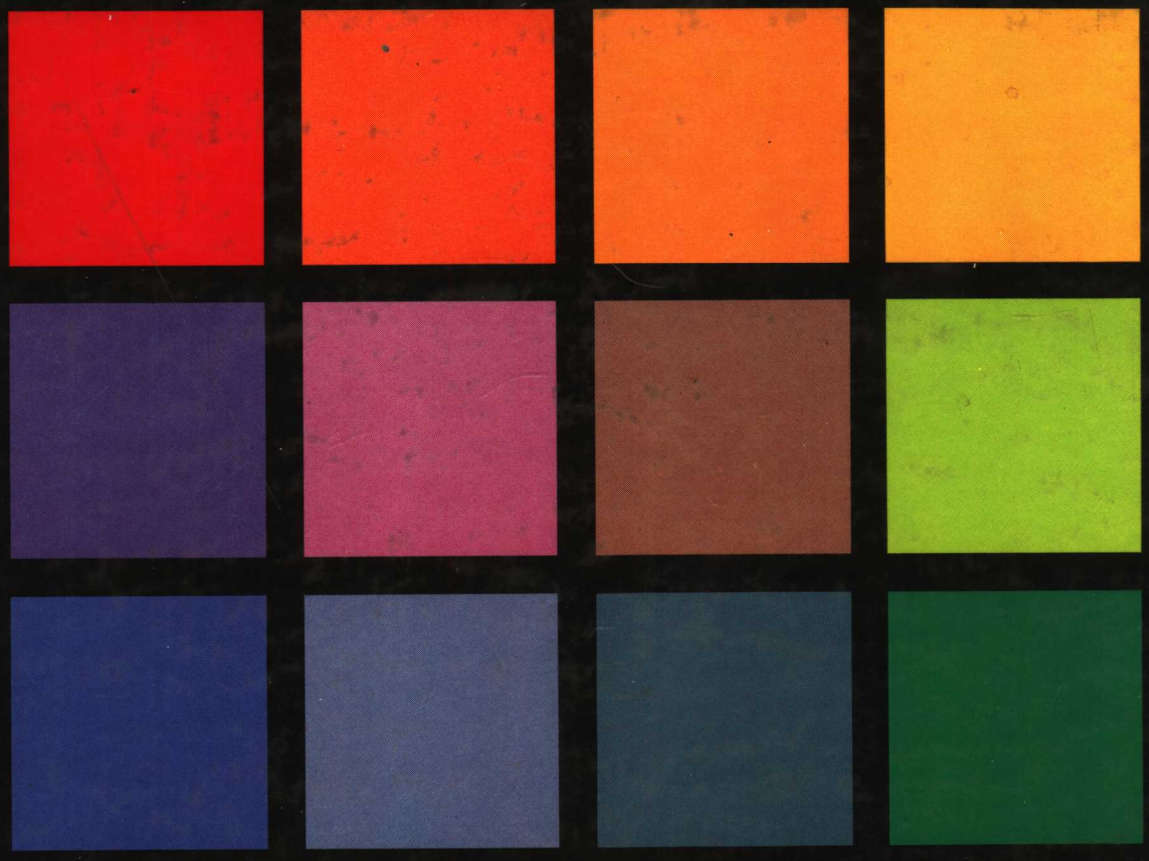
Design Dialogue



Jack Stoops

Jerry Samuelson

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Jack Stoops

Formerly U.C.L.A., University of Washington

Jerry Samuelson

California State University, Fullerton

Davis Publications, Inc., Worcester, Massachusetts

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Every artifact in the environment has been designed, from postage stamps to space stations. Sometimes a design is developed intuitively by a craftsperson seeking a solution to a problem. Most often solutions are the result of conscious efforts of designers striving to solve both functional and aesthetic aspects of a problem.

DESIGN is both process and product. As process, design is visual problem solving: creating, organizing, and evaluating. As product, design is a tangible visual solution. It is a resolution of visual elements, materials, and function expressing the unique personal stamp of the designer.

While it is true that design is an integral part of all visual art, this book focuses on functional design that seeks to create aesthetic solutions to visual problems touching the daily lives of everyone.

1

Introduction

An aspiring student of design is called upon to learn a large number of skills, historical data, bits of technical information, attitudes, and sensitivities. The purpose of this book is to set forth the major considerations in a succinct, clear manner. The authors are keenly aware that many of a designer's best thoughts are nonverbal; as the writing progressed we realized that words often failed to express our intent precisely. Such hazards persist when writing about visual matters, but the visuals here should help to clarify the text. Although reliance on words is necessary, the essential content, and intent, is *visual*.

To function effectively, the creative designer is required to understand and use a visual vocabulary (basic design elements), and to be critically aware of all visual relationships created: color to color, line to line, value to value, textural passages and spacing. Rudolf Arnheim, psychologist and art scholar, calls this kind of visual sensitivity *visual thinking* — a skill that can surely be developed with diligent practice. The ability is quite different from intellectual thought.

The potential for visual thinking is present, but often dampened and perhaps even extinguished by years of education emphasizing verbal skills and logical, rational thought. A restoration of a nice balance between thinking and feeling becomes the goal. At times the designer must think clearly on a rational, logical level using the left hemisphere of the brain; yet during the problem-solving phases of design, intuition is called upon, using the brain's right hemisphere. The interplay be-

tween the two sides of the brain often provides a sudden flash of creative energy called insight. It is such dynamic interaction that the designer must learn to activate. At these exciting moments, the whole individual works in harmony; deficiencies in one capacity are balanced by strengths in another. Insight grows, of course, as experience expands. Visual images, information, and ideas are all stored in the visual memory bank. The designer needs to be surrounded with objects and images that nourish inner resources. New images will coalesce as one learns to rely upon and to activate the right side of the brain.

Of great value, also, is a well-developed plan of approach; a way of working that will open pathways to solving design problems. The development of a fruitful plan of action will be a highly individual matter. Some suggestions for strategies are set forth in chapter 7.

Various chapters describe ideal growth progressions that may not be achieved easily. A combination of calm reflection and hard work can lead to success. However, true competence develops slowly, and surely not in a predictable order or with various competencies maturing at an even rate. Information about famous designers and major design movements stimulates growth and insight. A knowledge of the thought processes that produced and shaped the historically recent nineteenth-century Arts and Crafts movement, Art Nouveau, Bauhaus, and Art Deco contributes to a growing understanding of design evolution.

As with all hard work, there is a resulting joy and deep satisfaction that comes with conceiving an idea and shepherding it through to completion. Imaginative and dedicated designers are needed to help solve the difficult visual problems of our twentieth-century environment.

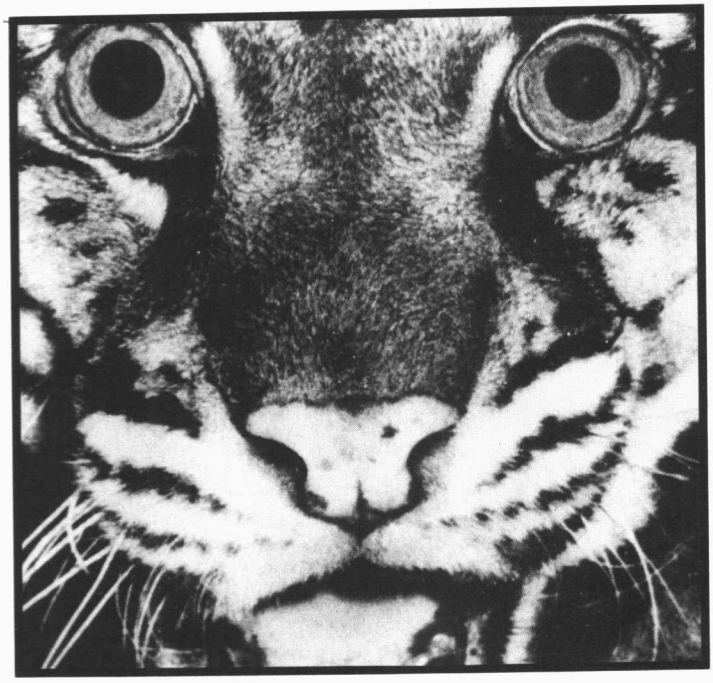
Perception and Imagination

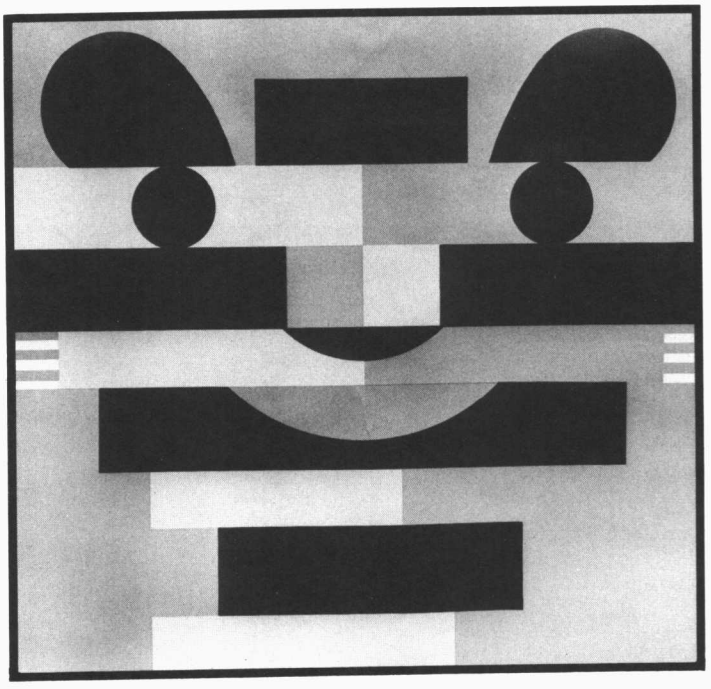
Perception and imagination—a pair of potent mental attributes that provide energy for the designer. While some artists seem to function intuitively, others may have to reach out consciously to activate their perception and imagination.

What are the meanings inherent in the term *imagination?* Imagination is the inner force that allows one to experience what was, what can be, and what might never be; it can transcend the limitations of space, time, and reality. Sometimes imagination may be a leap into fantasy, often expressed through dreams that reflect inner thoughts and desires. But imagination is more than involuntary illusion; it allows voluntary turning of ideas in the mind, trying new combinations, uncovering unexpected insights through a conscious guiding of visual invention. Imagination not only allows the picturing in the mind's eye of the earth as a sphere floating in space, it can also provide such inventions as Lewis Carroll's Jabberwock—"Beware the Jabberwock, my son! The jaws that bite, the claws that catch!"

Original imagery is often experienced in night dreams or in daydreams. Rudolf Arnheim writes in *Art and Visual Perception* that during sleep the human mind seems to descend to a more elementary level at which life situations are described not by abstract concepts but by significant images. This creative imagination, often liberated in sleep, is the power of picture language from which the artist draws.[1] The designer need not depend entirely upon sleep to liberate images, but seeks awareness of inner imagery while awake. In

1 Rudolf Arnheim, *Art and Visual Perception,* p. 142.





Upper left: A real tiger — the stimulus for three imaginative images.
Upper right: Detail; London Transport poster.
Lower left: Detail; Mexican yarn design.
Lower right: Logo design, Hungry Tiger Restaurants.

his book *Experiences in Visual Thinking,* Robert McKim suggests some conditions to foster inner imagery: a quiet environment, relaxed attention, and a desire to see.[2]

Imagination is clearly an essential part of the design process, bringing imaginative power into harmony with the perceptive eye.

Perception is visual intake that nourishes and stimulates the imagination; raw visual material is experienced, stored, and later may rise to consciousness in time of creative need. Louis Pasteur pointed out that invention springs from the prepared mind. Visual perception is the source of preparation for the designer. Perception is the mental grasp of objects or images through the senses leading to insight or intuition. True visual perception requires attention, effort, work, practice, concentration, and serious commitment. Clearly, perception extends well beyond mere recognition and identification in which a shoe is seen, a cat recognized, a penny found in the street. Quick visual intake is pertinent to our momentary needs and to little else. To see only on this elementary level leads to visual poverty. Visual perception moves the eye from casual looking to penetrating observation and, as visual skills are developed, to intensified seeing that involves a high degree of attention and concentration. In breaking out of visual poverty, the designer discovers a wealth of stimulating images and savors the intrinsic visual qualities of every conceivable object in the environment: shells, cloud formations, puddles, shadow shapes, light patterns. Frank Barron, educational psychologist, has pointed out a close relationship between per-

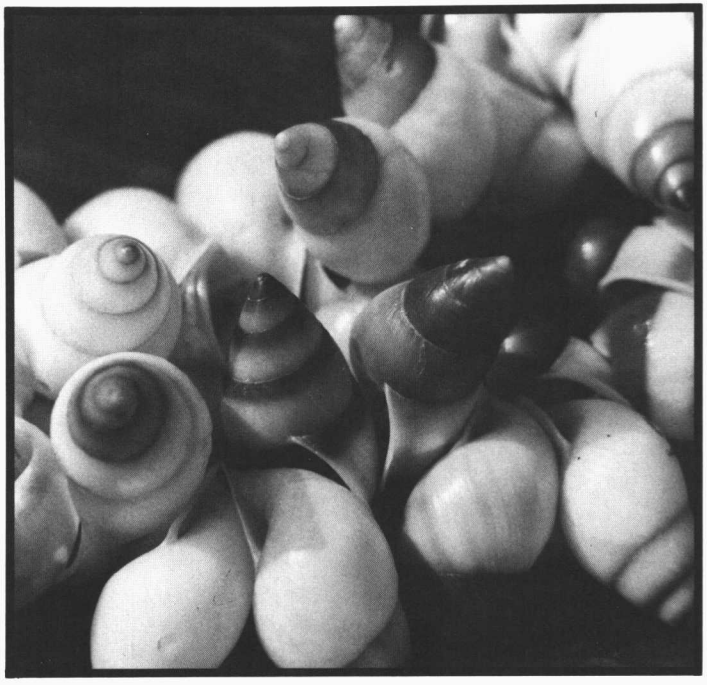
2 Robert McKim, *Experiences in Visual Thinking*, p. 46.

An imaginary image invented by Sir John Tenniel for Lewis Carrol's *Through the Looking Glass*..

ception and intuition; his research clearly reveals the perceptual sources of supposedly covert, hidden, intuitive thought.

The study of visual perception has intrigued psychologists; yet many of their studies delve into influences affecting perceptions that have only peripheral relevance to aesthetic visual perception. M. D. Vernon[3] describes studies of visual perception dealing with speed and accuracy of perception, and the influences of such distractions as pain, hunger, noise, attention factors, and selection.

Of these influences, selection is especially useful to the designer in the visual arts. Surrounded by millions of possible stimuli, the designer must select and focus on specific images and relegate others to the periphery of the visual field.



3 M. D. Vernon, *The Psychology of Perception*, p. 79.

The educated eye explores the visual qualities of a group of shells. The perceptive eye first identifies a flower and then continues on to enjoy light and shape variations.

Visual Awareness: Expanding the Perceptive Eye

More than basic selection is involved in aesthetic perception. Beyond discrimination and selection there is another level of attention. An object is explored for intrinsic visual qualities, i.e., shapes are examined for size, joining, turning, tapering, and intersecting; surfaces are scanned for textures, colors, patterns, and light modulations. It is precisely this kind of visual attention that John Dewey had in mind when he wrote:

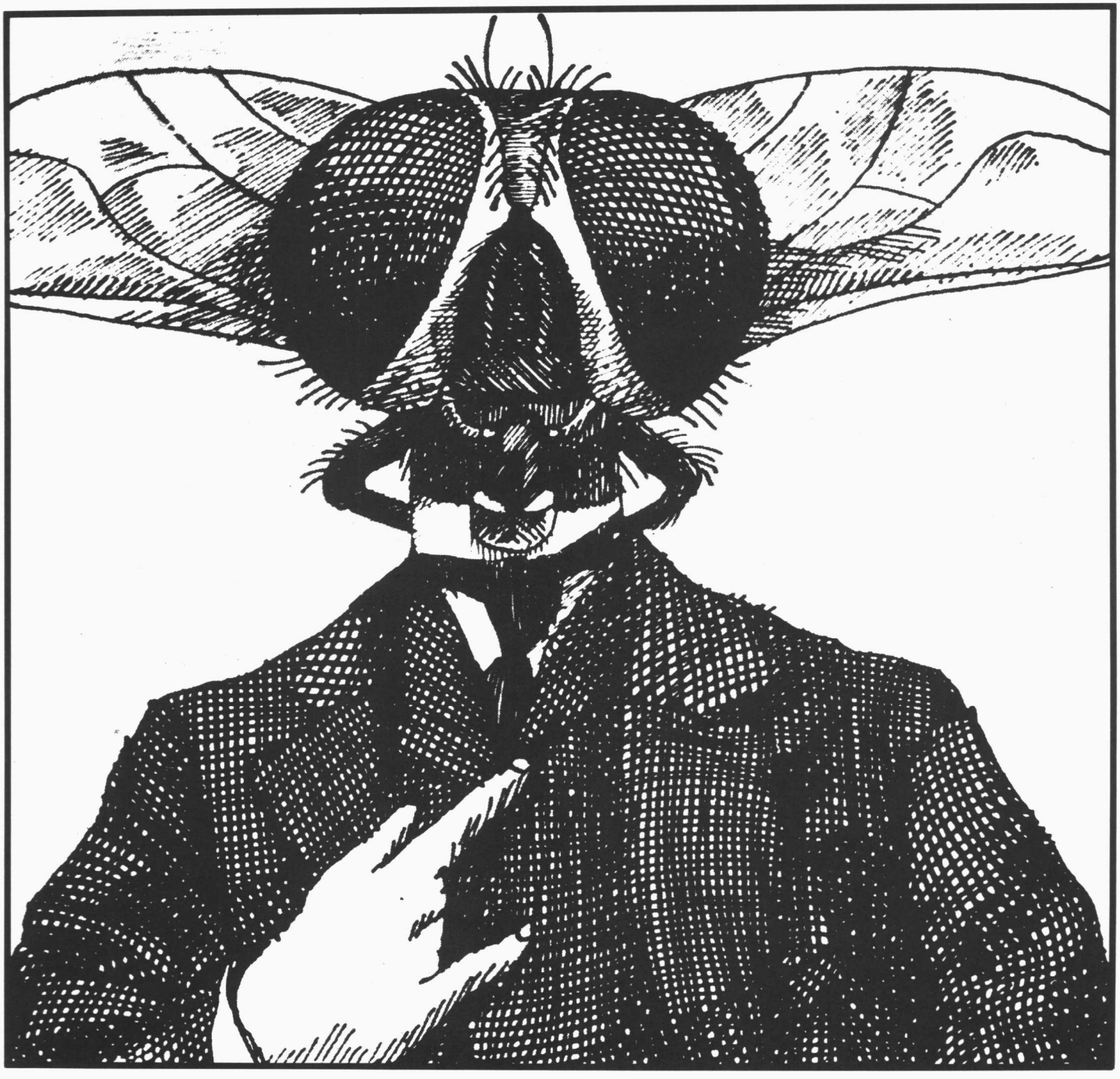
> To think effectively in terms of relations of qualities is as severe a demand upon thought as to think in terms of symbols, verbal and mathematical. Indeed, since words are easily manipulated in mechanical ways, the production of a work of genuine art probably demands more intelligence than does most of the so-called thinking that goes on among those who pride themselves on being intellectuals.[4]

Intensified visual perception is a form of thinking—a kind often overlooked, unrecognized, and misunderstood. Rudolf Arnheim supports the concept of visual perception as intelligence:

> My contention is that the cognitive operations called thinking are not the privilege of mental processes above and beyond perception but the essential ingredients of perception itself.[5]

For the designer, the act of perception is the vital link to visual growth, imaginative power, and aesthetic intuition. An examination of levels of seeing described by Ralph Pearson, art educator, may be useful in increasing perceptive awareness.[6]

4 John Dewey, *Art as Experience*, p. 46.
5 Rudolf Arnheim, *Visual Thinking*, p. 13.
6 Ralph Pearson, *How to See Modern Pictures*, p. 33.



Imaginative vision results in an unexpected combination of familiar images. Artist: Milton Glaser.

Pearson outlines four main kinds of vision:

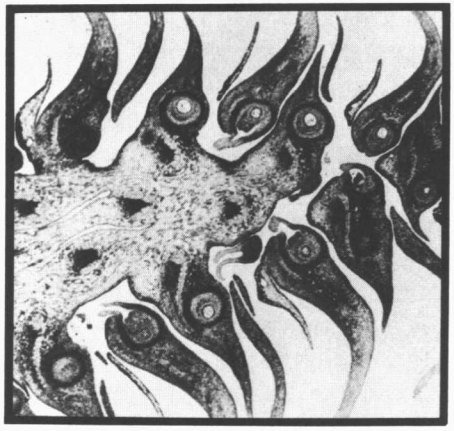
1. Practical vision
2. Curious vision
3. Imaginative or reflective vision
4. Pure vision

Practical Vision — Vision that results in action is practical vision. A bus approaches and one steps onto the curb for safety. Objects are located to be used in daily activities: knobs, buttons, coins, utensils, and discursive symbols, e.g. STOP, GO, CAUTION. This kind of vision is practical indeed, for without it survival would be difficult. It is object oriented; it labels and classifies for use.

Curious Vision — Curious vision involves a slight shift from practical vision. After quick identification has been established, one examines an object to determine some information about it, e.g., How old is it? Of what is it made? Where was it made? How does it fit together? A person who habitually uses vision for practical purposes to recognize budget figures, schedules, graphs, weights, and so on will often display added interest in an object: a redwood burl, a Persian knife, an ancient coin. This is curious vision characterized by close, intense observation rarely bestowed on familiar, ordinary functional objects. It is less rapid than practical vision where lightning-like recognition occurs. Scientific observation is an ultimate refinement and control of curious vision; yet the most disciplined scientific eye may remain blind to intrinsic, visual patterns and configurations. For example, an anthropologist identifying Zuni pottery, design motifs, and ethnological symbolism may remain utterly blind to the pottery's aesthetic qualities.

Imaginative or Reflective Vision — This kind of vision engages powers of visual recall. One recreates in the "mind's eye" a certain object, person, or experience. A creative leap forward allows the mind to engage in a new level of invention in which images are not only recalled but mixed through free play of the imagination. Astonishing images evolve from this kind of seeing.

Pure Vision — In pure vision objects are observed for their intrinsic visual qualities, disconnected from all practical associations. A rusty tin can or a peeling signboard may be of more interest than a precious stone. In pure vision the eye sees the peeling signboard and the precious stone for what they actually are: forms, subtle shifts of values as light plays on their surfaces, textures, and colors. All other considerations are set aside, and the pure visual impression is allowed to enter con-



Upper: Practical vision is called into constant use as daily tasks, such as tying a shoe, are performed.
Middle: Curious vision is used to identify the microscopic image of a young female cone of *Pinus excelsa*.

Lower: Pure vision recognizes the dried seed pod and moves on quickly to enjoy the twisted, textured formation.

sciousness. Literally one is set free to see, to experience all sorts of images regardless of setting, cost, prior associations, etc.—pure vision is liberated vision. When vision is liberated fully, true visual perception begins.

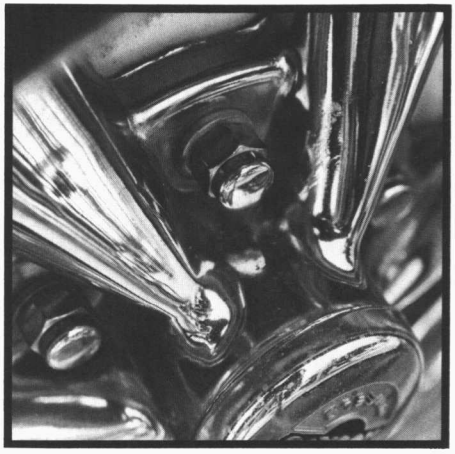
Both historical and contemporary design reveal a pervasive interaction of perception and imagination.

Attraction and close examination of a snail shell and/or the chambered nautilus undoubtedly provided the motivation for the ever-expanding curve of the scroll or the spiral design form that appears in several variations in Greek art. Greek designers chose to modify, join, repeat, and adjust the coiling spiral to suit a number of design uses.

A contemporary designer, Erik Nitsche, responded visually to the fleeting, flashing images one perceives while riding in a subway train. His design for a subway poster captures the rush of movement and color, fusing the impressions into an imaginative and striking visual statement.

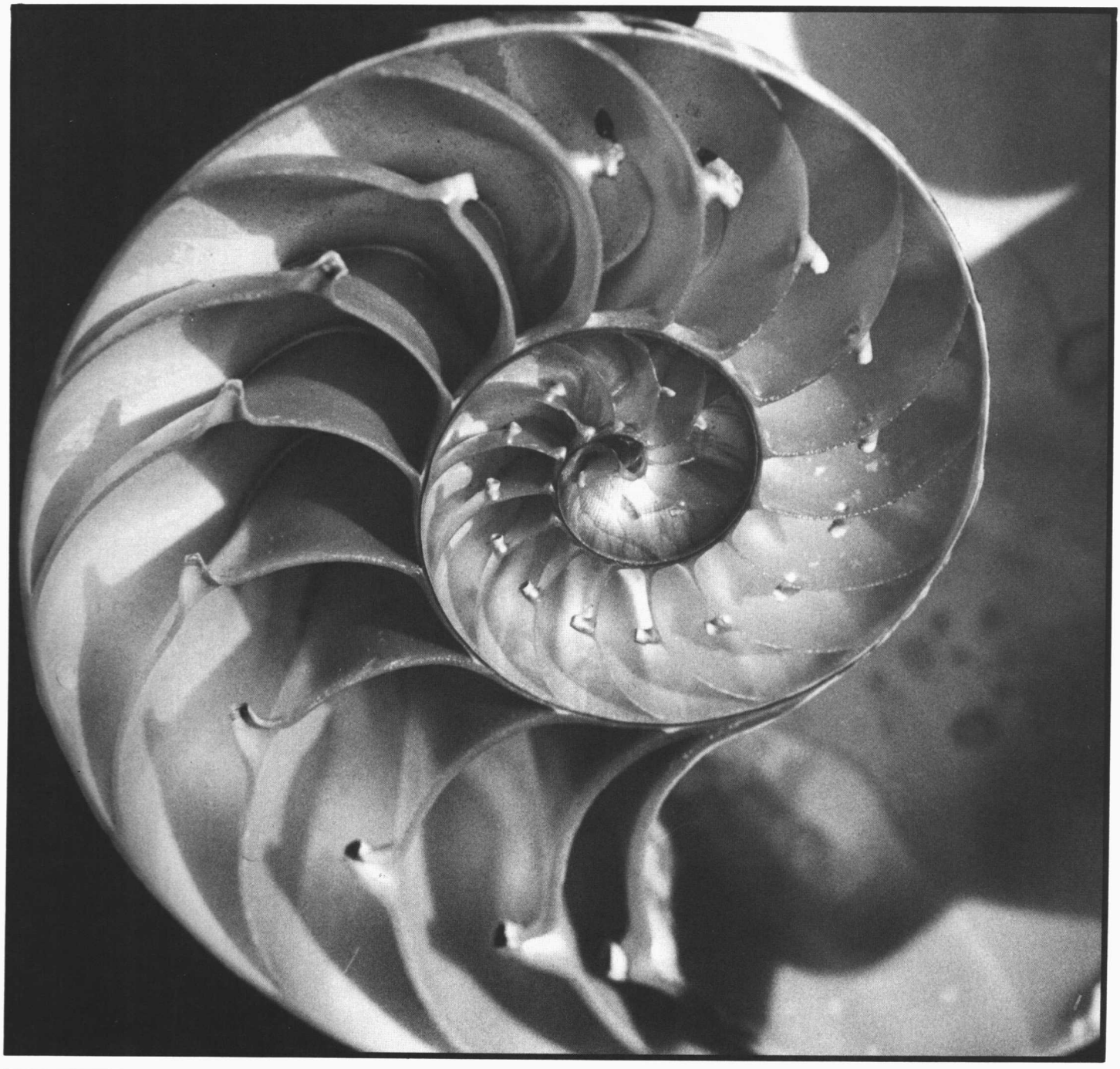
The two examples cited provide evidence of a relationship between visual source and design solution. The designer may not leave such unmistakable tracks; an idea may be reworked until it bears little resemblance to the original visual stimulus. Then too sources and visual cues may undergo a long period of gestation during which the designer may forget the original stimulus. The designer practices perceptual openness; he or she is forever perceiving and absorbing environmental stimuli and storing images that fuel creative endeavors.

The following chapters explore specific ways of exercising perception and liberating imaginative powers.



Upper: A hub-cap provides the eye with an interesting array of fractured reflections.
Middle: Massed tropical leaves can be seen as a lively linear pattern.

Lower: Speed, movement, and flashing images like those seen on a subway ride have been created by artist Erik Nitche for a New York subway poster.



The spiral line of the chambered nautilus and the light and shadow variations in each chamber delight the eye.