

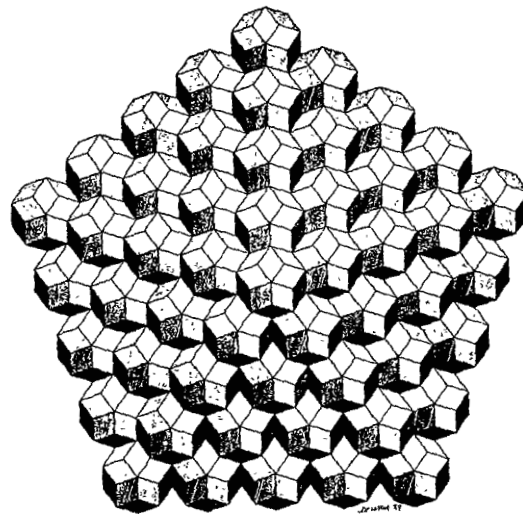
*For*

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Abstracts

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**BALANCE AND ITS SIGNIFICANCE IN MY DRAWINGS, PAINTINGS,  
AND TACTUAL EMOSSINGS FOR THE BLIND**

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**Slide Lecture: 40 slides: 60-90 min. delivery time**

In Fig. 1 are shown the basic shapes used in 18 of the artist's drawings and paintings. In the completed artwork, the regions of the basic shape are subtly shaded or colored. The basic shapes have the following unifying geometrical properties. First, they are all derived from 1 or more closed curves, with possibly 1 or more line segments removed. Second, all line intersections are of 3 types: X-intersections (4 branches formed by 1 continuous line crossing over another); T-intersections (3 branches formed by removing one branch from an X-intersection); or V-intersections (2 branches formed by removing 2 adjacent branches from an X-intersection). Eg, basic shape IV-3 has 2 X-intersections; IV-14 has 4 T-intersections; and IV-15 has 4 V-intersections. (Ré, 1980) All three basic shapes are derived from one closed curve. The derivation of basic shapes from closed curves is significant; it symbolizes the interconnectedness of everything in existence. In sociology, it corresponds to the peaceful, constructive interaction of human beings. In ecology, it represents the dynamical interdependence of all species, including man. It expresses the hope that mankind use thoughtfully the physical and spiritual bounties of nature. The key to this is balance, and balance is a dominant theme of the artist's work. (Ré, 1982) Using a slide of each work represented in Fig. 1, he discusses their balance which is often based upon strict or approximate rotational, reflective, or translational symmetry. Eg, both the basic shapes and completed drawings, IV-3: "Cavern" and IV-14 "Yin Yang", have 2-fold rotational symmetry. And basic shape IV-10: "Mountain" has reflective symmetry about the vertical centerline, but is asymmetrically shaded. Ie, the shading of the V-intersection in the center of the work exhibits a tonal inversion: to the left of the intersection, the shading is darker below the basic shape boundary, but to the right of the intersection, the shading is darker above the boundary. In Fig. 2, this is designated as shading type,  $V_a$ . The other type of V shading,  $V_b$ , is symmetric. In considering all possible intersection shading types, the artist requires that at each branch of an intersection, one side of the boundary be shaded darker than the other side in order to delineate the boundary. Thus, at V-, T-, and X-intersections, there are respectively, 4, 8, and 16 possible shading types. Fig. 2 groups together in blocks those kinds that are equivalent if the angle between successive branches is changed and/or if a mirror reversal of the whole intersection diagram is made. This reduces the total number of essential shading types for all 3 kinds of intersections to 10. Note that shading types  $V_b$ ,  $X_d$  and  $X_c$  have reflective

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symmetry:  $X_a$  has 4-fold rotational symmetry; and all other types are asymmetric. (Ré, 1981, P. 106-7)

In Fig. 1, basic shapes III-4: "Madonna", IV-8: "Inner Joy", III-14: "Blossom", III-16: "Serenity", IV-4: "Longhorn", and III-22: "Embrace" are derived from closed curves that have reflective symmetry about the vertical centerline. In each case, the removal of 1 or more line segments introduces an asymmetry that is crucially important to the work. This balanced asymmetry, or near-symmetry, the artist finds very appealing (much more so than strict reflective symmetry). And shading or coloring can introduce further asymmetry. Eg, Fig. 3 shows the basic shapes employed in 20 paintings with indications of differently colored areas. These paintings contain an 'island' in 1, 2, or 3 colors surrounded by a 'sea' of white. Some islands have an internal lake of white, as in III-4: "Madonna" where the 'occluded arm' is violet, and the 'occluding arm' is royal blue. To maintain a balance, the colors chosen for the 2 'arms' needed to be fairly close in hue, yet sufficiently different so that the boundaries between the two regions were clearly defined. The colors chosen also reinforce the meditative feeling of the work. In other paintings, colors of widely different hues were used. Eg, III-8: "Molecule" employs vermilion for the 2 lobes, and royal blue for the 'owl face'. In the Ostwald color system, these two colors are 7 1/2 standard steps apart in hue. Color triads and complementary colors are 8 and 12 standard steps apart in this system. (Ré, 1981, p. 107-110) Note that the two closed curves from which the basic shape of III-8 is derived both have a reflective symmetry, one about an axis from the lower left to upper right of the work, and the other about an axis from lower right to upper left (approximately) of the work.

Some works in Fig. 1 are quite asymmetric, yet are still very balanced; eg, the painting, III-21: "Listening Ears", and the pencil drawing, IV-7: "Goatscape". IV-7 also has the name, "Swan". During the lecture, the artist will encourage the audience to give alternative names for the works. This enjoyable exercise is based on one of the beauties of abstract art, namely, its multiplicity of referents. When one entity can evoke many ideas, this is one step in unifying diverse cultures. And these different gestalts entail a kind of symmetry. At the end of the lecture, the artist will present a few slides of recent works. One of these, V-19: "Three Swans", has 3-fold rotational symmetry and also has the names "Vortex" and "According to Knot" (note the echo of Gordian knot). The artist will also rotate some of the slides in order to point out other symmetry aspects, such as convex outward and convex inward gestalts.

Since 1979, the artist has translated the basic shapes of his visual art into raised line embossings. These are not only pleasing visually, but can be appreciated tactually by blind people. Using these embossings, he has made both an art book and traveling exhibit of TOUCHABLE ART. (Ré, 1983) The making of embossed translations (a significant word) can be considered a kind of symmetry

operation. The artist will illustrate some of the basic shapes in Fig. 1 with both the visual work and the embossed translation.

**Bibliography:**

- Ré, P. B. (1980), "My Drawings and Paintings and a System for their Classification", LEONARDO, 13, No. 2, 94-100.
- Ré, P. B. (1981), "On My Drawings and Paintings: An Extension of the System of their Classification", LEONARDO, 14, No. 2, 106-114.
- Ré, P. B. (1982), "On The Progression of My Figurative Drawings Toward Higher Abstraction and Outward Simplicity", LEONARDO, 15, No. 2, 109-114.
- Ré, P. B. (March 1983), "On My Raised Line Basic Shape Embossings: Art for Blind Persons", JOURNAL OF VISUAL IMPAIRMENT, 77, No. 3, 119-121.
- Ré, P. B. (1983), TOUCHABLE ART: A BOOK FOR THE BLIND AND SIGHTED, 1st ed., Albuquerque, NM, U.S.A., handmade by the artist.
- Ré, P. B. (1989), "Symmetry Aspects of my Pencil drawings and Their Tactual Translations for the Blind", SYMMETRY IN A KALEIDOSCOPE, Budapest: Hungarian Academy of Sciences.

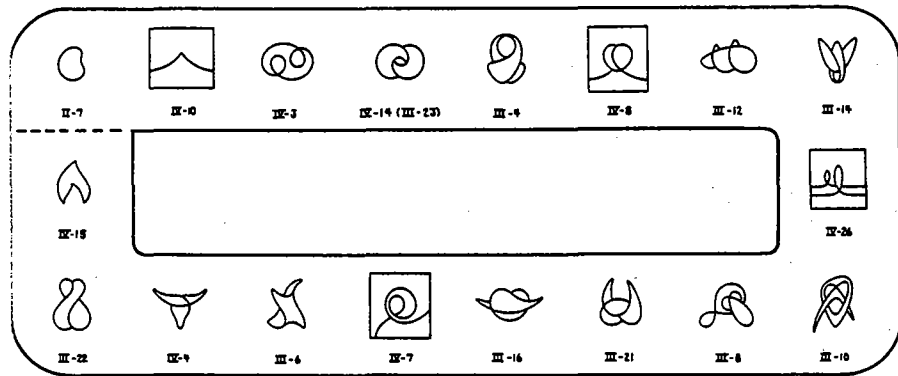


Fig. 1. Progression of Basic Shapes in TOUCHABLE ART: A Traveling Exhibit and Book for the Blind and Sighted.

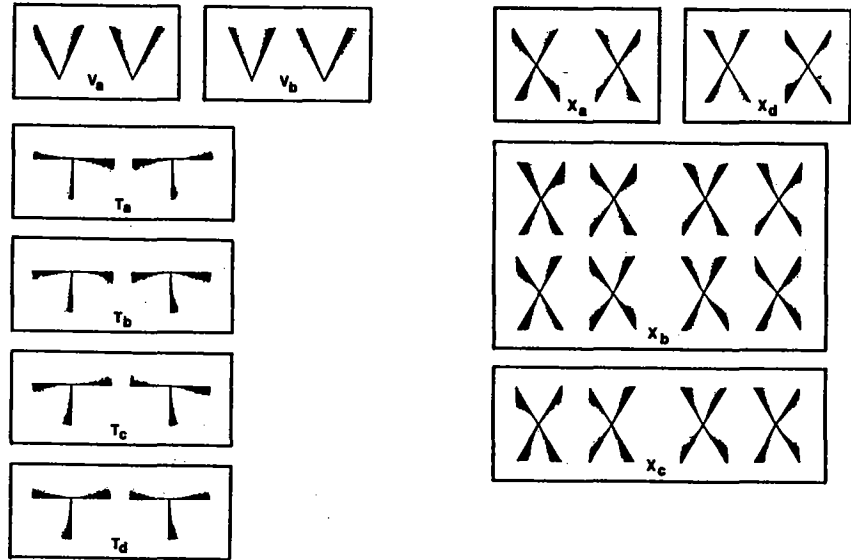
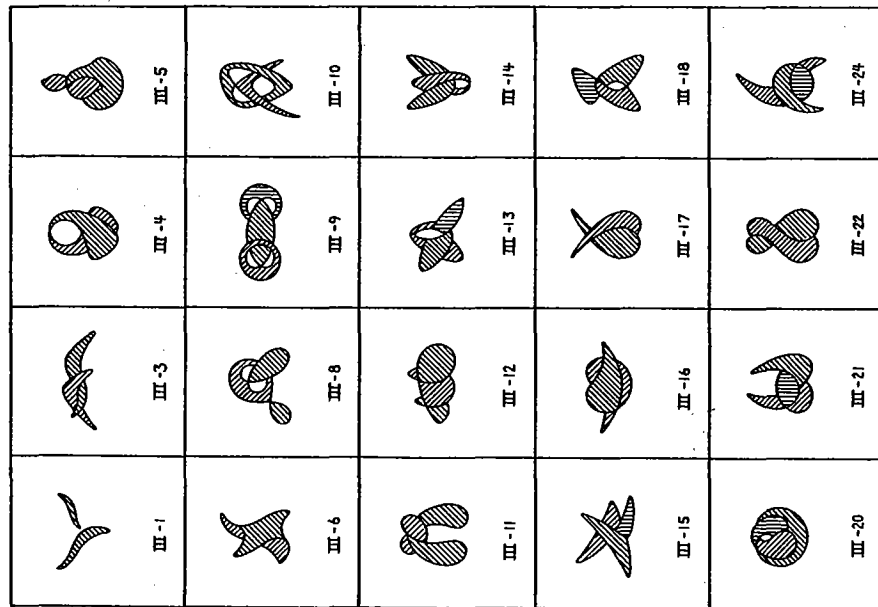


Fig. 2. Diagram of Intersection Shading Types in Pencil Drawings.



(← UP) Fig. 3. Basic Shapes in Paintings with Indication of Differently Colored Areas.