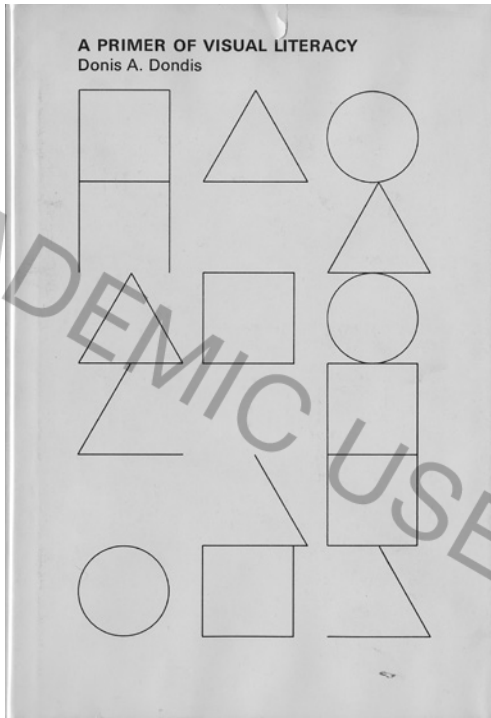


## Currently in Process

This is *A Primer of Visual Literacy* [↓].



This graphic design textbook was written by Donis A. Dondis, published by MIT Press in 1973, and is currently in its 23rd printing. It was designed by Muriel Cooper. Cooper and Dondis were classmates at Massachusetts College of Art in the 1950s and remained friends. When the book was written, Dondis was teaching graphic design at Boston University in the School of Public Communication and Cooper was design director at MIT Press. (She would soon start teaching in the Department of Architecture.) The book evolved from a running conversation between the two around teaching graphic design in the context of massive changes to the media landscape. The book proposed that in an age of mass electronic visual communication (such as television), reading and writing images was as fundamental as reading and writing words. Dondis ends the first chapter describing what's at stake:

What you see is a major part of what you know, and visual literacy can help us to see what we see and to know what we know.

The book presents itself as a kind of extended slide lecture, or a series of lectures marked off as chapters; running texts interjected with demonstration images, in-line illustrations that work like projected illustrations. The book's pacing is deliberate and the tone is solidly didactic and incremental. Reading it feels like sitting in a classroom, in a good way.

The proximity of author and designer and their shared investment in the contents led to a subtly strange layout. The book's typography is slightly off and feels automated, with a uniformly light Univers type, consistently awkward letterspacing, and affectations such as underlines in place of italics. Turns out that the typography was a consequence of its production. At the time Muriel Cooper had set up a research unit in the basement of the MIT Press offices and was exploring the application of electric and electronic typewriters to produce camera-ready typography. This book was set on an (only) slightly more advanced system, the IBM Electronic Composer which allowed for variable spaced typesetting in a wider range of types. The great advantage was that layouts could be created completely in-house and this resulted in a more iterative design and editing process. The disadvantage was the quality of the typesetting. This is also part of what gives the book a visual spark [↓].

elements: line, color, shape, direction, texture, scale, dimension, motion. Which elements dominate which visual statements is determined by the nature of what is being designed or, in the case of nature, what exists. But when we define painting elementally as tonal, filled with

When I've used this book in teaching (which is often), I ask students: Why does the cover look like it does? It looks to me like writing, or some kind of coded message. What does it say?

I've received a few almost-plausible suggestions over the years to explain the six rows of graphic shapes, which look to me like basic letterforms. After at least seven years of asking this question, the answer dawned on me. What the cover is "saying" cannot be articulated in English or any other written language. The six rows run through permutations of three primary visual forms borrowed from the Bauhaus. Square, circle, and triangle outlines repeat on each row with lines of each shape omitted. This is not a written message, it is a visual message. The fact that it took me so long to read this cover should make me consider spending more time absorbing the book's lessons.

The book uses Gestalt psychology as a foundation. Cooper had been a fellow at the Center for Advanced Visual Studies when György Kepes

was the director. Walter Gropius, former head of the Bauhaus, was leading the graduate design school at Harvard at the time and Gestalt psychology factored directly into the architecture and design curriculum. Rudolf Arnheim was nearby at Harvard. Artist Josef Albers, a Gestaltist who also emigrated from the Bauhaus, was head of the Yale University School of Art. Gestalt psychology and its application to design was not a distant concept and Dondis and Cooper embraced it directly. Page 21 (from Chapter 2, "Composition: The Syntactical Guidelines for Visual Literacy") starts like this:

Gestalt psychology has contributed valuable research and experimentation in the area of perception, collecting data and searching the significance of visual patterns, as well as finding how the human organism sees and organizes visual input and articulates visual output. Together, the physical and the psychological are relative and not absolute. Every visual pattern has a dynamic quality that cannot be defined intellectually, emotionally, or mechanically by size or direction or shape or distance. These stimuli are only static measurements, but the psychophysical forces they set off, like those of any stimuli, modify space and arrange or derange balance. Together they create the perception of a design or an environment or a thing.

And then comes the best part, and also, refreshingly, the strangest way to say it:

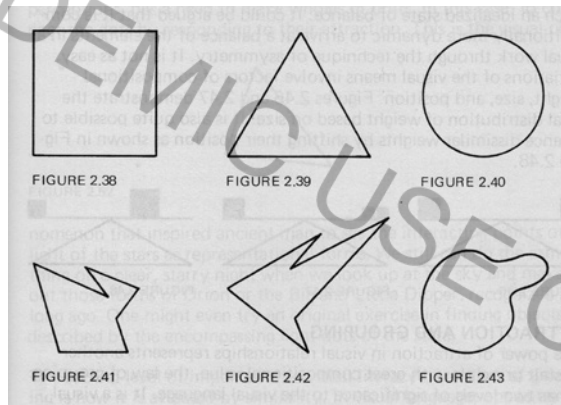
All things visual are not just something that happens out there. They are visual events, total occurrences, actions that incorporate the reaction into the whole.

The chapter continues to develop the idea of a visual syntax, built up by the viewer and constructed from the dynamic relationships between the graphic forms. Graphic signs always indicate a relation to another graphic sign, and these dynamic relations constitute whole messages, the building blocks of what Dondis would call a "visual language." The context of one symbol makes it easier to read the other, and meaning exists not in either alone, but rather in the gap between the two.

I've often found students are hungry for rules to graphic design. And although I don't believe such rules exist, I do like that *A Primer* at least makes a few attempts. On occasion, a generous, solicitous offering of something concrete is just what's called for in place of the harder answer that these universal rules simply don't exist. For example, a discussion

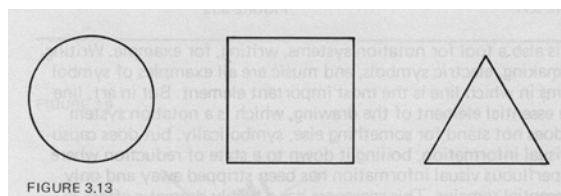
on balance shows what's being described and offers more than one illustration per point. This is pretty different from a text where illustrations are used as ballast to support an argument. *A Primer of Visual Literacy* wants to teach not convince its reader.

For example, the Gestalt principle of *Prägnanz* (definitiveness, resolution, simplicity) is presented. It's a furry concept but handled with clarity and copious illustration. Some relationships—graphic relationships—are more salient, more assured, more resolved than others. And so at the bottom of the page [↘] are two rows of figures. The top row are clearly recognized as the regular geometric figures of the square, triangle, and circle.



The second row has three considerably more ambiguous (and less easily named) figures. The top represents "good" *Prägnanz*, or simple, coherent, specific forms. The bottom is the opposite. By offering both example and counter-example, the simple point is generously explained.

*A Primer of Visual Literacy* is premised on the existence of a second language outside of spoken or written communication. This language is visual and simultaneous rather than literal and sequential. It is both read and written; it has a vocabulary, a grammar, a syntax, even meaning. On page 44, the trio of primary forms [↘] from the cover reappear.



This time the square, triangle, and circle are pushed into service to convey the meanings of specific shapes. Dondis is straight and authoritative, if not entirely convincing:

The square has associated to it dullness, honesty, and workmanlike meaning; the triangle, action, conflict, tension; the circle, endlessness, warmth, protection.

\* \* \*

This is a scan of my wristwatch from 2009 [↓].



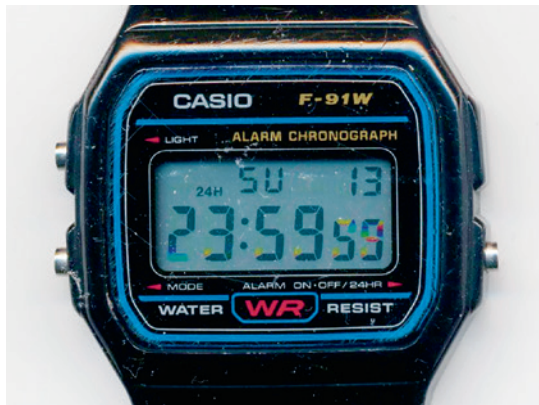
It was the result of an invitation extended to Dexter Sinister to participate in an exhibition in New York. Instead of being represented in the show itself, we suggested producing a publicity image—a piece of graphic design—for the show. And we would treat this self-assignment with the same degree of attention as any other artwork.

The exhibition was about the changing physical landscape of New York City and was oriented around a map showing where avant-garde figures at the leading edge of the arts lived in the city during the 20th century. The show was essentially about time, or that's where we took it, and this is why we decided to scan a watch. We produced the image by scanning my watch at 1200 dots per inch. At this high resolution, the scanning

head is moving slower than the second hand on the watch, and as a result, in the image the second hand appears to bend [↵] as it moves.



Here's another watch face. This one manifested from an invitation to redesign the display of the Casio F91, a very common digital wristwatch. It was an art project organized by Halmos in New York, where multiples were produced for sale at a reasonable price. When Dexter Sinister got this commission, I immediately thought we should do a digital translation of the analog watch scan—what would that look like?



I typed "Dexter Sinister digital watch scan" into Google and shockingly, the internet conjured this [↑] image. Years later I met Federico Antonini, the Italian graphic designer and artist who produced it. He took his own digital wristwatch, put it on the scanner, and also scanned it at a very high dpi. In his image you see the red, green, and blue of the liquid crystal display. So, we could not do this since it had already been done. We decided

to work in reverse. Instead of slowing down the scanner or image-making apparatus, we would slow down the display of time across the face of the watch.

Digital watches typically use a quartz crystal that, when electricity is introduced, resonates at a certain frequency and drives the watch. Quartz is used because it has a very stable resonant frequency and this keeps it running at the correct rate. The display moves across the face left to right, drawing each number segment by segment over time. (It takes time to tell the time.) The existing Casio F91 watches already drew each segment at different moments, but it all happens too fast to visually register. A new circuit board—the watch's brain—was designed and installed which would slow down the left-to-right drawing, producing a slowed-down display as a kind of inverted watch scan. The new watch relies on the Gestalt principle of being able to hold a sequence of images in your head even if it's distended in time.



Here's the finished product [↑]. Because the digital display is slowed down and it draws left to right, at any one moment the watch shows only part of the current time. The display speed is adjustable, however, and you're instructed to set the display as slow as possible so that you can still read the time. This should mark the limits of your perception, and it should be at the tipping point where the time is no longer legible.

These two projects are related, superficially by both being watch face design projects, but more emphatically they both have to do with the holding of a temporal sequence in your head over time as one gestalt—like a melody, or a sequence of discrete frames in a film.

\* \* \*

Watch faces and temporal displays are something graphic designers are often tasked with. In 1984, the Apple Macintosh was introduced. It was a personal, portable computer driven by a one-button mouse and the first consumer-facing graphic user interface. There was no existing visual precedent for communicating the novel user interactions of the powerful new machine, and so everything had to be invented from scratch.



Susan Kare [↑] is a designer based in San Francisco. She was the designer of the original visual language for the Macintosh interface. Kare was invited by Apple engineer Bill Atkinson and it seems she arrived to the project with very few preconceptions.

One interaction problem which needed to be solved with graphic design was called “perceived responsiveness”—something that lets you know the computer is thinking. The first Macintosh was small and slow. You turned it on, booted it up from a floppy disk, and waited for a while, and you needed to know that you needed to wait.

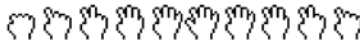
Whenever the computer processor was busy, the user needed to be reassured that the computer was indeed working. This “wait cursor” was mission-critical for the user experience. The animated icon that Kare



designed was a wristwatch [↻] whose hands moved slowly round in fifteen-minute increments to indicate that something was happening.



There were several other wait cursors in that original system software which were used in different scenarios [↵]. These included a hand with counting fingers, a slowly spinning planet Earth, a rotating Yin Yang symbol as some kind of Zen everything's-always-in-progress cursor, an hourglass, and the MPW cursor, which looked unnervingly like the symbol for a nuclear hazard.



2128 Counting Fingers



2130 Zen Cursor



2129 Earth Cursor



2131 MPW Cursor

When Steve Jobs left Apple to set up NeXT Computer, Inc., Kare joined him to become the lead designer of the new software. The NeXT was a considerably more powerful computer with a more complicated interface. The simple watch cursor was discontinued and replaced with a rotating, spinning, gradated color wheel. This disk graphic was ungenerously christened the "spinning beach ball of death" [⦿] by users who worried that their system had frozen whenever the ominous yet colorful graphic appeared.



Now, spinning beachballs have almost nothing to do with waiting, but this is the power of both context and repetition. It is now a recognizable graphic idea, a visual shorthand for waiting, invented out of thin air, and also only one of many possible answers.