THE ROLE OF PARTS IN INTER-SEMIOTIC TRANSPOSITION

ARNHEIM'S STRUCTURAL ANALYSIS OF MICHELANGELO'S CREATION OF ADAM

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The narrative of the creation of Adam in the Bible and MICHELANGELO's visual transposition

The creation of the first man in the book of Genesis

The Bible presents two narratives of the creation of man. In the first chapter of Genesis (Gen 1, 26-27), we read:

"God said, 'Let us make man in our own image, in the likeness of ourselves […]'
God created man in the image of himself,
in the image of God he created him,
male and female he created them."

This relationship with God marks man off from animals.

The second chapter of Genesis describes the creation of man in a more concrete way (Gen 2, 7):

"Yahweh God fashioned man of dust from the soil. Then he breathed into his nostrils a breath of life, and thus man became a living being."

From a psychological point of view, the text of Gen 2,7 can be analysed in two scenes: in the first scene God manipulates the dust of soil according to a model that is his own image. In the second scene God gives the breath of life to his creature. At the end of the process, in front to God there is a new being; his name is Adam because he originates from the soil (*adamah*).

In both scenes there are two components or parts with opposite roles: an active being, God Creator, who *gives* form to the formless soil and then *gives* life to a lifeless being; a passive part that *receives* from God: form and life.

The creation of Adam in MICHELANGELO's masterpiece in Sistine Chapel

Fig.1 shows the painting of MICHELANGELO:

Fig. 1

Rudolf ARNHEIM made a structural analysis of MICHELANGELO's painting; figure 2 depicts ARNHEIM's analysis in the form of a "structural skeleton":
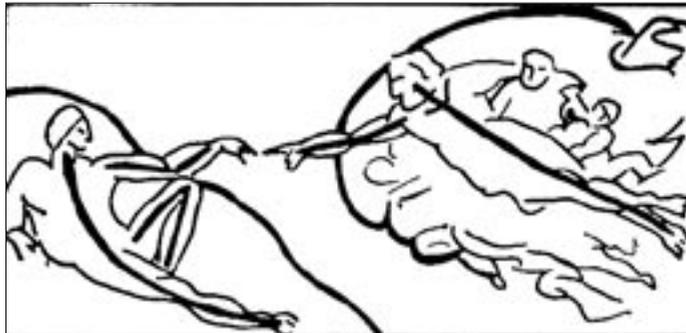

Fig. 2

The analysis of MICHELANGELOs picture by ARNHEIM

I quote from ARNHEIM (1974, 458-460):

"The Creator, instead of breathing a living soul into the body of clay – a motif not easily translatable into an expressive pattern – reaches out toward the arm of Adam as though an animating spark, leaping from fingertip to fingertip, were transmitted from the maker to the creature. The bridge of the arm visually connects two separate worlds: the self-contained compactness of the mantle that encloses God and is given forward motion by the diagonal of his

body; and the incomplete, flat slice of the earth, whose passivity is expressed in the backward slant of its contour. There is passivity also in the concave curve over which the body of Adam is moulded. It is lying on the ground and enabled partly to rise by the attractive power of the approaching creator. The desire and potential capacity to get up and walk are indicated as a sub-ordinate theme in the left leg, which also serves as a support of Adam's arm, unable to maintain itself freely like the energy-charged arm of God."

ARNHEIM points out the different roles of the parts of the picture and the op-positions that MICHELANGELO created in his composition. The world of heaven, outlined by the mantel of God, encloses him and his heavenly court, the angels and a female figure who may represent the "wisdom as creator" (Pr. 8, 22-30). In contrast with this world, there is a formless flat slice of the earth on which Adam lies alone. The energy and activity of the Creator is expressed by the rectilinear extension (German *Haupterstreckung*) of his aerodynamic body and stands in contrast to the passiv-ity of Adam represented through the concave curve of his body. The arms of the two figures make a "bridge that visually connects two separate worlds". In this bridge, the two arms have different roles, active and passive:

"The two hands, meeting at the balancing center of the painting and thereby endowed with decisive compositional weight, play out the essence of the scene: Adam's hand is still limp, barely able to lift itself in response to the approaching giver of life, while the hand of the Crea-tor reaches actively toward its target" (ARNHEIM 1988,160).

The expression of activity and passivity are not only depicted by the internal dy-namic of the single and isolated part but also through the opposition between these parts in the whole configuration.

We can imagine the various attempts of the painter in the search for the best form and the appropriate direction of arm and hand to obtain the desired expression. We don't have these attempts, but we can systematically vary certain positions of these parts and then observe their perceptual effects.

Fig. 3

Fig 3 presents an extreme variation in which the hands of the two figures are inverted. We can interpret this new configuration as a "moment after the creation" when Adam, full of spirit of life, calls to his Creator who is ready for the Sabbath day!

Gestalttheoretical background of ARNHEIM's analysis

Expression Embedded in the Structure

ARNHEIM (1974, 458-460) writes:

"In great works of art the deepest significance is transmitted to the eye with powerful directness by the perceptual characteristics of the compositional pattern.[…] visual expression resides in any articulately shaped object or event[…]. Each successful work presents a skeleton of forces whose meaning can be read as directly as that inherent in MICHELANGELO's story of the first man."

This concept can be found in the work of other Gestalt psychologists. METZGER writes (1954, 65f):

"For each expression there is a structure that can be defined excellent (German: *prägnant*), because this structure carriers the expression in the best way. The relation between expression and structure is not arbitrary and provisional […]."

The second concept is the role of parts.

The role of the parts in the whole configuration

The importance of role of the parts in a structure is one of WERTHEIMER's most significant discoveries. He shows that a structure can be analysed through the roles and functions of its parts as well as through the qualities of the whole (German *Gestaltqualität*). In his famous article dated 1923 (349-350) he writes:

"Proceeding *from above*, from structure of the whole and descending from there to the sub-whole and to the parts, the parts are not mere pieces in additional relation together, but parts of the whole; these parts are in hierarchical relation together […]"

In a short paper dated 1933 (353-357), WERTHEIMER demonstrates the connection between whole-qualities and the roles of parts varying the shape of the configuration. The importance of the role of parts was illustrated by WERTHEIMER in other fields like productive thinking and social relations (WERTHEIMER 1945). The concept and methodology suggested by WERTHEIMER have been applied in experimental research by GOLDMEIER (1936, 146-206) and RAUSCH (1951, 495-512), who demonstrated that two configurations are perceived as similar when the role of the parts is the same in both configurations.

ARNHEIM, like WERTHEIMER, studies the parts of a structure and distinguishes genuine parts from mere pieces. He writes (1974,78):

"It is necessary to distinguish between "genuine parts" – that is, sections representing a segregated sub-whole within the total context – and mere pieces – that is, sections segregated only in relation to a limited local context or to no inherent breaks in the figure at all."

ARNHEIM uses the concept of the role of parts to analyse what he defines as the

"structural skeleton" of a configuration. He shows that the "structural skeleton" can be found not only in simple geometrical shapes as those used in the experimental research, but also in the complex configurations of the visual arts; we have seen this in his analysis of MICHELANGELO's creation of Adam.

The subdivision of a structure by studying the functions of its "genuine parts" allows us to compare different structures, not only visual structures together but also a visual with a verbal structure. Not all scholars accept the latter comparison because verbal languages are discrete while iconic languages, like paintings, are continuous and not divisible into discrete signs.

The role of parts in the inter-semiotic transposition

I define the concept of inter-semiotic transposition with the words of R. JACOBSON (1971, 261) as "interpretation of verbal signs by means of signs of non verbal sign system".

One may ask oneself if the painting of MICHELANGELO is a good inter-semiotic transposition, from the written word of Genesis to the painted ceiling of the Sistine Chapel. ARNHEIM (1974, 458-460) says that: "The 'story' of MICHELANGELO's Creation of man, is understood by every reader of the book of Genesis" because "the structural skeleton of MICHELANGELO's painting reveals the dynamic theme of the story".

From an hermeneutic point of view, the meaning of the painting arises from the interaction between the visual structure and the observer who has some knowledge of the bible.

According to ARNHEIM, MICHELANGELO has transmitted the deep meaning of the biblical text because he has created in his picture the qualities of the relations between the two components in the Bible: the Creator who actively *gives* and Adam who passively *receives*. These are the basic roles of the two components of the story and these roles are not modified when the living soul was transmitted through the hand and not with the breath of God.

A successful inter-semiotic transposition can be achieved if the roles of the parts in the verbal text are maintained in the visual structure.

Summary

The paper starts from the analysis of MICHELANGELO's creation of Adam that ARNHEIM offers in his book: *Art and visual perception*. According to the basic conception of Gestalt theory, ARNHEIM illustrates the "structural skeleton" of the configuration and underlines the role of the parts. MICHELANGELO has transmitted the dynamic theme of the story because he has created in his picture the basic roles of the two components of the story: the Creator who actively *gives* and Adam who passively *receives*. The masterpiece of MICHELANGELO can be defined a successful inter-semiotic transposition.

Zusammenfassung

Der Beitrag bezieht sich auf die von ARNHEIM in seinem Buch Art and visual perception vorgelegte Analyse des MICHELANGELO-Freskos „Erschaffung des Adam". Entsprechend der Grundauffassung der Gestalttheorie zeigt ARNHEIM das „strukturelle Skelett" der Bildgestaltung auf und untersucht die Bedeutung seiner Elemente. MICHELANGELO übertrug das dynamische Thema der Erschaffungsgeschichte durch die bildliche Gestaltung ihrer beiden Grundkomponenten: der Schöpfer, der aktiv gibt, und Adam, der passiv empfängt. MICHELANGELOs Meisterwerk kann so als erfolgreiche intersemiotische Übertragung (Übertragung verbaler Zeichen in nichtverbale) verstanden werden.

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