

THE AESTHETICS OF STRUCTURAL SYMMETRY IN PAINTING,
MUSIC AND POETRY: APPLICATION TO EDUCATION

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The lecture will develop according to the following
guidelines:

- Introduction: a. Legitimacy of Discussion
b. Definitions
- Painting : a. Linear symmetry
b. Transfer symmetry
c. All-round symmetry
d. Spatial symmetry
- Music : a. Tonal symmetry (vertical and
horizontal)
b. Dodecaphonic symmetry (vertical
and horizontal)
- Poetry : a. Echo symmetry
b. Symmetry of meaning
c. "Anti-symmetry"
- Conclusion : a. Modern vs. modernistic
b. Enlargement of concept
c. Application to other Art-media
d. Application to Education
e. Learners' activities -- A model
proposal (see fig. 4)

At the end of the lecture the following questions will
be raised for discussion:

A.

In light of the ideas offered above, what patterns of
symmetry -- reflection, rotation, translation and
their combinations (Shubnikov, 1974; Senechal, 1977)
-- can be discerned in the following works-of-art:

1. Paul Klee's "Running-away from Oneself" (see fig.
I).
2. Arnold Schoenberg's Dodecaphonic Series from String
Quartet no. 4 and the opening melody based on it
(see fig. 2).

3. Timm Ulrichs' Concrete Poem (see fig. 3).

In the above works-of-art, which are the aspects of transformation (change) and which of conservation (invariance) (Shubnikov, 1974) ?

Does the enquiry of symmetry operations in one art-medium -- e.g. the visual -- contribute to the understanding of symmetry operations in another art-medium -- e.g. the verbal?

Should the discussion on the Level-of-Form -- namely of structural symmetry --aspire to reveal truths on the Level-of-Content as well as on the Level-of-Meaning?

B.

Jerome Bruner introduced the concept of "The Structure of Knowledge" in relation to Curriculum Planning (Bruner, 1960). He advocated that instead of memorizing multitudes of details, the learner should become acquainted with the principles of a discipline. Harry Broudy proposed to apply Bruner's ideas to Art Education (Broudy, 1966). According to Weyl, "all a priori statements in physics have their origin in symmetry" (Weyl, 1952); is this true also of the art-media? If so, can symmetry be regarded as one of the depth-patterns at the basis of not only one art-discipline, but of The art-disciplines as a whole?

C.

"Quarendo Invenietis" -- Seek and Ye Shall Find -- wrote J.S.Bach on one of the three "puzzle canons" in his Musical Offering: the composer provided a theme and the task was to determine by what symmetry operations he intended the theme to be repeated (Senechal, 1977). Indeed, through symmetry we can discover a norm for many things, thus unifying large bodies of knowledge. Therefore we keep on Seeking and hope to Find. Yet, should not the warning implied in the following questions/statements be re-heeded: when does this search for symmetry -- in the creation of works-of-art, as well as in their interpretation -- "begin to tend toward excess, toward a need for proportion and repetition and regularity so acute that it becomes obsessive and life-denying? How do we know when symmetry-seeking is still human?" (G. Fayen, "Ambiguities in Symmetry-Seeking: Borges and Others", in Senechal, 1977). Where is the limit?

SHORT BIBLIOGRAPHY

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- Weyl, H. Symmetry. Princeton, Princeton University Press, 1952.

LIST OF ILLUSTRATIONS

- Fig. 1: Paul Klee. "Running-away from Oneself" (Phase I), 1931; Paul Klee Foundation, inv. 778, K5(25).
- Fig. 2: Arnold Schoenberg. The Series from String Quartet No. 4 and the opening melody based on it; in S. Sadie and A. Lathan (ed.), The Cambridge Music Guide, Cambridge University Press, 1985, p. 62, ex. III.2.
- Fig. 3: Timm Ulrichs. A concrete poem; in P. Garnier, Spatialisme et poésie concrète, Gallimard, 1968, p. 99.
- Fig. 4: "Symmetry in Art Education: A Three-Dimentional Model":
- X-axis: Learners' Activities: (Xa)--Assimilation; (Xb)--Reproduction; (Xc)--Creation; (Xd)--Interpretation.
- Y-axis: Modes of Symmetry: (Ya)--A-Symmetry; (Yb)--Symmetry; (Yc)--Anti-Symmetry; (Yd)--Re-Symmetry. The modes correspond to phases in the historical development of the use of symmetry in The Arts.
- Z-axis: Art-Media: (Za)--Painting; (Zb)--Music; (Zc)--Poetry;

fig. 1

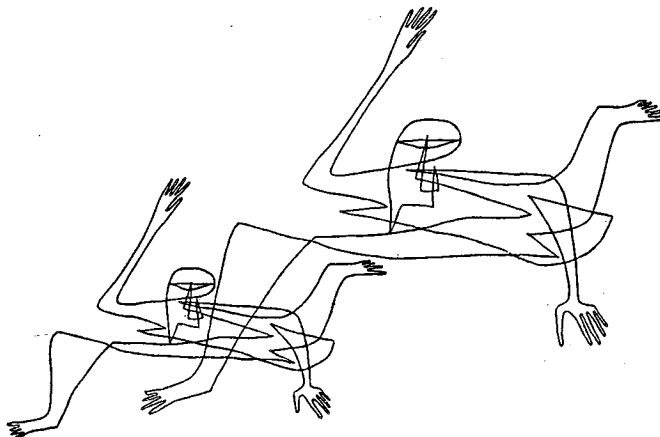


fig. 2



fig. 4

fig. 3

