS & BOLTS & BITS

less time than it takes to write about it.

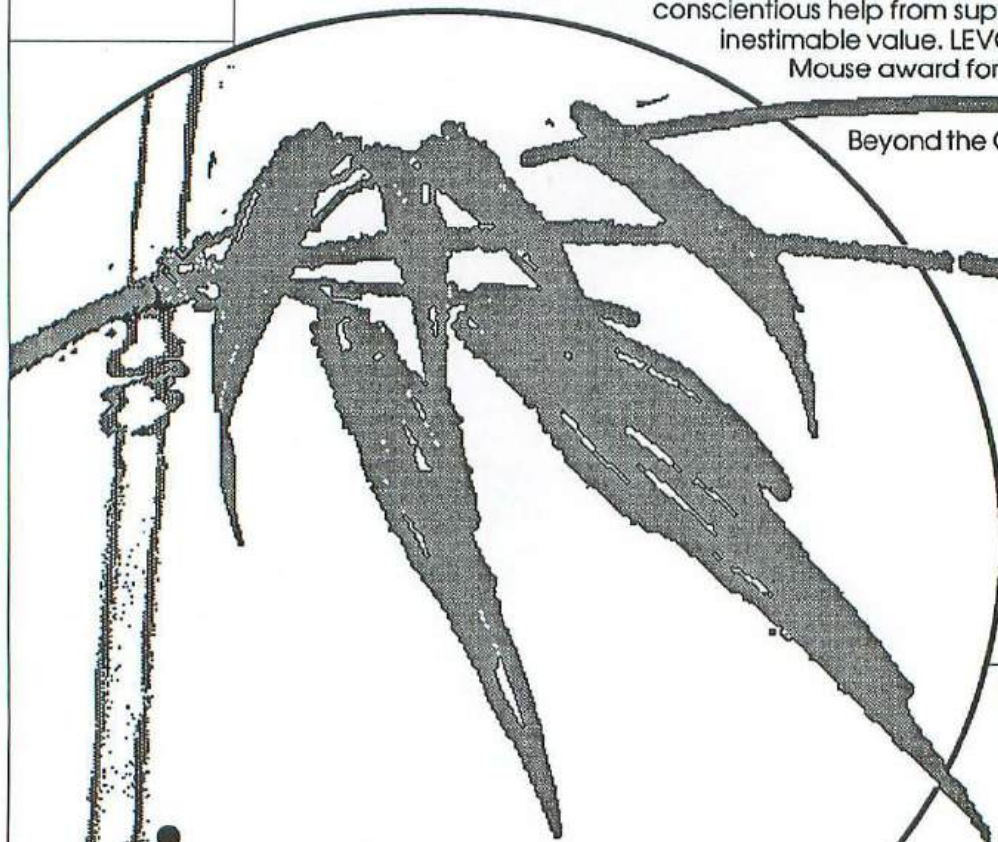
But hold on! When we've stacked up all these programs, thrown in an assortment of different type fonts, a desk accessory or two, and added some extra space for PageMaker (to handle those unreasonably complex layouts that do come along)—my friend, we've got a lot of K's to contend with. More than 512, more than 1000.

The solution? Crack open that Mac and throw in a big, booming memory hop-up. With SWITCHER letting you dance from program to program like an electronic Nureyev, you don't want to have to leave out any of them. Say you're in Pagemaker, with a sudden inspiration to re-do a Paint graphic. *No Problem.* Zip to MacPaint, touch it up there, zip to Paint Cutter, take it up full page and invert it, and zip it back to Pagemaker. Then to MacDraw, rotate some laser type, and back again to place it over your graphic. *And no wait.*

So get a bigger memory, friends. I picked the LEVCO two megabyte MONSTERMAC, and glad I did. Not because it's better than the others (I wasn't able to actually make comparisons, so all I can say is that it has worked just fine)—but because when some weird compatibility problems arose, did these guys give me fast help. Let me tell you, when you're lost in space with a crew of third party products that just can't get on the same wavelength—decent,

conscientious help from suppliers is a blessing of inestimable value. LEVCO gets the Golden Mouse award for Service Above and

Beyond the Call of Profit.



● These bamboo leaves were quickly sketched with one of the medium dot in the BRUSH menu dipped in black, then trimmed them down with a white BRUSH, taking care to preserve the sketchy feeling. They felt a bit too bold, so I turned them grey with PAINTBUCKET, and pulled them together with OUTLINE.

OFFICIAL DISCLAIMER

ZEN AND THE ART OF THE MACINTOSH

started out with the intention of being a basic treatise on creative MacPaint techniques. But that was long ago, and there are any number of excellent books out already that cover the bases. I'm assuming now that you know your way around, and would rather range around the book, getting ideas and figuring out for yourself *how did he do that?* Still, it might be appreciated if we walk through some of the trickier moves and off-used licks that made our life easier. But first, a disclaimer.

"Zen" has been volleyed about for some time in the West with a nonchalance that would make old Bodhidharma grit his teeth. Therefore, let's clear up the difference between *Zen* and the *aesthetics* that grew out of it. The *aesthetics* of Zen are its costume, so to speak, its stage props, and a popular—graspable—approach to a profoundly slippery subject. In the course of writing & imaging this book, I perceived that certain elements of Zen aesthetics were useful guidelines for the twentieth century discipline of computer graphics, both as an encouragement to its strengths, and antidote to its pitfalls.

However I don't want to further the trivialization of the Wayless Way into artistic formulas. Indeed, as the book winds along, we finally swim into deeper waters. Alas, as anyone steeped in Zen will immediately realize, our course often strays beyond the confines of its formal doctrines.

That's OK. I'd like to think this book follows the Zen *Fringe Rascal* tradition. The eminent practitioners of this calling were two Zen buddies of ancient China, Han-shan and Shi-ti. Han-shan was something of a vagabond and hung out in the hills, on Cold Mountain, roaming around writing poems on tree trunks. Shi-ti, on the other hand, was an enlightened cook in the local monastery down in the valley. Every now and then, Han-shan would show up unexpectedly, dash through the meditation hall—laughing wildly—and disappear. *Yo Han-shan!*

That's fringe Zen! Outside the sutras. *Whatever works.*

Just to be safe though, let me issue this public disclaimer absolving Zen—*official Zen*—of any responsibility for this book. Zen itself is clearly a mystery, and no less so because its smiling masters would deny even that, and declare it is as plain as the nose on your face. Whatever the truth of the matter, I make no claim to be a spokesman for its Great and Hoary Traditions.

Is this book Zen or not? Maybe it doesn't matter. My interest is in presenting what I have found to be true, rather than hewing to any predetermined beliefs, digital or metaphysical; to pass on some hard-won info on computers, opening some doors, and once again, raising the Good Question.





The Zen Stroke

*When the Mac
did this Z,
I knew we had a winner.*

But first, a Basic Zen Story: Hyakujo was a Zen Master. He wished to send a monk to open a new monastery. He called his pupils and told them whoever best answered a question would be appointed.

He put a water pitcher on the ground and asked, "Who can say what this is without calling its name?"

His senior disciple came forward and said, "No one would call it a shoe!"
Isan the cook suddenly jumped up, kicked over the vase, and went out.
Hyakujo smiled and said, "Chief monk loses."
Isan became the master of the new monastery.

Obscure as these Zen tales sound, the idea behind them is simple, if elusive. When the Roshi puts a question to the disciple, the only correct "answer" is one that springs from a student who has touched bright center, tasted his original inseparability with the universe; this awakening will reveal itself in responses as innocent of forethought as a child's laugh or a flock of pigeons erupting into flight from a sidewalk. (This **In the moment** quality is called **Suchness**.) Zen finds its purest artistic expression in the deliberate/spontaneous gesture that flashes suddenly across all contrived wanderings of the intellect into a realm of utter simplicity. Yo! Nobody home!

I started off the above Zen exercise in graphic **suchness** with one of the special brushes (the diagonal line of dots). For this kind of dashing calligraphy to be successful you can't hesitate or betray any constipation in your movement. The trick is to keep a finger of your left hand on the tilde (~) key, upper left corner, which is a shortcut UNDO, so you can keep knocking off trial versions (and just as quickly undoing them as you try and get just the right **controlled abandon** in the stroke). With this kind of instant forgiveness, **anybody** can sooner or later come up with a gem. After a dozen or more tries I stroked off a respectable Z. To loosen up the look some more, I lassooed the Z, copied it and dropped a few clones on top to produce the final multiple image.

THE GRAPHICS TABLET

I did the big Z "Chapter Two" with the mouse, on a graphic tablet. It's a good example of the kind of thing that would be just about impossible to do with a mouse. Unfortunately, by the time I got my hands on a tablet, I was so patterned to mouse-work that it was just as handy to use the mouse for most operations. One operation that the tablet excelled in was tracing, which was how I did the trendy David on 125 and the samurai on 175. If I didn't have to give back my review unit, I probably would have eventually shifted my whole operation to a tablet. If you know how to draw or do calligraphy, the feel of a pen is important. The tablet I liked best was the GTCO board which had some nifty features. Think twice about tablets which use a port (you need it) or software (may be incompatible with your hard disk). Check out any models with wireless pens—pulling that wire around when you draw is a drag.

Check out how the shadow under the underline is slightly rotated to heighten the 3-D effect.



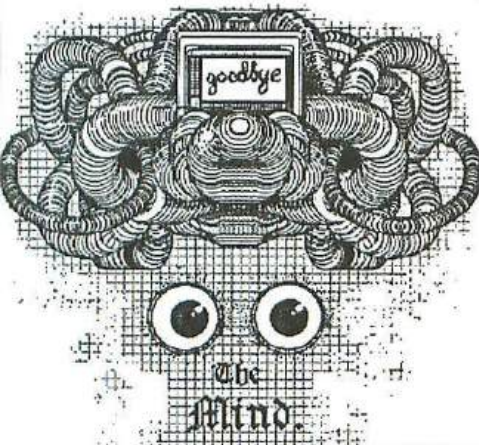
The Wizard really was my first picture and I picked at it a whole day just learning the ropes, so there are no great revelations of technique other than something known to most high school cartoonists. **If you pick a grotesque subject it is hard to go wrong.** Notice the white streaks in the wizard's hair, a nice touch easily done with the fine point of the brush dipped in white.

favorite. You've probably seen some version of this design before. It's called an **Enso**, the "circle of infinite possibilities," emptiness within fullness, profundity within simplicity... A traditional favorite of Zen calligraphers, it is often accompanied by a short poem, such as

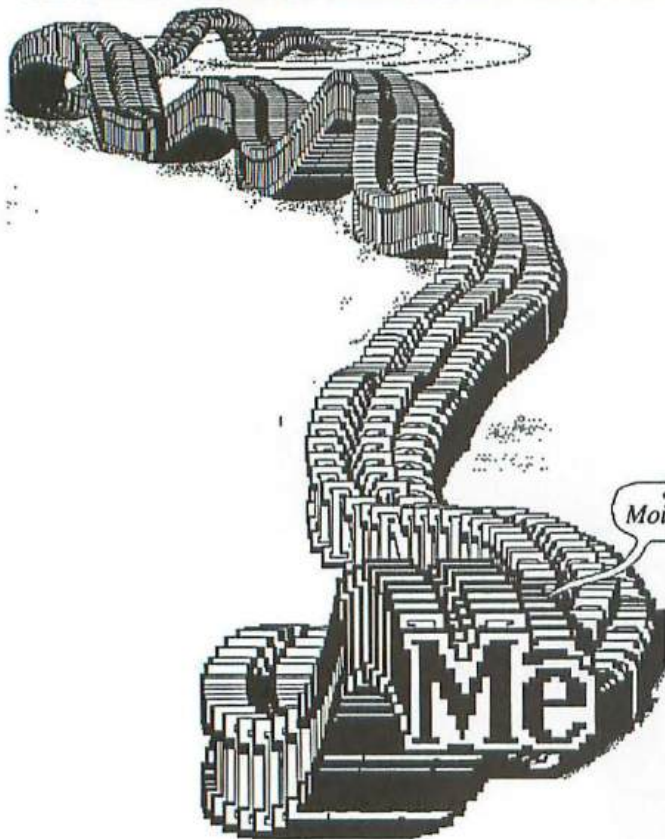
*The shadow of the bamboo sweeps
The stair all night long.
Yet not a mote of dust is stirred.*

—Chikan

The idea for a Mac version of this design came soon after seeing how holding down **OPTION** and **COMMAND** keys, while dragging an image, would "echo repeat" it. I wanted to have the word **ZEN** dense and almost unreadable at the beginning of the circle and open up at the end, so I had to increase the speed of my movement as I went around. After quite a few tries the best I could do was a circle with a nice flair at the end but a muddled beginning, and no amount of dickering around with the letters made it read "right." So I changed lanes: why not **exploit** the muddled beginning? I shot a little **SPRAY PAINT** over it, and lo! it started to look like a real brush stroke. That's it! I followed the lead, enlarged the result to full page, and the rest is Zen history.



This **OPTION+COMMAND** echo-repeat is a neat, often intoxicating feature. It must closely parallel some inner workings of the mind—it's great fun to just sit around endlessly doing it. The **real trick** is finding an appropriate use for the effect. **Here**, I lassoed a circle and dragged it around to make a delicious **Tube Snarl**. Then I added some smaller loops for texture. Note here how the little tube goes **both over and behind** the rest. First, it was drawn separately. Putting it over was easy: any time you create a detail

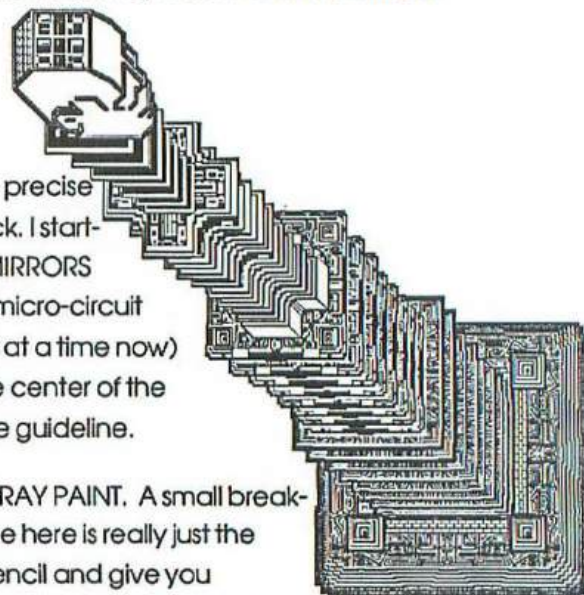


and drag it over to the main picture, it will slide on top. If you want it to go **under**, just lasso a section of the main picture and pull it over the detail. Then bring **both** back to rejoin the mothership.

The logical evolution of the tube bit was the **3-D Snake**. I (1) **OUTLINED** a 'Me.' (2) Starting at the top of the page, I dragged it forward with an undulating motion with the **LASSO** on echo repeat, making the first, smallest tail segment. Stopped, released the mouse button, pulled the original 'Me' to a neutral corner and (3) enlarged it a tad. Returned it to the end of the segment and (4) echoed out another, larger segment. (5) Repeated until the illusion was complete...

The **Left-brain**

Tower was a more precise rendition of this trick. I started with a **BRUSH MIRRORS**



mandala as a base (**OUTLINED** a few times to create an intense micro-circuit look), and kept pulling out the center and duplicating (one story at a time now) with the **MARQUEE**, enlarging as I went along. Then ditto with the center of the center, etc., keeping plumb all the time along a forty-five degree guideline.

Drawing with **SPRAY PAINT**. A small break-

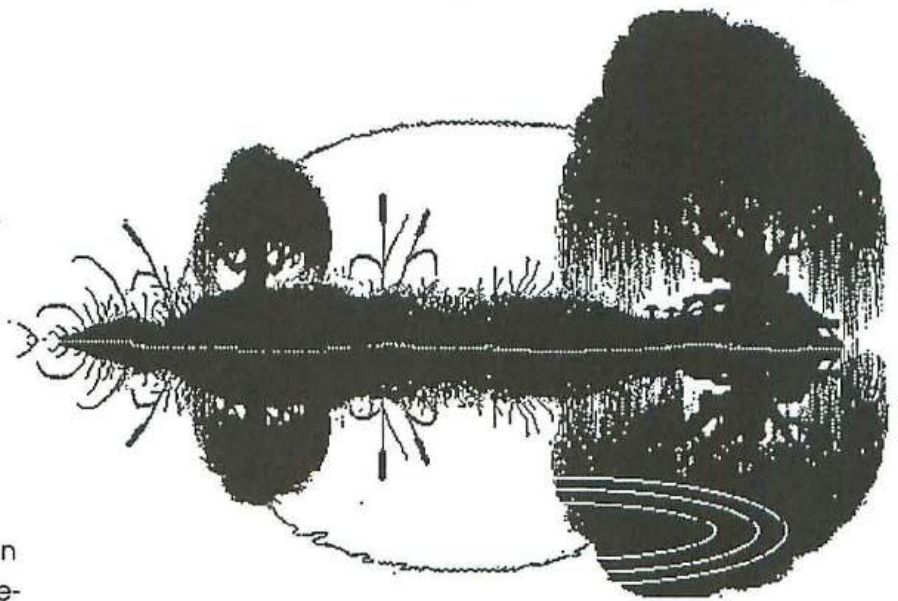
through picture. The idea gleaned from executing the little scene here is really just the first lesson in any basic life-drawing class. They take away your pencil and give you

a big stick of charcoal, forcing you to draw masses of light and shadow. **Model** your subject as a solid in space (holistic) rather than **outlining** it as a symbol (conceptual). The **SPRAY PAINT** is your charcoal, and it might well be the most intuitive way to draw on the Mac. But there's one big difference—in MacPaint you can switch back and forth between **laying down form** with black **SPRAY PAINT** and **trimming it off** with the white. Once you get the rhythm, it's a suprisingly accurate way of bringing a picture into focus—from the first vague idea to the final rendering—and it short-circuits the tendency to produce spidery, two-dimensional sketches. I did the full page Indian face on page 66 with **SPRAY PAINT**.



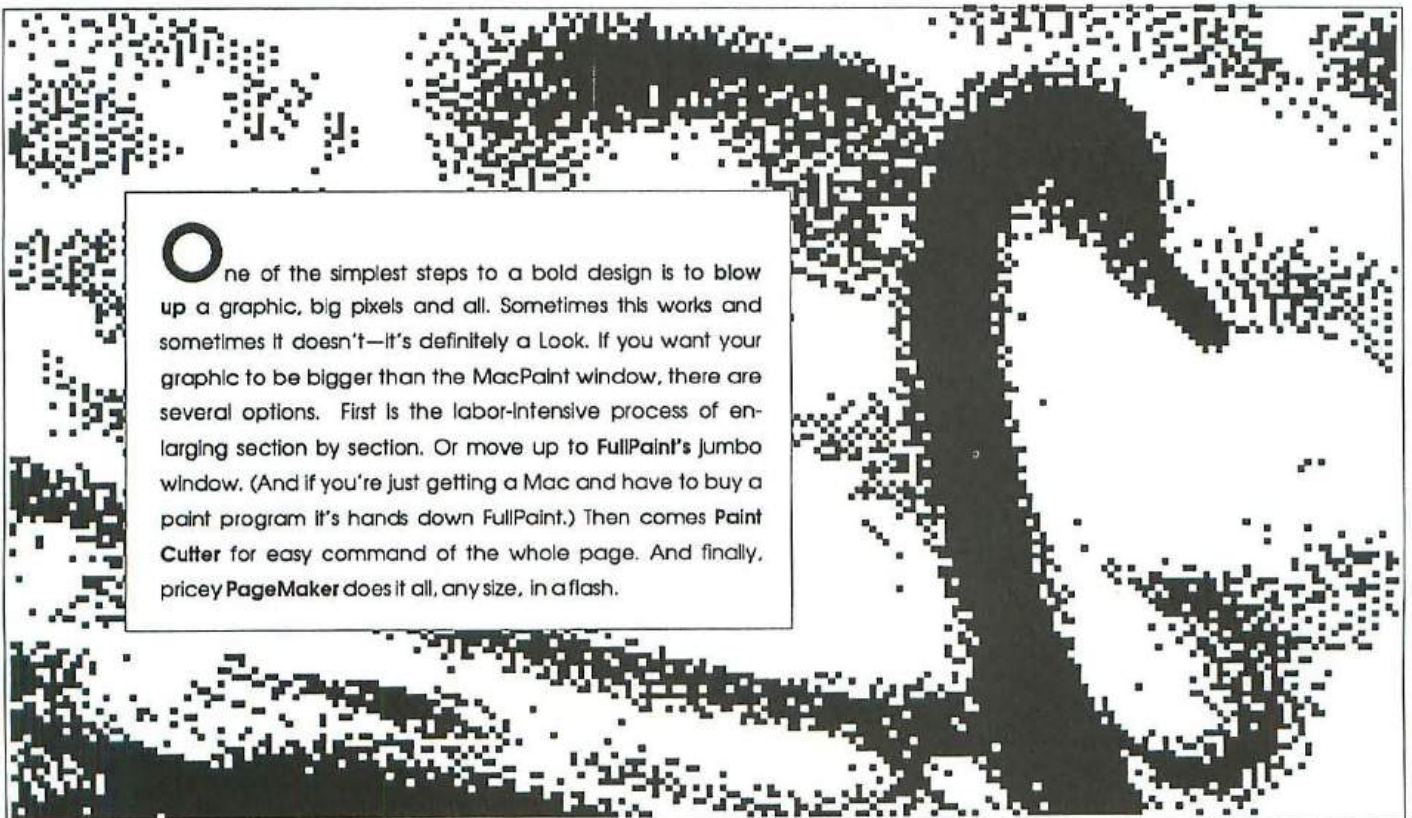
Also, by the time I did this picture, I had gotten accurate enough to start using the one pixel brush for detail instead of always reaching for **FATBITS**. It's faster, almost as accurate, and a whole lot looser.

Reflections on Reflections. Since FLIP VERTICAL has made graphic reflections a national craze, allow me to bring your attention to this reflection in the lake. Observe how it is **not** a simple flopped image of the trees above. It's been scrunched down a bit (**foreshortened** is the term). This is an off-overlooked detail in the reflection business: when you are looking eye to eye at a tree above water level, you're seeing the other tree below water level at an altogether different angle, with subsequent adjustments for foreshortening.



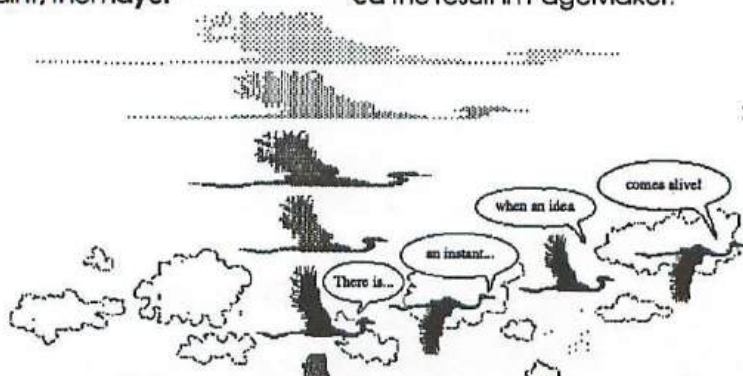
Drawing in silhouette like this is one of the strongest suits in Macintosh art because good bold images get along swell with the Dot Matrix effect, and avoid that spidery feel that is so easy to get into with PENCIL. Pick a big black dot from brush menu and scrub around to make a rough, bold form. Then, like Michelangelo "liberating the statue from the stone," just trim away the fat until you begin to see what you want. Then back to black...white...black...white. Bold black graphics also illustrate an important criterion of good design: does your page, seen from across the room, or upside down, **still seem interesting?** Are there contrasts, blocks of light and dark, etc...or does it all just **grey-out?**

One of the simplest steps to a bold design is to blow up a graphic, big pixels and all. Sometimes this works and sometimes it doesn't—it's definitely a Look. If you want your graphic to be bigger than the MacPaint window, there are several options. First is the labor-intensive process of enlarging section by section. Or move up to FullPaint's Jumbo window. (And if you're just getting a Mac and have to buy a paint program it's hands down FullPaint.) Then comes Paint Cutter for easy command of the whole page. And finally, pricey PageMaker does it all, any size, in a flash.



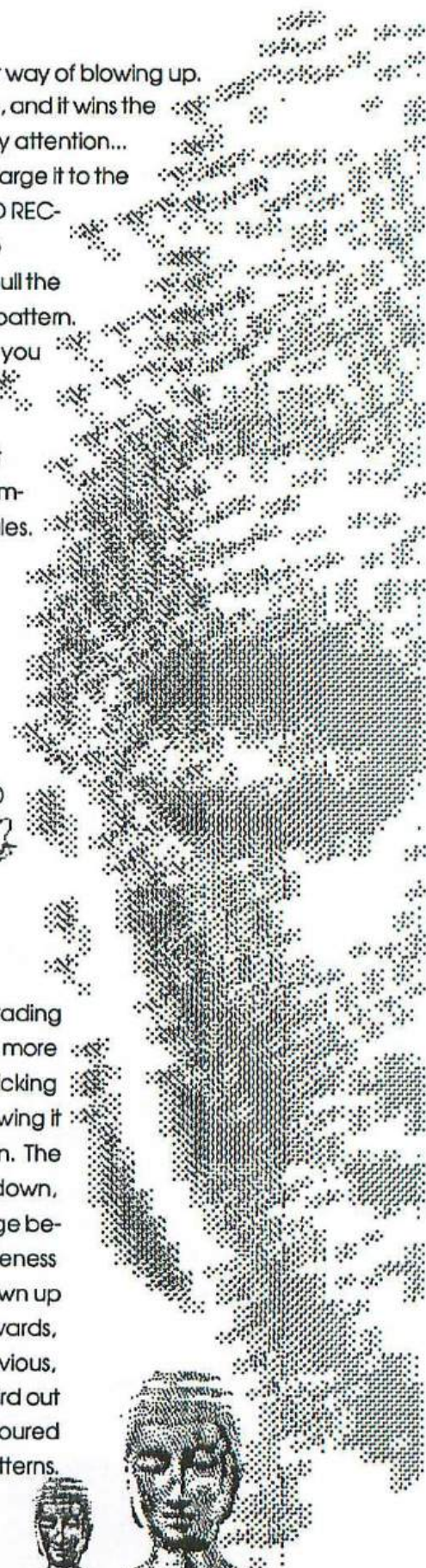
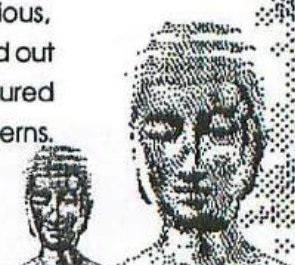
But there is yet another way of blowing up.

The **Turbo Zoom!** I discovered this trick in an early *MacWorld* magazine, and it wins the Golden Mouse award for the neatest MacPaint stunt to date. Now pay attention... We are going to enlarge a picture without getting huge pixels. First, enlarge it to the size desired with method of choice. Then INVERT. Now, select the FILLED RECTANGLE in the menu, click NO BORDER, choose the shade right next to black from the palette. OK? Now holding down the COMMAND key, pull the pattern across the whole screen. It will fill all the white space with the pattern. And you will double click on the marquee box and INVERT again. Now you see your original design writ large, but in a fashionable light grey, a mere ghost of itself. Lasso it, and holding OPTION key, pull off a clone, move it a few pixels away, drop it, repeat until you've built the contrast back up to where it was. I bet this is a toned-down version of those "computer enhanced" pictures you see of the outer planets or DNA molecules. I used it several places throughout the book, most noticeably on this goddess' face. Only here, I expanded full page in Paint Cutter, went grey in Paint, then layered the result in PageMaker.



So there's an instant when an idea comes alive? Well, sort of. The early versions of this page—and there were about a dozen—were a lot more baroque (a polite word for overdone), using all kinds of multiple outlining and such. One can really get into outlining, but I finally boiled it down to what you see. I started with the finished heron, which I copied from a book. And

then going down, degrading the image more and more by shrinking it down, clicking to freeze it, and then blowing it up to the original size again. The more you shrink it down, the cruder the image becomes, and that crudeness is retained when it is blown up again. Moving upwards, as should be obvious, I simply stretched the bird out more and more, and poured in the grey patterns.



Zen and the Art of the Rubik's Cube, or, "How do I get There from Here?" You know, **visualizing** the final version of your idea, then figuring out the exact chain of actions that will execute it. Most of the advanced graphic work you can do with this system gets you involved with *subroutines* all chained together just so. Example: I want this hand with a series of outlines around it. But the outlining process will do weird things to the hand as well as to the picture itself. So it's (1) COPY the hand to a clear workspace. (2) ERASE away all background. (3) LASSO the hand and COPY to memory. (4) OUTLINE away. (5) ERASE all weird effects now created inside of hand. (6) PASTE original hand back into the empty hand outline. (7) ERASE—with a bucket of white paint—some of the extra lines around the hand. (8) Remove one-pixel "leak" holes from the outlines so that when the whole effect is pasted back on the picture it doesn't blot out the



To make the dark-to-light gradation pattern on page 186-187, **enlarge** a strip of checkerboard pattern (created in Paint) then trim down the black squares smaller and smaller into one pixel dots. That's half of the job. FLIPPING VERTICAL and INVERTING automates the other half. Then just keep COPYING what you have done across the page till you have what you want.

While on the **A** subject of making things bigger and smaller...

BIT-MAPPED FONT GETS SMOOTH WHEN SHRUNK, OF COURSE

TRY CREATING A BLOCK OF type in Paint with a bit-mapped geometric display font, slanting it an elegant forty-five degrees in EFFECTS—and reducing in PageMaker. Or, do up a block of type in MacDraft (then rotate, if desired), then SAVE AS in PICT format. You now have a type document that goes into PageMaker—and can be stretched to any size and proportion (pages 6,7) with full Laser quality all the way.

whole background. (9) LASSO, COPY, AND PASTE back on top of original.

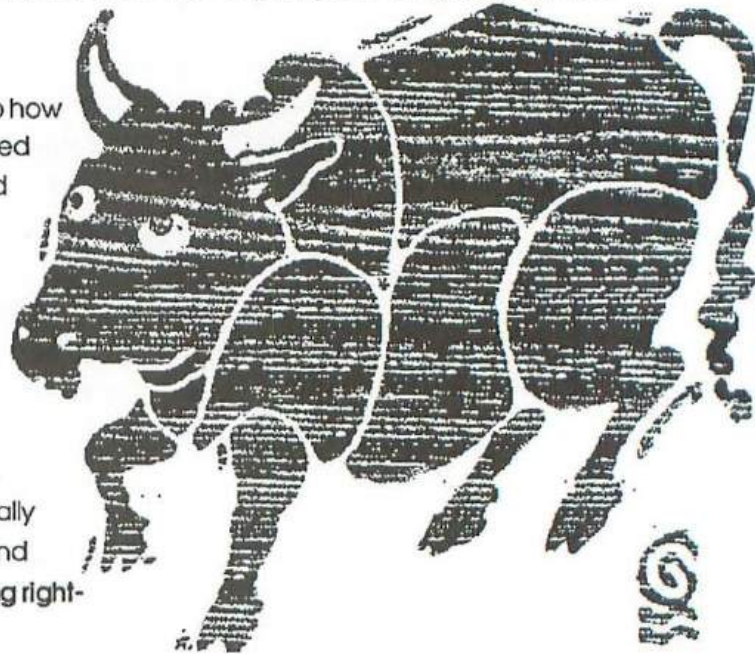
Ironic observation: The open-ended nature of the Mac easily leads to unbridled flights of "creativity" which can often disperse into the ozone. The check and balance of the **mundane** is needed too. Quoth the I Ching, "Unlimited possibilities are not suited for man, else his life will dissolve in the boundless." A friend who had gotten a Mac after seeing mine complained, "I really had fun on it for a while. But then, one day, I was trying to play...and I couldn't play." True. Not only can the blank canvas/screen be intimidating, but sometimes **omnipotence can be uninspiring**. I bet he needed a real world project to get him Grounded and off and rolling. Even children in their most absurd and joyful activities generally **start out** with a defined game.

"Men invent alarm clocks to wake themselves up. Then they fall asleep...dreaming of alarm clocks."

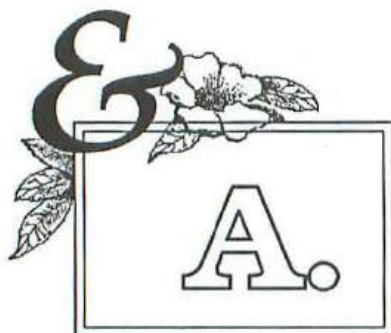
—Gurdjieff

Now take this ox. I started off digitizing this fellow, then enlarged him in Paintcutter, stretching his proportions out a bit while I was at it. Sent him back to Paint where his outline got cleaned up. Printed a proof; he didn't have the punch I wanted. Filled him with black. Divided him into sections like a prime-cut diagram. Still not happening. But it reminded me of a woodcut.

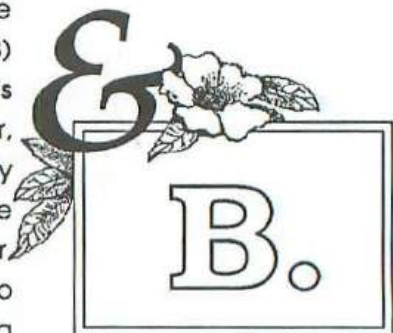
So how to do it? Simple. Aimed camera at my pine-planked studio floor in the failing light of late afternoon and caught a nice section of grain. Back to ox, and INVERT. Now he's a white ox on a black background. Back to wood, lasso a section of grain & carry it back & drop it onto ox. Oops...UNDO, back to the wood, INVERT it, lasso & carry piece back to ox, PASTE down over white spaces of ox (excess grain disappears into black background, yes?) Work over whole ox until he's all grain (actually reverse grain), then, Ta da, INVERT the whole kit and kaboodle, and there is the ox woodcut, everything right-side out.



But it's in the Bless'd realm of PageMaker where creative design really needs this kind of reasoning process. PageMaker is engineered to keep each graphic element in it isolated in its own plane. This can get complicated: some elements (such as any bit-mapped art from Paint, or anything in PICT format) are transparent, like a film overlay. Whatever's beneath these will show through. On the other hand, any graphic element generated by PageMaker will totally cover what's behind it, as will any picture brought in from the scrapbook. Not only that, if you want to work on something, it has to be on top... but any given element can be BROUGHT TO FRONT (top level) or SENT TO BACK (bottom). It takes a little forethought and arranging, but ultimately almost anything can be done. For instance, on the cover, the little flower (from Paint) hangs over the double-line border of a box generated by



Pagemaker. It should look like (A). But it doesn't. It looks like (B) because five tiny white ovals (generated by PageMaker, thus opaque) were crucially placed as masks on top of the lines and beneath the flower neatly preventing the lines (also the "&" symbol) from showing through. Check out page 181 for a tour-de-force example of the art of masking.



Layering, cont.

This deceptively simple effect of the dragon breaking through a border must easily have a dozen layers. I would hate to have to rethink it all over again. It is not really made of stripes, but from three groups of round-cornered rectangles stacked dark to light, with the open center area actually a block of white. The stripes were tapered and pointed by nesting little round-cornered rectangles **off center**. This exercise with stripes illustrates an interesting aspect of our new arform: it took me the better part of an afternoon's **Macking around** to figure out exactly **what** I wanted to do & the most elegant **way** to do it—then only fifteen minutes to **actually execute the final design**. As I was putting it together with all its little **sub-routines**, I got a strong hunch that what I was doing had probably more than a passing kinship with certain aspects of **programming**, complete with logic-loops, linking, reverse engineering, and other arcana.

The Great Discovery

The great discovery is always as near as our next breath, easy as opening a door and stepping through. Yet common experience is manifestly otherwise. The reason it seems remote & impossibly difficult is that we keep trying to *push* the door open. It's not locked, *it just swings the other way*. In.

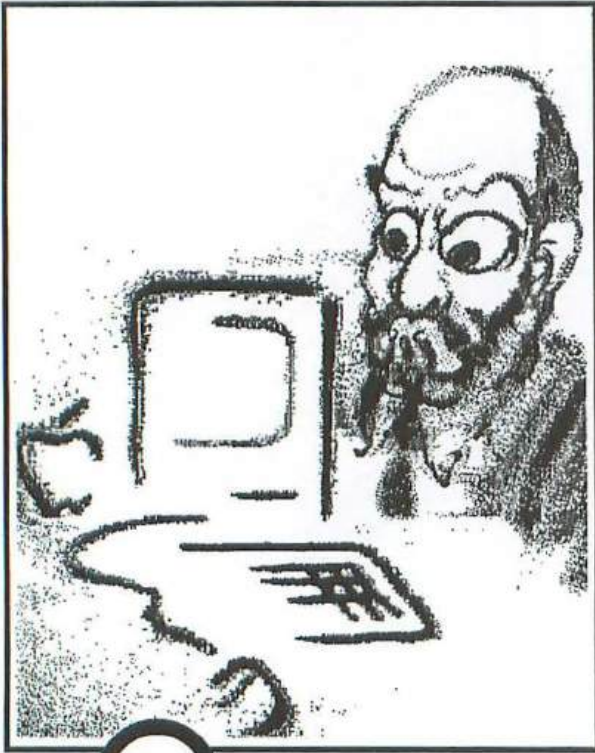


MacErosion. Take a graphic that you're working on, anything, as long as it's a good solid. Make it 50% grey with a kiss from the PAINTBUCKET. (This was a logo made from ClickArt's large Boston letterforms.) POUR black into all the white space around it, then white into the black, and so on. Each successive pour will nibble away a one-pixel thick outer layer of the grey shape—sometimes creating neat effects, sometimes not...but always, if you persist, leaving you in the end with nothing at all.

Digitizing, more on..

I first digitized a painting of a Zen sage, then the classic Macintosh drawing, and fitted them together. With this innocent act, I opened up the prickly issue of digital re-touching and journalistic integrity: did such a drawing ever exist? And are you implying an endorsement of the Mac by the sage? —And so forth. Forget it. For us, it's just plain fun. Now observe the jungle vista below. No, In truth I have never peered through undergrowth at an ancient digital temple. What I did do is digitize myself and a potted palm, digitized my Mac from a low and dramatic angle, pulled the menu bar from a MacPaint screen dump, sketched a fig tree from an old National Geographic article on Angkor Wat, cloned a few hundred leaves, then mixed and served. Simple!

The gentleman is Bodhidharma, the man who brought the Teachings from India to China and became the First Patriarch of Zen. (The point of his remark in the book, by the way, is that one of the most famous koans, or paradox-questions of Zen is "Why did Bodhidharma come to the East?") An interesting character, he is always depicted as embodying the fierce, rugged, uncompromising qualities of enlightenment.



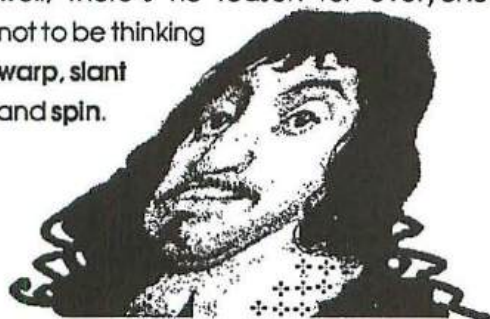
On the philosophy of Digitizing. Basically, I'm a Medievalist at heart, harkening to a time when artists and writers freely exchanged ideas and images. If somebody else did a really neat Adam and Eve, why bother to invent another pose if you liked that one? At that time we hadn't yet gotten so spun out on "originality." The point was to get the message out. Use whatever material is appropriate. Artists & writers viewed themselves less as originators than as transmitters of material; as such were less attached to their work. (Curiously this is almost exactly the ethic of the early hackers who started this whole thing: a fervent belief in the free exchange of all their discoveries.)

Anyway, I think the pixelated image that Mac digitizing captures is only a shadow of the original—the idea of the thing, rather than the thing itself. Digitizing captures an idea. And when you finish playing around with it, what you have (if it's still recognizable) is an homage rather than a rip-off. In keeping with this, let me go on record as saying anyone who wishes to digitize any of the images in this book is welcome to do so. May a hundred flowers bloom!



EFX.

Click Art EFFECTS is an obvious addition to the MacPaint vocabulary, and instantly becomes part of the way you electro-graphically think. Since it's part of the FULLPAINT repertoire as well, there's no reason for everyone not to be thinking **warp, slant and spin.**



Monsieur Descartes here was the first victim of this new, bent outlook. It was so much fun to do that it took a degree of self-control not to distort every subsequent picture that came along. René was snatched out of an old encyclopedia with the trusty digitizer, skewed, and touched up with FATBITS.

I think therefore I am.
—Descartes.
*Break the wineglass,
fall toward the glassblower's breath.*
—Rumi

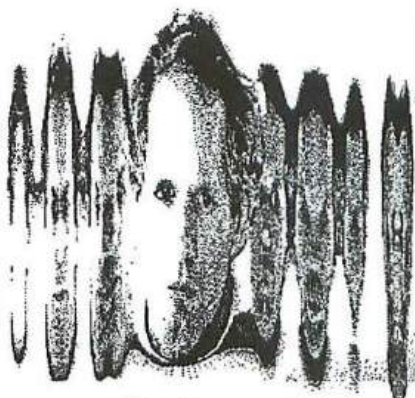
This would be a good opportunity to elaborate a little more on just how computers digest the teeming confusion of a world of **blurred boundaries** (like a face) and render it into crisp little **O's and 1's** (like a digitized picture). It all goes back to **The Frenchman and the Fly.**

The Frenchman was a 17th century dropout: René Descartes. He had decided that the entire knowledge system of his era was not worth his time: he was interested in **generating knowledge** as opposed to **accepting time-honored authority.** As legend has it, while pondering the great imponderables one morning, our hero's gaze strayed up to a fly crawling across the ceiling. Not the sort to take things lightly, he wonders, "Now just exactly **where** is that fly?"

V

ideo distortion.

These two portraits were done by simply moving my head in front of the video camera while MacVision was scanning me. First, in the opposite direction of the scan, then along with it, turning it slightly as I did. I had the camera sitting on top of the Mac so I could monitor the result right as it was happening. Took a few tries to get it right. There's a whole lot of interesting distortion effects waiting to be catalogued: vertical movements, jiggling, changing exposure, and so on.



Type distortion: Print out a block of large type, then distort by digitizing it with the camera aimed at an odd angle, or by bending the print-out in a bulge. Interesting possibilities here.

And—*Zut alors*— modern science is launched! Why? Because up until then, a fly was just, you know, **there.** But René saw in a flash that if an imaginary grid was superimposed on the ceiling, the fly would be precisely so many inches from one wall, and precisely so many inches from the other.

You're not impressed? *How perfectly obvious.* But it's only because this idea of a "Cartesian grid" is so central to the "scientific process" and so totally integrated into our twentieth century mental operating system/world view, that it has become like the ocean to the fish—**invisible.**

After this basic conceptual breakthrough, the rest was just a mopping-up operation. Armed with his new X-axis / Y-axis, Descartes quickly perceived how **mathematical functions**, which had hitherto been bewilderingly abstract, and all kinds of **real-world activities** like cannon ball trajectories, could be reduced to **connected points on a grid.**

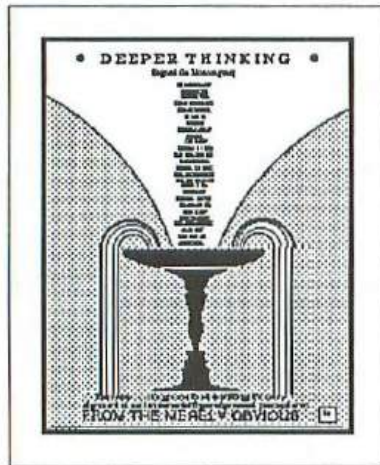
The seamless confusion of the world was transformed into points you could **count on your fingers.** Or, as we say in Latin, on your **digits.** Get it? Digital means: "anything you can count on your fingers."

The grid was a magic spell that could turn **things into numbers.** Very neat.

Maybe too neat. Because, these predictable left-brain conceptual models are so comforting that we now confuse them (like television) with the real thing.

Obviously I couldn't resist the chance to warp M. Descartes a bit out of his accustomed appearance.

NEW POSSIBILITIES



*Simply trust!
Do not the petals
flutter down,
Just like that?*

-Anonymous Haiku

FOR MOST OF THIS BOOK I HAD UNCONSCIOUSLY confined my use of PageMaker's various graphic elements to the given boundaries of its page outline.

Then, a simple observation: *why keep to these limits?*

Drawing right off the page out onto the desktop suddenly put a new vocabulary of great sweeping curves and huge segments of circles at my disposal. What overlapped the page would be printed, the rest would remain unseen.

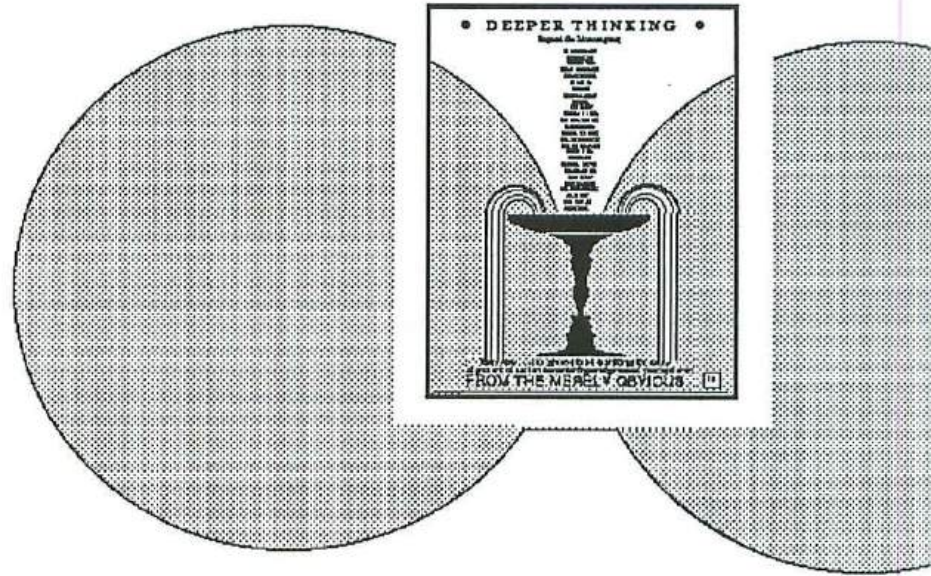
A hundred more possibilities wait to be found out in PageMaker, and in the other programs too. Or dreamed up: new graphic design applications are being written right now that will make these ones obsolete.

And new computers are on their way too, to push back the borders even more. What's Next?

The *new direction* is always unexpected, always obvious after the fact.

May we move fearlessly into the new territories; expand...into the invisible.



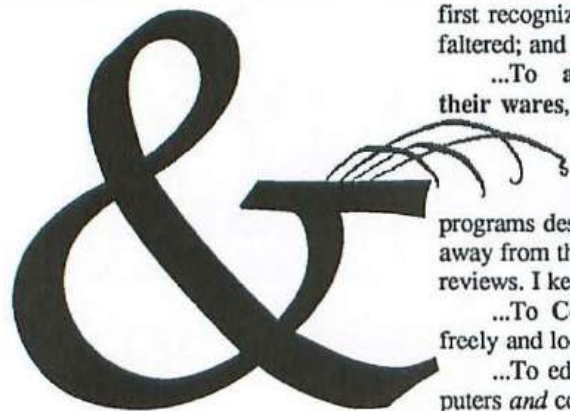


All that is visible
must grow beyond itself
into the realm
of the invisible.

-the I Ching

ACKNOWLEDGMENTS

It has been a long journey to finish this book, and without many helpful hands along the way it would never have come together as you now see it. Some grateful recognition:



...To Apple's Peerless Publishing Evangelists: John Duhring, who first recognized the potential of *Zen*, whose enthusiasm and ready assistance never faltered; and Martha Steffen who picked up where he left off.

...To all the software creators who sent me review copies of their wares, but who received no mention in these pages. I am all too aware that many of you guys are start-up visionaries, deeply in hock and need all the marketplace exposure you can get. Review copies cost money; I feel a bit like I've cheated you. There were some terrific, imaginative programs deserving of mention. But the reality of *my* marketplace steered this book away from the technical and into the literary. *Zen* would have sunk beneath a load of reviews. I kept it light. Sorry, that's just how it happened.

...To Coleman Barks, for his generous, very medieval permission to draw freely and loosely from his wonderful translation of Rumi, *Open Secret*.

...To editor Howard Rheingold who *just happened* to know about both computers and consciousness. And to Buzz Ferver for bearing with me an extra year.

PAGE CREDITS

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About now you are no doubt thinking along the lines of the old Zen saying "Better to see the face than to hear the name." But off we go again: P. 90. Chinese Landscape: MAGIC. P. 99. Face: MAGIC. P. 101. Type: Boston, by ClickArt. P. 102. Cabbage: MacMemories. P. 104. Gorilla: MacMemories. P. 105. Border: MacMemories; Japanese lady: Mac the Knife; Flower: The Card Shoppe. P. 108. Calligraphy: MAGIC. P. 110. Font: Michael Green, using Fontastic. P. 112. Thumbprint, courtesy Aldus. Pp. 116, 117. Type design: ClickArt Effects. P. 120. Font: Boston, by ClickArt. P. 121. Bodies: MAGIC; Faces: MacVision. P. 125. David: GTCO Graphics Pad. P. 128. Chinese Sages: MAGIC. P. 131. Number 5: Boston, by ClickArt. P. 132. Hand: MAGIC; Macintosh: ClickArt Publications. P. 133, 134. Face: MAGIC. P. 135, 136. Font: Mac the Knife. P. 137. Face: MAGIC; Font: Dallas, by ClickArt. P. 140. Leo: MAGIC. P. 141. Figures: MAGIC. P. 142. Leo: MAGIC. P. 144. S. Jobs: MAGIC; Vincent: MacVision. P. 145. Albert: MAGIC. P. 147. Sunset: MacVision. P. 148. Universal Man: MacVision. P. 151. Scrambled Man: MacVision. P. 152. Falcon Temple: MacVision. P. 153. All images: MacVision. P. 154. Confused Man: MacVision. P. 157. Images: MacVision. P. 159. Rabbit: MacVision. P. 160. Screen Dump: Amazing (Macintosh Maze.) P. 163. Rat: MacVision; Graph: Microsoft Chart. P. 166. Head: MacVision. P. 170. Swordbearer: MacVision. P. 171. The Thinker: MacVision & ClickArt Effects; Stencil letters: ClickArt Publications. P. 172. Flyer: MacVision. P. 173. Images: MacVision & special thanks to Gyorgy Doczi, author of *The Power of Limits*. P. 175. Meditation on Location: Boston, by ClickArt; Samurai: GTCO Graphics Pad. Pp. 176, 175. All images: MacVision. Pp. 178, 179. Faces: MacVision & MacPaint. P. 180. "B": MacVision. P. 181. Figure: Thanks to a carving by a nameless artist in Memories. P. 184. Images: MacVision; Goose and trees: MacMemories. Pp. 199. Ox: MacVision. P. 200. The Cleaver: MacMemories. P. 204. Hand: P. 217. Bodhidharma: MAGIC; Fonts: & thanks to Larry & Buzz for doing it.



Finally, as we close down shop, let us leave on the highest note:

LIGHTEN UP

Let yourself be silently drawn by the stronger pull of what you *really* love.

Cease your hankerings; make yourself like a perfect piece of immaculate silk;
let your mind dwell on eternity; be like an old censor in a deserted village shrine.
Let every thought of limitation vanish, and lo! realize the luminous.

THIS is a light abounding in full gladness, like coming upon a light in thick darkness, like receiving a treasure in poverty. So easy, so free are you, that the weight of the world and the aggravations of the mind are burdens no longer; your existence is delivered from all limitations. You have become open, light and transparent. You gain an illuminating insight into the deepest nature of things, which appear to you as so many gossamer patterns having no graspable reality.

Here is the original face of your being.

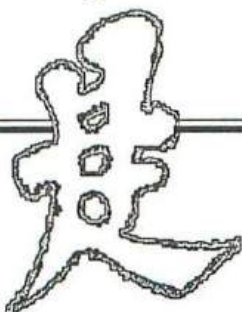
Here is the most beautiful landscape of your birthplace.

This is the straight passage, open and unobstructed.

This is when you surrender all.

This is where you gain peace, ease, non-doing and inexpressible delight. All sutras and scriptures are not more than communications of this fact. All the sages, ancient and modern, have exhausted their ingenuity and imaginations to no other purpose than to point the way to THIS.

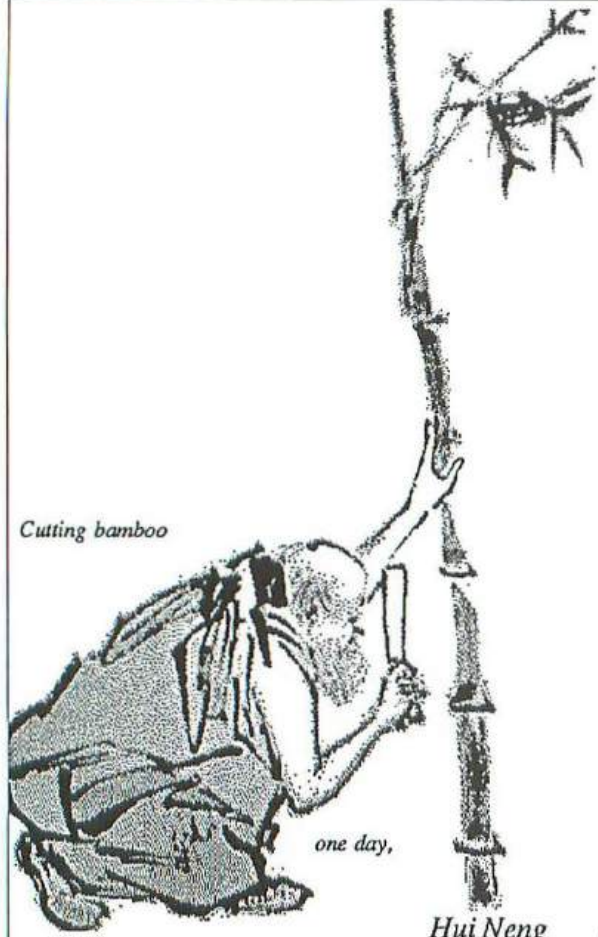
Zen master Shih Shuan



*These words I'm saying begin to lose meaning;
Existence, emptiness, peace, surrender;
Words and what they try to say swept
out the window, down the slant of the roof.*

TURN AROUND.

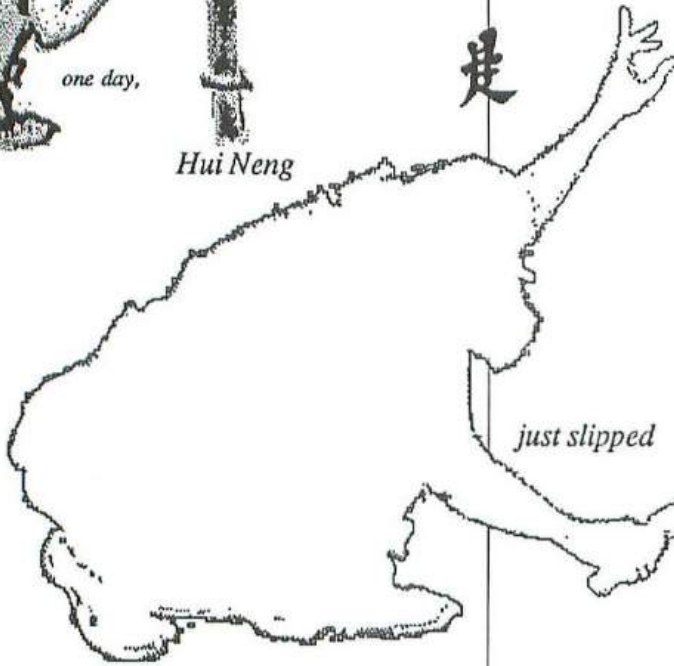
Cutting bamboo



one day,

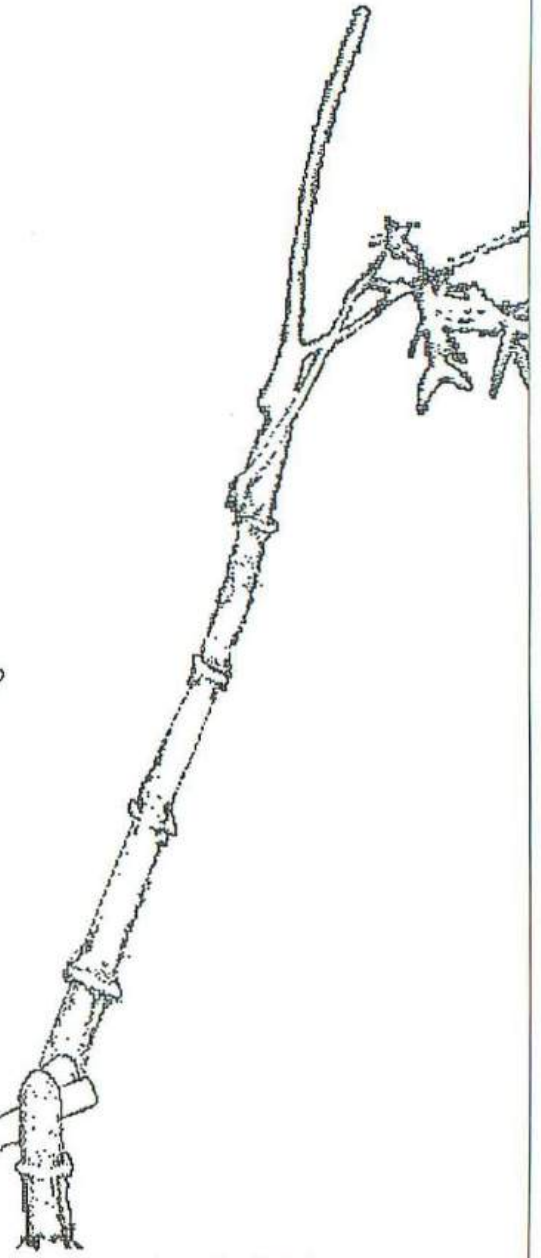
Hui Neng

是

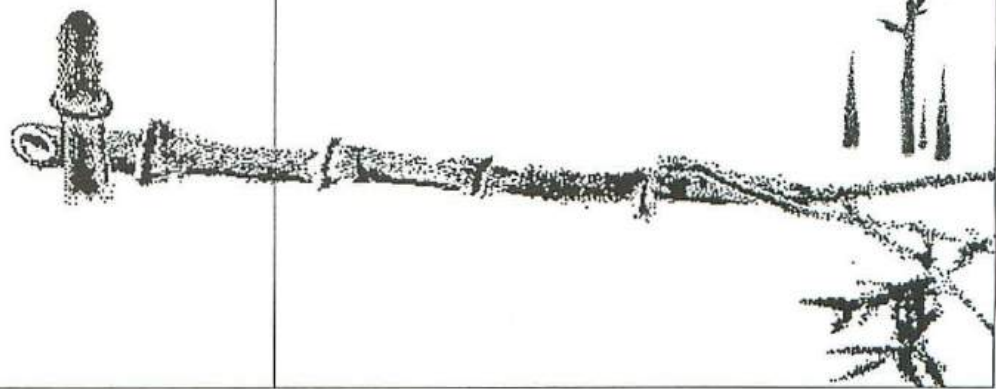


just slipped

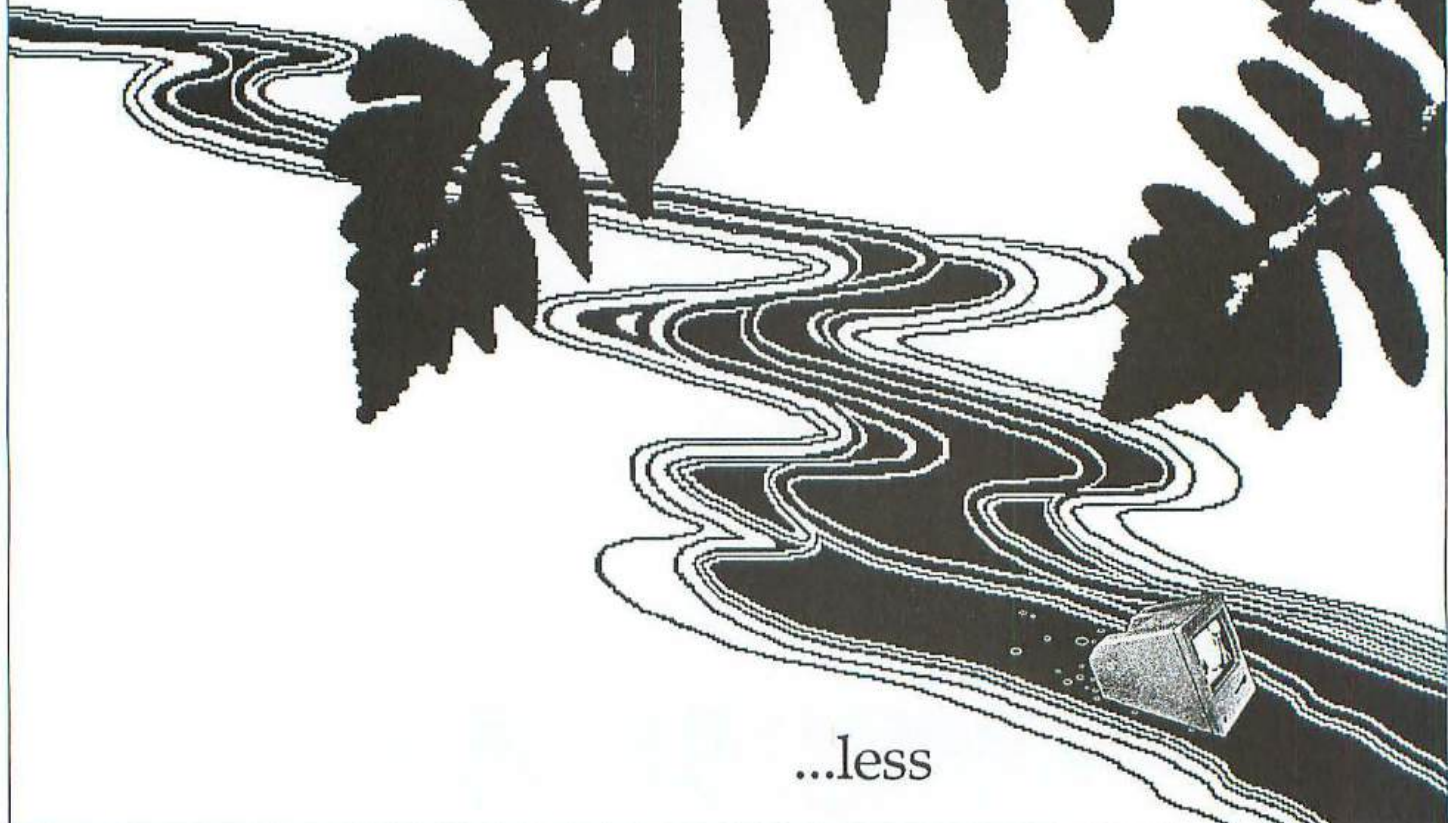
into the light!



GONE...



The End...



...less

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