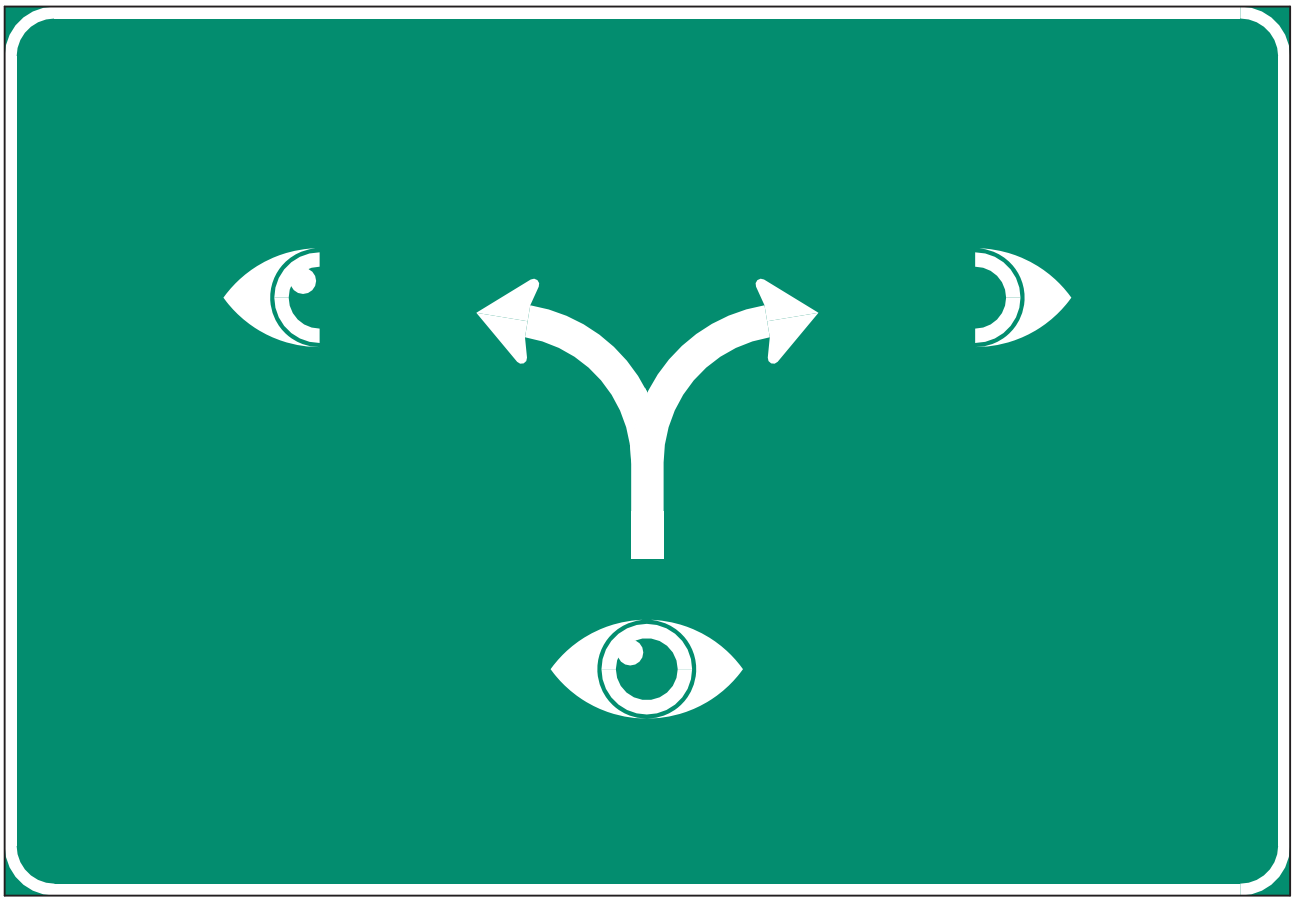

Art, algorithm and ambiguity. Aesthetic ambiguity with regard to metacognition based on visual semiotics, visual rhetoric and Gestalt Psychology.

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Dedicated to my teachers:

Prof. Vera Molnar
and
Prof. Eugen Gomringer

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see website of Deutsche Nationalbibliothek: **www.dnb.de**
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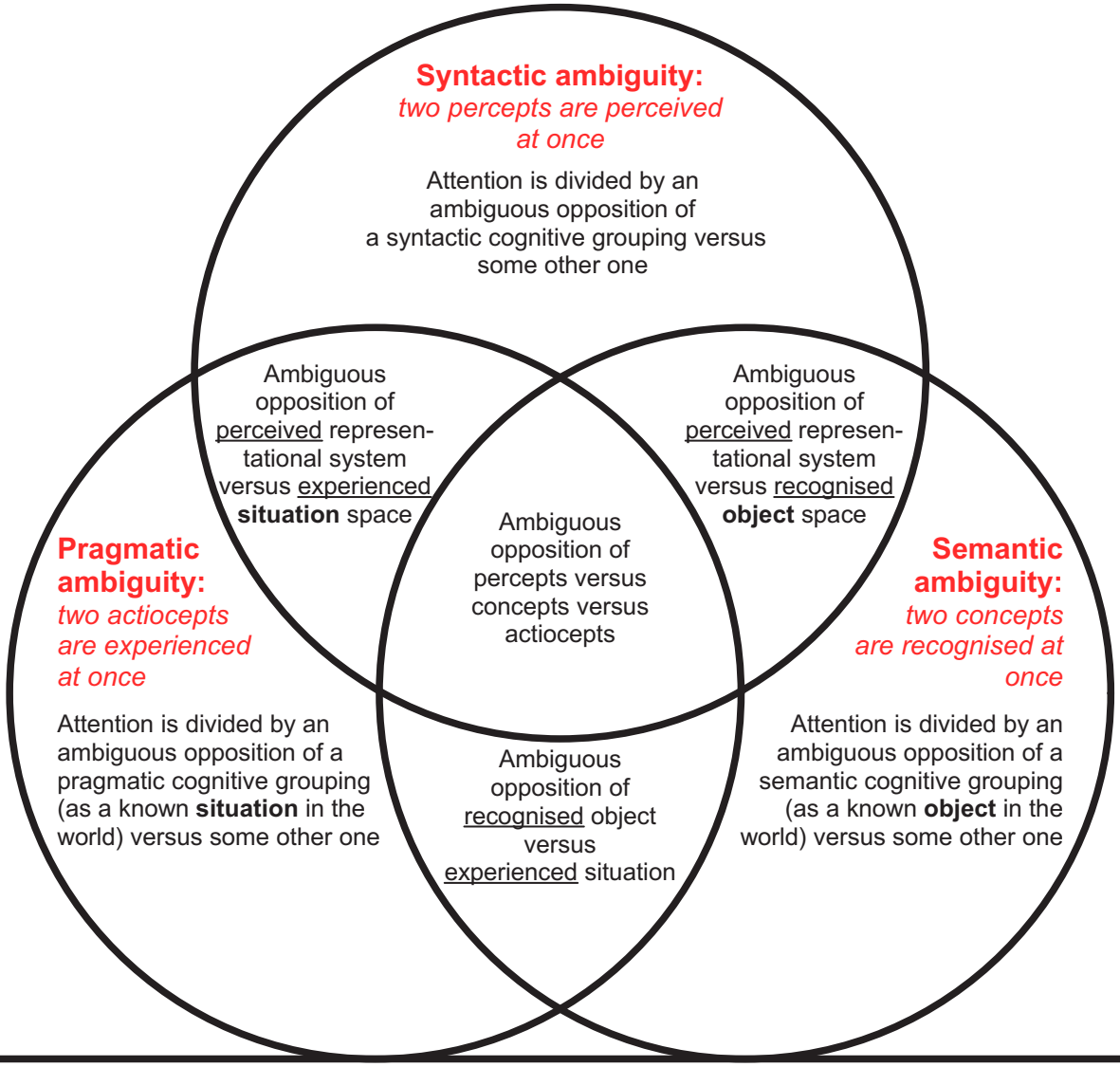
Summary (Figure 0): Semiotic theory of aesthetic ambiguity as the division of attention into two oppositional cognitive groupings of data (Borromean knot).
The seven zones created by three overlapping circles in the Borromean knot allow aesthetically ambiguous splitting of attention into two sides. Human cognition groups data coming from the outside world according to **grouping criteria** to reduce complexity. A **percept** is a grouping of data according to **syntactic** criteria (for example: a **perceived** group of elements of similar colour). A **concept** is a grouping of data according to **semantic** criteria (for example: a **recognised** group of elements with characteristics of a known **object** in the world). An actiocept is a grouping of data according to **pragmatic** criteria (**re-experienced** characteristics of a known **situation** in the world). An aesthetically (= intentionally) ambiguous work of art divides the recipient´s attention into several competitive and oppositional groupings of data (see latin ´ambigere´ = to push to two sides). This division of attention into (at least two) cognitive groupings in an ambiguous work of art can be analysed with this general formula: ´cognitive grouping **a** versus cognitive grouping **b** with the metacommunicative function **x**´ (derived from the work of **Roman Jakobson**). There are two general types of ambiguity: **contamination** (grouping **a** versus **b**) or **deviance** (order **a** versus deviance from this order **b**).



Aesthetic ambiguity has six metacognitive/ metacommunicative functions:

Feelings of the sender: meta-expressive function due to contaminated or deviant expressed emotions

Context: **metareferential function** due to contaminated or deviant references

Message: poetic function due to syntactic, semantic or pragmatic **anti-distinction** by contamination, deviance or a mixture of both

Contact (physical channel + psychological relationship): **metaphatic function** due to contaminated or deviant contacts as media conventions

Code: metalinguistic/ metasemiotic function due to contaminated or deviant codes / representational systems

Recipient: meta-appealative/ meta-evocative function due to contaminated or deviant stimulants

A

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1.0 Theoretical Part, examples of serial production of aesthetic ambiguity

1.1 Terms

Some terms used in the title of this book need explaining:

Art, algorithm and ambiguity.
Aesthetic ambiguity with regard to metacognition based on visual semiotics, visual rhetoric and Gestalt Psychology.

1.1.1 Algorithm (for production and for analysis)

Analysis and reception of an ambiguous work of art is the reconstruction of its production, of its disunifying operations on cognitive units as objects. Parts of art history could be redefined as a **generative matrix of operations and their cognitive objects**, which are to be disturbed in order to gain aesthetic ambiguity (see figure below). The positioning of the work of art within this matrix leads to statements about possible processes of its reception.
The cognitive 'layers' of the analysed art works are separated from each other to lay open the opposition of the layers; this cognitive opposition leads to aesthetic ambiguity. This section of one cognitive layer from the other by a kind of 'equation of image' is called 'reconstruction'. Another kind of analysis is variation.
There are works with **linear cognitive oppositions** (e.g. direction of a temporal/spatial sequence versus its counter-direction) or **nonlinear cognitive oppositions, both with metacognitive function.** These theories for art works could therefore be used as a basis for an aesthetic theory of music and of literature in which you find such linear and nonlinear formations as well.
This book can be used by:
- **artists** (especially those who like variation of parameters in their works as **empirical aesthetics**),
- **scientists of the image**, for example in the sectors of artificial intelligence/generative aesthetics,
- **art theorists/historians/psychologists** (who are interested in metacognitive disturbance and development of cognition by art),
- **art educationalists** (who design lessons on the idea of reconstruction and variation of art works),
- **designers** (who are supposed to create communication *without* ambiguous disturbance in order to inform, or *with* ambiguous disturbance in order to attract attention within an economy of attention) and last but not least
- **art recipients** (who like to train their cognition by looking at exercises in complex art).

1.1.2 Aesthetic ambiguity

a) *'Ambiguity'* = *'phenomenon of several meanings or values of one word, one symbol or one case'* based on the Latin *'ambigere'* (i.e. *'to push to two sides'*); b) *'aesthetic'* has numerous meanings based on the Greek *'aisthetike (techne)'* = *'science of the sensual perceivable';* c) *'aesthetic ambiguity'* is therefore redefined in this book as *'division of attention (of the recipient of an ambiguous work of art) to several oppositional cognitive entities with the aim of pointing to cognitive principles/metacognition'*.
Aesthetic ambiguity is **cognitive disunity**; cognitive disunity can be achieved by an **opposition of cognitive entities (by competition of attractors towards cognitive unification of elements) in the work**; such an opposition of cognitive entities can be produced in several **ways**:
a) by **changing a cognitive scheme**: original scheme versus changed scheme,
b) by **contaminating possibilities for cognitive unification of elements**: cognitive group A versus cognitive group B, or
c) by a combination of a) and b).

Whenever the work of art is a **icon** (i.e. a sign similar to its meaning, a representation of a concept such as a situation or an object), one can look for three different types of ambiguity, depending on the **level of semiotic reception** on which cognitive disunity can be stated:
A) syntactic ambiguity: conventional/automatic perception in clear units is disturbed, because there is:
- **syntactic deviance** from a redundant **perceptual scheme** (square, circle, symmetry...),
- **syntactic contamination** of different but mixed **percepts** (i.e. cognitive unifications of elements according to similarity of colour but also, in opposition to that, according to similarity of form/size/orientation...) or
- a combination of both.
B) semantic ambiguity: conventional/automatic assignment of meaning to the icon in clear units is disturbed, because there is:
- **semantic deviance** from a **conceptual scheme** ('face', 'tree', 'stone'),
- **semantic contamination** of different but mixed **concepts** (i.e. cognitive unifications of aspects of a meaning according to personal or cultural memory) or
- a combination of both.
C) pragmatic ambiguity: conventional/automatic inner and outer reaction of the recipient in the form of memorised actiocepts as units is disturbed, because there is:
- **pragmatic deviance** from a redundant **actioceptual scheme** ('behaviour x in environment y', 'visit an exhibition', 'advertise'...),
- **pragmatic contamination** of different but mixed **actiocepts** (i.e. cognitive unifications of aspects of an action/situation according to personal or cultural memory) or
- a combination of both.

An **actiocept** is a memorised scheme which comprises aspects of an inner or outer action within a situation using consciousness of body; an inner action is for example the mental anticipation of an action while looking at a **tool** by remembering its temporal, spatial and physical embedding (**nonlinear**) and the path from beginning to the end of its common use (**linear**). Substitutio of the tool's embedding or of its parts or transmutatio of the stages within the linear order of the path of the tool can lead to deviant art of the tool; by looking at the work of **Mona Hatoum *Wheel Chair*** for example (1998, three-dimensional imitation of a wheel chair with pointed knives instead of handles, see figure 327) you can anticipate the pain of grasping at the knives which substitute for the handles; this substitution is an intervention in the memorised actioceptual scheme *'pushing a handicapped person sitting in a wheelchair'*, and therefore an intervention in the consciousness of body; the effect is different from an intervention in a concept such as substitution of a stone's gravity by no gravity at all (semantic substitutio + antonymity).

Due to the fact that one level of reception is linked to the other two, there may be combinations of different types of ambiguity at different levels. Each has to be analysed to describe the effects on the recipient.

1.1.3 Metacognition and visual rhetoric

Whenever the reception of an art sign is disturbed by its ambiguity, one can refer to the ***'deautomatisation'*** of reception; ***'deautomatisation'*** is a term in the art theory of **Victor Shklovsky** (see his text *'The Device of Art'*, 1916/1917) that focuses attention on the three disturbed receptional processes of syntactics (perception of the art sign), semantics (assignment of meaning to the art sign) and pragmatics (i.e. inner and outer reaction to the art sign) themselves, instead of rushing automatically through them.
According to Victor Shklovsky there are **two ways to deautomatise reception**:
A) Estrangement of objects:
This book offers **twelve rhetorical methods of estranging objects**: the four basic and miscible rhetorical operations according to **Quintilian** on three kinds of potential objects: schemes/prototypes of syntactics, semantics and pragmatics. The reaction to an ambiguous work by rhetorical deviance from a schema may be attention which is drawn above all to one cognitive criterion, depending on the rhetorical operation used:
A1) to the **absence** of something missing in a **fragment** (criterion of **modality by a detractio (omission, subtraction) operation = taking away**, contours may point to the empty space left by the element which has been taken away),
A2) to the added element as a surplus quantity (criterion of **quantity by an adjectio (addition) operation = adding**),
A3) to the exchanged positions of elements (criterion of **relationality by a transmutatio (transmutation, transposition) operation = (ex-)change of position**) or
A4) to the quality of the element which substitutes for another (criterion of **quality by a substitutio (substitution) operation = substitution**).

B) Complicating (of forms):
This book offers **nine methods of complicating.** 'Complicating (of forms)' is redefined in this book as the **contamination** of different possibilities for reception in order to cognitively unify elements of syntactics, semantics or pragmatics; contamination can be caused by adjectio or by substitutio (see fig. 2).

Cognitive automatisation in everyday life is necessary to reduce numerous data from the senses to simple information for the consciousness by drawing attention to criteria rather than details. In contrast, **aesthetic deautomatisation** lays open the processes of perception of, assigning of meaning and inner/outer reaction to the art sign; by deautomatisation, the ambiguous art sign directs attention to the three processes of reception and therefore refers indirectly to itself. The reaction to an ambiguous work by contamination may be **attention which fluctuates** between different elements on offer in order to build up a percept/concept/actiocept.

1.1.4 Visual semiotics

Aesthetic ambiguity can take place at three interdependent levels of reception of an art sign:
- perception of oppositional cognitive entities as **percepts** at the level of the **syntactics** of the art sign,
- assigning of oppositional cognitive entities as **concepts** at the level of the **semantics** of the art sign and
- assigning of oppositional (re-)actions as **actiocepts** at the level of the **pragmatics** of the art sign.

These kinds of ambiguity can be distinguished and correlated to reconstruct the reception of aesthetic ambiguity provoked by the art sign.

1.1.5 Gestalt Psychology

Human cognition has to reduce the wealth of data from the receiving senses to a small amount of information. This is achieved by cognitive unification of dispersed elements. Criteria for cognitive unification of the visible elements of the image (to oppositional cognitive groups in the case of aesthetic ambiguity) are based on **similarity S of colour/form/size/orientation (iconicity)** and on **contiguity C/indexicality**; oppositional cognitive groups produce syntactic ambiguity. **Optical illusions** show, for example, that the appearance of a colour depends on neighbouring colours, in general that these criteria influence each other with regard to their appearance in the image (see below).

The levels of **distinguishability** between one figure and another, and between a figure and its background, result in different impressions of **spatial depth**; for example, a figure that has similar colours compared to its background appears as if it were far away from the viewer.
Jacques Lacan criticises the image (and therefore Gestalt psychology as the basis for making and perceiving images) as a source of **illusion of unity of existence** and therefore as a source of mental disease. Aesthetic ambiguity is the opposite of cognitive unity and therefore eventually a way to liberate from illusionary unity.

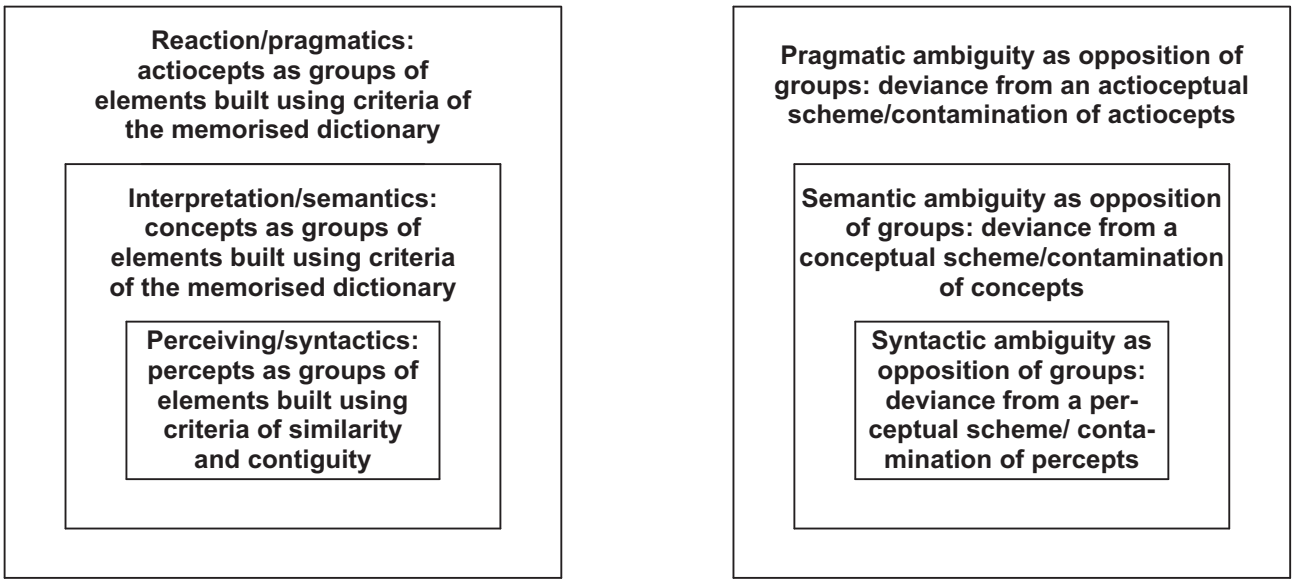


Figure 1: The three spheres of the reception of signs including each other - simplified everyday communication (left) and aesthetic ambiguity (right)
Ambiguity as the opposition of percepts/concepts/actiocepts (and therefore as opposition of the different criteria on which these groups of elements are based) indicates the criteria of reception, by dividing attention between these oppositional groups of elements: deviance/'ars' versus scheme/'natura' (rhetorical deviance), or group a versus group b (with criteria a and b, contamination); for this reason ambiguity has the **function of metacognition = cognition of its own criteria**. **Homo pictor** (the human being analysing its own cognition) and **homo ludens** (the human being playing with the world and with his cognition) are combined here. Images that do not represent a concept (i.e. which are not icons) have no semantic sphere, but a pragmatic sphere. However, the recipient may develop subjective associations as semantic concepts. These associations were probably not intended by the author of the work of art; the 1930 manifesto of the Concrete Art movement excluded semantics totally. But one may state that the syntactic ambiguity of such a work of non-representational art relates to perception and could therefore be seen as an index sign. Syntactic ambiguity of an icon normally leads to semantic ambiguity as well; an example of this is an image of two contours of bodies drawn into each other with points of intersection, an image which shows syntactic ambiguity (contamination of two planes) and semantic ambiguity (contamination of two bodies). Within modern art, one finds a tendency towards geometric formation: lines or points added to each other which build up structuralised planes (e.g. van Gogh, Seurat); in these images, the difference between the figure and its background is therefore minimalised, one can refer to a contamination of both, and thus to syntactic ambiguity. **Cognitive schemes** (stereotypes, prototypes) reduce the complexity of the world from huge amounts of data to memorisable information. An example of a **perceptual scheme** is a square which shows high redundance by symmetry; a disturbance of such a scheme means deautomatisation of perception and attraction of attention. The reduction of data to parcels of information is complicated. A linear perceptual scheme, for example, is a sequence of stages in the development of a colour or a linear index C1.
A **conceptual scheme** is a list of characteristics linked to the concept; within semantic ambiguity, characteristics of two concepts can be mixed (contamination). In art history, a mixture of the concepts 'animal' and 'human' shows three different kinds of syntactic ambiguity: A) Hybrid H of syntactic = semantic criteria: Werewolf, B) Mixture M of syntactic = semantic criteria: Pan, C) Minimal Difference MD of neighbouring planes: Centaur.
An **actioceptual scheme** can be **linear** (e.g. a source/destination path of a conventional action) or **nonlinear** (e.g. temporal or spatial embedding of a conventional action), so pragmatic ambiguity can be linear (e.g. substitution of the destination of a conventional source/destination path) or nonlinear (e.g. substitution of the spatial embedding of a conventional action).

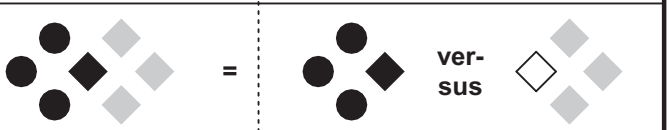
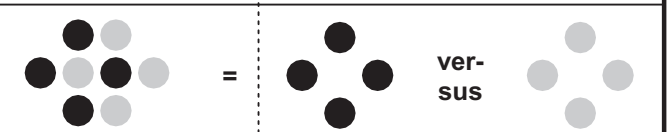
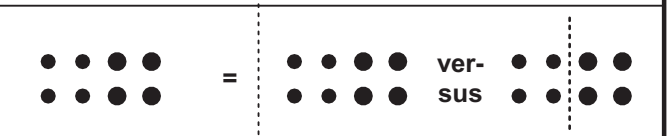
1.2 The 21 general types for the production and analysis of aesthetic ambiguity

Aesthetic ambiguity can be described as **opposition between two cognitive entities**:
- in the case of **deviance**: entity of a **scheme** versus the entity of the work which seems to be a **disturbance of this scheme**,
- in the case of **contamination**: entity of one cognitive grouping created by using a criterion versus another entity of grouping created by using a different criterion.
This ambiguous opposition between entities can be called 'poetic anti-distinction', 'anti-unification and -simplification', 'deautomatisation' (**Viktor Sklovsky**), 'contamination of contingence and cognition' etc.
There are two types of opposition within aesthetic ambiguity:
a) **Secondary opposition in the case of deviance:**
The syntactically ambiguous work evokes the impression of being a **disturbed redundant scheme** due to asymmetry, to disorder of development, to inhomogeneity, to 'broken' contours pointing to an empty place, or to contours turned round instead of going straight on, etc.
The semantically/pragmatically ambiguous work activates a memorised scheme (i.e. a prototype of the dictionary) consisting of aspects conventionally linked by similarity; the prototype seems to be disturbed.
In both cases there is an **indirect opposition** of
an entity offered by cognitive reconstruction or by memory (which you cannot find physically in the work itself) **versus**
the entity in the work (interpreted as a 'change' in the other entity).
The Latin terms adjectio (addition), detractio (taking away), transmutatio (exchange of positions), substitutio (substitution) are based on **Quintilian's** rhetorical theory.
b) **Primary opposition in the case of contamination**:
Entities in opposition can be found directly in the work of art itself; these entities are linked to one of the three interdependent levels of the reception of a sign:
the level of perception of the sign/syntactic percepts, the level of assigning meaning to the sign/semantic concepts, the level of reaction to the sign/pragmatic actiocepts.

There are numerous kinds of **interaction between syntactic, semantic and pragmatic ambiguity**:
- Henri Cartier-Bresson's black and white photo ***'Madrid 1933'*** shows persons in front of a fireproof wall with small holes; the black heads are similar to the black holes in the white wall, therefore you can state syntactic **Mixture M** (small black planes versus a white plane and versus contours of bodies claiming these small black of heads/planes for themselves). This **syntactic unifying of semantic entities,** of heads and holes leads to **semantic discrepancy** (heads versus holes) which can be reinterpreted as an **allegorically semantic complementarity** (allegory on humanity, for example in this way:
'individuals as holes/outlooks within bodies/material').
- Mixtures of parts of body of a human and of an animal like in the mythological figure of **Pan** can be distinguished syntactically (by differences in colour and form > **Mixture M** of two syntactic entities) and semantically (**allegorically semantic complementarity** of human and animal).
But there are **deviances from concepts which show only semantic ambiguity** and no syntactic ambiguity as well: contours of a fragment of a body may not point to empty spaces of the missing parts; in this case there is only semantic ambiguity.
- **Still lifes of the Baroque period** show objects of desire (fruit, art, shells ...) which are syntactically penetrated by objects or developments of disgust (insects, worms, decay... > **syntactic Hybrid H or Minimal Difference MD**), therefore you can speak of **pragmatic antonymity** of two oppositional psychological reactions.

A cognitive unification of elements within a work of art can be **linear** or **nonlinear:** The direction of a line in an image is a linear index, a plane is nonlinear (percepts). A sequence of fading colours in an image can represent the concept 'linear spatial depth', subimages added one to the other in line a temporal concept; the spatial embedding of an object as a part of the definition of the object is a potential nonlinear object, for example of substitution. A function is the end of a path from source to destination (i.e. function), it is a part of a linear actiocept whereas the spatial embedding of a conventional action is a potential nonlinear object, for example of substitution. One could also refer, therefore, to **42 types of aesthetic ambiguity instead of 21 types** when a distinction is made between linear and nonlinear (parts of) percepts, concepts and actiocepts with regard to their rhetorical change (four basic operations) or their contamination (three basic operations): 2 (linear/nonlinear) x 3 (objects of three levels: percepts/concepts/actiocepts) x (4 rhetorical operations + 3 operations of contamination) = 42 types of aesthetic ambiguity.
The human body is based on the principles of similarity and contiguity which are criteria for human cognition as well; the human body shows nonlinear extension and linear movement. Therefore the body can be seen as the super-medium of transformation of linear into nonlinear cognition and vice versa.
The following figure of 21 types of ambiguity can be used for production and analysis as well; analysis in this sense is a **mental retrogression** of the ambiguous operation of contamination of entities or ambiguous operation of deviant changing of one entity. This mental retrogression can be achieved by **reconstruction** by anatomical sectioning of the image into its cognitive sub-images/sub-entities or by **variation** using the same operation on other objects or another operation on the same objects/entities. **Reconstruction and variation can be methods within the didactics of ambiguous art**.

Figure 2: Changing of a scheme (deviance) or mixing of criteria (contamination): 21 types of aesthetic ambiguity (*) A second entity can enter the first one by adjectio or substitutio, the result is **contamination**.

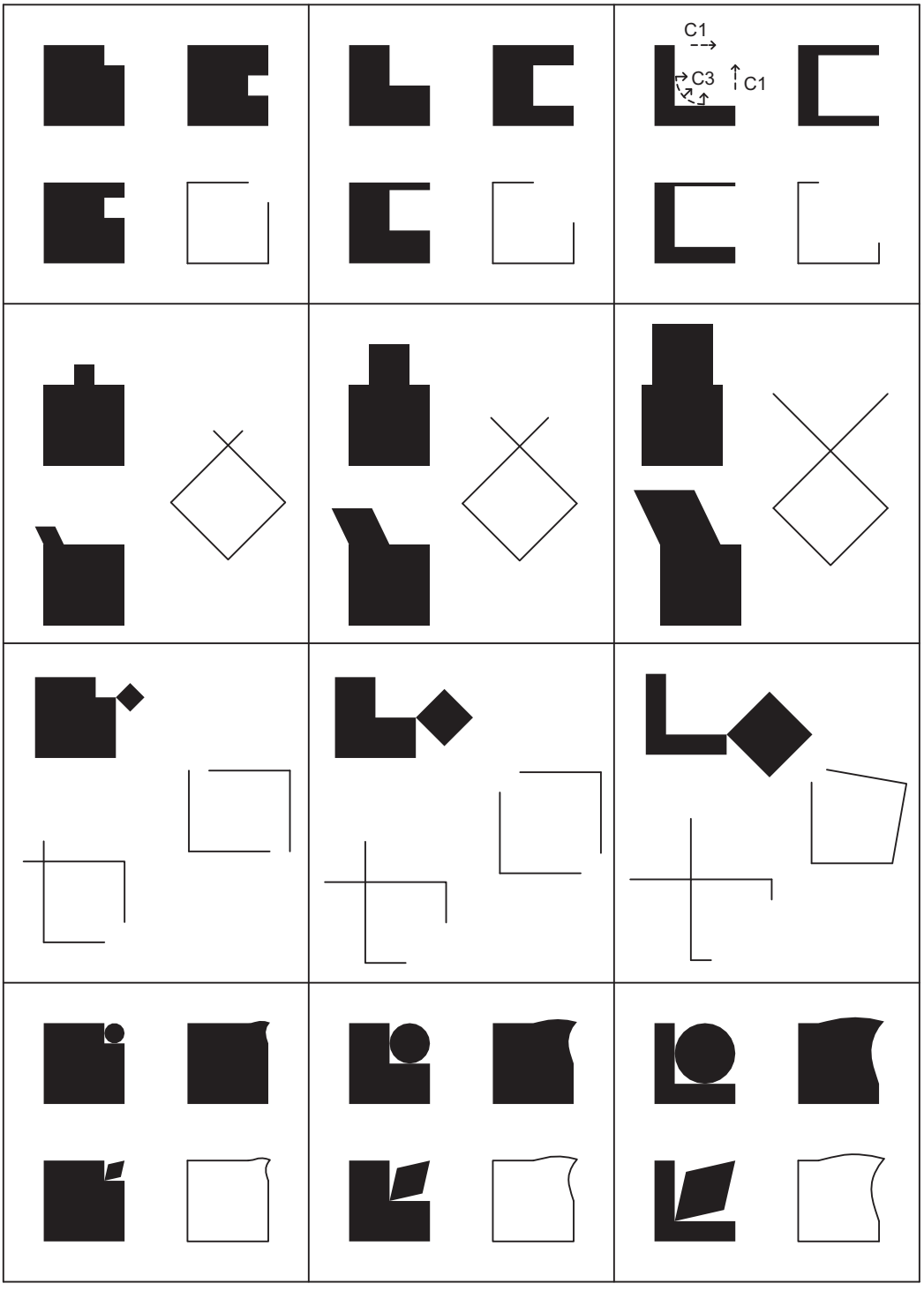
Cognitive object(s):	Operation to produce aesthetic ambiguity as a division of the attention into opposed cognitive entities		Cognitive entities in opposition
Syntactics/ perception of a work	**Syntactic detractio (focus on modality: a 'missing' piece)**	**Syntactic deviance from a scheme as a play with cognition**	
	Syntactic transmutatio (focus on relationality: a 'rotated' piece)		
	Syntactic adjectio (focus on quantity: a piece 'too much')	(*)	
	Syntactic substitutio (focus on quality: a piece is 'different')		
	Hybrid H (fluctuation of attention, reciprocity and relativity of criteria)	**Syntactic contamination**	
	Mixture M (fluctuation of attention, reciprocity and relativity of criteria)		
	Minimal Difference MD (fluctuation of attention, reciprocity and relativity of criteria)		
Semantics/ giving meaning to signs (***pragmatic ambiguity*** is analogic but refers to concepts of action = *'actiocepts' which are perceived also by consciousness of body, for example: the situation ´around´ a wheel chair)*	**Semantic detractio (focus on modality: a 'missing' eye)**	**Semantic deviance from a scheme as a play towards possible or dream-world**	
	Semantic transmutatio (focus on relationality: 'rotated' eyes)		
	Semantic adjectio (focus on quantity: an eye 'too much')	(*)	
	Semantic substitutio (focus on quality: these 'eyes' are 'different')		
	Semantic antonymity (reciprocity and relativity of criteria)	**Semantic contamination**	
	Semantic discrepancy (reciprocity and relativity of criteria)		
	Semantic complementarity (reciprocity and relativity of criteria)		

1.3 Semiotic objects of operations towards aesthetic ambiguity

1.3.1 Objects for operations towards syntactic ambiguity

1.3.1.1 Syntactic criteria for cognitive unification in changed schemes (deviance) and in contaminations

Syntactic schemes like a square have homogeneity (e.g. symmetry), a form similar to a square may seem as a 'changed square' with disturbed homogeneity = heterogeneity; in that case, indices of linear direction (C1) and of curvation (C3) point to the changed parts of inhomogeneity, and guide attention to the point of deviance. **Identification** as a 'changed scheme' depends on size and position of the 'changed part of the scheme':



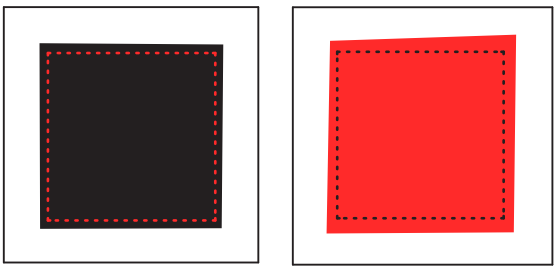
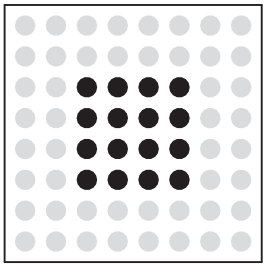
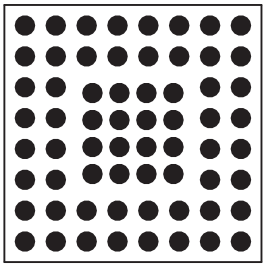


Figure 3: The four operations of rhetorical change (detractio, adjectio, transmutatio, substitutio) in different grades on the object of a square; deviance from the ideal square in two works of Malevitch: *Black Square* (1915, painting, called *'Quadrangle'* in the catalogue of its first exhibition *Zero-Ten* in Petrograd 1915-1916) and *Red Square* (1915, painting)

The basic process of perception (of syntactics of an art sign) involves the reduction of numerous data to one item of information by cognitive unification of image elements; cognitive unification uses four **similarity** criteria and four **contiguity** criteria. These criteria allow **syntactic contamination** to be described by means of a **formula**:
In the case of syntactic contamination **Hybrid H**, one criterion defines an element as being part of one group, while another criterion assigns this element to another group: e.g. **Hybrid H (criterion a versus criterion b)**.
In the case of syntactic contamination **Mixture M**, the links assigning elements to one group cross the links of another group: e.g. **Mixture M (formation of criterion a in one group versus a totally different formation of criterion a in the neighbouring group).**
In the case of syntactic contamination **Minimal Difference MD**, differences between two neighbouring groups can hardly be realised: **MD (formation of criterion a in one group ~ a slightly different formation of criterion a in the neighbouring group)**



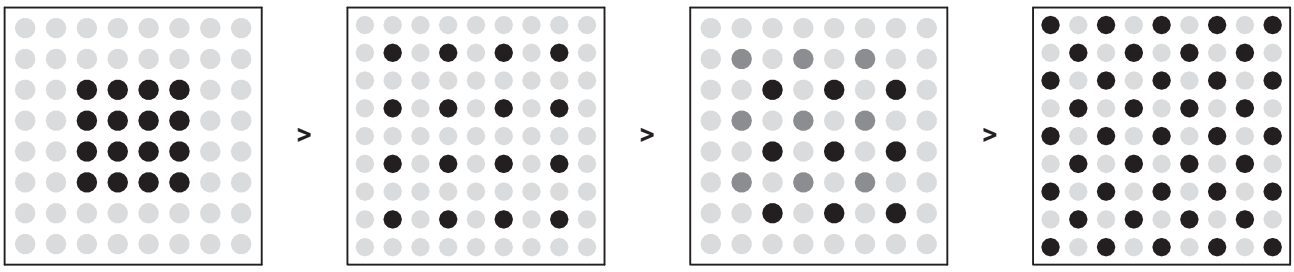
64 elements of the image are unified by cognition to two groups: 'figure' (black) and 'ground' (grey):
due to the criterion **similarity of colour S1**.
There is a tendency to unify all 64 elements to one group, but not as strong as the example on the right.



64 elements of the image are unified by cognition to two groups 'figure' and 'ground':
due to the criterion of **proximity as contiguity C2**; due to similarity of colour S1, form S2 and size S3, one element seems to be part of figure and ground, which could be interpreted as:
Hybrid H (S1, S2, S3 versus C2).

Figure 4: Reduction of numerous data (64 elements) by cognitive unification to information (two groups, figure and ground).
Perception of two opposed unities (figure and ground) by one criterion.

In contrast to everyday **automatic** perception in **unities** (figure and ground) for the purpose of **orientation as a linear, telic meaning**, there is **deautomatised** perception in **disunities** of ambiguous art works which may lead cognition to realise its own grouping criteria (**metacognition**) within a **nonlinear, atelic content** as a constellation of disunified entities. In such an ambiguous work of art, groups made by cognitive unification compete with each other for the recipient's attention; this competition between cognitive groups and cognitive criteria leads to instability of reception.
Deautomatisation is a term coined by **Viktor Sklovsky**, which he defines as slowing down reception by ***'estrangement'*** and by ***'complication of the form'*** in a work of art, which guides attention to (criteria of) cognition itself: seeing itself becomes visible (see **Konrad Fiedler's** theory). **'*Estrangement'*** is redefined in this book as a **rhetorical change of scheme** by adjectio, detractio, transmutatio and substitutio; ***'complication of the form'*** is redefined as Hybrid H, Mixture M and Minimal Difference MD for syntactics, for semantics and pragmatics as antonymity, discrepancy or complementarity.



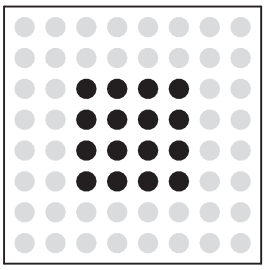
Formation towards unity: a relatively clear distinction between black figure and grey ground

Formation towards duality/ambiguity: the grey ground joins the black figure: Mixture M (S1.1 black versus S1.2 grey)

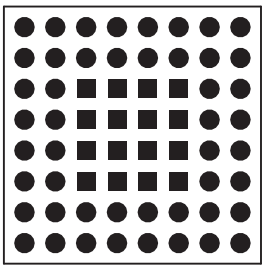
Formation towards triality/ambiguity: two figures and one ground are mixed: Mixture M (S1.1 versus S1.2 versus S1.3)

Formation towards duality/ambiguity: two structures as two 'grounds' are mixed: Mixture M (S1.1 versus S1.2)

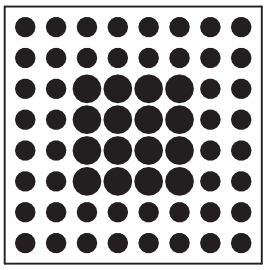
Figure 5: Examples of formation towards unity or disunity (duality/triality as syntactic ambiguity)



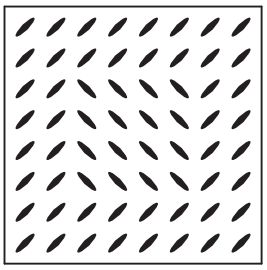
Similarity of colour
(S1)



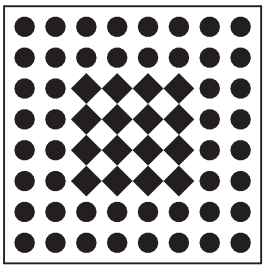
Similarity of form
(S2)



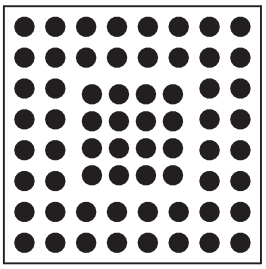
Similarity of size
(S3)



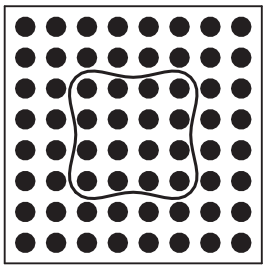
Similarity of orientation
(S4)



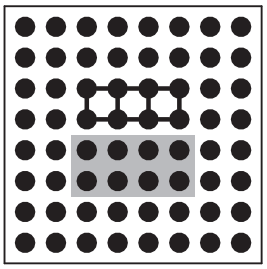
Contiguity of line-direction-index
(C1):



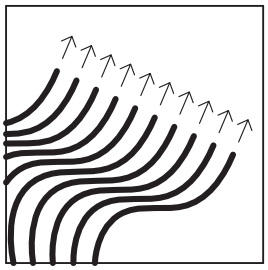
Contiguity of (relative and reciprocal) proximity
(C2):

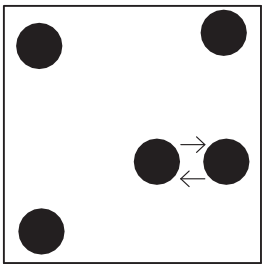


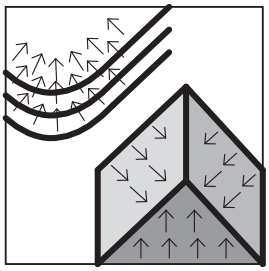
Contiguity of line-curvature-index
(C3):



Contiguity of (relative and reciprocal) connexion by points/ lines/ plane
(C4):







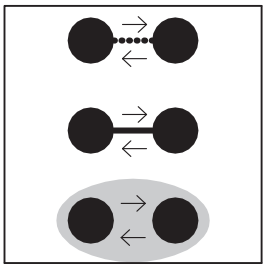
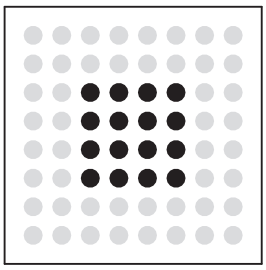
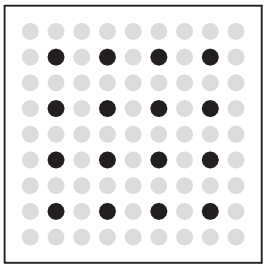


Figure 6: The eight criteria of cognitive unification of elements to groups
The four criteria of contiguity are based on indices which either show one direction (C1) or reciprocal relation (C2) .
Criterion C1 can be active in a line or in a plane that could be reconsidered as a bunch of lines (see first figure in the last row). Criterion C3 is active in the **'inner side'** of a round line or round plane or the inner side of a constellation of lines or planes.
To produce clear **distinction** of elements there has to be **dissimilarity** ('contrast' of colour, form, size and orientation) and **discontiguity**. Contrast of colour can be achieved by the choice of two colours being opposed on the surface of the ball of colours (equator of red-orange-yellow-green…, poles of black and white); **Johannes Itten** called an opposition:
- within the equator: contrast of complementarity or in the case of bluish and reddish colours cold-warm-contrast
- across the equator: contrast of clearness,
- between the equator and the rest: contrast of quality
Contrasts of form are based on symmetry (which can be reinterpreted as similarity of sub-forms S2 within a form) /asymmetry, similarity/dissimilarity to basic forms such as square/triangle/circle, difference of the numbers of points of bending, homogeneity/heterogeneity, etc.
There are choices concerning all criteria within one formation of an image, but often only two criteria are in clear opposition, which can be described by a formula for ambiguity: criterion a versus criterion b. Criteria for cognitive unification interact (see chapter *1.3.1.2 Interaction and relativity of syntactic criteria for cognitive unification: Optical Illusions*).

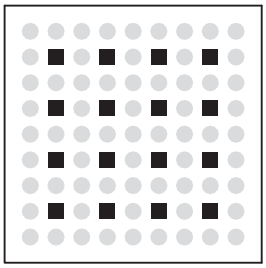
Figure 7: Contamination of figure with ground, one figure with another figure and one structure as a 'ground' with another 'ground'



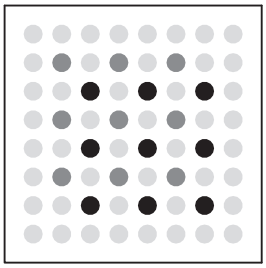
Hybrid (S1/2- figure versus S1/2- ground)



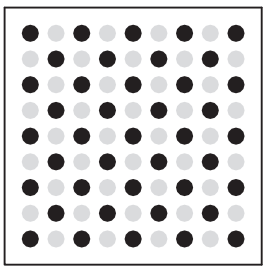
Mixture (S1.1- figure versus S1.2- ground);
Hybrid (S1/2- figure versus S1/2- ground)



Mixture (S1/2.1- figure versus S1/2.2- ground)



Mixture (S1.1- figure a versus S1.2- figure b versus S1.3- ground);
Hybrid (S1/2- figure a versus S1/2- figure b versus S1/2- ground)



Mixture (S1.1- ground a versus S1.2- ground b);
Hybrid (S1/2- ground a versus S1/2- ground b)

1.3.1.2 Interaction and relativity of syntactic criteria for cognitive unification: Optical Illusions

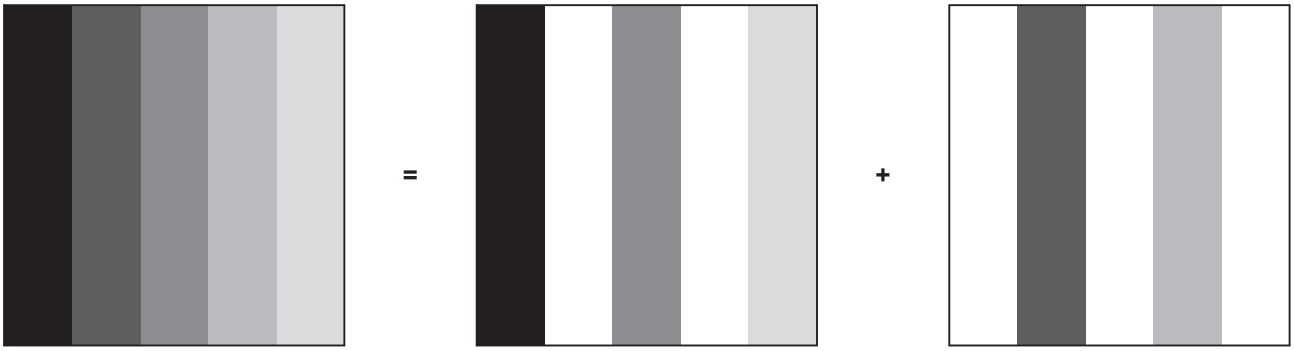


Figure 8: Illusion of colour according to Michel Eugène Chevreul (1839):
Relativity of the appearance of one colour due to an adjoining colour (S1.1 ~ S1.2)

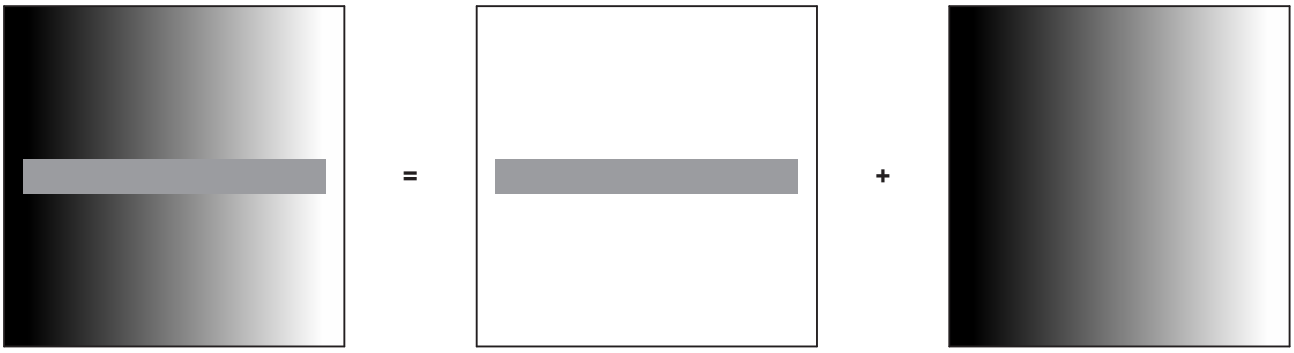


Figure 9: Illusion of colour by simultaneous contrast according to Michel Eugène Chevreul (1839):
Relativity of the appearance of one colour due to an adjoining colour (S1.1 ~ S1.2)

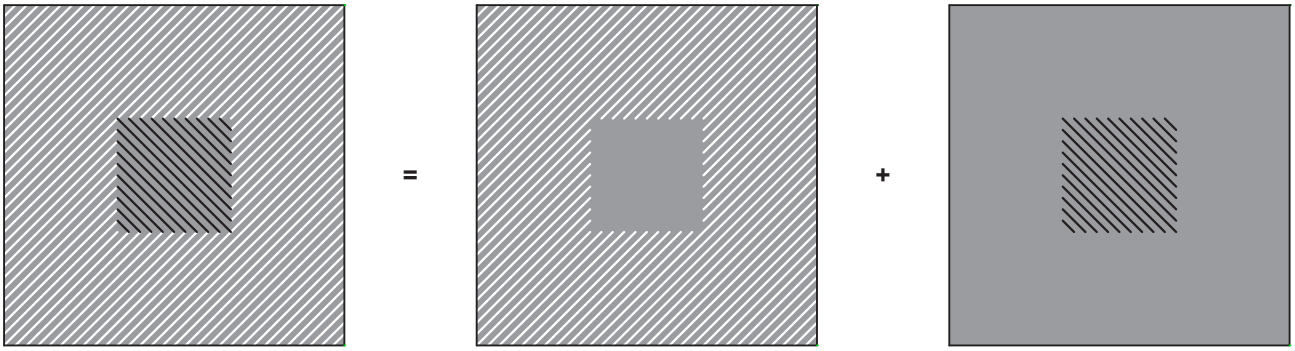


Figure 10: Illusion of colour by assimilation according to Wilhelm von Bezold (1874):
Relativity of the appearance of one colour of ground due to colour of lines in superposition (S1.1 ~ S1.2)

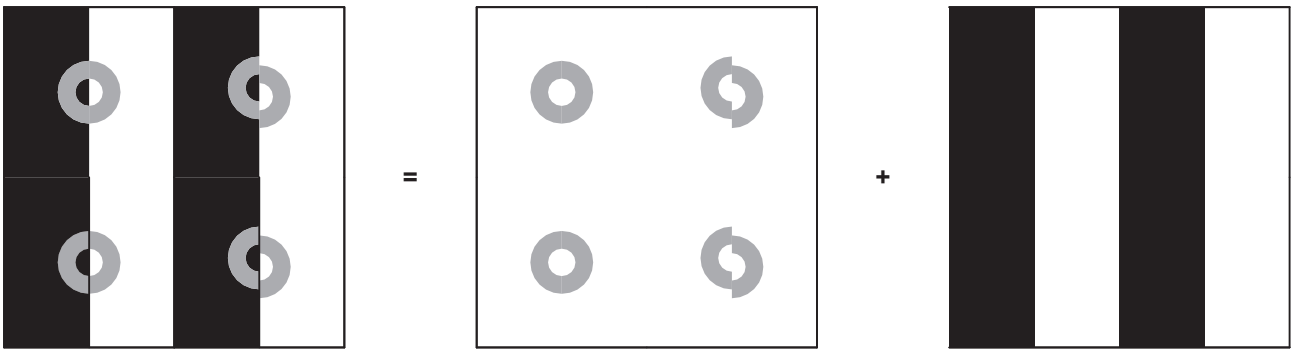


Figure 11: Illusion of colour according to Kurt Koffka/Max Wertheimer (1915):
Relativity of the appearance of one colour due to another and form criterion (S1.1 ~ S1.2, S1.3 and S2)

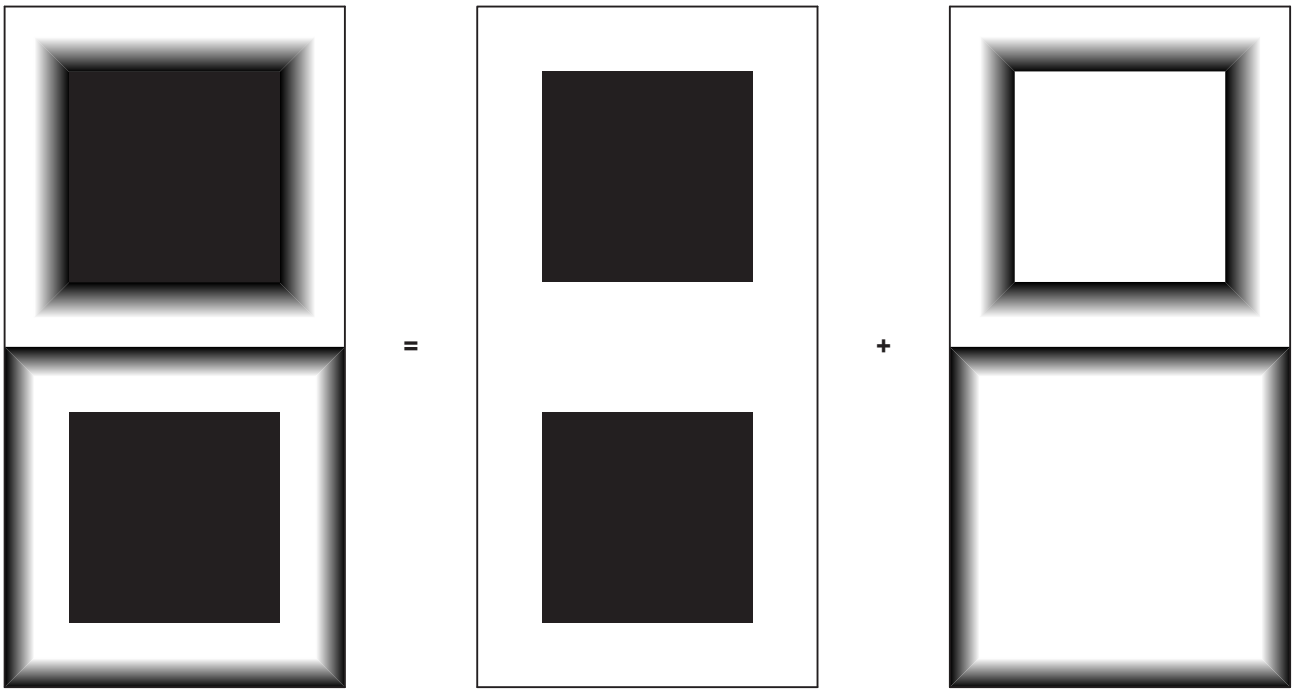


Figure 12: Illusion of colour according to Rupprecht Matthaei (1929):
Relativity of the appearance of colour due to another colour and form criterion/sharpness of contour
(S1.1 ~ S1.2/S2)

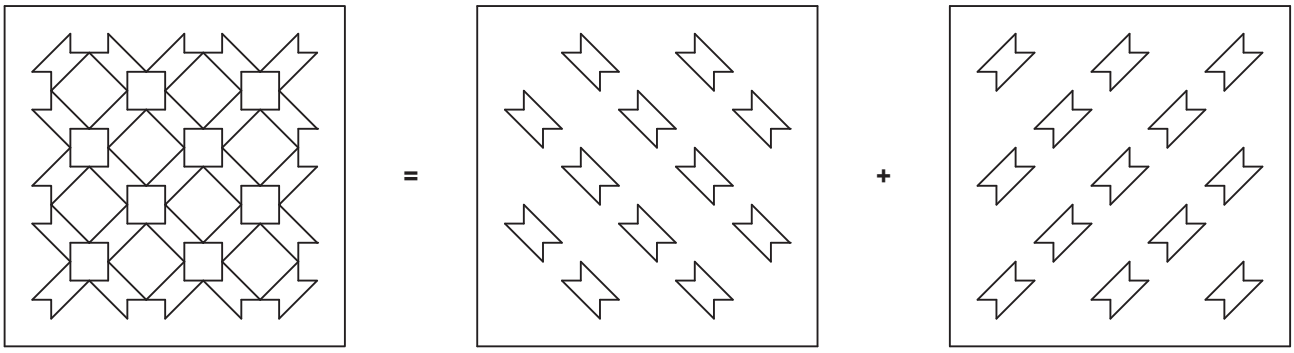


Figure 13: Illusion of one interpretation of a multi-structure according to Metzger (1975, p. 47).
Relativity of the appearance of form due to contiguity of line-direction-index and line-curvation-index
(S2 ~ C1 + C3)

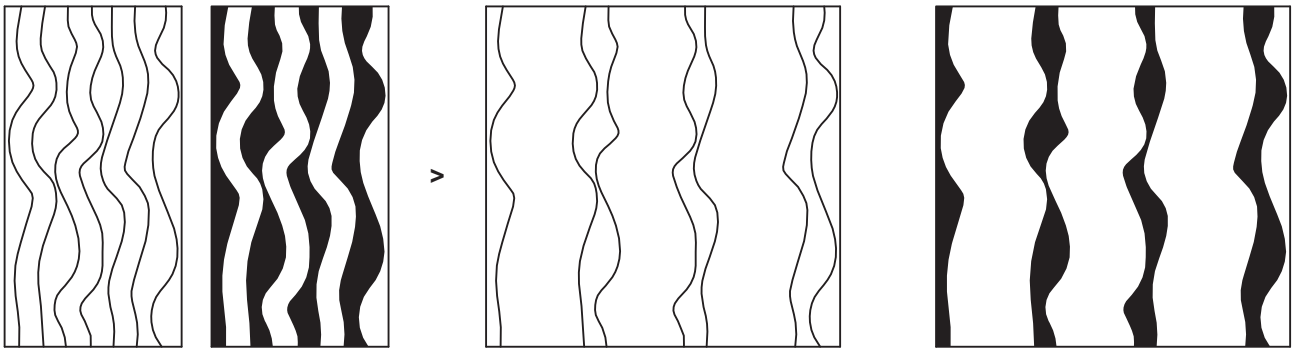


Figure 14: Illusion of one interpretation of figure and ground according to Shiro Morinaga (1941):
Relativity of the appearance of form/figure due to similarity of thickness and orientation
(S2 ~ S3 + S4)

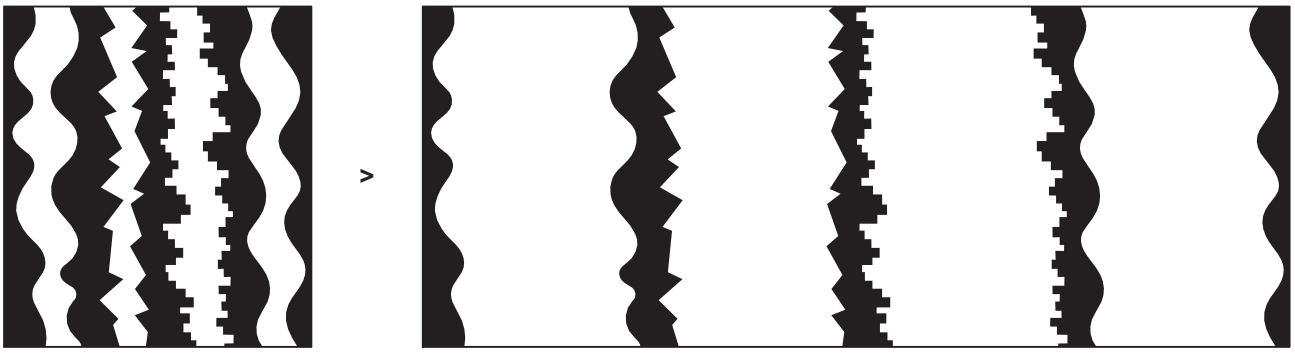


Figure 15: Illusion of one Interpretation of figure and ground according to Metzger (1975, S. 46): Relativity of the appearance of form/figure due to sub-forms (S2.1- figure ~ S2.2-sub-forms)

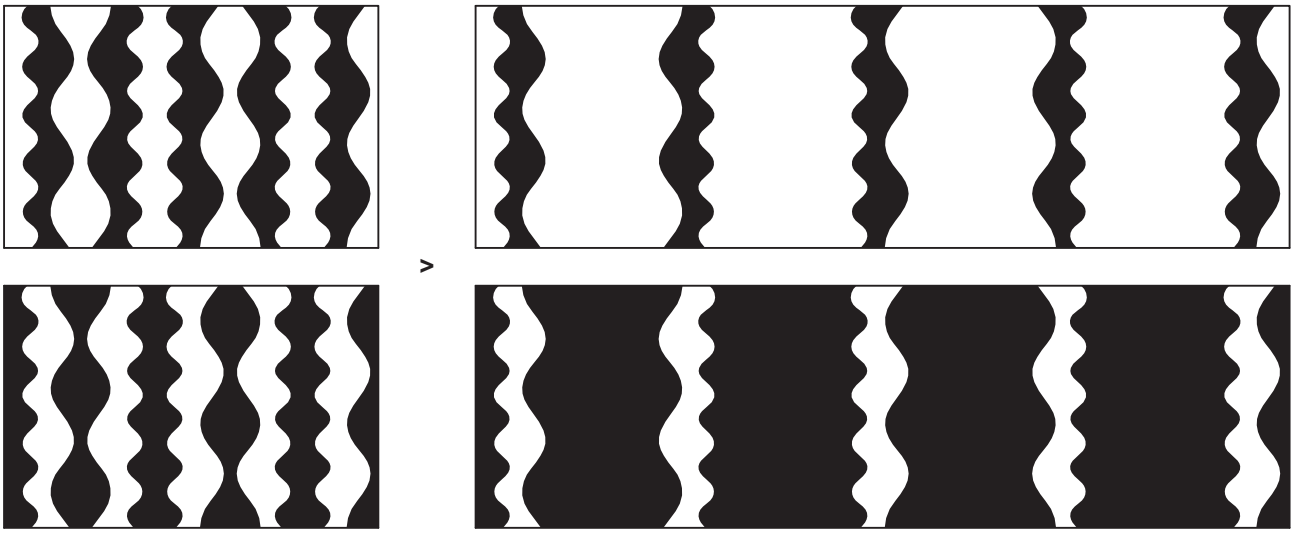


Figure 16: Illusion of one interpretation of form/figure according to Paul Bahnsen (1928) and Gaetano Kanizsa (1975): Relativity of the appearance of form/figure due to symmetry (S2.1 form/figure ~ S2.2 symmetry)

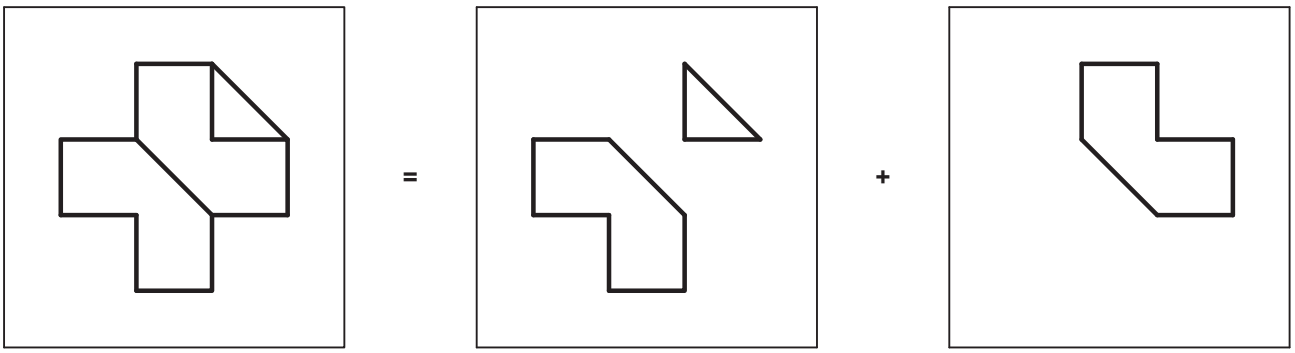


Figure 17: Illusion of one interpretation of a multi-structure according to Metzger (1975, p. 70): Relativity of the appearance of form due to symmetry (S2.1, S2.2… forms ~ S2.X Symmetry)

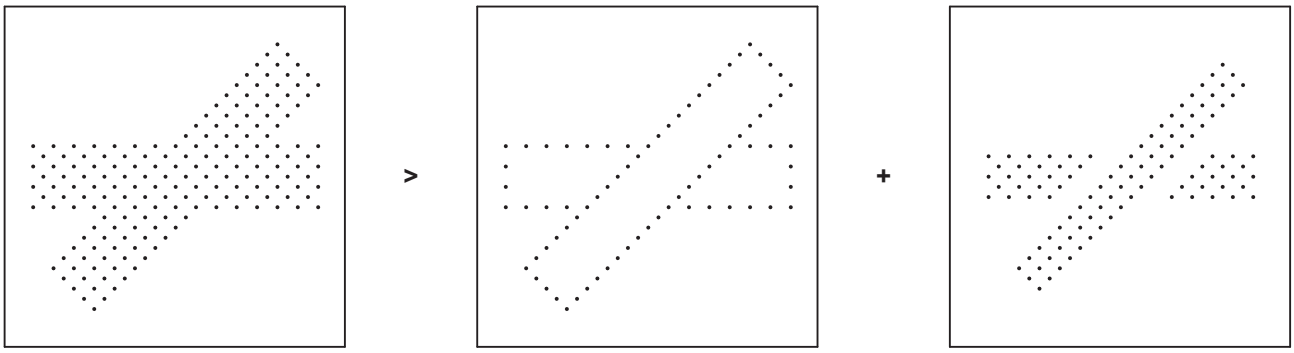


Figure 18: Illusion of covering of a form by another according to Paolo Bozzi (1969): Relativity of the appearance of form due to proximity of elements (S2 ~ C2)

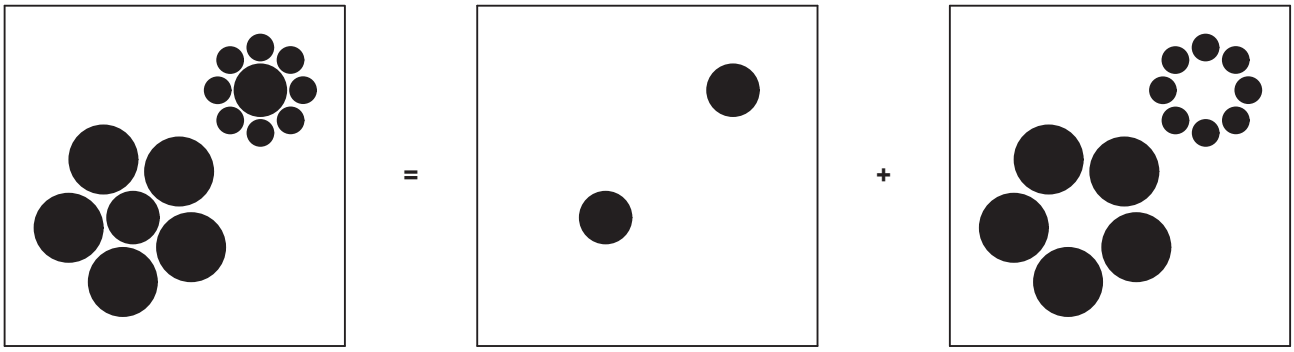


Figure 19: Illusion of size according to Hermann Ebbinghaus (ca. 1890) and Edward Bradford Titchener (1901): Relativity of appearance of size due to an adjoining size (S3.1 ~ S3.2)

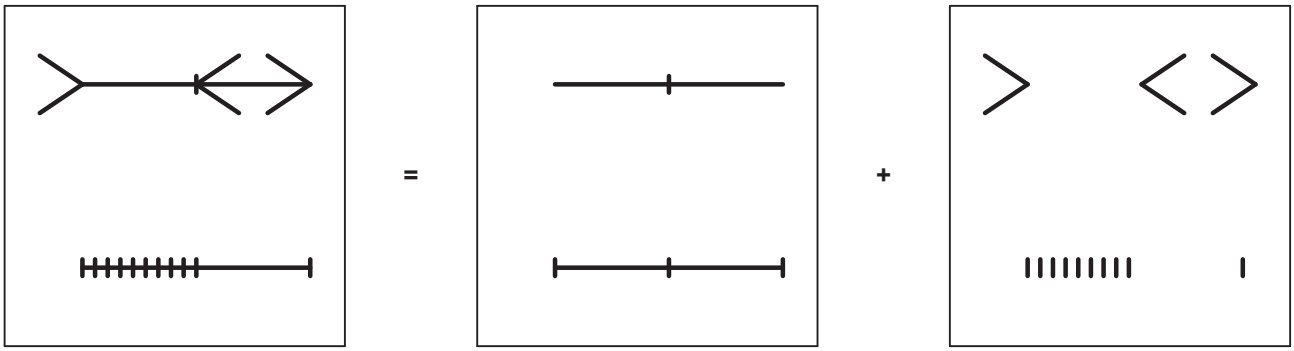


Figure 20: Illusion of size according to Franz Carl Müller-Lyer (1889, above: relativity of the appearance of size due to line-direction-index: S3 ~ C1 ?)
and according to Johann Joseph Oppel (1855)/August Kundt (1863, below: relativity of the appearance of size due to sub-sizes: S3.1 ~ S3.2)

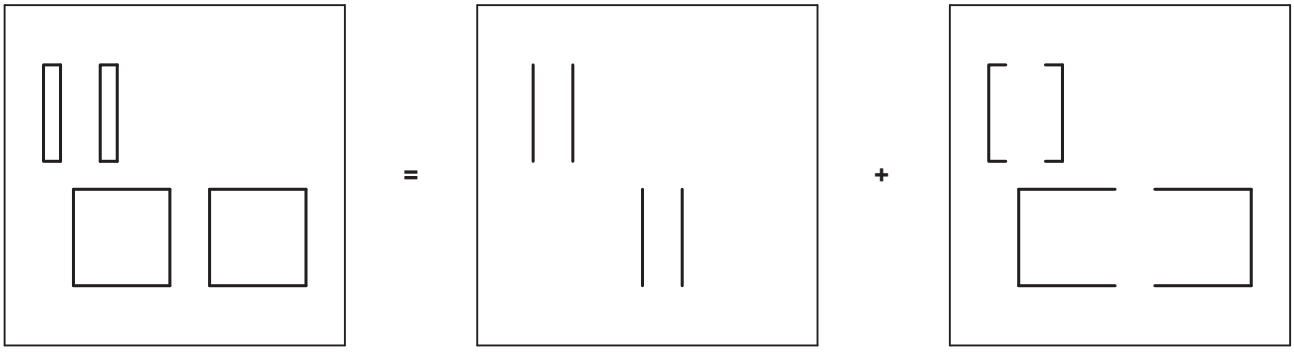


Figure 21: Illusion of size according to Hermann Ebbinghaus (ca. 1890):
Relativity of the appearance of size due to adjoining sizes (S3.1 ~ S3.2)

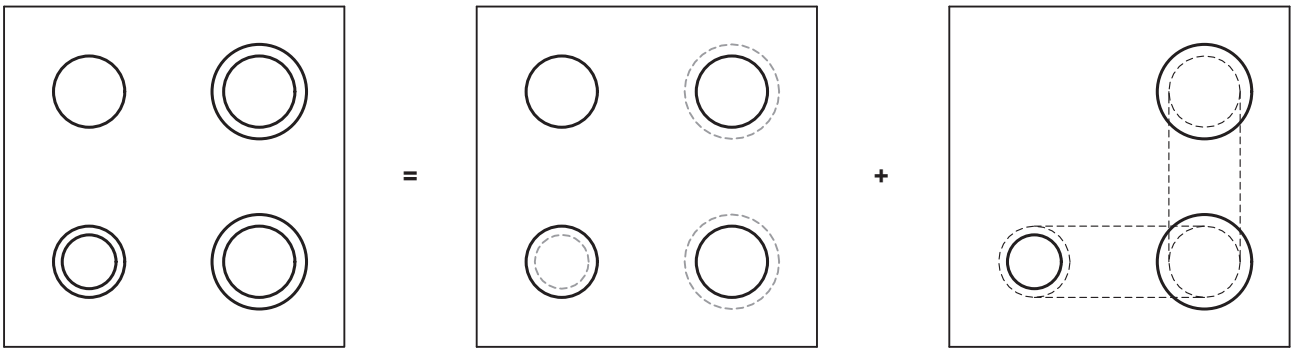


Figure 22: Illusion of size according to Joseph Remi Leopold Delboeuf (1865):
Relativity of the appearance of one size of four circles due to adjoining sizes (S3.1 ~ S3.2)

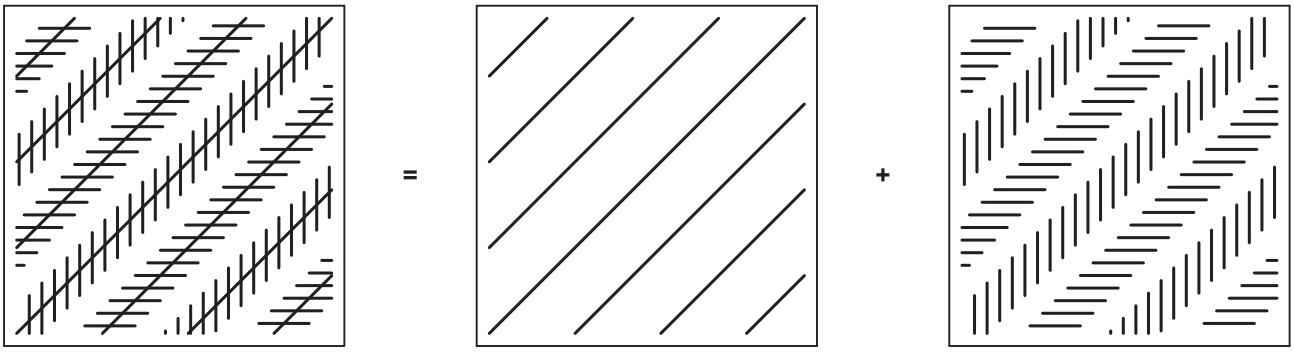


Figure 23: Illusion of orientation according to Karl Friedrich Zöllner (1862):
Relativity of the appearance of orientation due to sub-orientations? (S4.1 ~ S4.2?)

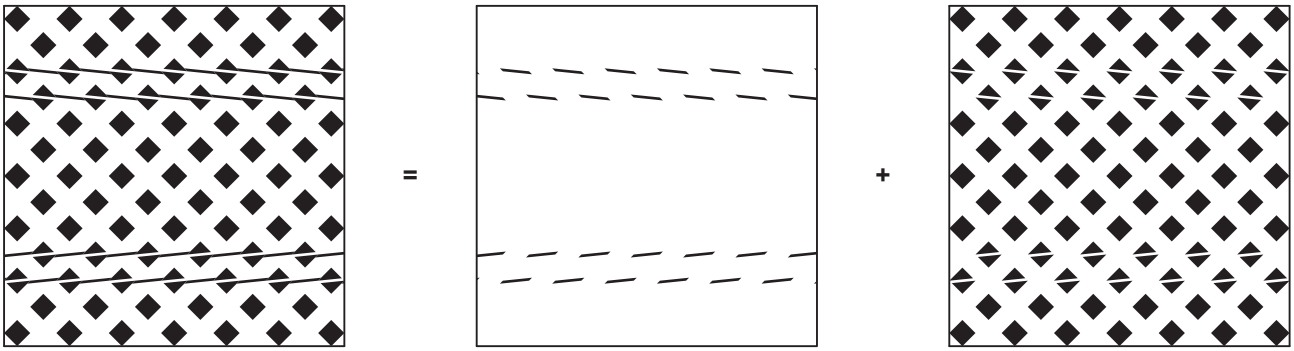


Figure 24: Illusion of orientation according to James Fraser (1908):
Relativity of the appearance of orientation due to sub-orientations? (S4.1 ~ S4.2?)

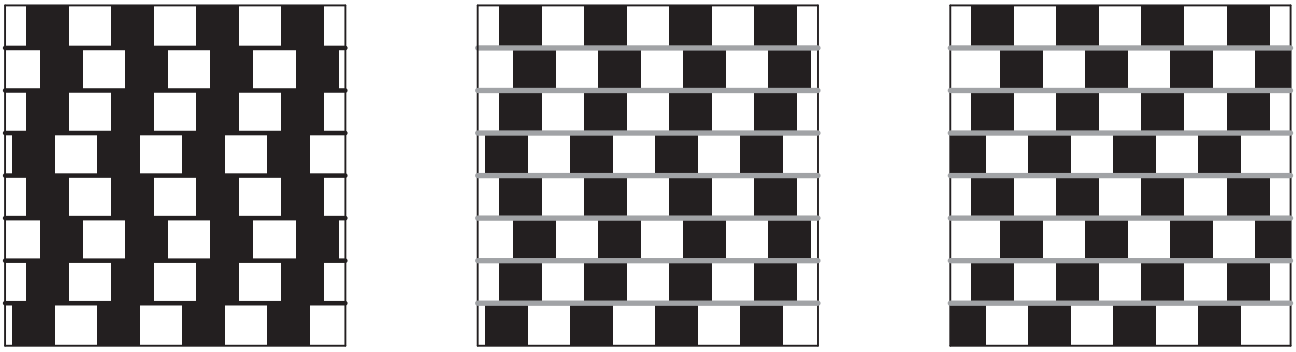


Figure 25: Illusion of orientation according to Hugo Münsterberg (1874):
Relativity of the appearance of orientation of horizontal lines due to vertical line-direction-indices and line-curvation-indices? (S4 ~ C1 + C3 ?)

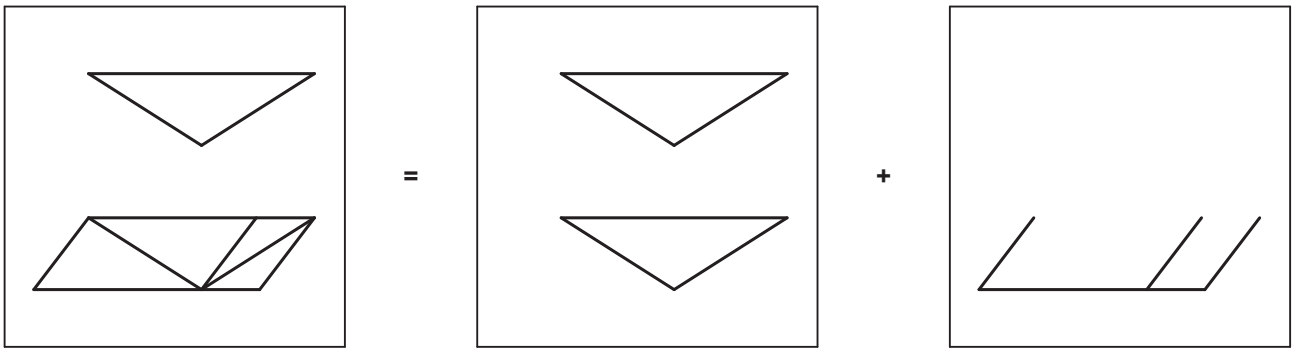


Figure 26: Illusion of orientation according to Friedrich Sander (1926):
Relativity of appearance of an orientation due to adjoining orientations (S4.1 ~ S4.2, S4.3)

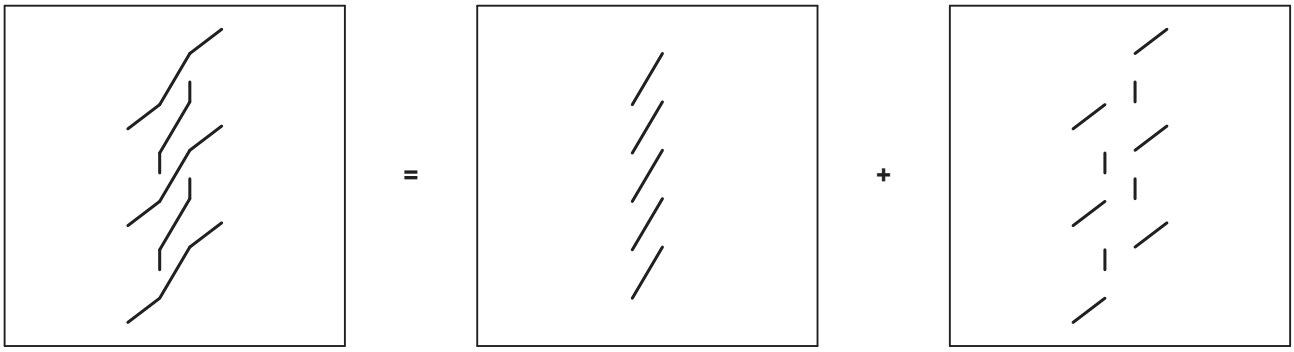


Figure 27: Illusion of orientation according to Theodor Lipps (1897):
Relativity of the appearance of an orientation due to adjoining orientations (S4.1 ~ S4.2, S4.3)

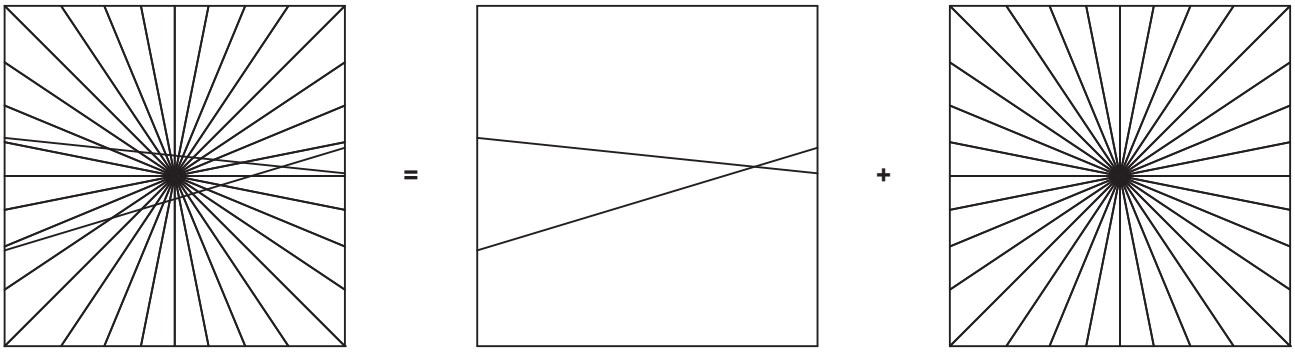


Figure 28: Illusion of line-direction-index according to Alois Höfler (1853-1922):
Relativity of the appearance of a line due to adjoining lines (C1.1 ~ C1.2, C1.3…)

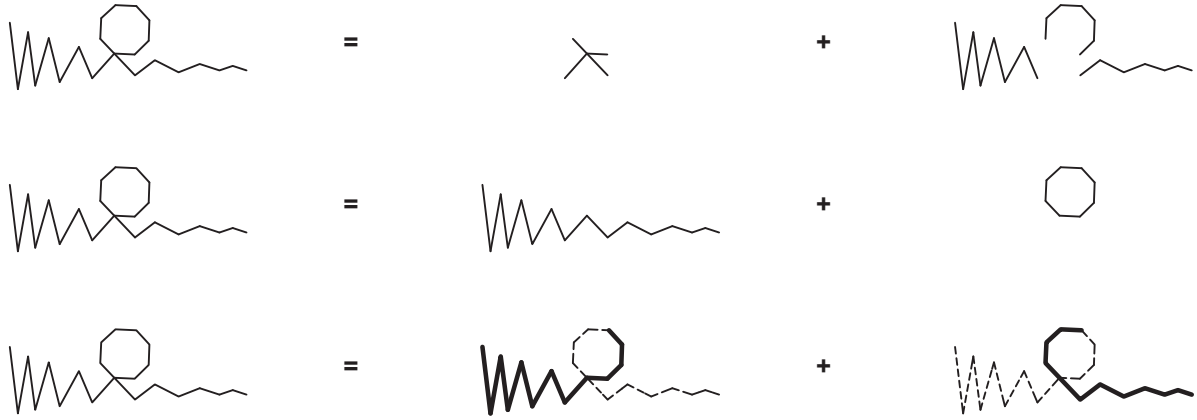


Figure 29: Illusion of one interpretation of a line according to Max Wertheimer (1923):
Relativity of the appearance of line-direction-index due to line-curvation-index and symmetry of form (C1 ~ C3 + S2)

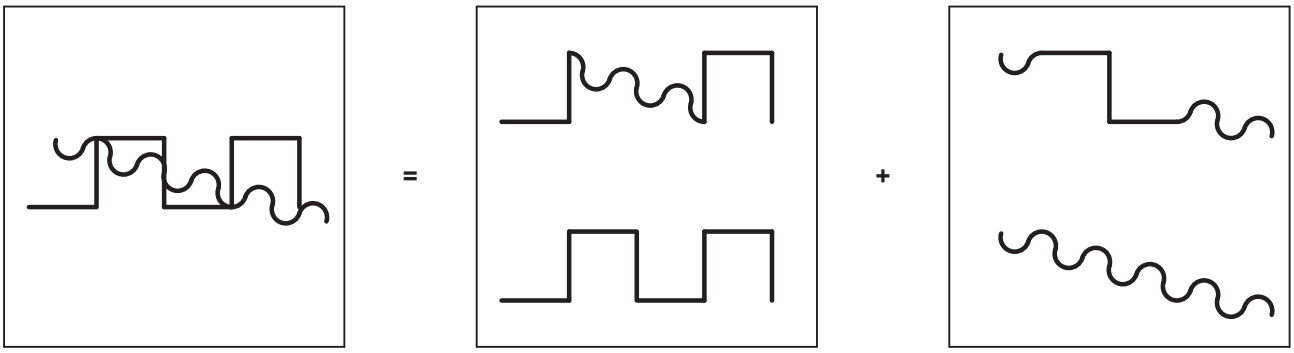


Figure 30: Illusion of one interpretation of line-direction-index according to Max Wertheimer (1923): Relativity of the appearance of line-direction-index due to symmetry of form (C1 ~ S2)

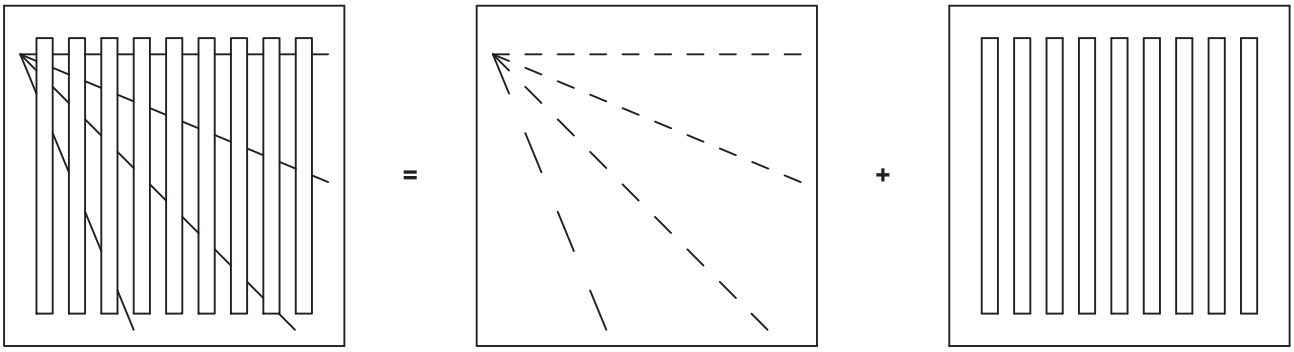


Figure 31: Illusion of line-direction-index according to Johann Christian Poggendorff (1860): Relativity of the appearance of line-direction-index due to other lines (C1 ~ S4?)

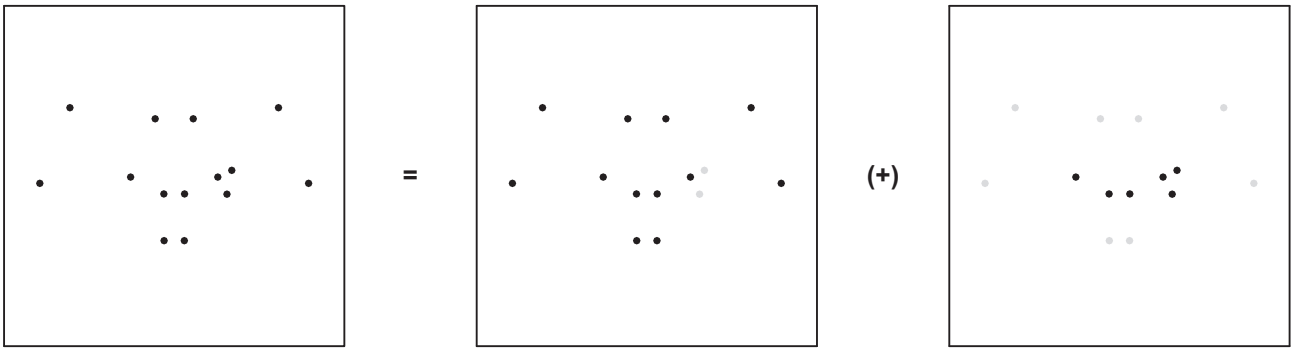


Figure 32: Illusion of one interpretation concerning groups of points according to Metzger (1975, S. 96): Relativity of proximity as criterion of unification due to symmetry (C2 ~ S2/symmetry)

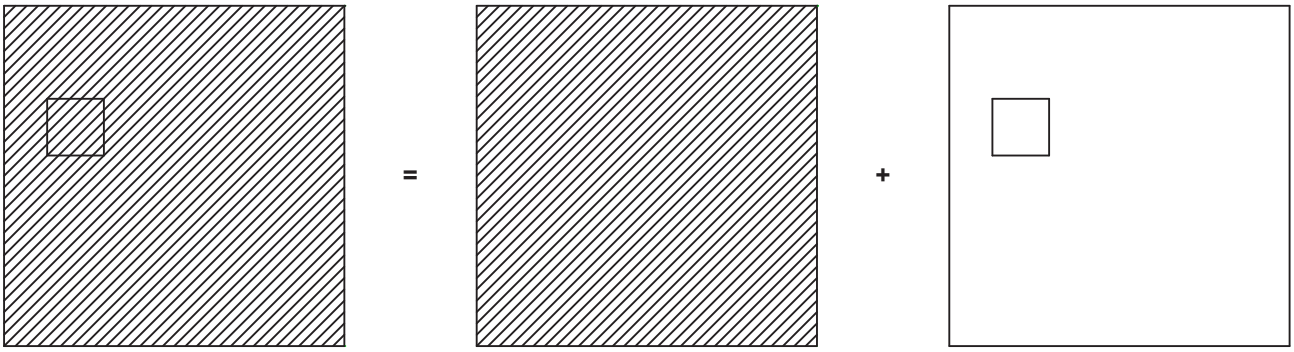


Figure 33: Illusion of proximity according to Giovanni Bruno Vicario (1971): Relativity of the appearance of proximity due to the size of a 'window' within the image (C2 ~ C3 and S3 of the 'window'?)

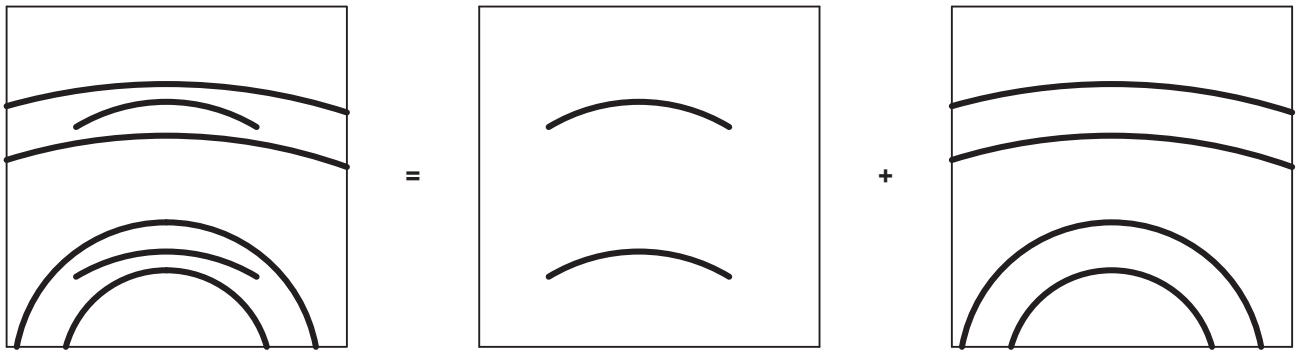


Figure 34: Illusion of line-curvation-index according to Alois Höfler (1853 - 1922):
Relativity of the appearance of line-curvation-index due to adjoining curved lines (C3.1 ~ C3.2)

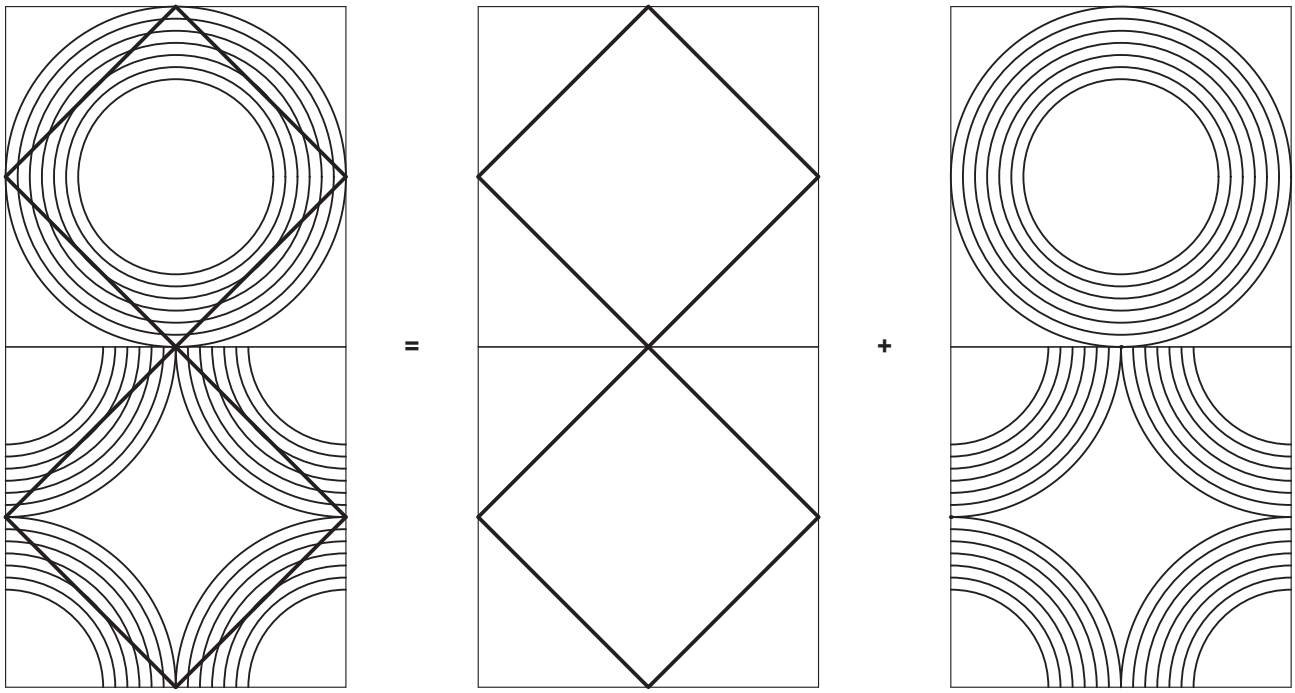


Figure 35: Illusion of line-curvation-index according to Walther Ludwig Ehrenstein (1925):
Relativity of the appearance of line-curvation-index due to adjoining lines (C3.1 ~ C3.2?)

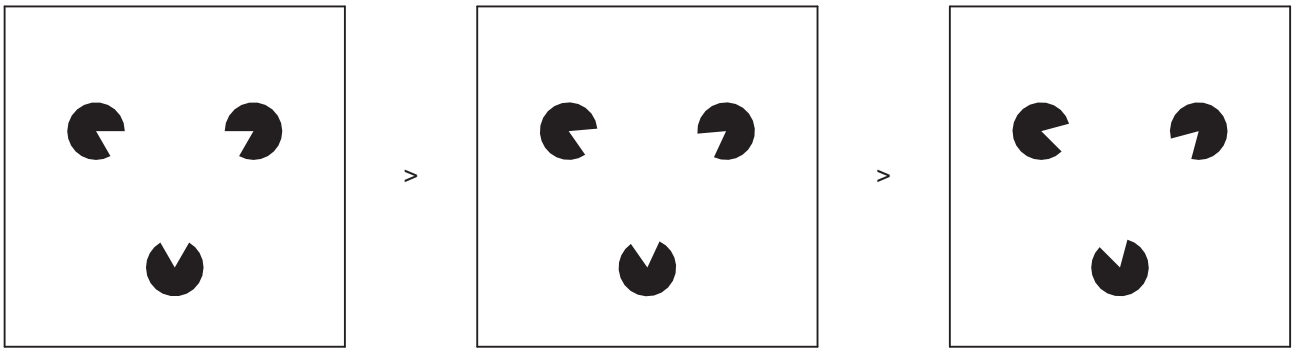


Figure 36: Illusion of a light triangle according to Gaetano Kanizsa (1949, two variations):
Relativity of the appearance of the contiguity of plane due to fragments of circles (C4 + S1 of a white ground ~ C1 + C3 of fragments of circles)

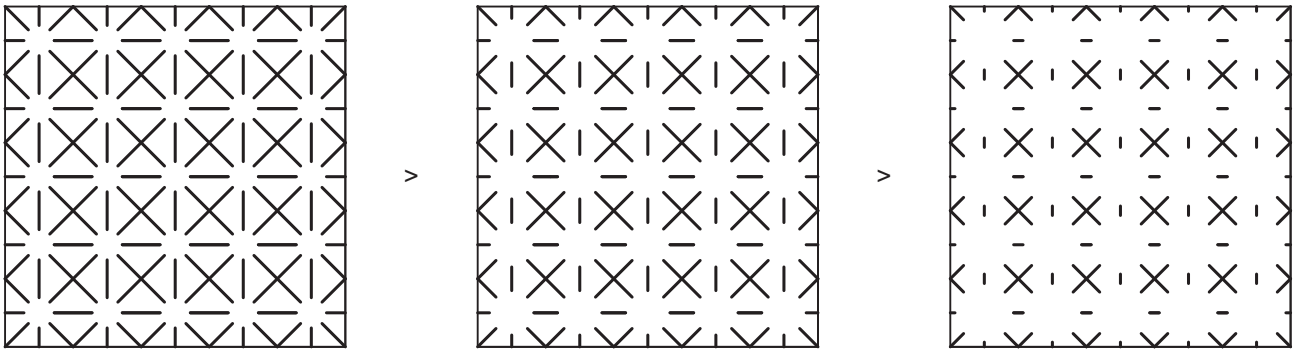


Figure 37: Illusion of light circle-planes according to Walther Ludwig Ehrenstein (1941, two variations): Relativity of the appearance of a white ground due to lines (C4 + S1 of a white ground ~ C2 of the final points of lines > C3 of pseudo-circles)

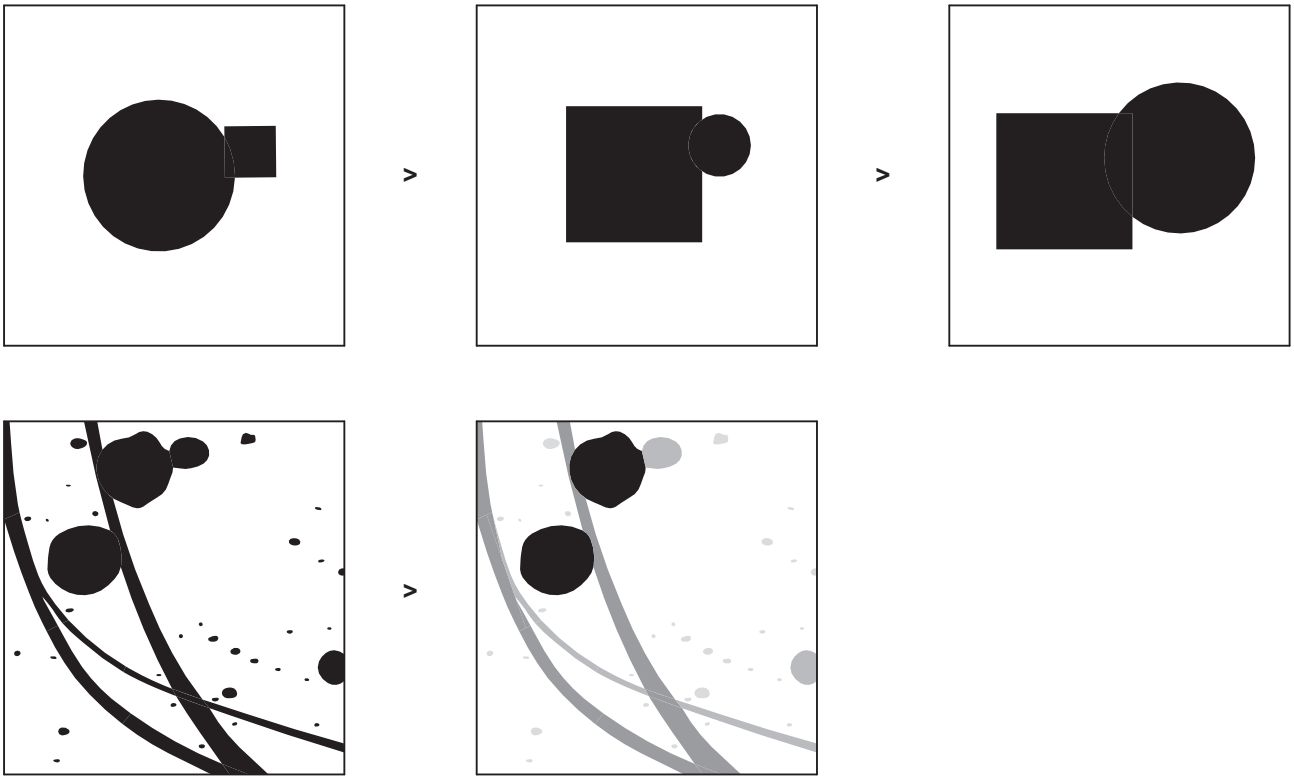


Figure 38: Illusion of covering and therefore spatial depth according to Guido Petter (1956, two variations): Relativity of the appearance of the contiguity of a black plane due to its contour and sizes (C4 of the black plane ~ C1 + C3 + S3 of contour) and spatial disambiguation of a detail of Jackson Pollocks' work *Number 32* (1950, painting)

Criteria for the illusion of spatial depth will be described in the next chapter.

1.3.1.3 Trial reformulation of Monocular Criteria for (semantic) optical depth by syntactic criteria for cognitive unification

The more distinguishable a figure is in relationship to its background and to other figures, the more attention this figure can attract and the 'nearer' it appears.

The less distinguishable a figure is in relationship to its background and to other figures (i.e. contamination of figures and of figure and ground by **Minimal Difference MD**), the less attention this figure can attract and the 'farther away' it appears.

A Minimal Difference MD of colour of figures to their ground can be found in serials by **Casimir Malevitch** (white forms on white ground ca. 1917) and **Alexander Rodchenko** (black forms on black ground ca. 1918), later you can state Minimal Difference MD of colour of neighbouring planes in serials by **Ad Reinhardt** (blackish planes in the 1960s) and **Antonio Calderara** (whitish planes in the 1960s): the image seems to 'disappear' here.

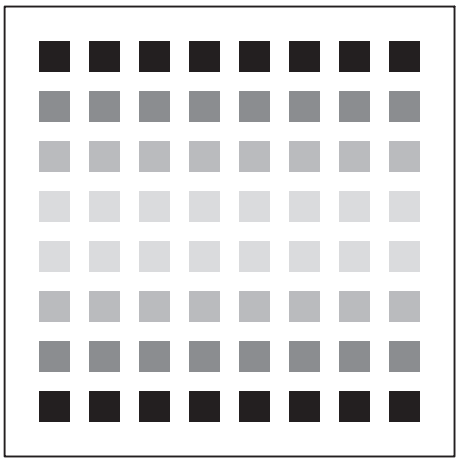


Figure 39: Similarity of colour of figures versus their ground (S1):
The more similar the colours of figures and of ground are, the farther away the figures seem to be.

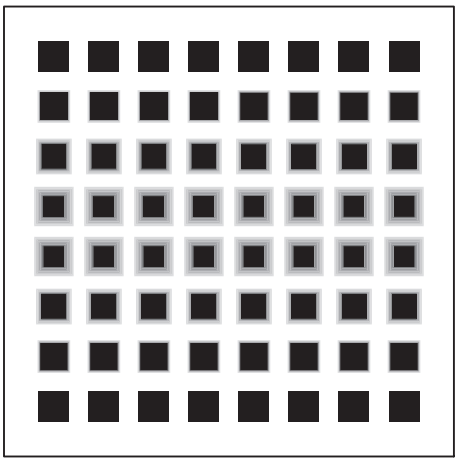


Figure 40: Similarity of form of figures versus their ground (S2):
The more the ground seems to intervene in the figures/the less sharper the contours of the figures seem to be, the farther away the figures seem to be.

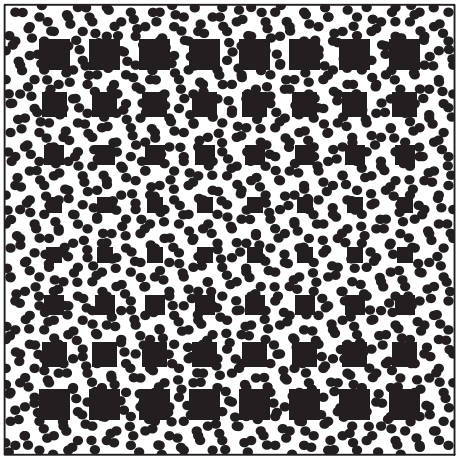


Figure 41: Similarity of size of figures versus elements of a ground structure (S3):
The more similar the size of the figures becomes in comparison to elements of the ground, the farther away the figures seem to be.

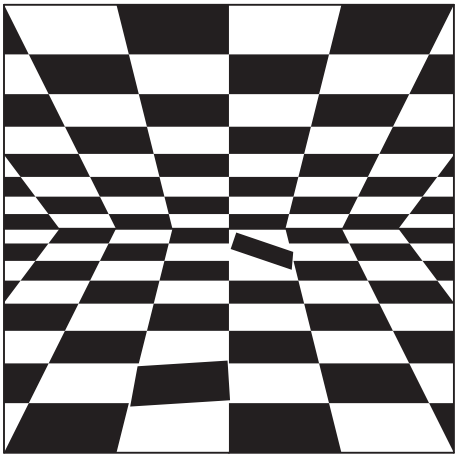


Figure 42: Similarity of orientation of figures versus ground structure (S4):
The more similar the orientation of a figure becomes in comparison to its surrounding background, the farther away the figure seem to be.

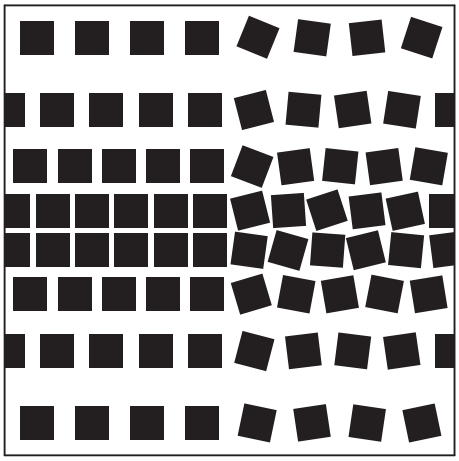


Figure 43: Contiguity of line-direction-indices of figures (C1):
The more the contours of figures refer (´indicate´ by means of criterion C1) to each other, the farther away the figures seem to be.

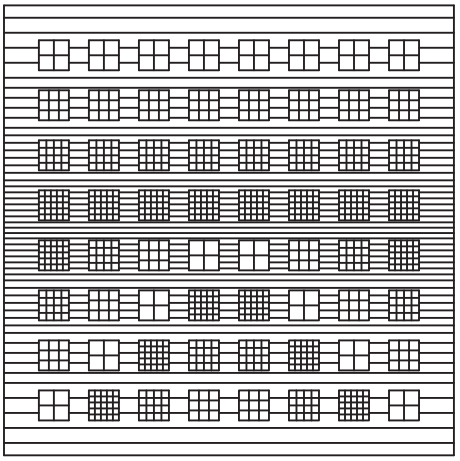


Figure 44: Contiguity of proximity (C2):
The more the inner elements of figures and the ground approximate each other, the farther away the figures seem to be.

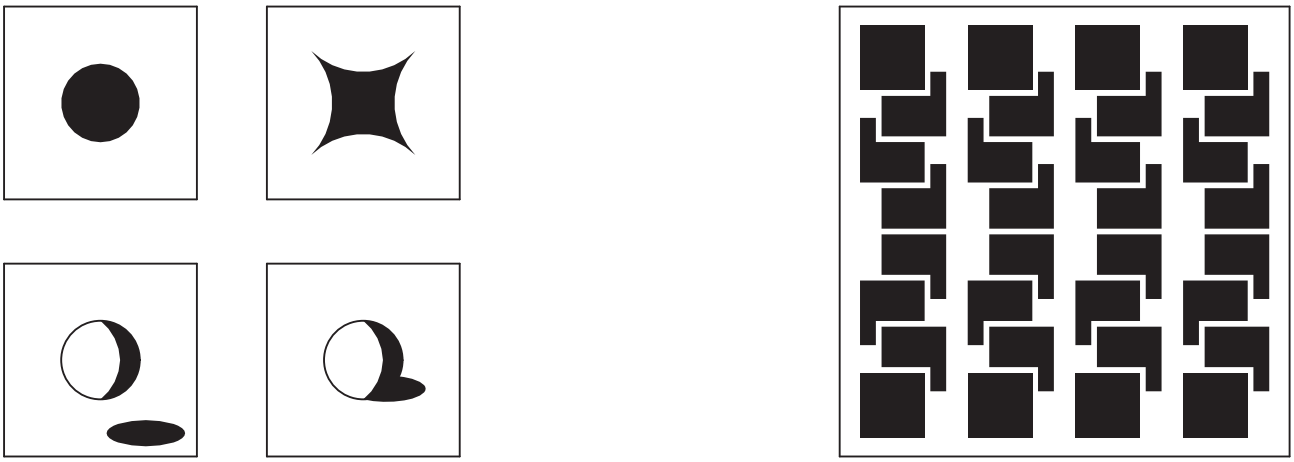


Figure 45: Contiguity of line-curvation-indices of figures (C3):
The more the curvation indices of a figure refer (´indicate´ by means of criterion C3) to other figures or to its background, the farther away the figure seems to be.

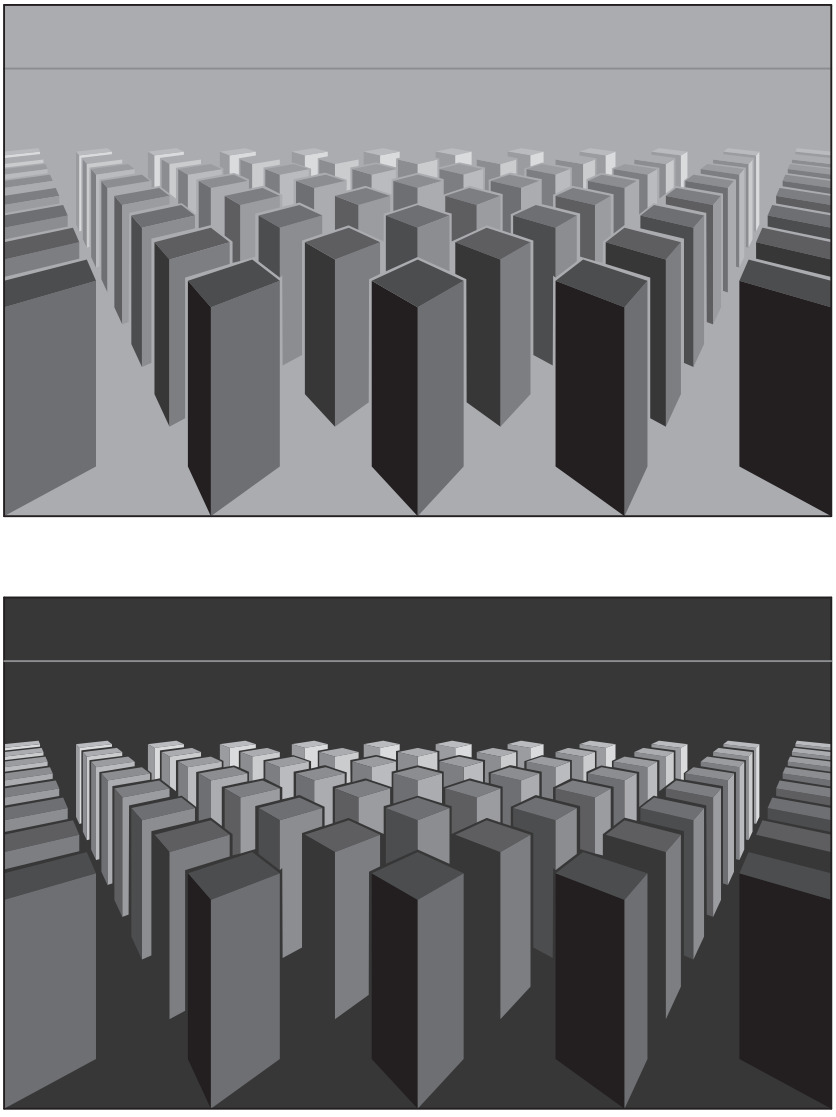
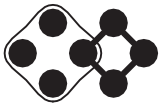
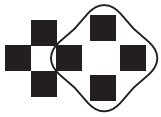
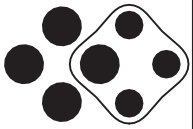
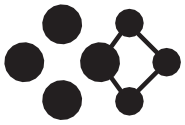
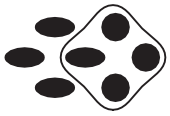
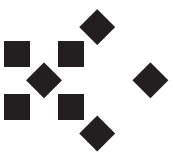
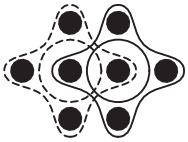


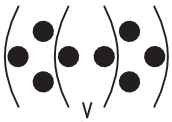
Figure 46: Contiguity of connection (here by two different ground planes in light grey and dark grey; C4):
The same three-dimensional figures appear in the two images as if they were near by or far away due to their connection via the ground plane; but (Dis)S1 plays a role as well.

1.3.1.4 Production of works of syntactic ambiguity by putting syntactic criteria (S1- S4, C1- C4) in opposition

Figure 47: Oppositions of syntactic criteria for cognitive unification (S1- S4, C1- C4) within ambiguous works based on cognitive units in opposition
The three basic types of opposition (Hybrid H, Mixture M and Minimal Difference MD) can be combined, but syntactic criteria of similarity more easily.

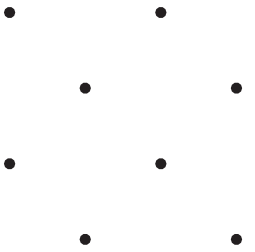
Hybrid (H) (S1 versus S2): 	**Hybrid (S2 versus S3)** 	**Hybrid (S3 versus S4)** 	**Hybrid (S4 versus S1)** 	**Hybrid (S1 versus S3)** 	**Hybrid (S2 versus S4)** 
Hybrid (C1 versus C2) 	**Hybrid (C2 versus C3)** 	**Hybrid (C3 versus C4)** 	**Hybrid (C4 versus C1)** 	**Hybrid (C1 versus C3)** 	**Hybrid (C2 versus C4)** 
Hybrid (S1 versus C1) 	**Hybrid (S1 versus C2)** 	**Hybrid (S1 versus C3)** 	**Hybrid (S1 versus C4)** 	**Hybrid (S2 versus C1)** 	**Hybrid (S2 versus C2)** 
Hybrid (S2 versus C3) 	**Hybrid (S2 versus C4)** 	**Hybrid (S3 versus C1)** 	**Hybrid (S3 versus C2)** 	**Hybrid (S3 versus C3)** 	**Hybrid (S3 versus C4)** 
Hybrid (S4 versus C1) 	**Hybrid (S4 versus C2)** 	**Hybrid (S4 versus C3)** 	**Hybrid (S4 versus C4)** 		

Mixture (M) (S1.1 versus S1.2) 	**Mixture (S2.1 versus S2.2)** 	**Mixture (S3.1 versus S3.2)** 	**Mixture (S4.1 versus S4.2)** 	**Mixture (C1.1 versus C1.2)** 	**Mixture (C2.1 versus C2.2)** 
Mixture (C3.1 versus C3.2) 	**Mixture (C4.1 versus C4.2)** 				

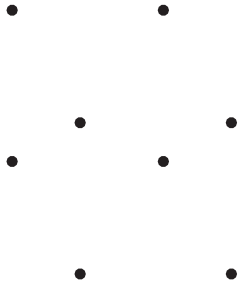
Minimal Difference (MD) (S1.1~ S1.2~ S1.3)  V S1.2	Minimal Difference (S2.1~ S2.2~ S2.3)  V S2.2	Minimal Difference (S3.1~ S3.2~ S3.3)  V S3.2	Minimal Difference (S4.1~ S4.2~ S4.3)  V S4.2	Minimal Difference? (C1.1> C1.2< C1.3)  V C1.2	Minimal Difference? (C2.1~ C2.2~ C2.3)  V C2.2
Minimal Difference? (C3.1> C3.2< C3.3)  V C3.2	Minimal Difference? (C4.1> C4.2< C4.3)  V C4.2				

H + MD (S1.1/2/3 versus S2) 	H + MD (S2.1/2/3 versus S3) 	H + MD (S3.1/2/3 versus S4) 	H + MD (S4.1/2/3 versus S1) 	H + MD (S1.1/2/3 versus S3) 	H + MD (S2.1/2/3 versus S4) 
M + MD (S1.1/2/3 versus S2.1/2) 	M + MD (S2.1/2/3 versus S3.1/2) 	M + MD (S3.1/2/3 versus S4.1/2) 	M + MD (S4.1/2/3 versus S1.1/2) 	M + MD (S1.1/2/3 versus S3.1/2) 	M + MD (S2.1/2/3 versus S4.1/2) 
H + M (S1.1/2 versus S2.1/2) 	H + M (S2.1/2 versus S3.1/2) 	H + M (S3.1/2 versus S4.1/2) 	H + M (S4.1/2 versus S1.1/2) 	H + M (S1.1/2 versus S3.1/2) 	H + M (S2.1/2 versus S4.1/2) 

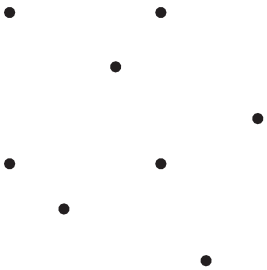
Figure 48 (two pages): Mixture of contamination and deviance:
Contamination of two fragments (i.e. syntactic detractio of the scheme of a square or a cube).



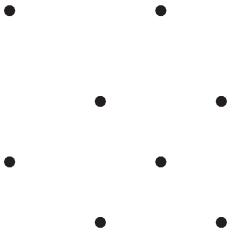
1) ambiguity?



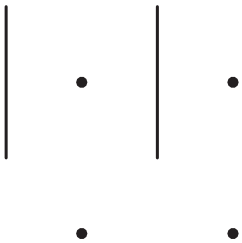
2) ambiguity?



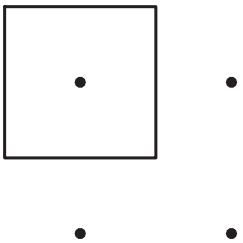
3) ambiguity?



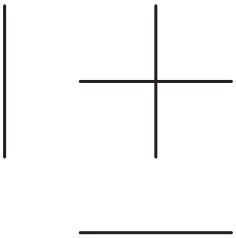
4) MD (C2.1 ~ C2.2) +
M (C2.1 vs. C2.2)?



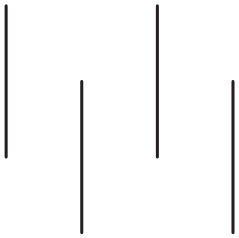
5) ambiguity?



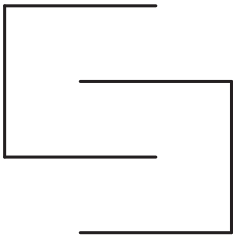
6) M (S2.1 vs. S2.2)



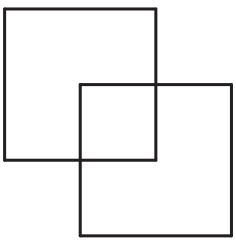
7) ambiguity?



8) ambiguity?



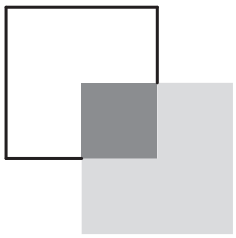
9) ambiguity?



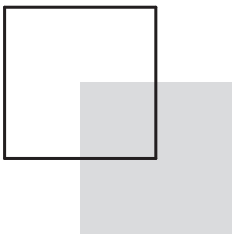
10) H (C1/3.1 vs.
C1/3.2)

11) H (C1/3.1 vs. C1/3.2)
or <u>one</u> unit?

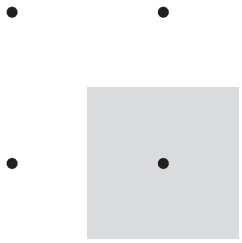
12) MD (S1.1 ~ S1.2 ~ S1.3)+
H(C1/3.1 vs. C1/3.2)



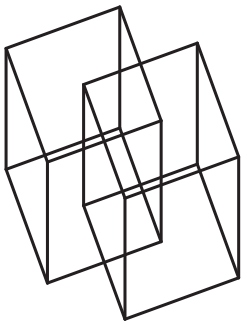
13) H (C1/3.1 vs. C1/3.2)



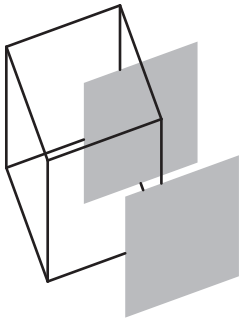
14) H (C1/3.1 vs. C1/3.2)



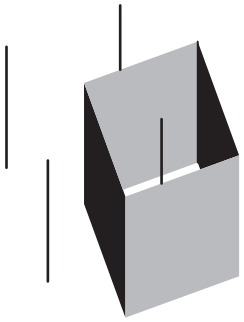
15) H (~S2.1 versus S2.2) + M



16) H (C1/3.1 vs. C1/3.2)

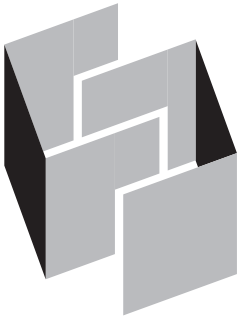


17) M + H ?

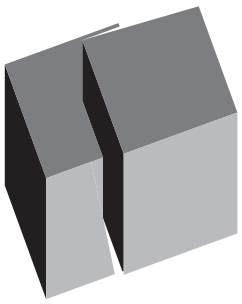


18) M ?

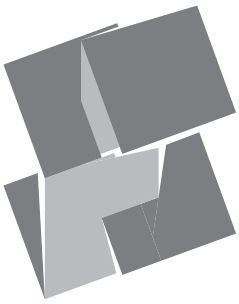
19) ambiguity or S4-unit?



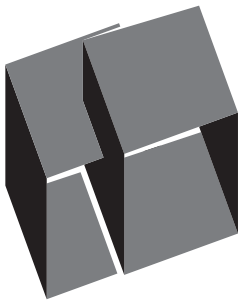
20) M ?



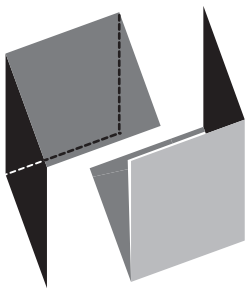
21) H (C1/3.1 vs. C1/3.2)



22) M + H ?

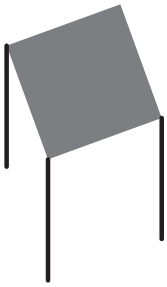


23) M + H ?

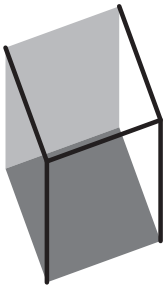


24) M ?

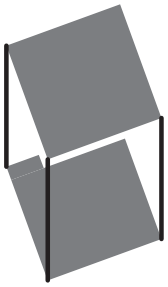
Figure 49: Fragments of the cube (detractio) as types of architecture



1) one plane



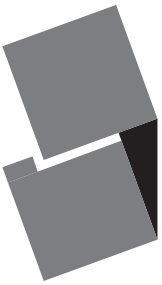
2 a) two planes



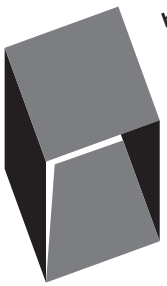
2 b) two planes

3 a) three planes

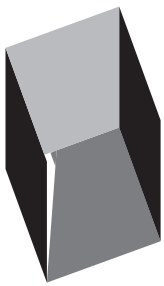
3 b) three planes



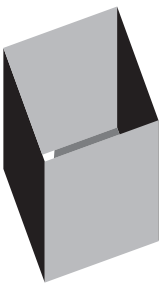
3 c) three planes



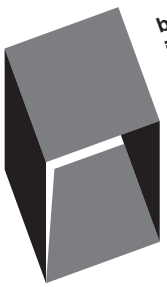
4 a) four planes



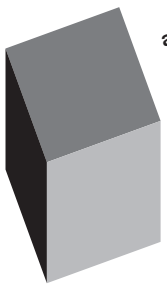
4 b) four planes



5 a) five planes



5 b) five planes



6) six planes

In the *Wolfson Trailer House* (1949 - 51) by **Marcel Breuer**, mainly made of wood and stone, a trailer made of aluminium was integrated; this shows pragmatic antonymity (mobility versus immobility). An example in the book *Learning from Las Vegas* (1972) by **Robert Venturi** et al., a tiny house in the form of a duck for the purpose of selling fried ducks has pragmatic complementarity (cooking versus selling the product of cooking). The operations of **spatial syntactic deviance and contamination** can be used within **design** as well; some examples of architecture are the following:

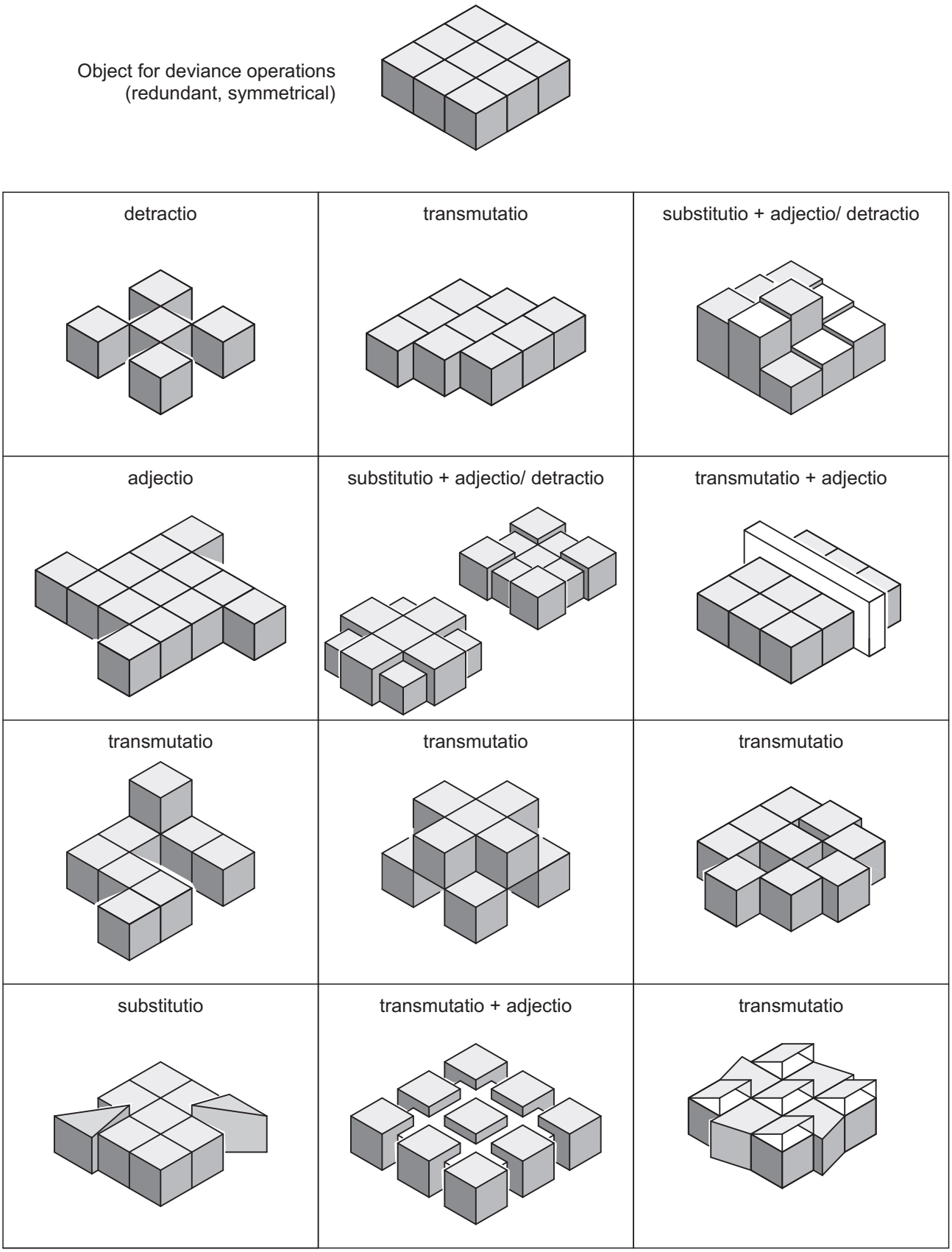


Figure 50: Recombination of deviance operations in architecture

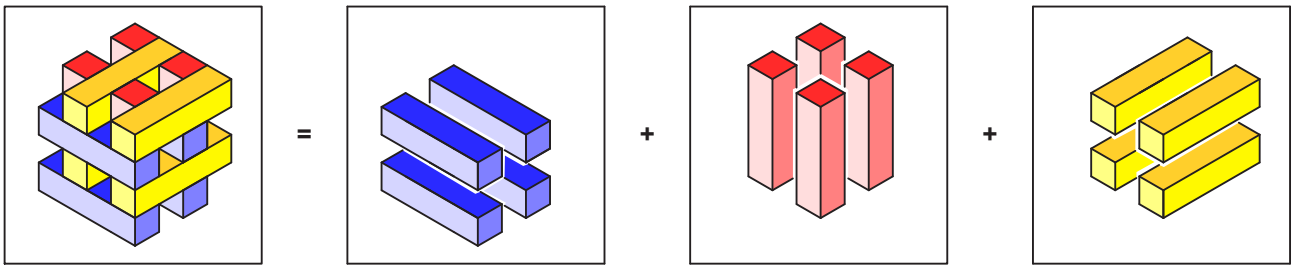


Figure 51: The ‘Mixture’ type of ambiguity, in a realisation as architecture

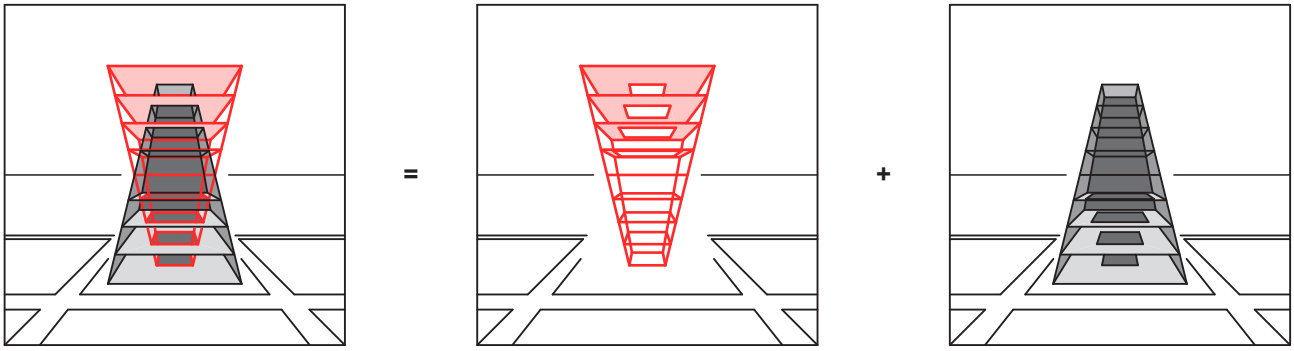


Figure 52: The ‘Minimal Difference’ + ‘Hybrid’ type of ambiguity, in a realisation as architecture

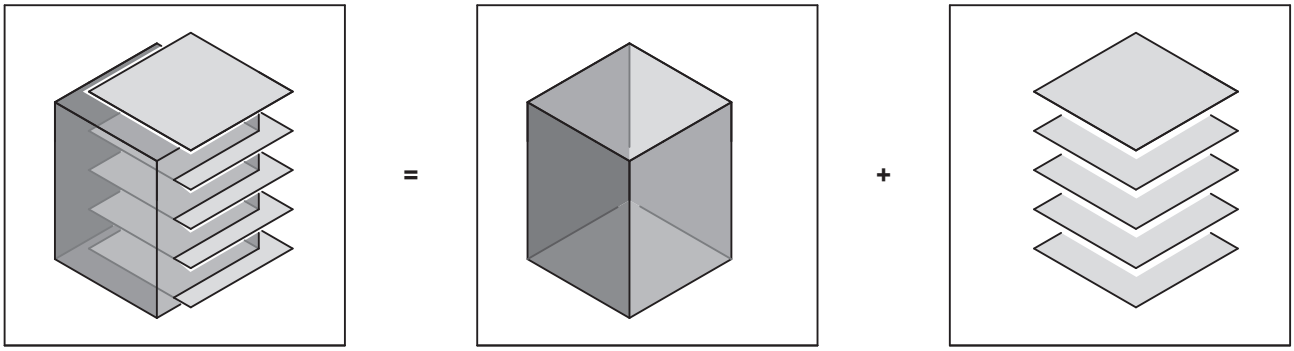
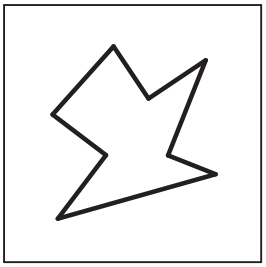


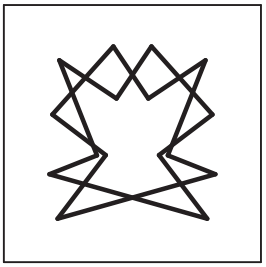
Figure 53: The MD (Minimal Difference) + Hybrid type of ambiguity, in a realisation as architecture

Five characteristics of **Le Corbusier’s** architecture can be linked to aesthetic ambiguity:
1) **the house stands on columns**: the space under the house is neither totally part of the environment nor of the house (**Hybrid H**);
2) the **garden on the roof** is a similar spatial **Hybrid H** of house and environment as well;
3) a **ramp** can be seen as a sequence of heights with **Minimal Difference MD** from each other;
4) the **free ground plan** (based on columns bearing the weight, rather than walls) allows a thin round wall which points to a space by criterion C3; but this space is open to the other side and floats through the whole building, so it is only partly part of the whole inner space of the building (**Hybrid H**);
5) the **strip of horizontal windows** adjoining each other and going around the inner space allows a panoramic view of the landscape, which is also horizontal, so it can be assigned to the entity ‘house’ and to the entity ‘landscape’ (~ **Hybrid H**).

Figure 54: Lines and ambiguity of form interpretation
Images of an irregular form reflected in a vertical plane (second image), in a horizontal plane (fifth image) and in both planes (sixth image, see **counterpoint**) show that these complex images allow several interpretations as cognitive unifications (third and fourth image) due to symmetry (as similarity of sub-forms S2) plus similarity of orientations S4 and C1 of the indices of lines.
In contrast to this ambiguity of two possible interpretations, the example in the third horizontal row leads to a dominant interpretation of 'two overlapping circles', because in this one, symmetry and contiguity C1 work together. The last two images show the difference between Mixture M and Hybrid H in constellations of lines.



original form, later reflected at a vertical, a horizontal and at both lines



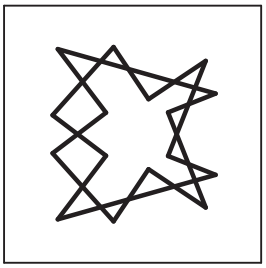
Hybrid H (symmetry S2 versus C1)

=

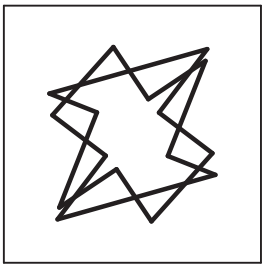
cognitive unification according to criterion S2 / symmetry

+

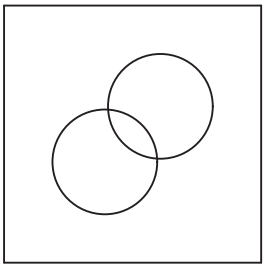
cognitive unification according to criterion C1



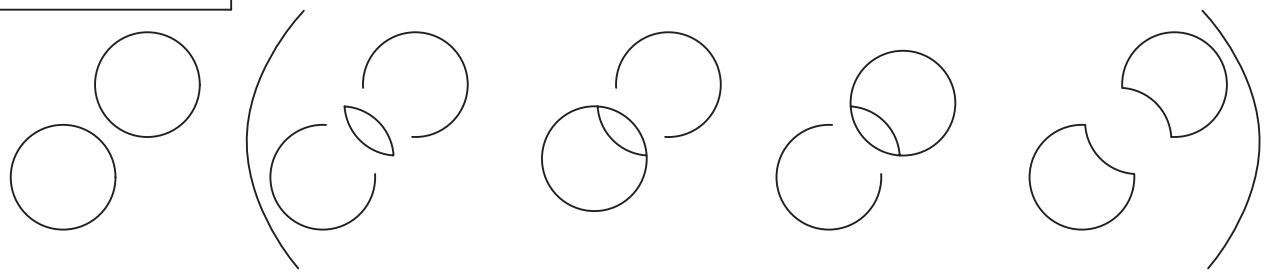
Hybrid H (S2 versus C1)

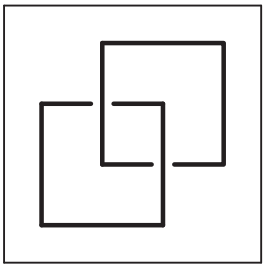


Hybrid H (S4 versus C1)

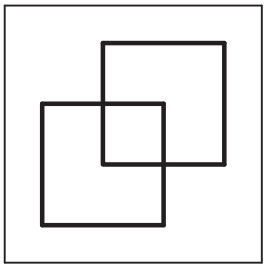


=





Mixture M (C1.1 versus C1.2)



Hybrid H in two points of intersection C1.1 versus C1.2) and in one plane of "overlapping" (C3.1 versus C3.2)

1.3.1.5 Syntactic versus semantic ambiguity

Aesthetic ambiguity **divides the attention by opposition:**
- by **deviance** (scheme versus its change in the work) or
- by **contamination** (cognitive unification of elements A versus another cognitive unification of elements B) or
- by a mixture of both.

This phenomenon can take place on the syntactic, semantic or pragmatic level of the reception of the work of art; oppositions on one level may lead to oppositions on another level.

Schemes can be **disturbed (deviance)** and **criteria** can be **opposed (contamination)** for the purpose of aesthetic ambiguity:
- to produce aesthetic **deviance** one can search for cognitive **schemes** of perception (syntactics), meaning (semantics) or reaction (pragmatics) as **objects of disturbance**.
- to produce aesthetic **contamination** one can search for **criteria** of perception (syntactics), meaning (semantics) or reaction (pragmatics) as **objects of oppositioning**.

A **syntactic scheme** such as a square is a unity by redundance; redundance means homogeneity by similarity (such as symmetry as similarity of sub-forms S1 within a form) and contiguity; attention is drawn to the changed part of the scheme:
- broken contours C1 may point to the changed part,
- disturbed balance/symmetry (as dissimilarity of sub-forms within the form DisS1) makes perception more difficult,
- contours point to an empty space by C3;

Syntactic criteria of syntactic unification are those by similarity (S1 - S4) and those by contiguity (C1 - C4).
Syntactic contamination of cognitive groups can be achieved by:
- opposing these syntactic criteria within one element (Hybrid H),
- opposing these syntactic criteria within mixed elements (Mixture M),
- making differentiation difficult by minimal differences in respect of one criterion (Minimal Difference MD).

The **interaction of syntactics and semantics** with regard to aesthetic ambiguity can be described in two ways:
a) Syntactic criteria are used to **signify spatial depth** within an icon of a space; this is the link to semantics and to semantic ambiguity. One syntactic criterion can describe an element of the image as 'nearby', another criterion as 'far away'; this means semantic ambiguity of spatial depth based on syntactic criteria.
b) In addition to this fact, syntactic ambiguity of an icon can be interpreted as a sub-sign for semantics of the icon.

A semantic or pragmatic unity (as a potential object of disturbance or of contamination) can be found in a **word** as a concept or actiocept. A concept/actiocept is a scheme AND a bunch of characteristics (e.g. 'river' or 'going'); such a word can be disturbed as a scheme by operations of **deviance** (adjectio, detractio, substitutio, transmutatio) or as a bunch of characteristics by operations of **contamination** (antonymity, discrepancy or complementarity), for example by substituting/supplementing one characteristic of a concept by a characteristic of another concept.

Syntactically based semantic unities which can be objects of operations towards ambiguity are:
a) **unity of one temporal appearance** of all elements of the images (neon light installations by **Bruce Nauman** and **Francois Morellet** do not show all elements of the image at once),
b) **unity of one point of view** (multi-perspective images such as those of cubism show an object from different angles),
c) **unity of one cutting border of the image** (several art works show several images/frames, see below),
d) **unity of homogeneity of spatial representation by the camera lens** (photos with blur effect show nearby objects with blurred contours and faraway objects with sharp contours, which means inhomogeneity of spatial depth),
e) **unity of one concept of colour S1, of form S2, of size S3 and of orientation S4** (a black and white photo may show one object in red colour,
f) **unity of congruence of contour and its inner planes** (some paintings of the **Nabis** and the avant-garde of the 1910s show a divergence of contours and the planes which are normally meant to be surrounded by these contours),
g) **unity of indices** by forms, figures, light, wind, nature etc. (**Jan van Eyck** e.g. painted a supersized Madonna in a church with sunlight coming unnaturally from the north: *Madonna in the Church*, ca. 1426).

Unity of semiotics (a lot of images are not only iconic but also semantically abstract and symbolic or indexical by showing traces of the painting process), and **unity of natural proportions** are other unities.

1.3.2 Objects of operations towards semantic ambiguity

1.3.2.1 Differentiation of syntactic-semantic ambiguity from pure semantic ambiguity

A divergence of the mental image 'normal human head' from an image showing a similar but changed head (with three eyes/only one eye/circulated eyes/substituted eyes) means pure semantic ambiguity (absent) 'natura' versus (present and deviant) 'ars', because ambiguity takes place only at the level of semantics/concepts. This **aesthetics of deviance** can lead to **aesthetics of contamination** when substitution or addition leads to a second entity within the changed first entity.

In contrast to this pure semantic ambiguity one can state syntactic AND semantic ambiguity when two circles are drawn into each other, representing two heads. This image shows:

- a contamination of two percepts (two circles, type of contamination: **Hybrid H** in points of intersection of lines and in the space claimed by both circles by the syntactic criterion C3) AND
- a contamination of two concepts (two heads, one smiling and one showing signs of sorrow, therefore type of contamination **antonymity**).

This syntactic ambiguity becomes a **sub-sign in its own right** (which may be interpreted as a sign for 'mental instability' for example); therefore syntactic and semantic ambiguity have to be analysed separately to get every sub-sign out of the art sign; syntactic ambiguity in an icon (i.e. an image which represents a concept) can be interpreted as a sub-sign with implications for semantics ('double-concept') and pragmatics ('double-effect'/ 'double-actiocept').

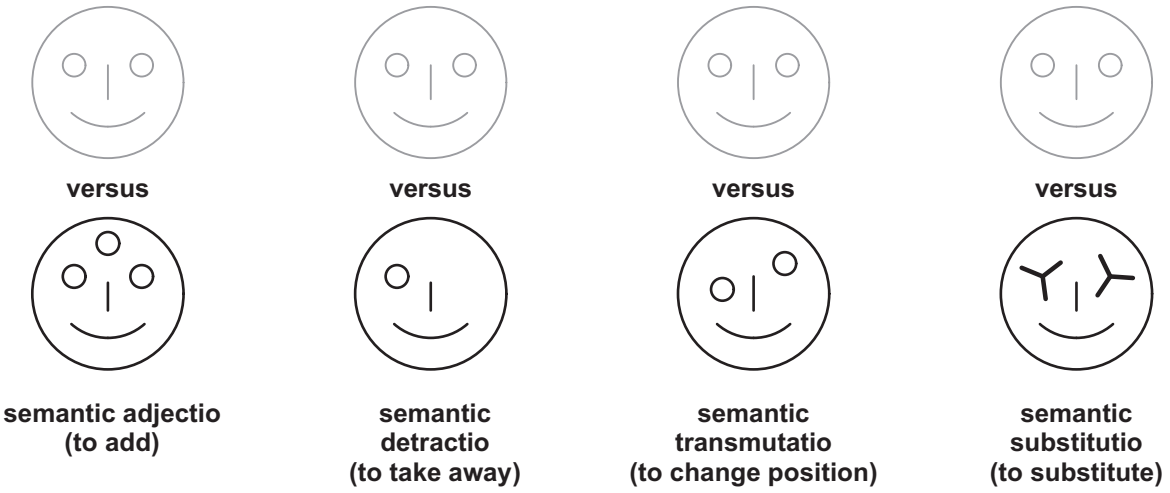


Figure 55: Pure semantic ambiguity:
A 'normal' face as a memorised scheme and its changes according to Quintilian's rhetoric.

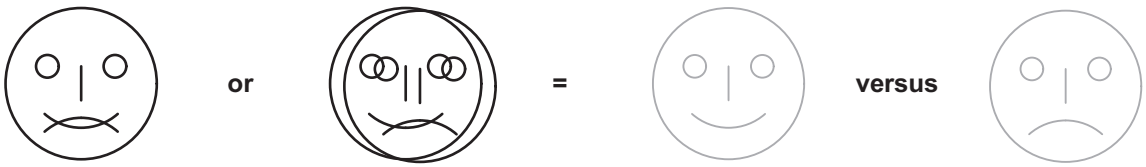
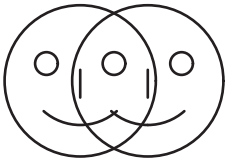


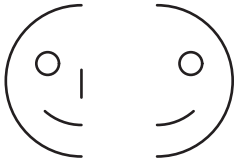
Figure 56: Syntactic-semantic ambiguity
- Syntactic ambiguity: type of contamination **Hybrid H** (C1.1 versus C1.2) in points of intersection of lines and **Hybrid H** (C3.1 versus C3.2) in spaces claimed by two circles in minimal transposition (**Minimal Difference MD**)
- **Semantic ambiguity: adjectio** (two mouths)+ type of semantic contamination **antonymity** ('happiness' versus 'sorrow').

Figure 57: Mixtures of syntactic and semantic ambiguity in the field of abstract icons
(without describing the rhetorical disturbance of the 'circle' scheme)

syntactic Mixture M, semantic detractio + adjectio + antonymity

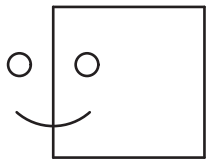


syntactic Hybrid, semantic adjectio



syntactic Mixture M (C1 versus C4), semantic transmutatio

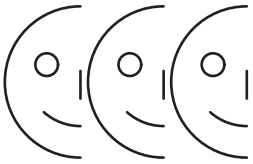
semantic adjectio



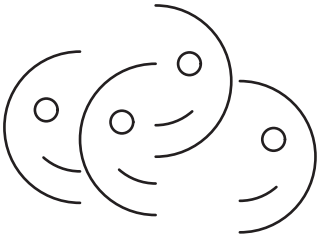
syntactic Hybrid H (C1.1 vs. C1.2), semantic substitutio + transmutatio

syntactic Mixture M (rectangular vs. circular), semantic detractio + substitutio

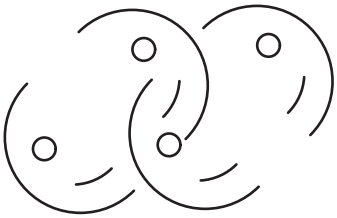
semantic adjectio + substitutio+ detractio



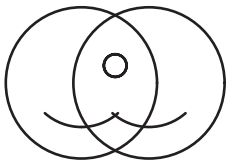
syntactic Hybrid H (S2 eyes vs. C3/ C1 semi-circles), semantic detractio + adjectio



semantic transmutatio + adjectio



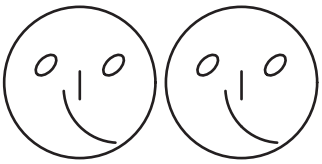
syntactic Mixture M (C1/3.1 vs. C1/3.2), semantic transmutatio + adjectio



syntactic Hybrid H, semantic detractio + adjectio

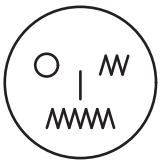
syntactic Hybrid H + Minimal Difference MD, semantic detractio + adjectio

syntactic Hybrid H (S4 vs. S2 in the right eye), semantic transmutatio (of the mouth and the right eye)

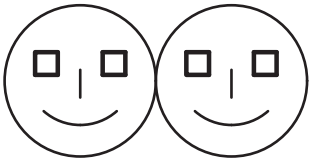


syntactic Hybrid H (S2/S4 eyes/ mouth vs. C3 circle), semantic transmutatio (eyes/ mouth)

syntactic Hybrid H (S2 eyes versus C3 circle), seman- tic adjectio (eyes)

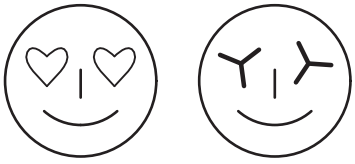


syntactic substitutio (disturbed symmetry), semantic substitutio (eye, mouth)



syntactic Hybrid H (S2 squares versus C3 circles, C1.1 vs. C1.2 in one point), seman- tic substitutio

syntactic Hybrid H + Minimal Difference MD (eye-sequence vs. C3 circles), semantic substitutio + detractio



semantic substitutio of the eyes:
a) left: by a **symbol** > pragmatic complementarity: iconic versus symbolic function
b) right: by a **form** to which associations can be made

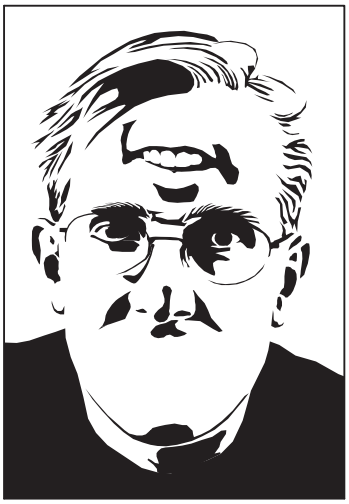
Operations towards aesthetic ambiguity can work on **abstract icons** (such as those smiling pictograms above) more easily than on **naturalistic icons** (such as those below) due to empty white spaces; the recipient tends to interpret a changed abstract icon in a more **allegorical** way. Every variation has a different impact on semantics and pragmatics (see eight and ninth image):

Figure 58 (two pages): Syntactic and semantic ambiguity in the field of naturalistic icons (self-portrait of the author)

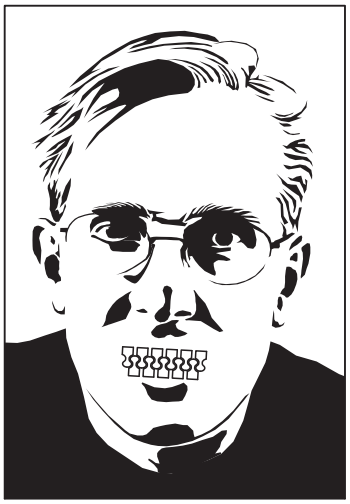
Original (self-portrait)

semantic adjectio

semantic detractio



semantic transmutatio

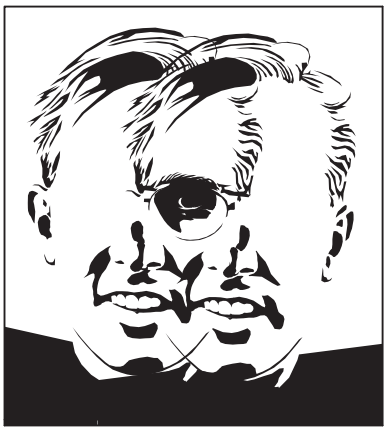


semantic substitutio

syntactic MD + Hybrid H (C3.1 vs. C3.2), syn.-sem. adjectio

syntactic Mixture M (S4.1 versus S4.2) + semantic detractio + adjectio

syntactic Hybrid H + semantic adjectio



syntactic Hybrid H + semantic detractio + adjectio

Jiri Kolar´s technique of Rollage (see plate 287): syntactic Mixture M, semantic adjectio (of a whole second face) + transmutatio (of pieces)

semantic adjectio + substitutio

semantic transmutatio

syntactic Hybrid H (S4 versus S2 in the right eye) + semantic transmutatio

syntactic Hybrid H (S2 eyes versus C3 oval of the head), semantic adjectio eyes

syntactic Hybrid H (S2 forms of the eyes and the mouths versus C3 of three ovals of heads) + Minimal Difference MD (S3.1~S3.2~S3.3... sequences of sizes of eyes and mouths), semantic substitutio + detractio/ adjectio (sizes of eyes and mouths)

1.3.2.2 Reciroprocal enrichment and relativisation of contaminated concepts

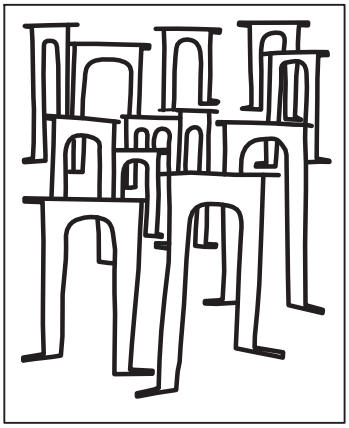
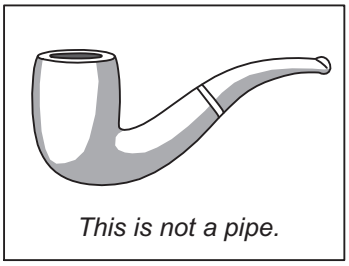
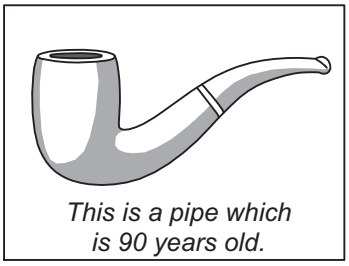


Figure 59: Structure of Paul Klee's *Revolution of the Viaduct* (1937, painting)
Semantic antonymity of the two concepts 'architecture' versus 'human being' leads to **reciprocal enrichment and relativisation of both contaminated concepts as bunches of characteristics**. By using semantic linguistics (see **Helbig** 2008), this semantic contamination can be described as a constellation of characteristics of both concepts:
mental, theoretical, potential agent, instrumental, animal, institutional, human, not animated, geographical, not spatial, informational, spatial, artificial, not human, legal person, animated, not movable, movable, axial;
red > characteristic of the concept 'architecture'
green > characteristic of the concept 'human being'
blue > characteristic of the both concepts
(Paul Klee's 'walking architecture' needs these two aspects)
black = not fulfilled by both concepts.

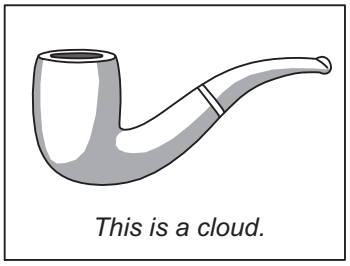
The former instrument **'architecture'** appears as if it was an **animated** and **movable human**, a **potential agent**, a **legal and human person**; the former **'human being'** appears as if it was reduced to an **instrument, less/not movable, less/not animated, geographical, artificial, less/not human**.



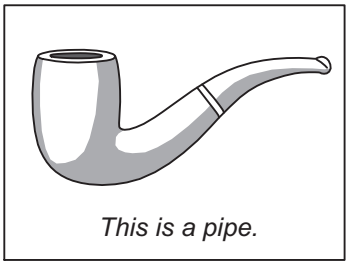
semantic antonymity



semantic complementarity



semantic discrepancy



semantic redundancy

Figure 60: Variation of René Magritte: *The Treason of the images* (1929, painting, original left above)
Images are similar to the represented world and therefore cognition tends to replace three-dimensional, changing and complex contacts with the world by a less complex, two-dimensional, stable and often ideological image; the psychological theory of **Lacan** refers to this tendency of replacement (of complex, ambiguous perception of the world, of yourself and of existence) by a (terrible) simplification of a projected image which comes already into a child's mind by the reflected image of itself. Iconoclasm, the oldest theory of image, may come from the criticism of this terrible simplification by (projected) images.
In Magritte's work this cognitively automatic replacement of reality by an image is interrupted by semantic antonymity of text versus image. The semantic relationship 'complementarity' between text and image is based on the limits of media: analogous, nonlinear and iconic image versus digital (1= word, 0= empty space), linear symbolic text. These conventional limits of representation by text and by image may have led to a tendency to cross these limits, for example by nonlinear poetry or linear image (film) or by syntactic-semantic ambiguity. An early example of this is shown in Figure 313: a prehistoric double-image of two moments of one movements of an animal looking backwards (syntactic Hybrid H of two contours drawn into each other and semantic complementarity of two moments of one movement).

According to **Winfried Nöth** (*Handbuch der Semiotik*. Second edition (2000); Weimar: Metzler publishers, p. 482), the different potentials of text and of image to represent concepts (with regard to semantic complementarity of text and image) can be described as follows:
a) Which **general concepts** can be represented by the medium?
Text: (linear) temporal concepts, image: (nonlinear) spatial concepts;
b) Information on which human **channel of sense** (hearing, smelling...) can be represented by the medium?
Text: every sense (smell, sound, taste...), image: only the visual channel;
c) Can the medium represent **concrete AND abstract concepts**?
Text: concrete AND abstract concepts, image: only on a lower level abstract concepts, abstract concepts by symbols in the image
d) Can the medium represent **particular or general concepts**?
Text: both, image: in general only particular concepts (exception: highly abstract pictographs of the human being in general like in the art of the Russian avantgarde 1918-1930 as a sign for 'equality')
e) Can texts **refer to** texts, images to images?
Texts: yes, images: only in a limited way (e.g. reflection)
f) Is a **theory** of texts in the form of a text/a theory of images in the form of an image possible?
Text: yes, image: no (you can criticise this declaration, because even **Albrecht Dürer** created images about making images such as *'Drawing the lute'* from 1525 in which he describes the geometry of perspective)
g) Can the medium **deny** a statement?
Text: yes, image: no.
h) Can the medium give **reasons** for facts?
Text: yes, image: no
i) Can you **(speech) act** by using signs of the medium (such as affirm, lie, ask, appeal, promise...)?
Text: yes, a text can spoke act; image: no
j) **How much information** can be transported in one period of reception of the medium?
Text: less than the image, image: more than the text
k) Does the medium transport more **monosemic or a polysemic meanings**?
Text: less polysemic (exception: rhetorical tropes), image: more polysemic

To **cross these borders of the image** was a project of modern art and its techniques in general (see e.g. **E.J. Marey´s chronophotographic gun**, 1883): aesthetic ambiguity helps to cross these borders of the image (see chapter 2.2.6 for example: semantic contamination of two moments as a representation of time by the aesthetically ambiguous image). 'Understanding the world by signs' could be understand as a relating of linear texts and nonlinear images, which leads to a medley, an ambiguous contamination. Even the reception of an isolated text leads to such an ambiguous contamination of linear and nonlinear mental ideas, because the recipient produces mental images about the space in which the action described by the text takes place.

A concept is a bunch of characteristics which can be changed by deviance operations and contamination operations; for example, the **value** 'heavy weight' of the concept 'rock' can be substituted with 'no weight/be suspended', as **René Magritte** does in his painting *The Castle in the Pyreneans* (1959), in which the normal **spatial embedding** is also substituted (above the sea instead of on the ground). According to the MultiNet metalanguage (**Helbig 2008**, page 40), the following general characteristics of an object (as a concept of semantics like 'stone') can be also objects of an operation towards ambiguity:
A) intraobjective (a) substantial: is part of/consists materially of/has a specific quantity; b) qualitative: properties, attributes and values);
B) spatial embedding (point or extension in space);
C) temporal embedding (point or duration in time);
D) interobjective (a) assignments of possessions, other objects, a form or representational mode; b) comparing: quantitatively equal/more/less, qualitatively equal/similar/different in an aspect);
E) telic: spatial origin/direction, purpose.

1.3.3 Objects of operations which lead to pragmatic ambiguity

1.3.3.1 Four kinds of reference to action by the work of art

Four kinds of actions linked to the art sign can be distinguished; action within pragmatic ambiguity appears as: A) reaction of the recipient, B) performance by the artist, C) representation by signs, D) remembrance of the handling of a (rhetorically changed) tool.

A) Reaction of the recipient

Mixed feelings as a reaction to a work of art can be stated, for example, in still lifes of the Baroque period; these show **semantic antonymity** (flowers, fruits, butterflies versus worms, insects and parts of decay) which leads to **pragmatic antonymity**. In the architectural sculpture '*Maman'* (1999, a kind of metal pavilion in the form of a spider) by **Louise Bourgeois**, one can identify semantic-pragmatic antonymity ('pavilion = shelter' versus icon 'spider = threat'), and also in some **happenings by Viennese action artists** in the 1960s: naked young human bodies (i.e. attraction) versus blood, offal and dead animals on these bodies (i.e. disgust).

Images show spatial embedding of situations to which temporal embedding can be added mentally by the recipient: reception itself is ambiguous (showing by the artist versus adding by the recipient).

Timm Ulrichs uses paradoxical appeals in a lot of his works; in 1969, for example, he placed a gravestone in a cemetery; on the gravestone the following appeal is engraved: ***'Always think of forgetting me!'*** One can produce **pragmatic paradoxical antonymity** (way versus aim of an action). This pragmatic antonymity can be linked to **Zen Buddhist** koans such as ***'Clap with one hand!'***

B) Performance by the artist

If the normal function 'representation' of an image is only ironically quoted and therefore subverted, one can refer to simulation by the artist. A simulation is ambiguous because it quotes an action without taking it seriously. The work *'The human face in the mirror of sociologically nervous processes'* by **Jürgen Klauke** (1976- 1977, figure 381) shows a series of photos of the artist's face either smiling or looking stern at the viewer; different titles are written on the photos: *'judge', 'artist', 'official', 'anarchist'*.... This simulation of representation can be named pragmatic antonymity (simulated representation versus actual criticism of representation).

C) Representation of action by signs

Such signs may be non-verbal, linear, indexical signs which do not show an action but only hint at an action. An action (as a linear source-destination-path with beginning and end) cannot be represented by an image; therefore the missing aspects are added by the recipient. This means that the recipient enacts mentally the action.

The work *'Card-Sharper'* by **Georges de la Tour** (ca. 1620) shows one person gambling with cards and three persons deluding this person, which is shown by nonverbal indices of the bodies (semantic and pragmatic antonymity).

The staircase scene in the film *'Battleship Potemkin'* (1925) by **Sergey Eisenstein** shows numerous linear indices and counter-indices (pragmatic antonymity). The film *'Ghosts before breakfast'* by **Hans Richter** (1927) shows actions in retrogradation by playing the film backwards (pragmatic transmutatio).

Sequential parts of two actions may be shown in a film in alternation ('Mixture M') or two actions can be shown simultaneously by double-exposure ('Hybrid H'). Both representations of action mean pragmatic contamination.

In the work *'Change-Money-Change. A circulation through twenty currencies or the actualised fairy-tale of Hans with good luck'* (1968- 1978) by **Timm Ulrichs** the aim of changing an amount into another currency in order to buy something is substituted with the repetition of changing until the amount is so small that it cannot be changed again: pragmatic substitutio + antonymity (use of a medium versus its destruction) by pragmatic adjectio (repetition of changing).

D) Remembrance of the handling of a (rhetorically changed) tool.

Art using tools of everyday life refers to the handling connected to this tool; therefore the change of a tool leads to pragmatic substitutio + contamination (old actiocept: handling/function/temporal or spatial embedding of the tool versus new actiocept: its new handling/function/temporal or spatial embedding: exhibition room). **Marcel Duchamp's** art of object beginning in the 1910s shows a general pragmatic antonymity (profane embedding/function versus sacred embedding/function).

Change of such tools that are directly connected to the human body may be received as an intervention in the recipient's consciousness of body; **Marcel Marien's** work *The Unfindable* (1937, see figure 378), for example, shows a pair of glasses of which one glass was taken away: pragmatic detractio (of one glass) + substitutio (old function of seeing versus new function of an allegory).

1.3.3.2 Pragmatic ambiguity and the model of pragmatics of Roman Jakobson

a) Feelings of the sender: expressive function

Political posters by **Klaus Staeck** are often based on **pragmatic-ironic-expressive antonymity**, for example: *'Im Mittelpunkt steht immer der Mensch' (lit. The human being is always the centre of attention)* (1981, poster): the head of a figure is substituted with a barcode (as a symbol for mass production for the masses, semantic substitutio), the title is written on the poster, title and photo are in semantic antonymity which indicates that the title is only an ironic expression; irony is semantic antonymity (the transmitted content versus the intended oppositional content) and pragmatic antonymity (showing doing versus pretending doing).

b) Context: referential function
Semantic ambiguity means a **duality of reference**:
a) case of deviance: reference to a scheme and to deviance from this scheme, b) case of contamination: reference to several contaminated entities.
A contamination of objects of **desire** (fruits, flowers, musical instruments) and of **disgust** (worms, insects, decay) in Baroque still lifes mean pragmatic expressive ambiguity (two feelings towards life are expressed) and pragmatic appealative/ evocative ambiguity (two feelings may be evoked).
Art using **tools of everyday life** refer to two (nonlinear) **embeddings** (old substituted embedding of the tool versus new embedding of the object of art: exhibition room) and to two (linear) **purposes** (old substituted function versus new function as an art sign). This substitution of an old function of a tool is often clearly visualised by a kind of **destruction of the old function** (pragmatic referential detractio) in Dadaist or post-Dadaist works of the 1950s and 1960s: compressing of cars (**César**), letting cars explode (**Arman**), smashing a violin to pieces or cutting or burning it (**Arman**), fur-covered teacup (**Meret Oppenheim**: *Breakfast in Fur*, 1936), painting rolls with white colour (**Piero Manzoni:** *Pane,* 1961), hitting hundreds of nails into a chair (**Günther Uecker**: *Nailed Chair*, 1963) or smearing butter on it (**Joseph Beuys**: *Fat Chair*, 1964), making sausages out of books (**Dieter Roth**: *Literature Sausages/Hegel in 20 volumes*, 1974), putting cars into concrete (**Wolf Vostell**: *Cars put into Concrete*, 1987), wrapping a sewing machine in cloth (**Man Ray**: *The secret of Isidore Ducasse*, 1920) or the 'Look' magazine in transparent foil (**Christo:** *Look*, 1965, Edition MAT), sewing a bag of felt for a grand piano (**Joseph Beuys**: *Infiltration for Grand Piano*, 1968). These visible destructions of an old function of tools are interventions in the consciousness of body of the recipient, who has to develop a new way of handling the changed tool.
To give an instrument another function is a technique often used by **situationist** writers and artists such as **Guy Debord, Raoul Vaneigam**, and artists like **Asger Jorn** who partly overpainted decorative trashy paintings in an Abstract Expressionist way in the 1950s. With the term ***anti-conditioning***, Raoul Vaneigam (1980, p. 184) defines the purpose of such an exchange of function as an **exchange of educated perspective by the artist's personal and unusual perspective**.

c) Message: poetic function
The principle of **similarity** (rhyme etc.) within an order of linear sequence of words (**contiguity**) as the **autotelical poetic function** of a poem can be generalised with regard to images as **aesthetic anti-distinction** achieved, for example, by contamination of entities, by aesthetic ambiguity.

d) Contact (physical channel + psychological relationship): phatic function
Wim Delvoye digitally manipulated a photo of a mountain to a monument by adding huge 'engraved' capital letters forming the following phrase: '*OUT WALKING THE DOG, BACK SOON. TINA*' (2000); in this case you can state pragmatic phatic anotonymity ('sacred monument' channel versus 'profane notice of everyday life' channel).
The **Adbusters** movement subverts the formation of the 'commercial advertisement' channel to criticise the conditioning of behaviour by advertising. They therefore call their technique **'subvertising'**, with which a kind of pragmatic phatic antonymity can be created (old function of the channel versus new function of the channel).
Taking away one of the several sensory channels (hearing, smelling...) while experiencing an object is the principle of the following works (**pragmatic phatic detractio)**: **Marcel Duchamp**'s *A Bruit secret* (1916) consists of an invisible object which produces noise by moving between two metal plates. **Yves Klein**'s *Tactile Sculpture* project (1958) leaves only the tactile channel to the recipient, who can touch an invisible object.

e) Code: metalinguistic/metasemiotic function
Syntactic/semantic/pragmatic ambiguity refers to syntactic/semantic /pragmatic criteria as the 'grammar' of the art sign. It is therefore metalinguistic/metasemiotic (pragmatic ambiguity of representation by a sign versus reference of the sign to itself; showing versus showing showing).
Several levels of abstraction can be found within an **Etruscan human figure** (see example below), 'iconic grammar' is rendered visible by the technique of 'abstraction' itself.
'Keep it real!' (print, no date) by **Banksy** includes the iconic languages of comics (used for the representation of a boy) and of photo-naturalism (used for businessmen laughing at this boy); this pragmatic ambiguity of two mixed languages in one image is metalingual/metasemiotic as well.

f) Recipient: appealative/ evocative function
The effect of the appeal on the recipient can be divided in an inner and an outer reaction.
Timm Ulrichs has placed a gravestone on a cemetery in 1969; on the gravestone the following paradoxical appeal is engraved: *'Always think of forgetting me!'* (see above). You can state **pragmatic appealative/ evocative antonymity** (way versus aim of an appeal).

1.3.3.3 Pragmatic ambiguity with regard to temporal and spatial embedding and source/destination processes

Pragmatic ambiguity can work on nonlinear aspects of a situation (e.g. spatial embedding) or on linear aspects of it (e.g. temporal embedding, source-path-destination):

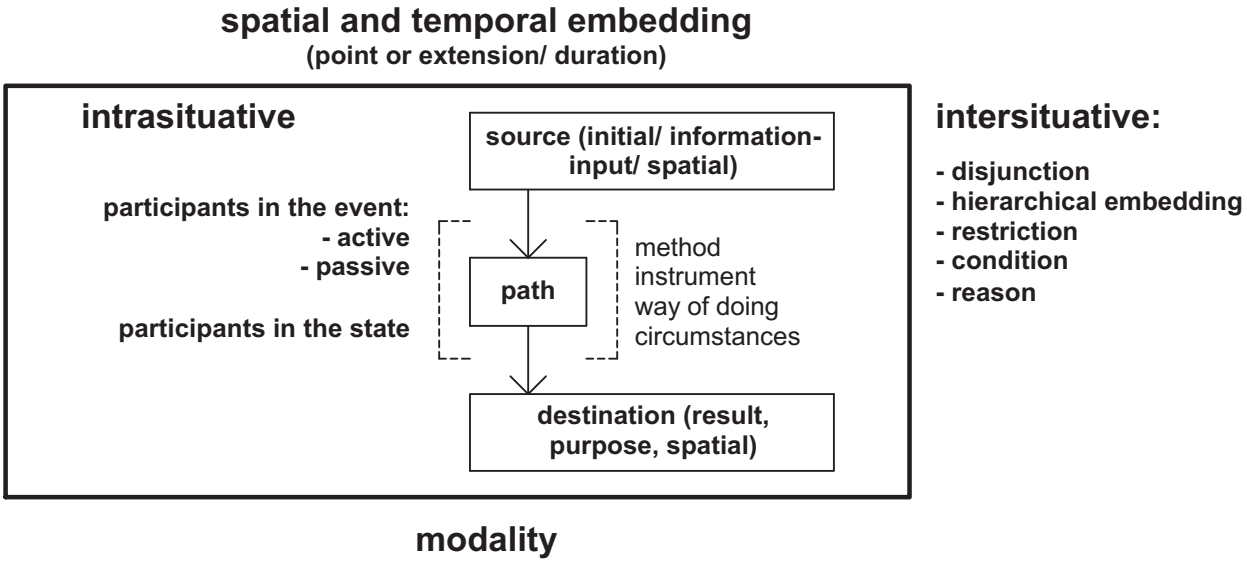


Figure 61: General description of a situation according to the MultiNet metalanguage (Helbig 2008) with linear and nonlinear aspects as potential objects for operations towards pragmatic ambiguity.

These aspects of a situation can be used as objects for operations of deviance or of contamination= production or for analysis of pragmatic ambiguity, for example:
a) doing something intimate in public (**pragmatic substitutio** of the conventional spatial embedding of an action), b) doing something in an anormal order (**pragmatic transmutatio** within the path of the source-destination-path), c) doing something very old fashioned (**pragmatic substitutio** of the conventional temporal embedding), d) digitally dividing the space of action and the result of the action (**pragmatic detractio** of the destination out of the spatial embedding of the source); but this division of space of an action seems to be more and more conventional (i.e. no longer deautomatised and metacognitive) **attrition of pragmatic ambiguity** by getting accustomed to it within a telematic civilisation, e) making the source to the destination (Sisyphus-circulation/devil circulation, **pragmatic substitutio**), f) being active and passive participant at the same time (**pragmatic contamination**); for example, in his *Timm Ulrichs, shadowed/Detective Diary*, 1970/71) art action, **Timm Ulrichs** assigned a detective the task of shadowing him.

This **typology of actions** (Helbig 2008, page 153) may be quite useful for the purpose of **happenings operating on everyday actions** as objects for producing ambiguity; an everyday action:
- of low intensity (to sleep a little bit)
- of a definite ending (to read till the end)
- with self-repetitions on a lower grade (to cough slightly)
- of longer duration (to feel)
- as a result of a sequence of other actions (to ascend the top of a hill)
- as the beginning of a sequence of other actions (to start doing something)
- as a change without the purpose of an end result (to develop)
- with the end result of an object (to write a letter)
- with evolution and clear destiny (to blush)
- in repetition or as a habit (to shovel, to tremble)
- leading to another action or a state (to order, to paint on something)
- limited to a point of time (to explode)
- executed together with other persons (to play with each other)
- with a result after its ending (to overwork)
- executed only once due to irreversibility (to destroy)
- as a kind of state (lying on the ground).

Examples based on this typology of action are:
1) a contamination of non-verbal signs for ‘sleeping’ and ‘going’ (**pragmatic antonymity)**,
2) filling water from one barrel into another endlessly due to the connection of both by pipes in **Timm Ulrichs’** happening lasting eight hours *‘Water-circulation and idling-action...’* (1968, **pragmatic substitutio ‘destination’ by ‘source’ + antonymity (end result versus end-resultlessness)**
3) endless repetition of the beginning of a telephone call: *‘Yes? Hallo!’* (sound art by **William Burroughs**, **pragmatic adjectio**).

2.0 Analysis of examples from art history using the 21 types of aesthetic ambiguity

The analysis has two parts which reconstruct the complex reception of an ambiguous work of art:
a) A text assigns the work of art to **one type or several interacting types** of aesthetic ambiguity and names the **cognitive opposition** of syntactic/semantic/pragmatic criteria by writing:
'criterion a versus criterion b'.
Every syntactic ambiguity can be interpreted for itself as a sub-sign for a sub-concept. Semantic ambiguity may lead to pragmatic ambiguity, so every phenomenon of ambiguity has to be named to gain a realisation of the semiotic interaction of the different types of ambiguity.

b) A series of images with several names:
b1) **'structure'** (of a work) means a reduction of the work with regard to ambiguity;
b2) **'reconstruction'** means a kind of sectioning of the image into oppositional cognitive sub-images as possible percepts/concepts/actiocepts: original image = sub-image A + sub-image B;
b3) **'variation'** means a kind of search for the differences of the work to other possible formations, these differences describe the particularity of the work. One kind of variation is the change from polysemy to monosemy. Instead of the one operation on one object in the work of art, a different operation can be applied to the same object, or the same operation can be applied to a different object.

The images provide **visual evidence** as proof for the content of the text.
Another function of this kind of analysis could be its use in a form of art education that approaches art works by remodelling them (mixture of reception and production of art).

2.1 Syntactic ambiguity

2.1.1 Formation with Minimal Difference to two geometric types (point, line, plane, volume)

1 - points to line: points lie together in such a way that the whole appears as a kind of blurred line
(Minimal Difference of S2.2 formation in the image to S2.1 'point' type and to S2.3 'line' type)
2 - lines to point: the ends of two lines lie together in such a way that the whole appears as a kind of blurred point
3 - points to plane: points lie together in such a way that the whole appears as a kind of blurred plane
4 - planes to point: planes lie together in such a way that the whole appears as a kind of blurred point
5 - points to volume: points lie together in such a way that the whole appears as a blurred volume
6 - volumes to point: volumes lie together in such a way that the whole appears as a blurred point
7 - lines to plane: lines lie together in such a way that the whole appears as a blurred plane
8 - planes to line: planes lie together in such a way that the whole appears as a blurred line
9 - lines to volume: lines lie together in such a way that the whole appears as a blurred volume
10 - volumes to line: volumes lie together in such a way that the whole appears as a blurred line
11 - planes to volume: planes lie together in such a way that the whole appears as a blurred volume
12 - volumes to plane: volumes lie together in such a way that the whole appears as a blurred plane
13 - points to lines to plane: points lie together in such a way that the whole appears as blurred lines, these lie together in such a way that the whole appears as a blurred plane
14 - planes to lines to point: planes lie together in such a way that the whole appears as blurred lines, these lie together in such a way that the whole appears as a blurred point
15 - lines to planes to volume: lines lie together in such a way that the whole appears as blurred planes, these lie together in such a way that the whole appears as a blurred volume
16 - volumes to planes to line: volumes lie together in such a way that the whole appears as blurred planes, these lie together in such a way that the whole appears as a blurred line
17 - points to lines to planes to volume: points lie together in such a way that the whole appears as blurred lines, these lie together in such a way that the whole appears as blurred planes, these lie together in such a way that the whole appears as a blurred volume
18 - volumes to planes to lines to point: volumes lie together in such a way that the whole appears as blurred planes, these lie together in such a way that the whole appears as blurred lines, these lie together in such a way that the whole appears as a blurred point

Techniques such as **origami** (**planes to volume**) may lead to such geometric Minimal Difference of a formation to two geometric types.
Since the end of the 19th century there has been a tendency towards **'syntacticisation': Georges Seurat** (**points to plane**) and **Vincent van Gogh** (**lines to plane**), and so on.

Such geometric Minimal Differences in installations may be interpreted as **allegories which disintegrate geometrically based schemes of thinking**:
A) volume to planes (of annual rings in wood) **to lines** (of a trunk) type: **Giuseppe Penone**'s work *Tree of a height of 11 metres* (1969-1989) consists of two volumes of wood; both are massive and rectangular at the bottom, the top is carved in a way that the original form of the previously young, thin and irregular tree with its branches becomes visible. There is **syntactic-semantic antonymity** of regularity versus irregularity, both syntactically linked by
Minimal Difference of the work to three geometric types (volumes to planes to lines).

B) Mario Ceroli, *Mr. Muscolo* (1964, sculpture of a serial of wooden plates, **planes to volume** type): the contour of a male person with big muscles is shown six times by six wooden plates standing behind each other; the impression of a volume is evoked. This could be interpreted in this way: 'repetition of stereotypes in mass media with pseudo-volume/pseudo-life'.

C) points to plane type: **Mona Hatoum** fixed hundreds of little balls to the ground in her 'Map' installation (1998); these form the contours of the continents of the earth. This could be interpreted as a political allegory about the semantic antonymity of 'longing for mobility' versus 'political/geographical/cultural borders'.

D) In the *'Portrait on the fly'* installation by **Christa Sommerer** and **Laurent Mignonneau** (2016), the type of geometric Minimal Difference MD **points to line** is used for a **double icon**: from far away, one sees points/flies walking around as a projection, if one comes closer these flies/points form the contours of your body, your 'portrait'. There is a semantic 'flies' versus 'human body' discrepancy which can be reinterpreted as semantic complementarity (e.g. 'mental portrait of the dispersed attention of the visitor which is drawn to the portrait by coming nearer/concentrating')

There are **technical aspects** of the process of painting with regard to geometric Minimal Difference as well:
The colour of a line may widen by flowing into a plane within humid parts of the ground.

A line can show widened parts which appear as if they were points. If these 'points' are near each other, the impression of a line may be evoked. In the example below, there is a kind of structure composed of curved lines which form a kind of **ground**; on these curved lines, widened parts appear as points forming straight lines of a square as a kind of **figure**. The ground of curved lines seems to go through the figure of a square. This is a **Hybrid H** of figure versus ground and of curved lines versus straight lines:

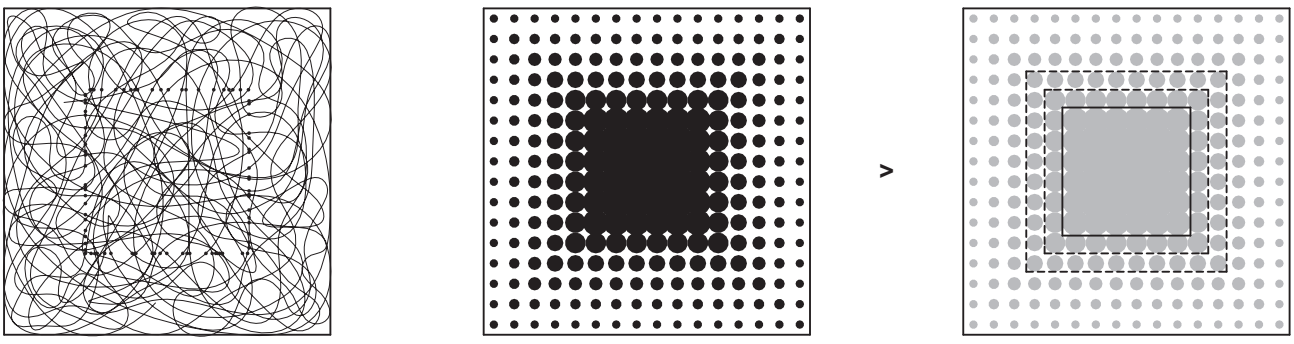


Figure 62: Type 3 of Geometric Minimal Difference (points to plane, mixture of figure and ground)
The image on the left shows Geometric Minimal Difference which cannot be categorised with one type.

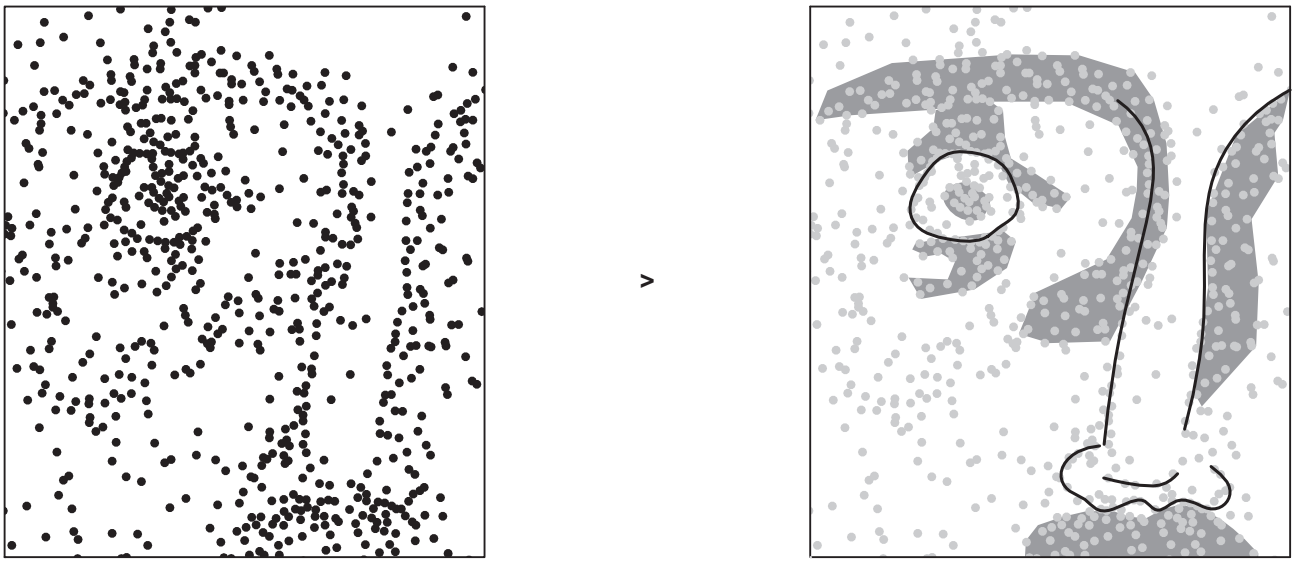


Figure 63: Reconstruction of Paul Klee's *Portrait Mr. A.L.* (1925, ink and watercolour, detail).
Type 13 of Geometric Minimal Difference (points to lines to plane)

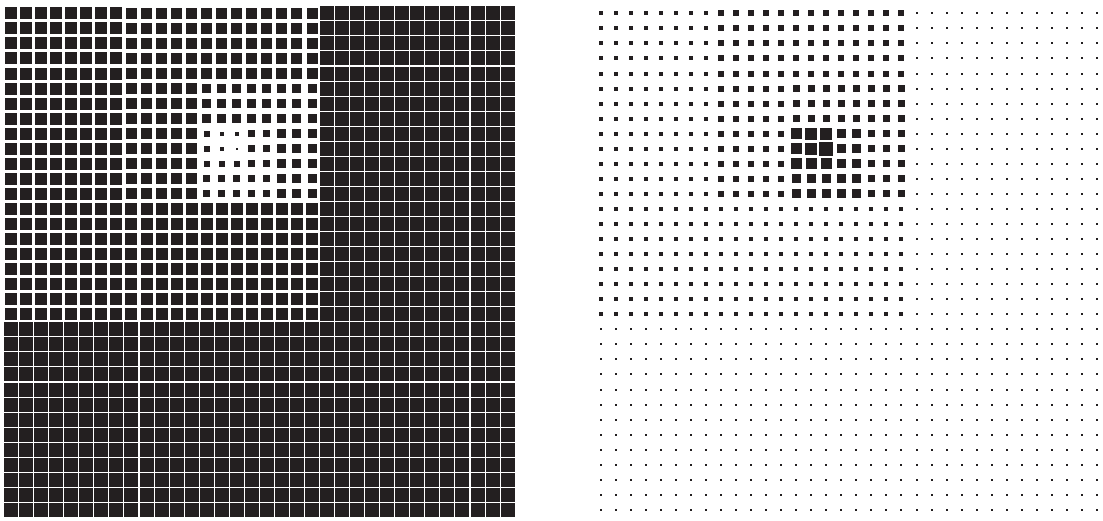


Figure 64: Axel Rohlfs: *Fibonacci-Square-Spiral-Diptych* (2004, computer print).
Type 3 of Geometric Minimal Difference (points to plane)

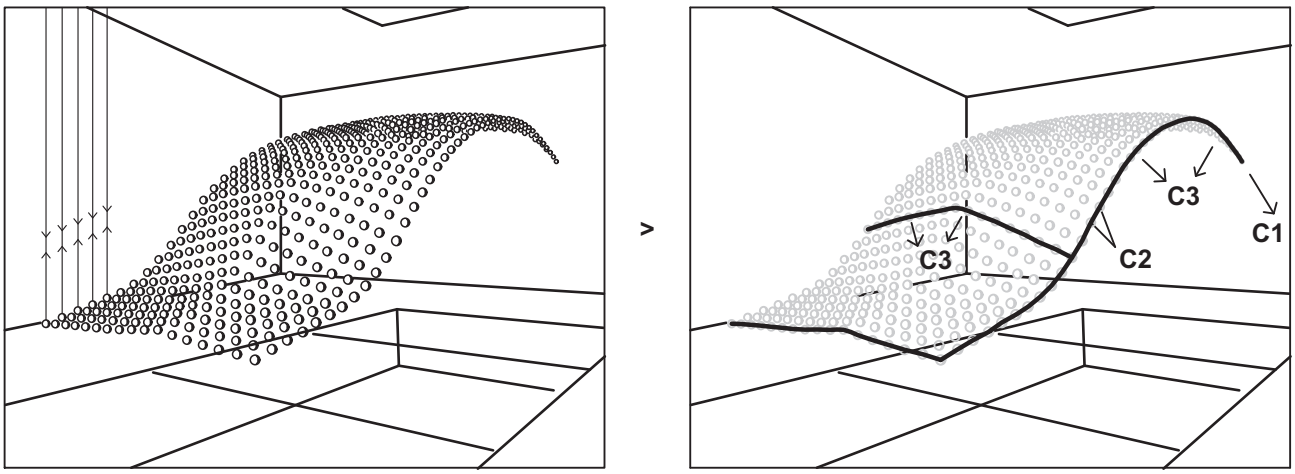


Figure 65: Reconstruction of Art + Com's *The shape of Things to come* (2008, kinetic installation with balls moving up and down, in the moment before it forms the contour of a car).
Type 17 of Geometric Minimal Difference (points to lines to planes to volume)

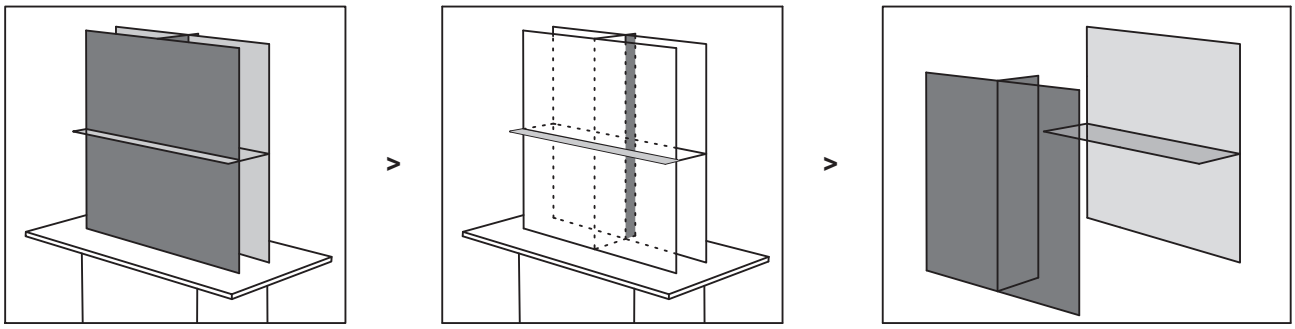


Figure 66: Reconstruction of Jan Kubicek's White and black squares with division of line in contrast (1970, sculpture).
Type 8 of Geometric Minimal Difference (planes to line)

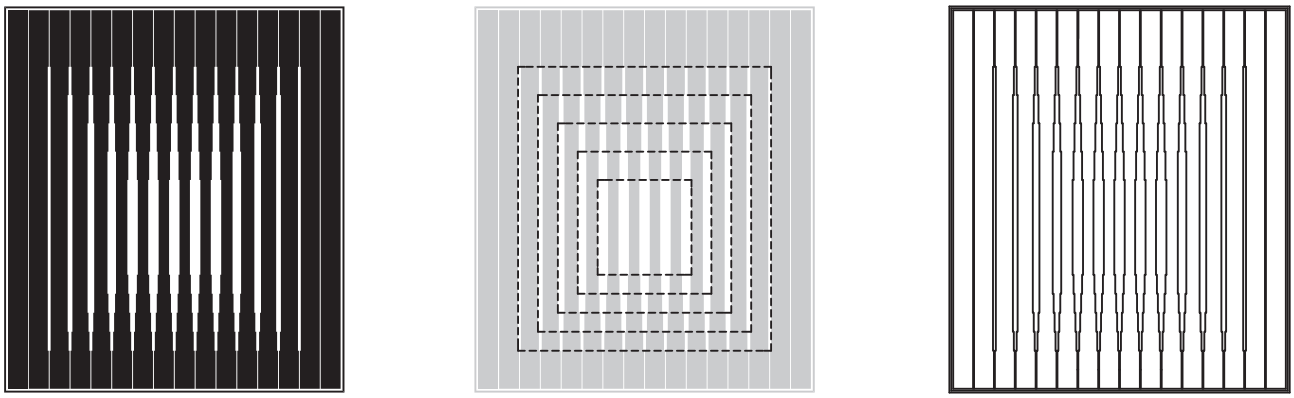


Figure 67: Reconstruction of Victor Vasarely's *Bora II* (1964, print).
Type 7 of Geometric Minimal Difference (lines to plane)

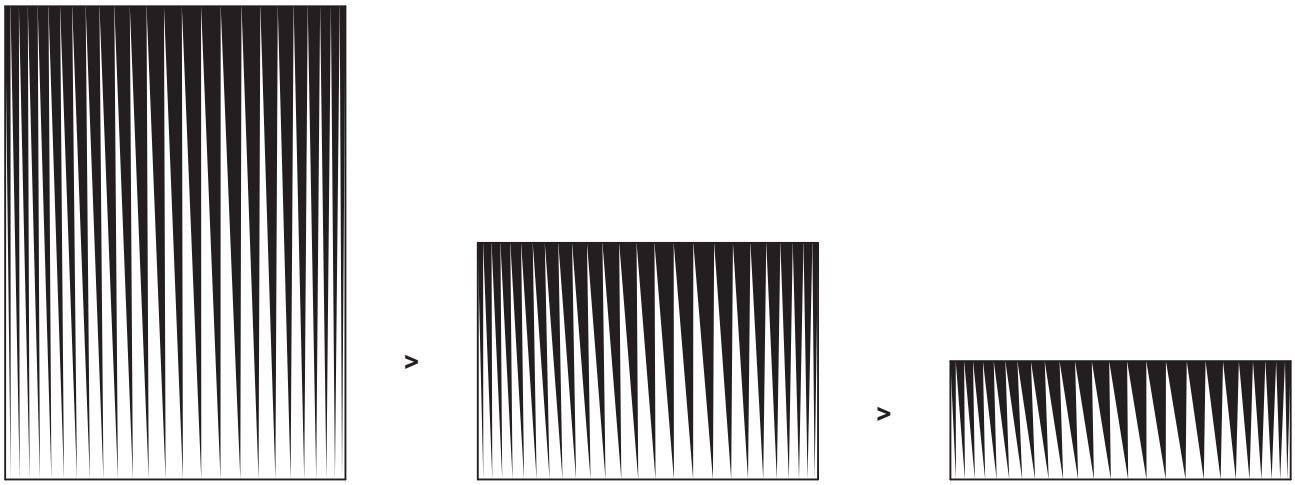


Figure 68: Variation of Bridget Riley's *Breathe* (1966, original left, painting).
Type 7 of Geometric Minimal Difference (lines to plane), reciprocal, positive and negative

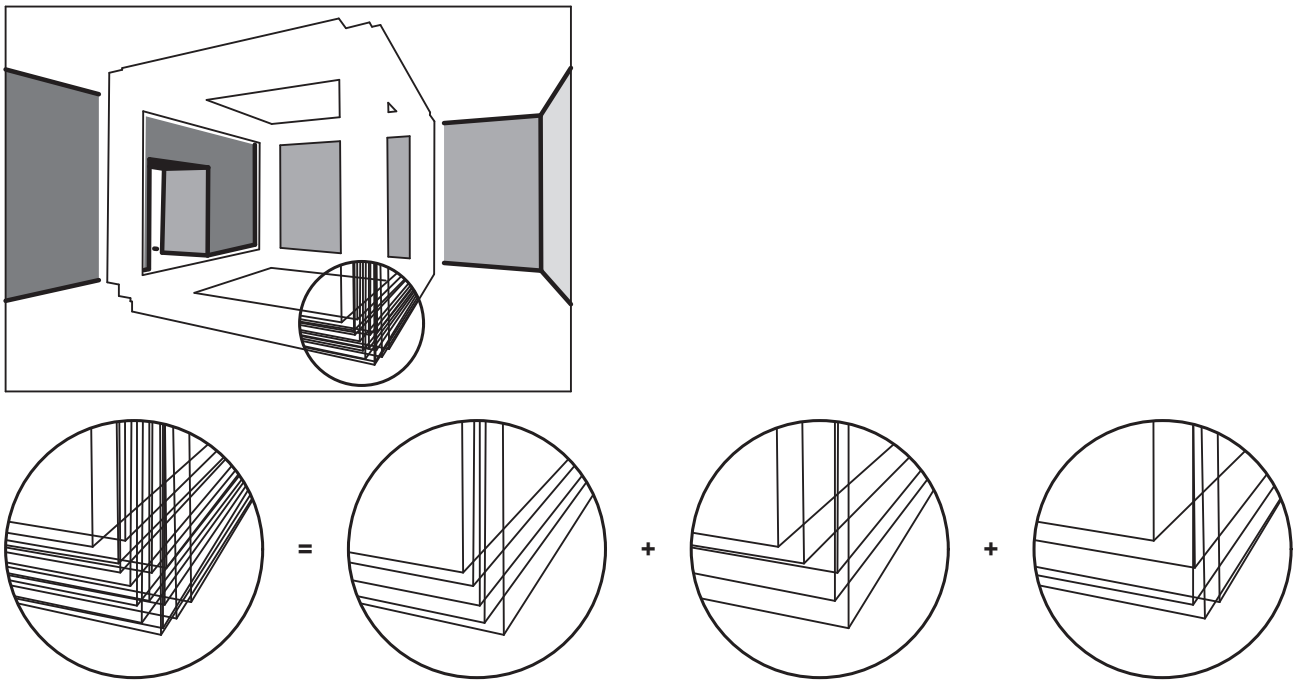


Figure 69: Reconstruction of Antony Gormley's *Murmur* (2014, detail, sculpture of 15 contours of cube, made of metal bars).
Type 9 of Geometric Minimal Difference (lines to volume); 15 contours of cube in each other mean Hybrid H (C3.1 versus C3.2...versus C3.15).

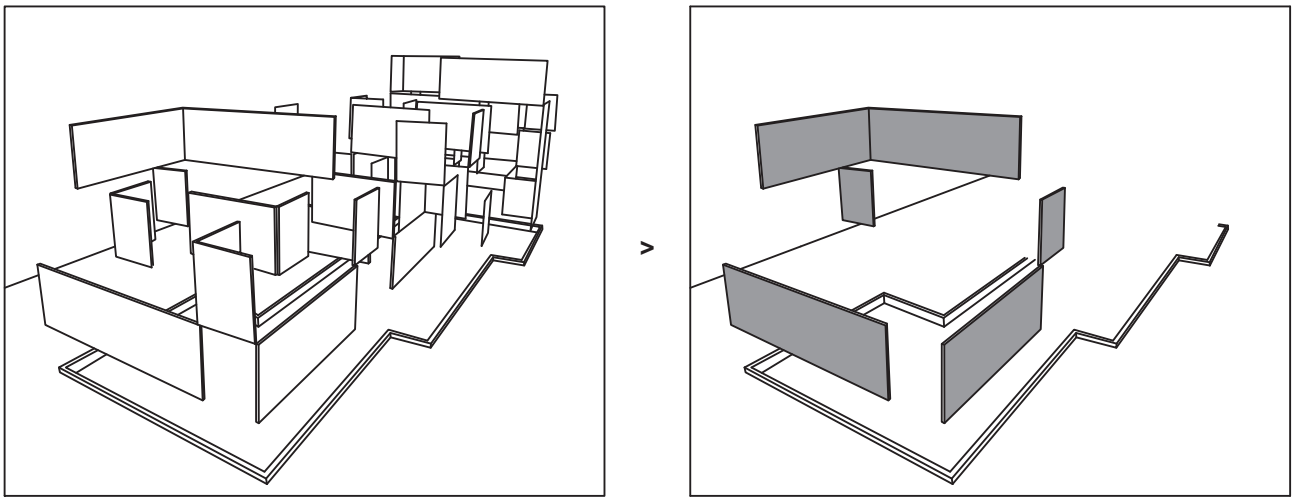


Figure 70: Reconstruction of Helio Oiticica's *Grande Nucleo* (1960, installation of plates in yellow, light orange, dark orange and white colour, right: group of dark orange plates).
Type 11 of Geometric Minimal Difference (planes to volume); appearance: fragments of boxes (detractio)

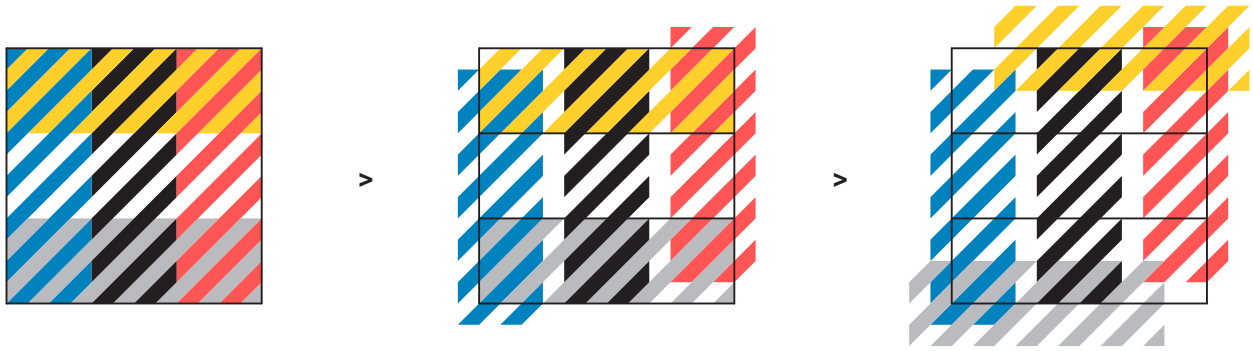


Figure 71: Variation of Anton Stankowski's poster '*Anton Stankowski /Malerei von 1926 - 1977'* (1977, print).
Type 7 of Geometric Minimal Difference (lines to plane) ?;
Mixture M of six groups by similarity of colour (S1.1 versus S1.2...).

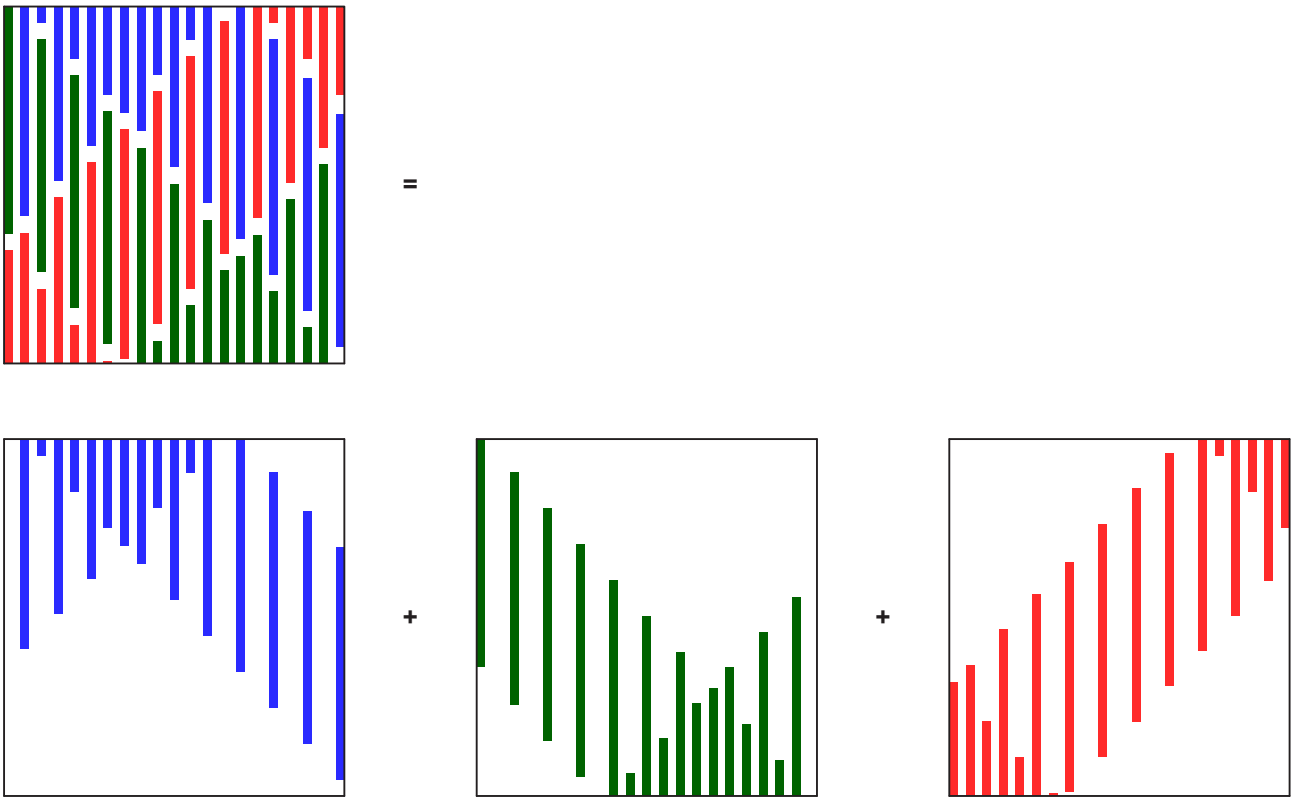


Figure 72: Reconstruction of Horst Bartnig's *30 interruptions - 30 lines in three colours* (1994, painting).
Type 7 of Geometric Minimal Difference (lines to plane); the white interruptions appear as if they were 'points' which form 'lines'; Mixture M of three groups by similarity of colour S1: M (S1.1 versus S1.2 versus S1.3).

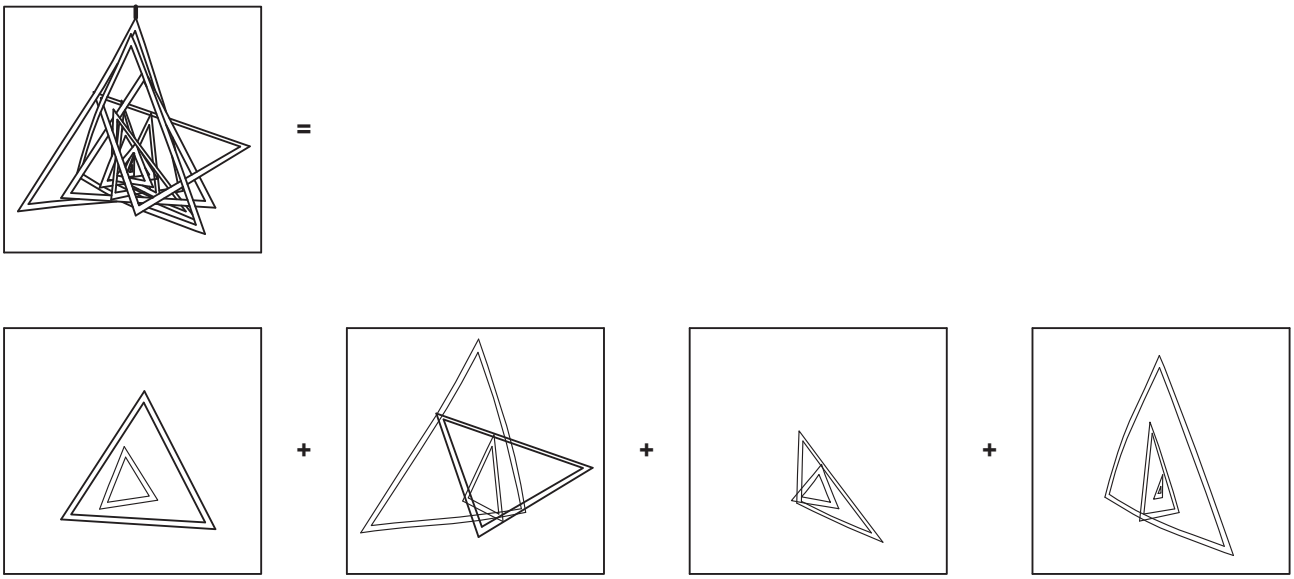


Figure 73: Reconstruction of Alexander Rodtchenko's *Hanging Spatial Construction* (ca. 1920, hanging sculpture).
Type 15 of Geometric Minimal Difference (lines to planes to volume); Self-Similarity (Hybrid)

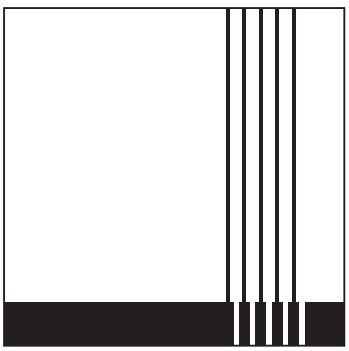


Figure 74: Structure of Frantisek Kupka's *Abstraction* (1930-33).
Type 7 of Geometric Minimal Difference (lines to vertical plane)

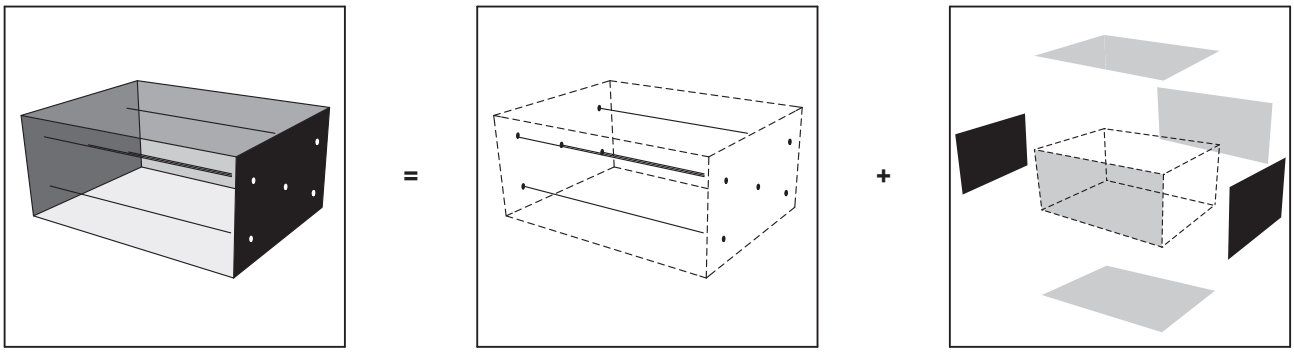


Figure 75: Reconstruction of Donald Judd's *Untitled* (1965 - 1988, sculpture made of four transparent and yellow glass plates, five bracing ropes and two metal plates).
Type 11 of Geometric Minimal Difference (planes to volume), five yellow colours in Minimal Difference MD.

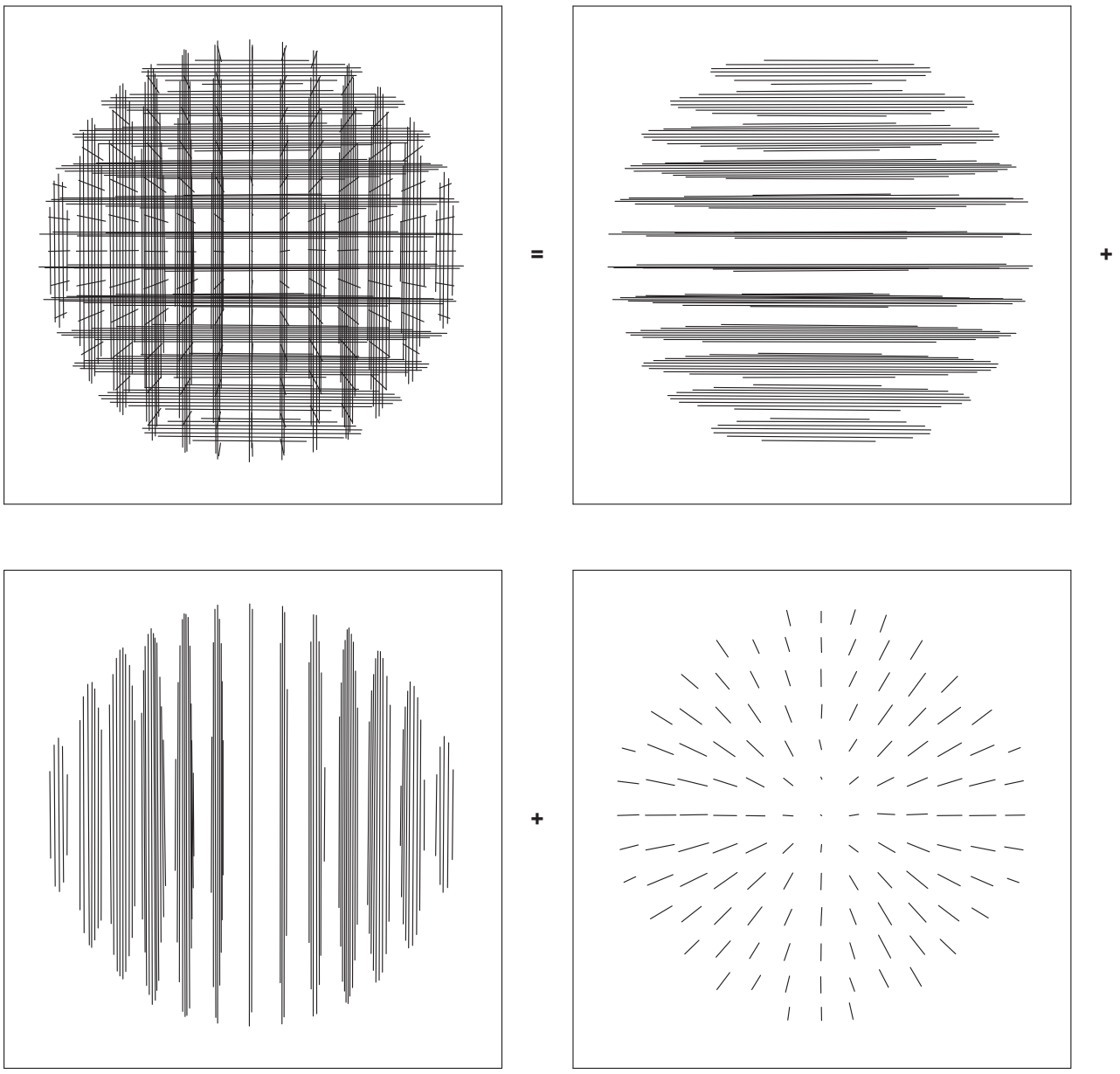


Figure 76: Reconstruction in three dimensions of Francois Morellet's *Sphère - trames* (1962, sculpture made of metal bars).
Type 15 of Geometric Minimal Difference (lines of bars to circle planes to ball volume)

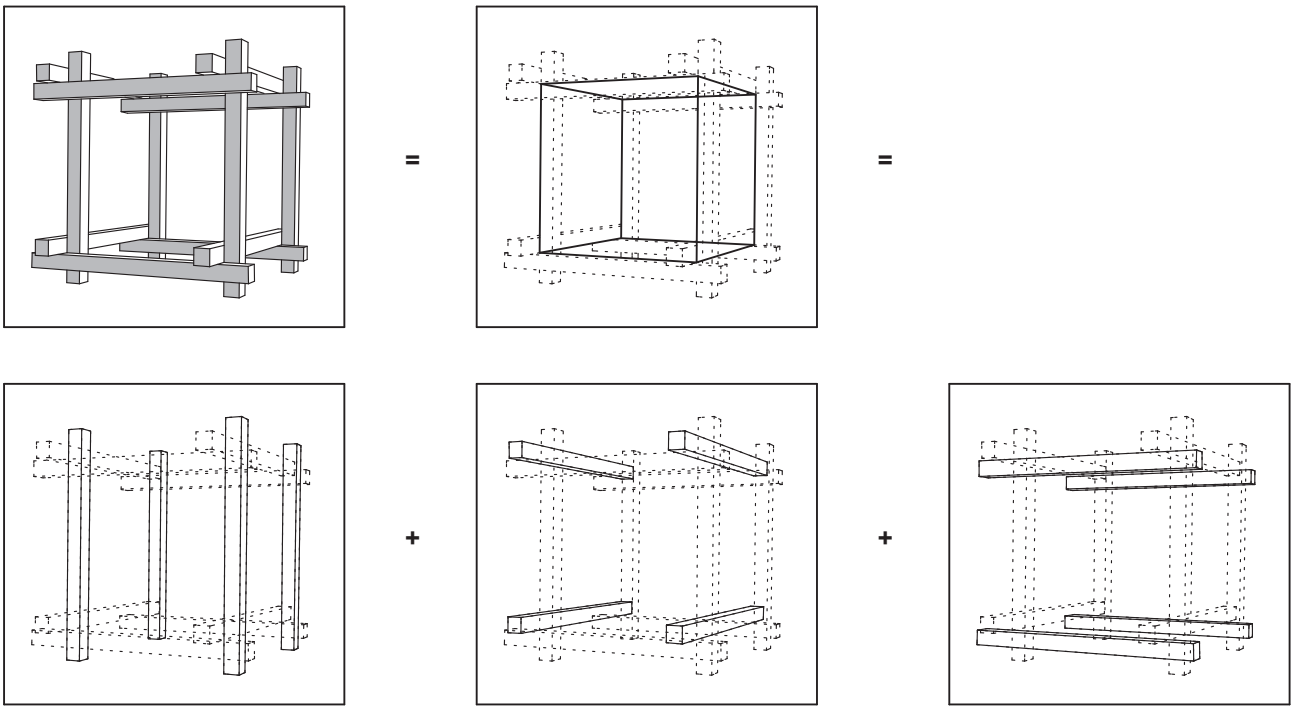
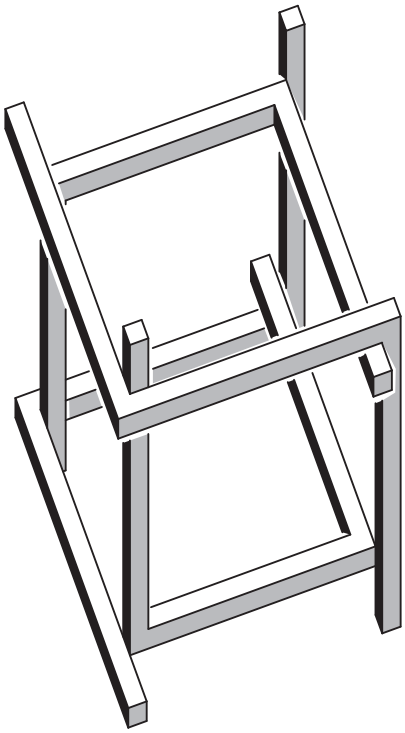


Figure 77: Reconstruction of Max Bill's *Pavilion Sculpture II* (1969 - 1975, wood-work).
Type 9 of Geometric Minimal Difference (lines to volume); Mixture of three groups of four beams: M (S4.1 x-horizontal versus S4.2 y-vertical versus S4.3 z-horizontal)

Figure 78: Axel Rohlfs: *Homage to Max Bill's Pavilion Sculpture* (project, 2017).
Type 9 of Geometric Minimal Difference (lines to volume)



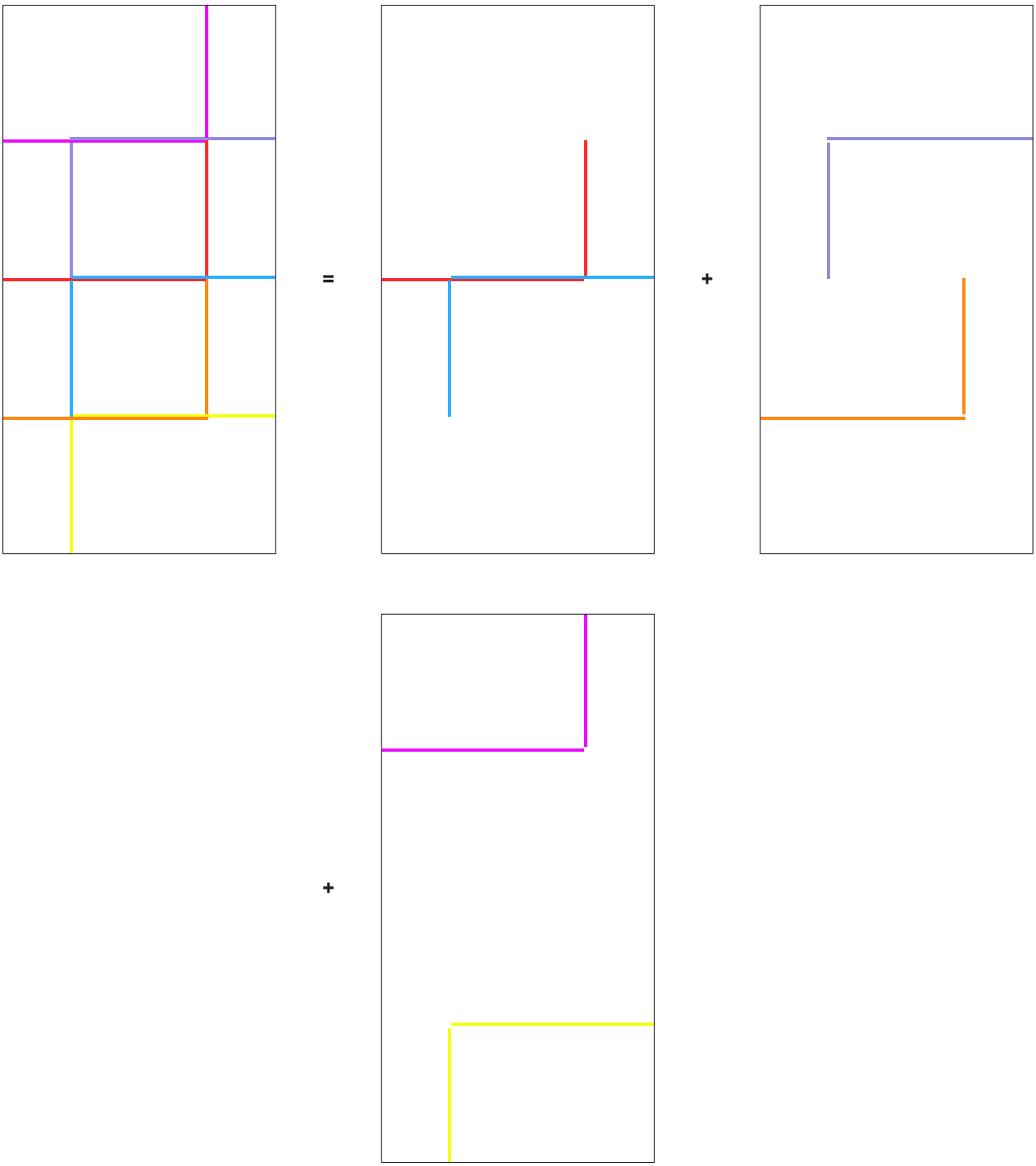


Figure 79: Reconstruction of Max Bill's *Two surrounded Squares* (1971, painting).
Type 7 of Geometric Minimal Difference (lines to plane); Mixture M of three couples of lines similar in orientation **(S4.1 versus S4.2 versus S4.3)**

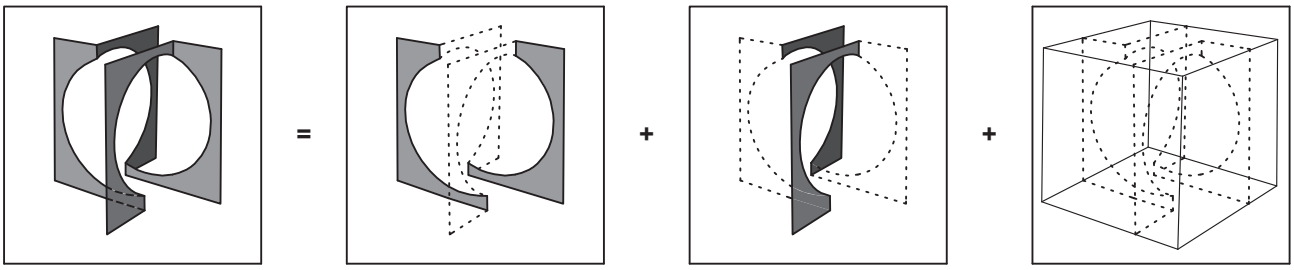


Figure 80: Reconstruction of Franz Weissmann's *Protótipo para Espaco Circular em Cubo Virtual* (1957-78, sculpture made of metal plates).
Type 9 of Geometric Minimal Difference ((circle) lines to (cylinder) volume),
Type 11 of Geometric Minimal Difference (planes to (cube) volume)

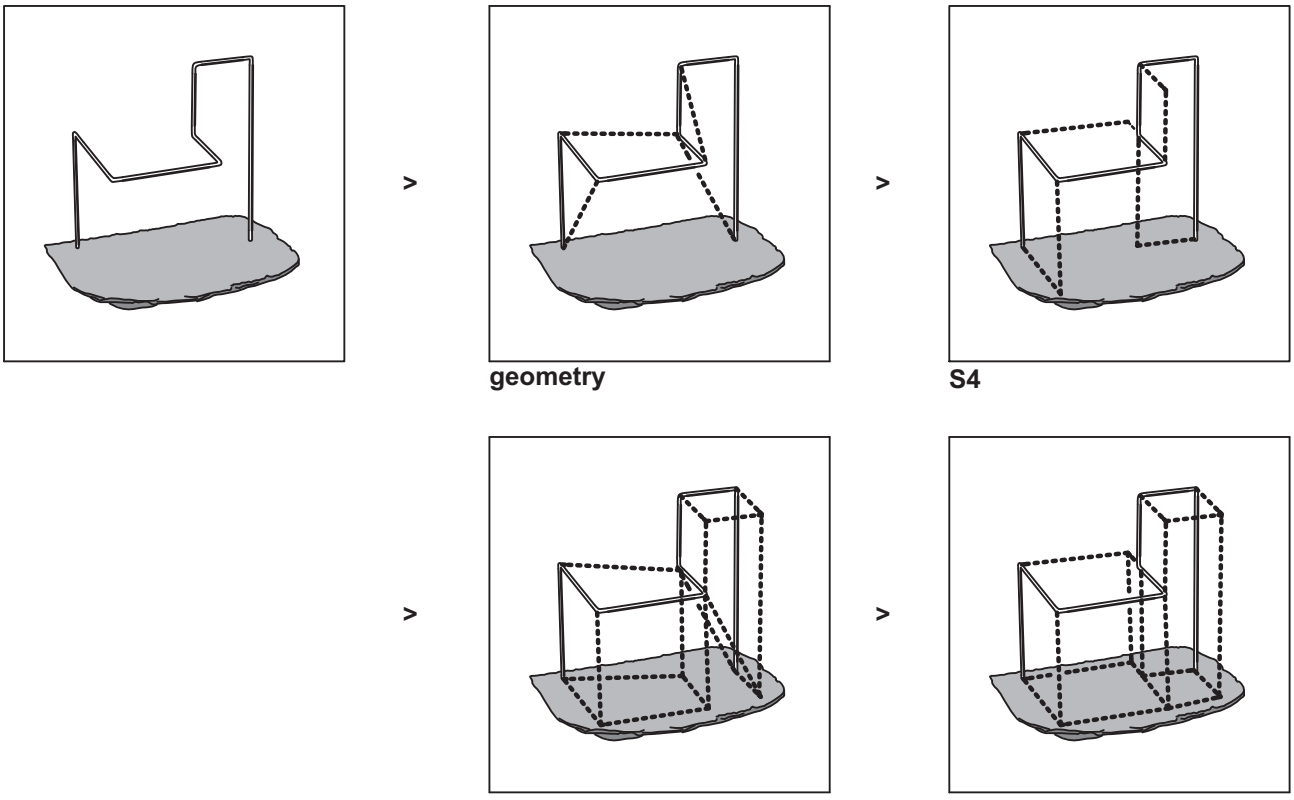


Figure 81: Four possible reconstructions of Norbert Kricke's Spatial sculpture White (1950, sculpture made of one wire, mounted on a plate of slate).
Type 9 of Geometric Minimal Difference (lines to volume) + syntactic detractio

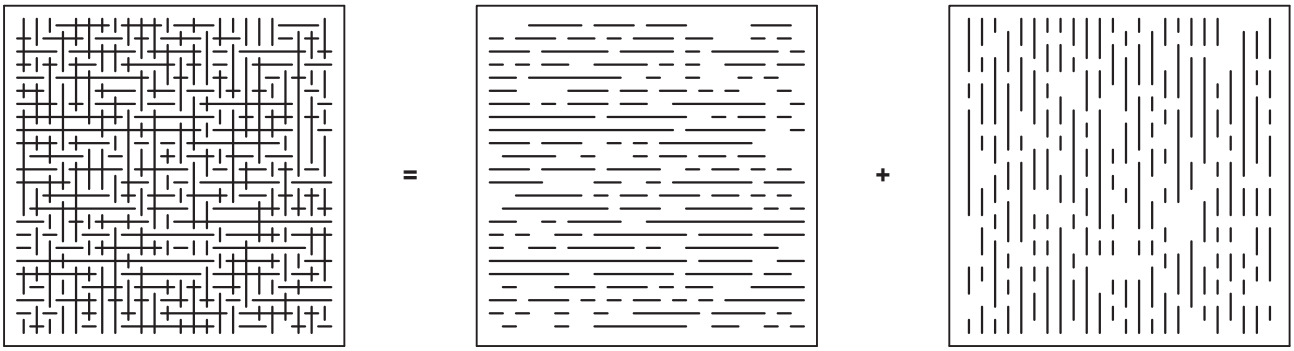


Figure 82: Reconstruction of Vera Molnar's *Simulation d'une série de divisions de Mondrian à partir de trois éléments au hasard* (1959, painting).
Type 13 of Geometric Minimal Difference (points to lines to plane) because of syntactic detractio + Hybrid (S4.1 group of horizontal lines versus S4.2 group of vertical lines)

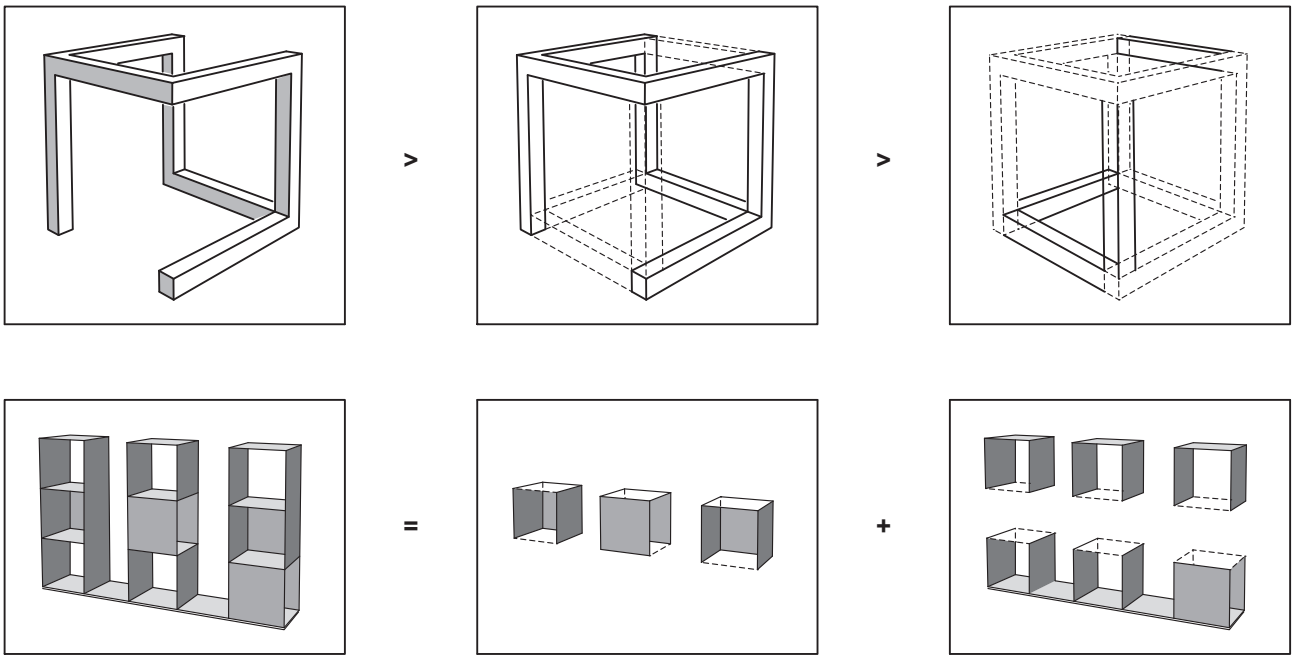


Figure 83: Reconstructions of two works by Sol LeWitt:
a) *Incomplete Open Cube* (one example of a serial started in 1974, sculpture).
Type 9 of Geometric Minimal Difference (lines to (cube-)volume) because of syntactic detractio;
b) *Three Part Variations on Three Different Kinds of Cubes* (1967, sculpture).
Type 11 of Geometric Minimal Difference (planes to (cube) volume) because of syntactic detractio + adjectio ('fragments of cubes' added to each other, with different possible interpretations concerning the relationship between the pieces (of the '(cube) fragments') and the whole (of one cube of nine possible cubes or of one 'shelf' of three 'shelves')

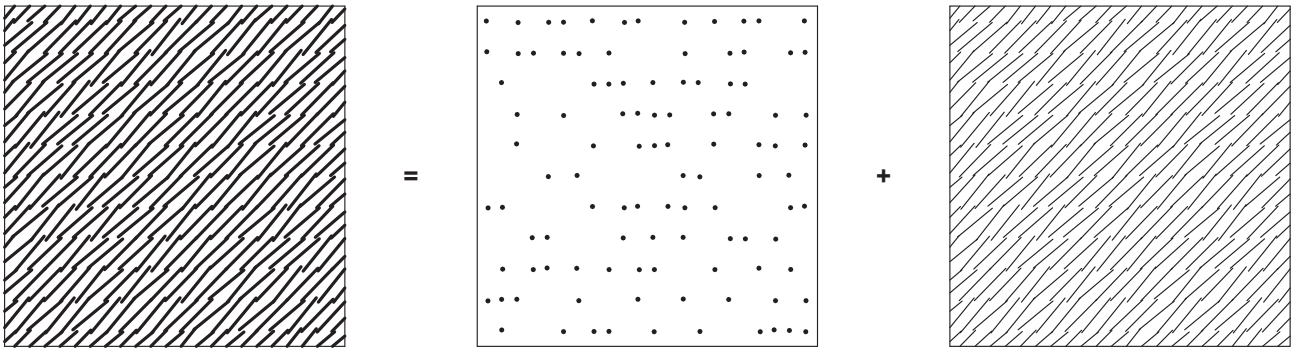


Figure 84: Reconstruction of Vera Molnar's *Oblique Segments* (1984 - 2017, painting).
Type 2 of Geometric Minimal Difference (lines to point)/type 7 of Geometric Minimal Difference (lines to plane)/type 13 of Geometric Minimal Difference (points to lines to plane)

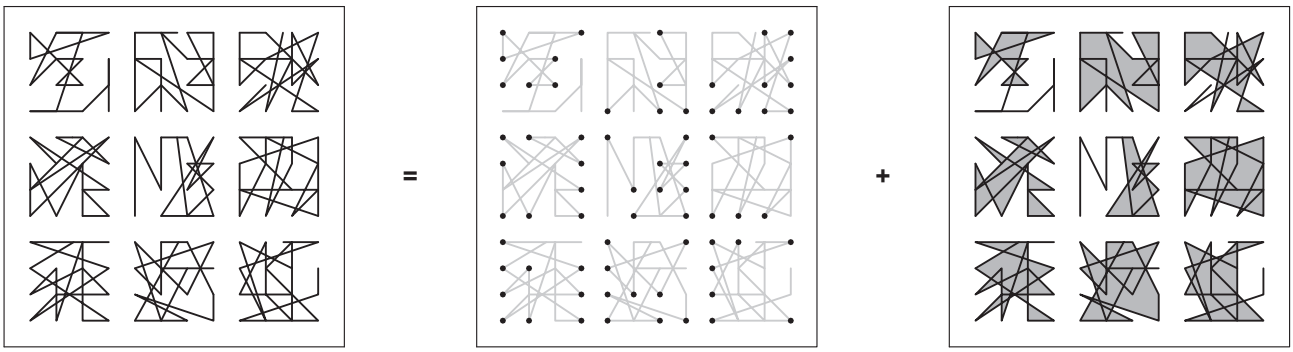


Figure 85: Reconstruction of Vera Molnar's *Hommage an Dürer* (1985, detail from a computer print of a serial).
Type 2 of Geometric Minimal Difference (lines to point), Type 7 of Geometric Minimal Difference (lines to plane)
The title refers to the Magical Square shown in Albrecht Dürer's print *'Melencolia I'* (see below).

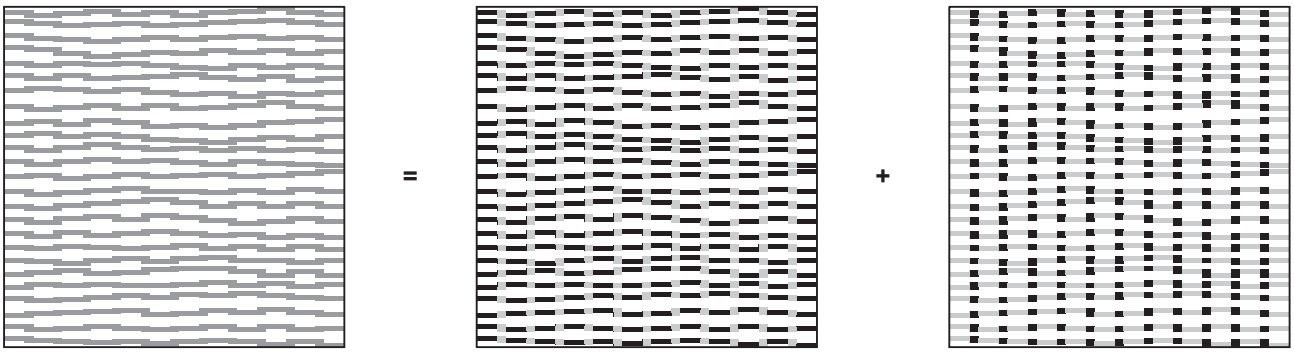


Figure 86: Reconstruction of Vera Molnar's *Structure à L'Horizontale* (1987 - 2010, painting).
Type 2 of Geometric Minimal Difference (horizontal ('broken') lines to point), type 1 of Geometric Minimal Difference (points to vertical line)

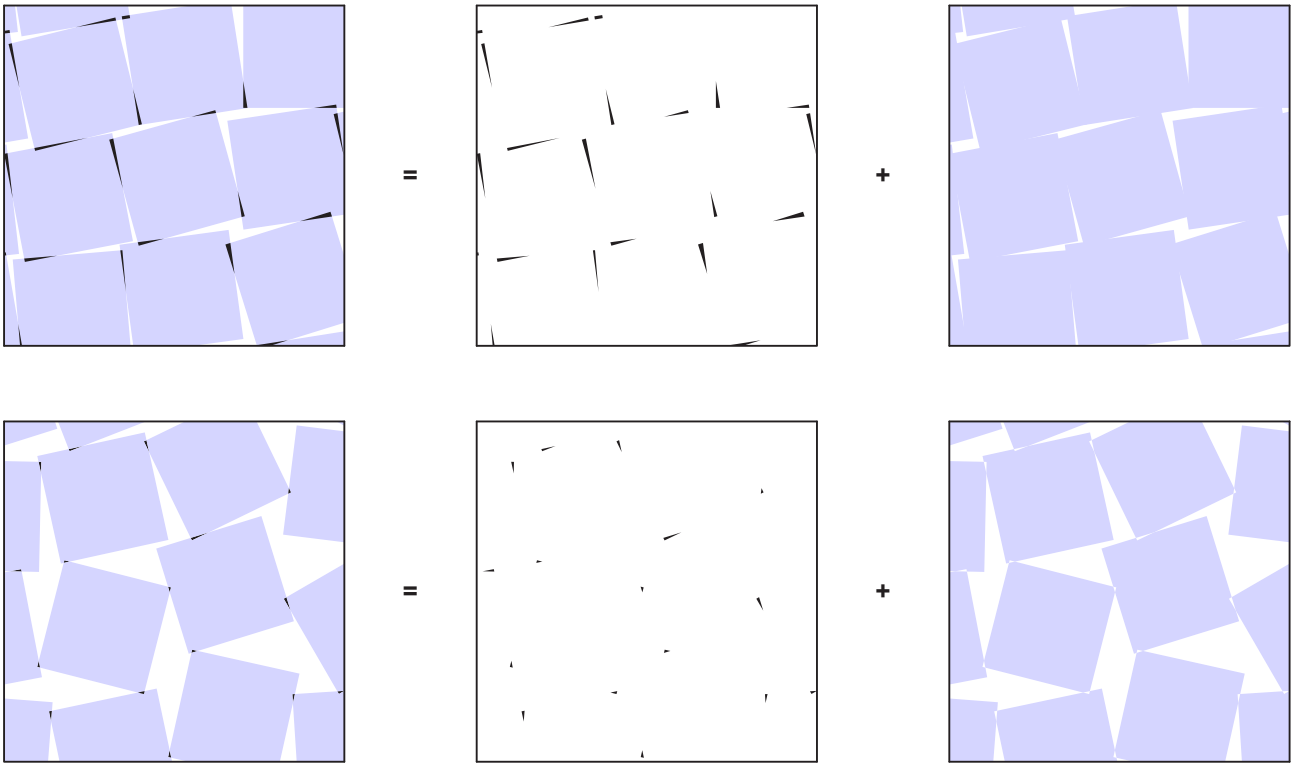
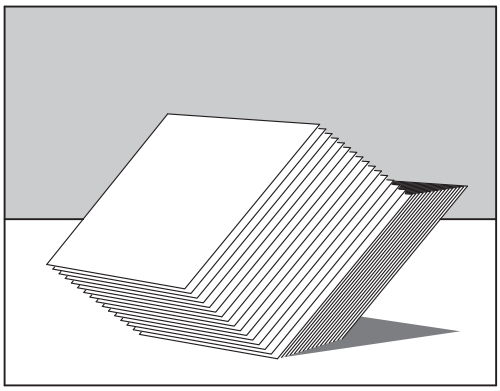


Figure 87: Reconstruction of Vera Molnar's *À peine* (1993 - 2011, diptych, details of two paintings).
Type 8 of Geometric Minimal Difference (planes to line), type 4 of Geometric Minimal Difference (planes to point)

Figure 88: Structure of Thomas Lenk's *Untitled* (1970, sculpture made of metal plates).
Type 11 of Geometric Minimal Difference (planes to volume) because of syntactic adjectio which appears as if it was pseudo-transmutatio (pseudo-movement)



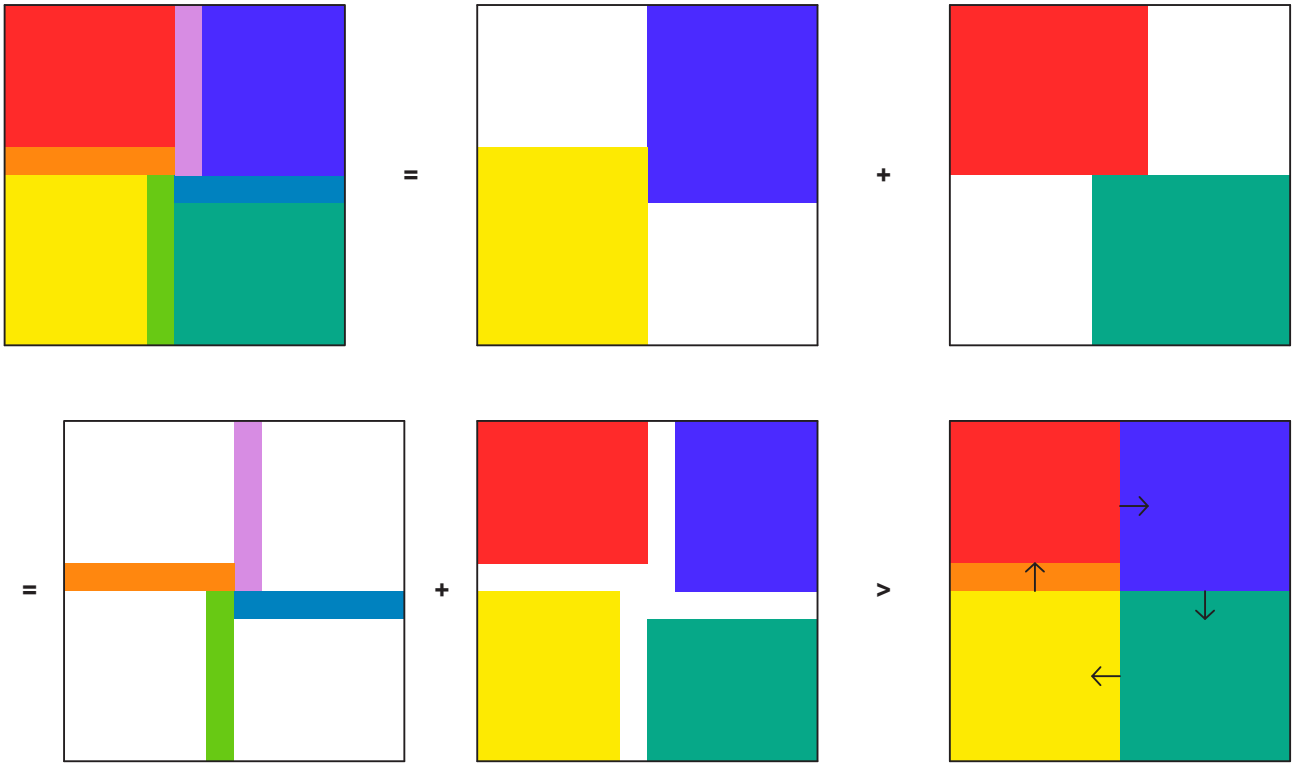


Figure 89: Reconstruction of Richard Paul Lohse's *Movement around an axis* (1952 - 69, painting).
Type 8 of Geometric Minimal Difference (planes to line (or 'stripe' as Minimal Difference MD between line and plane?!)), Minimal Difference MD of three colours (MD (S1.1 yellow ~ S1.2 orange ~ S1.3 red, for example), which appears as if it was created by transmutatio/movement of four planes

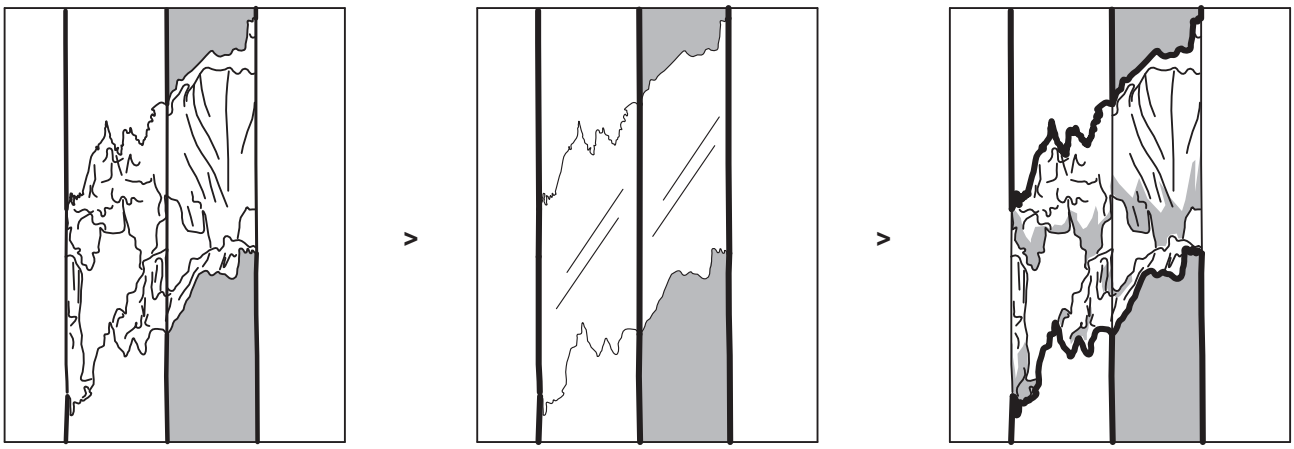


Figure 90: Reconstruction of Vera Röhm's *Completion* (1992, sculpture made of wood and acrylic glass, detail).
Type 11 of Geometric Minimal Difference (planes (of breaking) to volume) + index of destruction and completion (transmutatio + adjectio)

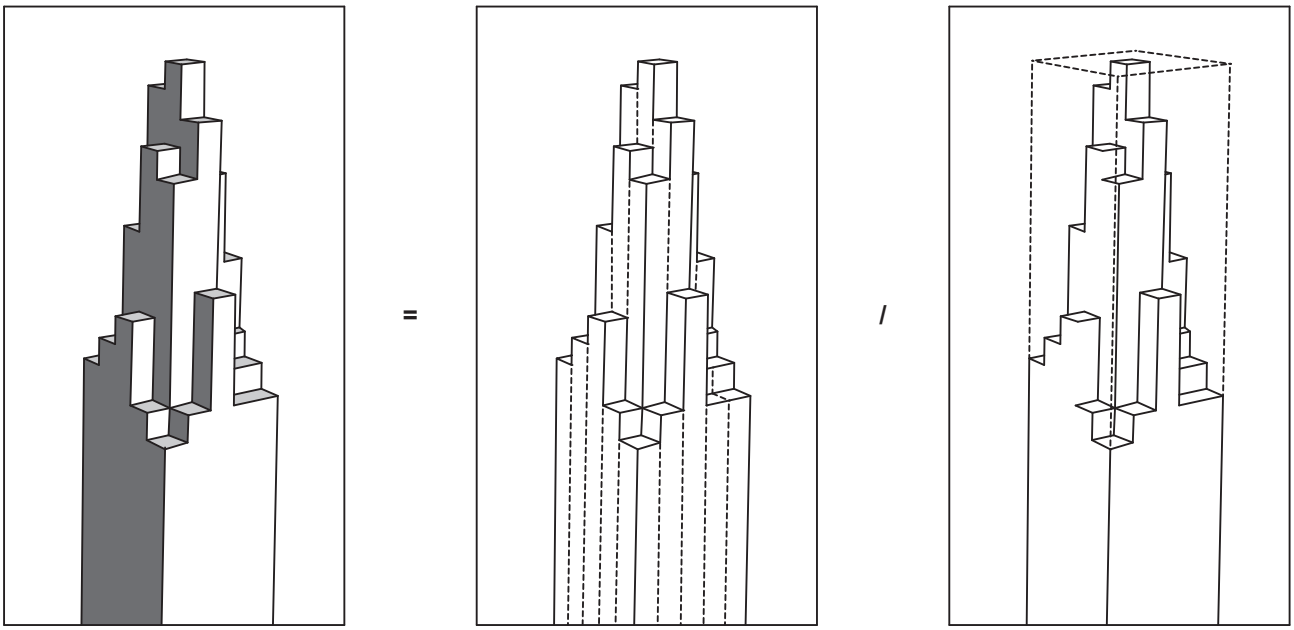


Figure 91: Structure and two possible percepts of Robert van t'Hoff's *Spatial Plasticism* (1918, wood sculpture).
Type 9 of Geometric Minimal Difference (lines to volume), fluctuation of attention between analytical perception (dissection into line modules) and completing perception (reconstructing a simple volume) because of syntactic detractio

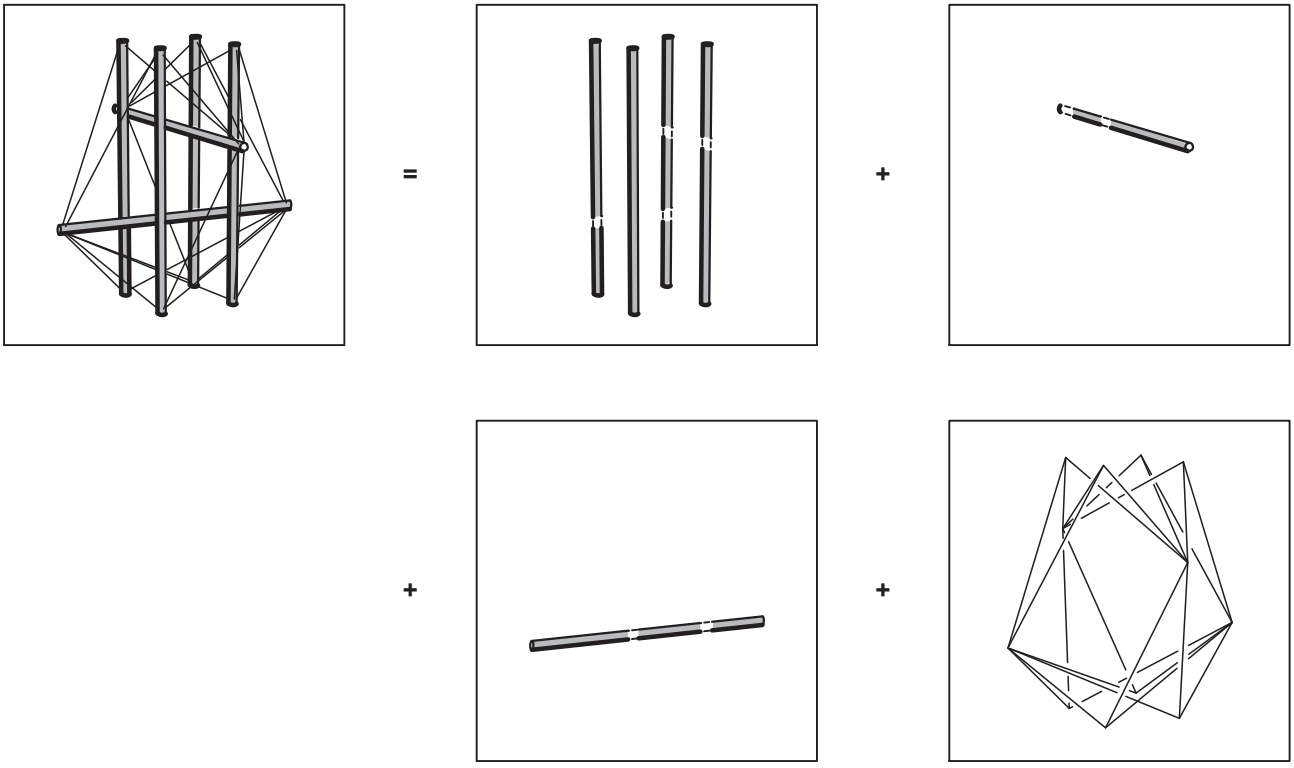


Figure 92: Reconstruction of Kenneth Snelson's *Metal sculpture* (1967, sculpture made of metal bars and ropes).
Type 9 of Geometric Minimal Difference (lines to volume) + Mixture M of the bars (S4.1 x-horizontal versus S4.2 y-vertical versus S4.3 z-horizontal) and Mixture M of the ropes (twelve contaminated volumes of tetrahedron)

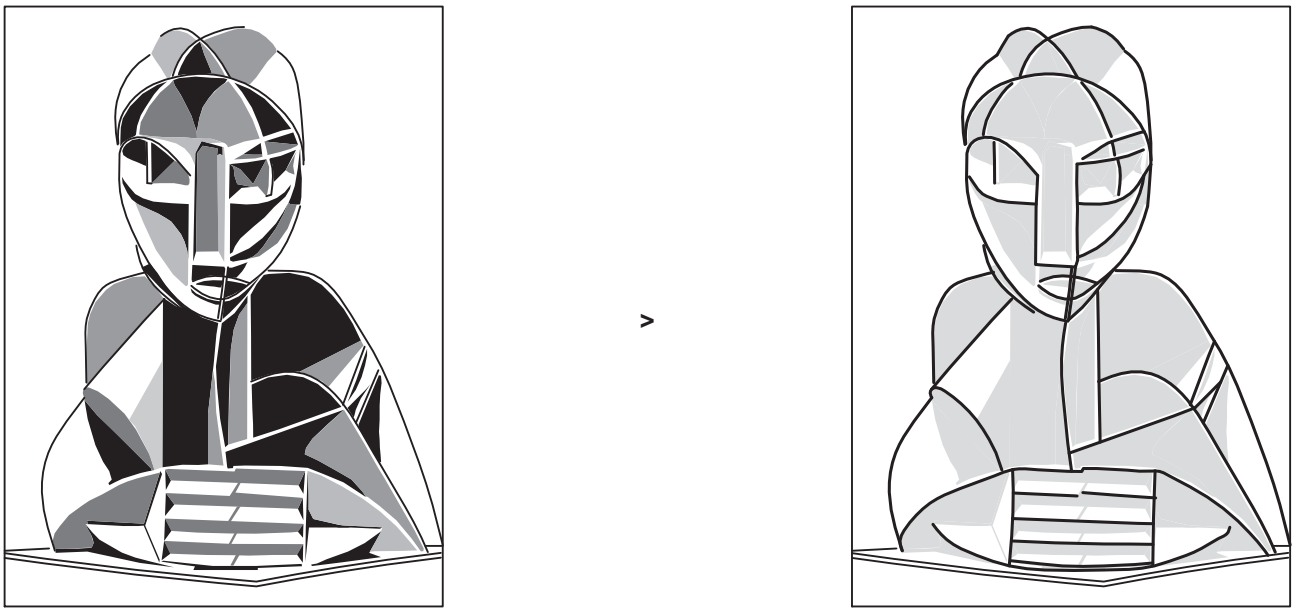


Figure 93: Structure and variation of Naum Gabo's *Constructive Head 2* (original 1916 /1923 - 24, edition of the year 1964, sculpture made of metal plates).
Fluctuation of attention between type 11 of Geometric Minimal Difference (planes to volume) and type 9 of Geometric Minimal Difference (lines to volume) + semantic detractio (abstraction of a head)

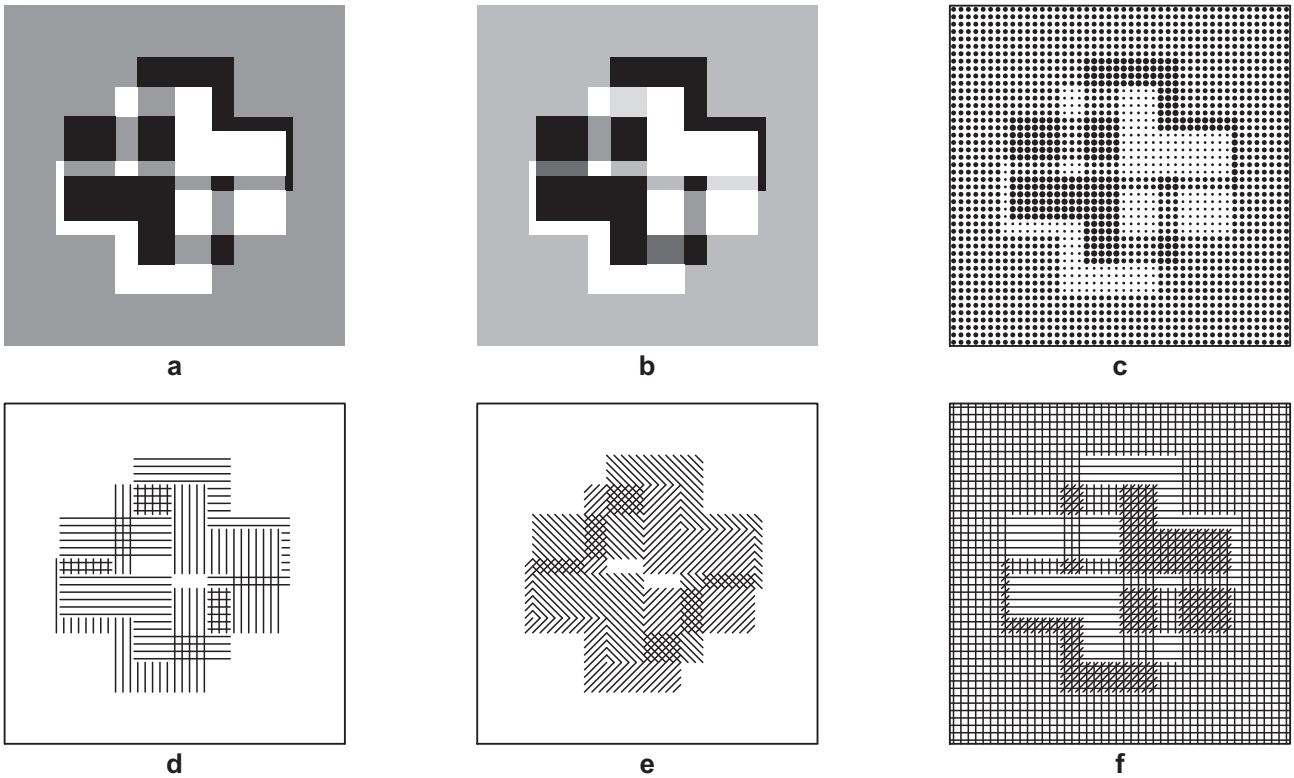


Figure 94: Variation of Axel Rohlfs' *Oberflächen- und Tiefenstruktur 17 /Doppelkreuz* (2012-2015).
Two endless walks with growing width are crossed to a kind of 'double-knot'; the both form each other reciprocally. Some of the arising planes appear as if they were 'points' or 'lines' or 'planes'; in these cases one could speak of type 13 of Geometric Minimal Difference (points to lines to plane); there are different kinds of ambiguity in the six plates:
First figure: Hybrid H + Minimal Difference MD in grey planes of 'superposition' of the white with the black walk in the double-knot which have the same colour as the 'ground'; second figure: Hybrid H + Minimal Difference MD in grey planes of 'superposition', but there are different kinds of grey, which leads to the impression, that white and black planes in superposition are differently thick; third figure: Hybrid H and Minimal Difference MD in points of middle size with type 3 of Geometric Minimal Difference (points to plane); fourth figure: Hybrid H (walk/figure a versus walk/figure b) + type 7 of Geometric Minimal Difference (lines to plane); fifth figure: Hybrid H (walk/figure a versus walk/figure b) + type 7 of Geometric Minimal Difference (lines to plane); sixth figure: Hybrid H (walk/figure a versus walk/figure b versus ground) + type 7 of Geometric Minimal Difference (lines to plane).

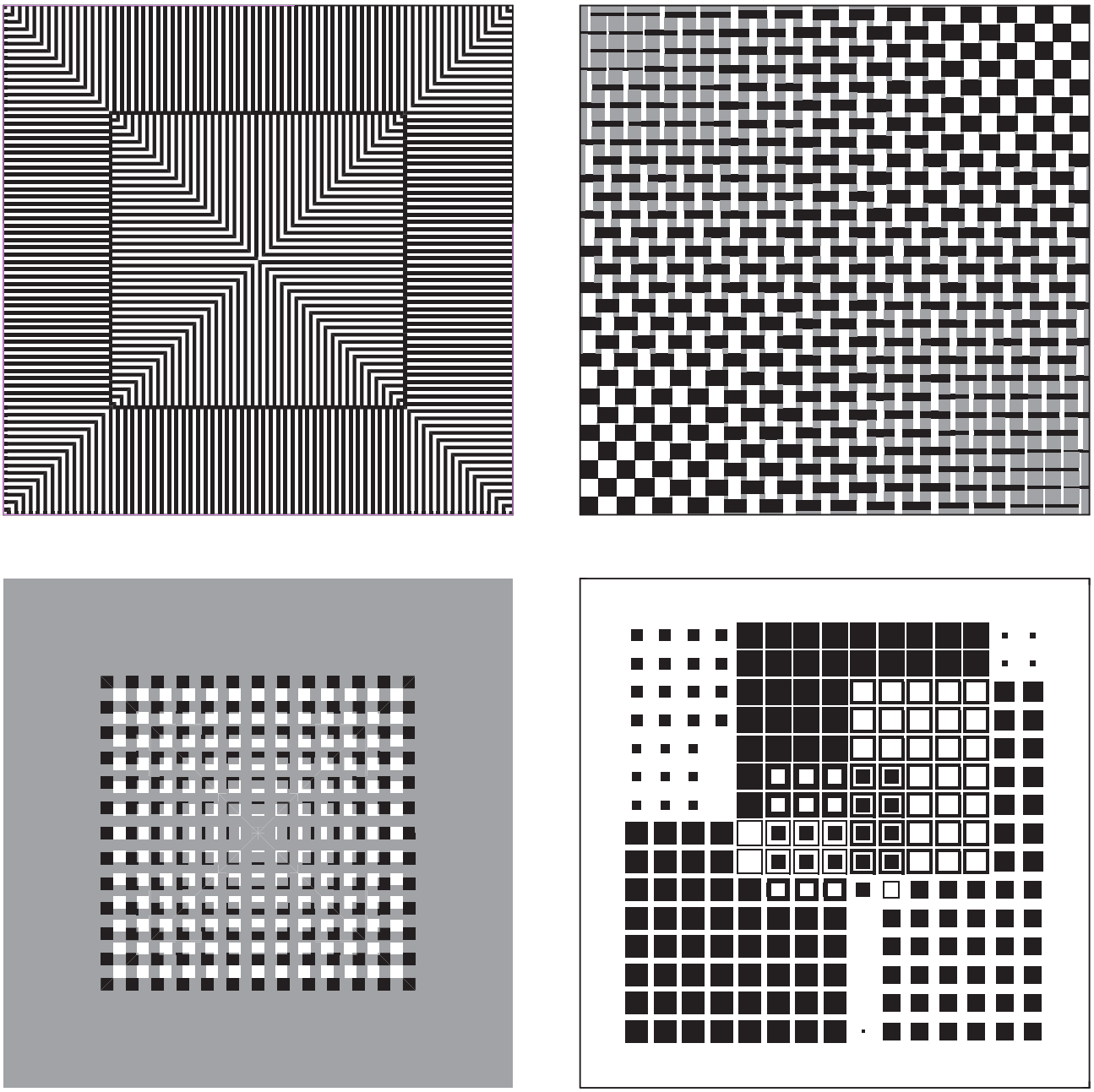


Figure 95: Axel Rohlfs' *Four Computer Studies* (2002 - 2006, from the book *39 Computeretuden*).
In the first figure, lines appear as if they were broken; the broken ends ('points') of these lines form another line, orthogonal to the old one. So there are not only types of Geometric Minimal Difference, but also types of **Geometric Duplication**: points to point, lines to line, planes to plane, volumes to volume.
The second figure shows morphing from lines to planes and vice versa; types of Geometric Minimal Difference 7 (lines to plane) or 8 (planes to line).
In the third figure, there is Geometric Duplication of planes to plane; the grey planes of 'superposition' of black and white planes have the same colour as the grey 'ground' (Hybrid H + Minimal Difference MD of grey to black and to white).
In the fourth figure (bottom right), there is Geometric Duplication by using positive and negative figuration.

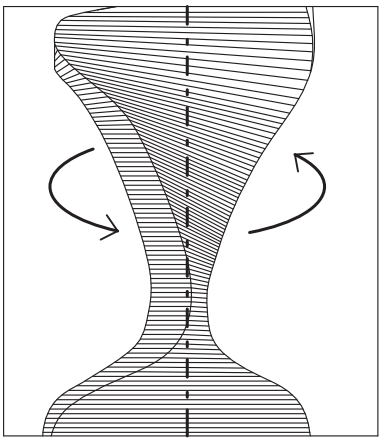


Figure 96: Structure of Mary Vieira's *Polyvolume* (1966, design from the year 1948, kinetic sculpture: rotation of metal plates about a vertical axis by hand, detail).
Type 11 of Geometric Minimal Difference (planes to volume); **ambiguity of potentiality of variants** of volume in a do-it-yourself-sculpture

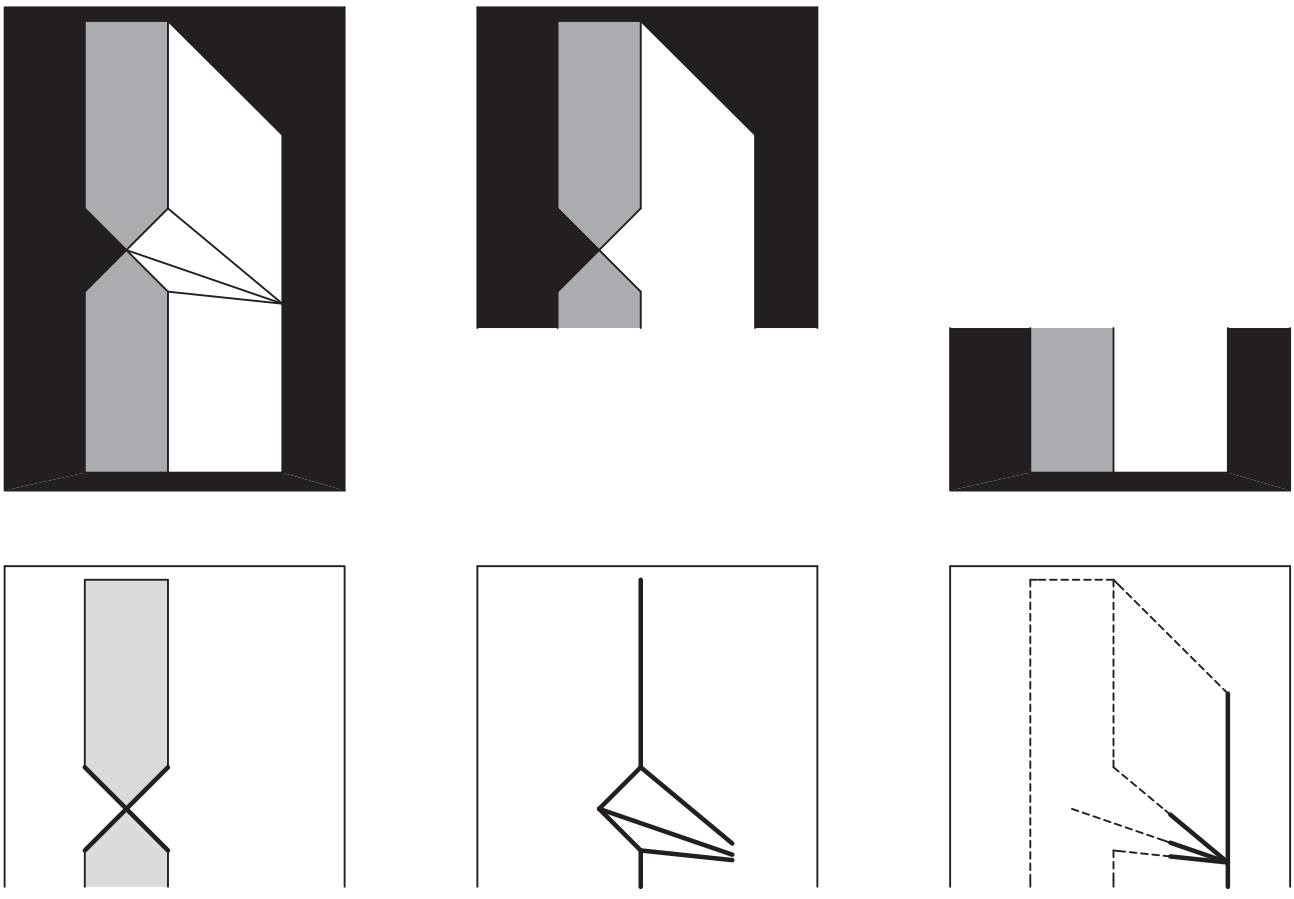


Figure 97: Reconstruction of Erwin Heerich's *Constructive Composition* (1973, print).
There is a sequence of several types of Geometric Minimal Difference linked to a mixed impression of two-dimensional and three-dimensional parts.

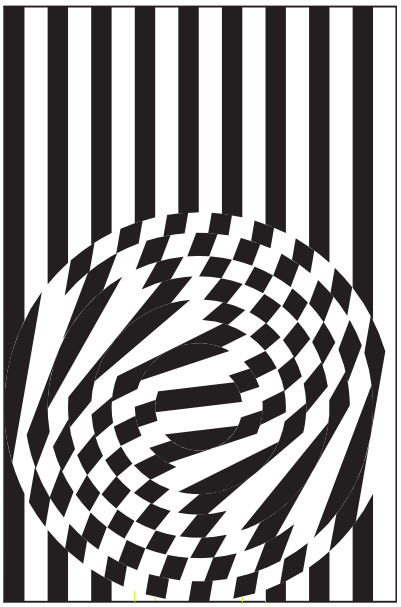
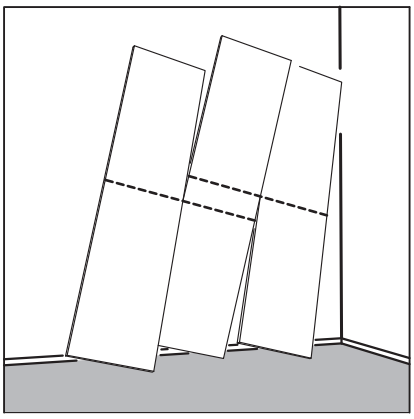


Figure 98: Structure of a work of a student of Josef Albers at the Bauhaus-School (according to Hans Maria Wingler (1975): *Das Bauhaus: Weimar, Dessau, Berlin 1919 - 1933*).
Type 7 of Geometric Minimal Difference (lines to plane) because of syntactic transmutatio



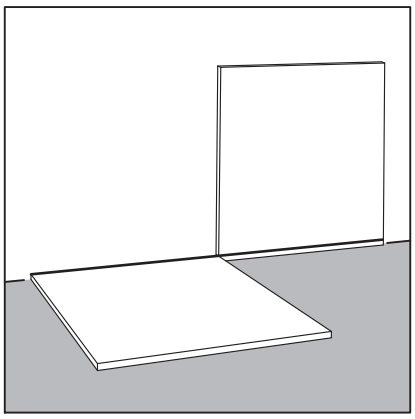


Figure 99: Structures by Francois Morellet:
a) *Par derrière à trois* (1986, installation)
b) *Seule droite traversant 2 carrés dans 2 plans différents à 0°-90°* (1978, installation).
Type 8 of Geometric Minimal Difference (planes to rotation-axis-line)

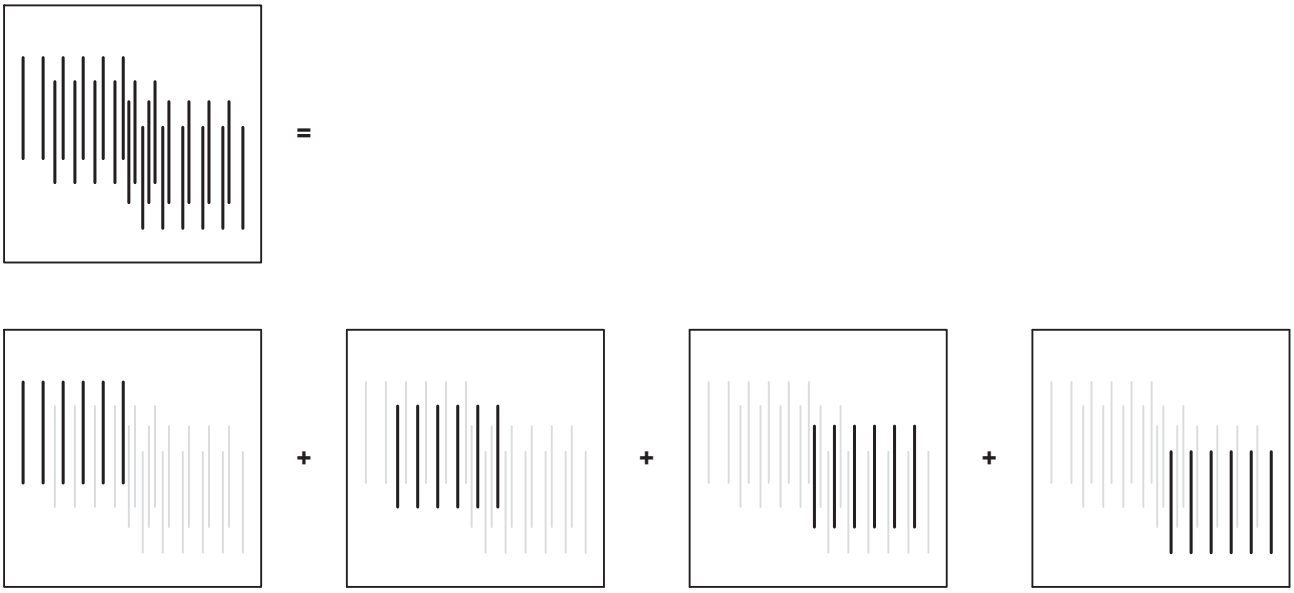


Figure 100: Reconstruction of Francois Morellet: *Tamponnade No. 3* (2013, installation with adhesive tape on wall).
The final points of six lines are unified by cognition to an imaginary horizontal line (type 1 of Geometric Minimal Difference (points to line)), therefore six lines are unified by cognition to one plane (type 7 of Geometric Minimal Difference (lines to plane), therefore one finds another type of ambiguity: Mixture M of four groups of six lines (C3.1 versus C3.2 versus C3.3 versus C3.4); but these groupifications are not stable: there is also the possibility of seeing one group of 24 parallels.

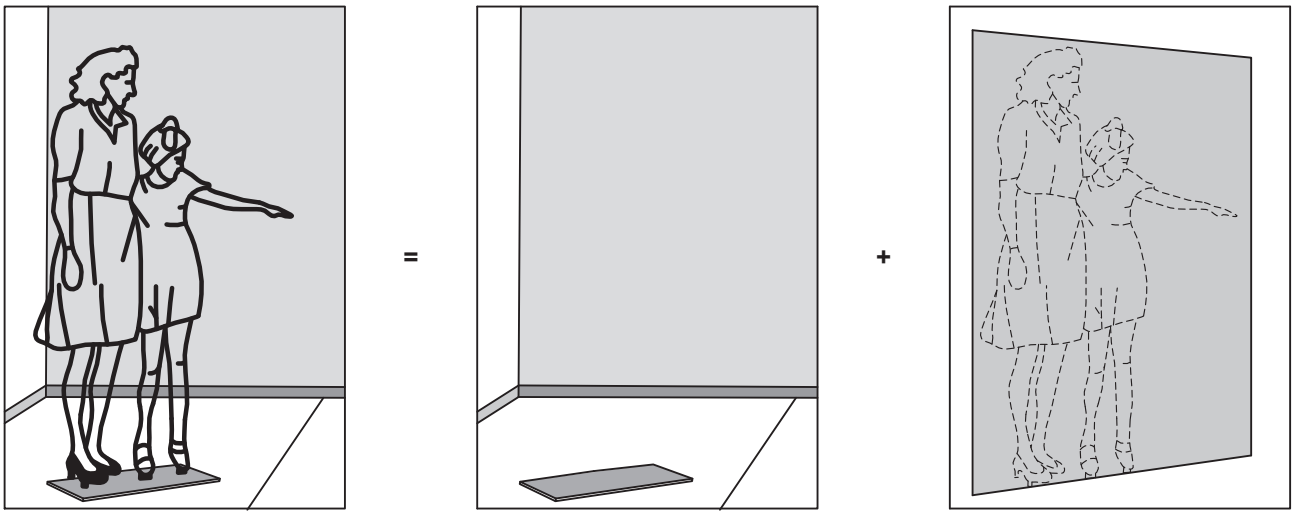


Figure 101: Reconstruction of László Fehér's *Steel Drawing* (detail of an installation of several two-dimensional sculptures cut out of metal plates, 1990).
Type 7 of Geometric Minimal Difference (lines to plane) in a two-dimensional representation of human figures in clothes of the 1940s/1950s, standing in a three-dimensional space which is visible through the interspaces betweeb the lines

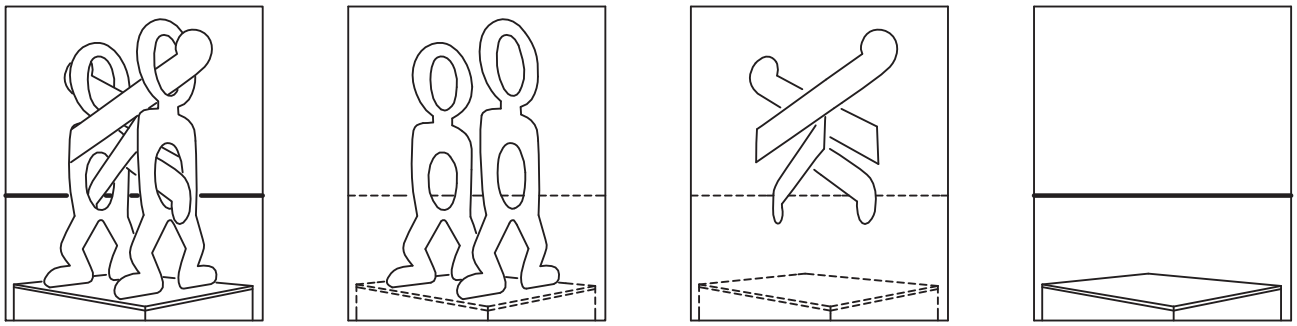


Figure 102: Reconstruction of Keith Haring's *Boxer* (1987, sculpture made of metal plates).
Type 11 of Geometric Minimal Difference (planes to volume) + Hybrid H of arms going through the space of another body (C3.1 versus C3.2)

A special case of Geometric Minimal Difference of type 12 (volume to plane) can be found in the work of **James Turrell**; sitting in one of his rooms one sees exact planes as cuts out of white walls, and if the sky is cloudless one sees a plane instead of the space of the sky (e.G. 'Chestnut Hill Skyspace', 2013).
The opposite can be found in the blue paintings of **Yves Klein** that use a non-reflecting surface for the illusion of space within a plane.

2.1.2 Interruption of the homogeneity of formation

Homogeneity of formation means a small range of choice concerning criteria of similarity and of contiguity. An interruption of this continuity (for example a red object within a black and white photo) means an interruption of the cognitive relational system, an 'extraterritorial' system of cognition within or adjoining another system of cognition. These different cognitive zones can be organised in the known ways:
a sequence of Minimal Differences MD, alternation of zones (Mixture M) or hybrid zones (Hybrid H) or mixtures of these.

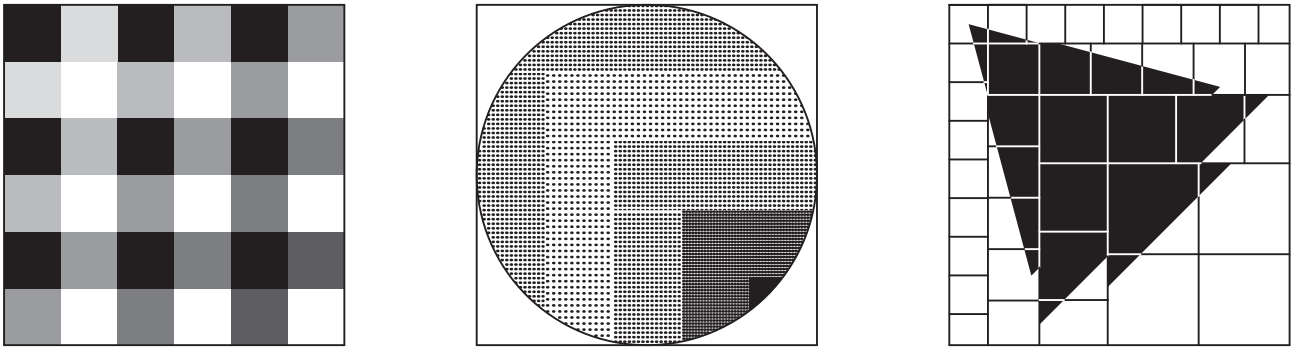
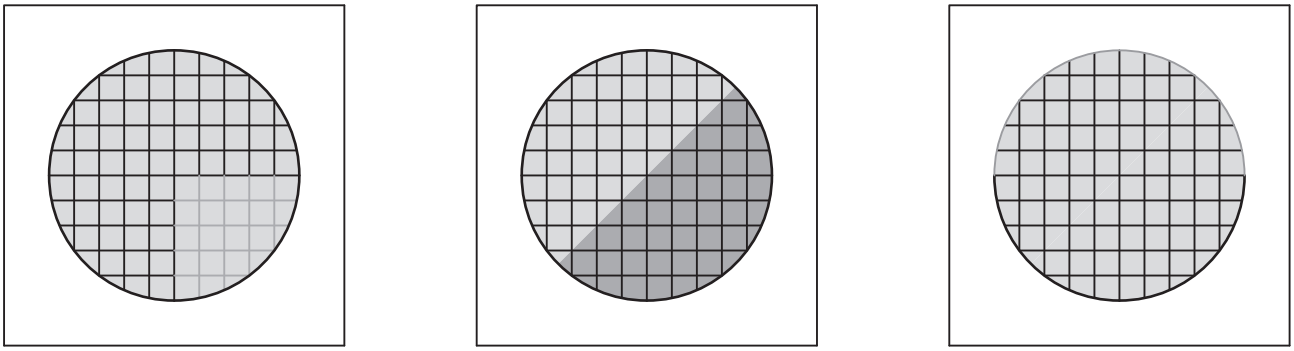
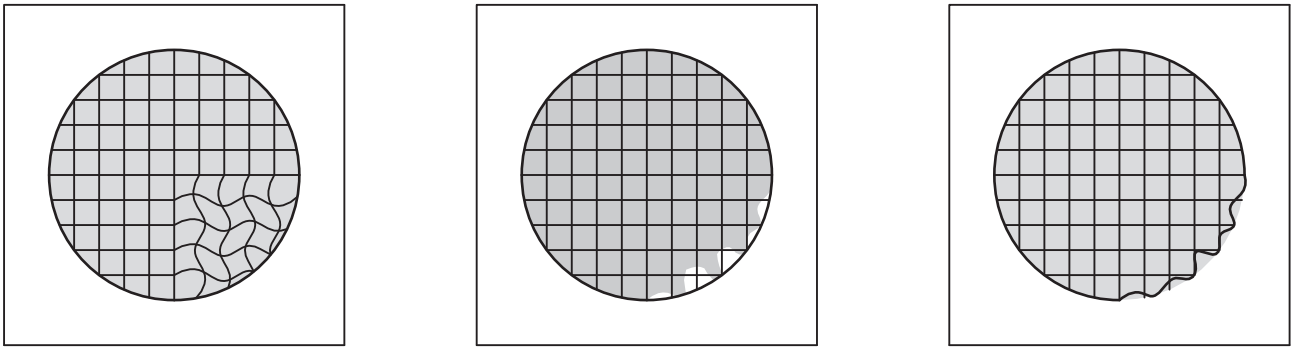


Figure 103: Interruptions of homogeneity of formation with impact on the illusion of spatial depth
1 - Paraphrase of Josef Albers' serial *'Interaction of colour'* (1960s, didactic serial of silk screen prints):
MD (S1.1 first grey ~ S1.2 second grey ~ ...)
2 - Paraphrase of László Moholy-Nagys' print *'Constructivist Composition'* (1922/23):
MD (C2.1 of points ~ C2.2 of points ~...)
3 - Paraphrase of Attila Kovács' serial *'Koordinationen'* (1970s):
MD (C2.1 of the lines of a first grid ~ C2.2 of of the lines of a second grid ~...)

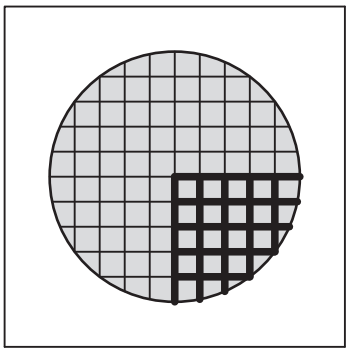
Figure 104 (three pages): Interruptions of other criteria of unification (Dissimilarity DisS1 - DisS4 and Discontiguity DisC1 - DisC4) with regard to filling structure, filling colour and contour



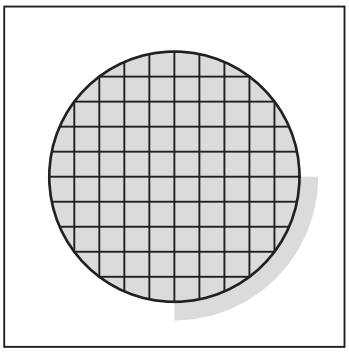
DisS1 of filling structure **DisS1 of filling colour** **DisS1 of contour**



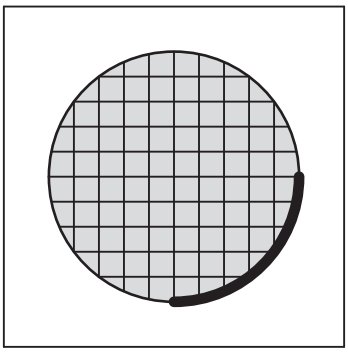
DisS2 of filling structure **DisS2 of filling colour** **DisS2 of contour**



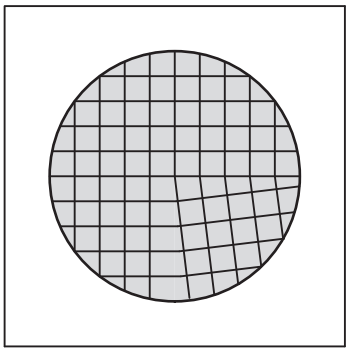
DisS3 of filling structure



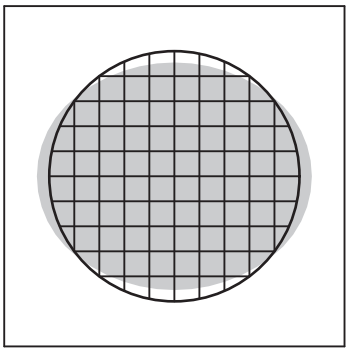
DisS3 of filling colour



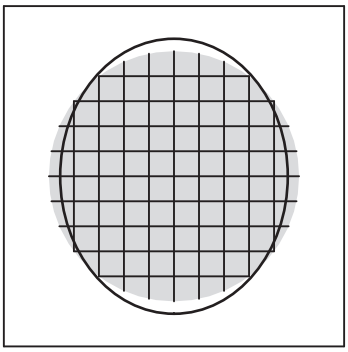
DisS3 of contour



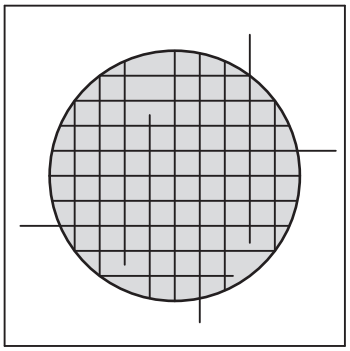
DisS4 of filling structure



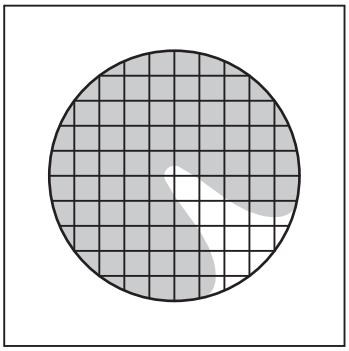
"DisS4" of filling colour



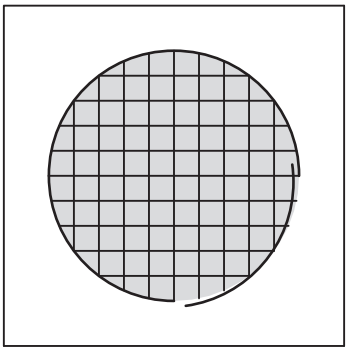
"DisS4" of contour



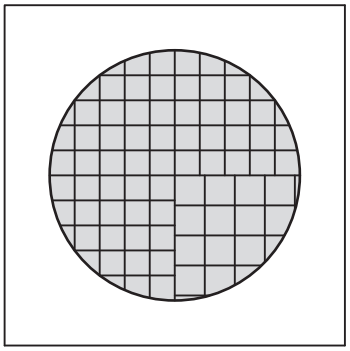
DisC1 of filling structure



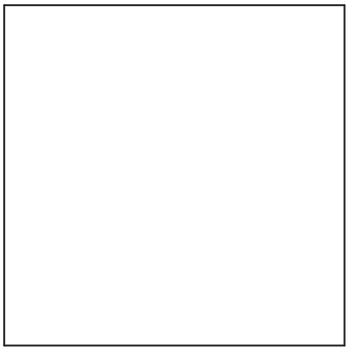
DisC1 of filling colour



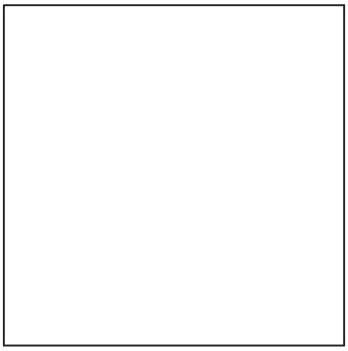
DisC1 of contour



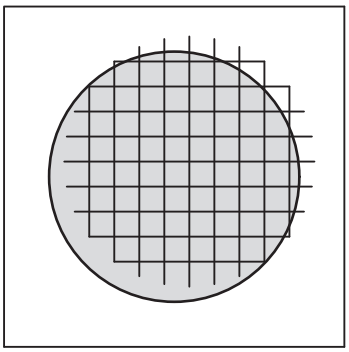
DisC2 of filling structure



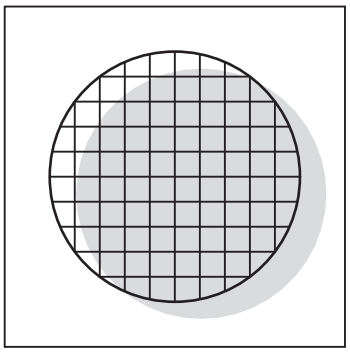
DisC2 of filling colour



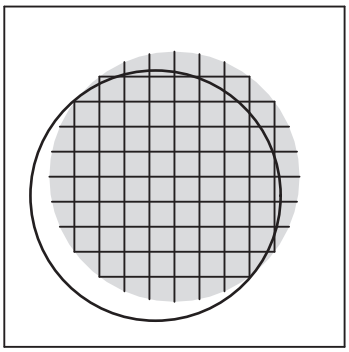
DisC2 of contour



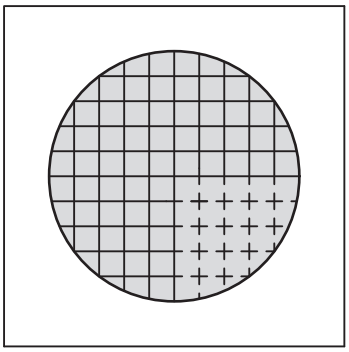
DisC3 of filling structure



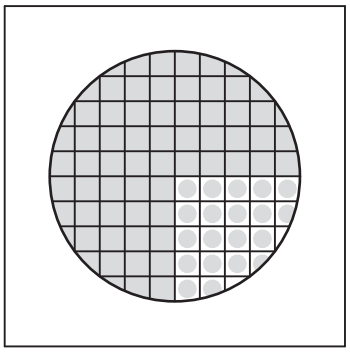
DisC3 of filling colour



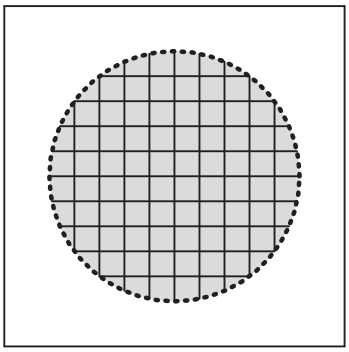
DisC3 of contour



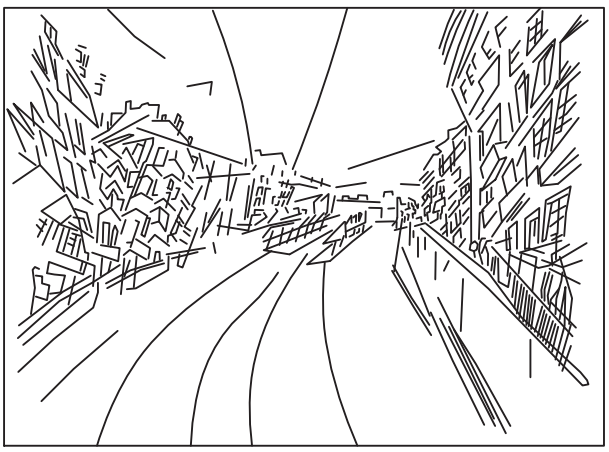
DisC4 of filling structure



"DisC4" of filling colour



"DisC4" of contour



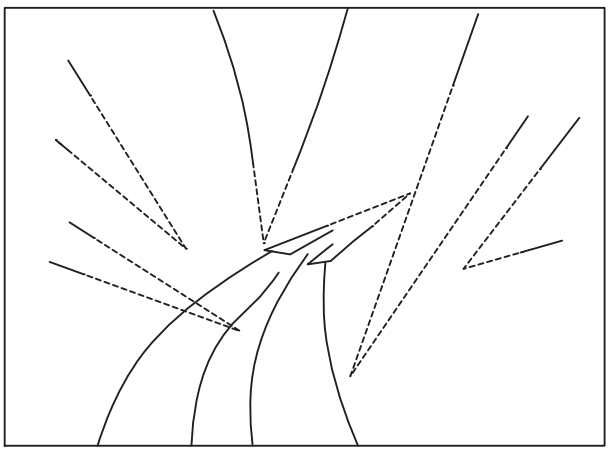


Figure 105: Reconstruction of Ludwig Meidner: *Südwestkorso/Berlin, five o'clock in the morning* (1913, drawing)
Semantic substitutio/transmutatio of point of perspective as a semantic interruption of a plan (~ DisS4).

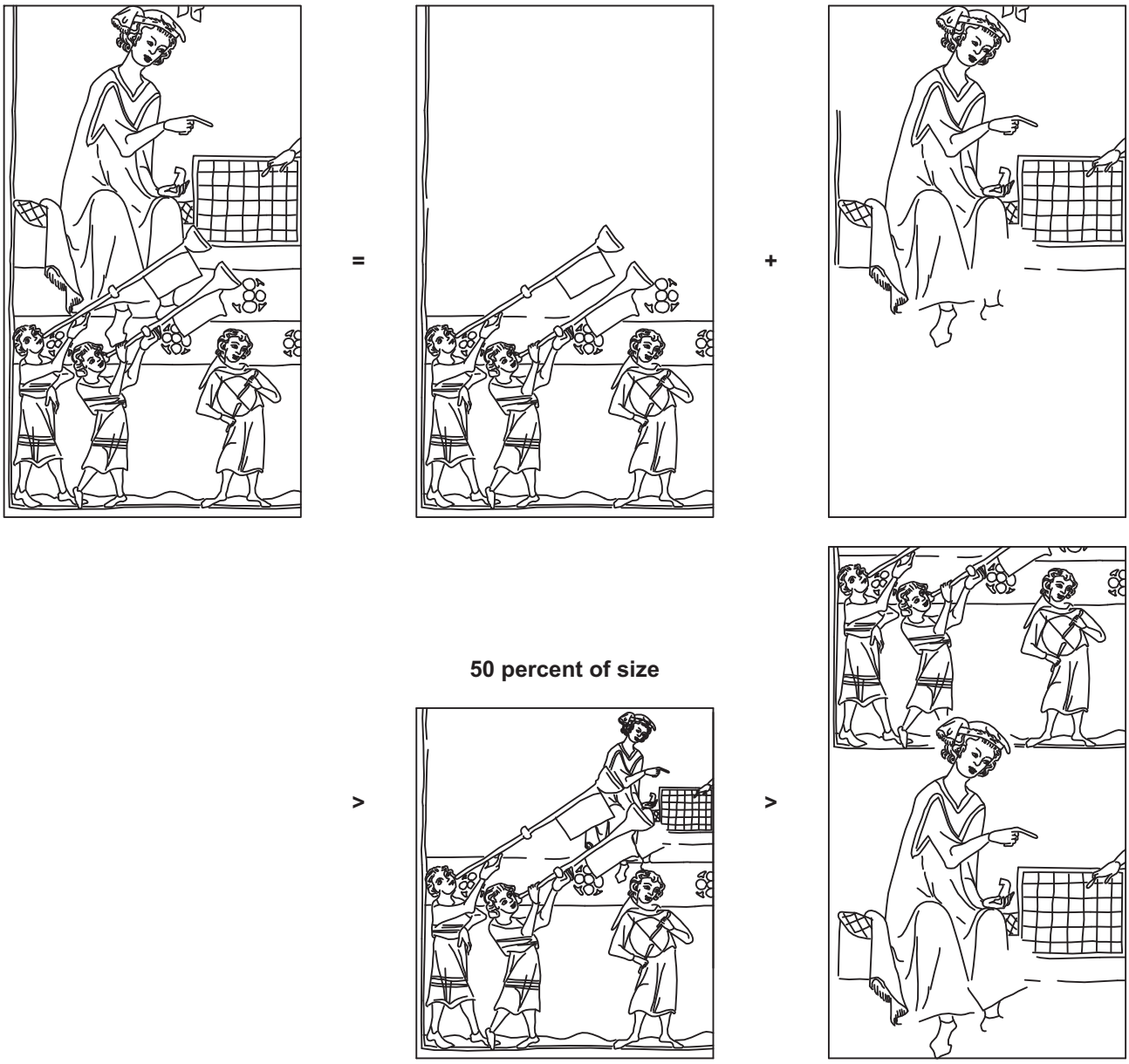


Figure 106: Reconstruction and variation of Master of the Manessian Manuscript of Songs: *Aristocrats and Musicians* (14. Century, detail, coloured drawing) as interruption of size-plan DisS3, so called 'perspective of meaning' (more important persons are bigger than the others).

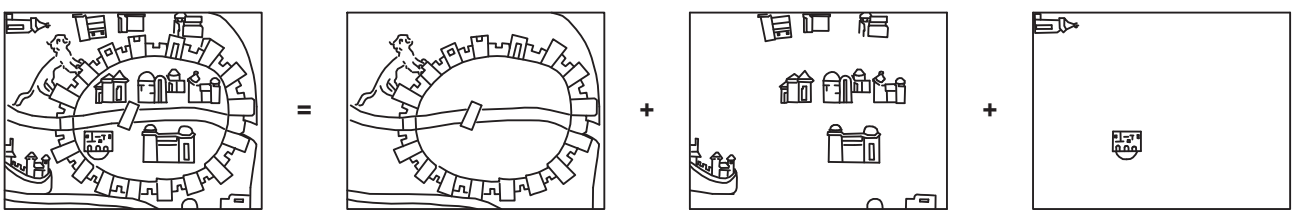


Plate 107: Reconstruktion of the detail *"Rome"* from the map of the world of Ebstorf (13th century)
Interruption of orientation (~ DisS4) as syntactical-semantical ambiguity: "central-perspective" of the city wall and contradictory views of the houses inside and outside the city wall (syntactical ambiguity due to S4.1 + C3 of the city wall versus S4.2 of the solitary houses with an impact on semantics of perspective).

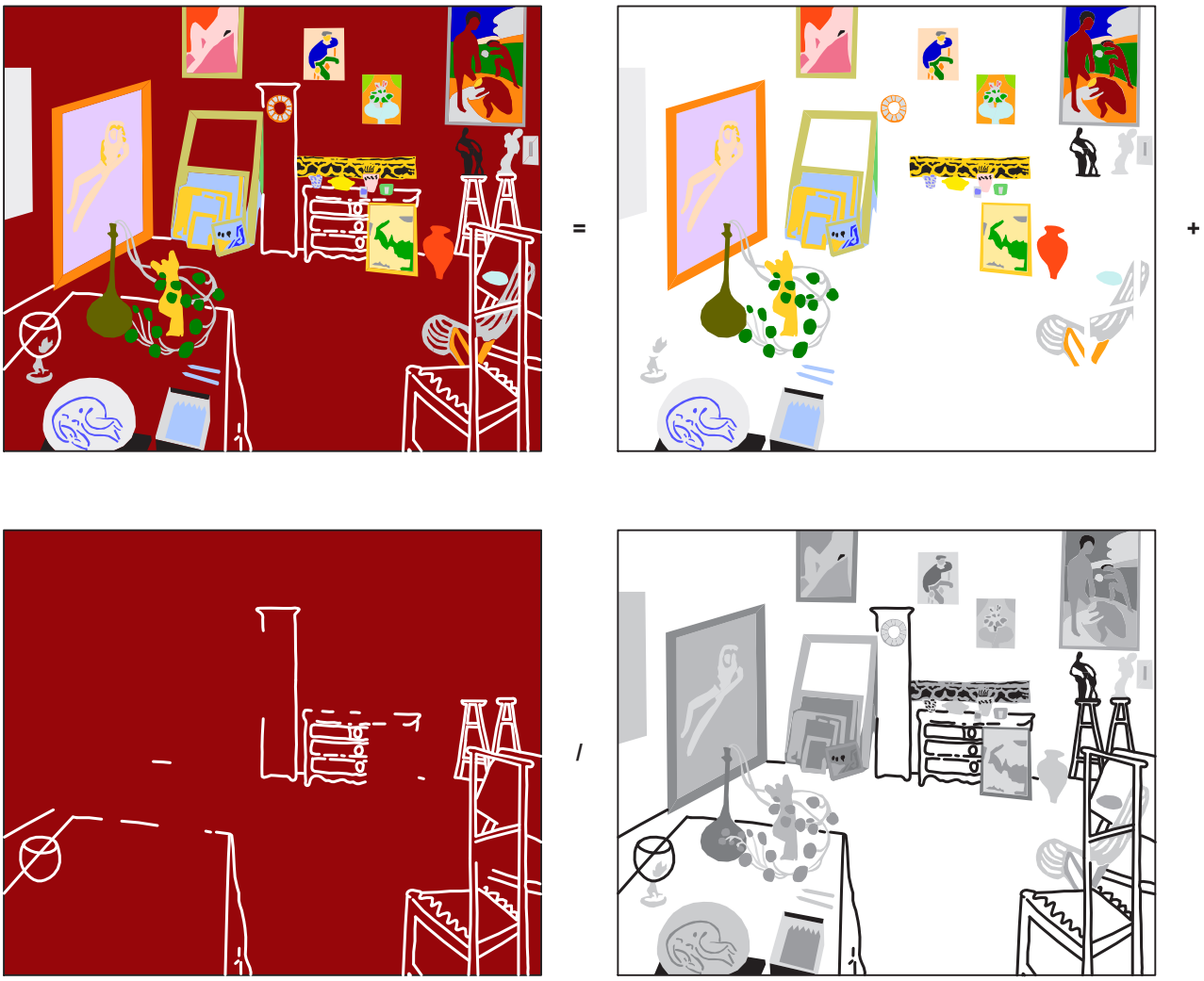


Figure 108: Reconstruction of Henri Matisse's *The Red Studio* (1911, painting), interruption of S1-plan and S2-plan.
There is an interruption of the plan of formation in form of the type Mixture M (S1.1 red/white versus S1.2 colours + S2.1 lines ('more abstract') versus S2.2 planes ('more true to nature')).
Etruscan Figures (see below) have different levels of abstraction/naturalism as well.

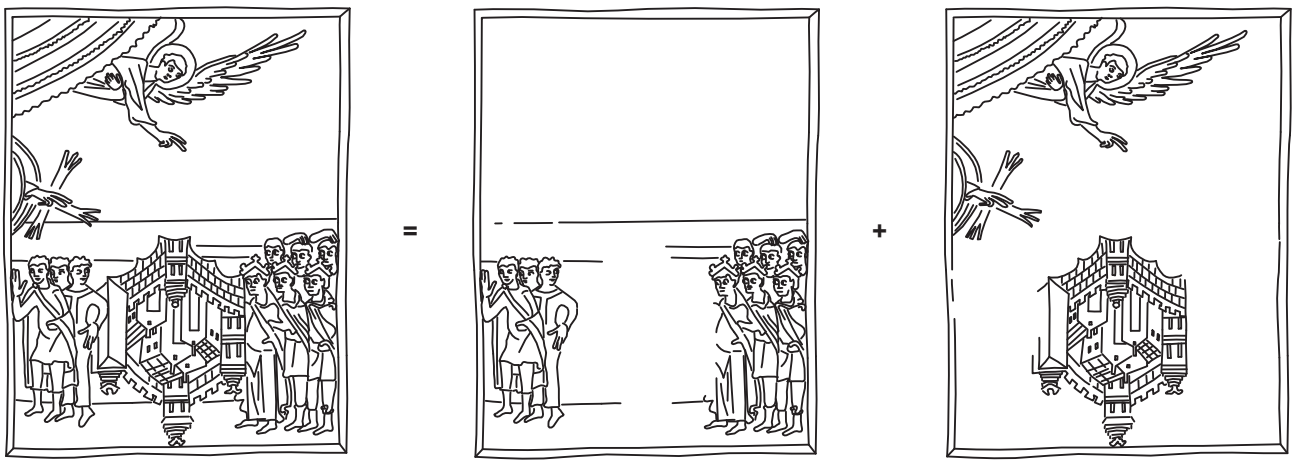


Figure 109: Reconstruction of Master of the Apocalypse of Bamberg's *Fall of Babylon* (1000 - 1020, painting).
One can refer to an interruption of semantic orientation because the city is turned around, in the 'perspective of God'.

2.1.3 Bifurcation

The aesthetically ambiguous division of the attention into two oppositional cognitive groupings by grouping criteria is very well visible in the case of bifurcation: Hybrid H (C1.1 versus C1.2 in one point of splitting of a line).

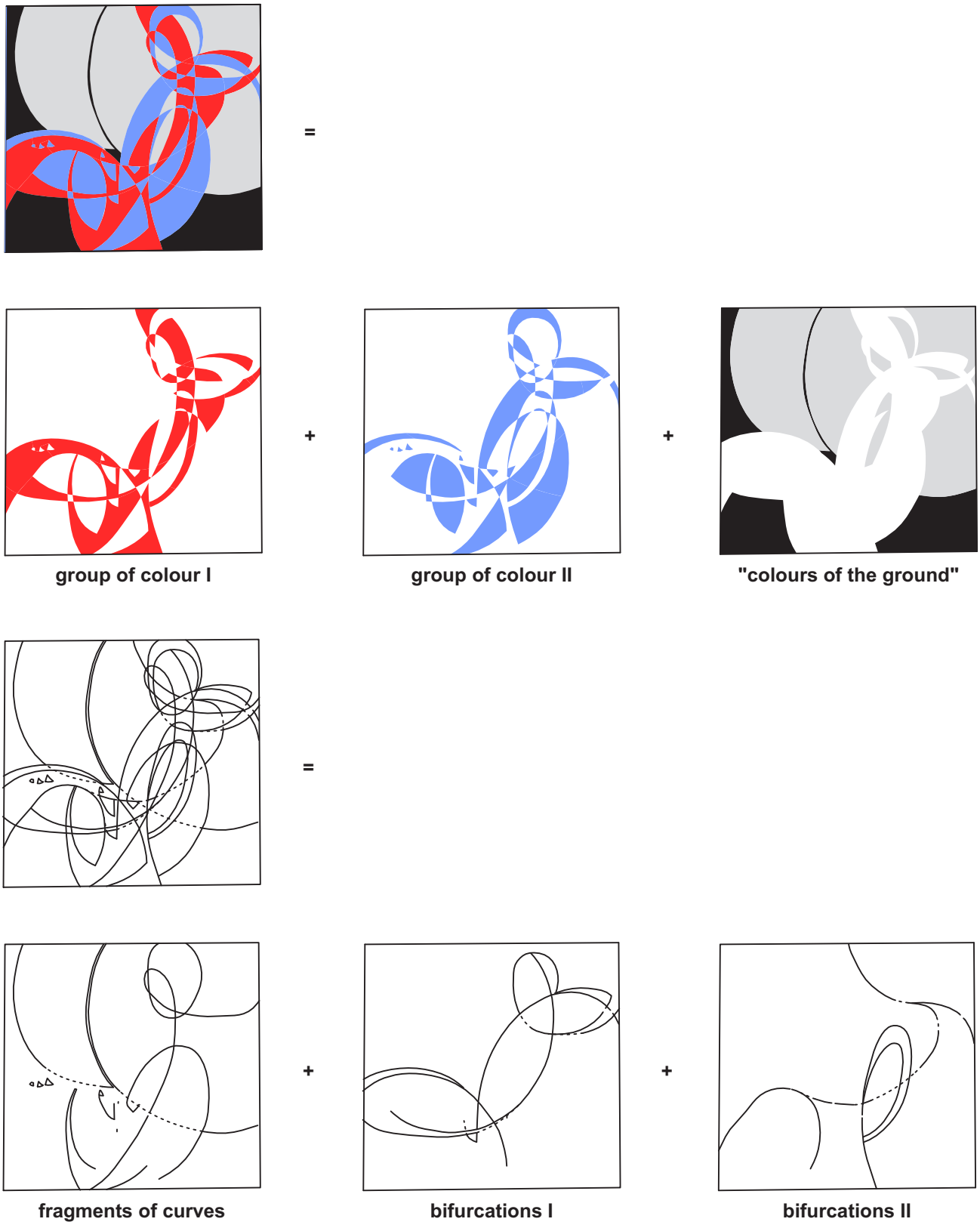


Figure 110: Reconstructions of Frantisek Kupka's *Amorpha - Fugue in two Colours* (1912, painting). Type of ambiguity Mixture M (S1.1 versus S1.2, see second - fourth figure) and Hybrid H (bifurcations : C1.1 versus C1.2), detractio (fragments of lines), actual crossings of lines (Hybrid H) and imaginary crossings of lines (Mixture M) : C1.1 versus C1.2.

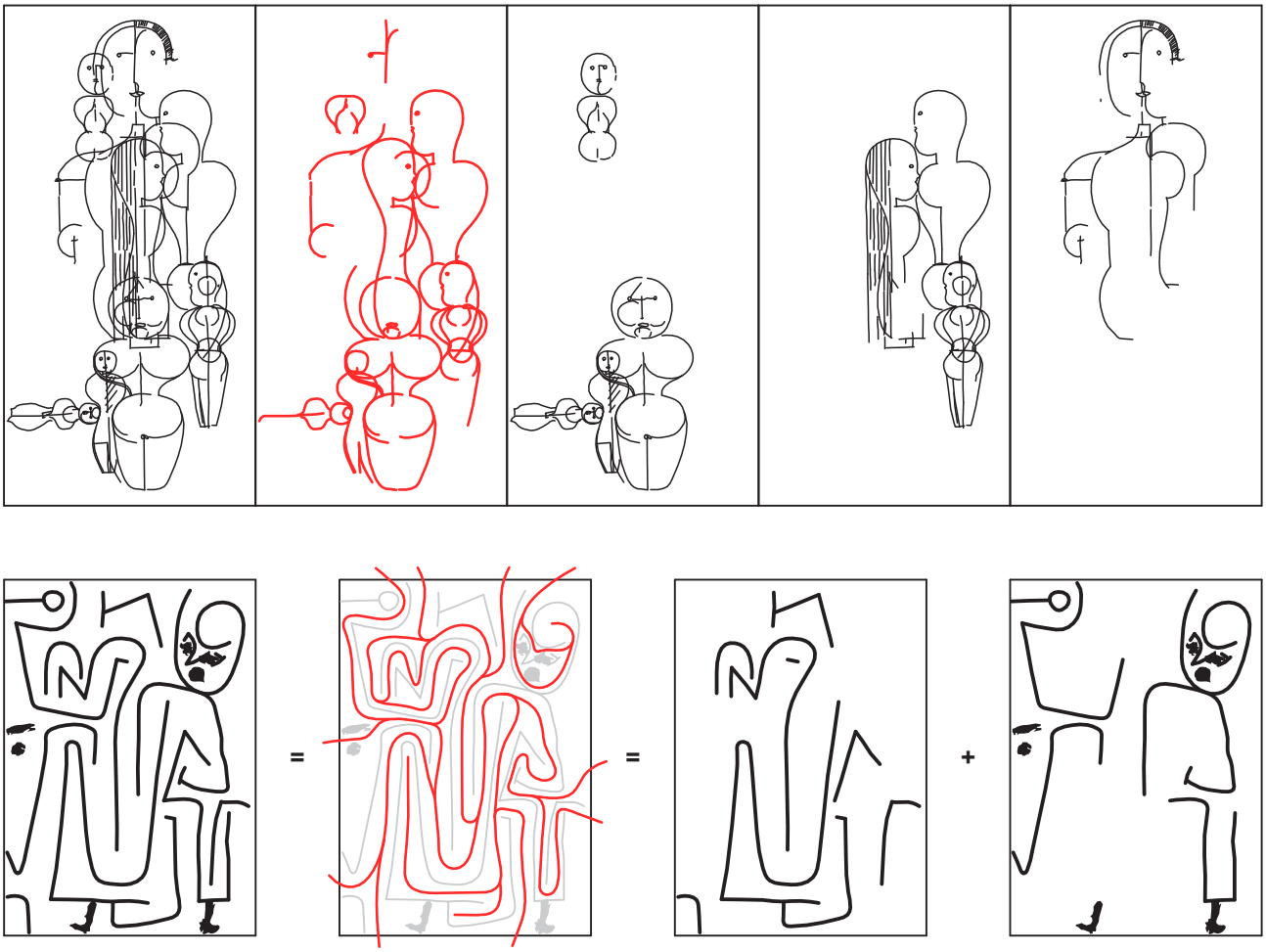


Figure 111: Reconstruction of bifurcations (red lines) in:
Oskar Schlemmer's *Graduated Figures 'K'* (1921, drawing, original = first figure) and
Paul Klee's *Child and phantom* (1938, ink drawing).
Bifurcation of contours of adjoining bodies in Schlemmer's work lead **from syntactic ambiguity to semantic ambiguity**: ambiguous meanings can be assigned to the syntactic ambiguity of bifurcation such as: 'human coexistence'/'interaction'/'resonance', etc. Different directions of the looks/eyes are also contaminated in the central figure (see fifth figure: one half of the face looking at the viewer and the other half looking at the neighbouring figure).
In Paul Klee's drawing two 'fragments' (semantic detractio) as allusions (semantic substitutio/adjectio/transmutatio) of two entities (child on the right and 'phantom' on the left side, see last figure) are combined by contours which form a labyrinth for the viewer's eye movement. Labyrinths are based on bifurcation of ways. The reception of the work can be organised simultaneously in one figure of reception ('Gestalt') 'labyrinth' or successively as a 'walk of the eye' through the image.

2.1.4 Mixtures of constellate groups of similar colours

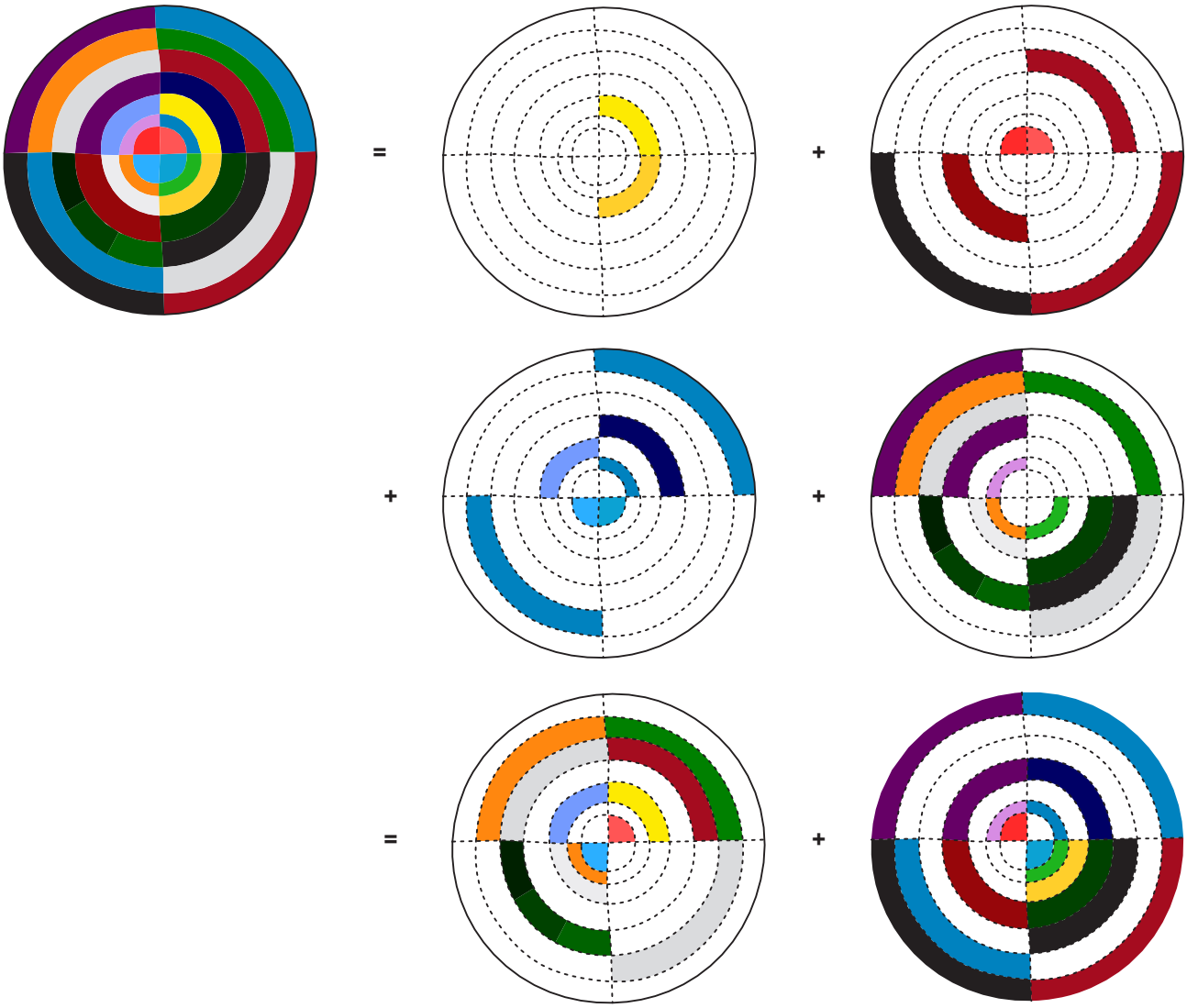


Figure 112: Reconstruction of Robert Delaunay: *First simultaneous Disk* (1912- 13, painting).
Syntactic ambiguity can be stated as Mixture M of three constellate groups of colours (S1.1 bluish versus S1.2 reddish versus S1.3 yellowish, see second - fourth figure) and as pseudo-superposition of colour fields, better described as Minimal Difference MD of colours (S1.1 ~ S1.2 ~ S1.3, see seventh figure).
'Simultaneity' is redefined by the work as contamination of different perceptions of different groups (S1/similarity of colour and C1/contiguity of circle-line-direction-index and C3/circle-line-curvation-index) in one moment. Contamination of spatial and of temporal conceptions are typical of the early avantgarde in the 1910s (see examples below): **Cubism** contaminates different spatial views, **Futurism** contaminates moments of movement of an object.

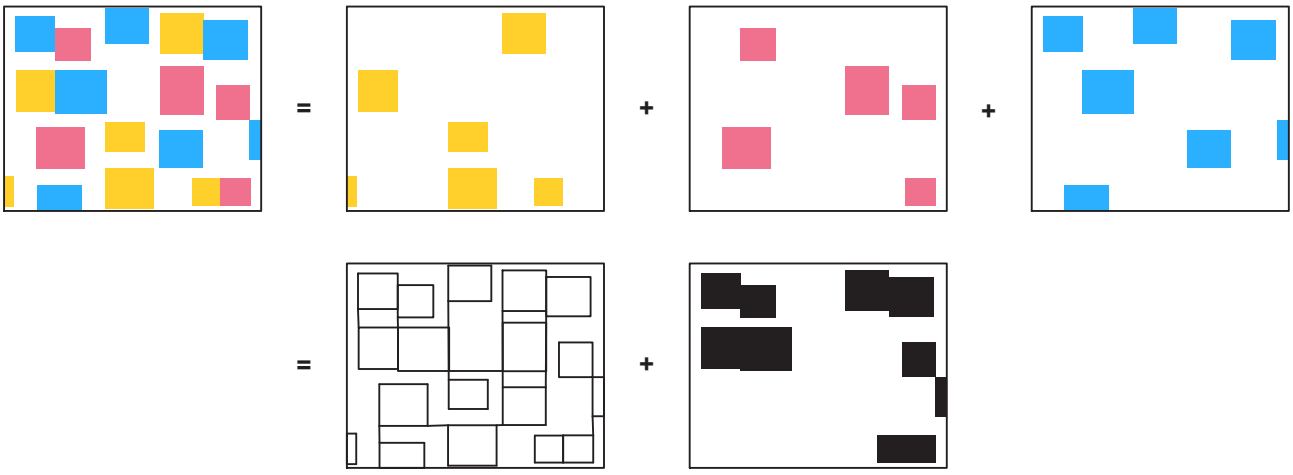


Figure 113: Reconstruction of Piet Mondrian's *Composition with Colour Fields 4* (1917, painting)
Mixture M of three groups of colours (S1.1 versus S1.2 versus S.1.3, see second - fourth figure) and Hybrid H because of C1 (fifth figure) and C2 (sixth figure): C1 + C2 versus S1.

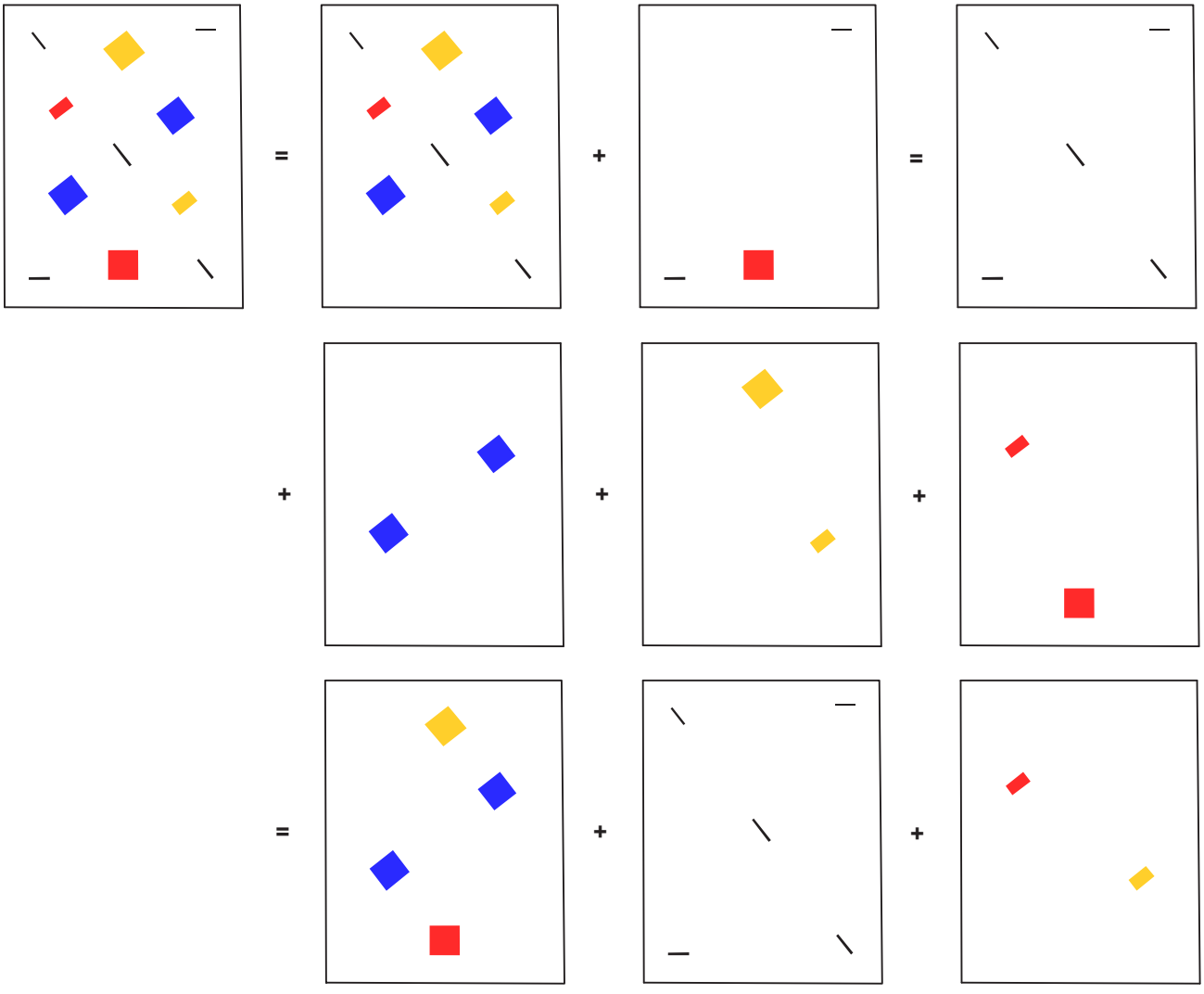


Figure 114: Reconstructions of Bart van der Leck's *Composition* (1918, painting)
Mixture M + Hybrid H because of groupification according to different cognitive criteria of unification:
a) S4, b) S1 and c) S2.

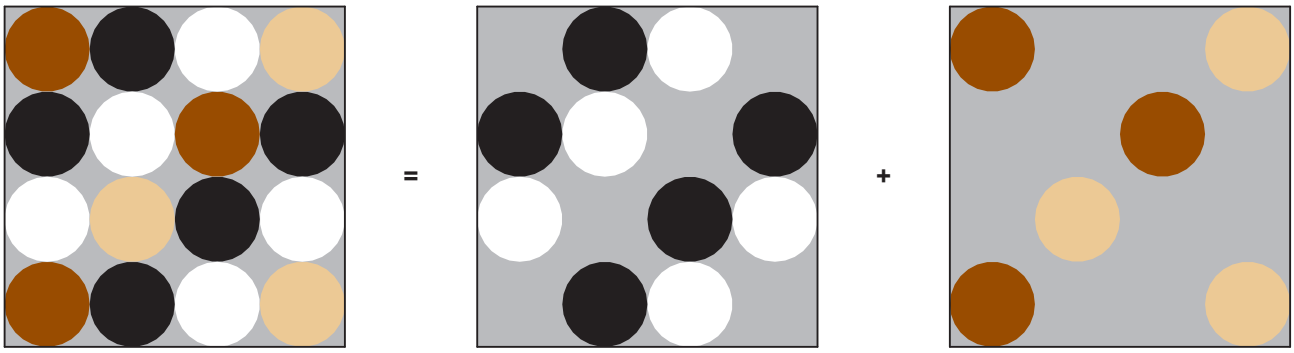


Figure 115: Reconstruction of Sonia Delaunay's *Simultaneous Fabric No. 65* (1925, painting).
Mixture M of four groups of points because of four different colours.

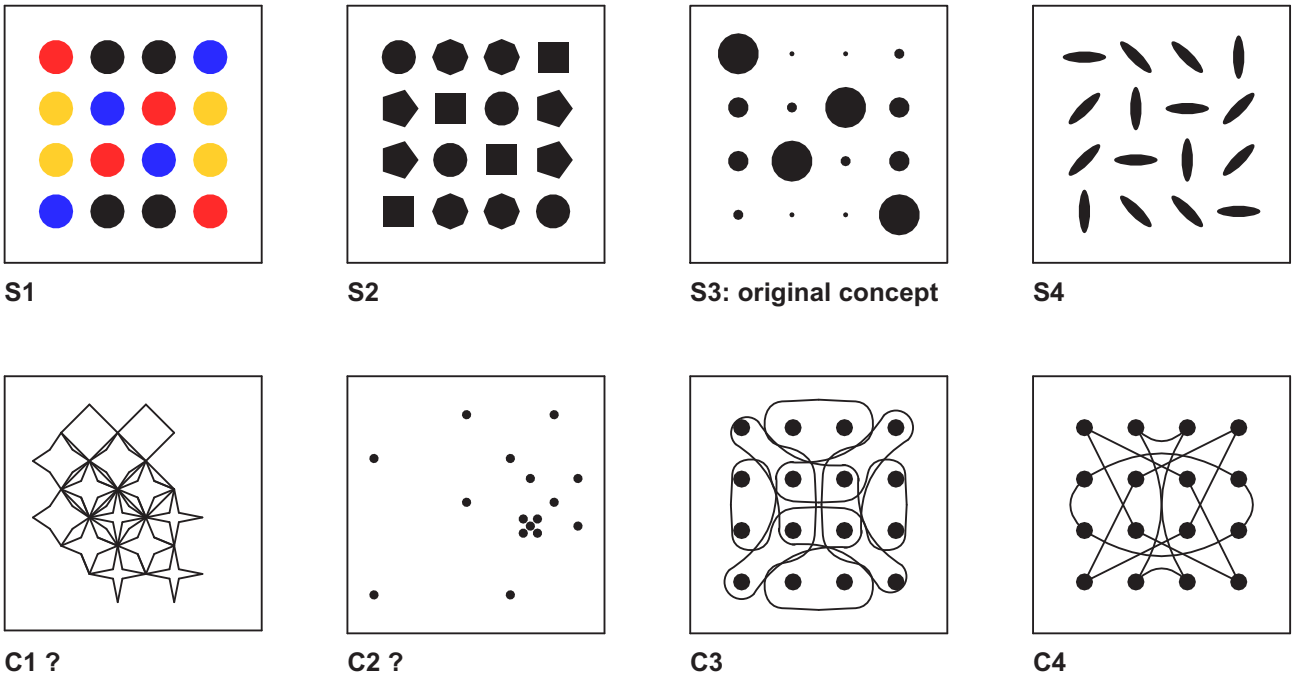


Figure 116: Eight variations of Vera Molnar's *16 points* (1952, collage).
In the original collage (third figure) there is a tendency towards spatial illusion.
Variation of the concept is not that easy using contiguity criteria C1 - C4 instead of criterion S3.

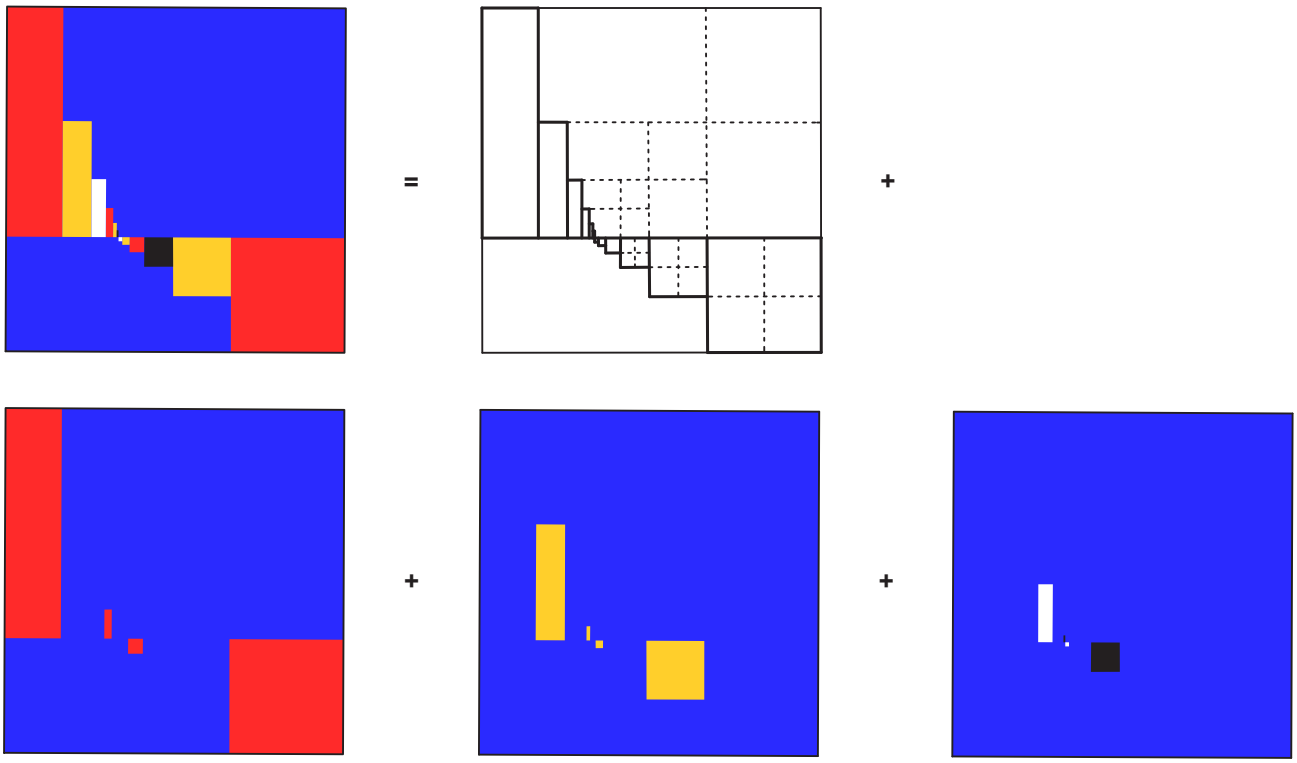


Figure 117: Reconstruction of Camille Graeser's *Equivalence at the Horizontal* (1958, painting).
Hybrid H (one red element is assigned to a pair-group of S2 and to a group of S3) + Mixture M (four groups of the colours red, yellow, black and white).

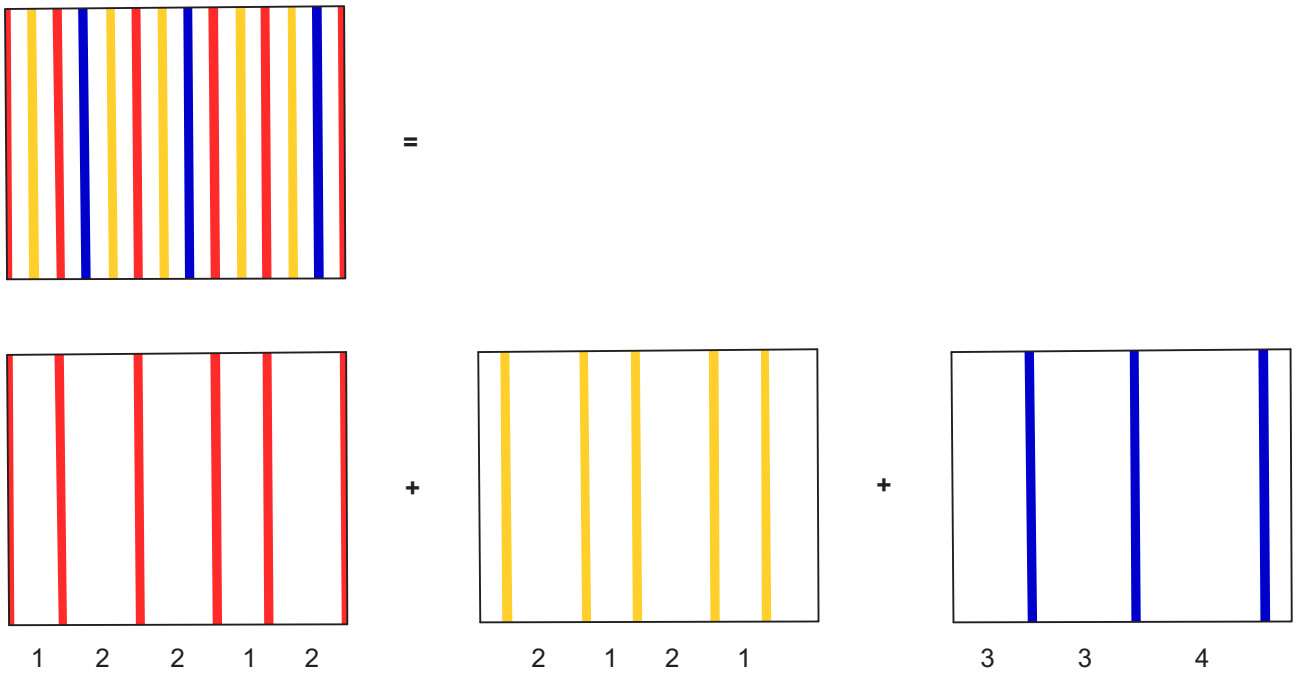


Figure 118: Reconstruction of Francois Morellet's *Blue, Yellow, Red* (1952, painting).
Mixture M (S1.1 red versus S1.2 yellow versus S1.3 blue in combination with three 'rhythms' of these three colour groups as three systems of proximity C2)

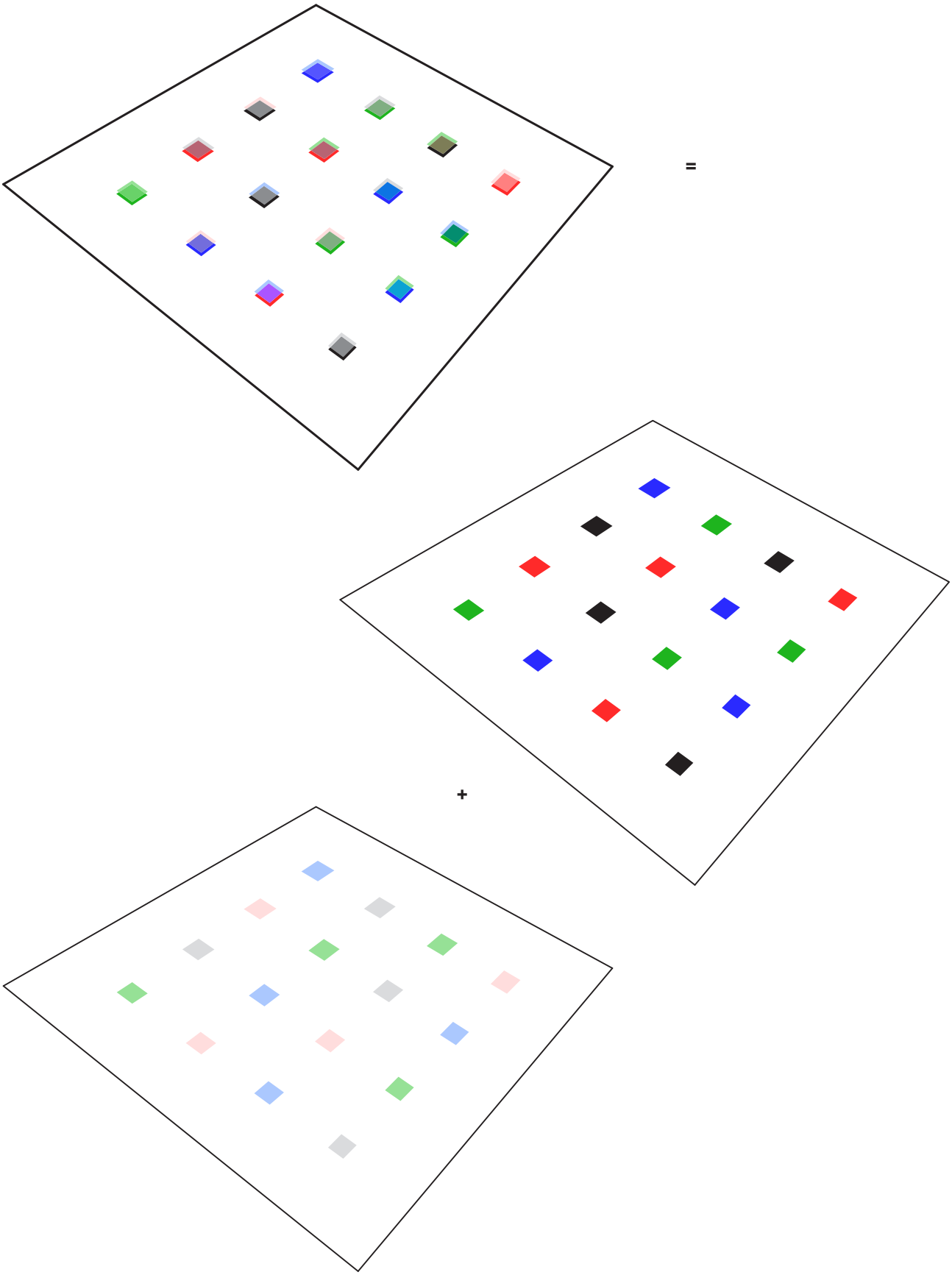


Figure 119: Reconstruction of Hans-Jörg Glattfelder's *16 Dimmings I* (2003, painting).
Type Mixture M (S1.1 red versus S1.2 blue versus S1.3 green versus S1.4 black, see second figure); the repetition in superposition of the four groups in light colours ('dimming', see third figure) could be described as a visual 'counterpoint' because of the reflection of 'themes' at a horizontal and at a vertical axis. The pseudo superposition of 'translucent' colour planes is based on Minimal Differences MD of colour.

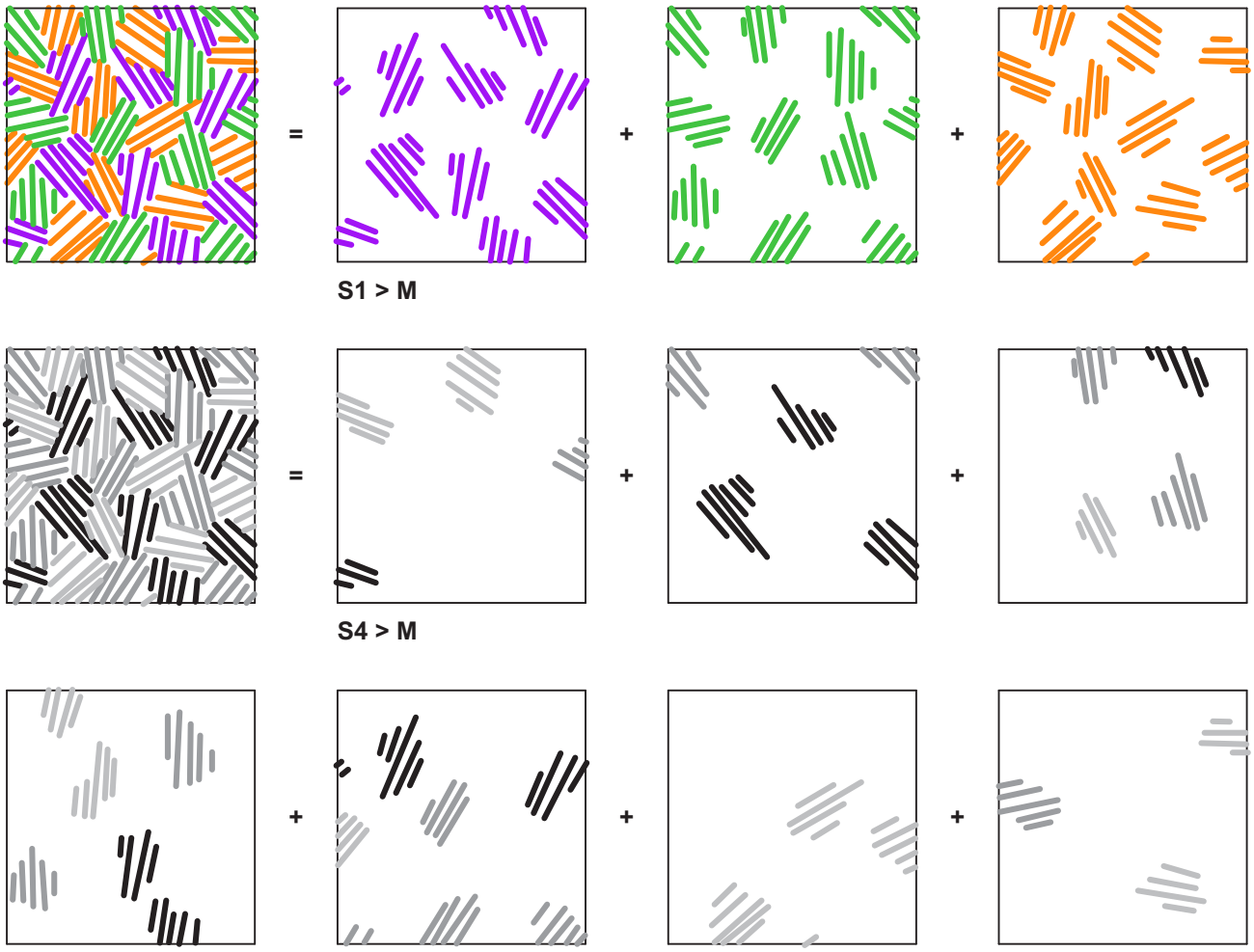


Figure 120: Reconstruction of Jasper Johns' *Cross hatch* (1977, print).
Combination of the two types of ambiguity Mixture M + Hybrid H:
three groups of lines because of three colours (S1.1 versus S1.2 versus S1.3, see second - fourth figure) and about seven groups of lines because of different orientations (S4.1 versus S4.2..., see fifth figure - last figure).

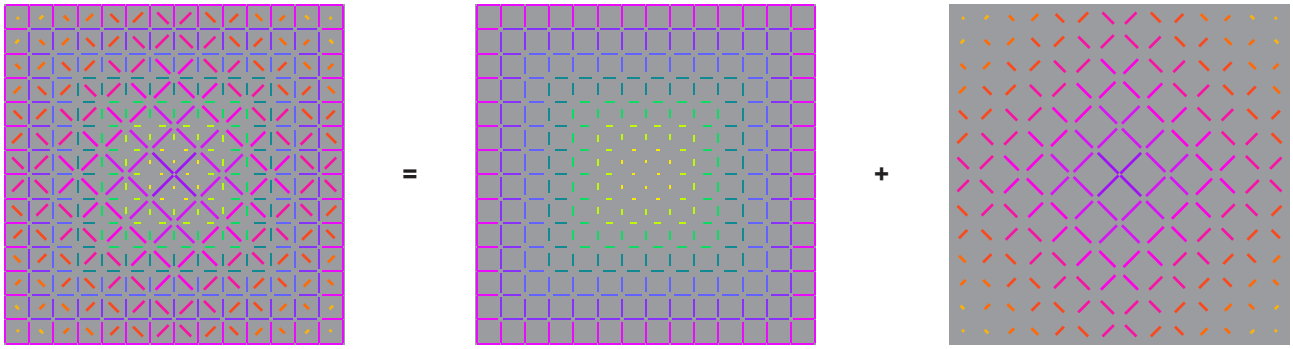


Figure 121: Reconstruction of Axel Rohlfs: *Four simultaneous Structures in Counter-development* (2003, print)
There are four sequences, two of colour and two of length in counter-development with Minimal Differences MD (S1/3.1 ~ S1/3.2 ~ S1/3.3...); the four seqences form two groups which can be visually separated from each other by colour, length, orientation and line-direction-indices:
Mixture M (S1/3/4.1+C1.1 versus S1/3/4.2+C1.2) plus illusion according to **Ehrenstein** (see figure 37).

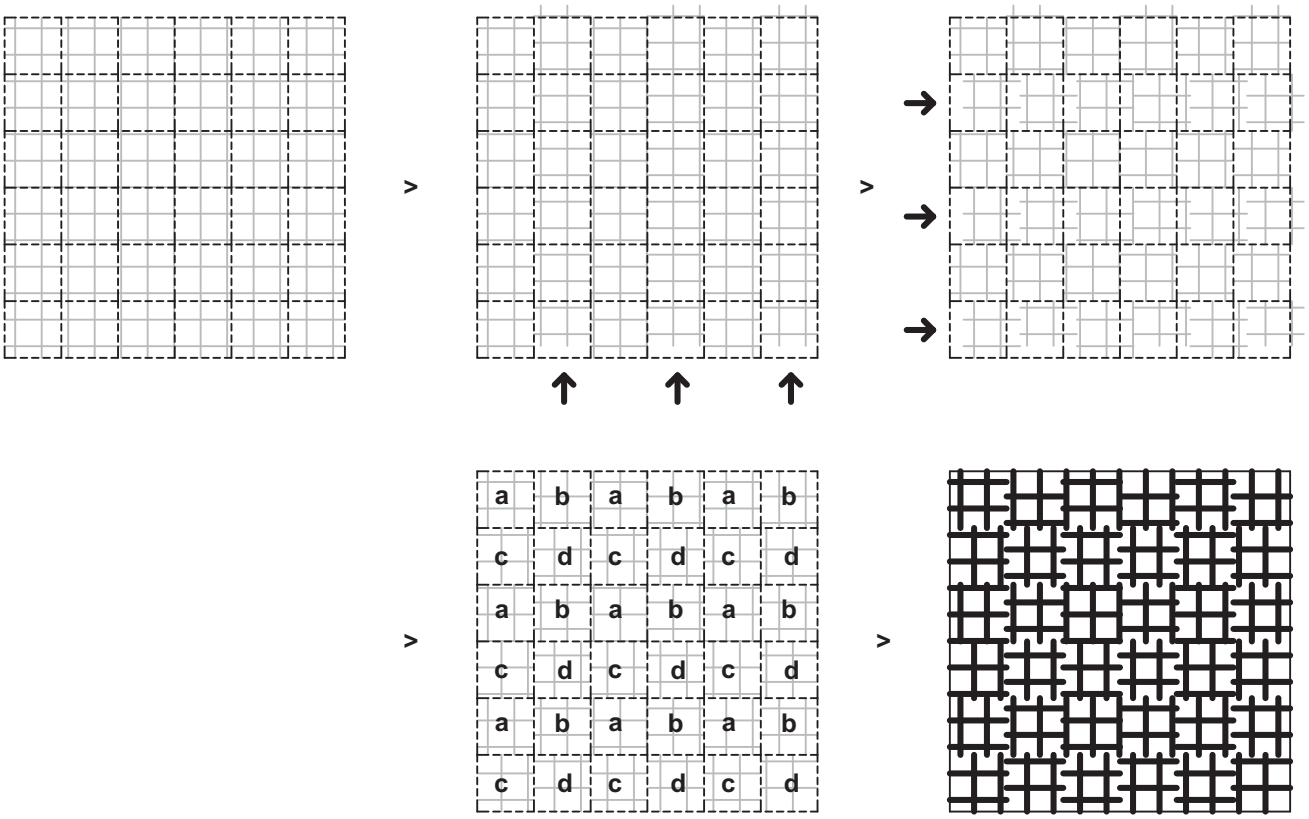


Figure 122: Reconstruction of Francois Morellet's *Tirets 0°- 90°* (1960, detail, painting).
Transmutatio of parts of a grid in 0° and 90°, therefore Mixture M of four C1-groups (C1.1 versus C1.2 versus C1.3 versus C1.4).

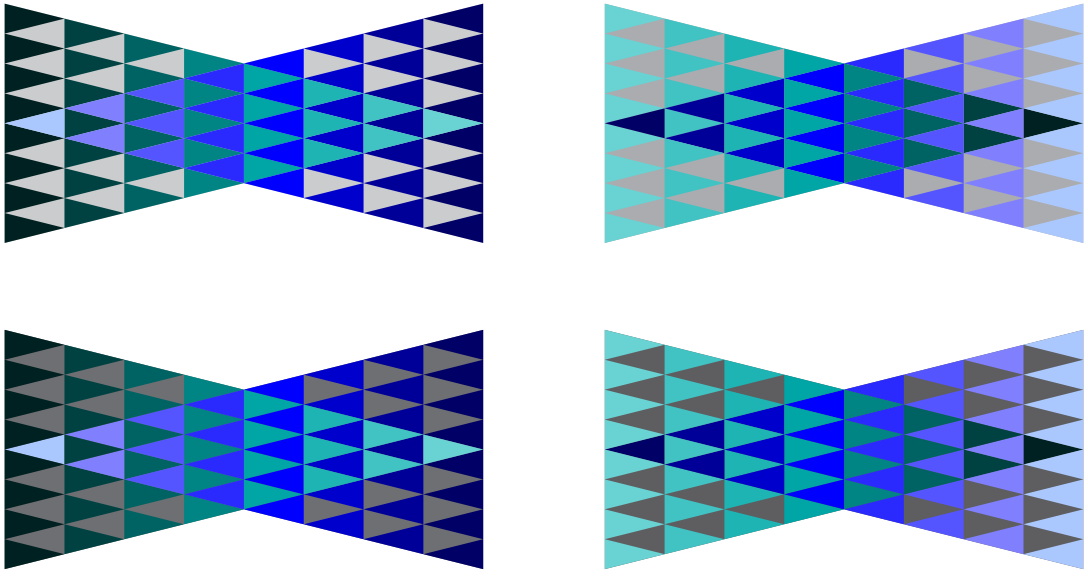


Figure 123: Variation of Axel Rohlfs' *Inverse Crossing of two sequences of colour* (2004 - 2018, print).
Type Mixture M of two self-similar groups of 2 x 36 triangles (S1.1/S4.1 versus S1.2/S4.2), Hybrid H of these two groups (C3.1 triangle-formation a of 36 triangles versus C3.2 triangle-formation b) and Minimal Differences MD of colour; the four variations show different sequences of illusion of spatial depth.

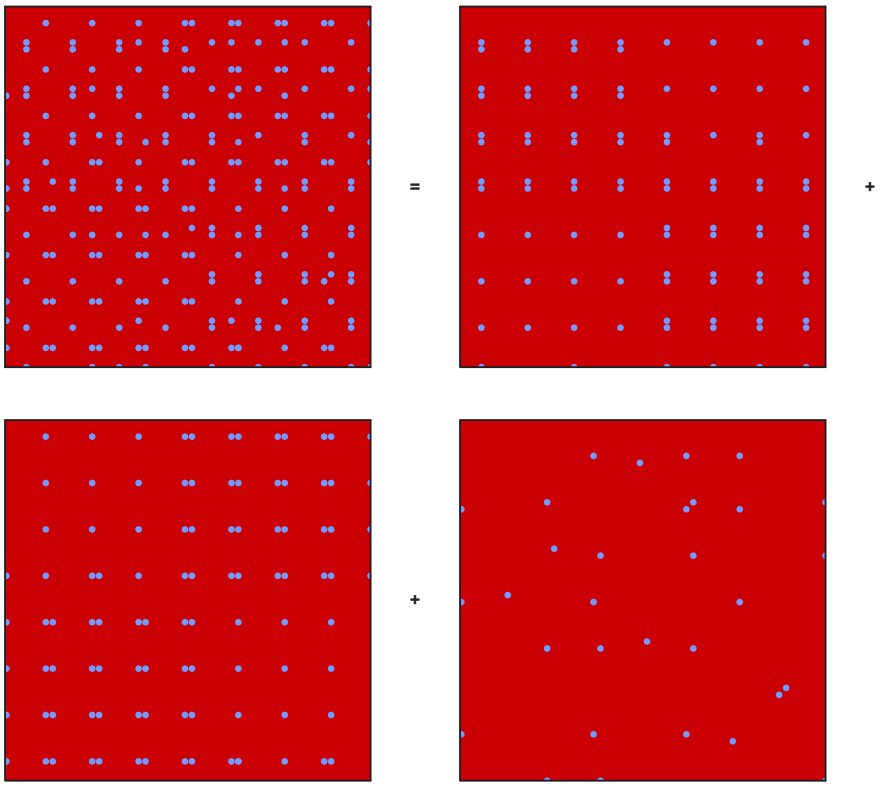


Figure 124: Reconstruction of Larry Poons' *The Enforcer* (1963, painting).
The cognitive sub-images of the second figure and third figure are based on similarity of distances (S + C2) and on the type 1 of Geometric Minimal Difference 'points to line'; these two groups form ambiguity of the type Mixture M. The fourth figure shows points without order of position, which disturb the strict order of the second and third figure.

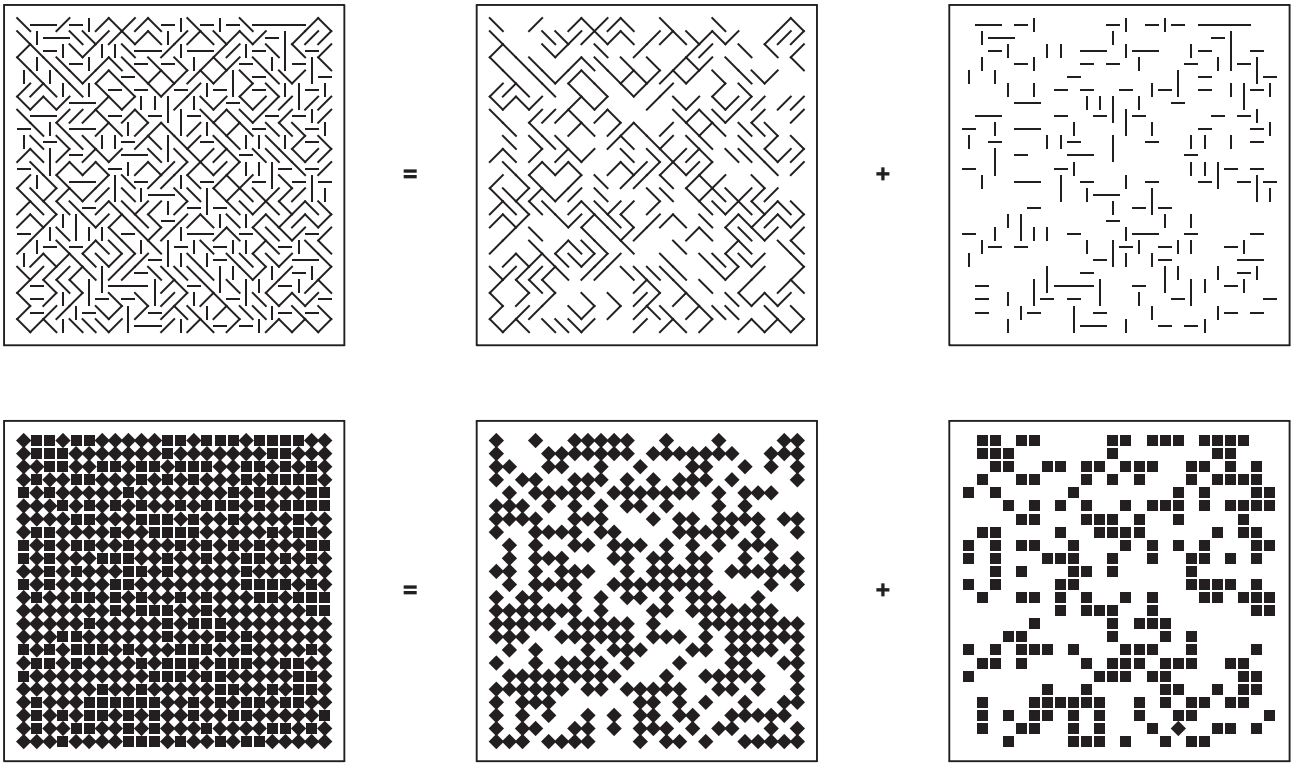


Figure 125: Reconstruction of Vera Molnar's
a) first - third figure: *Random Positioning in four steps, white ground* (1959- 2010, third painting of a serial of four)
b) fourth- sixth figure: Squares in two Positions/B (2011, third painting of a serial of four).
Mixture M of four groups of four orientations (S4.1 horizontal versus S4.2 vertical versus S4.3 diagonal going up versus S4.4 diagonal going down) or Mixture M of two groups of two orientations (S4.1 orthogonal versus S4.2 diagonal); it is difficult to separate these two groups of squares because of their proximity to each other.
Both paintings are based on the same random positioning of elements (diagonal or orthogonal lines/squares).

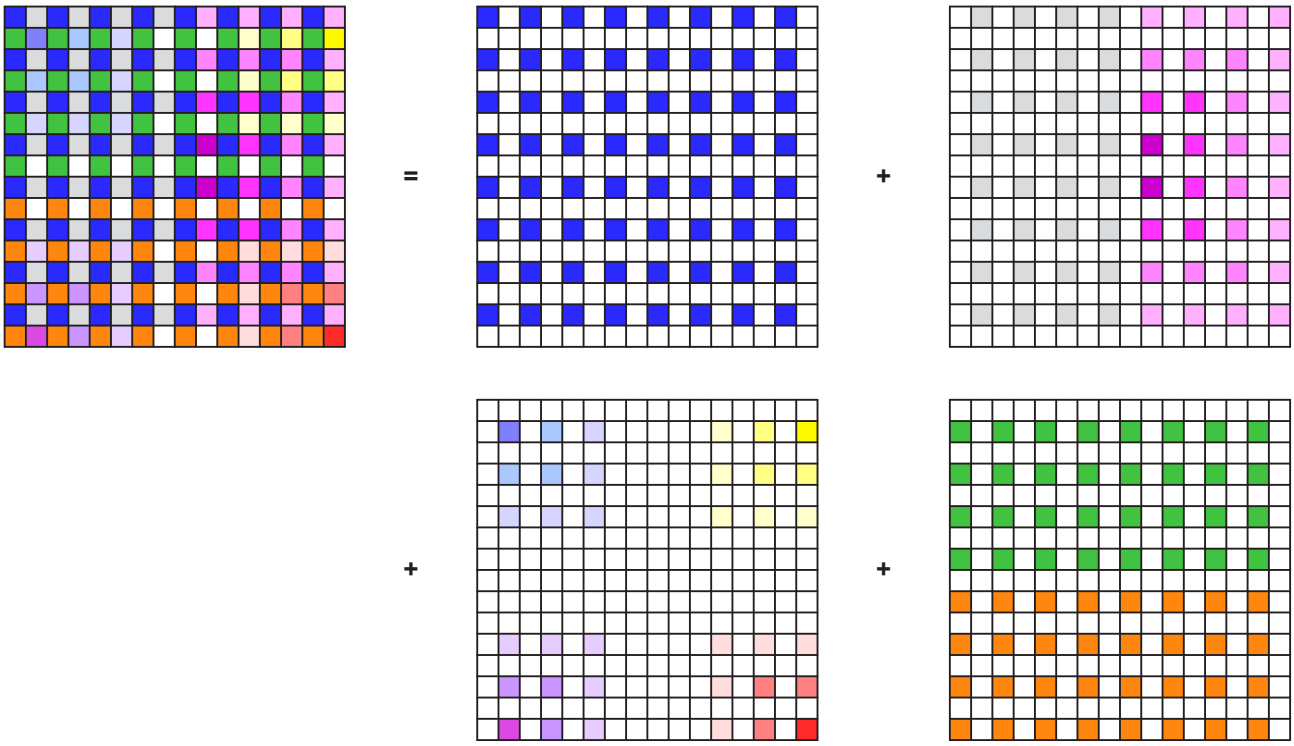


Figure 126: Reconstruction of Max Bill's *Integration of four Systems* (1958-60, painting, detail).
Mixture M of six groups, sometimes with Minimal Differences MD of colour: a) top left quadrant: constantly blue, b) top right quadrant: division in a grey field and a field of the sequence lilac to light lilac, c) bottom right quadrant: four colours with sequence into a white cross in the middle, d) bottom left quadrant: two fields of two colours (orange and green)

Figure 127: Structure of Antonio Calderara's *Light Space* (1970-1971, painting).
Mixture M (S1.1 white squares versus S1.2 yellow squares) and Minimal Difference MD (S1.1 yellow squares ~ S1.2 light yellow ground). The relatively bigger space around the 16 white squares and the relatively bigger difference between white and yellow allow an interpretation of this group of 16 white squares as a kind of outstanding constellation, as a kind of ´figure´ in front of a ´ground´ formed by the 25 yellow squares. The ´theme´ of this painting is therefore Minimal Difference between two levels of visual attraction (16 white squares versus 25 yellow squares).

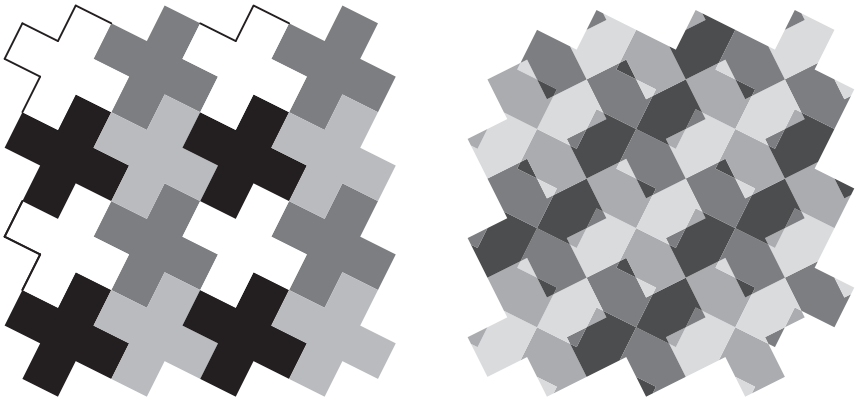
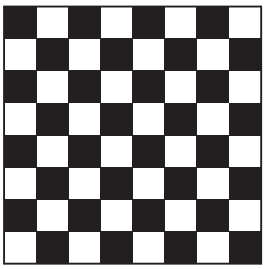
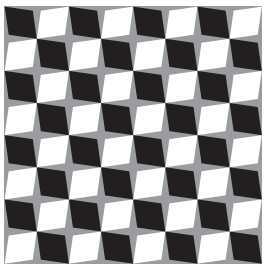


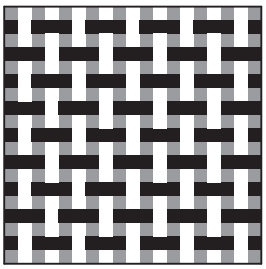
Figure 128: Paraphrasing of Op-Art: ambiguous cross-structure and pseudo-superposition.
The first figure shows an ambiguous structure as Mixture M of four groups because of four colours, the second figure two 'translucent' structures in pseudo-superposition ('Hybrid H') because of Minimal Differences MD of colour (S1.1 ~S1.2~S1.3~S1.4).



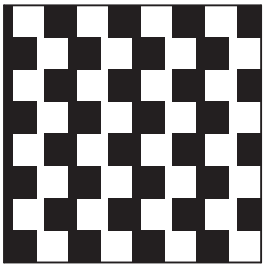
Mixture M of
two "grounds"



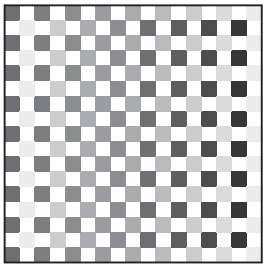
Mixture M of
three "grounds"



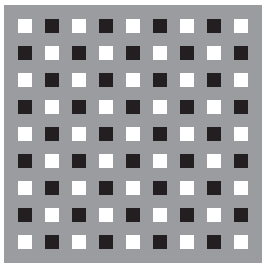
Mixture M of
three "grounds"



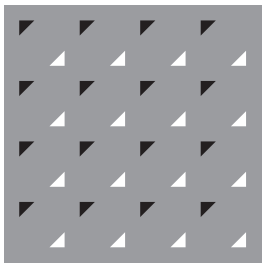
Mixture M of
two grounds/ figures?



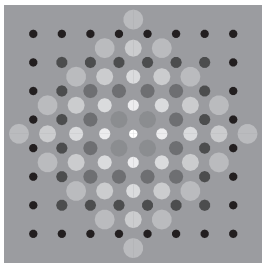
Mixture M of
three "grounds" (MD)



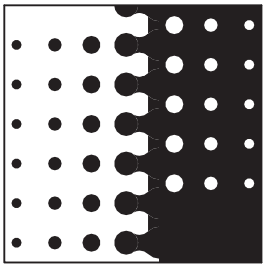
Mixture M of
three "grounds"



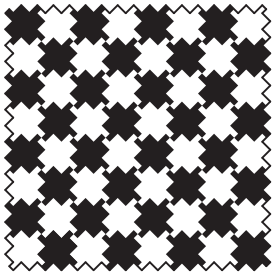
Mixture of
two figures/ grounds?



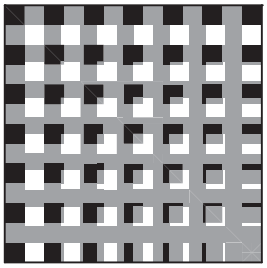
Mixture of
two figures? (MD)



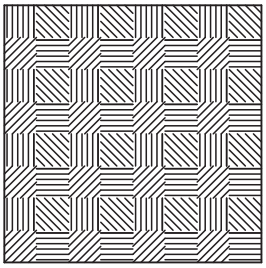
exchange of role of figure
in the middle zone



Mixture of
two "grounds"



Mixture M of
three grounds? (MD)



Mixture of four grounds
(S4.1 vs. S4.2 vs. S4.3 vs.
S4.4)

Figure 129: Variations on the chessboard structure.

2.1.5 Hybrid H of crossed grids

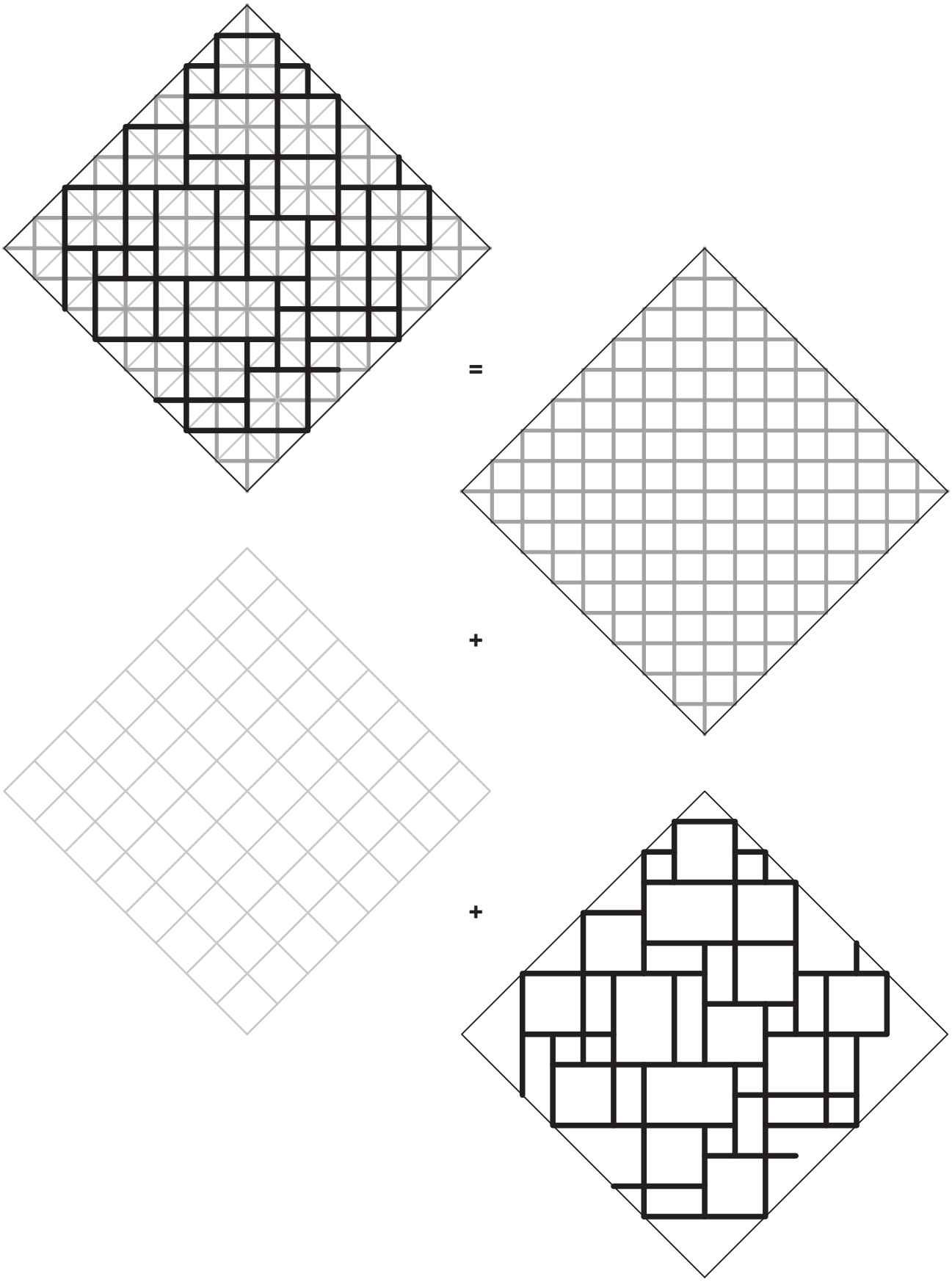


Figure 130: Reconstruction of Piet Mondrian: *Composition with grey lines* (1918, painting).
Hybrid H of a 'superposition' of three grids which can be distinguished from each other with the criteria of colour and size (width).

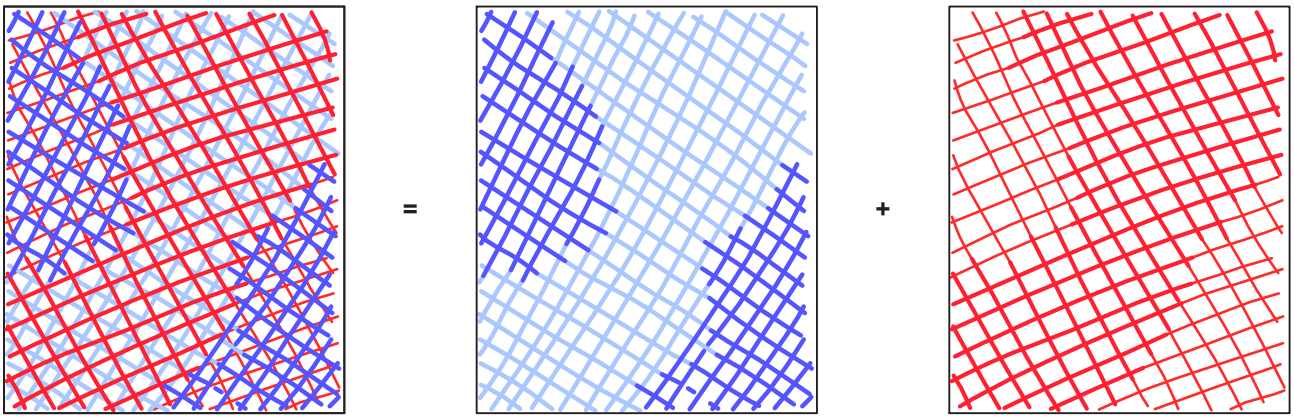


Figure 131: Reconstruction of Sonia Delaunay's Design from the portfolio *'Compositions- Couleurs-Idées'* (1930, painting).
Mixture M of two grids which exchange of (super-)position (S1.1 red/C1.1 versus S1.2 blue/C1.2)

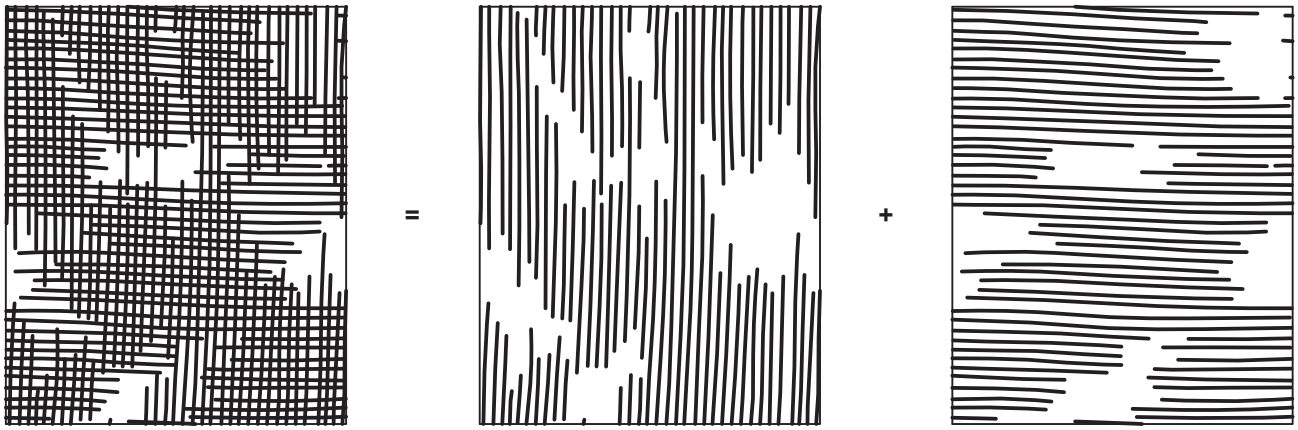


Figure 132: Reconstruction of Sonia Delaunay's *Design No. 951bis* (1929, print on cloth).
Hybrid H (C1.1 versus C1.2 in points of intersection and C3.1 contour a of verticals versus C3.2 contour b of horizontals), type 7 of Geometric Minimal Difference MD lines to plane

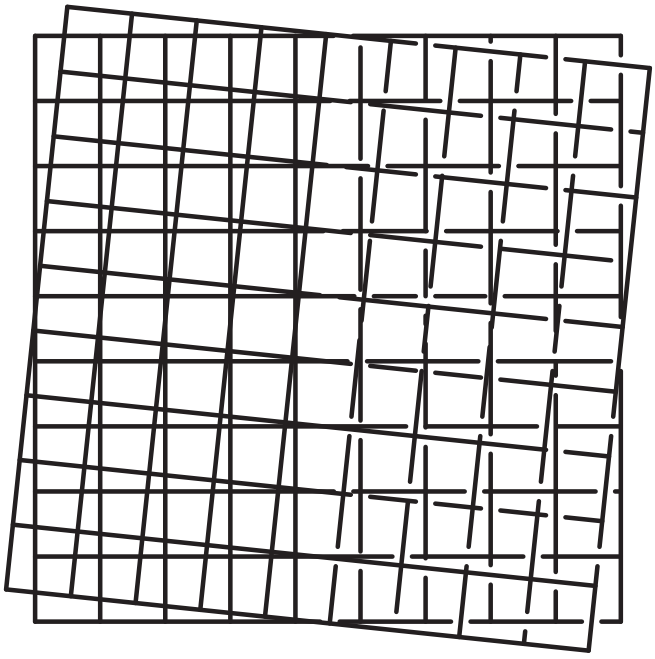


Figure 133: Variation on an idea of Francois Morellet (1960s).
left half: Hybrid H (original)
right half: Mixture M (variation)

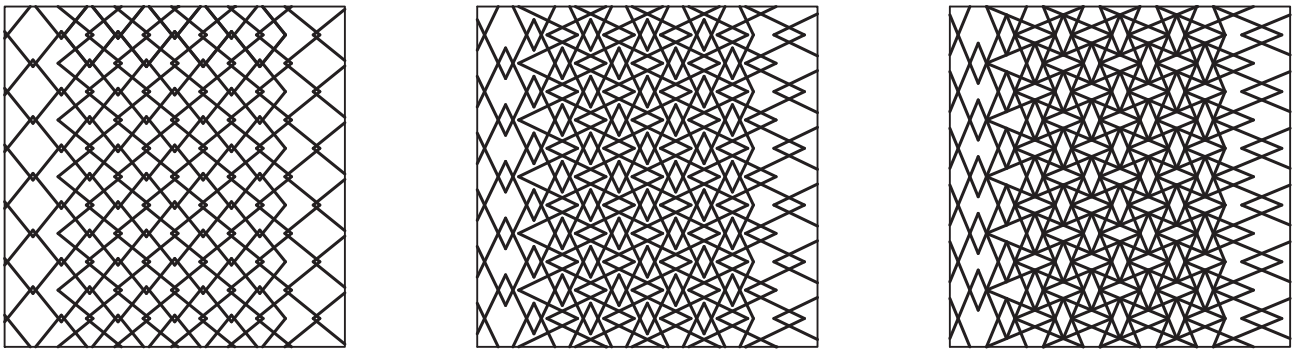


Figure 134: Paraphrase of Op-Art: two structures in three kinds of superposition.
Hybrid H (C1.1 versus C1.2 in points of intersection of zig-zag-lines, C3.1 versus C3.2 by interpretation as a structure of parallelograms)

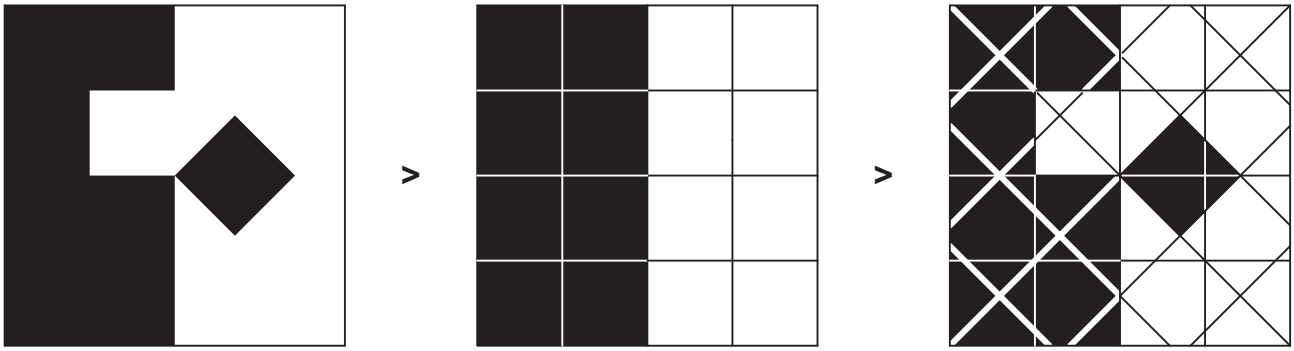


Figure 135: Reconstruction of Camille Graeser's *Untitled* (1977, print).
Syntactic transmutatio of one modular square hints at two modular grids.

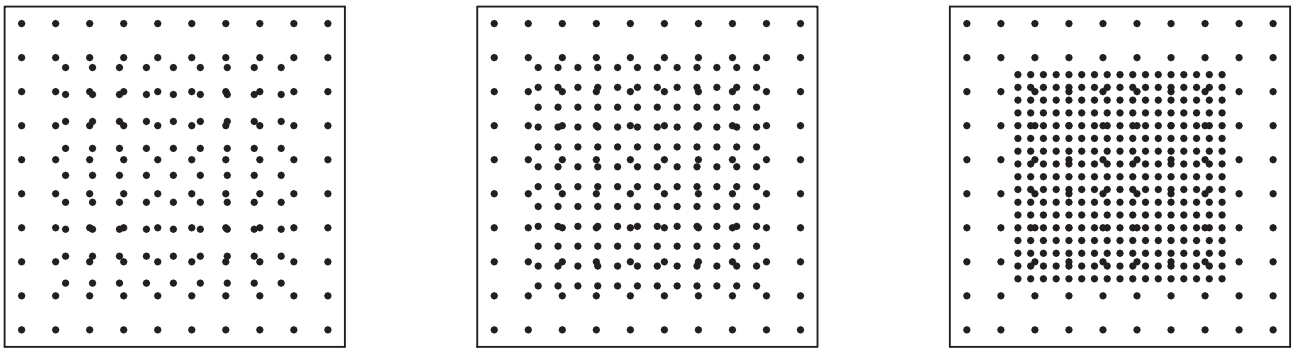


Figure 136: Three variations of criteria C2 of a central grid of points.
Hybrid H/Mixture M of figure (?) and ground based on similarity of proximity (S of C2) plus type 13 of Geometric Minimal Difference (points to lines to plane), secondary structures as pseudo-perspectives

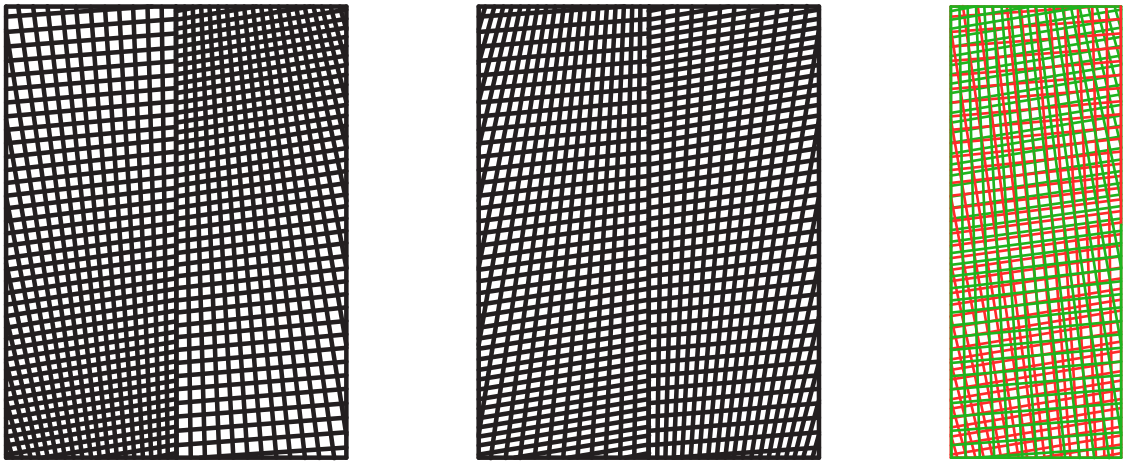


Figure 137: Variations of Mario Nigro's *Untitled* (1956, painting, original structure left).
Hybrid H of the middle-zone of the painting because of similarity of proximity (S of C2); the original (left) evokes an illusion of spatial depth by using two sequences of Minimal Difference MD of proximity C2; it appears as if there was a rotation around a horizontal axis.
The first variation (middle) uses the same two sequences of proximity C2 of lines, but the horizontal lines are reflected at the horizontal axis in the middle; therefore the effect is a Minimal Difference MD of orientation S4 of the holes of the grid, the spatial illusion is reduced.
The second variation (right) is a superposition of the two halves in green and red, therefore a total Hybrid H.

2.1.6 'Overlapping' of two pseudo-translucent planes (Hybrid H) as a zone of mixture of colours (Minimal Difference MD of three colours)

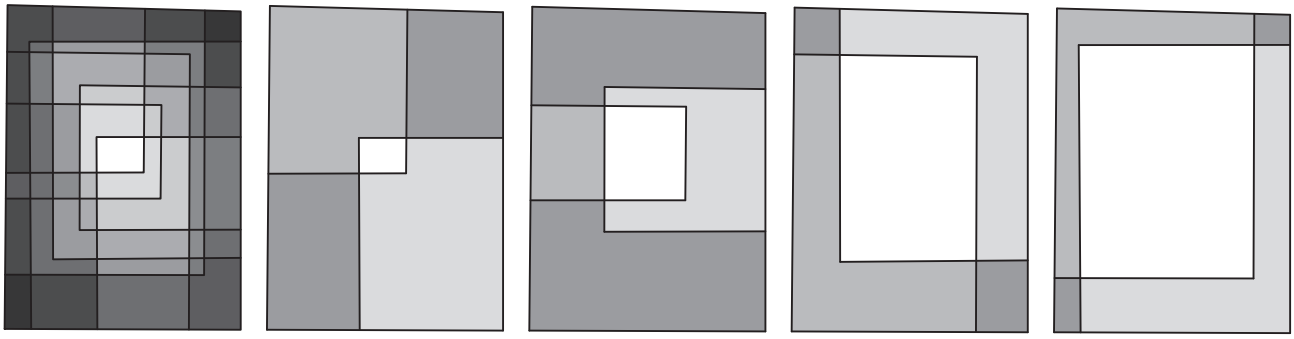
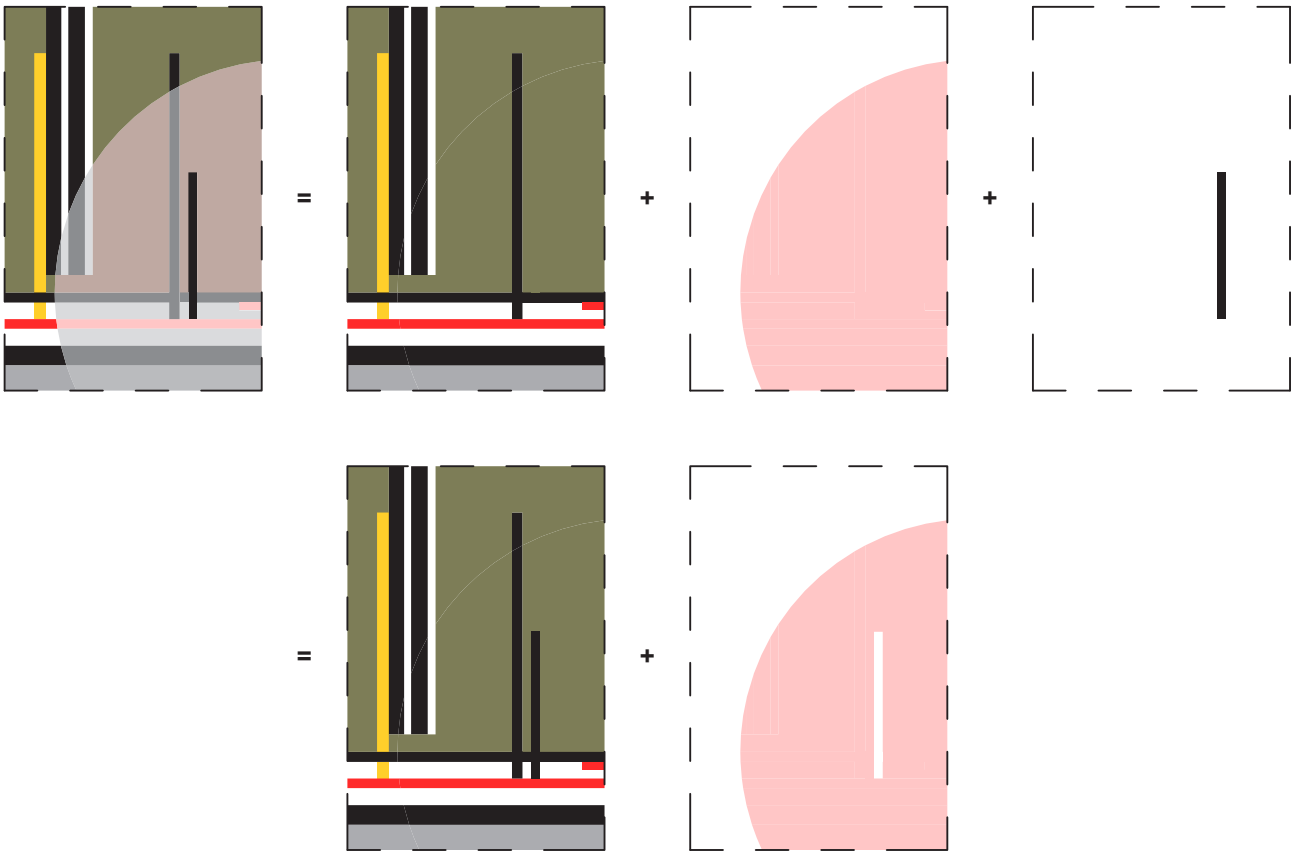
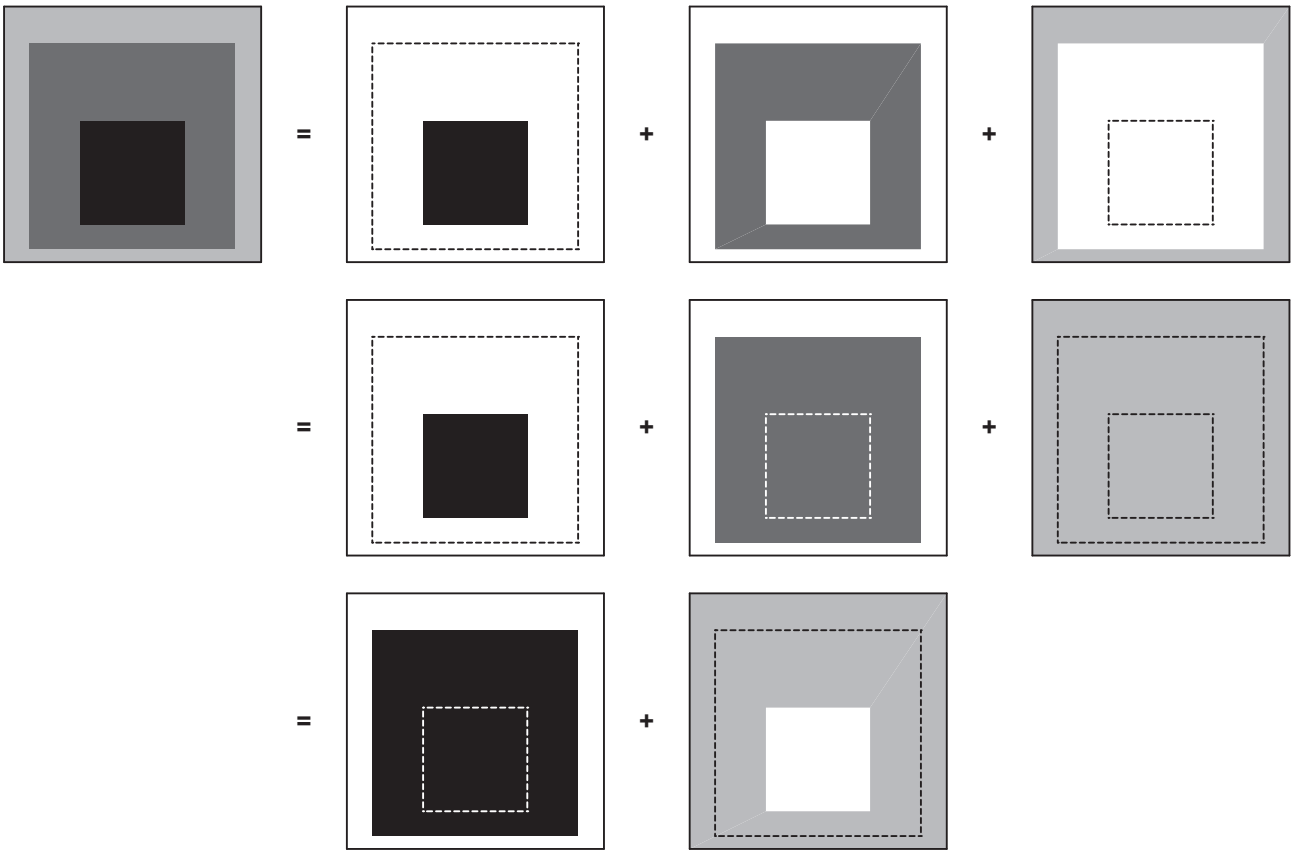


Figure 138: Reconstruction of the succession of the layers of watercolour in the work by Paul Klee: *Polyphonically enclosed White* (1930, drawing and watercolour).
Four pairs of translucent colour-fields in technical superposition can be distinguished; the fields of superposition can be described with Hybrid H (C1/3.1 versus C1/3.2) + Minimal Difference of colour (S1.1~ S1.2~ S1.3). The title refers directly to ambiguity, because 'polyphonic' means simultaneity of two voices giving variations of a theme in music. In the image of Klee the **ambiguous crossing of two entities** is of course not temporal but spatial; but both aesthetic phenomena use (spatially or temporally) mixed indices that refer to different cognitive groupifications (melodic lines, formations, shapes).

Figure 139: Kinds of 'spatial' interpretation of László Moholy-Nagy's *LIS* (1922, painting, detail) and Josef Albers' *Homage to the Square* (1950, painting, page 80).
The detail of Moholy-Nagy's work allows two kinds of spatial interpretation: a round plate of glass with or without a hole.
Albers' work allows three kinds of spatial interpretation:
a) succession of frames with a hole in the first line (with possible spatial-semantic interpretation like 'tunnel'),
b) superposition of squares (spatial-semantic interpretation) and
c) a translucent grey plane on a black one in superposition (Hybrid H + Minimal Difference MD of three colours).





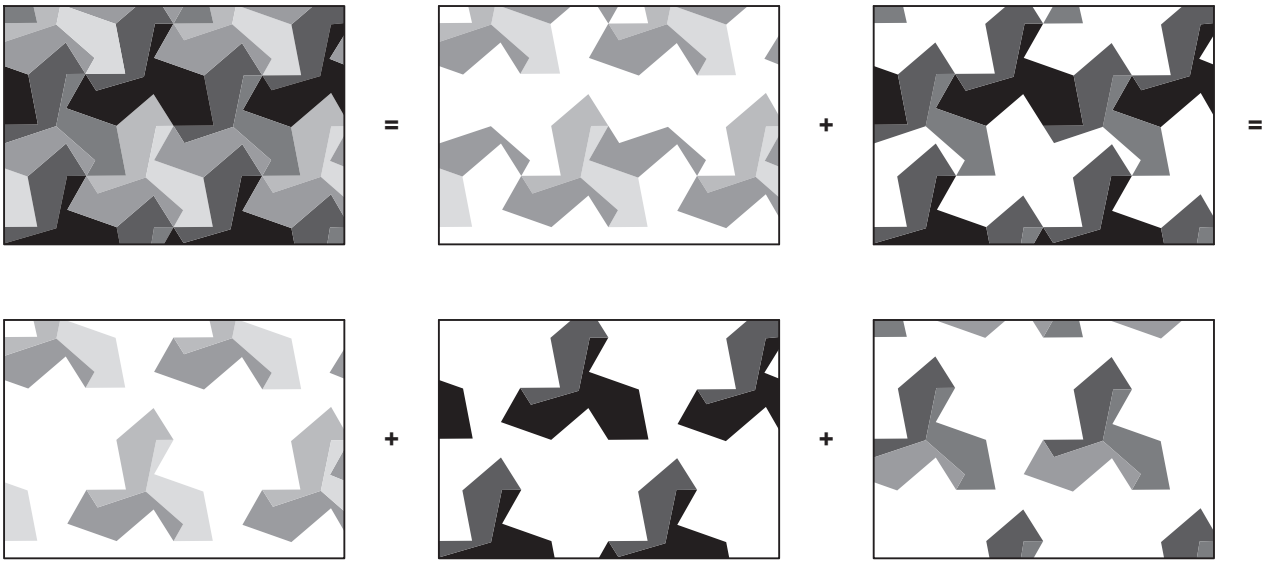


Figure 140: Reconstruction of Hans Hinterreiter's *Study 36* (1932, painting).
Mixture M of three groups of Y-forms (see last line), which can hardly be distinguished because of Minimal Difference MD of eight greyish colours of translucent appearance and because contours of figures cross other figures (> Hybrid H (C3 versus C1). Therefore other interpretations of figures than Y-forms are possible (see first line). This produces ambiguity of figure interpretation.

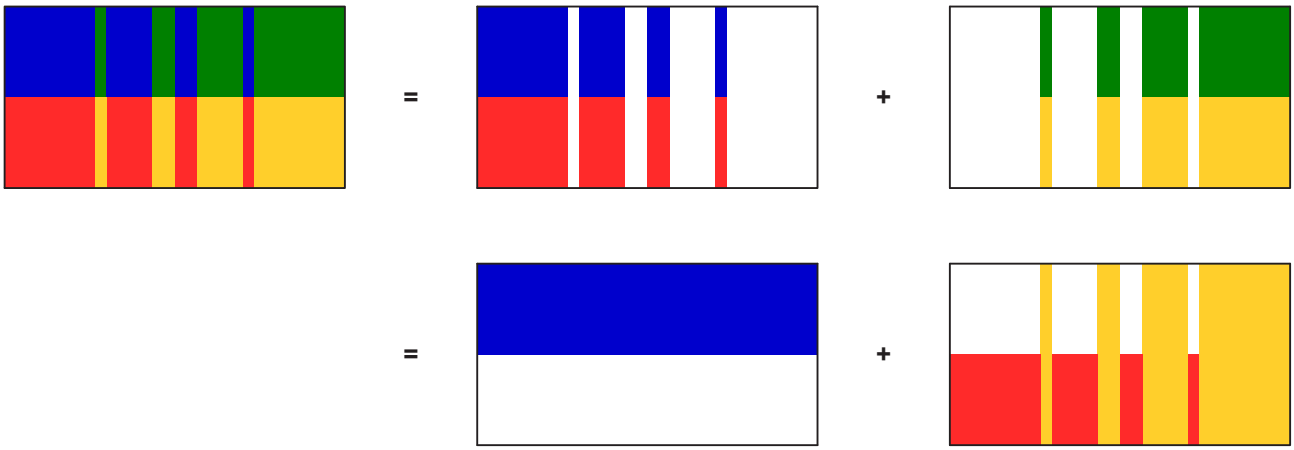


Figure 141: Reconstruction of Max Bill's *Four colours in structure* (1970, painting).
Mixture M of four cognitive groups on the base of four colours; one group consists of four separated colour-fields in a sequence of width (1/8, 1/4, 1/2, 1/1 or backwards), two sequences have two counter-sequences. A second interpretation as superposition of translucent colours is possible as well (Hybrid H + Minimal Difference MD of colours, see last line).

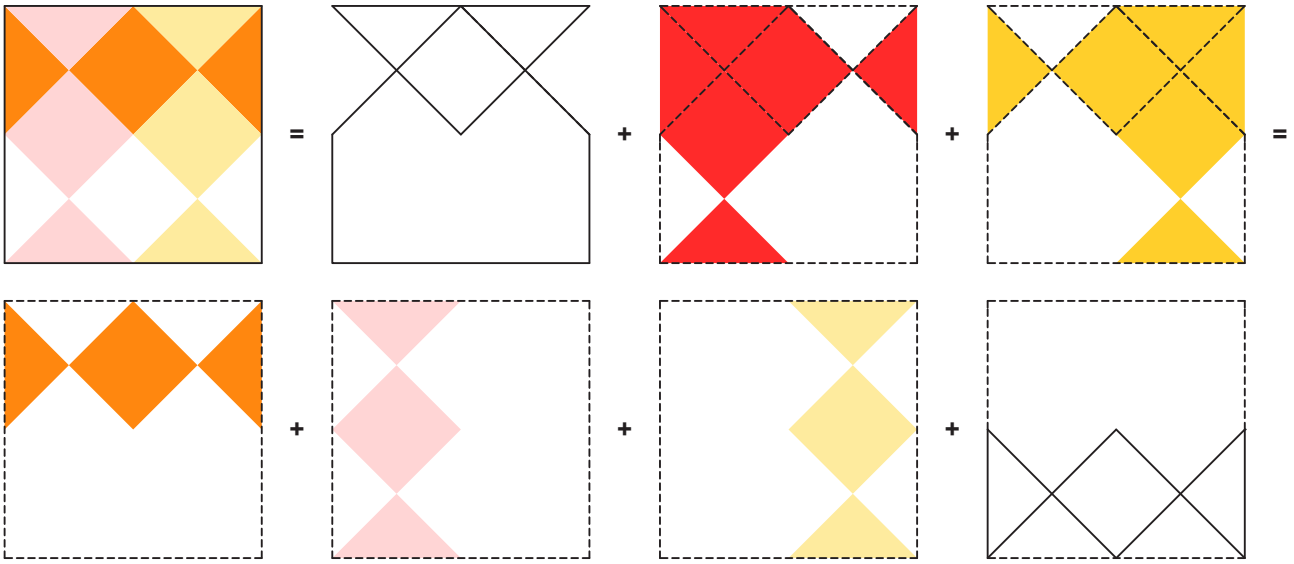


Figure 142: Reconstruction of Max Bill's *Field of light penetrating Colours* (1966-67, painting).
One can refer to two possible kinds of interpretation: three groups of translucent colour fields in superposition (first line, Hybrid H + Minimal Difference MD of colour) or four groups of adjoining colour fields (~ Mixture M).

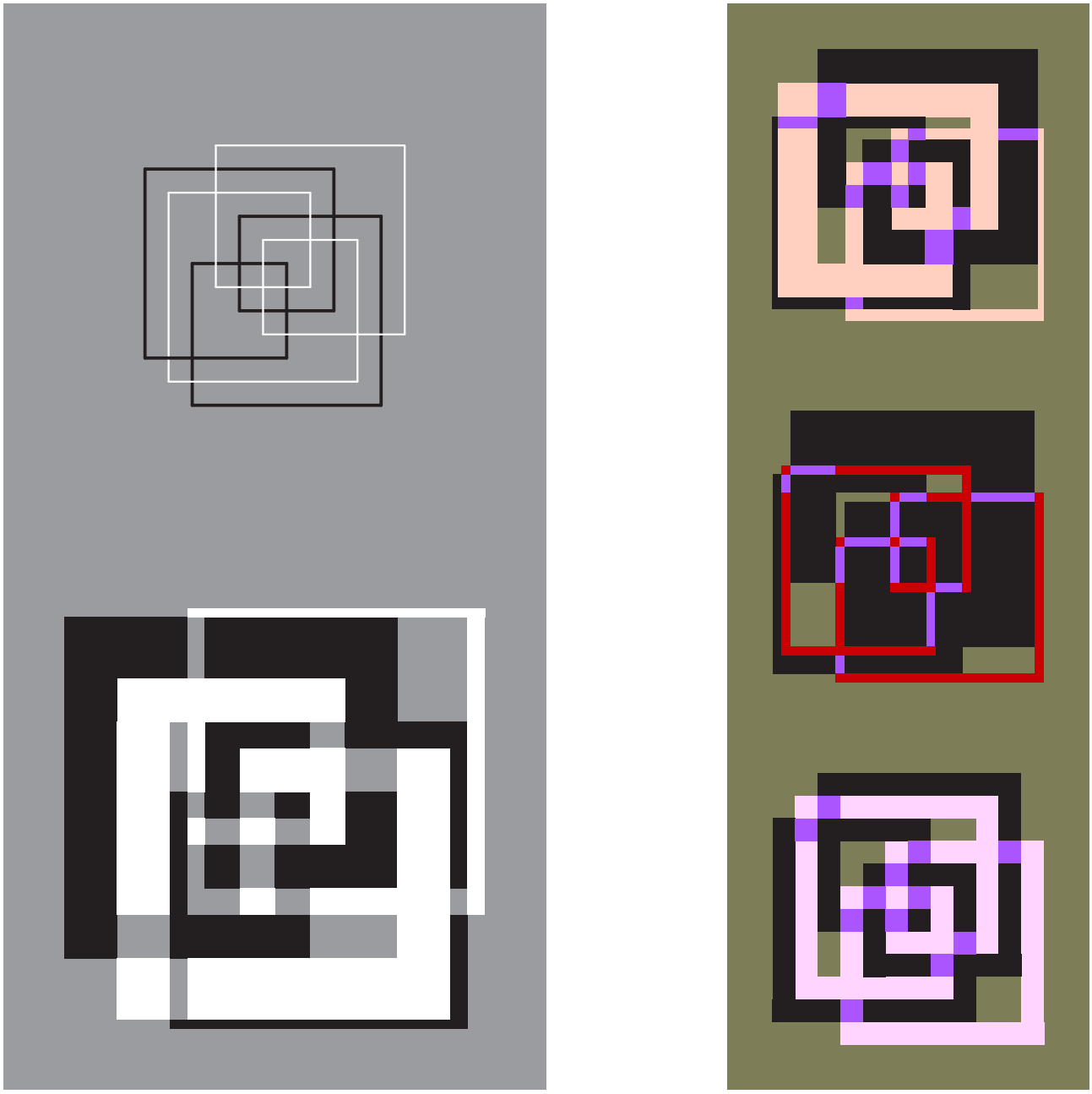


Figure 143: Axel Rohlfs' *Structure of Surface and Structure of Depth of a double knot OT 33* (2013, painting) and the correlating image *Colour Topology CT 33* (2016, print).
The reciprocal formation of the two endless knots in one double knot leads to several phenomena of aesthetic ambiguity: Geometric Minimal Difference GMD 'points to lines to plane' by swelling, Hybrid H + Minimal Difference of colour colour-fields (the grey of superposition-fields of the right figure is identical with the grey of the ground of the double knot: Hybrid H + Mixture M of a contamination of the double knot as the 'figure' and its ground).
The left figure shows the structure of depth of the double knot as system of black and white paths, the four structures of surface show inputs of progressive or constant widths; the structure of depth has multiple structures of surface as multi-reference, but one structure of surface has only one reference: to the structure of depth. This phenomenon could be named as an ambiguity of formation.

2.1.7 Self-similarity

The ambiguous principle of self-similarity as repetition of a formation in different dimensions in itself appears in iconic and non-iconic art and in nature. By this kind of repetition in micro-, meso- and macro-dimensions, the impression of poly-dimensional representation is evoked. This crossing of similarity and contiguity in self-similarity poses the question of a possible analogy of perception and self-organisation of the material world.
One smaller formation is enclosed by a bigger and similar formation (> Hybrid H (C3.1 versus C3.2), but Mixture M of dispersed elements is possible as well (see figure 175).
Even paintings by Jackson Pollock have self-similar structures: thick lines/big drops on thin lines/small drops.

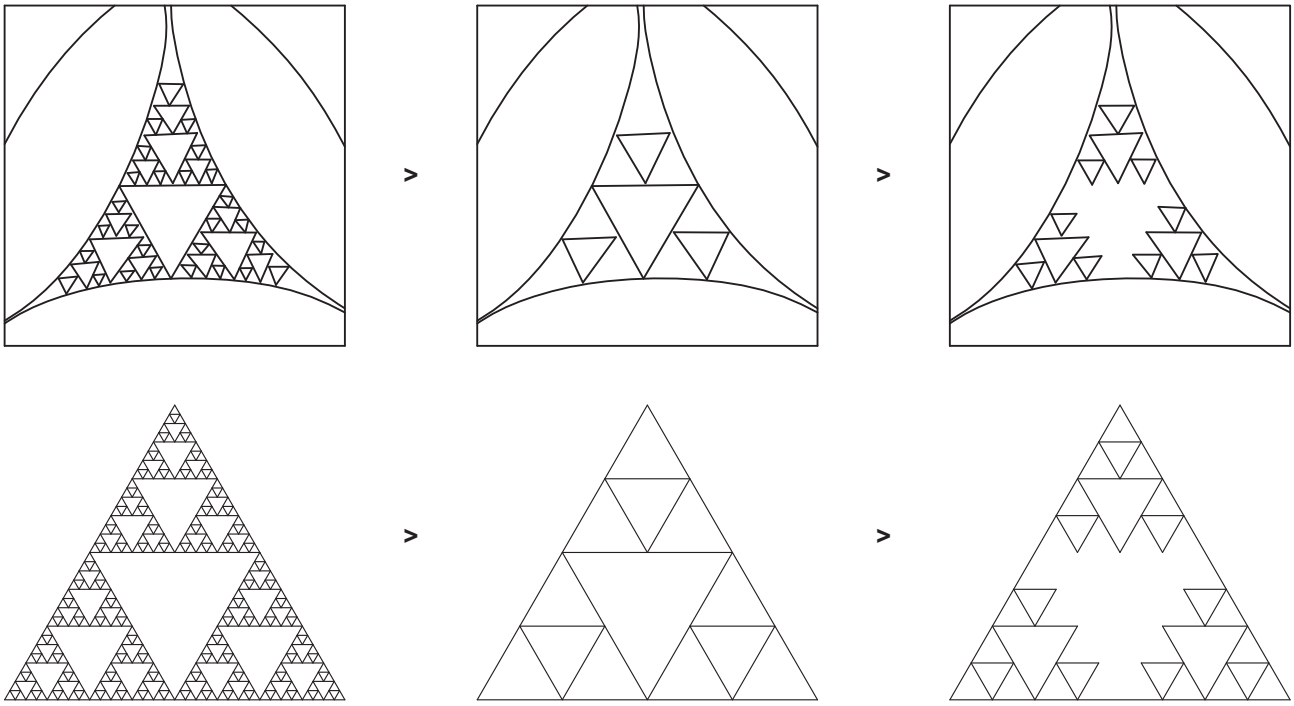


Figure 144: Structures: a) above: detail of a mosaic of the cathedral in Anagni (ca. 13. century); b) below: the triangle of the mathematician Waclaw Sierpinski (1915).
Syntactic Ambiguity of self-similarity in the form of Hybrid H (repetition in itself) + Mixture M (groups of similar size).

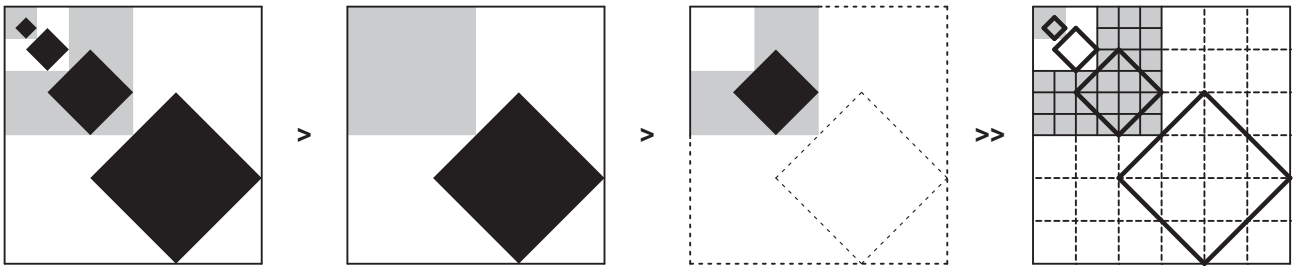


Figure 145: Structure of Theo van Doesburg's *Arithmetic Composition* (1930, painting).
Hybrid H (C3.1 versus C3.2 versus C3.3...) + Mixture M (S1-, S2-, S4- group of four black squares versus S2+ C3 of the orthogonal frames).

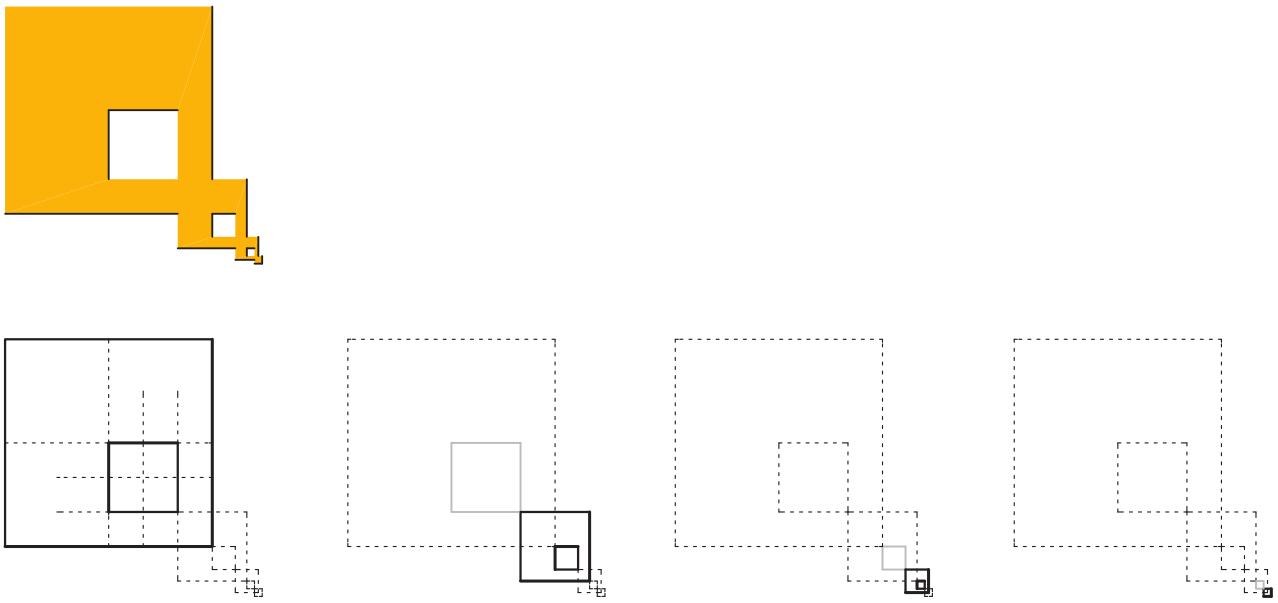


Figure 146: Reconstruction of János Szász/SAXON's *Yellow direction* (2000, painting + relief).
In this opened image ('shaped canvas') sub- and supra-dimensions are not visually separated, they go into one another. One smaller (fragment of) square seems to be covered by a bigger one (see illusion according to Guido Petter above), which has a counterpart in the fact that the edge of one bigger yellow square is marked by a small white square (see third figure - fifth figure).

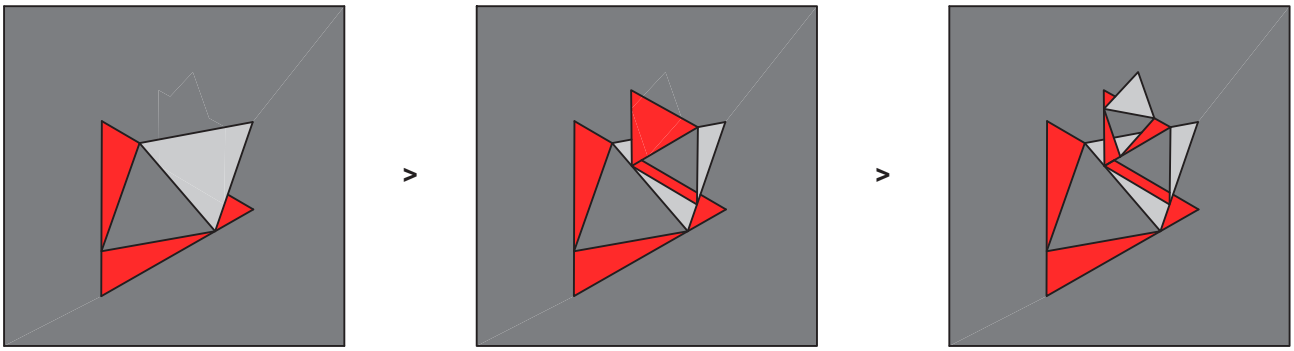


Figure 147: Reconstruction of Tíbor Gáyor's *Trigon Torsion 4* (2001, collage, original right).
Hybrid H as self-similarity (C3.1 versus C3.2 versus C3.3 versus C3.4) and technical-syntactic transmutatio (one piece of painted canvas was cut, cut pieces were folded out).

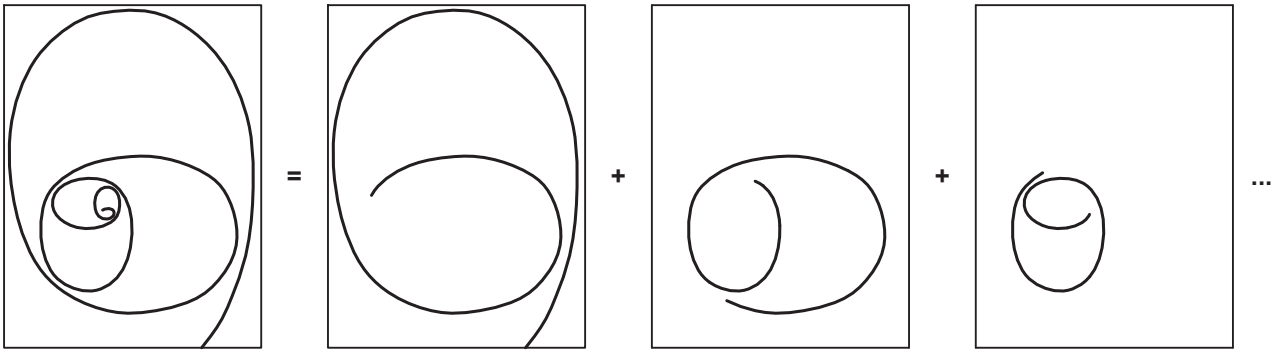


Figure 148: Reconstruction of Anton Stankowski's *Self-portrait* (1934 - 91, painting).
Hybrid-self-similarity in the form of one continuous line evoking the impression of 3/4-fragments of ovals (C3.1 versus C3.2 versus C3.3... + syntactic detractio)

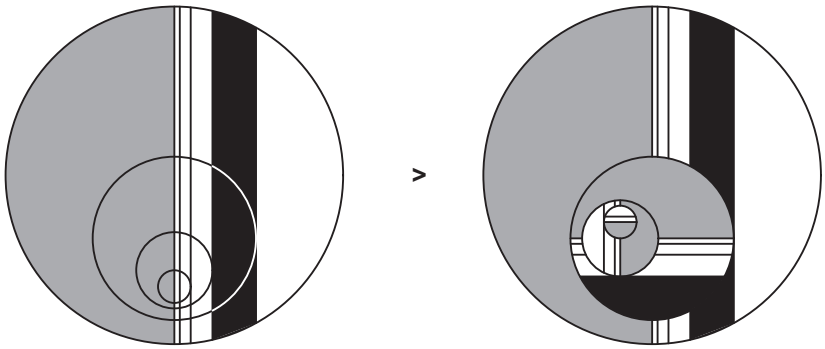


Figure 149: Structure of Karl Gerstner's *The tangential Ex-Center* (1956- 57, kinetic object).
The image can be changed by the recipient (idea of do-it-yourself, here by syntactic transmutatio/three rotations); it has a kind of reduced (and reducible) Hybrid self-similarity.

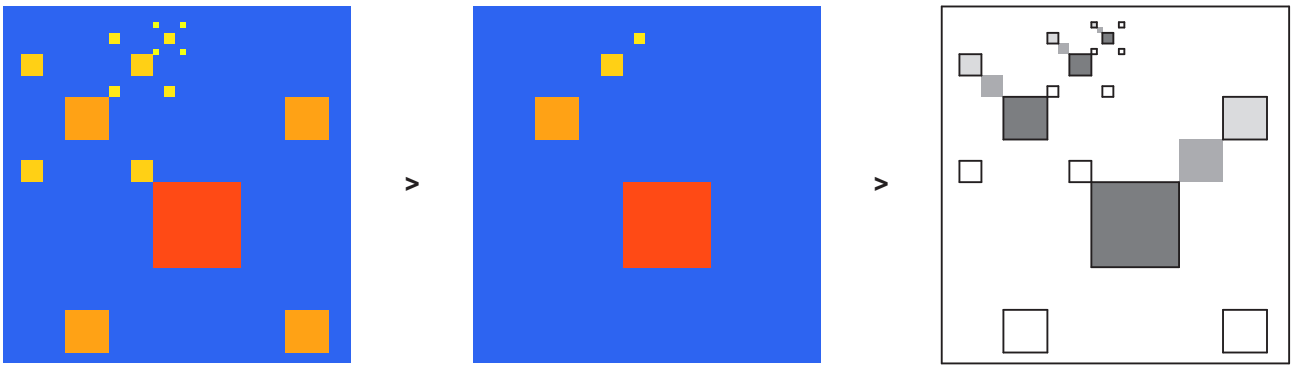


Figure 150: Reconstruction of Anton Stankowski's *Generations Blue* (1937 - 1987, painting).
Self-Similarity of the type Mixture M of four cognitive groups which can be distinguished from each other by the criteria S1 and S3

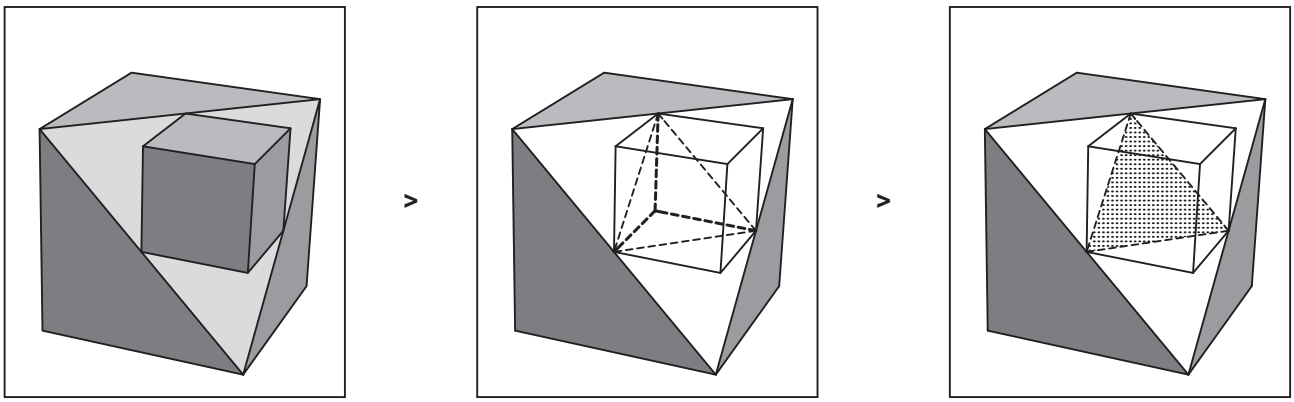


Figure 151: Reconstruction of Erwin Heerich's *Untitled/Cube* (without date, sculpture made of cardboard).
syntactic detractio + impression of self-similarity of a little cube in a big cube (> Hybrid H (C3.1 big cube versus C3.2 little cube, see second figure); another visual interpretation is possible: two fragments (see third figure).

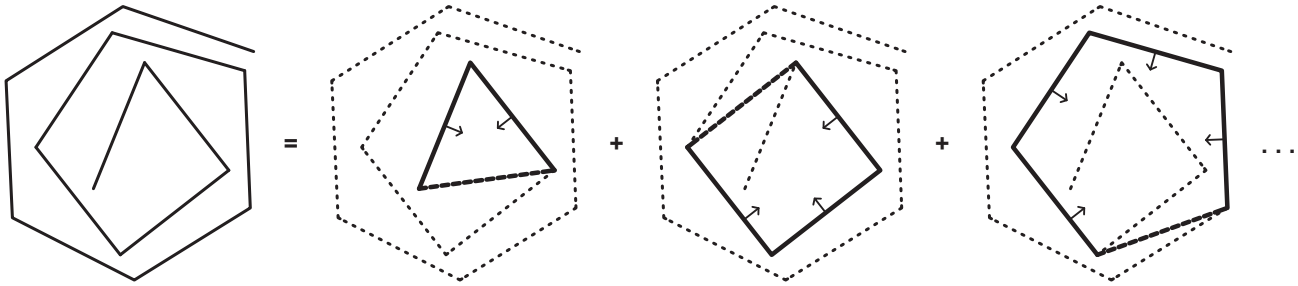


Figure 152: Reconstruction of Max Bill's *Variation about a Theme* (1938, detail of one print of a serial).
This work is similar to the self-portrait of Anton Stankowski: a spiral line evokes the impression of fragments of basic symmetrical forms (syntactic detractio on the basis of C1 and C3, see arrows). One partial line often belongs to two forms (for example to the triangle AND to the square > Hybrid H). This could be referred to as 'self-evolutivity' instead of self-similarity. One can also identify type 7 of Geometric Minimal Difference lines to plane.

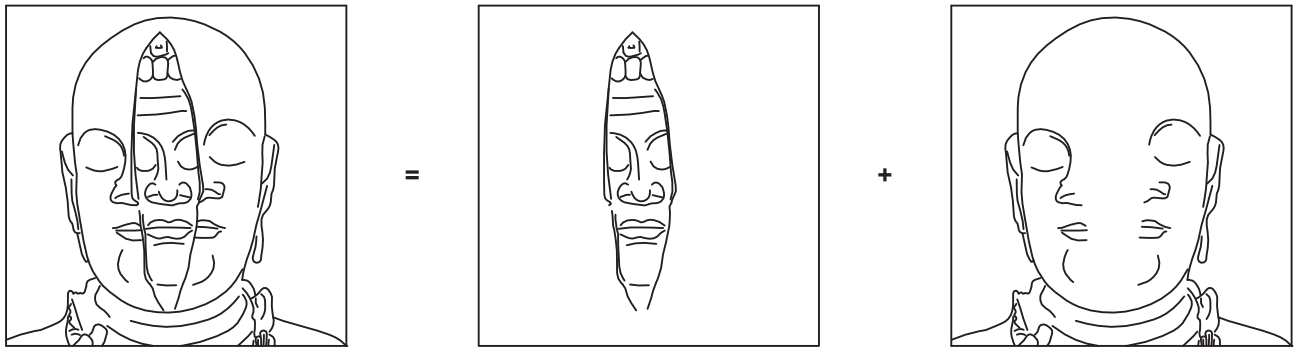


Figure 153: Reconstruction of *Hoshi Washo Statue* (Japan, Heian Era: 794-1192, wood sculpture).
Syntactic-semantic Hybrid-self-similarity **(**C3.1 whole versus C3.2 part**)** + semantic transmutatio (of first face) + adjectio (of second face) + semantic ambiguity of denotative (two faces) and connotative meaning (allegory)

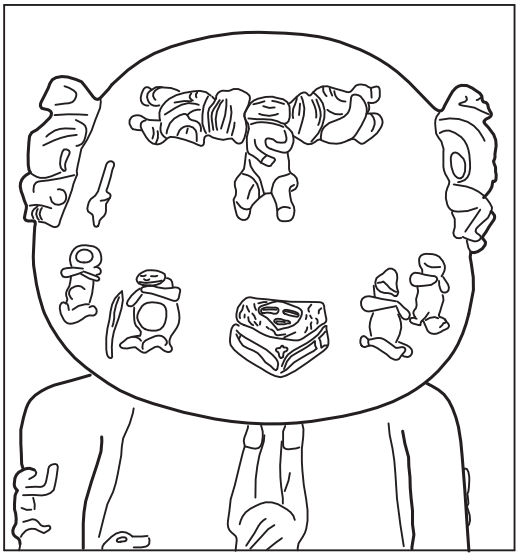


Figure 154: Structure by an unknown artist from Rurutu island: *Reliquary figure* (late 18. Century).
Syntactic-semantic self-similarity by semantic substitutio (of the nose, mouth, etc.) + adjectio + detractio (repetition of the figure in a smaller dimension, not only as substitutes).
Thomas Bayerle created a portrait of Josef Stalin by iterations of his characteristic moustache, which form the mouth, nose, etc. by deformations (*Stalin*, 1970, print).

2.1.8 Formation of an evolution as a successive aspect in the simultaneous image

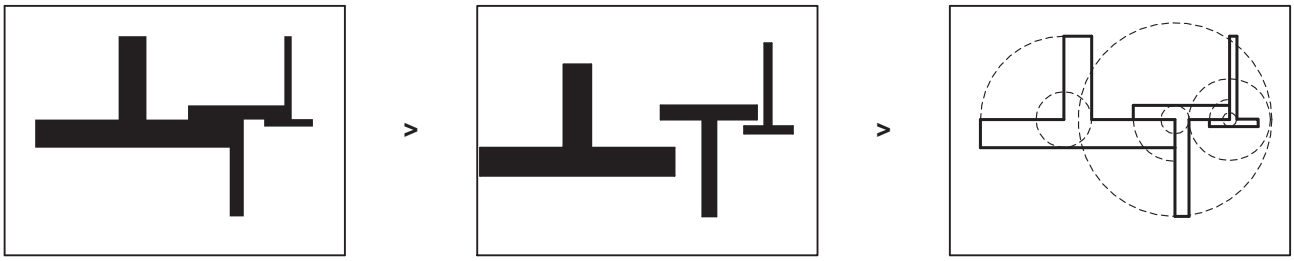


Figure 155: Reconstruction of Camille Graeser's *Synthetic Construction* (1946, painting).
Syntactic adjectio + topological distortion of the two added similar T-shapes according to a proportion of halving/doubling (see circles in the third figure); you reconstruct three T-shapes out of one black plane because of symmetry S2, C1 and C3, so one can refer to Hybrid H (C4 black plane versus S2 symmetry/C1 and C3)

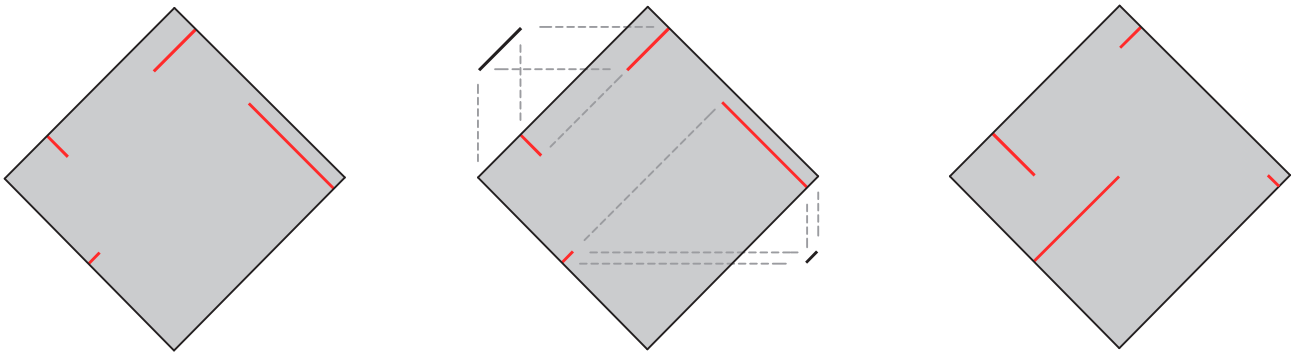


Figure 156: Reconstruction and variation of Marcel Wyss: *Doubled and halved* (1954, painted object with four red slots).
A theme is repeated and variated: From step to step the length of a red slot is doubled whereas the distance to the border is halved (see title); so there is a development and a counter-development.

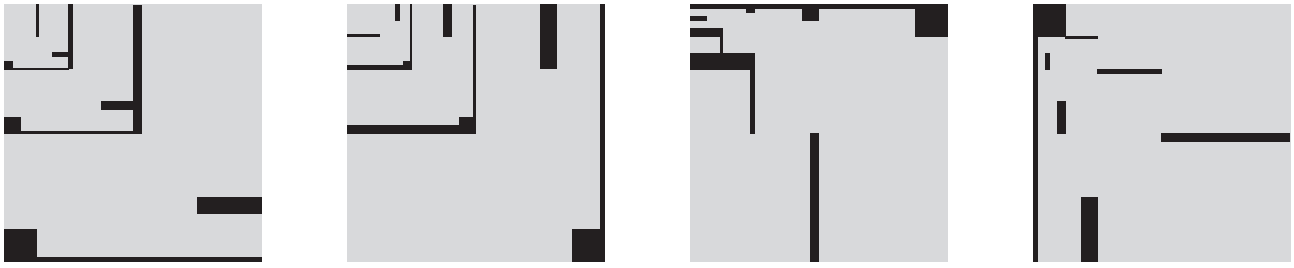
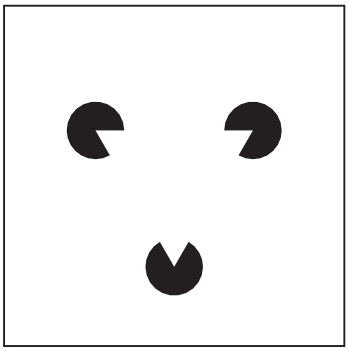
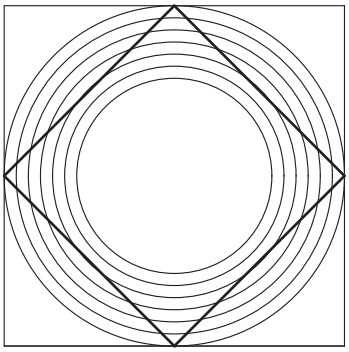


Figure 157: Axel Rohlfs: *Self-similarity and Permutation /Homage to Marcel Wyss* (2004).
A black square is distorted from proportion 1:1 to 1:8; the distance to the border is increased. This theme of four steps is repeated in itself in a smaller dimension (self-similarity); this work is a recombination of ideas of the work of **Theo van Doesburg** and of **Marcel Wyss** shown above.

2.1.9 Indices and ambiguity

C1- and C3-indices of lines can evoke the impression of a triangle shape of which only fragments (syntactic detractio) exist, but which point at each other (see left figure, it could be called a Mixture M of pseudo-figure and ground by C1). Or a shape like a square seems to be distorted by circles with C1 and C3 (right figure). Aesthetic ambiguity is produced by divergence of geometry and its appearance.





Repetition of figure 36: Illusion of a light triangle according to Gaetano Kanizsa (1949): Relativity of the appearance of the contiguity of plane due to fragments of circles (C4 + S1 of a white ground ~ C1 + C3 of fragments of circles); Repetition of figure 35: Illusion of line-curvation index according to Walther Ludwig Ehrenstein (1925): Relativity of the appearance of line-curvation index due to adjoining lines (C3.1 ~ C3.2)

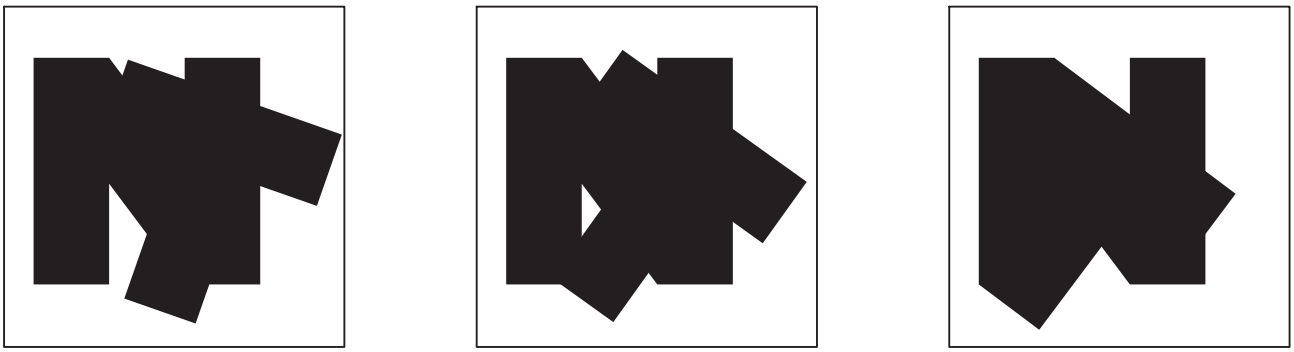


Figure 158: The letters T and N in superposition with five, four and two visible edges of the T-form
S2/symmetry and C1 + C3 allow the reconstruction of the forms of the letter N and the letter T; Hybrid H (C3.1 of form T versus C3.2 of form N) on decreasing levels.

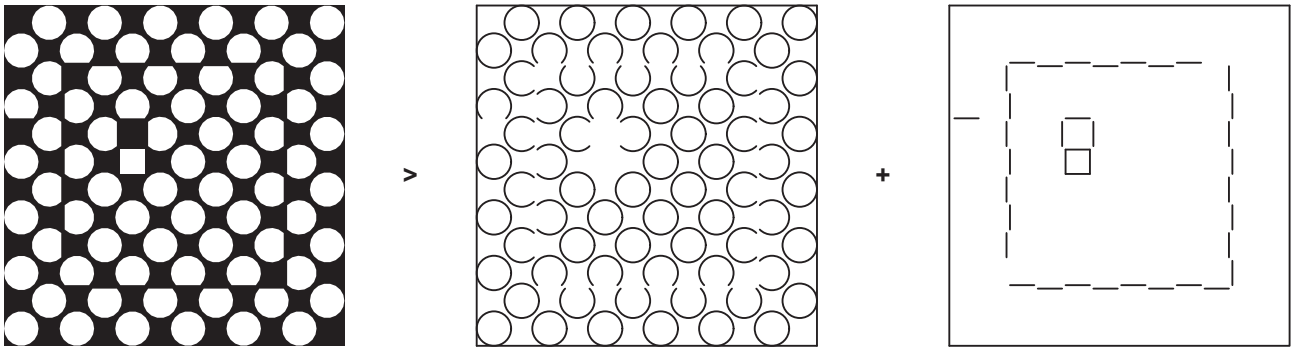


Figure 159: Reconstruction of Victor Vasarely's *Bellatrix M.V.* (1957 - 1960, detail, painting).
Lines of fragmentation (syntactic detractio) together mark an imaginary square, so these lines belong to circle-planes AND to the imaginary square (Hybrid H + Mixture M (C4 of white circle-planes versus pieces of the contour of the imaginary square which point into each other > C1). This work is based on the same effect as the image of Kanizsai above.

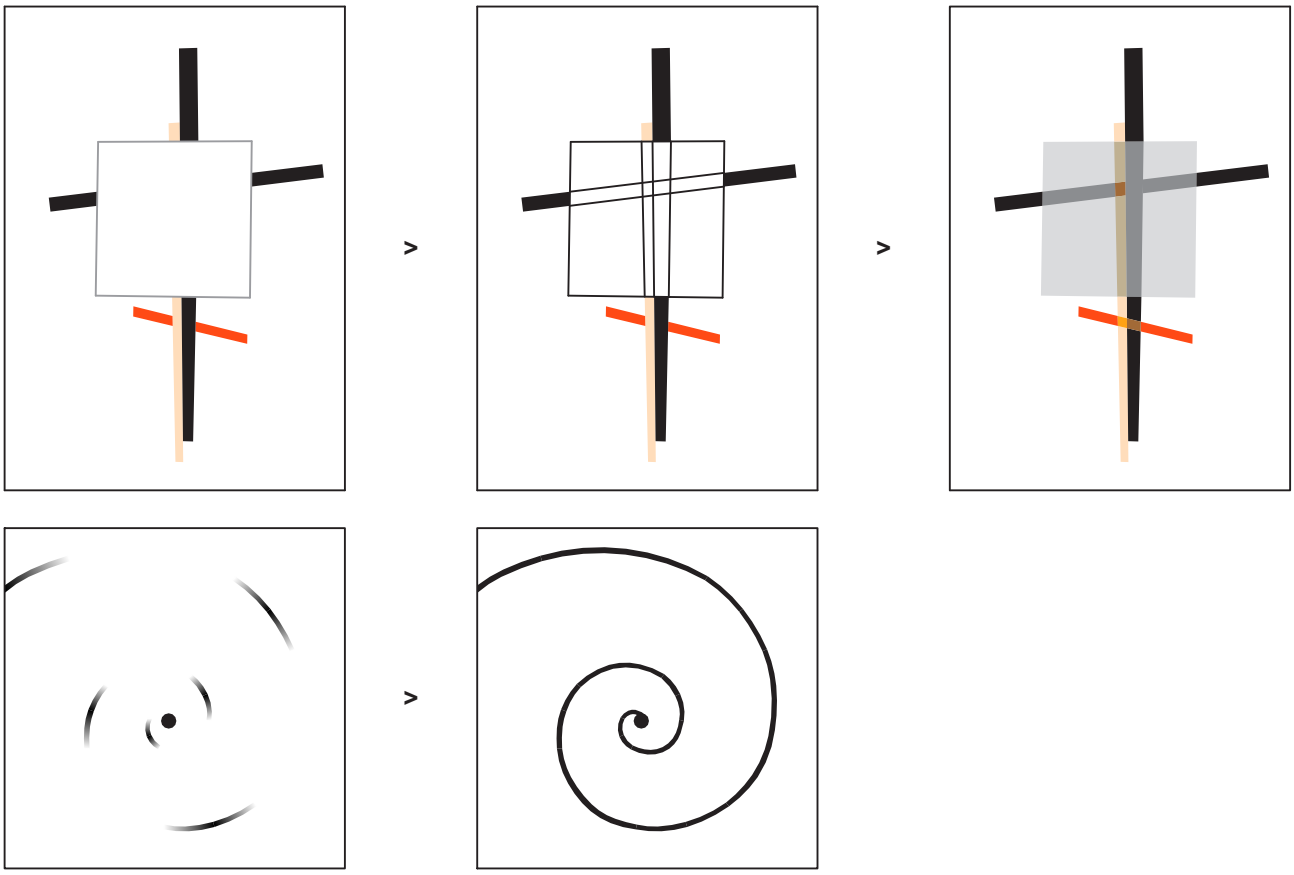


Figure 160: Variation of Casimir Malevitch's *Suprematism of the Spirit* (1919, original structure left, painting) and of Francisco Infante: *The point in its space* (1964, painting).
In the work of Malevitch one finds the following types of ambiguity: **syntactic detractio/substitutio** (fragmentation/covering of two crosses by a white square), **Hybrid H** (C1 of the cross versus C4 of the white plane) + **Minimal Difference MD** of colour between orange, light orange and white.
The middle variation of Malevitch's work shows the force of visual unification by C1- and C3-indices and the last variation a Hybrid + Minimal Difference of colour in superposed translucent planes (C3/C1 versus S1). This last variation does not give the impression of absence of a crossing and of contamination of figure and ground like the original image: the white square in the original left belongs visually to the two crosses and to the white ground which may refer to the title ('spirit as fusion/contamination').
A similar phenomenon is found in the work of Infante: the impression of a black spiral sinking into its white ground is produced by Minimal Difference MD of sequences from black to white within the spiral; the figure of the 'broken' spiral and its ground are contaminated: Hybrid H (C1 of the pieces of a spiral pointing to each other versus C4 of the contiguity of the white plane).

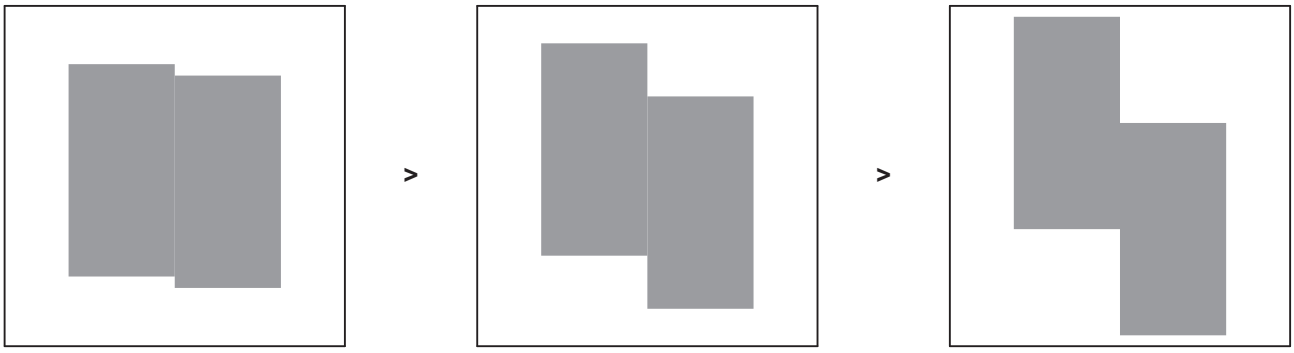


Figure 161: Two variations of Casimir Malevitch: *Suprematistic Study/Shifting of the suprematistic square, so that a new suprematistic element with two levels arises* (1920s, drawing on paper, original right)
- syntactic transmutatio of two halves/rectangles of a square, but the impression of a third rectangle as a Hybrid H (C3.1 first versus C3.2 second versus C3.3 third rectangle) is evoked because of C3 and because of the similarity of the third rectangle with the two halves of the square S3 (of width) and S2 (proportion of form 1:2): the middle figure does not evoke in the intensity the impression of a third rectangle. The first figure shows two rectangles in Minimal Difference MD to a square.

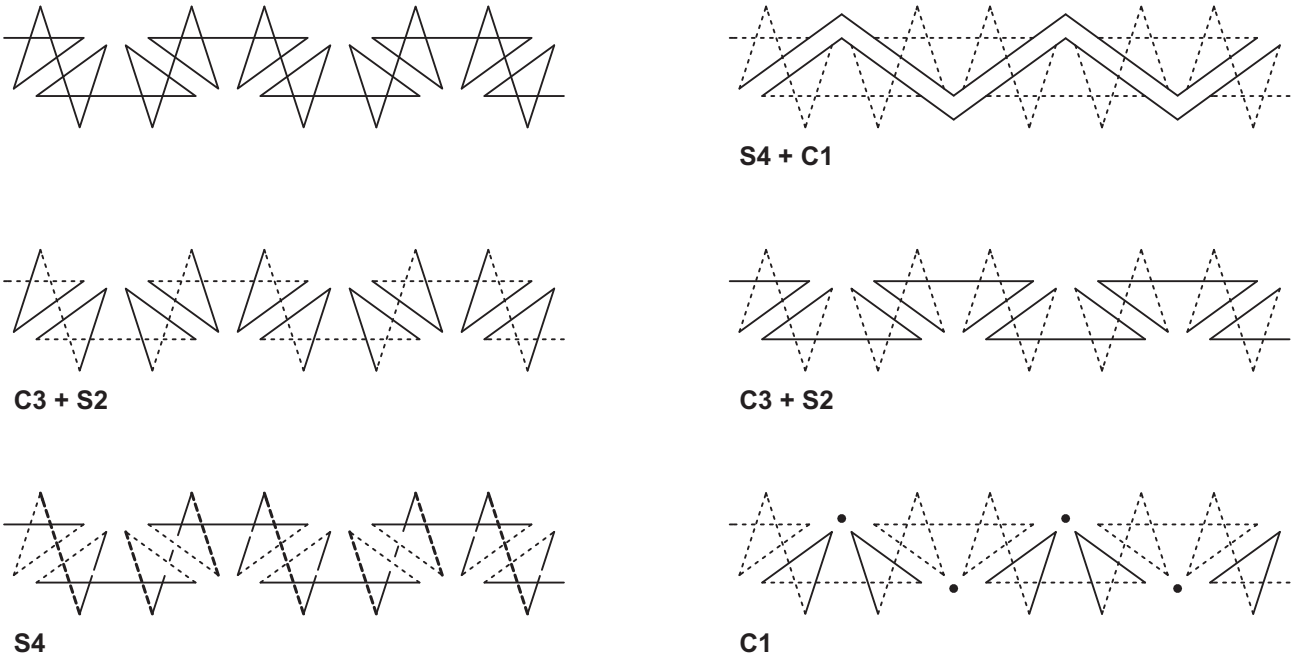


Figure 162: Reconstruction of Waclaw Szpakowski's *Sketch from 1900 notebook, pp. 16 - 17* (drawing, 1900).
The parts of this zigzag line can be grouped in many ways according to the used criteria S4 + C1, C3 + S2, C3 + S2, S4 or C1; at least five groupifications compete in one part of the zigzag line, so this phenomenon could be called Hybrid H.

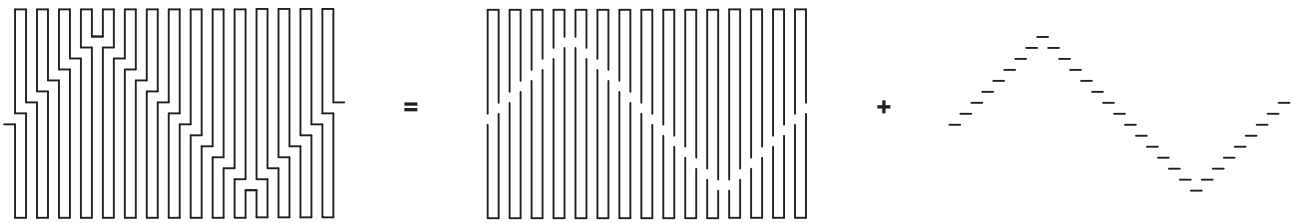


Figure 163: Reconstruction of Waclaw Szpakowski's *B1* (ca. 1925, ink drawing)
Hybrid H (C1 of the continuous line versus S4.1 group of horizontal lines versus S4.2 group of vertical lines), type 7 of Minimal Difference of Geometry (lines to plane) but also Minimal Difference of Geometry **lines to line**, because short horizontal lines form a zigzag line**.**

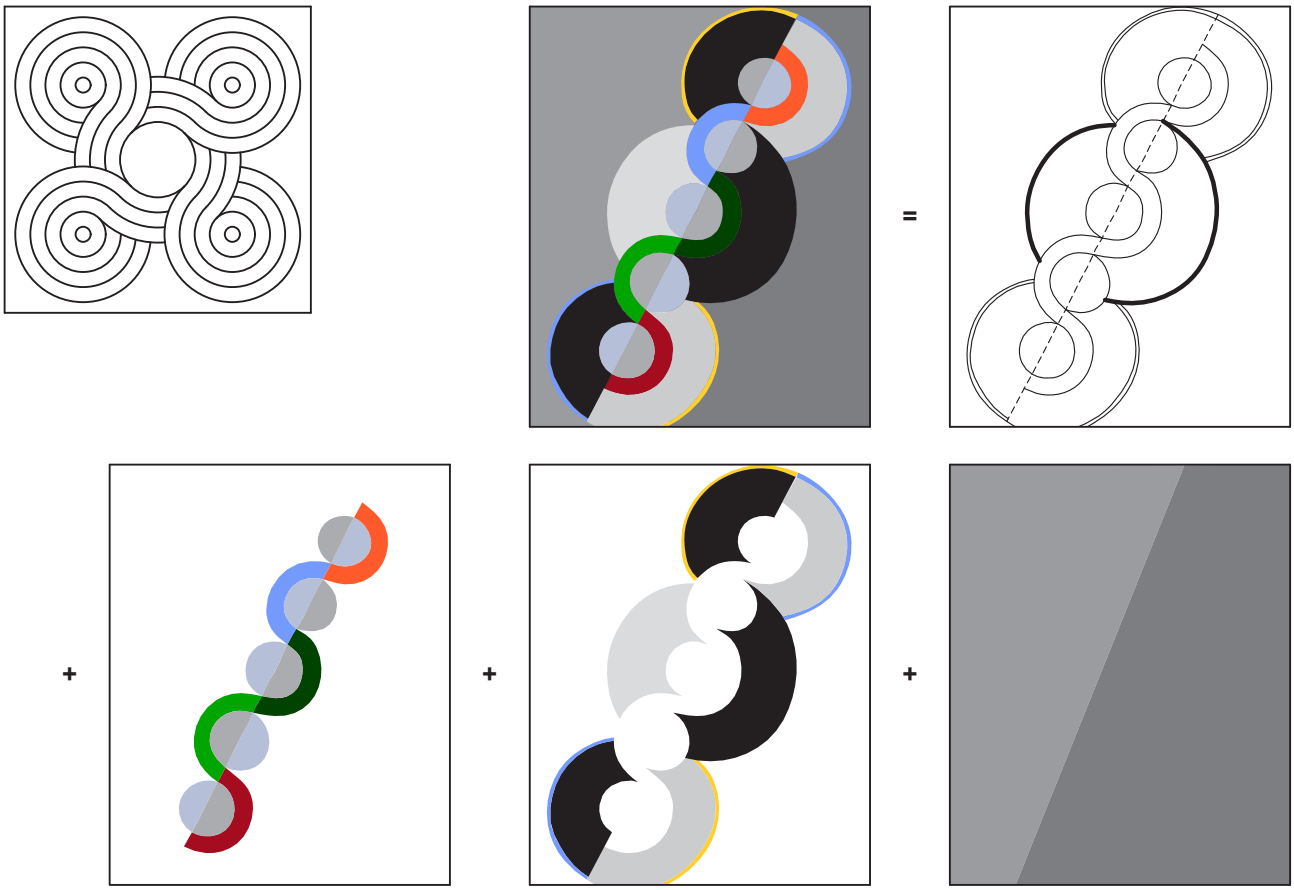


Figure 164: Structure of a mosaic in Anagni cathedral (ca. 13. century), and reconstruction of Robert Delaunay's *Rhythm without End* (1934, painting).
- Mosaic: groups of fragments of circles are unified by C1 (syntactic detractio + adjectio) + Mixture M (C1.1 superposing lines versus C1.2 superposed lines)
- Delaunay: rhythm because of transmutatio of circle-fragments (shifting against each other); visual unification of circle-fragments by C1, even when they are shifted against each other, Mixture M (S1.1 group of light blue planes versus S1.2 group of grey planes, see fourth figure) and Mixture M (S1.3 light grey versus S1.4 black versus S1.5 yellow versus S1.6 blue planes, see fifth figure), Minimal Difference MD of the colours of the two parts of the ground (see sixth figure)

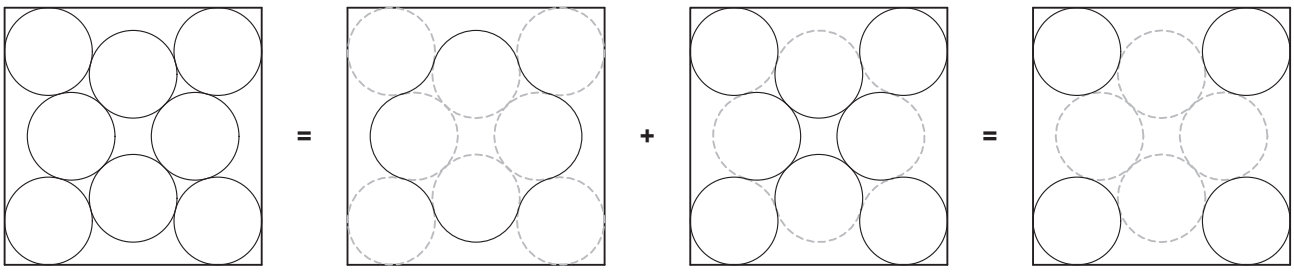


Figure 165: Reconstruction of Vera Molnar's *55 Circles /F* (one of a serial of ten paintings, 1992 - 2010).
Competition of C1 versus C3 in the points of bifurcation leads to alternative interpretations of the image (two groups (second + third figure) versus eight circles (fourth figure, based on S2 and S3).

2.1.10 Crossing of pseudo-planes and pseudo-volumes

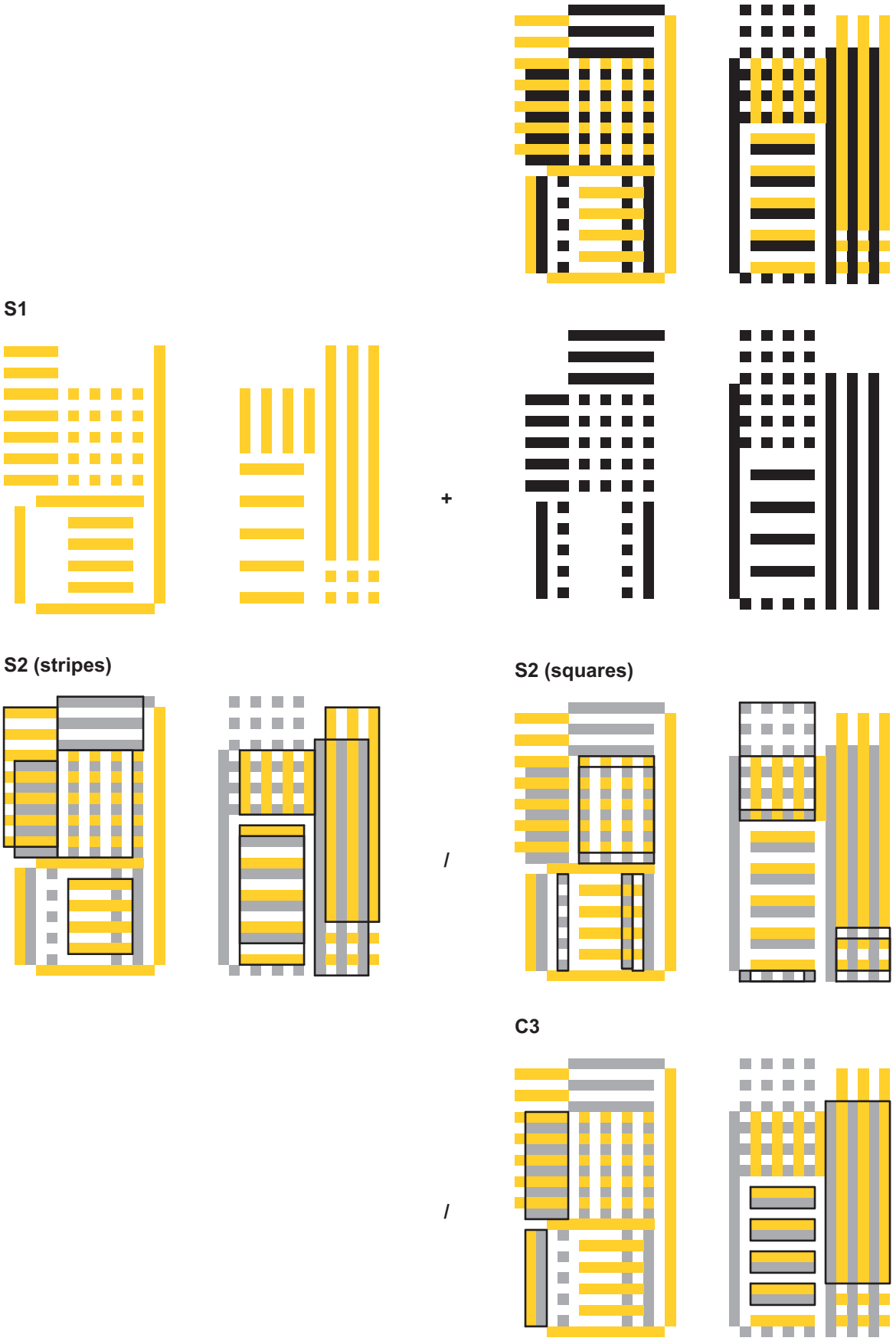


Figure 166: Reconstruction of Josef Albers' *Arbours* (1929, glass-object).
Hybrid H of different attachments of one pictorial element compete (e.g. S1 versus C1/C3) + Mixture M of groups of squares and of stripes (S2.1 stripes versus S2.2 squares); the title indicates that there is a representation function alongside this contemplation function (pragmatic discrepancy of two functions).

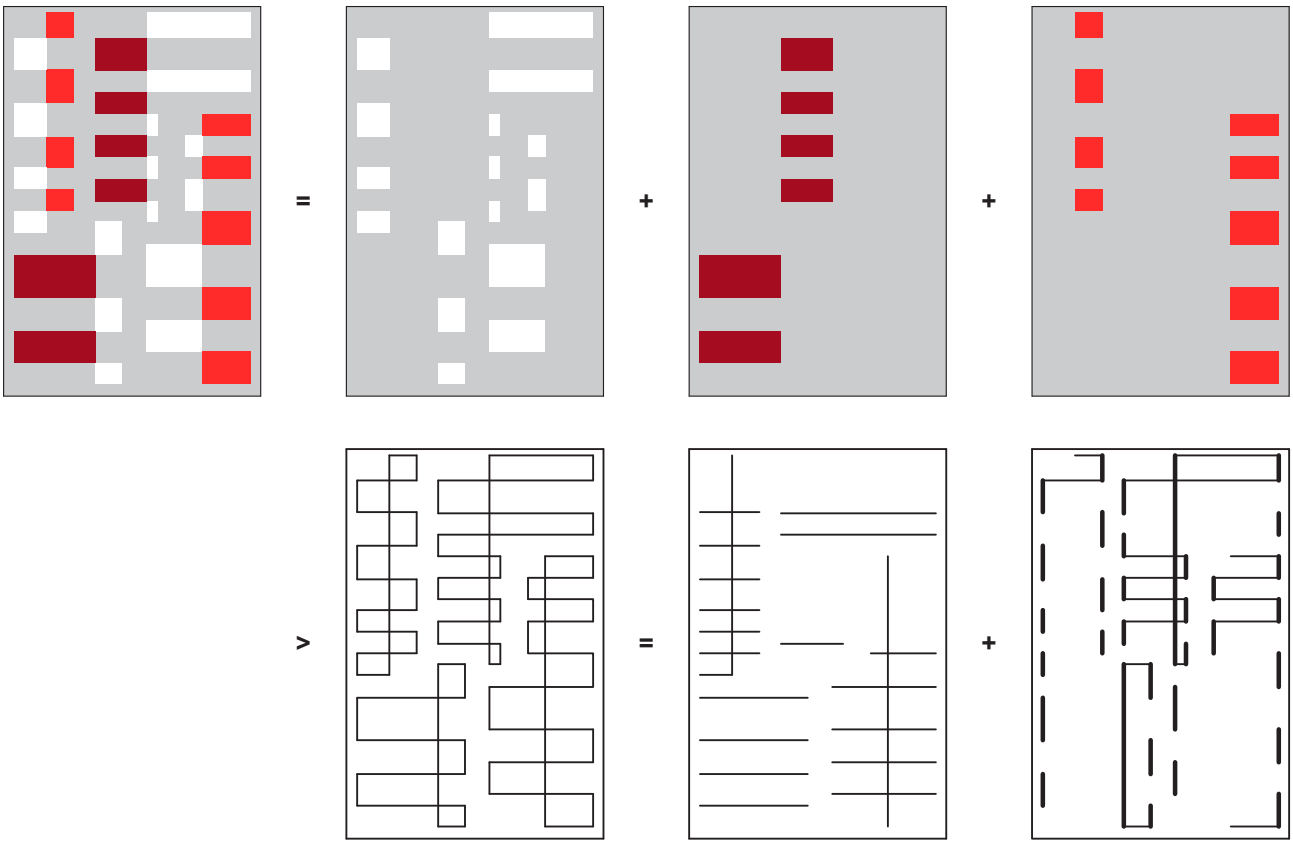


Figure 167: Reconstruction of Leon Polk Smith's *Grey Columns* (1947, painting).
Mixture M of three S1-groups of three colours (see second to fourth figure); C1-groups of line-direction-index (see fifth to seventh figure) are in competition with these three groups: Hybrid H (S1 versus C1)

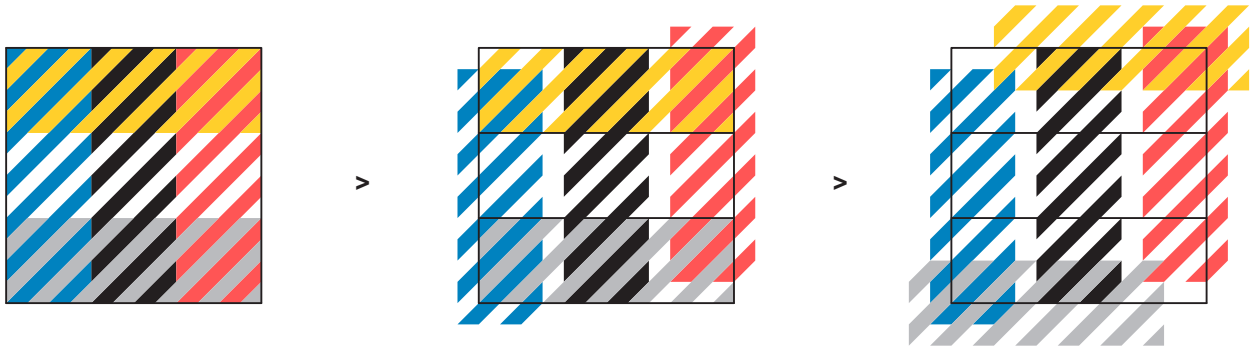


Figure 168: Reconstruction of Anton Stankowski's '*Anton Stankowski /Malerei von 1926 - 1977'* (1977, poster for an exhibition)
Mixture M of six groups of stripes (S1.1 versus S1.2 versus...) + Hybrid H of six pseudo-rectangles (C3.1 versus C3.2 versus...) which lead to Minimal Difference MD of the two tendencies to see a rectangle as a 'figure' or as 'ground' (**Minimal difference MD of attraction to the attention**); the strongest contrast of colour (white versus black) gets more attention and therefore gives the impression of a cross in the middle.

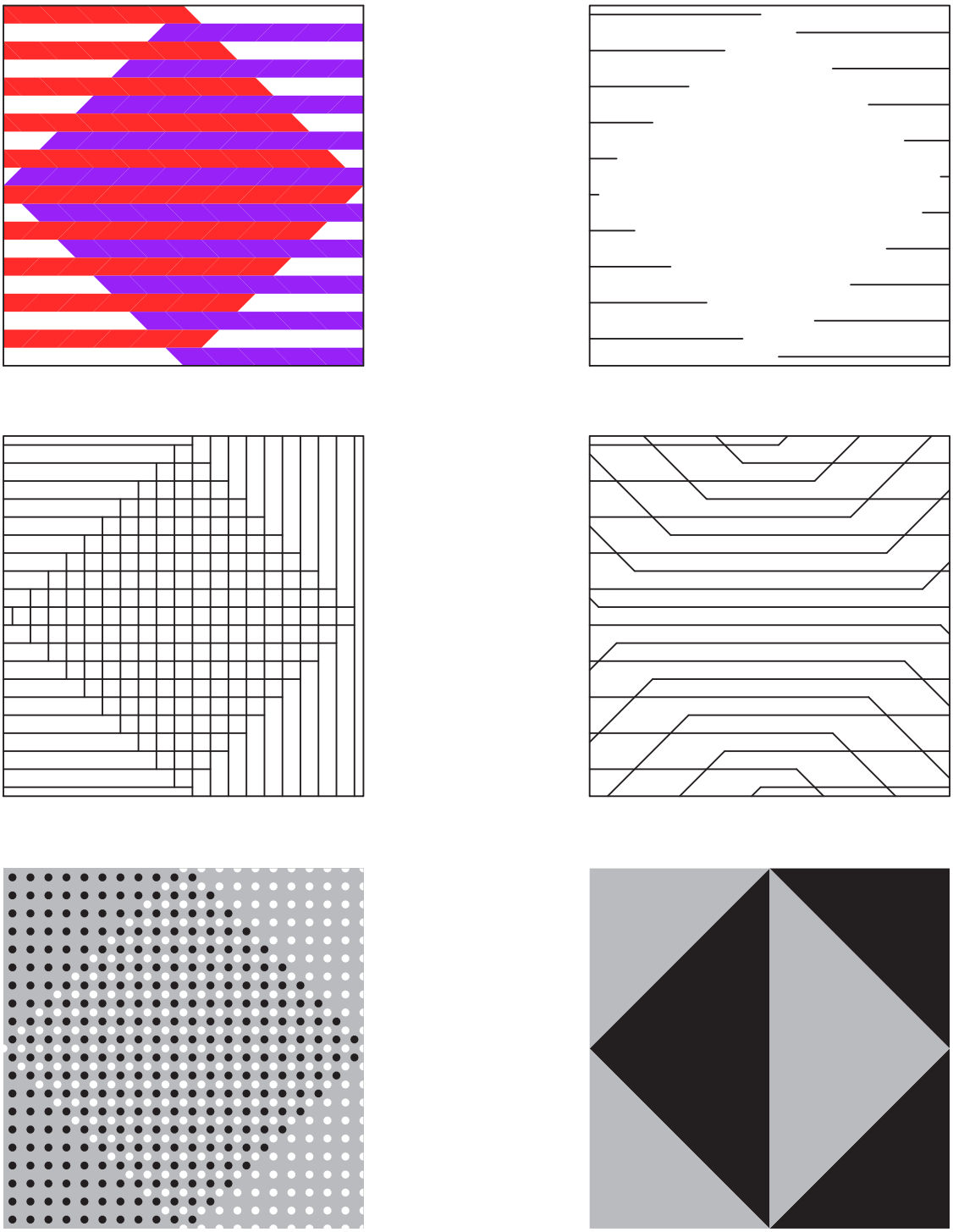


Figure 169: Structure and five variations of Anton Stankowski's *1 + 1 = 3* (1969, painting, rotated detail).
Two 'crossed' structures of stripes, two 'grounds' form the impression of one figure of a pseudo-square: Mixture M (C1 of the diagonal edges of the stripes versus C1 of the horizontal edges of the stripes) + Hybrid H (C3.1 of 'red ground' a versus C3.2 of 'lilac ground' b versus C3.3 of the pseudo-square)
The five variations lead to different levels of attraction of attention to the pseudo-square.

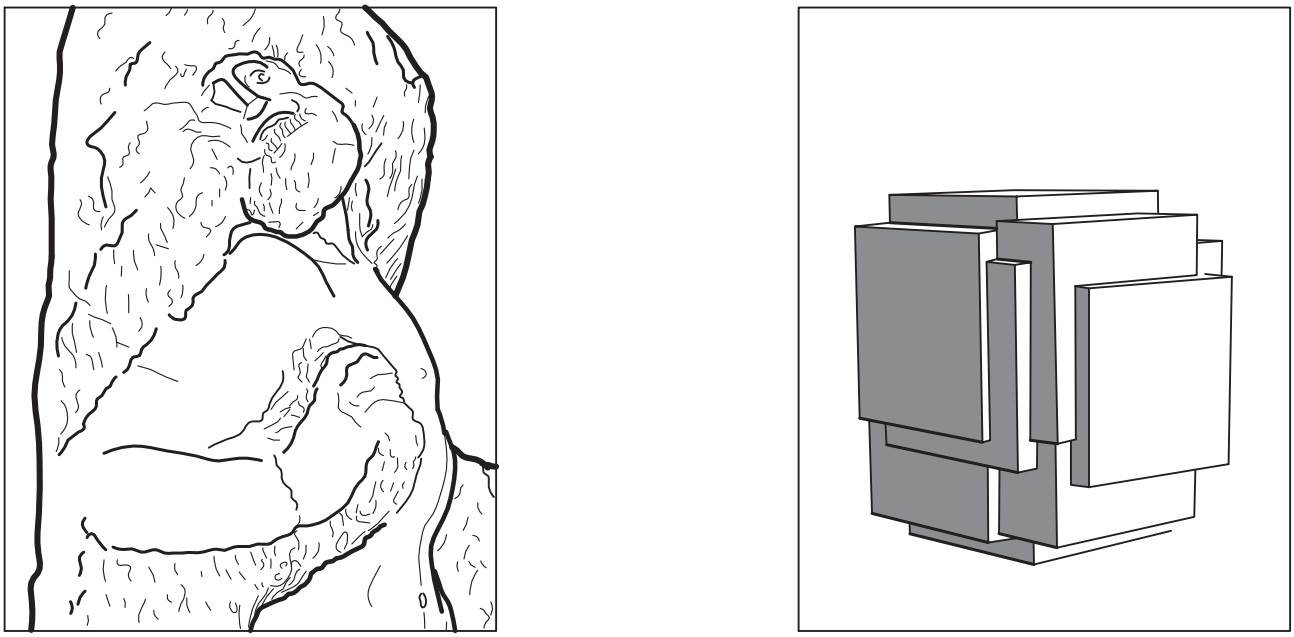


Figure 170: Structures of a) Michelangelo Buonarroti's *The awakening Slave* (ca. 1519 or 1530 - 1534, out of the serial of the Boboli Slaves, stone sculpture) and
b) Hans Steinbrenner's *Square-Stone-Sculpture* (1965, stone sculpture).
Both sculptures appear as if several volumes are contaminated, as if volumes share common volumes:
type of ambiguity Hybrid H (C3.1 versus C3.2...), but in the first case the amorphous volume of stone appears as a kind of 'ground' for the human figure, whereas in the second case the volumes have equal levels of attention.
C1 (in a kind of 'plane-direction-index') supports the impression of C3 in both cases, because C1 seems to penetrate another plane of another volume with a line of intersection which shows indices of irregular treatment as a kind of Minimal Difference of texture/form (S2).
The volumes in the work of Steinbrenner differ minimally from each other in terms of position and size, so an impression of the work as being a series of variations of one original cube is evoked.
In the work of Michelangelo, the difference between surfaces of irregular treatment ('indices of treatment in opposing material') and smooth surfaces of human skin ('pure icon') leads to an ambiguity of two types of signs and therefore of two accesses to 'world'.

2.1.11 Minimal differences concerning one criterion of cognitive unificiation

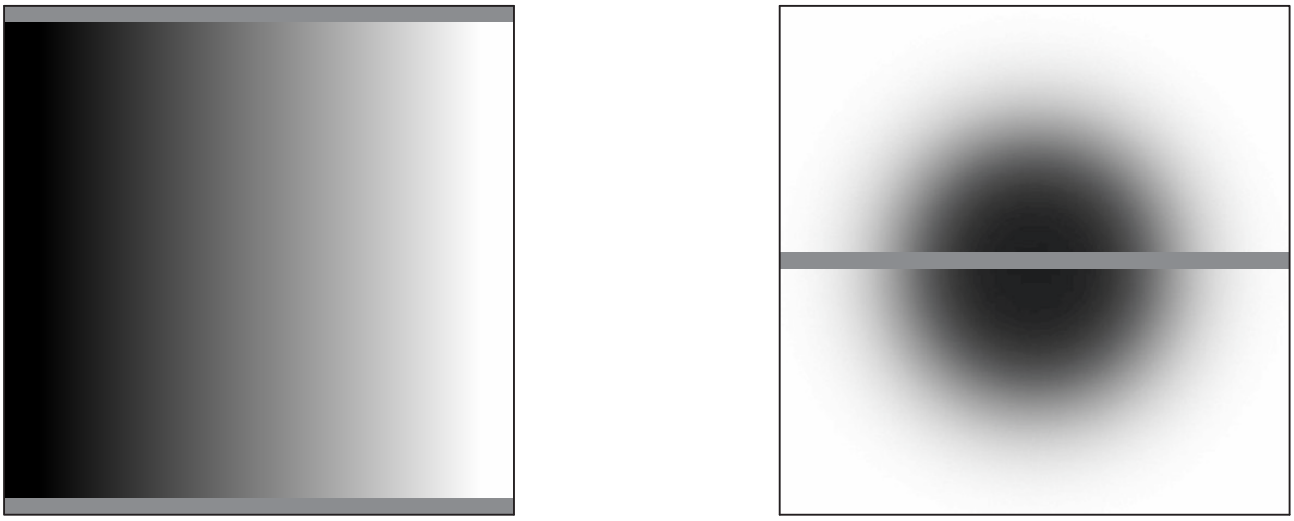


Figure 171: Structure (left) and variation (right) of Raimer Jochims' serial of *Chromatic Reliefs* (1960s, paintings): Jochims' concept of 'Identity' as a fusion of figure and ground.
In Jochims' serial of Chromatic Reliefs, every painting has an analogous structure: a development of colour in Minimal Differences MD in a big central plane and a stripe of only one continuous colour (as the average of all nuances of colour) at the top and one at the bottom of the central plane. Because of its neighbourhood, the stripe appears as if it was not of only one colour, but as if it also has a development of colour like the central plane; in his theoretical work of the same name, **Josef Albers** named this phenomenon ***'Interaction of colour'*** (1962). So there is an ambiguity of two modes of colour: its physical existence/its appearance in an isolated view, and its appearance within its neighbourhood of other colours which shows a relativity (see above: 'Illusion of colour by simultaneous contrast according to **Michel Eugène Chevreul** (1839)'). The variation show a more obvious illusion but without reference to the geometry of the central plane and without counter-development; it even has a kind of figure-ground hierarchy. Jochims calls the disappearance of this hierarchy 'identity' (of figure and ground) and connects to it the convention of subject and object which leads to a kind of utopia:
'The metanoetic structure of consciousness, the division of reality in subject and object which has already been mentioned and which has to be surmounted, is analogous to the division of reality into figure and ground in painting.'
('Der anfangs besprochenen metanoetischen Bewusstseinsstruktur, der Teilung der Realität in Subjekt und Objekt, die überwunden werden muss, entspricht in der Malerei die Teilung der Realität in Figur und Grund.'
Raimer Jochims 1975, page 50).
In the constellations of **Eugen Gomringer**, as an example of concrete poetry, there is no subject and object of a sentence: nouns are distributed all over the page.

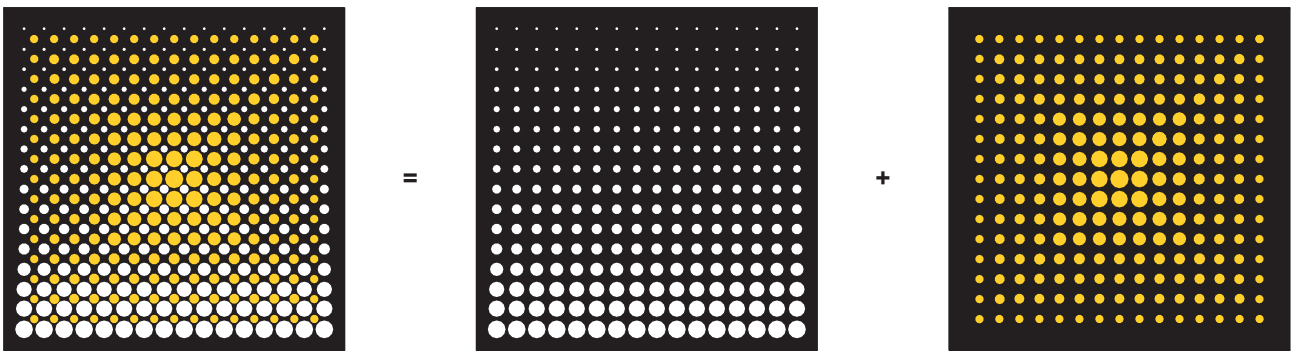


Figure 172: Reconstruction of Almir Mavignier's *Composition* (1962, one half of a print).
Mixture M of a yellow and a white group of 'points' + Minimal Difference MD (S3.1 ~ S3.2 ~ S3.3...) of the sizes of the points which lead to two crossed systems of illusion of spatial depth (a: 'white points above are far away', b: 'yellow points at all borders of the image are far away')
Similar to the image of his teacher **Max Bill** ('*Integration of four Systems*' (1958-60, see figure 126), already shown, there is a contamination/mixture of two groups in which a development of Minimal Difference MD can be found (here S3, in Bill's work S1).

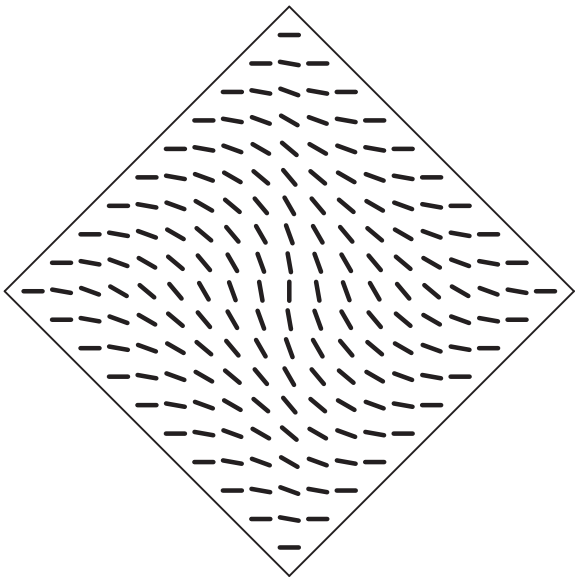


Figure 173: Structure of Hartmut Böhm's *Untitled* (out of the serial *Visually changeable Structures*, 1968, detail, print)
ambiguity of Minimal Difference of orientations:
MD (S4.1~ S4.2 ~ S4.3...). There is weak tendency to see a central might-be figure which 'sinks' into its ground.
In his reliefs (in which similar structures are realised with standing plates instead of the black lines) there are endless variations of taking a point of view on the relief.

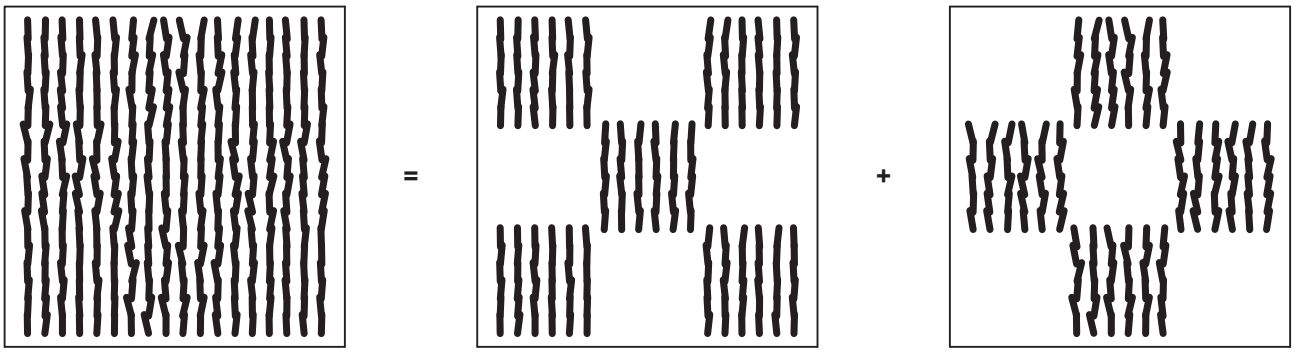


Figure 174: Reconstruction of Vera Molnar's *Is it a Cross?* (one painting of a serial of six, 2011, on the base of a computer-print of 1981)
Type 2 of Minimal Difference MD of Geometry ((overlapping) lines to point (of the zone of overlapping)) and 7 (lines to plane); nine planes can be distinguished by Minimal Differences MD of orientation (S4) which can be cognitively unified to two groups in Mixture M: a formation of five planes ('diagonal cross') and a formation of four planes ('orthogonal cross').

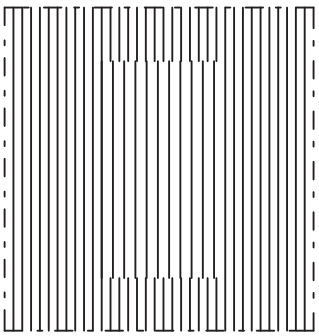


Figure 175: Structure of Henryk Stazewski's *Untitled* (1974 - 1979, detail of a print).
Within a structure of parallel lines, parts of 13 lines are substituted (type of syntactic substitutio) by ten lines with similar proximity to each other, which leads to a Minimal Difference of proximity MD(C1/2.1 ~ C1/2.2). This field of substitution appears as a kind of figure sinking into its ground (see above). One could imagine a variation of the work: a development of minimal different distances instead of repetition of the same distance.

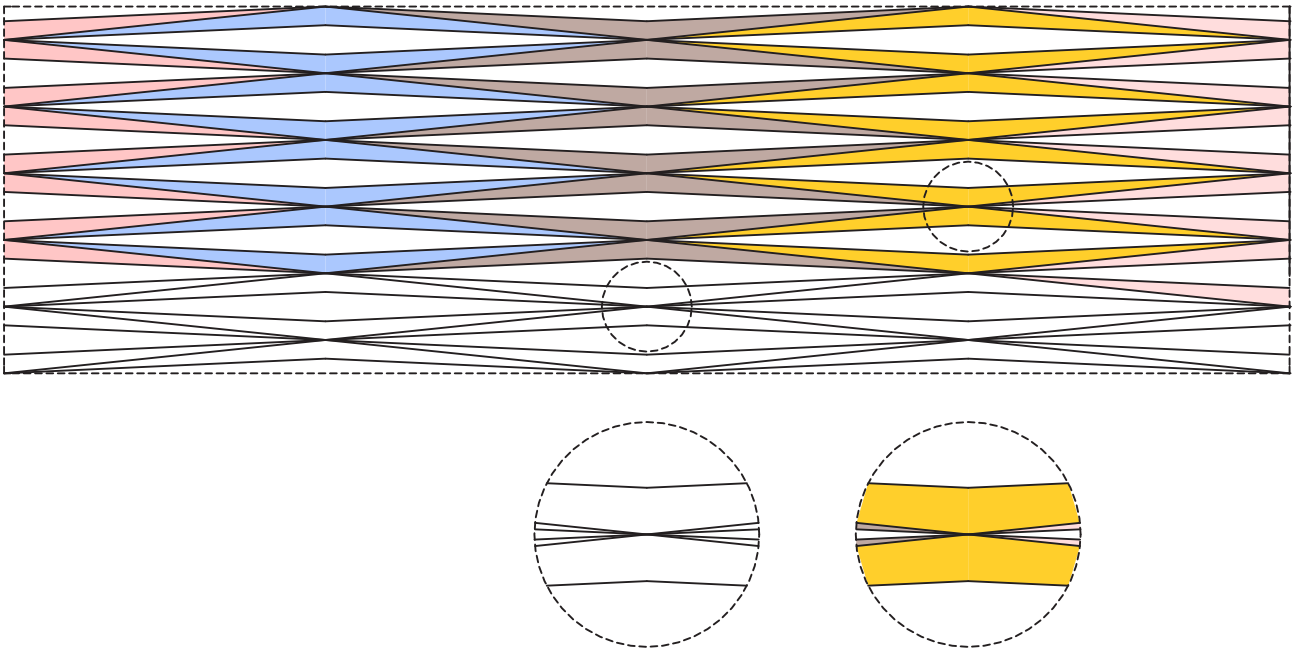


Figure 176: Structure and reconstruction of Giacomo Balla's *Iridescing Penetration* (1912, detail, drawing and tempera).
Ambiguity arises because of the greenish grey which is minimally different to blue and to yellow (> MD (S1.1~ S1.2~ S1.3) and which appears as if there was a superposition of translucent planes of colour (> Hybrid H). This correlates to the acute-angled quadrangles which seem to share a common halved field of colour Hybrid H (C3.1 versus C3.2).
There is a Minimal Difference of attraction of attention ('figurality') because cognition accepts the white quadrangles due also to their simplicity as 'figure'. The two details show Minimal Difference MD of C1 in points of intersection. In the 1960s, this idea of acute-angled fields of colour going visually one into the other was further developed by Op Art artists such as **Carlos Cruz-Diez** or **Getulio Alviani**.
The phenomenon of **Taft Changeant** (a fabric produced with two threads of different colours which was often painted in the 16th century in Venice) already used crossed geometry of two entities of colour to produce an iridescent effect.

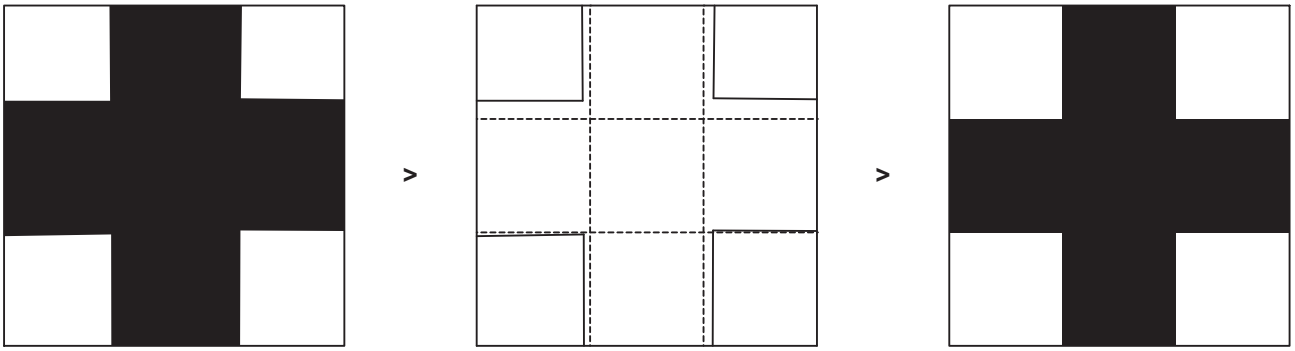


Figure 177: Reconstruction of Casimir Malevitch's *Black Cross* (1923, original left, painting).
Minimal Difference MD from total symmetry (see last figure) by syntactic transmutatio

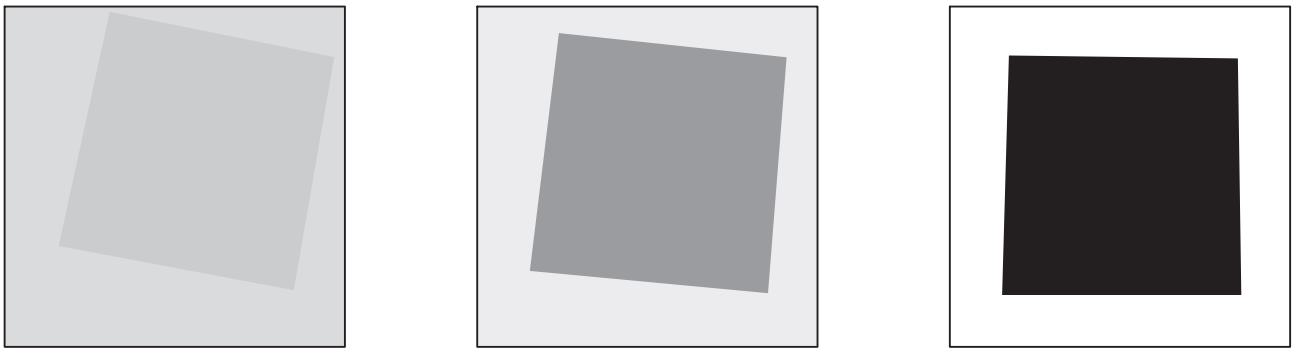


Figure 178: Variation of Casimir Malevitch's *White on white* (1918, painting in two kinds of white).
Minimal Difference MD of two kinds of white of one figure and its ground; the ground appears as if it went 'through' the figure. Minimal Difference MD to an ideal symmetrical square because of syntactic transmutatio. The counter-position of the quadrangle to the frame of the image attracts attention.
Minimal Differences of colour were often used in the XX. century:
Aleksander Rodchenko (serial of black figures on black ground ca. 1918), **Antonio Calderara** (serial of whitish colour-fields in the 1960s) and **Ad Reinhardt** (serial of blackish colour-fields) unify geometrically separated planes by similarity of colour (ambiguity of geometric separation versus unification by colour).

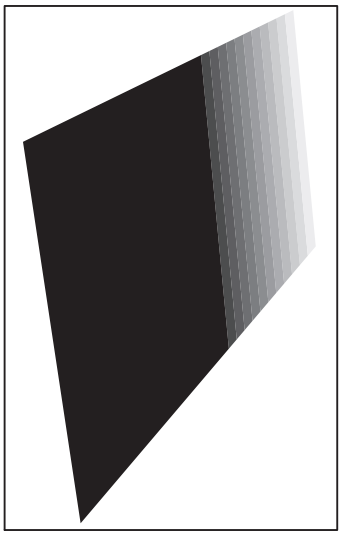


Figure 179: Structure of Casimir Malevitch's *Suprematism* (1918, painting of a yellow quadrangle with a graduation to the white of the ground, here in grey colours)
Minimal Difference of 'chromatic' colour-steps between figure and ground, the figure seems to sink into the ground which corresponds to the may-be perspective of the quadrangle: the image could be called an 'icon-sign' because it can be interpreted as a representation of spatial depth by using the monocular criteria of perspective and fading of colour.

2.1.12 Swapping the roles of figure and ground: adjoining planes have Minimal Difference MD of attraction of attention as 'figure'

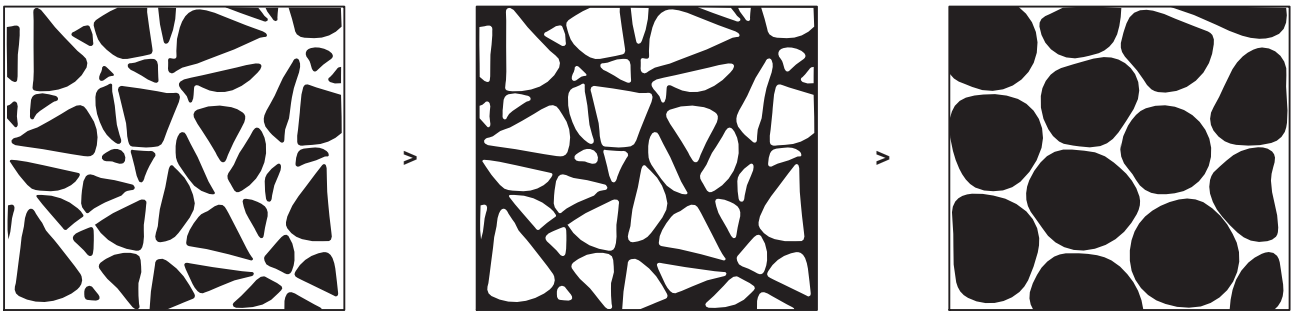
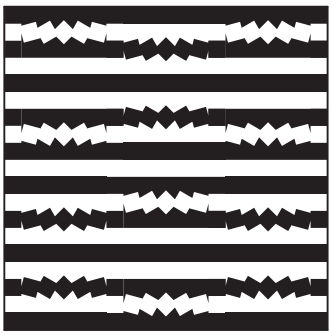


Figure 180: Two variations of Sonia Delaunay's *Carte orfiche* (without date, print?, original left).
The grid of the interspaces between the round forms is continued even above the round forms, so that the grid is 'ground' for the round forms (which attract attention by C3, see third figure) and superposing figure 'in front of round forms' as well (see second figure). Two attractions of attention, therefore two interpretations of the figure-ground relationship are in ambiguous opposition: simplicity of ONE grid and C3-self-indication of the numerous round forms (Minimal Difference of attraction of attention as 'figure').

Figure 181: Paraphrase of Op-Art: swapped roles of figure and ground
Ambiguity of Minimal Difference of attention (i.e. interpretation as 'figure') of white and black stripes using C3 of squares which attract attention (syntactic transmutatio of square modules out of a stripe)



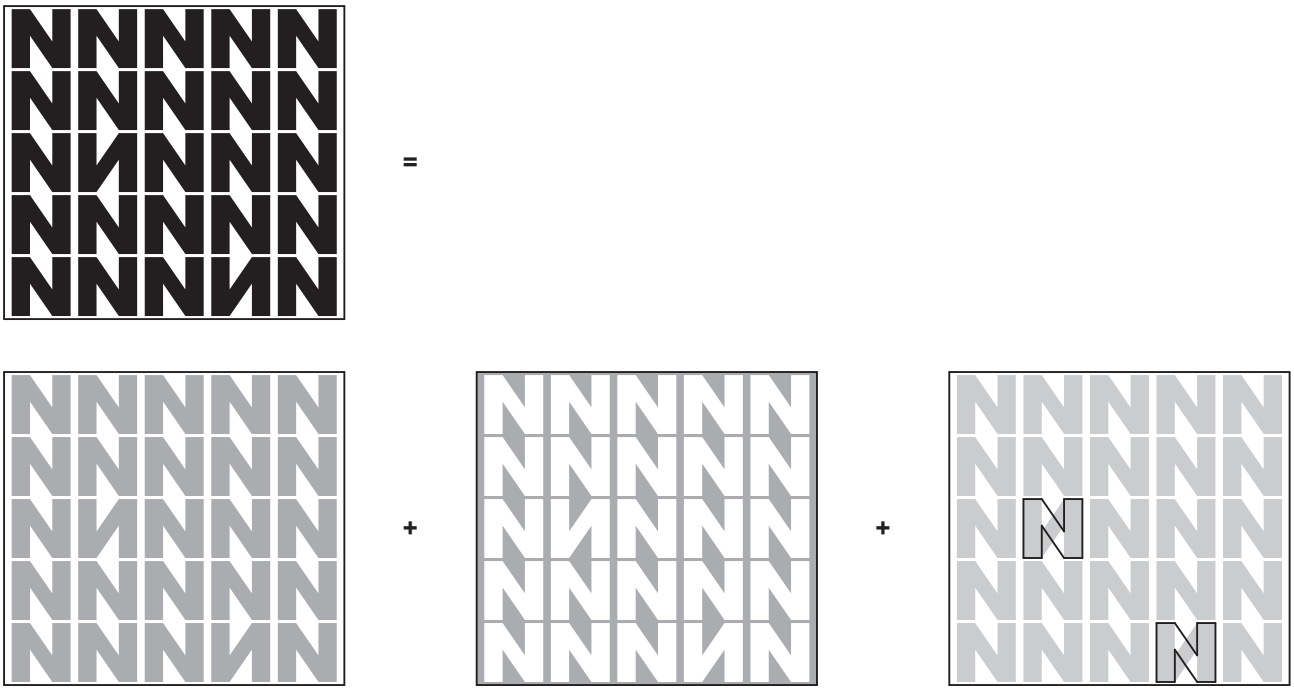


Figure 182: Reconstruction of Vera Molnar's *Structure coming from the letter N* (1961, collage).
Repetitions of the letter N are so near to each other that there is a tendency to interpret the interspace as a grid with parallelograms. The image offers two interpretations of figure: grid and repetitions of the letter N.
The letter N is reflected twice in a horizontal line (syntactic transmutatio).

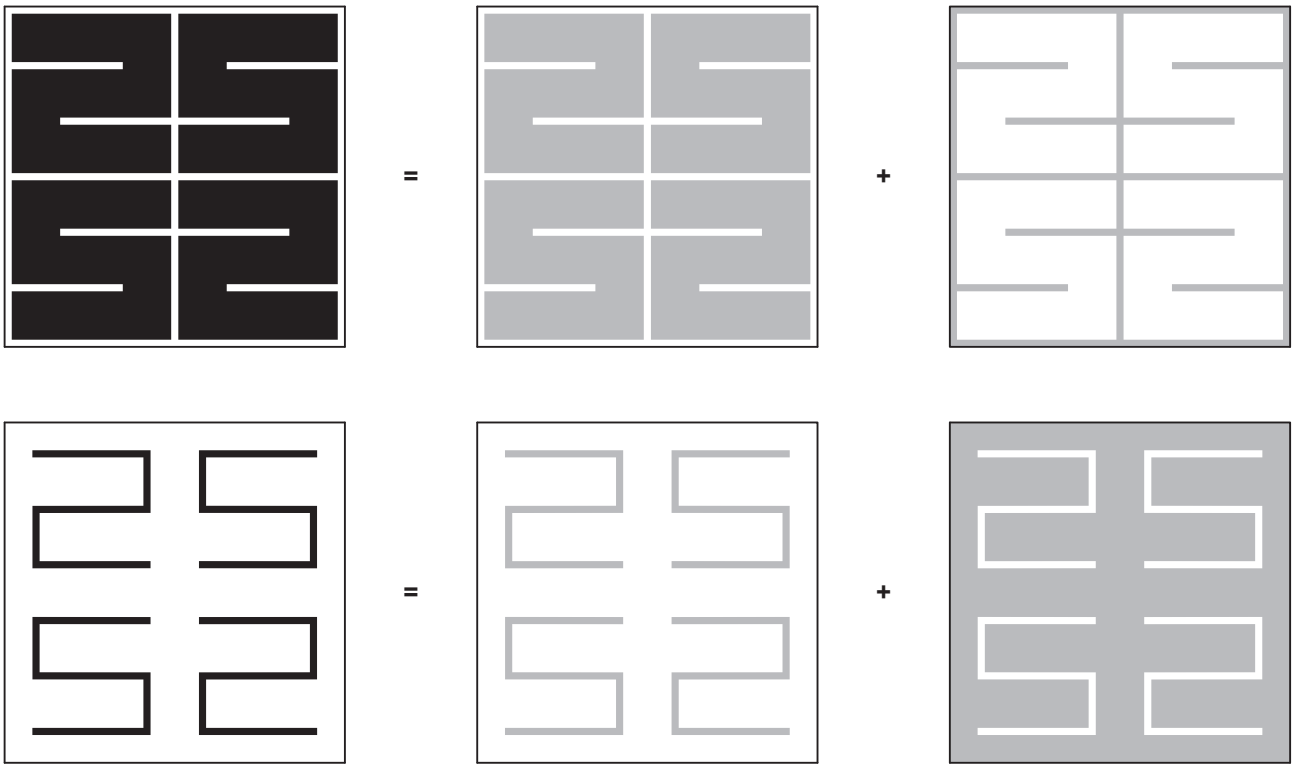


Figure 183: Reconstruction (first row) and variation (second row) of Vera Molnar's
Aesthetic Effect of the Inversion of the Functions by Fluctuation of the Attention (1960, painting).
Two options for interpretation as 'figure' (between these the attention is fluctuating) are in opposition:
four S-forms versus one grid. Both show on theirself and on the other option via C3, and both have similar complexity.
Black colour attracts the attention more than grey colour because of the white paper of this page, but the thinner and therefore the more isolated the S-shapes become, the more they appear as 'figures' - even if they are only grey (see second - sixth figure).

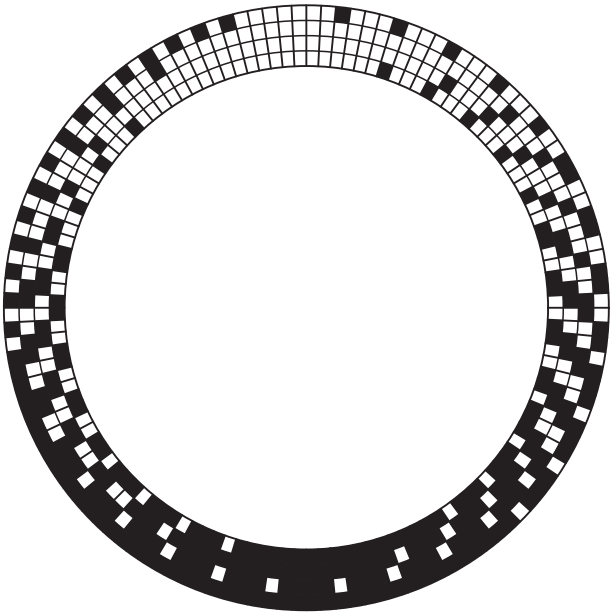


Figure 184: Variation on a serial of works by Ryszard Winiarski (begun in the 1970s).
Winiarski adds black squares systematically in a repeated grid of white squares which leads to Minimal Difference MD between attraction of attention by white and by black planes.

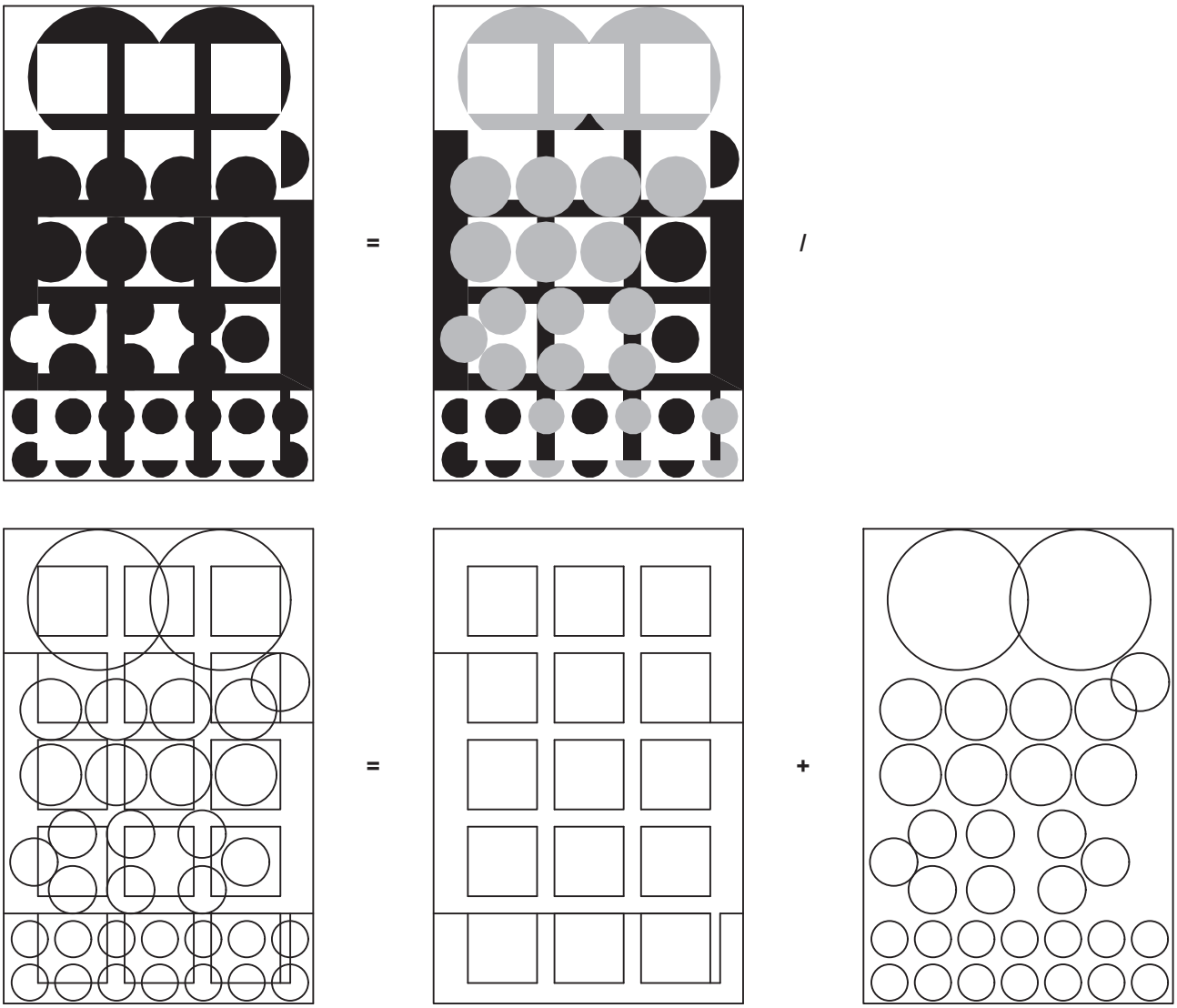


Figure 185: Reconstruction of Victor Vasarely's *Umbriel* (1959, print).
Mixture M of three groups of form: a group of 3 x 5 squares, a grid and a group of 33 circles. (The circles are positioned in a sequence of size which can be interpreted as spatial depth.) These groups of form are mixed by syntactic detractio ('covering'/'fusion', see second figure); the fragments of circles are completed by cognition because of C1, C3 and S2 (symmetry), and because contours of squares are tangents to circles which lead to contamination as well. White squares appear in fragments of black circles (similar to the illusion according to **Kanizsai**, see figure 36), but sometimes the roles of 'superposing' versus 'superposed' are swapped: the illusion of depth is disturbed ambiguously. The grid appears as a 'figure' in the middle part of the image, but at the top of the image the squares are 'figures', at the bottom the circles are 'figures'.

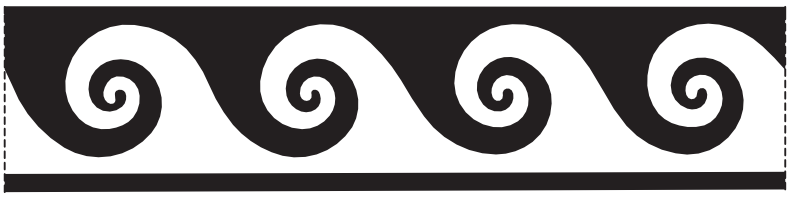


Figure 186: Structure of a mosaic of the palace of Attalos II in Pergamon (159 - 138 BCE).
Similar to the Cup of **Rubin** there is one contour line pointing to both sides with the criteria of line-curvation-index/C3. There is therefore a Minimal Difference between the attraction of attention by the black and by the white plane.

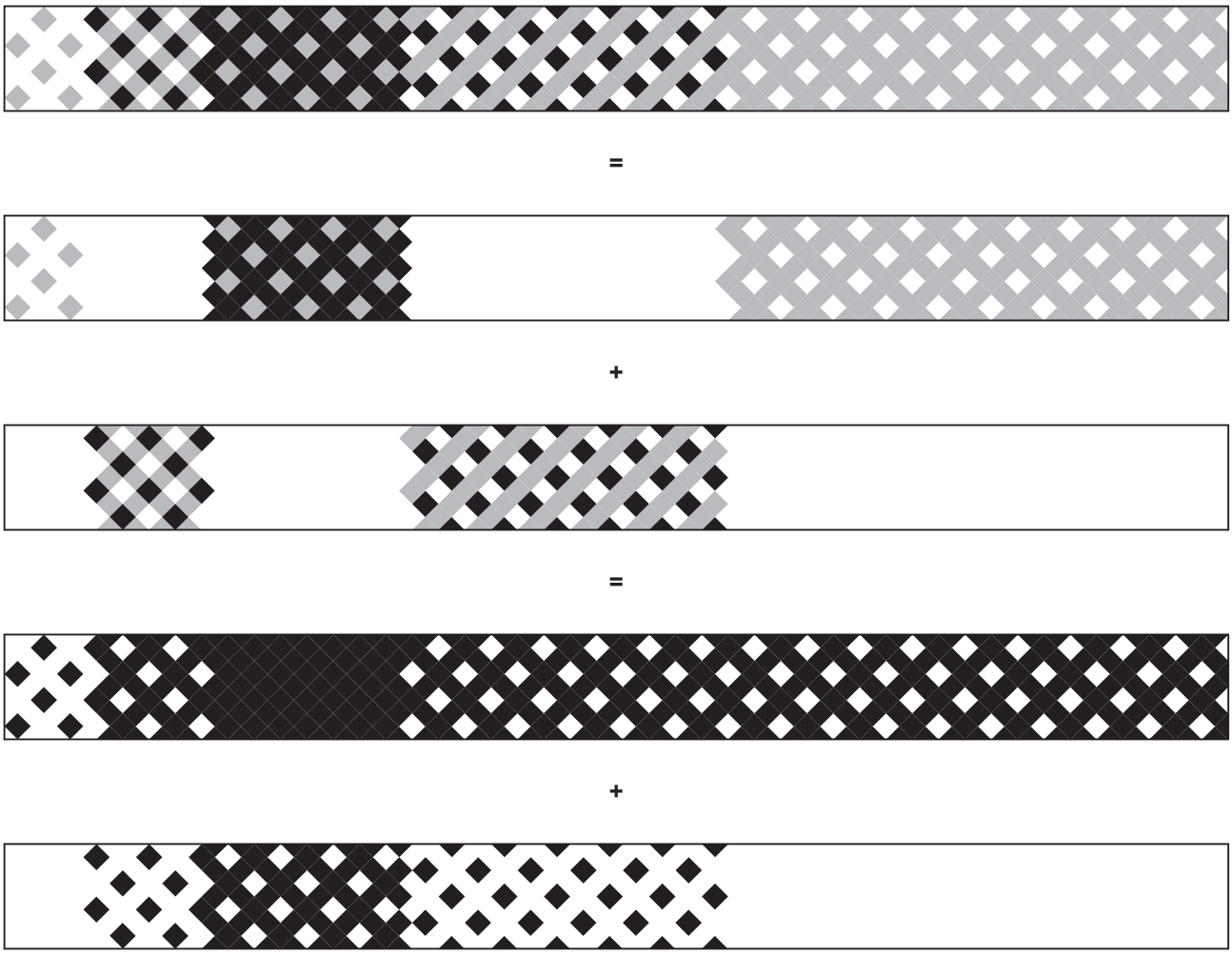


Figure 187: Reconstruction of Hans-Jörg Glattfelder's C*anon for white, grey and black* (1964, painting).
One possible section/interpretation of the image is shown in the second and third figure; a second, more complicated interpretation is one of superposition of translucent planes of colour: Hybrid H (C3.1 versus C3.2) + Minimal Difference MD of colour. These two interpretations build a Hybrid H of two interpretation.
The width of the five areas are based on the Fibonacci sequence of numbers: 1, 1, 2, 3, 5, which means that a following width contains the two preceding widths. This could be called a kind of Hybrid on an abstract level (parts versus the whole).

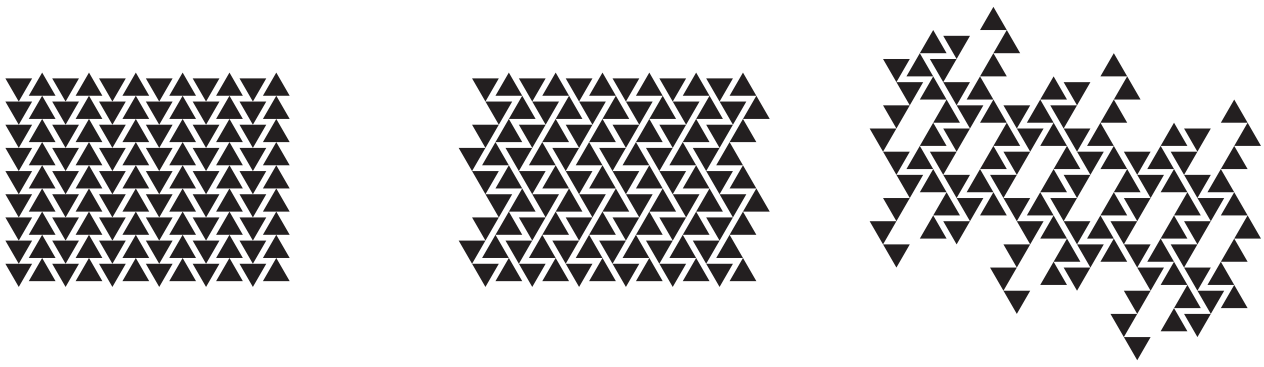


Figure 188: Paraphrase of Op-Art: swapped roles of figure and ground due to thin interspace and formation of interspace
Ambiguity of Minimal Difference MD between the attraction of attention by black planes and by white planes. In the three variations, the white planes gain more and more attention, appear more and more as 'figures'.

2.1.13 Disturbance of symmetry and other orders

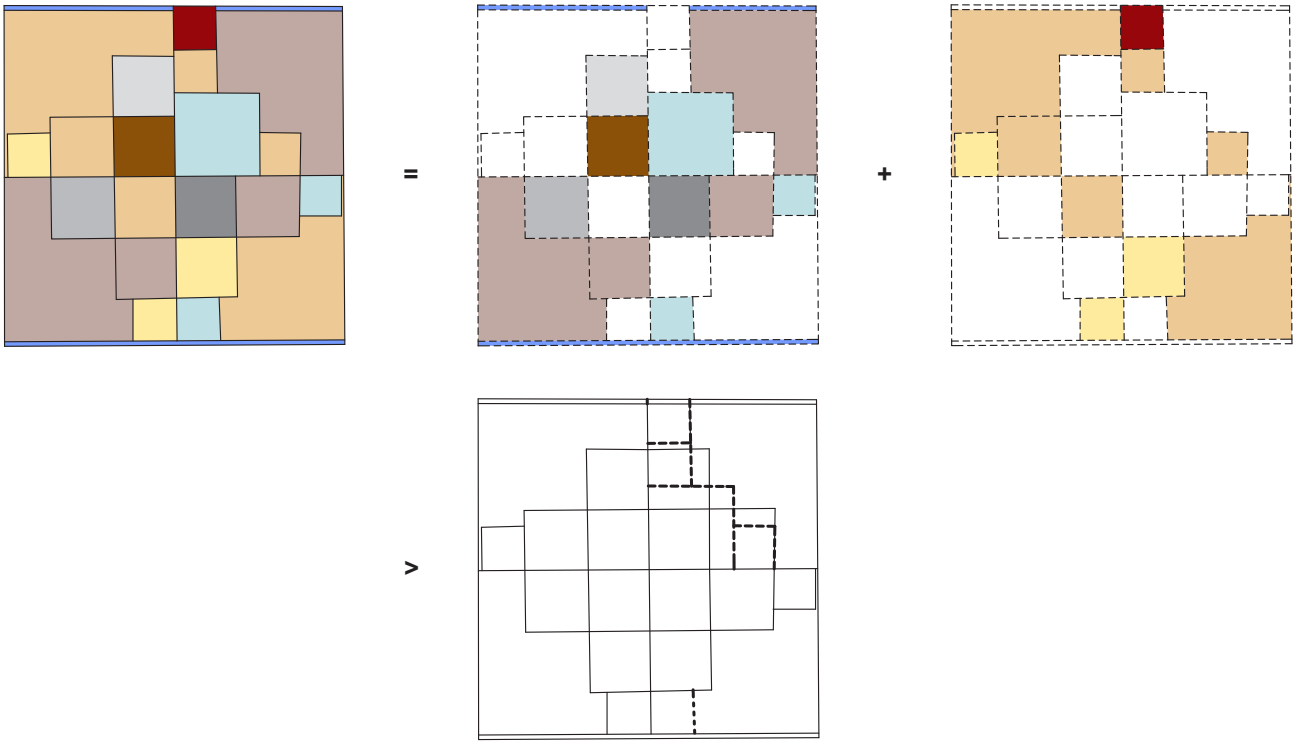


Figure 189: Reconstruction of Paul Klee's *Study* (1928, gouache + collage)
The symmetry of point in the image is disturbed twice (see broken lines in the fourth figure): syntactic adjectio of a square in the middle at the bottom and syntactic substitutio of three squares. The 'ground' of the whole arrangement of squares is divided into a lighter and a darker part (Minimal Difference MD of colour); this divided ground overlaps into the arrangement of squares: Hybrid H (C3 of contour of the arrangement versus S1.1/S1.2 of the ground, see second and third figure).
Mixture M of three groups of colours (three light blue squares versus three greyish squares versus three light yellow squares); the brown and the red square cannot be assigned to a group of squares.

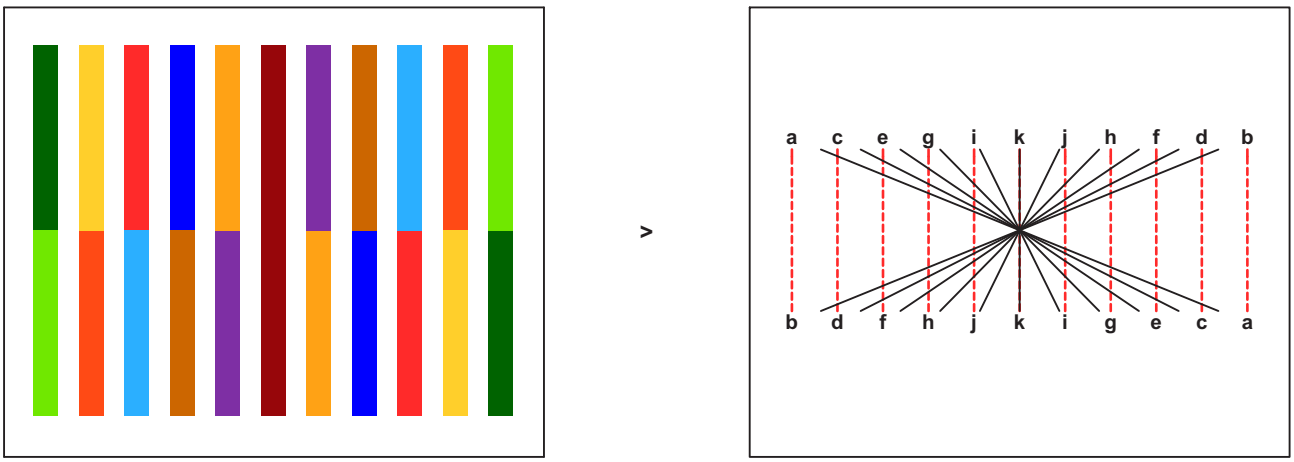


Figure 190: Structure of Vera Molnar's *Untitled* (1949 - 1950, painting)
The arrangement of colours is based on a symmetry of point: ten pairs of colour are in a Mixture M (S1.1 versus S1.2... versus S1.10). But a second cognitive unification is thinkable: one 'beam' divided in two colours (C2 + C3), which leads to Hybrid H (C2/3 versus ten pairs of S1 in Mixture M). The relationships of these two colours in contiguity can be interpreted: light versus dark green (a - b), neighbourhood of yellow and orange in the circle of colours (c - d), cold-warm contrast of red versus turquoise (e - f), pure colour blue versus mixed colour brown (g - h), complementary colours yellow versus lilac (i - j).

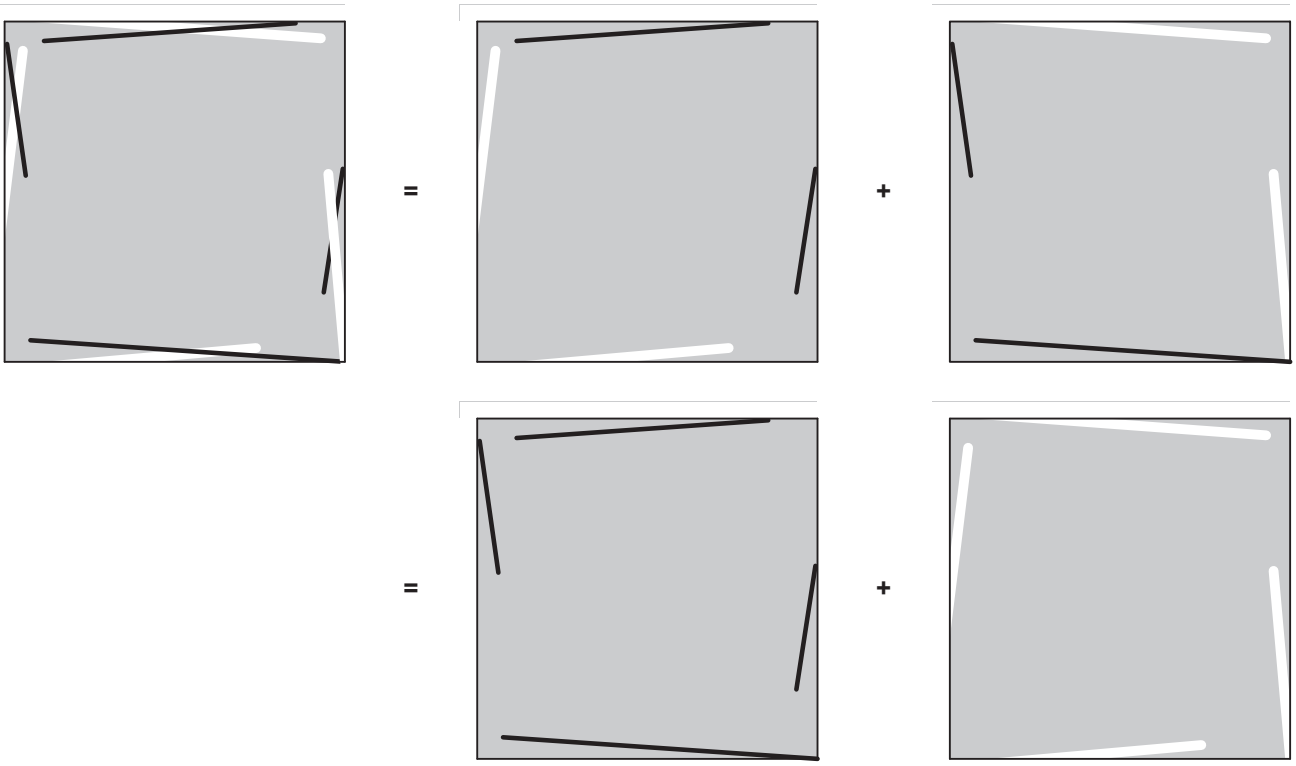


Figure 191: Reconstruction of Vera Molnar's *2 Quasi-Squares/A* (2000, painting)
Perception has two ways of unifying the eight lines to cognitive groups:
according to the criterion of similarity of orientation (S4, second and third figure) or according to the criterion of similarity of colour (S1, fourth and fifth figure). Therefore, in one element of the image there is competition between two criteria, so one can identify the 'Hybrid H' type of ambiguity (S4 versus S1).
The title refers to the comprehension that four lines can be regarded as fragments of quadrangles (syntactic detractio) which can be interpreted as spatially distorted squares (syntactic transmutatio).

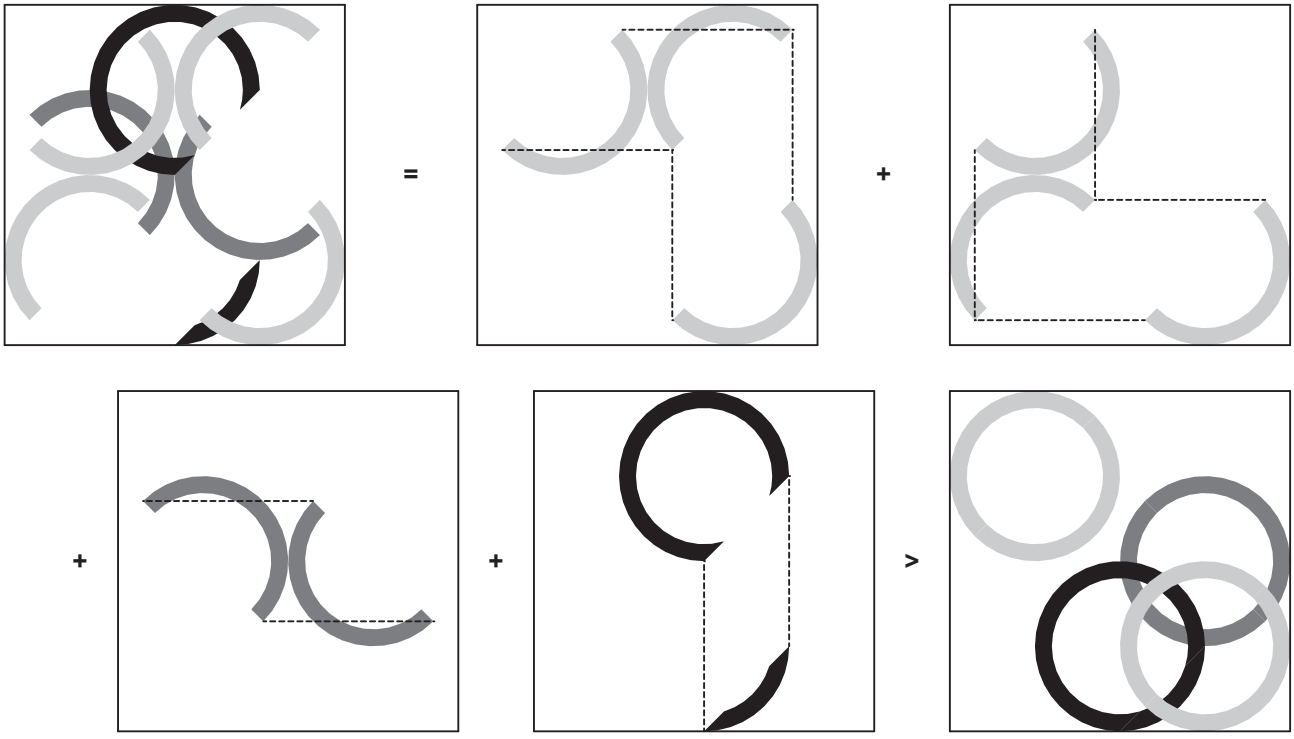


Figure 192: Reconstruction of Jan Kubicek's *Divided Circles, two Dimensions* (1988-92, detail, painting).
Two interpretations concerning the axis of syntactic transmutatio of the light grey circles are possible (see second and third figure): vertical and horizontal; this could be called ambiguity of transmutatio.
The dark grey circle and the black circle allow only one axis of transmutatio.
The circle-fragments describe C3-spaces which can be attributed to many circles (> Hybrid H and Mixture M).

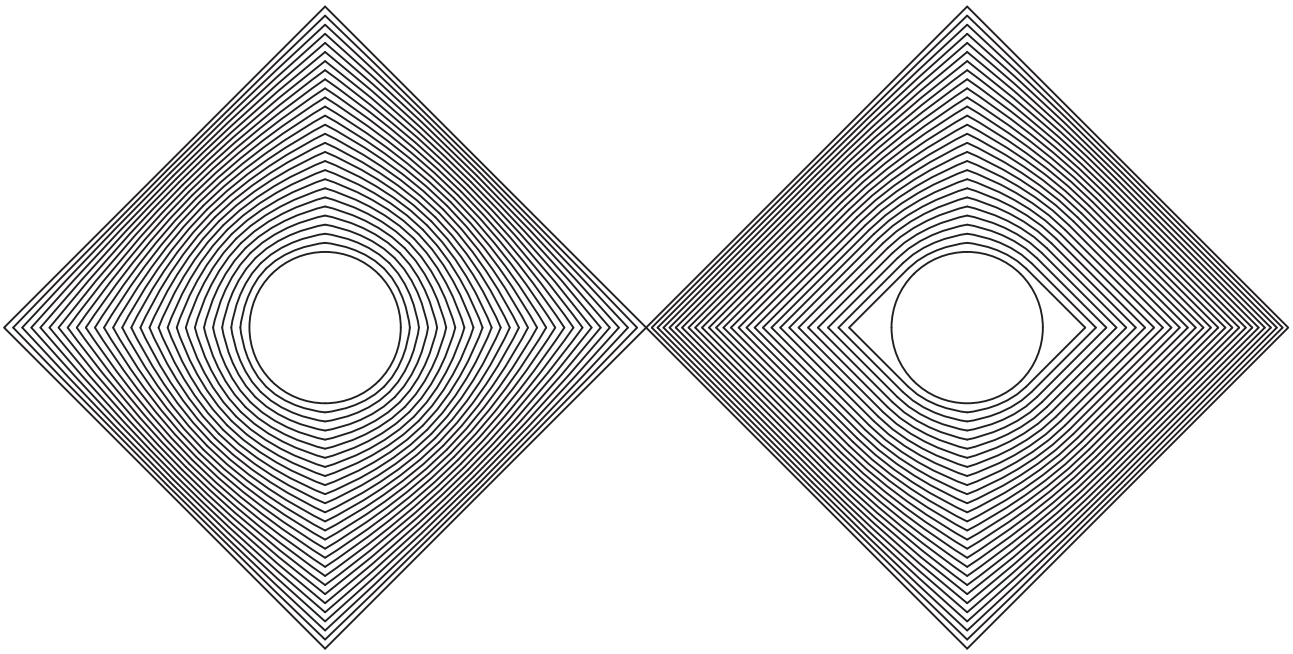


Figure 193: Axel Rohlfs: *Turning circles into squares* (2004, computer print)
Syntactic sustitutio/transmutatio (distortion) can be identified because there is a increasing deviance of the smaller forms from their bordering frame. But this disturbance of a square (or a circle) is nearly imperceptible because of Minimal Differences MD of the steps to each other.
One could imagine a wire sculpture in which a distorted square appears as if it was a circle and vice versa.

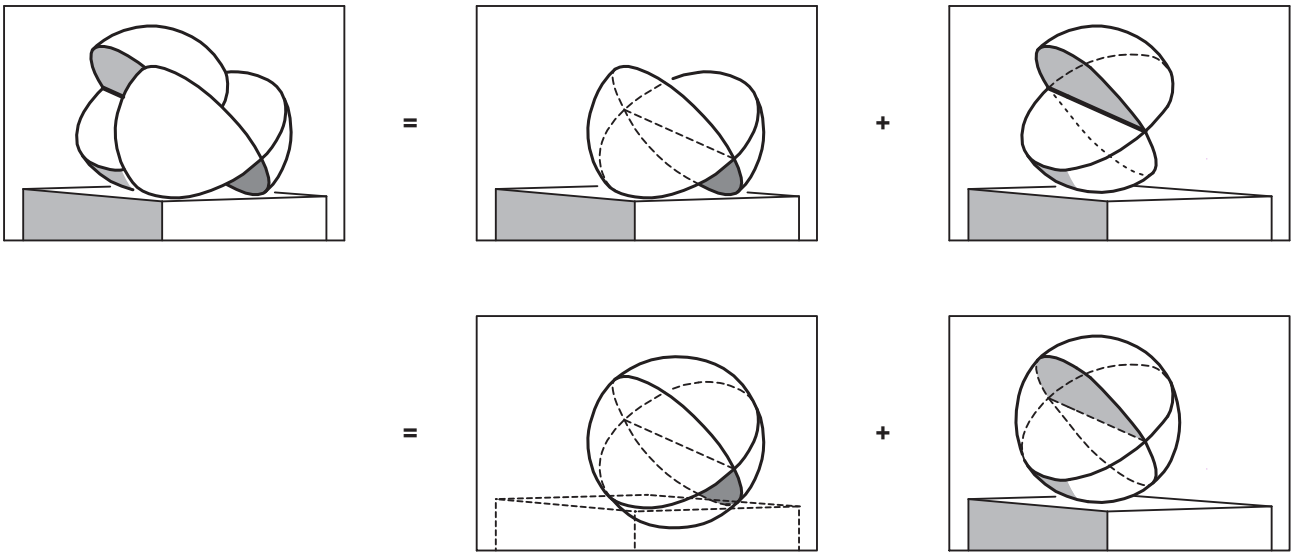


Figure 194: Reconstruction of Max Bill's *Striving Forces at a Ball* (1966 - 1967, stone sculpture)
Syntactic transmutatio of two quarters out of the volume of a ball (see title) - but which also evokes the impression of a second ball; therefore there are two ways of interpretation: syntactic transmutatio out of one ball versus syntactic detractio/fragmentation of two (contaminated) balls. The last interpretation evokes the impression of a contamination of two volumes: Hybrid H (C3.1 first ball-volume versus C3.2 second ball-volume).

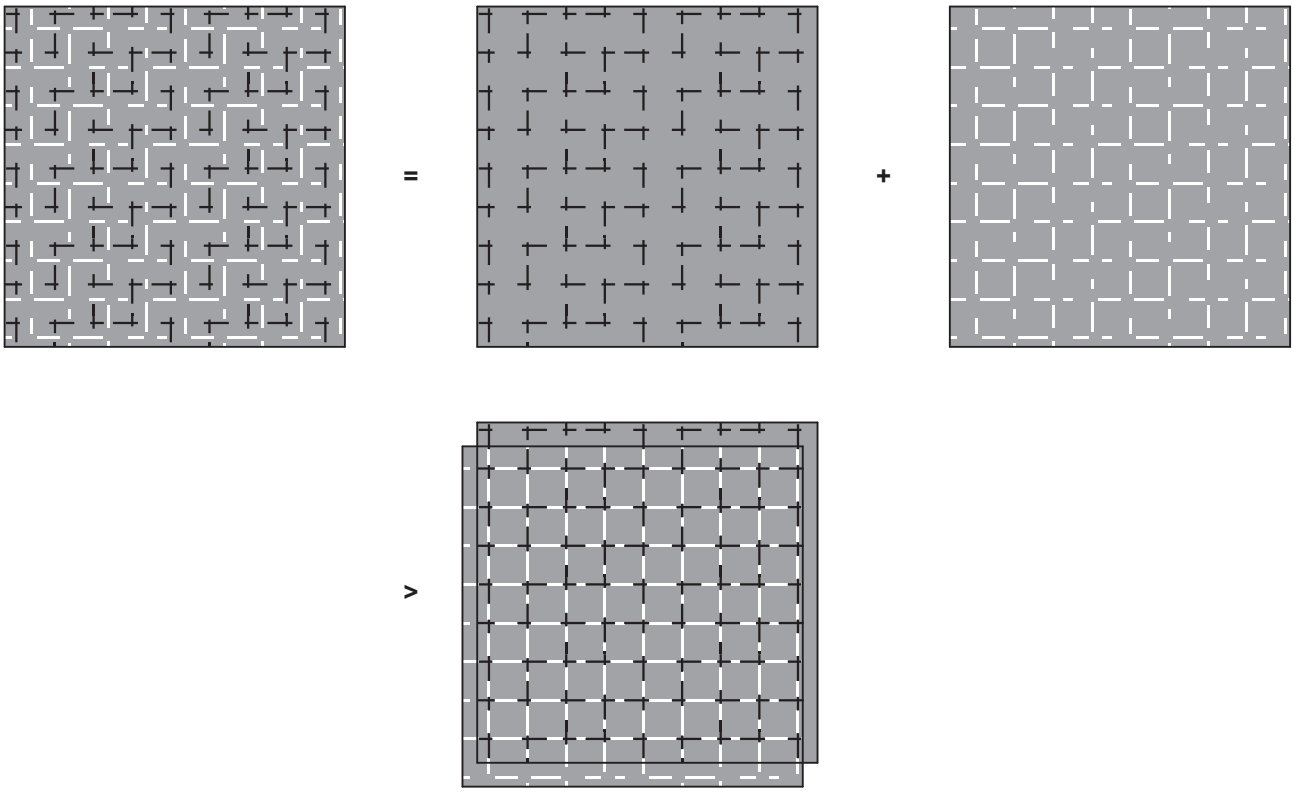


Figure 195: Axel Rohlfs: *Computer Study* (2002 - 2006, print).
The areas around the points of intersection of a grid are cut out and diagonally shifted (syntactic transmutatio/detractio; see second and third figure). The black fragments of the grid are crosses with four lengths of its 'arms': 1, 2, 4 and 8. This cross shape is rotated from one step to the next. The black and the white fragments of the original grid are syntactically complementary (see fourth figure). One can identify the Mixture M type of ambiguity because the two complementary structures do not touch each other: M (C1.1 white fragment of grid versus C1.2 black fragment of grid).

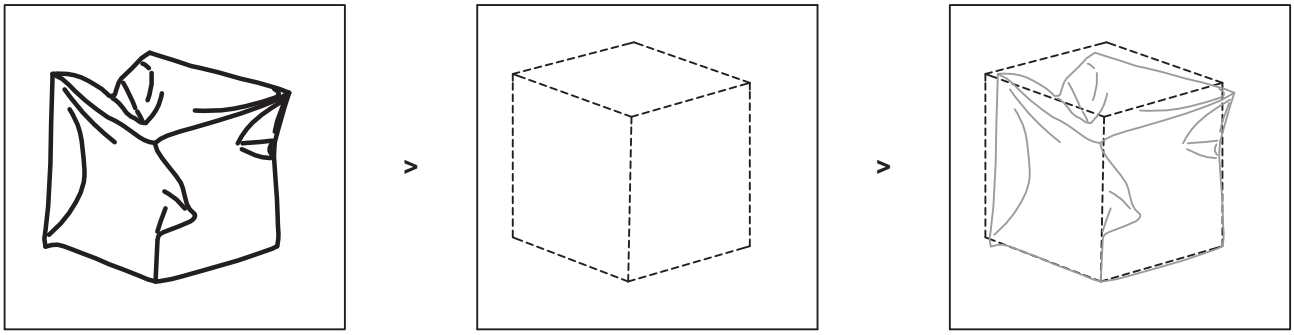


Figure 196: Reconstruction of Ewerdt Hilgemann's *Imploded Cube* (1986, imploded sheet steel sculpture)
One can identify syntactic transmutatio - but by technical means: The folds can be interpreted as indices referring to the implosion; so there is an ambiguity of two interpretations: non-sign (mode of geometric perception, in which C1 and C3 refer to the disturbed cube) versus sign (mode of physical interpretation).

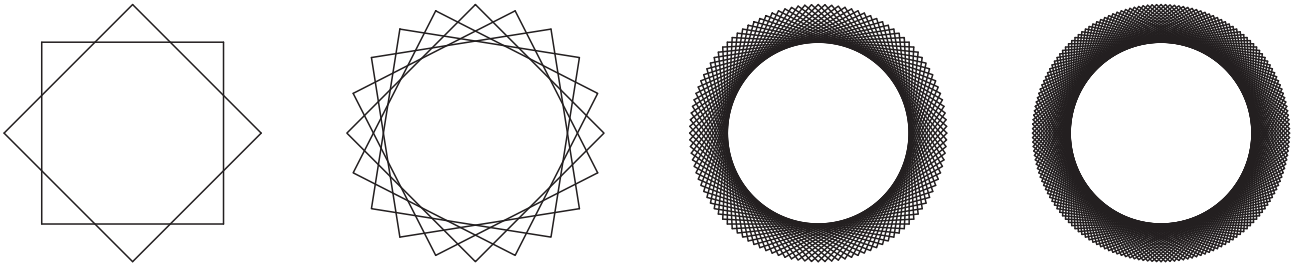


Figure 197: Rotation and Hybrid of squares (= syntactic adjectio + transmutatio)
E. J. Marey's chronophotography (ca. 1884) and Futurist chrono-painting (ca. 1910) could be carried on to pure rotation as adjectio + transmutation, which visualises moments within a movement as one image.
Rotation is the base not only for **Renato Giuseppe Bertelli**'s fascist work *Profilo continuo - Testa di Benito Mussolini*, 1933, sculpture), in which rotation becomes a sign for Mussolini's idea of 'Mare Nostrum'.
But also for sculptures of contaminated fragments of faces by **Tony Cragg**.
In his work *'Constante'* (1959, Edition MAT), **Jean Tinguely** offers a rotating platform on which the buyer of this edition can fix an object. This do-it-yourself work of art leads to a dynamic view in which aesthetics of absence (illusion of transparency in movement) and of Situationism (another use of everyday objects) can be identified.
The operations of ambiguity can thus be used for very different purposes.

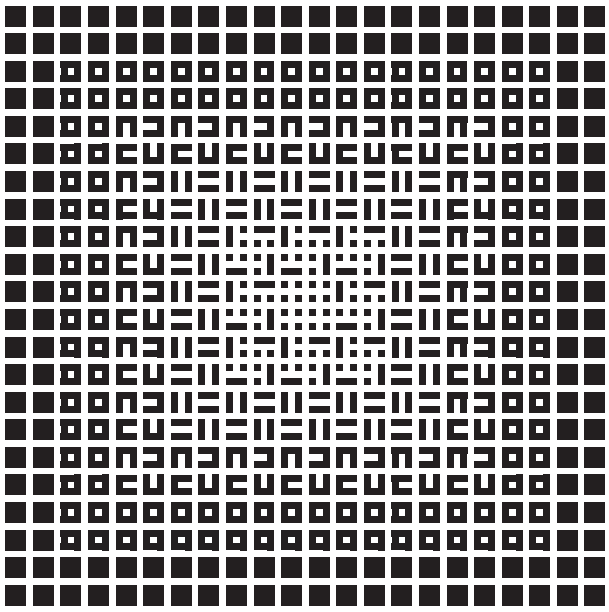


Figure 198: Axel Rohlfs: *Multiple Structure in disintegration 1* (2004, painting)
A sequence of fragmentation of squares produces several types of ambiguity:
a) the first level of fragmentation could be interpreted as 'white square on a bigger black square', b) structure of U-shapes results in continuous swapping of roles (Minimal Difference MD of attraction of attention between the white grid and the U-shapes because of C3), c) Mixture M of two groups (horizontal versus vertical elements), d) Mixture M of three groups ('points' versus horizontal lines versus vertical lines).

2.1.14 Illusion of spatial depth as a representation within semantics

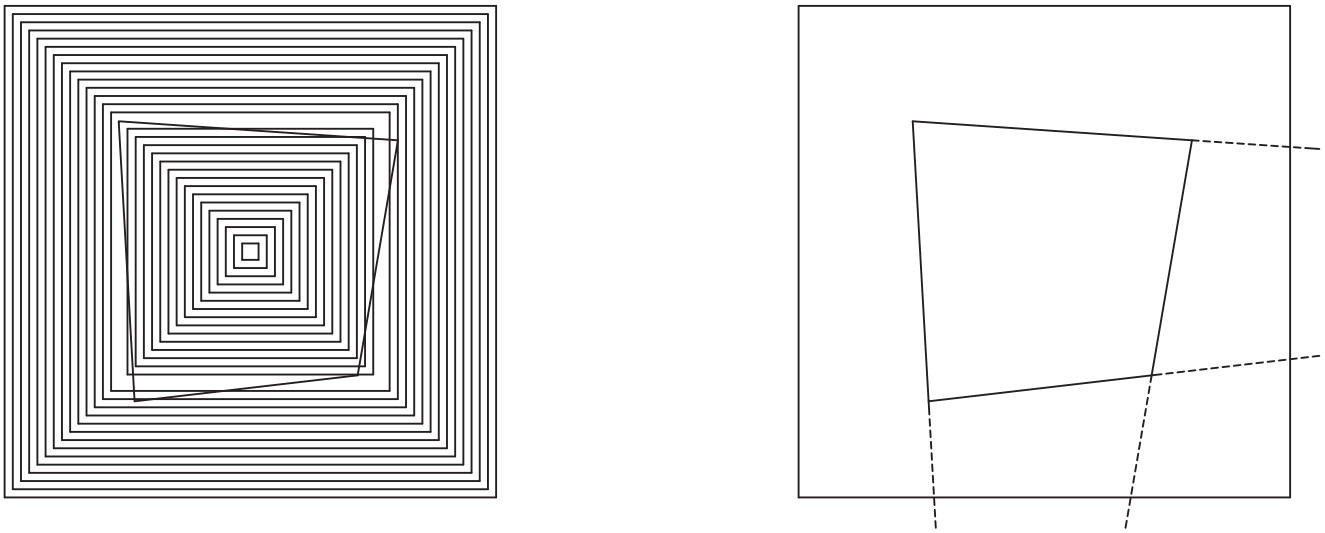


Figure 199: Reconstruction of Vera Molnar's *The fifteenth jumps the queue* (one of a serial of ten prints, 2006).
The fifteenth shapes seems to originate from the syntactic transmutatio operation (distortion of one square to a quadrangle), which offers the interpretation of a square in space. This leads to an ambiguity of two interpretations: non-iconic (by concentrating on the concentric squares) and iconic (representing spatial depth, by concentrating on the quadrangle).

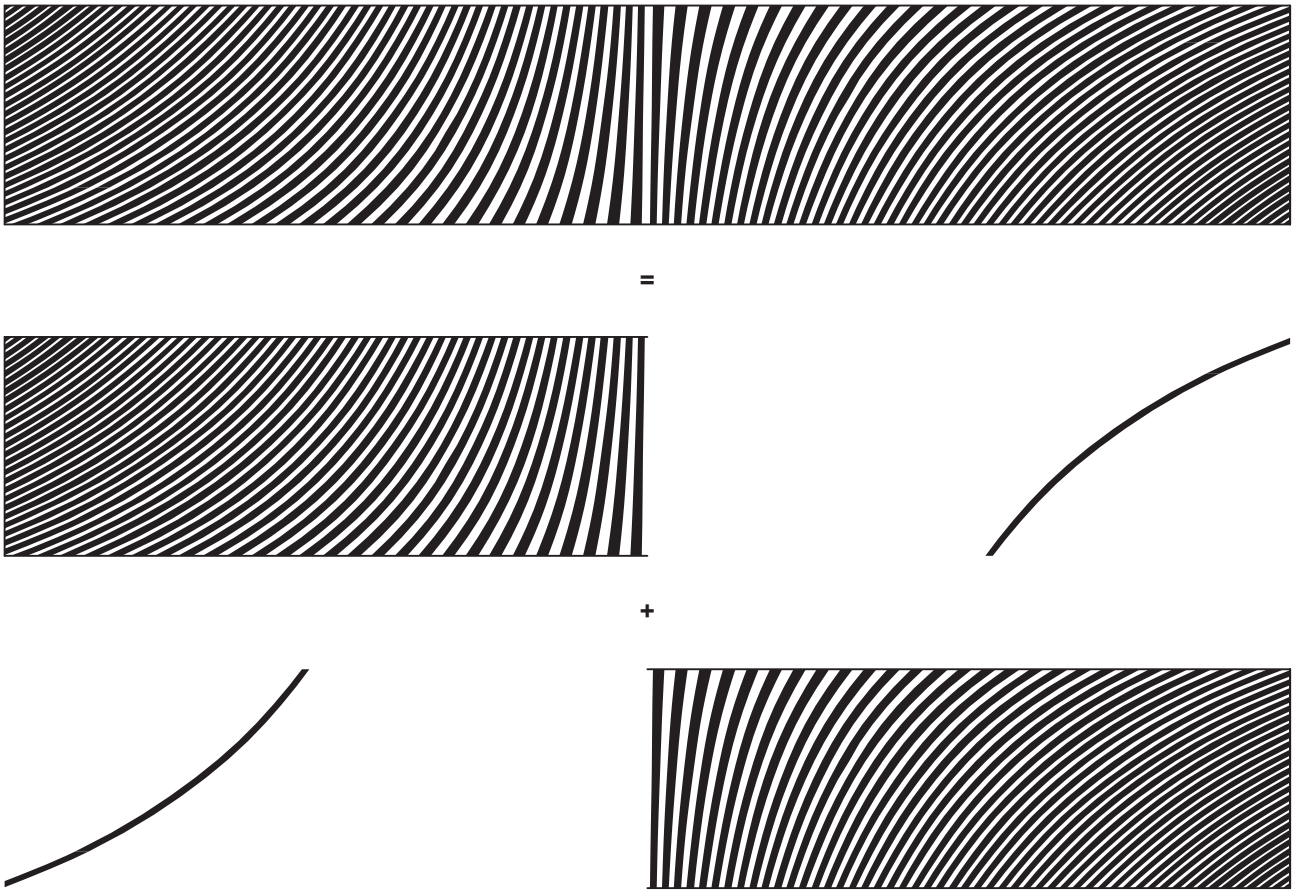


Figure 200: Structure of Vera Molnar's *Perspective inverted 2* (1957 - 2007, painting).
A curved plane in perspective might be shown; but the continuous plane has an orientation to the top in the left half, and to the bottom in the right half. It appears as a contamination of two perspective systems.
There is a tendency to unify pairs of two lines which stand in symmetry of point to each other (Mixture M).

2.1.15 The border of the image

The borderline of an image points in general to the centre of the image because of the criterion C3 which can easily be realised in the case of a round image (see examples below). The borderline of an image can be formed in an ambiguous way by deviance (e.g. deformation of a symmetrical scheme of the borderline of the image) or by contamination (e.g. two contaminated frames/borderlines of ´two images´ or section of the shown objects out of their surroundings according to their boundary lines in a shaped canvas as a contamination of the borderline of the image with the contour of the shown object, see figure 258).

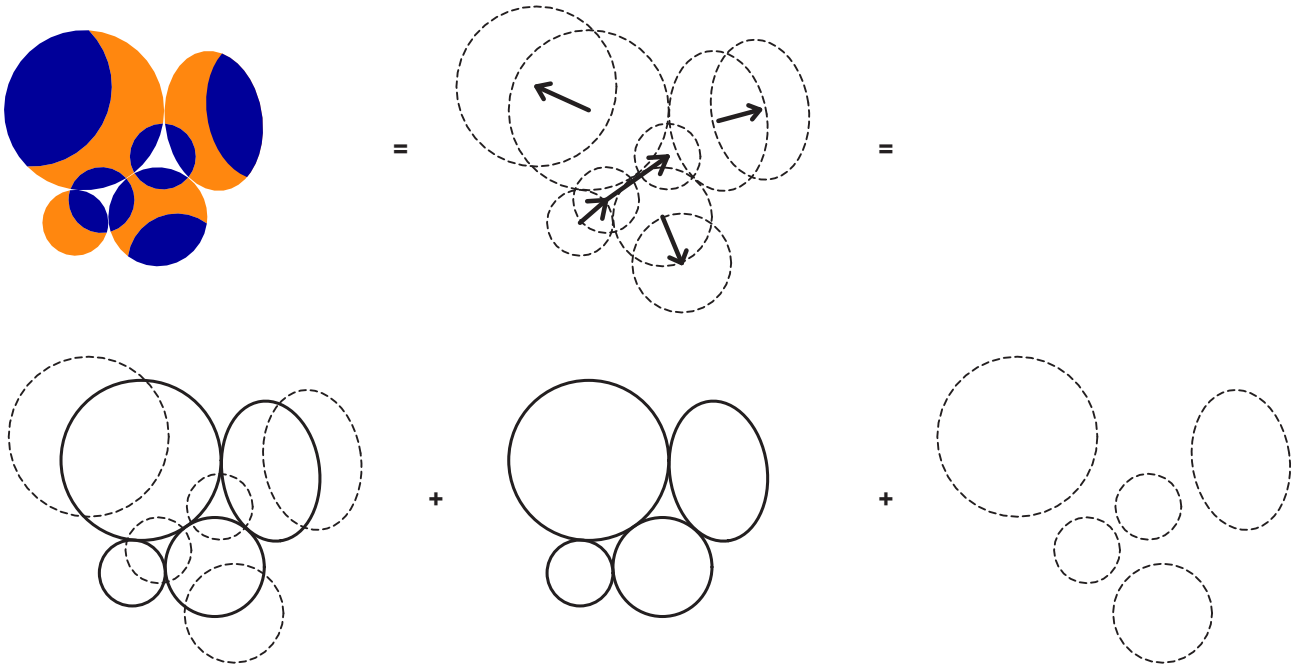


Figure 201: Reconstruction of Leon Polk Smith's *Constellation blue - gold* (1972, four painted panels).
The four figures show shiftings of themselves (syntactic adjectio + transmutatio, see second figure) which appears as if they were after-images. You could name this phenomenon 'a kind of self-similarity'.
In the points of contact of the panels one can identify the Hybrid H type of ambiguity (C1.1 versus C1.2, see fourth figure).

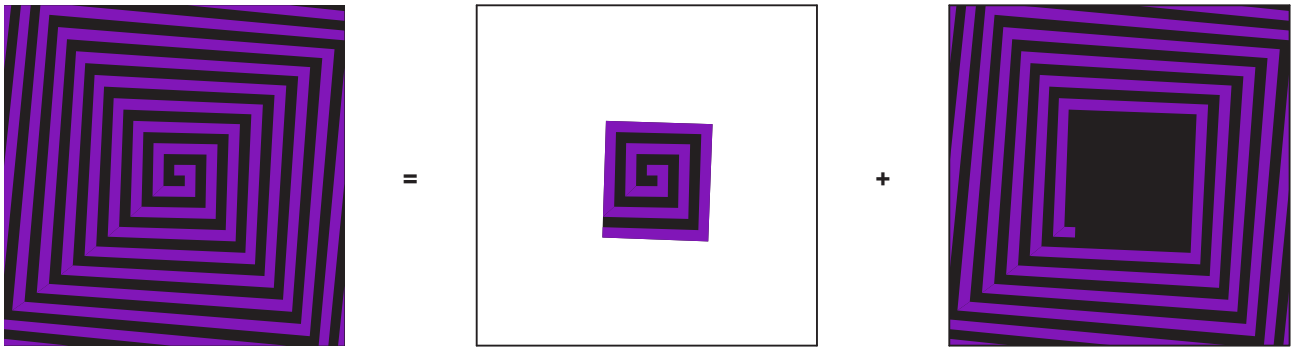


Figure 202: Reconstruction of Vera Molnar's *Spiral 2* (1958- 2006, painting).
The nearer the spiral gets to the border of the image, the more its orientations differ from pure orthogonality. This development is achieved by steps of Minimal Difference MD. Orthogonal centre and orthogonal boundary line can be unified to a cognitive group (type Mixture M (S4.1 centre + boundary line versus S4.2 rest), see second figure), the rest 'falls out of the frame' visually (see third figure). But the boundary between these two groups is not fixed, which results in visual instability.

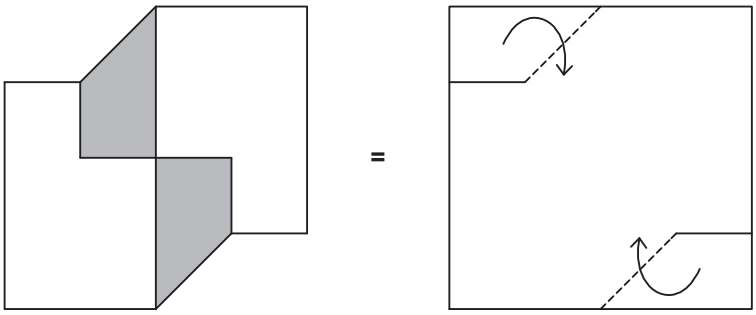


Figure 203: Reconstruction of Tíbor Gáyor's *Drawing of System* (1973, detail of a drawing)
In the 1970s, Tíbor Gáyor began a serial of cuttings in canvas, pieces of which are turned over so that the grey rear of the canvas is visible. This kind of syntactic transmutatio in space can be reconstructed by reconstructing the movements.

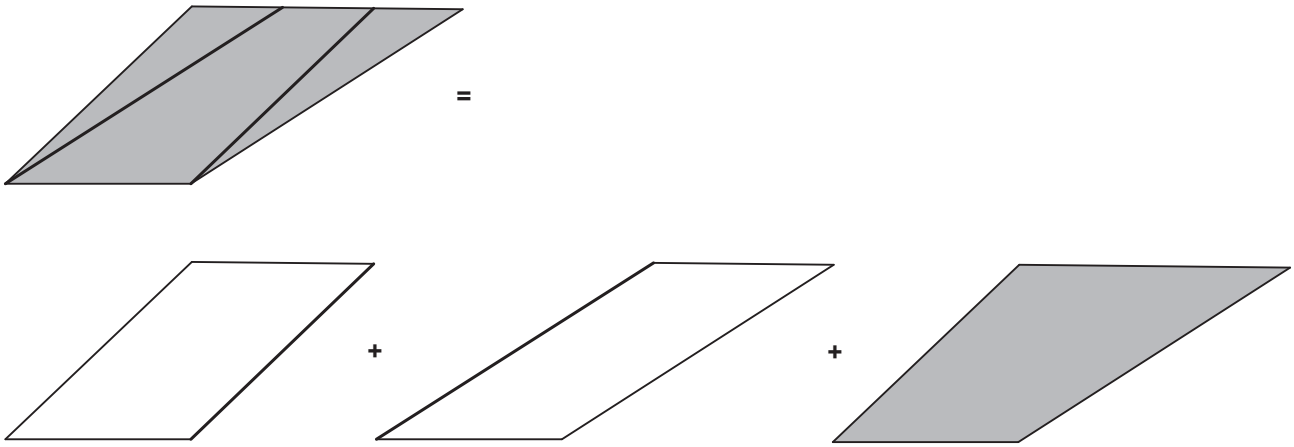


Figure 204: Reconstruction of Hartmut Böhm's *parallel, inside-outside, I* (1981 - 1982, wooden plates)
The work seems to be a contamination of two parallelograms as frames, which can be distinguished by similarity of orientation (Mixture M (S4.1 of two parallel lines versus S4.2 of the other two lines) which results in a Hybrid H concerning three planes (C3.1 first parallelogram versus C3.2 second parallelogram versus C3.3 the whole).

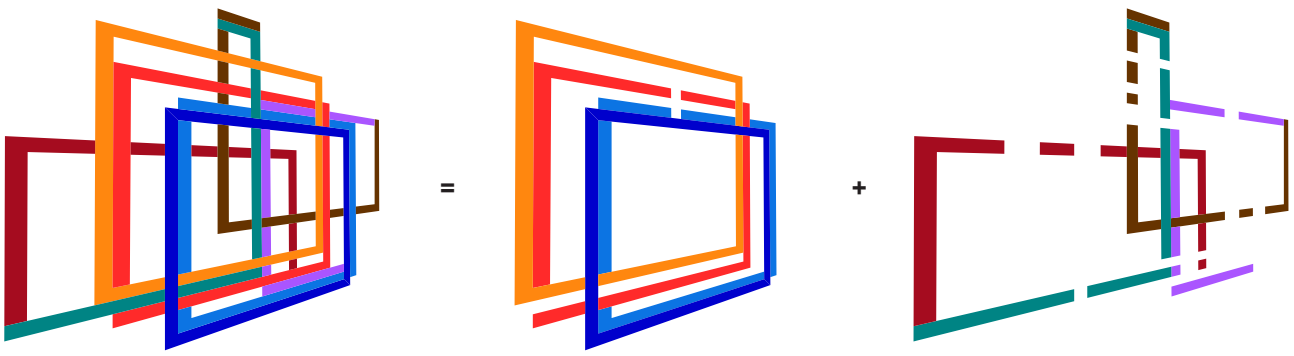


Figure 205: Reconstruction of Dora Maurer's *Gemini 4 - B* (1997- 1998, painting on shaped canvas).
The work consists of four colourful quadrangles (see second figure) and four less colourful fragments of quadrangles which merge into each other and thus form a kind of spiral (syntactic detractio + adjectio, see third figure). So eight frames or fragments of frames contain each other: Hybrid H (C3.1 versus C3.2... C3.8). Zones of overlapping suggest spatial depth.

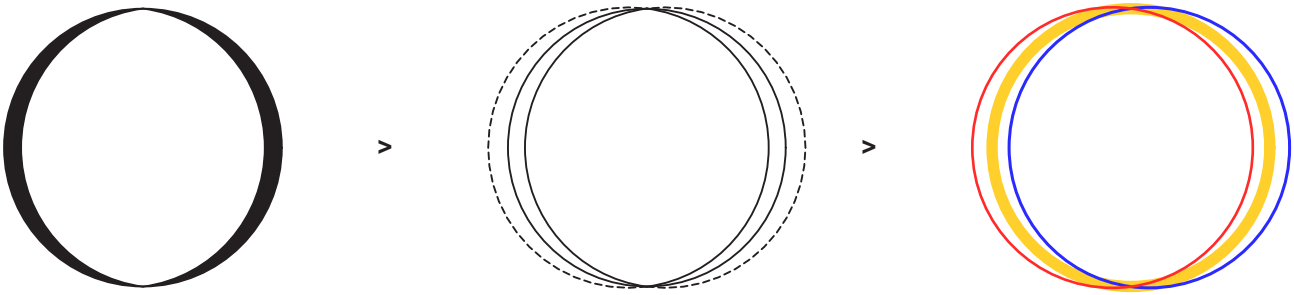
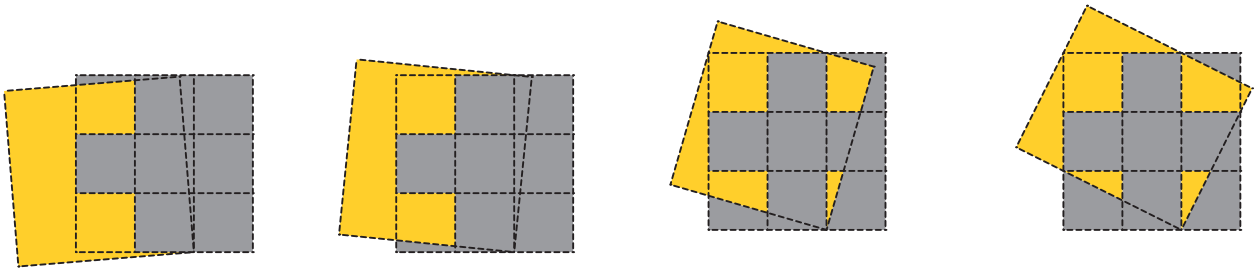


Figure 206: Reconstruction of Leon Polk Smith's *No. 7801* (1978, painting).
Three contours of circles which are similar in size (two bigger, one central smaller circle = panel, see second figure) are in 'superposition' (syntactic adjectio) and shifted slightly against each other (transmutatio + Minimal Difference MD), so that line-direction-indices merge into another (MD (C1/3.1 versus C1/3.2 versus C1/3.3). The interspaces between the three contours are filled with black colour; these black planes seem to be a thickened contour (Minimal Difference MD of Geometry 'line to plane'). The white plane appears as if it expanded against these black planes.
The border of the image is visually instable because it can interpreted in these three ways: circles in superposition, contours going one into another, or thickened contour.



one point of contact (contour of yellow rectangle vs. grid of the grey square)

two points of contact (contour of yellow rectangle vs. grid of the grey square)

three points of contact (contour of yellow rectangle vs. grid of the grey square)

five points of contact (contour of yellow rectangle vs. grid of the grey square)

Figure 207: Three variations of Anton Stankowski's *Secondform* (1992, painting).
In the original image (see third figure) there are three tangential points of contact of a yellow rectangle with the grid of a dark grey square; pieces of the yellow rectangle are removed, so that a fragment of a cross within the dark grey square appears (syntactic detractio of a rectangle and of a cross which both form a kind of Hybrid H).
The sequence of spatial depth is contradictory: The grey cross seems to be in front of the yellow rectangle but it is also part of the grey square which is overlapped by the yellow rectangle (semantic ambiguity in the representation of spatial depth): Fragments have strong effects on cognition.

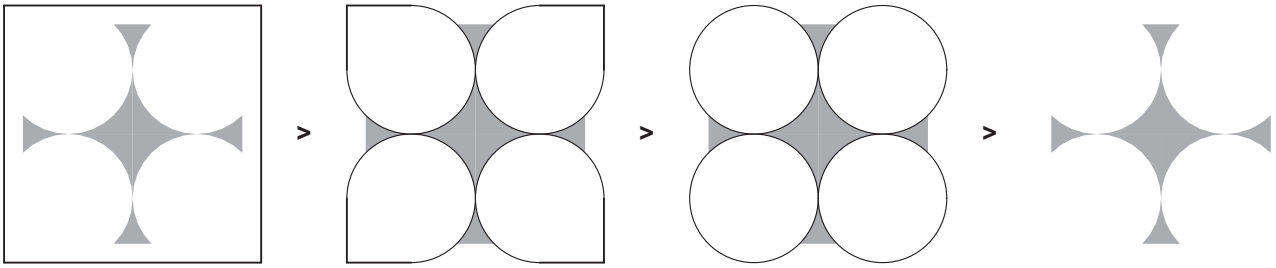


Figure 208: Reconstruction of Vera Molnar's *Emerging of a Cross* (1970 - 2012, painting).
The contours of four circles are fragmented (syntactic detractio), which demand completion (> C1, C3 and S2/symmetry). But completion is possible in the form of a drop (second figure) or in form of a circle (third figure). If the painting had no frame of, cognition would reconstruct a circle because this means less data. In the four points of contact of two circles one can identify the Hybrid H type of ambiguity (C1.1 first contour versus C1.2 second contour).

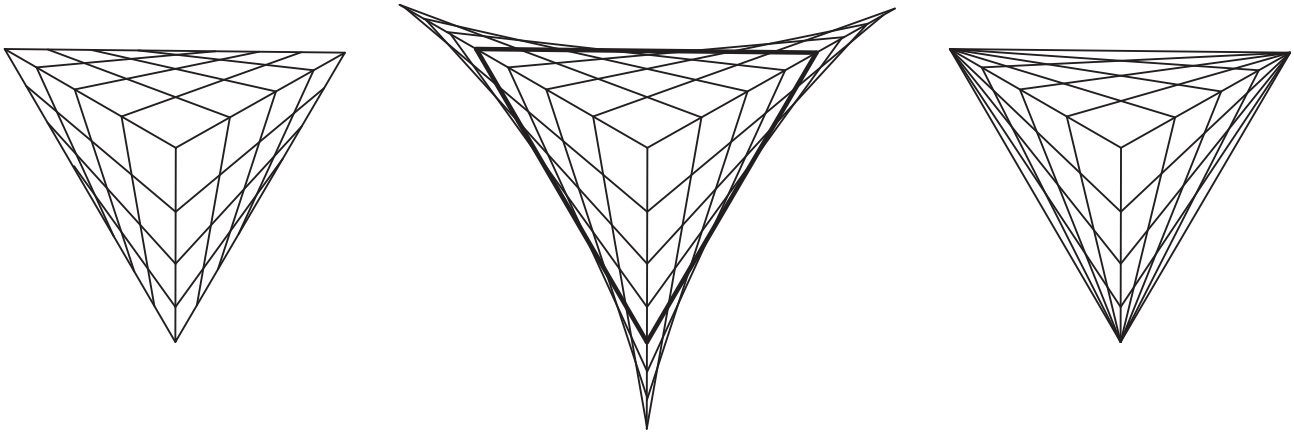


Figure 209: Structure and reconstruction and variation of Hans-Jörg Glattfelder's *Triplon* (1983, painting).
The original (left figure) has different points of perspective which is shown in the reconstruction (middle figure); the variation (right figure) has only three points of perspective which lie on the edges of the cube.
The original has ambiguity of space representation (orthogonal versus curved space) and of dimensional character (2D at the edges, 3D in the middle); the cube in the variation seems to implode at the edges.

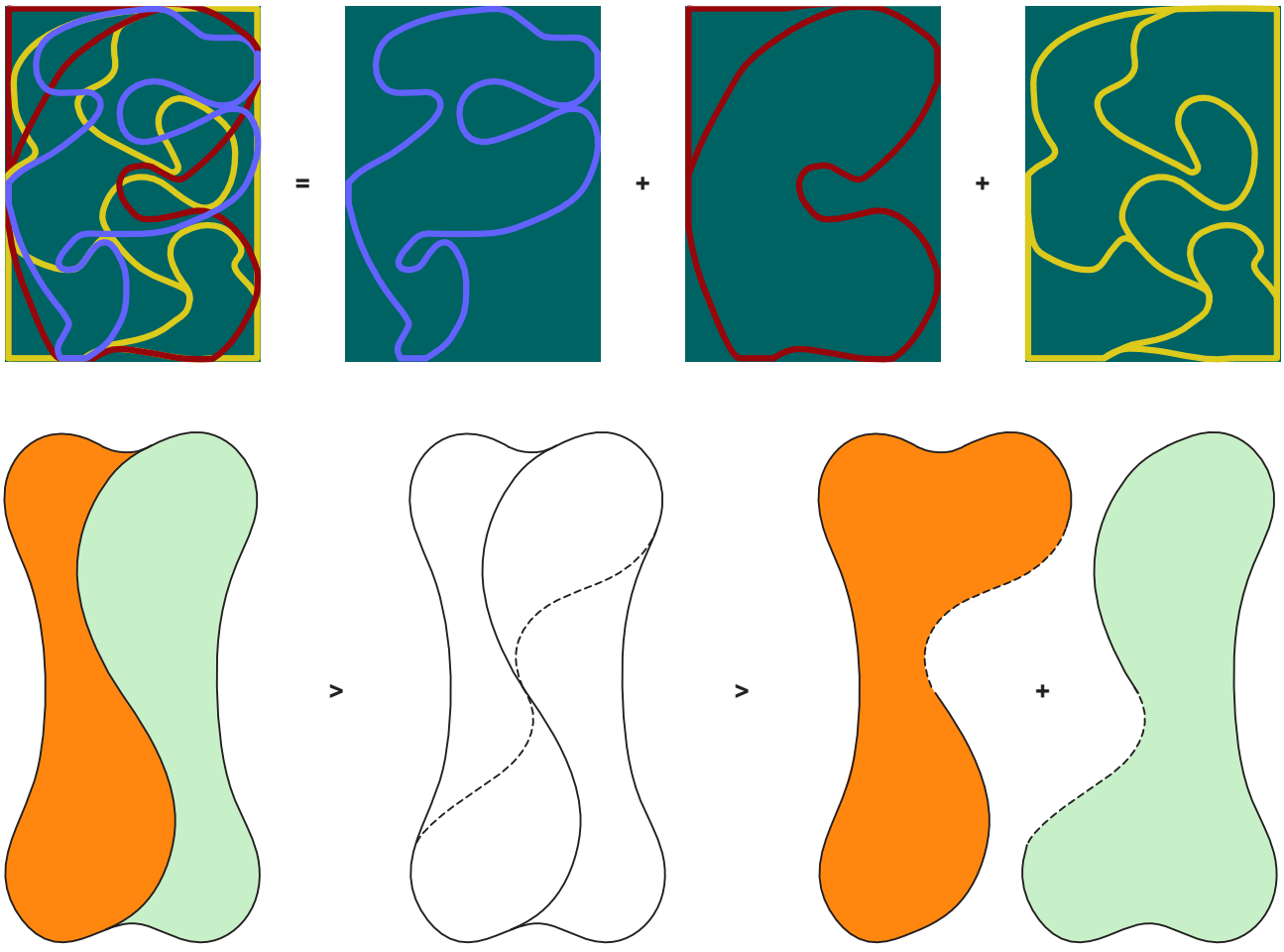


Figure 210: Reconstruction of Brice Marden's *Elements (Hydra)* (1999-2000, 2001, painting) and Leon Polk Smith: *Sun* (1958 - 1959, painting).
The boundary of the first image by Marden is marked by a net of red lines or of yellow lines in bifurcations, only the middle at the top and at the bottom does it seem to be 'open'. The blue line overlaps the red net, the red net the yellow net, all suggesting different kinds of 'overlapping' areas by C3; the inner plane and the border are contaminated.
The boundary of the image by Smith has two bifurcations (see second figure; Hybrid H (C1.1 versus C1.2) and seems to enter the interior of the image. One of the two parts of the images points to the other part (C3.1 of the whole versus C3.2 of the orange part versus C3.3 of the greenish part) which leads to the impression of two overlapping planes, of two-and-half-dimensionality (see third and fourth figure).

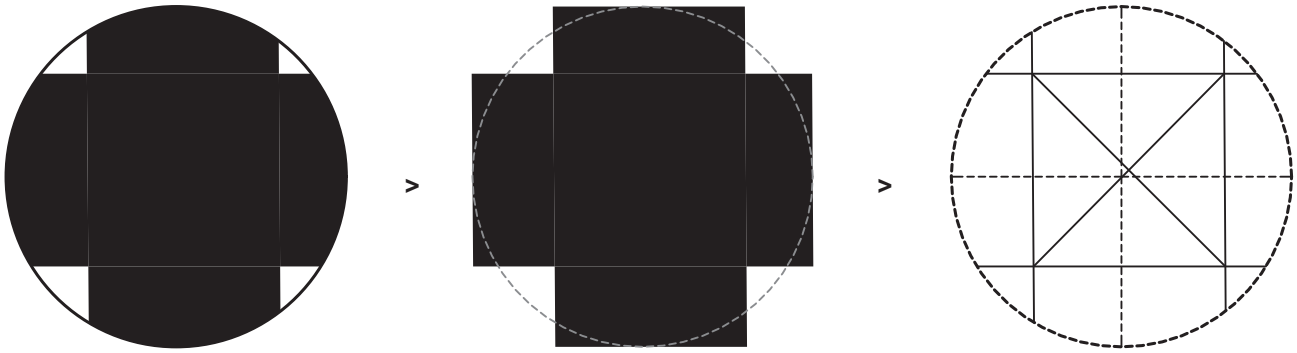


Figure 211: Reconstruction of Leon Polk Smith's *Pearl Gray and Black Cross* (1976, painting).
A black cross seems to be fragmented by the boundary of the image (syntactic detractio), which creates the impression that the angles are not rectangular. The four white triangles and the fragmented black cross can be interpreted as 'figure(s)' (Minimal Difference MD of figurality). The centre of the cross has a different position than the centre of the circle (MD of positions).

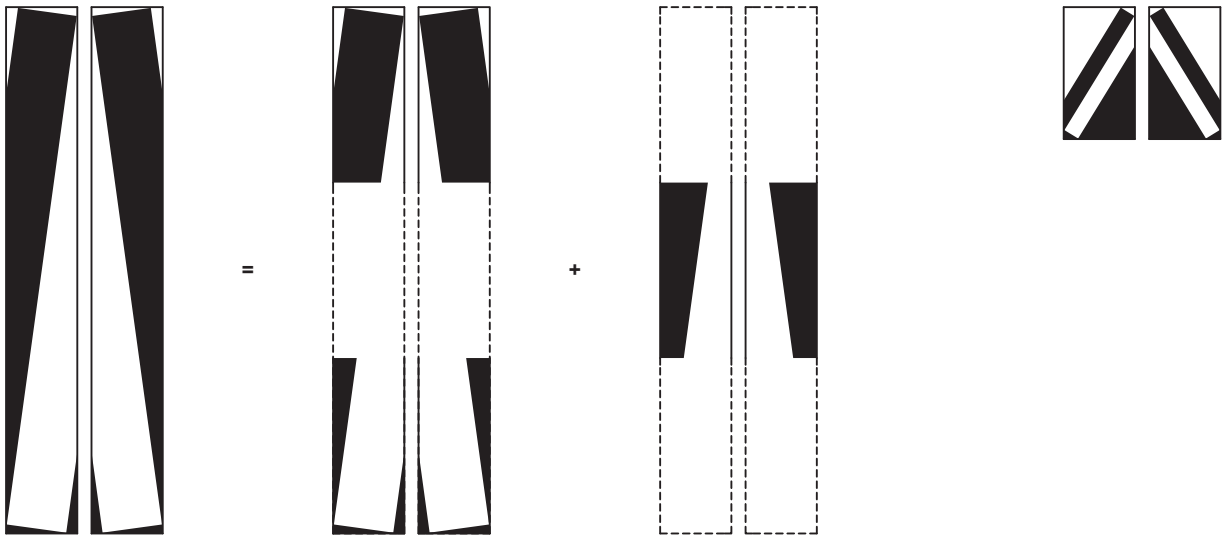


Figure 212: Reconstruction and variation of Torsten Ridell's *Approximation of two forms* (1989, painting/diptych)
At the top, the black forms appear as 'figures', whereas at the bottom the white forms do so, because of the C3 criterion. In the middle there is an equilibrium with Minimal Difference MD of figurality between white and black planes. The variations shows a reduction of the middle zone which results in an overview that can better handle this ambiguity of the middle zone; the similarity of the forms with the boundary of the image in the original creates an impression of circulation that is absent in the variation.

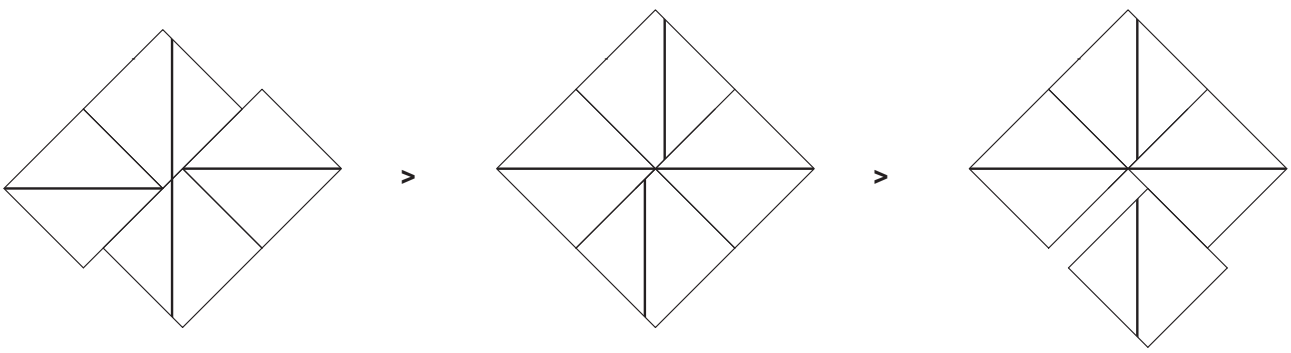


Figure 213: Two variations of Francois Morellet's *The debacle* (2013, quadriptych of four paintings)
Every trial reconstruction of an original cross (see second and third figure) fails, and leads to a debacle because it is merely pseudo-transmutatio. In the original (left figure), one can identify the Mixture M type of ambiguity because the two panels of horizontal lines form a group across the other two panels due to similarity of orientation (S4 versus C1).

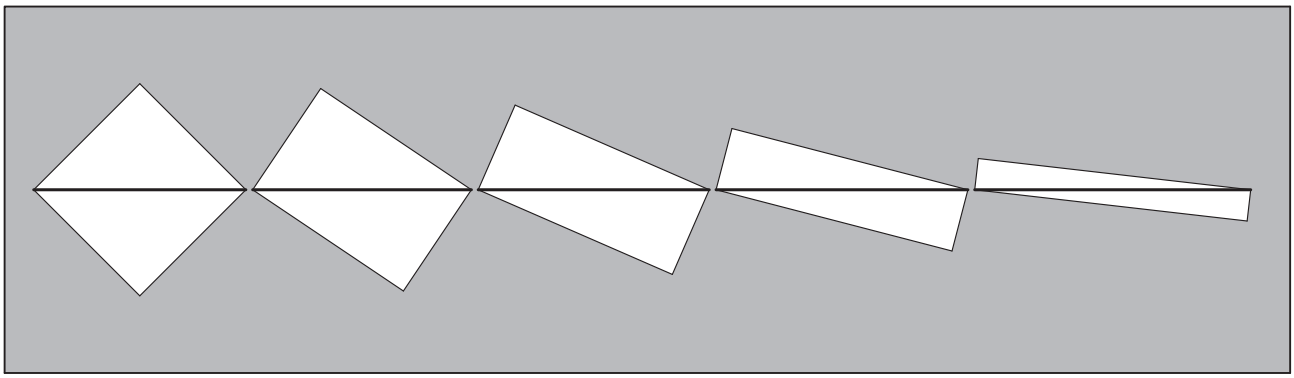


Figure 214: Structure of Francois Morellet's *Diagonal-Horizontal* (1973 - 1974, painting)
Five panels seem to share 'one' horizontal line: Mixture M + Hybrid H (C3.1/C3.2.../C3.5 versus C1 horizontal line); the horizontal line consists of five parts that are diagonals of the rectangles.

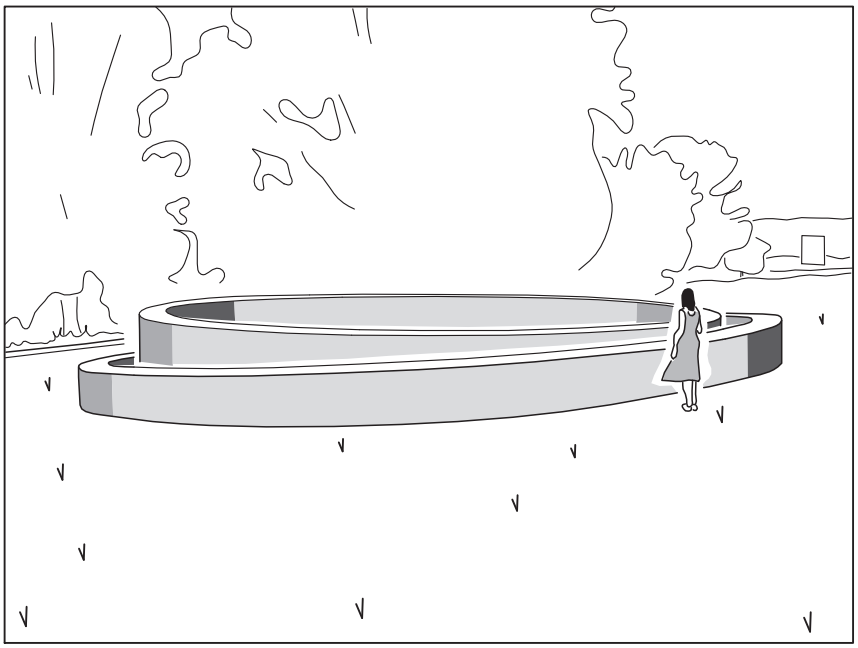


Figure 215: Structure of Donald Judd's *Untitled* (1977, outdoor sculpture in Münster/Germany made of two rings of concrete).
Mixture M (S1 + S2 + C3 of the two rings of concrete versus S4 descent of the ground and of the external ring).

2.1.16 Double-structures

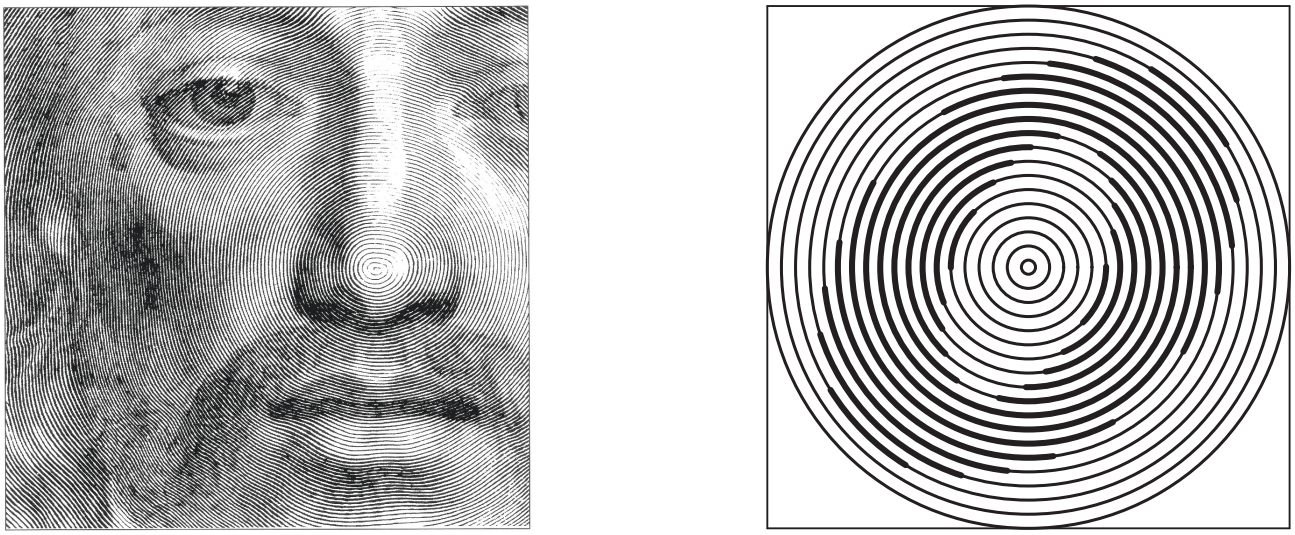


Figure 216: Detail of Claude Mellan's *Sudarium* (1649, detail of a print) and similar paraphrase of Op Art
Mixture of figure and ground due to the changing thickness of the line (Geometric Minimal Difference MD line to plane): Hybrid H (C1 of line of 'ground' versus S3 thick parts of the line as 'figure'/face/oval).

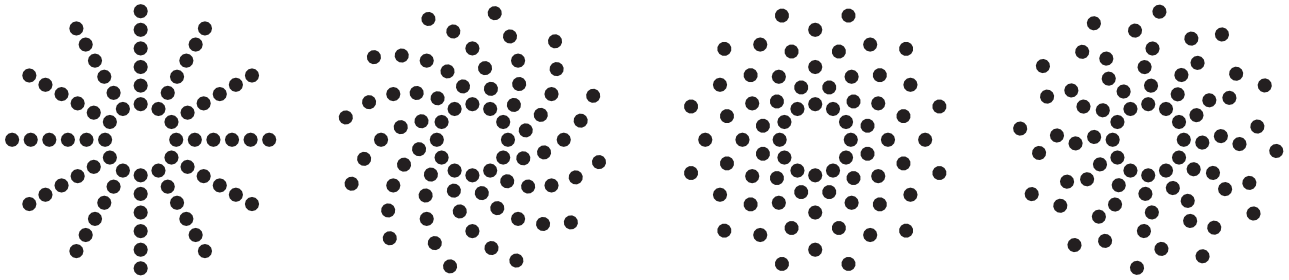


Figure 217: Paraphrase of Op Art: distortion of rings of points in three steps
In the second figure one point can be assigned to one line, in the third figure to two lines (> Hybrid H), in the fourth figure again only to one line (type of Geometric Minimal Difference MD points to line).

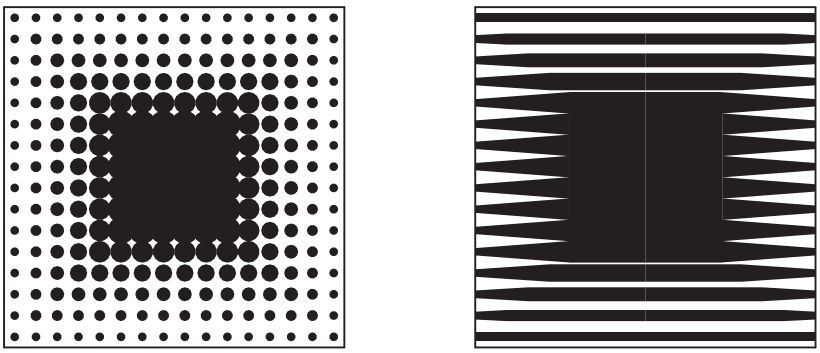


Figure 218: Paraphrase of Op Art: Contamination of figure and ground
Type 3 of Geometric Minimal Difference MD (points to plane) and type 7 (lines to plane)

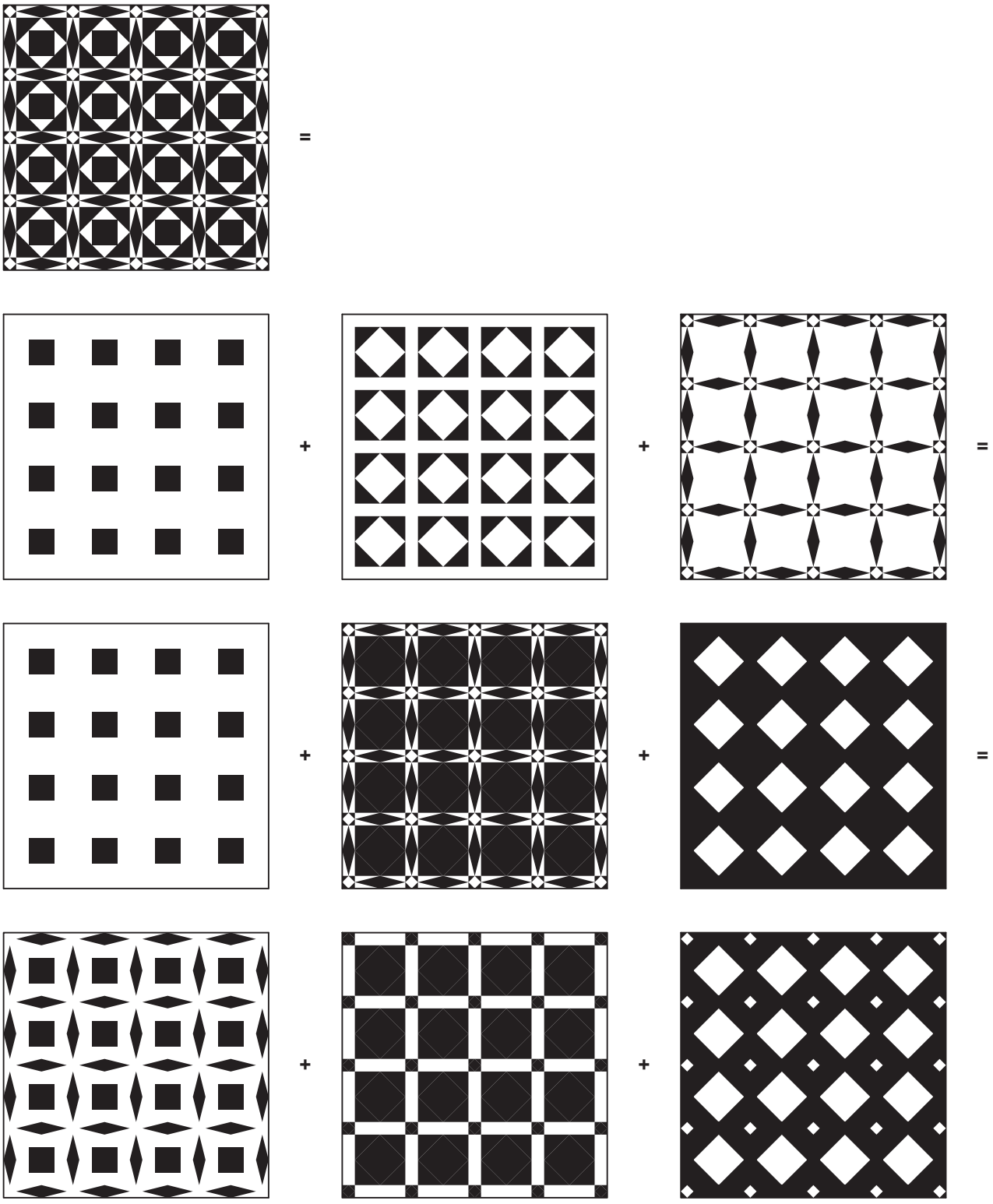


Figure 219: Reconstruction of possible groupifications of a late Roman structure of tiles in Sainte Colombe.
Mixture M of three groups of forms according to S1 - S4 (see second to fourth figure); but four black triangles seem to be part of a black square (see third figure) which lead to other interpretations (see sixth and seventh figure and ninth and tenth figure). If you interpret parallelograms as distorted squares (transmutatio) the groupification of the eight figure is possible according to the criteria S2. These interpretations compete with each other (> Hybrid H).

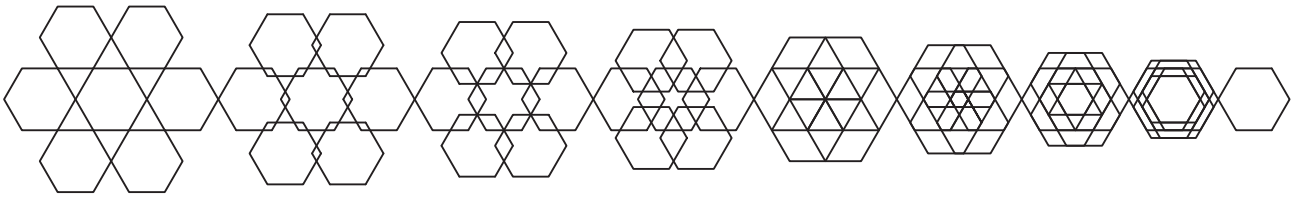


Figure 220: Variations on ornaments of Moorish architecture
Such structures of tiles are often based on hexagons which overlap in some cases in such a manner that they cannot be distinguished from each other: Hybrid H (C3.1 of a hexagon versus C3.2 figure of overlapping such as a ‘star’ versus C3.3 grid) and Hybrid H (C1 versus C3).

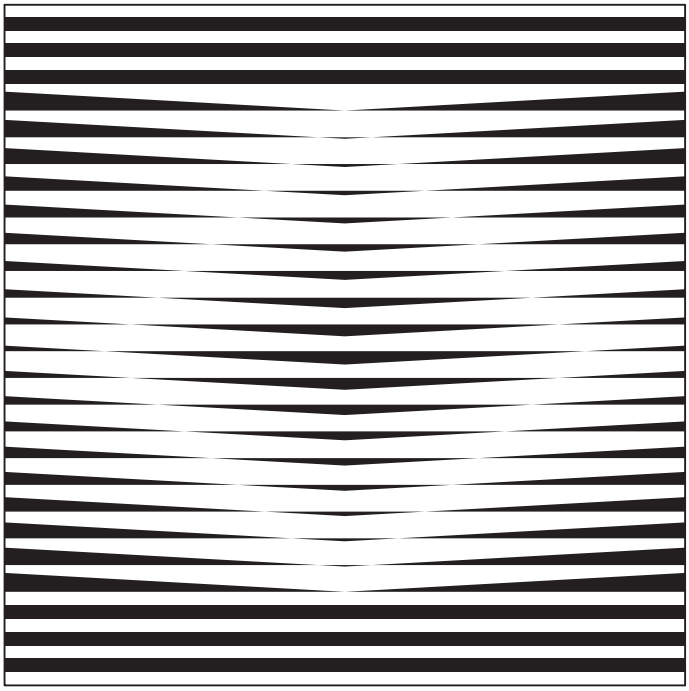


Figure 221: Paraphrase of Op Art: Pseudo-contour of a diagonal square
Hybrid H in the points of intersection of the contours of stripes and Geometric Minimal Difference MD planes to diagonal line

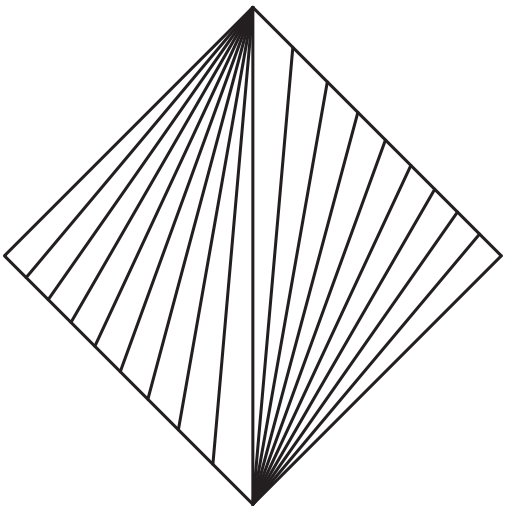


Figure 222: Paraphrase of Op Art: semantic ambiguity of a vertical line
The vertical line in the middle can be assigned to two perspective spaces, so it could be seen as two lines in front of each other or as one curved line or as a side-face of a plane orthogonal to the viewer, going into the deep. One can therefore identify semantic ambiguity concerning the spatial character of this line.

2.2 Syntactic-semantic ambiguity

Semantics can be described according to the terms of the structural net for a known "object" of the world offered by the meta-language MultiNet (Helbig 2008); these specific characteristics of a known object of the world can be changed in an aesthetically ambiguous operation of deviance. For example the ordinary spatial or temporal embedding of a known object can be substituted. Here is a shortened version of this structural net of terms:

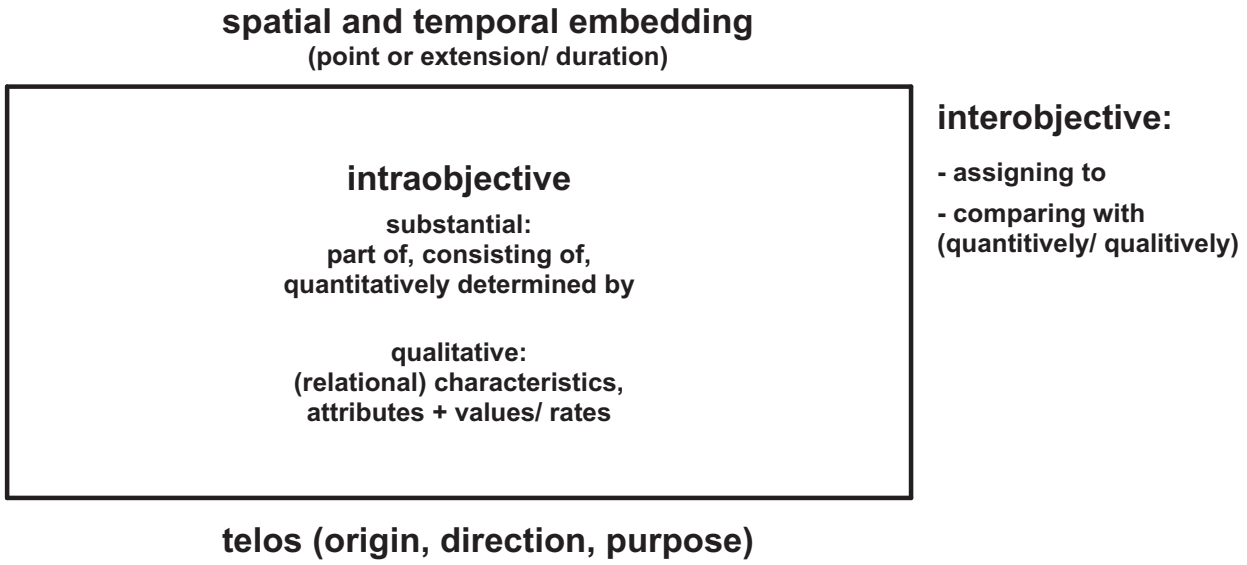


Figure 223: General description of a semantic object according to the meta-language MultiNet (Helbig 2008) with linear and non-linear aspects as potential objects for operations towards semantic ambiguity (see plate 320 for a pragmatic situation)

2.2.1 Syntactic-semantic in contrast to pure semantic ambiguity explained by representations of the human body

Whenever an icon (i.e. a sign with similarity to the concept as its meaning) already shows ambiguity at the syntactic level (as contamination of percepts or as deviance of a percept from a scheme), one can refer to syntactic and semantic ambiguity, because this syntactic ambiguity can also be interpreted as semantic ambiguity. To give an example: two contours of human bodies are drawn one into the other; there are points of intersection where one can identify syntactic ambiguity of the Hybrid H type (C1.1 first line versus C1.2 second line). The meaning of this icon of two 'transparent' bodies has semantic ambiguity; an association may, for example, be 'transcendental unification of bodies'. The two contaminated bodies as two meanings may be in a relationship of semantic complementarity/discrepancy/antonymity based on non-verbal signs of the bodies, for example.

Another way of producing syntactic-semantic ambiguity is a syntactic similarity of two objects/persons in the icon which are in a relationship of semantic complementarity/discrepancy/antonymity. An example is the photo by **Henri Cartier-Bresson** of *Children playing in front of a fireproof wall in Madrid* (1933, black and white photo), in which the heads of the persons are similar to the little windows of the fireproof wall ('small black points in a white plane'). The syntactical unification of heads and windows to a group of similar forms and colours results in reciprocal semantic enrichment of the two concepts 'head' and 'window'; the whole may then appear as an allegory on human existence, for example: 'little outlook out of a hidden and protected inner space.

Examples of pure semantic ambiguity include:

A) deviance of an icon from the 'human face' scheme, due to three eyes (adjectio) /one eye (detractio) /eyes at the wrong place (transmutatio)/eyes substituted with flowers (substitutio),

B) contamination of human head and animal head.

In this chapter, two special cases of semantic ambiguity of the representation of the human body are shown:

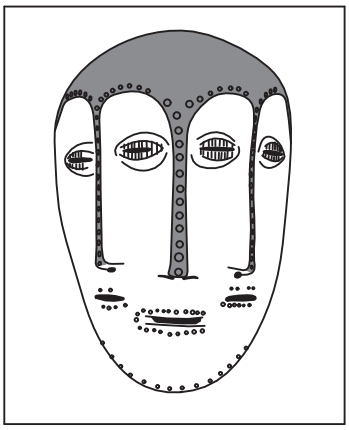
a) metacognitive transformation:

geometric idealisation which makes seeing visible because it exaggerates the principle of reduction of data in everyday cognition by detractio of details and transmutatio of contour (> metacognition);

b) psychological transformation:

semantic transmutatio of the body-contour, for example, could be something other than just a simplification. It could be so anti-natural that it may be interpreted as a representation of feelings and thoughts concerning the self-cognition of the body. The image of the Sensorial Homunculus (see below) is such a psychological transformation of the human body which can be interpreted as a double-representation of the exterior and of the interior 'body' even without knowing the meaning: looking at this double-icon, one may feel the similarity of higher and lower density of sensibility in parts of one's body. The exterior and the interior image of the phenomenon 'human body' are in a relationship of semantic complementarity.

Figure 224:
a) Structure of a mask of the Lega people (Congo, wooden mask)
Semantic ambiguity due to four eyes and one contour of forehead that can be attributed to three faces (semantic adjectio).
But there is **syntactic ambiguity** as well because four ovals (eyes) form a cognitive group across the arches of the contour of forehead: Mixture M (S2 four ovals versus C1 contour)
Therefore it is an example of syntactic-semantic ambiguity.



b) Structure of a female figure from Tlatilco/central Mexico (1200 - 900 BCE, painted ceramics)
Semantic ambiguity due to three eyes that can be attributed to two faces; syntactic ambiguity is less visible than in the example above:
Mixture M (S2/4.1 eyes versus S2/4.2 noses).

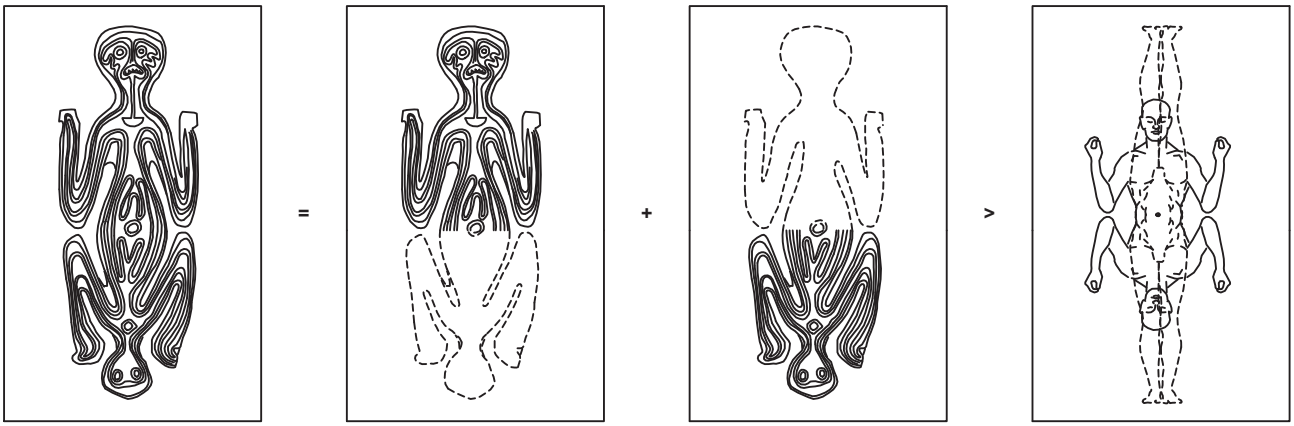


Figure 225: Reconstruction of a board of the Gope (people of Gope, Papua-New Guinea, before 1925, carved an painted wooden board)
Two fragments of human bodies are contaminated (semantic detractio + adjectio/substitutio, see fourth figure); both share two forms which may represent a stomach and a navel.
This work may be based on a head hunting cult.

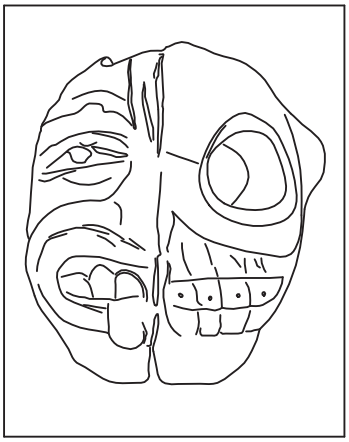


Figure 226: Reconstruction of a head/skull mask, Tlatilco (central Mexico, 1100-600 BCE, ceramics)
The two halves are in the **syntactic** relationship of disturbed symmetry and in the **semantic** relationship of antonymity (dead versus alive).
The motive of face with such two halves appears also in the 18th century in Europe as a sign to remember mortality (memento mori).

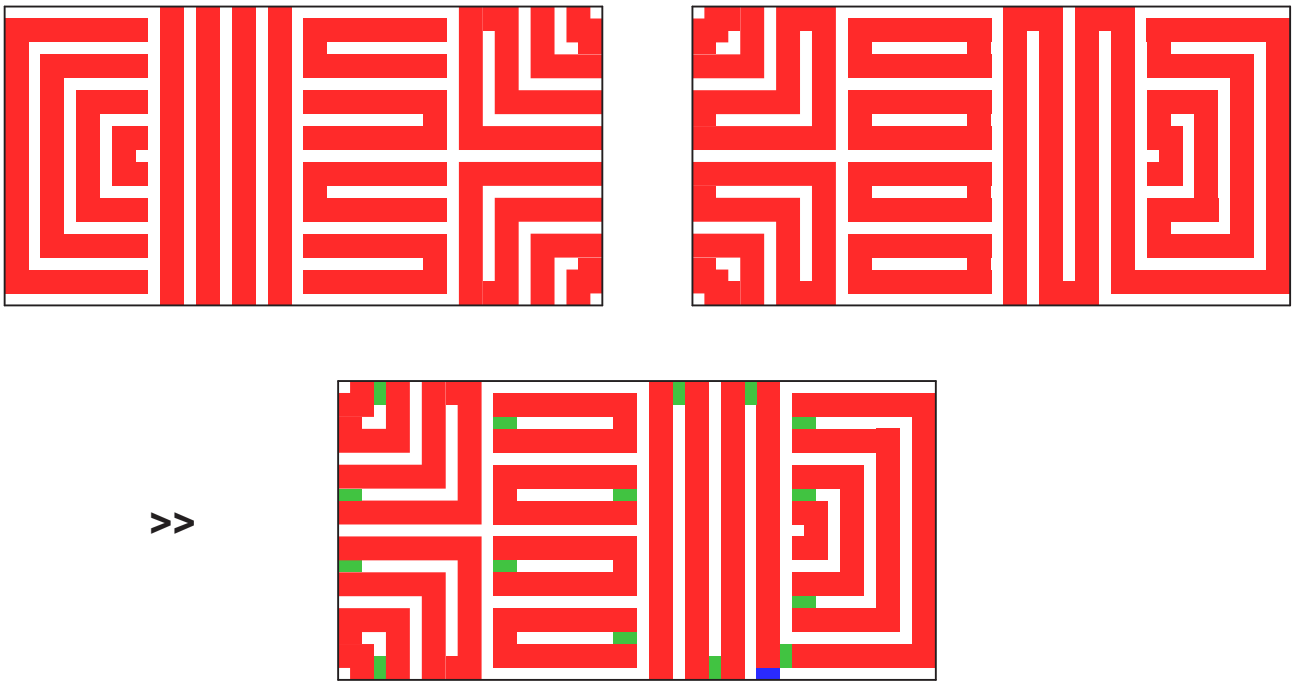


Figure 227: Reconstruction of Vera Molnar's *Identical but different B* (2010, painting, diptych).
Disturbed symmetry of the two parts of this diptych is (similar to the mask from Tlatilco above) the principle of this work. This disturbance can be interpreted as **syntactic adjectio or detractio** (see green planes in the figure below).

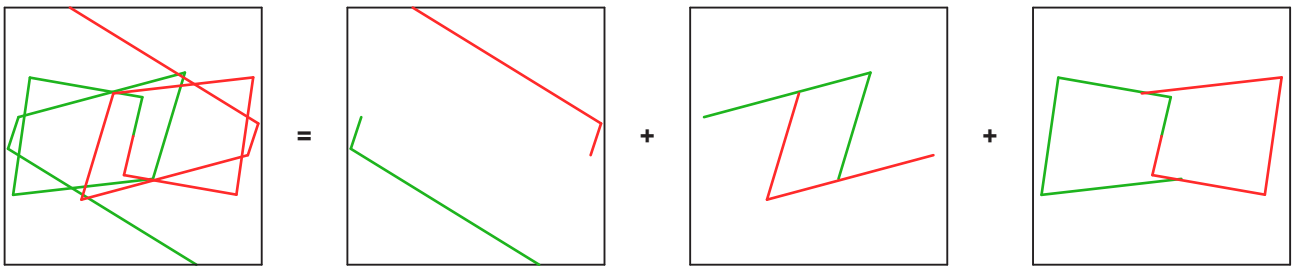


Figure 228: Reconstruction of Vera Molnar's *Walking - Return E* (2013, painting, one of serial of four paintings).
One could refer here to a disturbed point-symmetry achieved by **syntactic substitutio** of colour of one half. There are three cognitive groups: the whole of one line, the two parts (green and red line) and pairs of two parallel lines (see second - fourth figure).

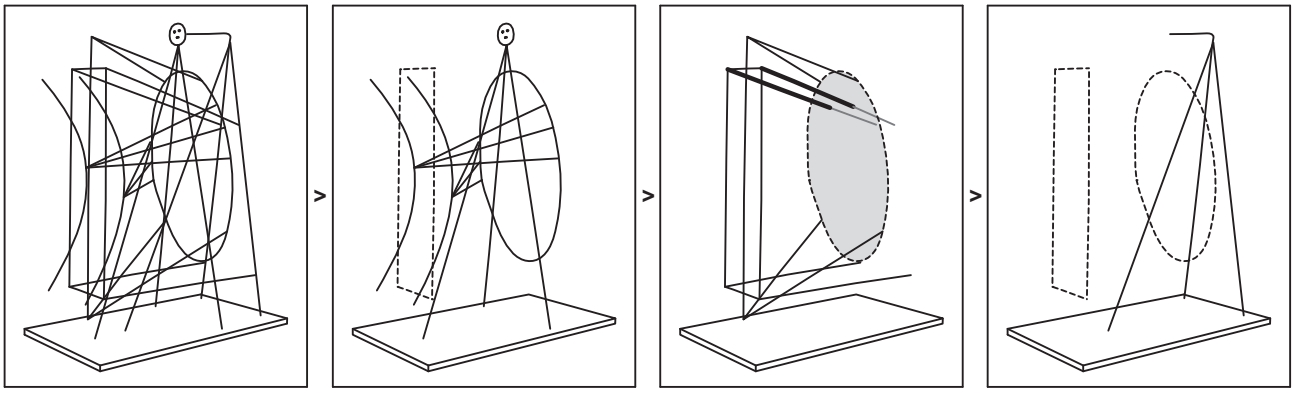


Figure 229: Reconstruction of Pablo Picasso's *Monument for Appollinaire* (1928 - 1962, metal sculpture)
- Syntactic ambiguity: A lot of points of intersection of lines (> Hybrid H) and Mixture M in two imaginary points in two lines entering an oval imaginary plane (see greyish plane in the third figure).
- Semantic ambiguity as contamination of three concepts that are reduced to transparent structures (semantic detractio as metacognitive transformation): a human figure (second figure), a kind of object (as a symbol for an ambiguous 'interworld' between space and body comparable to the philosophy of Maurice Merleau-Ponty?) held by the figure and penetrating the figure (third figure) and a kind of stabilizing structure (fourth figure).

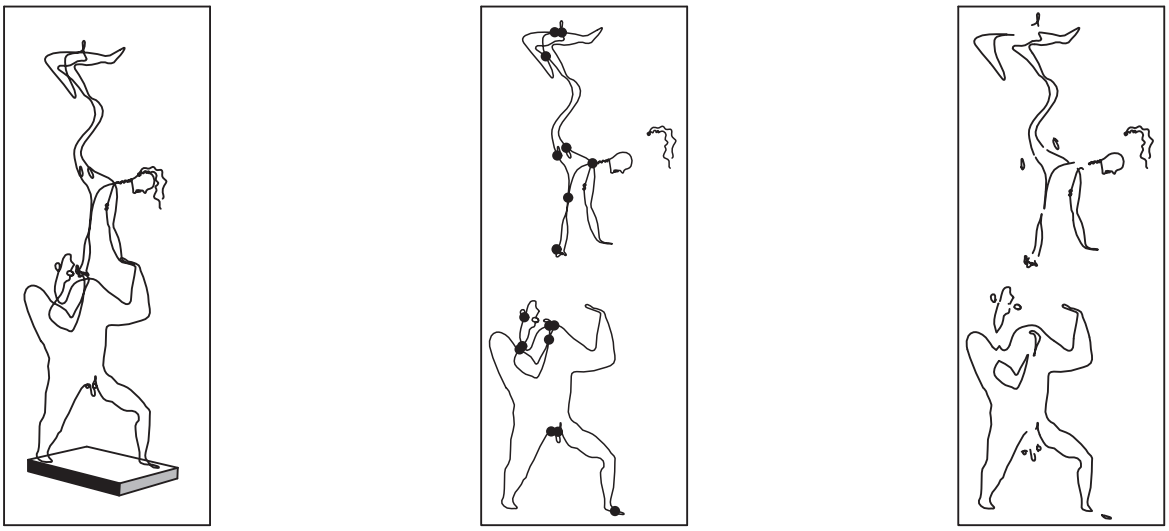


Figure 230: Reconstruction of Alexander Calder's *Acrobats* (1927, wire sculpture)
- Syntactic ambiguity: points of intersection of lines (> Hybrid H, see second figure), type 9 of Geometric Minimal Difference lines to volume, the planes between the lines change their form in 'steps' of Minimal Difference MD as one walks around the sculpture, and they offer a view of the changing background (> Hybrid C3 contour versus C4 background); Brancusi integrated the environment into the work of art as well: by polishing the surfaces of a sculpture so that they become mirrors which reflect the environment (see example below).
- Semantic ambiguity: deviance as radical abstraction and deformation (semantic detractio + transmutatio of contours of human bodies).

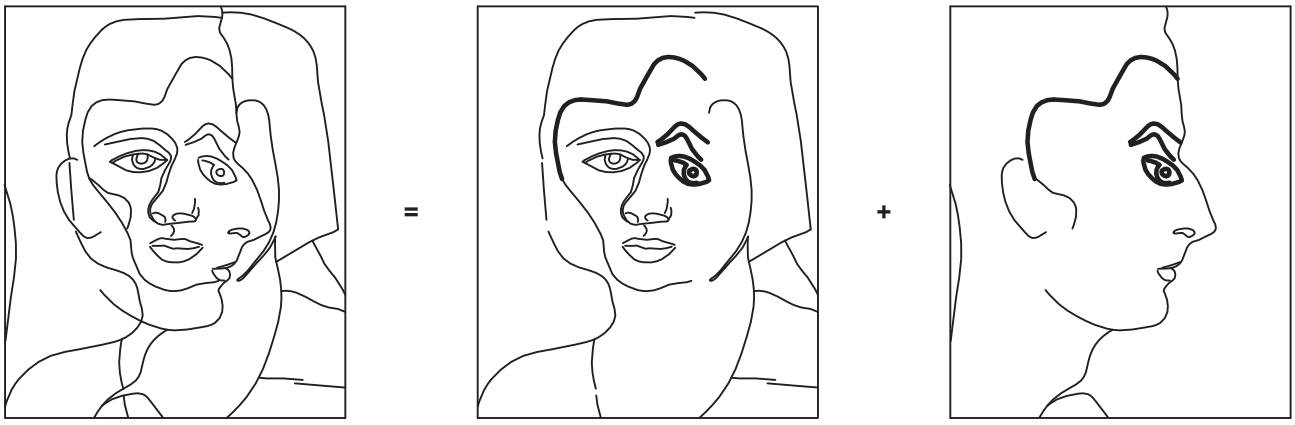


Figure 231: Reconstruction of Man Ray's *Dual Portrait* (1913, painting).
- Syntactic ambiguity: competition between planes which are defined by crossing lines: Hybrid H (C1/3.1 versus C1/3.2); **- Semantic ambiguity:** contamination of a male (?) face in profile and a female (?) and fragmented face from the front; they share one eye, an eyebrow and the borderline of hair (see thick lines in the second and third figure).

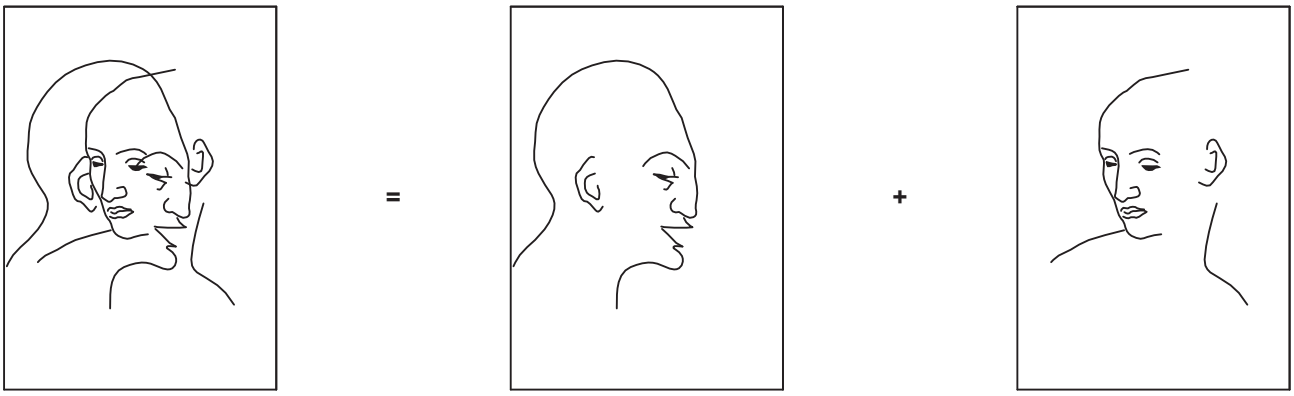


Figure 232: Reconstruction of Francis Picabia's *Transparence* (1930, drawing).
- Syntactic ambiguity: competition between planes defined by crossing lines (Hybrid H C1/3.1 versus C1/3.2);
- Semantic ambiguity: extreme reduction of faces to lines (semantic detractio) and contamination of a male (?) and female (?) face which are in a relationship of antonymity because of directions of views

Figure 233: Reconstruction of Alexander Rodschenko's *The painter Alexander Chevchenko* (1924, black and white photo with double-exposure)
- Syntactic ambiguity: numerous Minimal Differences MD of greyish colours from white to black + Hybrid H of overlapping planes (C3.1 versus C3.2)
- Semantic ambiguity: only where a dark and a light part mix can the contours of the two reproductions be seen. In Marey's chronophotography, the sub-images of a photographed movement are complementary, whereas here the two sub-images are in semantic antonymity because of non-verbal language: one hand grasps the other one.

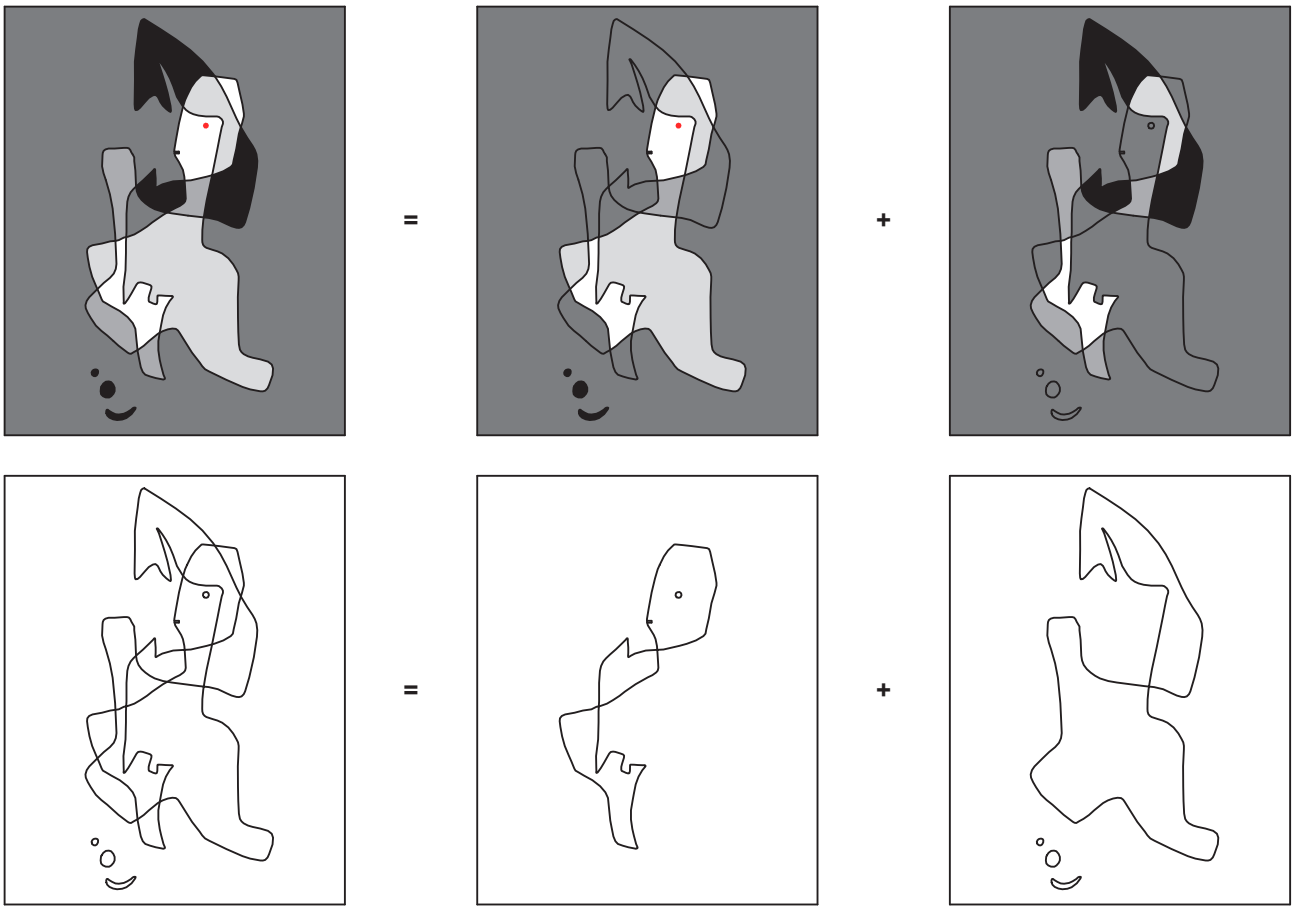


Figure 234: Reconstruction of Paul Klee's *Gift* (1932, water-colour)
- Syntactic ambiguity: points of intersection of lines (Hybrid H C1.1 versus C1.2) and overlapping planes (hybrid H C3.1 versus C3.2); planes can be unified to cognitive groups according to S1/similarity of colour (see second and third figure) or lines according to C1 of two endless lines (see fourth - sixth figure) which means a Hybrid H (S1 + C3 versus C1); Minimal Differences MD of colour appear as if they were overlapping translucent planes.
- Semantic ambiguity: Fragmented and distorted figures (semantic detractio and transmutatio) appear as if they were transparent, in superposition, contaminated. The image could be interpreted as psychological self-perception in the moment of receiving a gift.

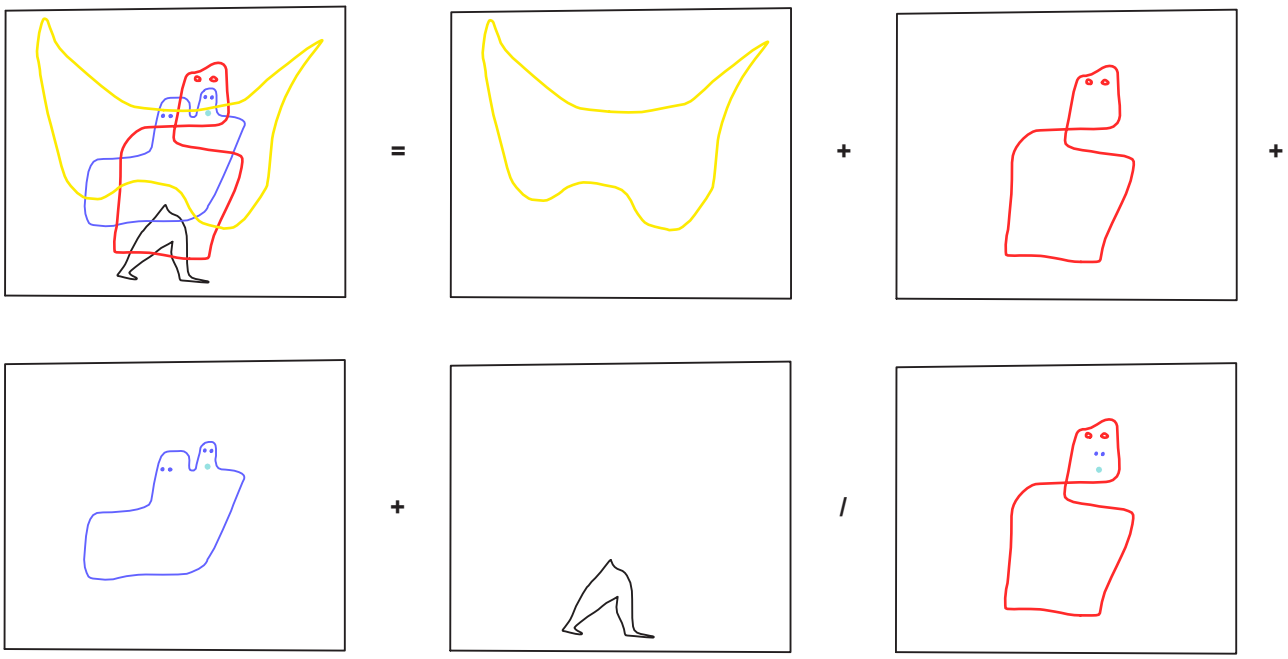


Figure 235: Reconstruction of Paul Klee's *In Engelshut /In Angel's Care/Hat* (1931, the German word 'Hut' is ambiguous and means in English 'care' and 'hat' as well, drawing in four colours)
- Syntactic ambiguity: Hybrid H in points of intersection of lines (C1.1 versus C1.2) and 'overlapping' planes (C3.1 versus C3.2).
- Semantic ambiguity: Fragmented and transparent parts of body-contours overlap each other (semantic detractio) and claim for other fragments: Two blue circles can be interpreted as nostrils of the red figure or as eyes of the blue figure, one blue circle as the mouth of one or the other figure (see sixth figure); the legs could be part of one or the other body. The blue figure has two heads, is therefore ambiguous in itself.
Two functions (contemplation and meaning) are contaminated in this icon because the function of representation is reduced to put emphasis on syntactics/perception of syntactic ambiguity (pragmatic complementarity).

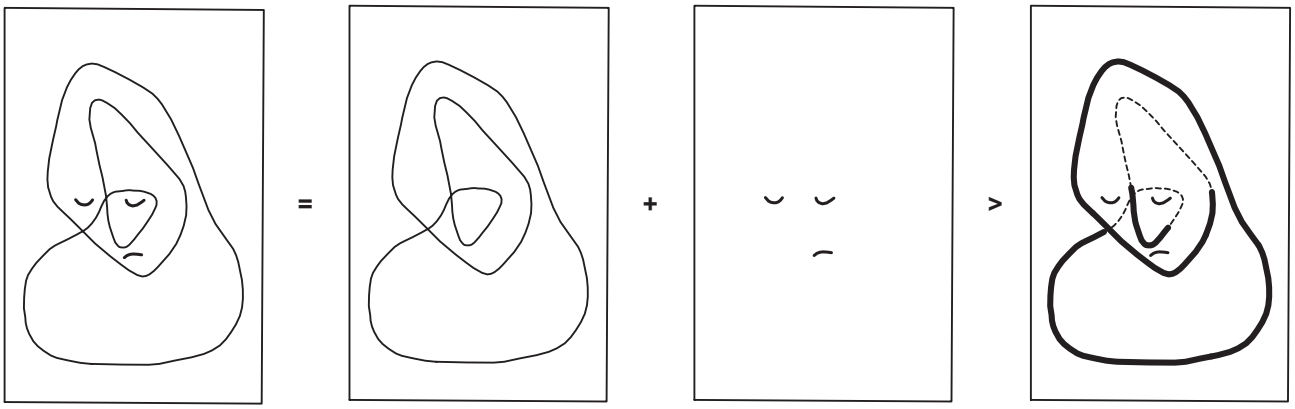


Figure 236: Reconstruction and disambiguation of Paul Klee's *Mourning* (1934, detail, painting).
- Syntactic ambiguity: one line with points of intersection (Hybrid H C1.1 versus C1.2).
- Semantic ambiguity: if the curved lines for the eyes and the mouth are taken away (see third figure), the endless line no longer represents a contour in space (see second figure); parts of the endless line compete with spatial representation (see fourth figure), which can be referred to as contamination/antonymity of two-dimensional and three-dimensional representation, which can be reinterpreted as a mental image, a psychological transformation, for example as 'an implosion of your spatial cognition within a period of mourning'.

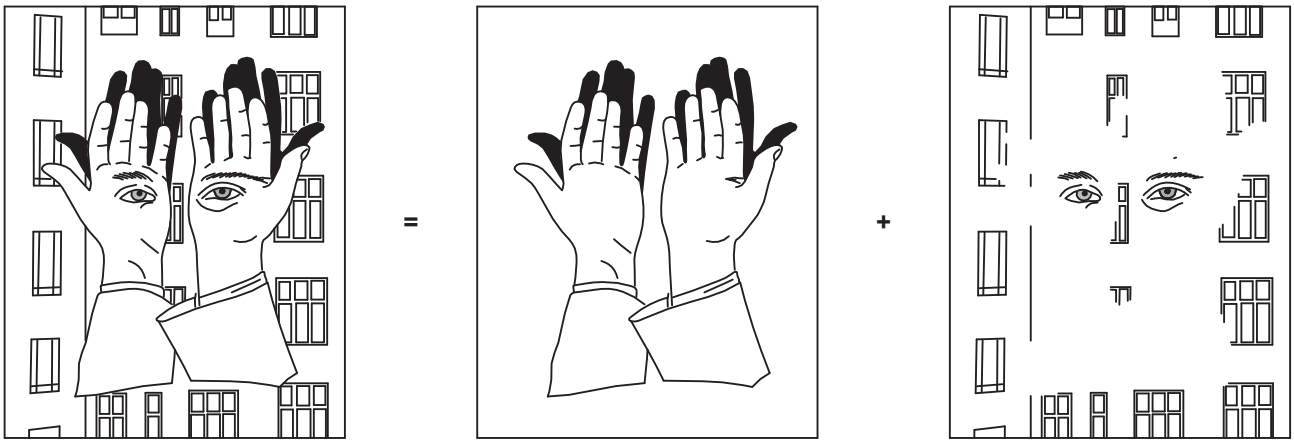


Figure 237: Reconstruction of Herbert Bayer's *Lonely Inhabitant of a Metropolis* (1932, collage of photo)
- Syntactic ambiguity: Mixture M of a group of two ovals (eyes) with the background: M(S2.1 versus S2.2).
- Semantic ambiguity: semantic transmutatio (eyes placed in the hands), semantic detractio of the rest of the body, parts of windows can be re-interpreted as parts of a face (nose and mouth, see third figure), semantic transmutatio of the source of light (coming from below).

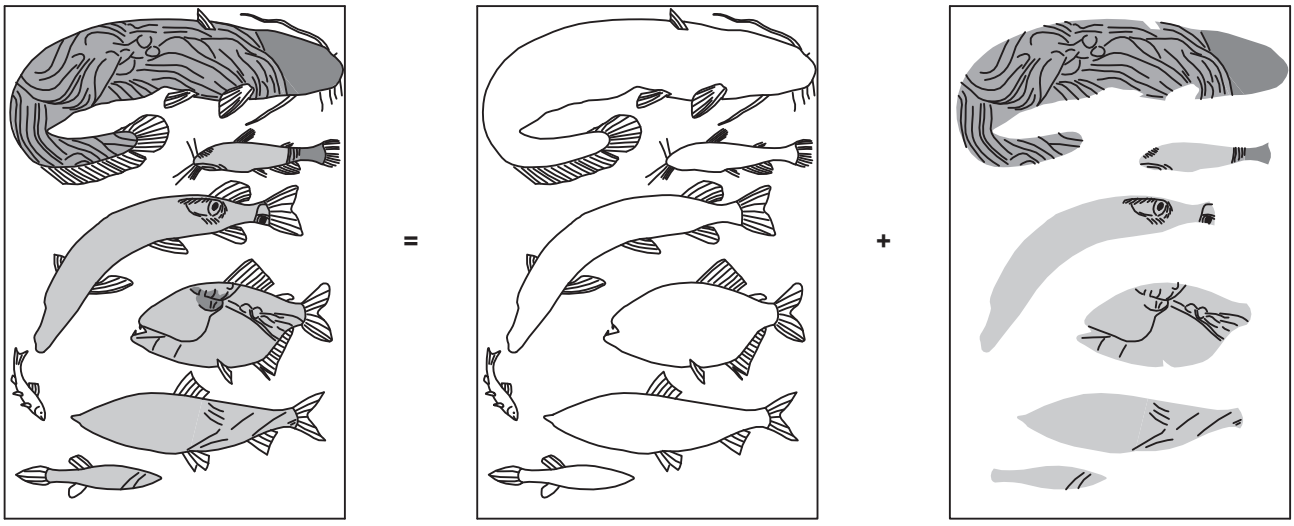


Figure 238: Reconstruction of Jirí Kolár's *Water Maiden* (out of the serial of 'Intercollages', 1963, collage).
A figure showing fishes (see second figure) has been perforated which opens the view onto a second image of a woman (see third figure).
- Syntactic ambiguity: Hybrid H (C3.1 fishes versus C3.2/C1/S1 of the woman.
- Semantic ambiguity: semantic detractio of fishes and a face are contaminated to semantic discrepancy (face versus fishes) which can be re-interpreted by association to semantic complementarity (unachievable subject of desire).

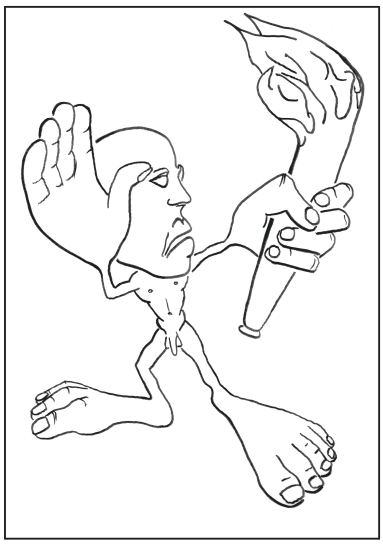


Figure 239: Axel Rohlfs: *Transformation of Arno Breker's Relief 'Torch-Bearer' (1940) in a Sensory Homunculus* (2008, a print from the book '*schemenata*')
- Semantic ambiguity: (also intertextually ambiguous) semantic transmutatio of the contour of a fascist sculpture (which originally showed a body of muscles as an **externalised** image of the human body) according to the Sensorial Homuculus scheme (which shows the density of sensibility of the parts of the human body as an **interior** image of the human body); the two combined images are in **antonymity** (exterior versus interior image of the human body).

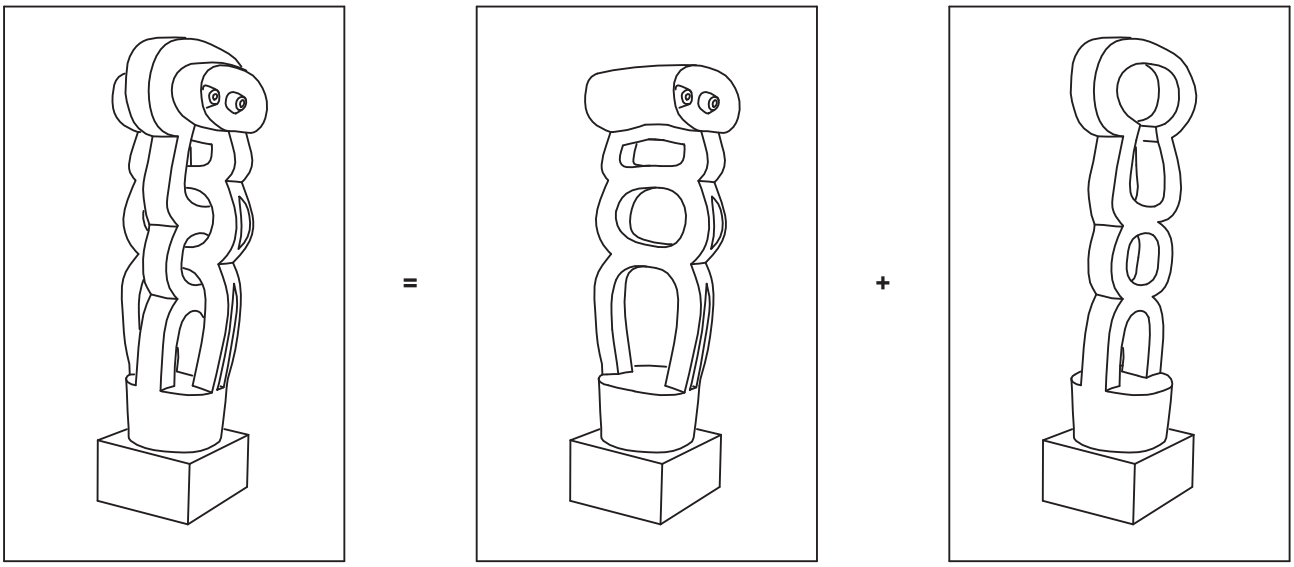


Figure 240: Reconstruction of Jacques Lipchitz's *Figure* (1926 - 30, metal sculpture)
- Syntactic ambiguity: two sequences of rings are combined; in the middle part one can identify the Mixture M type (C1/3.1 versus C1/3.2), at the top and the bottom the Hybrid H type, because one volume can be assigned to both sequences of rings.
- Semantic ambiguity: polysemic interpretation as one figure (with a representation of its interior?) or as two combined figures; both interpretations mean contamination.

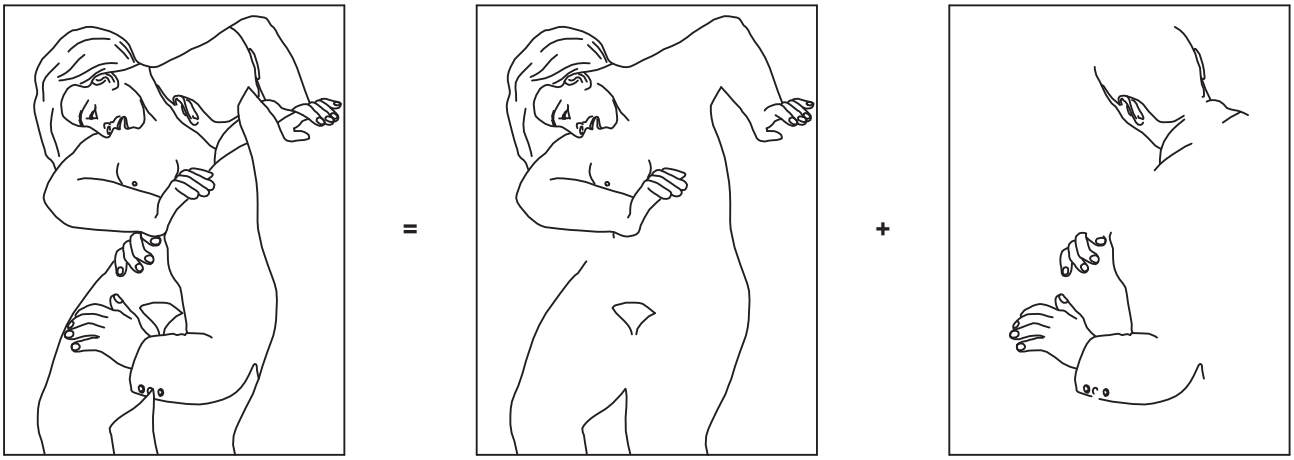


Figure 241: Reconstruction of René Magritte's *The gigantic days* (1928, painting).
- Syntactic ambiguity: syntactic detractio (based on symmetry and C1 of broken lines) Hybrid H (C3.1 contour of the woman versus C3.2 fragments (detractio) of contour of the man).
- Semantic ambiguity: semantic detractio of the man, semantic antonymity because of non-verbal communication (index of warding off the approximation of the man).

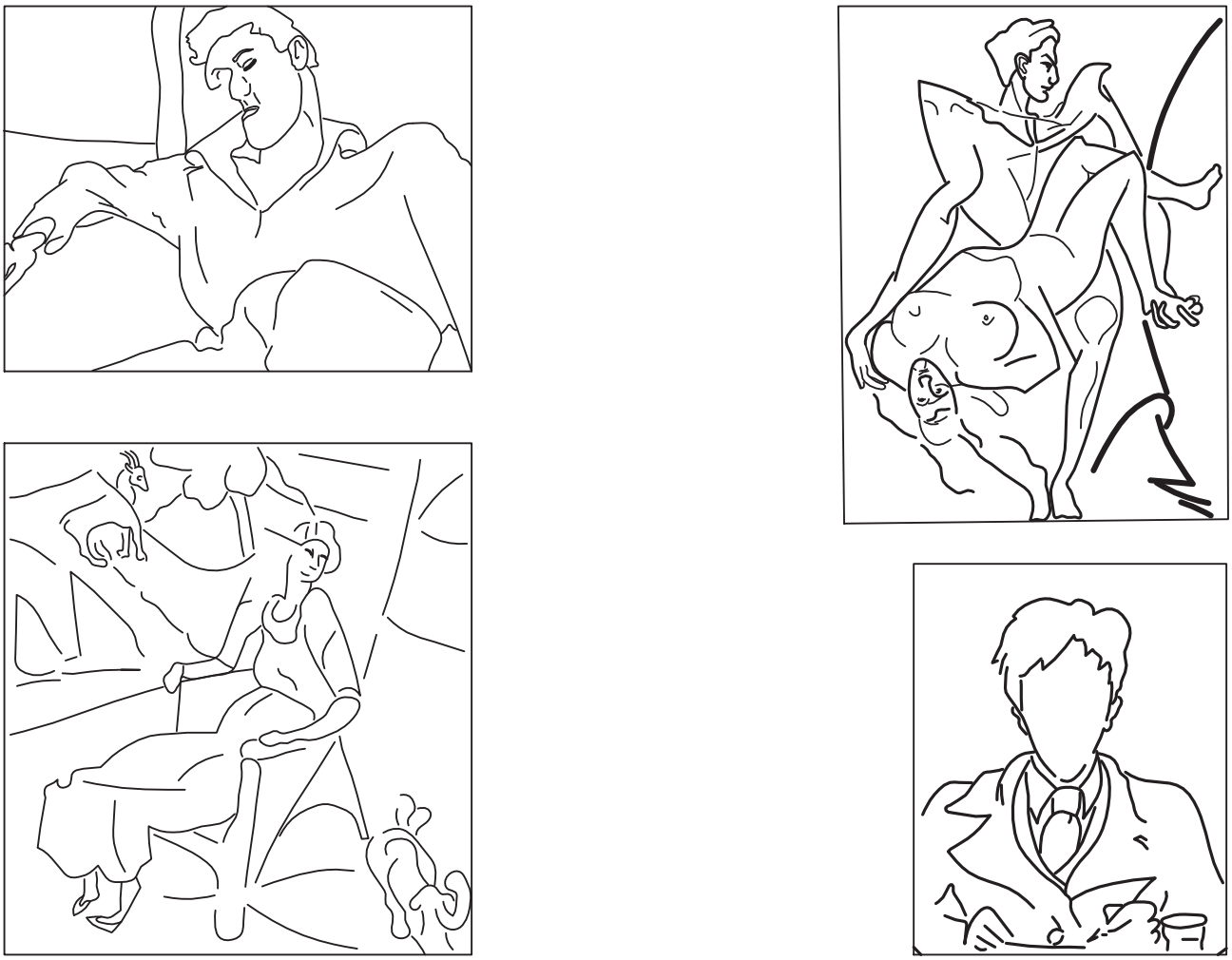


Figure 242: Structures of rhetorically changed images of human bodies ca. 1910:
a) Robert Berény's *Portrait of Leo Weiner* (1911, painting) > semantic detractio of one half of the face (as a psychological metaphor for 'sleep'?!); **b) Lajos Tihányi's *Nude Couple* (1911-12, painting) > semantic transmutatio** of the contour of body (including detractio, adjectio, substitutio of the shoulders as a psychological metaphor for 'defence' of man watching at the entrance of a cave?!); **c) Robert Berény's *Woman sitting in a garden* (ca. 1911, painting) > semantic adjectio** as lengthening of the thigh (as a psychological metaphor for the consciousness of a body sitting and feeling its weight?!); **d) Jean Cocteau's *Self-portrait without face* (ca. 1910, drawing) > semantic detractio** of the face (as a psychological metaphor for 'transcendence of the EGO'?!)

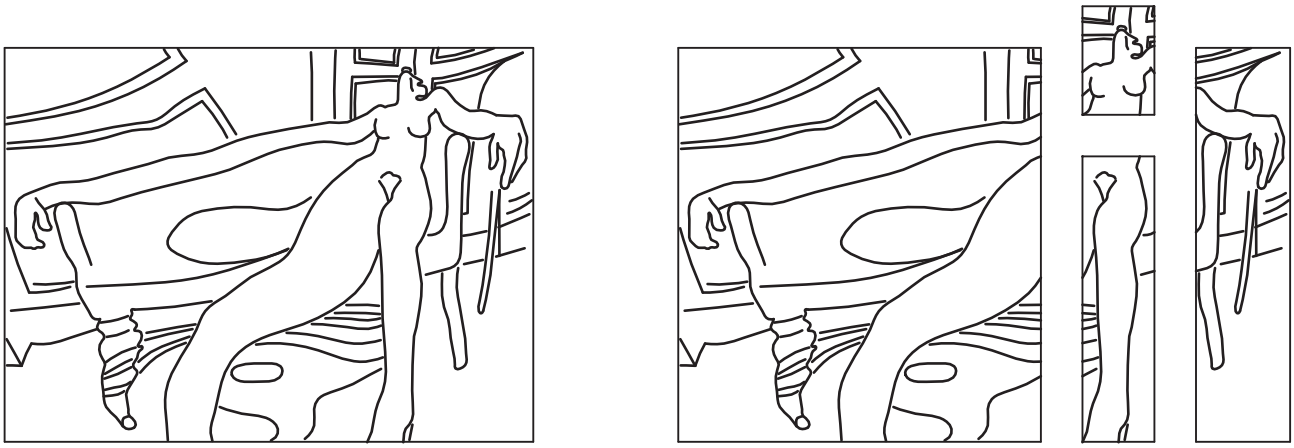


Figure 243: Reconstruction of parts of deformation of André Kertész's *Distortion No. 79* (1933, photography)
- Syntactic ambiguity: syntactic (adjectio/detractio/) transmutatio as a disturbance of the symmetry (of a human body by using a curved mirror)
- Semantic ambiguity: semantic (adjectio/detractio/) transmutatio of a nude; André Kertész was a friend of **Lajos Tihányi** (see his portrait of Tihányi) and may have been influenced by his similar deformations of bodies.

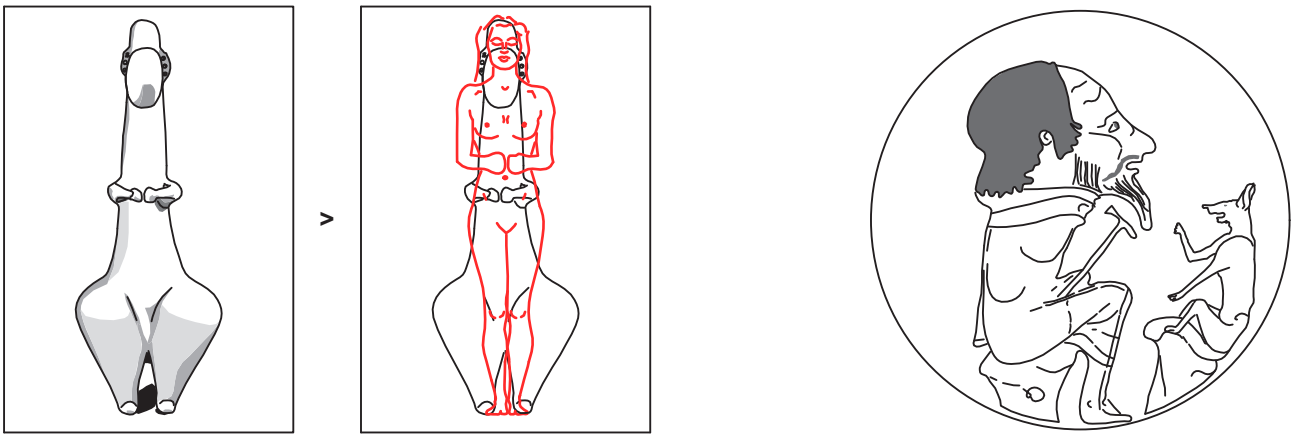


Figure 244: Two types of topologic deformation in contrast: reconstruction of a statue of the Amlash (Persia, beginning of the first millennium B.C., figure of clay) and detail of an attic vase: *The Fox is telling Aesop about Animals* (Greece, 5th century B.C.).
Semantic transmutatio of the contour of body is visualised by two overlapping layers of perception in the first work: image of memory and the actual image. This semantic transmutatio could be seen as psychological transformation of a semantic antonymity (gravity versus counter-aspiration upwards) or even as **morphing** of a female figure towards its counterpart: associated 'phallus' versus female figure (see work of Brancusi on this page). The attic vase shows another type of topologic deformation: **exaggeration** - probably as a sign for 'concentration' of Aesop listening to the fox. Morphing is closer to the 'substitutio' operation, exaggeration is closer to the 'transmutatio' operation on the contour.

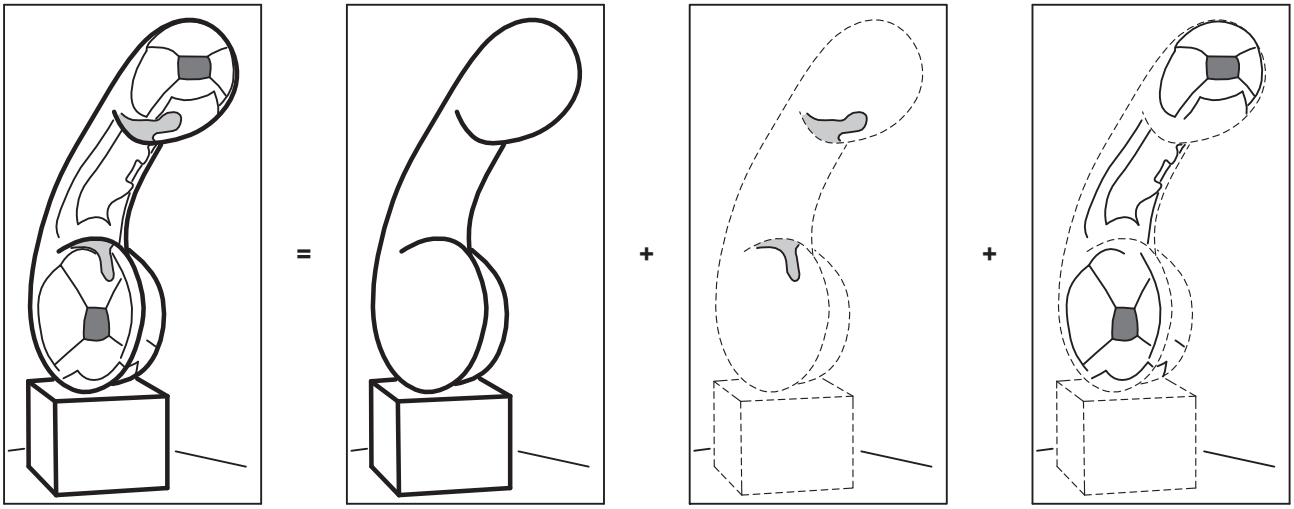


Figure 245: Reconstruction of Constantin Brancusi's *Princess X* (1916, mirroring metal sculpture)
- Syntactic ambiguity: in the entity of the volume, parts of the volume (see third figure) and the environment (see fourth figure) are reflected (Hybrid H C3.1 volume versus C3.2 parts of the volume versus C3.3 environment)
- Semantic ambiguity: semantic discrepancy/complementarity due to the polysemy of the image (that resembles a figure AND a phallus) versus title ('princess')

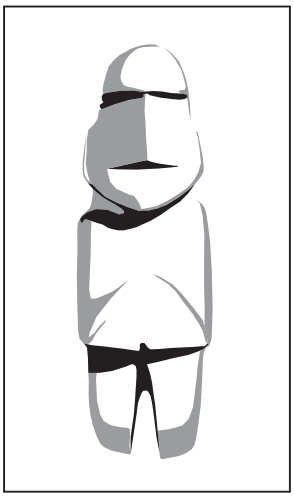
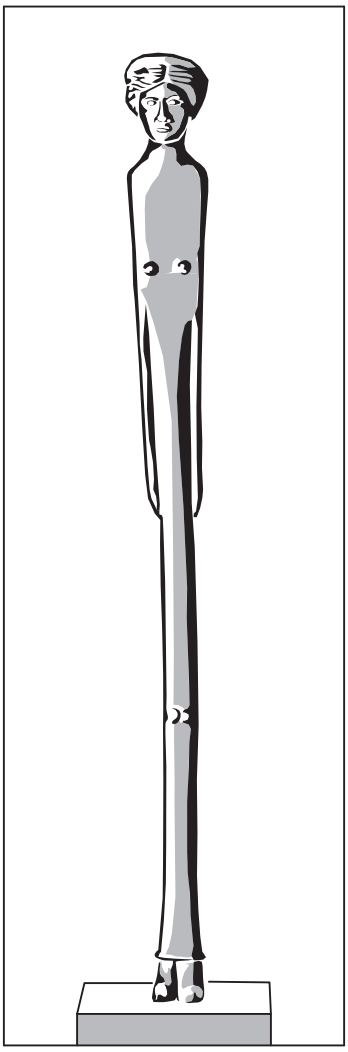


Figure 246: Structure of a sculpture of the Mezcal culture (South-America, 300-100 B.C., stone sculpture)
Semantic ambiguity: metacognitive transformation (semantic transmutatio as geometric idealisation + detractio as abstraction of details) and eventually psychological transformation because of enlargement of the head (semantic adjectio as representation of spheres of concentration, see the Sensorial Homunculus)

Figure 247: Structure of a statue probably made by the Etruscans (Nemi, ca. 350 BCE, metal sculpture)
- Syntactic ambiguity: contamination (?) of two distinguishable parts of one volume (head is more and lower parts are less detailed).
- Semantic ambiguity: detractio and transmutatio + adjectio (extreme abstraction and lengthening of the lower part of the body); a cultural connotation could be a semantic antonymity of a Greek naturalistic head versus an archaic-abstract lower part - for example as a kind of self-portrait of the Etruscans (?); another interpretation could be a psychological transformation as a mental image of concentration (on the head as the main part of interaction with the environment).



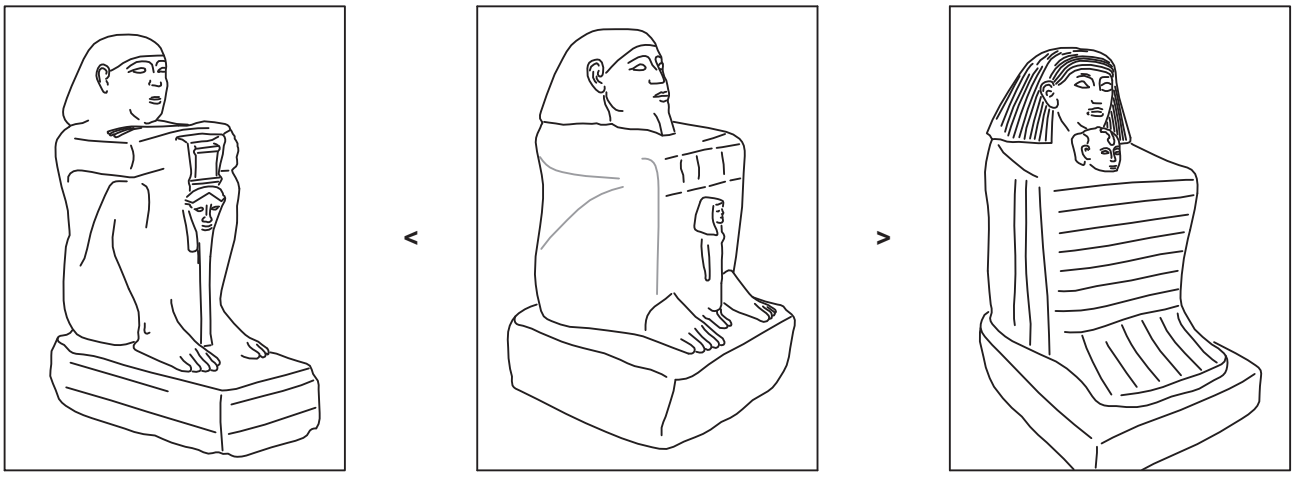


Figure 248: Comparison of three Egyptian statues of a sitting figure in the form of a cube with regard to an equilibrium between naturalistic representation versus meta-cognitive schematisation
a) *Block statue of Harsomtusemhat* (664 - 610 BCE, stone sculpture)
more naturalistic representation than meta-cognitive schematisation because no textiles hide the muscles
b) *Block statue of Senwosret-Senebefny* (1836 - 1759 BCE, stone sculpture)
equilibrium between naturalistic representation versus meta-cognitive schematisation because you cannot see muscles, you can only divine them under textiles
c) *Block statue of Senenmut* (ca. 1475 BCE, stone sculpture)
more meta-cognitive schematisation than naturalistic representation because of sharp edges and lines of inscribed signs
The three examples form a scale from naturalism to schematism; the second example is right in the middle between the two extremes, therefore I would argue that in this work ambiguity is intensely mediated.

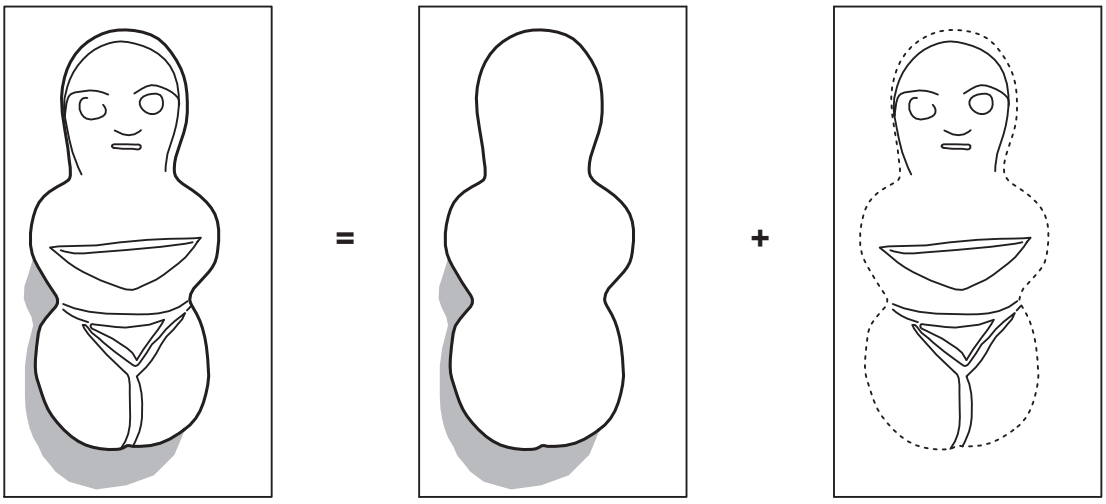
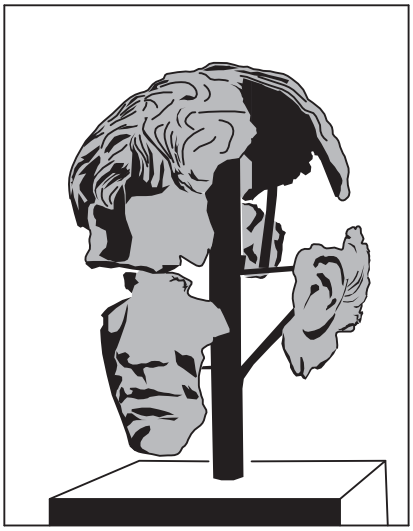


Figure 249: Reconstruction of female statue (Corsica, ca. 3500 BC, figure of stone with scratched lines)
This formation to an idealised ovaloid volume appears as an icon only because of the lines scratched in the stone (abstraction as **semantic detractio**); these lines define the form as a female figure. The lines have therefore the function of representation whereas the volume has more a **meta-cognitive function** of 'making seeing visible' by this **syntactic contamination** of three ovaloid forms (Hybrid H C3.1 versus C3.2 versus C3.3). The three Egyptian sculptures on the following page use the cube as an idealised volume for a human figure for meta-cognitive functions: it is a formation which becomes aware of itself.

Figure 250: Fragment/Structure of a fragment of a head of Augustus (Roman Empire, ca. 50 CE, metal sculpture)
Syntactic ambiguity: Mixture M (because the pieces of contour point to each other by C1, the curved metal pieces point to a common centre by C3 and they are cognitively unified by the criteria S1 - S3 across the void in between the pieces) + syntactic detractio (because of interruptions of symmetry)
Semantic ambiguity: fragment of a head (semantic detractio) transporting also the meaning of modality ('absence')



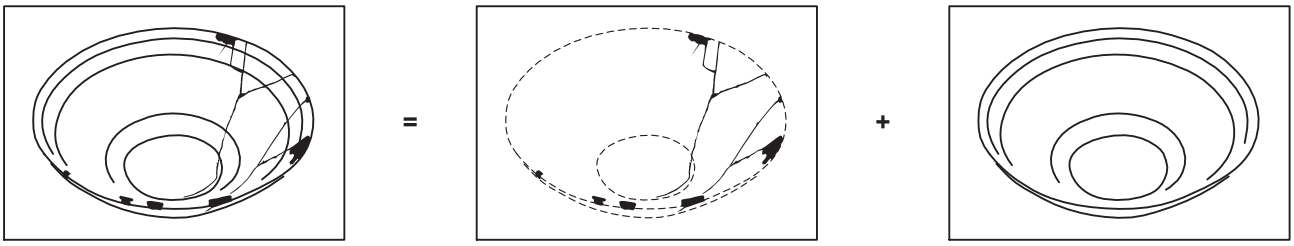


Figure 251: Fragment/Reconstruction of *Kintsugi Tea-Bowl* (Corea, Joseon Dynasty, 16th century)
Syntactic ambiguity: syntactic detractio + re-adjectio (see second figure: lost pieces of destroyed tea bowl are reconstructed with a substance in which pure gold was added), the points of intersection of these crack-lines (see second figure) with the ring lines (see third figure) are of the type Hybird (C1.1 versus C1.2)
Semantic ambiguity: the substance of reconstruction with pure gold as sign of high esteem has the character of a (Zen) cultural sign: the aesthetic theory of **Wabi Sabi** marks the imperfect as expression of inconstancy and transformation
Pragmatic ambiguity: pragmatic complementarity (?) of the old function as a bowl versus the added new function of a (Zen) cultural sign (pragmatic adjectio); it can be referred to as complementarity within the context of the **Zen Buddhist** tea ceremony to which meditation about transcendence is added by this sign of gold.

Figure 252: Reconstruction of Constantin Brancusi: *The Kiss* (1916, stone sculpture), Leonardo da Vinci: *Virgin and Child with St. Anne* (1510-1513, painting) and Dimitris Papaioannou: *Primal Matter* (2012, choreography) as examples for contamination of two bodies.
Brancusi's work shows two kinds of ambiguity: a) **Syntactic ambiguity:** bifurcation of one contour as Hybrid H (C1.1 versus C1.2, see fourth figure and fifth figure) and two parts of a whole as disturbed symmetry (syntactic substitutio, see sixth figure), Mixture M (C1 line versus C4 surface of the mouth) in the region of the interrupted middle line (because the line is mentally reconstructed across the interruption by C1) and Mixture M (S2/C1.1 two halves of bows representing eyes versus C1.2 continuous middle line), b) **Semantic ambiguity:** ambiguous meaning of (spiritual) unification of two persons, 'transported' by syntactic ambiguity (psychological transformation of two human bodies in 'ecstasy').
Da Vinci's work allows two interpretations of the body holding the child: the dominant contour of the border between bodies and landscape leads the eye to a false assignment of two legs.
Papaioannou's choreography hides the lower part of the leg of the younger naked person (syntactic-semantic detractio due to disturbed symmetry), the dressed and elder man completes that lack with a naked lower part of his left leg, which has a similar colour to the skin of the younger person but which can be assigned by its contour to the elder person (Hybrid H S1 skin versus C3 contour).

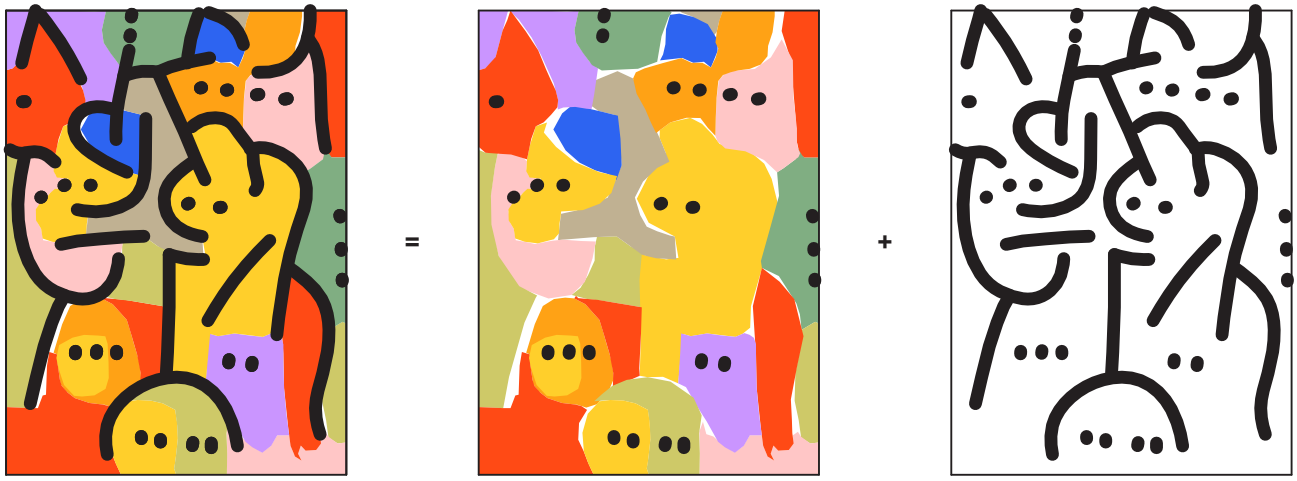


Figure 253: Reconstruction of Paul Klee's *Girls' Class outdoors* (1939, watercolour)
Syntactic ambiguity: colour-fields define sometimes other planes than the black contours (Hybrid H of C3 versus C4, see second and third figure in comparison), Mixture M because eight groups of planes in eight colours (S1.1 - S1.8) and one group of black points (S1.9, S2) and are unified across the other structures as a contamination of figures and ground, type 1 of Geometric Minimal Difference MD points to line
Semantic ambiguity: faces in abstraction (first semantic detractio) and in fragmentation (second semantic detractio); two vertical lines of eyes are based on semantic transmutatio because the natural position of the bodies is changed, addition of one eye (three eyes, semantic adjectio), contamination of fragments of bodies to a kind of labyrinth of black lines, complementary contamination of this 'labyrinth of bodies' with a 'carpet' of colour-fields as a representation of 'landscape' (body versus body... versus landscape) which may be interpreted as 'mental unification in juvenile ecstasy', for example (therefore as a kind of psychological transformation). This syntactic contamination of figures and ground as 'disbordering' transports a totally different meaning ('devotion') as the similar contamination of figures and ground in **Edvard Munch**'s *The Cry* (1895, print of black curved lines in the figures and in the ground, 'anxiety' for example).

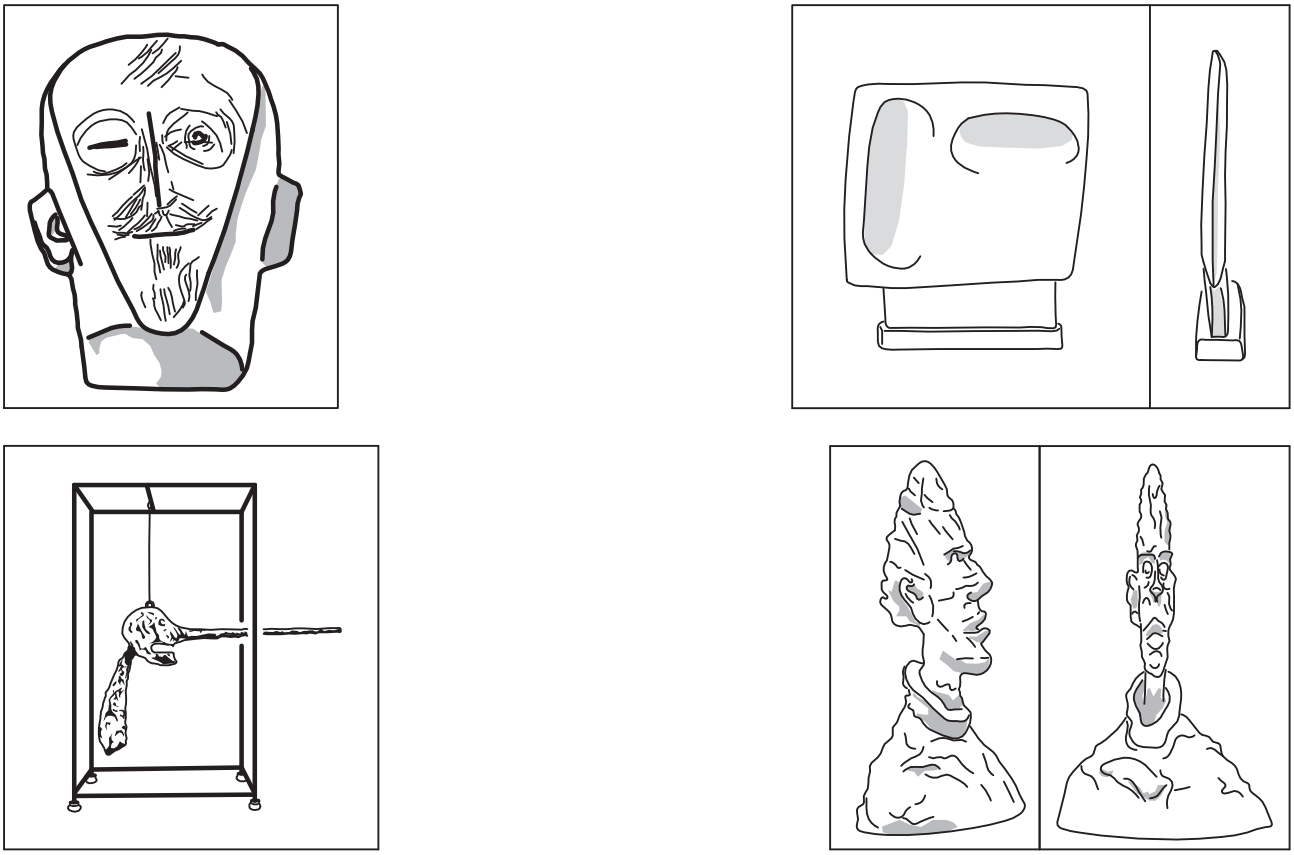


Figure 254: Sketches about four works by Alberto Giacometti as examples of types of Geometric Minimal Difference (see page 39) in representations of human bodies:
a) *Head of the Father* (1927- 1930, metal sculpture), b) *Gazing Head* (1928 - 1929, plaster sculpture), c) *The Nose* (ca. 1952, metal sculpture) and d) *Big thin Head* (1955, metal sculpture)
a) Geometric Minimal Difference type 15 - lines to planes to volume: here as a pragmatic contamination of

two techniques in art: drawing versus sculpture;
b) Geometric Minimal Difference type 11 - planes to volume: planes are minimally curved to positive (head) and negative (eye, nose) volumes;
c) Geometric Minimal Difference type 9 - lines to volume (cage) and Geometric Minimal Difference type 10 - volume to line (nose). **Syntactic ambiguity:** Mixture M of a line penetrating one plane of an imaginary volume (C1 line/'nose' versus C3 volume/'cage' as a product of lines to volume); **Semantic ambiguity:** lengthening of the nose and the neck (semantic adjectio/transmutatio), perhaps as a psychological transformation (crossing of conventions/reason...)
d) Geometric Minimal Difference type 12 (volume to plane): Only the head of a portrait is compressed to the impression of a 'plane'.

2.2.2 Syntactic-Semantic ambiguity of the borderline of the image

The borderline points to centre by the criterion C3, it leads the attention to the centre; it has a semantic aspect as well because it shows what the producer has found important. In the 1920s Russian photographers cut away parts of the face of a portrait; this cutting of a contour sets free the criterion C1: the line which is interrupted by the borderline of the image points to something which is outside the image; the symmetry of the face (S2) is disturbed (syntactic and semantic detractio). A soft (and changing) ending of a round image was used in films of the 1920s (Minimal Difference MD). The principle of Shaped Canvas (a borderline of the image which corresponds to the objects shown in the image) has already been used for example by László Péri (see example below). Cave paintings such as in Lascaux, surrounding panoramic pictures with 360 degrees of the 19th century and virtual reality are spatial images. The following examples show that, in art history, the convention of a symmetrical borderline of the image was an object of pictorial-rhetorical operations.

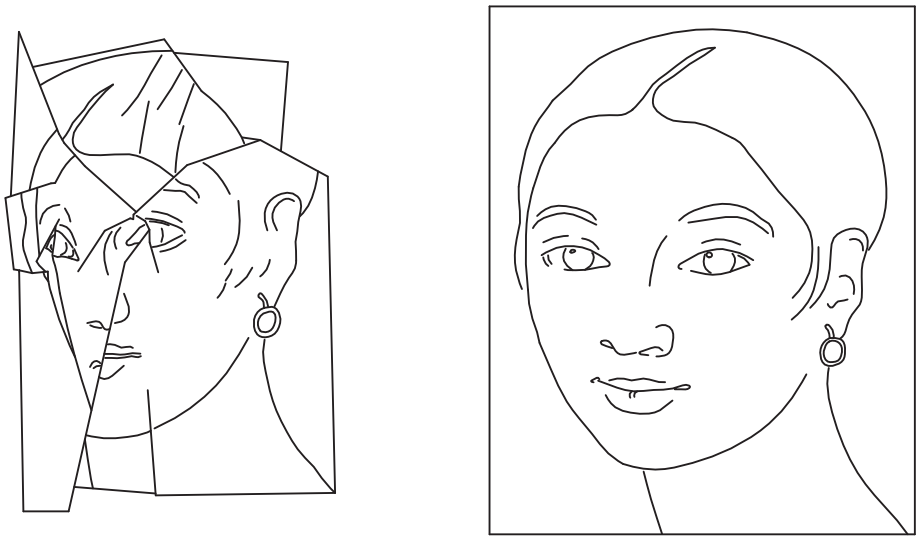


Figure 255: Reconstruction of Jiri Kolár's *Mademoiselle Rivière* (1981, crumpled reproduction of a portrait of Dominique Ingres)
The borderline of the image appears as a disturbance of symmetry (syntactic-semantic detractio + transmutatio) and is an index to the process of crumpling; the space of representation seems to be disturbed as well: Euclidian space and the orthogonal borderline of the image are connected to each other.

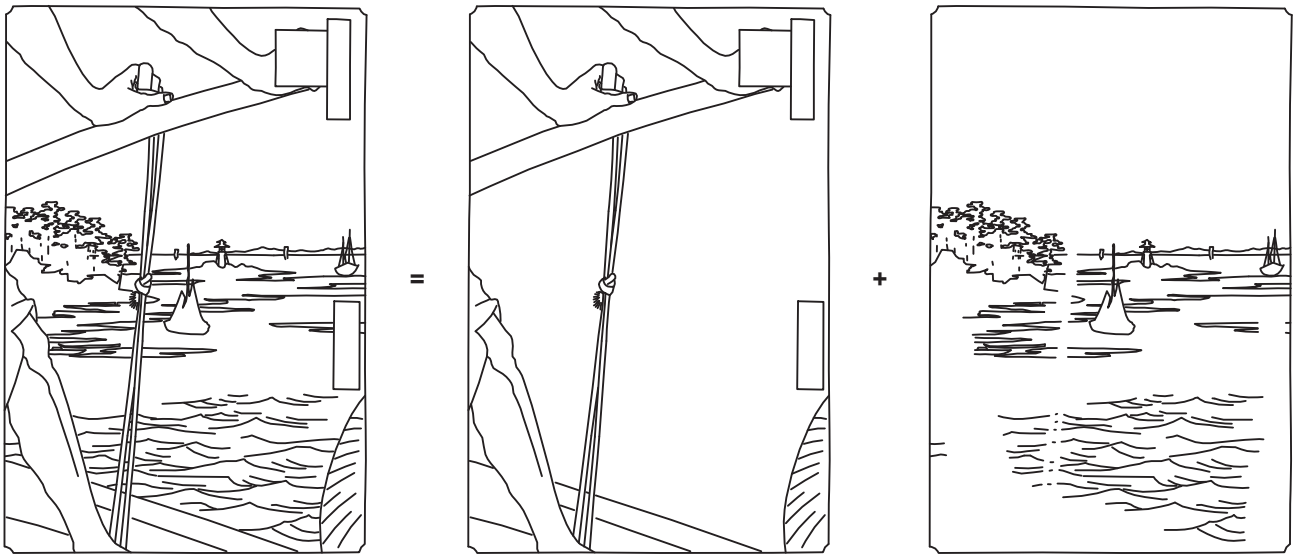


Figure 256: Reconstruction of Ando Hiroshige's *The Benten Shrine at the point of carrying over Haneda* (1858, woodcut)
A human figure and a boat are cut by a black and formed borderline ('extreme detractio') of the image which draws the attention to this black borderline of the woodcut; at the points of intersection of contours and borderline, one can identify the Hybrid H type (C1.1 versus C1.2). A kind of awareness of medium as a part of metacognition becomes visible.

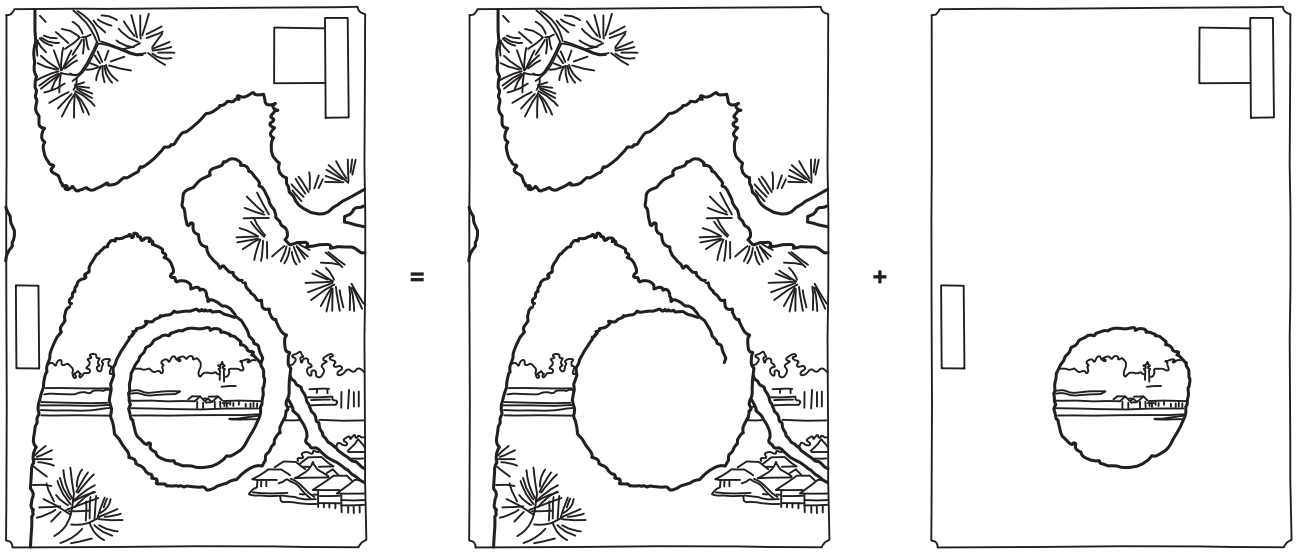


Figure 257: Reconstruction of Ando Hiroshige's *Jaw in form of moon on the territory of the cloister in Ueno* (1857, woodcut)
Awareness of the borderline of the image as organisation of attention, therefore awareness of the medium is achieved by the repetition (adjectio) of the principle within the image: a round secondary image (with a higher grade of indexicality C3 to the centre) within a branch is an echo of the rectangular borderline of the image.
Because of the higher indexicality C3 of the round secondary image (higher in comparison to the rectangular but bigger primary image) there is a kind of equilibrium between the attention on this area and the attention on the whole rectangular image, so there is a fluctuation of attention between the primary and the secondary image (Minimal Difference MD of potentials of attracting attention).

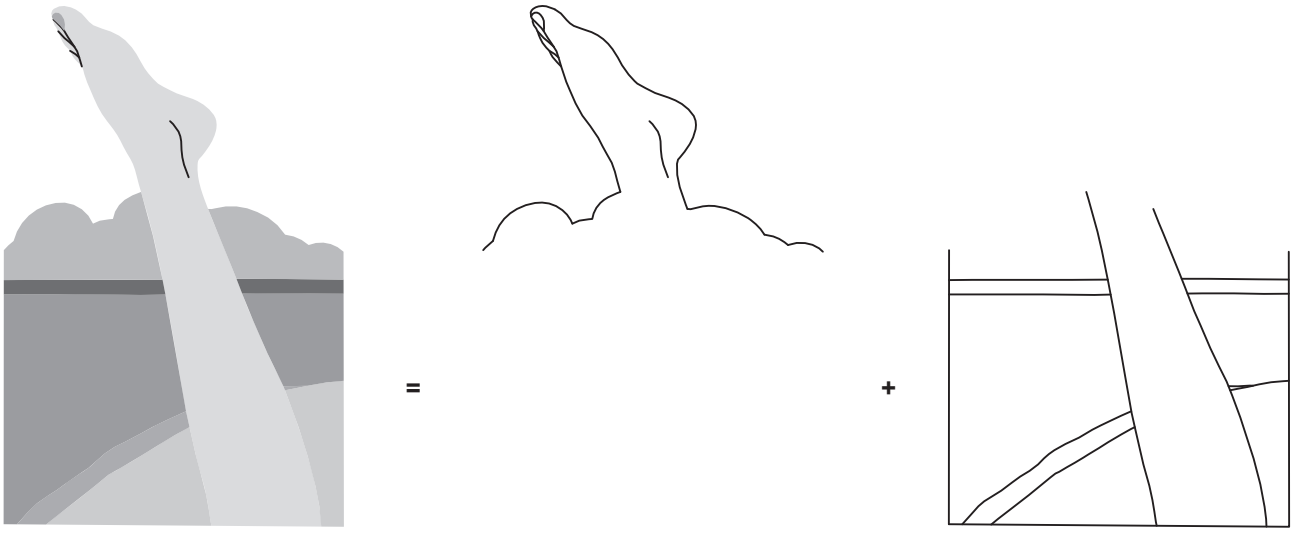


Figure 258: Structure and reconstruction of Tom Wesselmann's *Seascape No. 22* (1967, painting)
The borderline of the image is unconventionally drawn into the contours of shown clouds and of a shown foot which could be called a kind of contamination of frame (´showing´) and shown objects (showing versus shown objects contaminated in one borderline). The disturbance of the symmetry of the borderline of image could be called syntactic detractio (or even transmutatio).

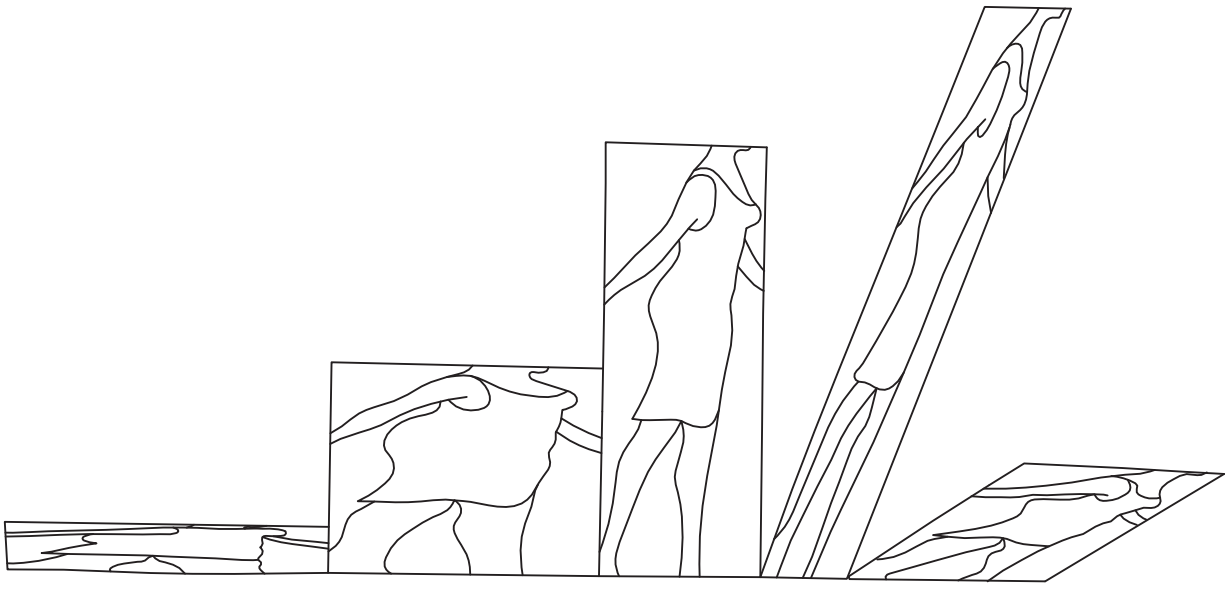


Figure 259: Structure of Michael Snow's *Five girls panel* (1964, painting)
The third orthogonal panel showing a Euclidian space seems to be the origin of the transmutatio operation on the frame and therefore the representational space. An orthogonal frame seems to communicate that this perspective is correct.

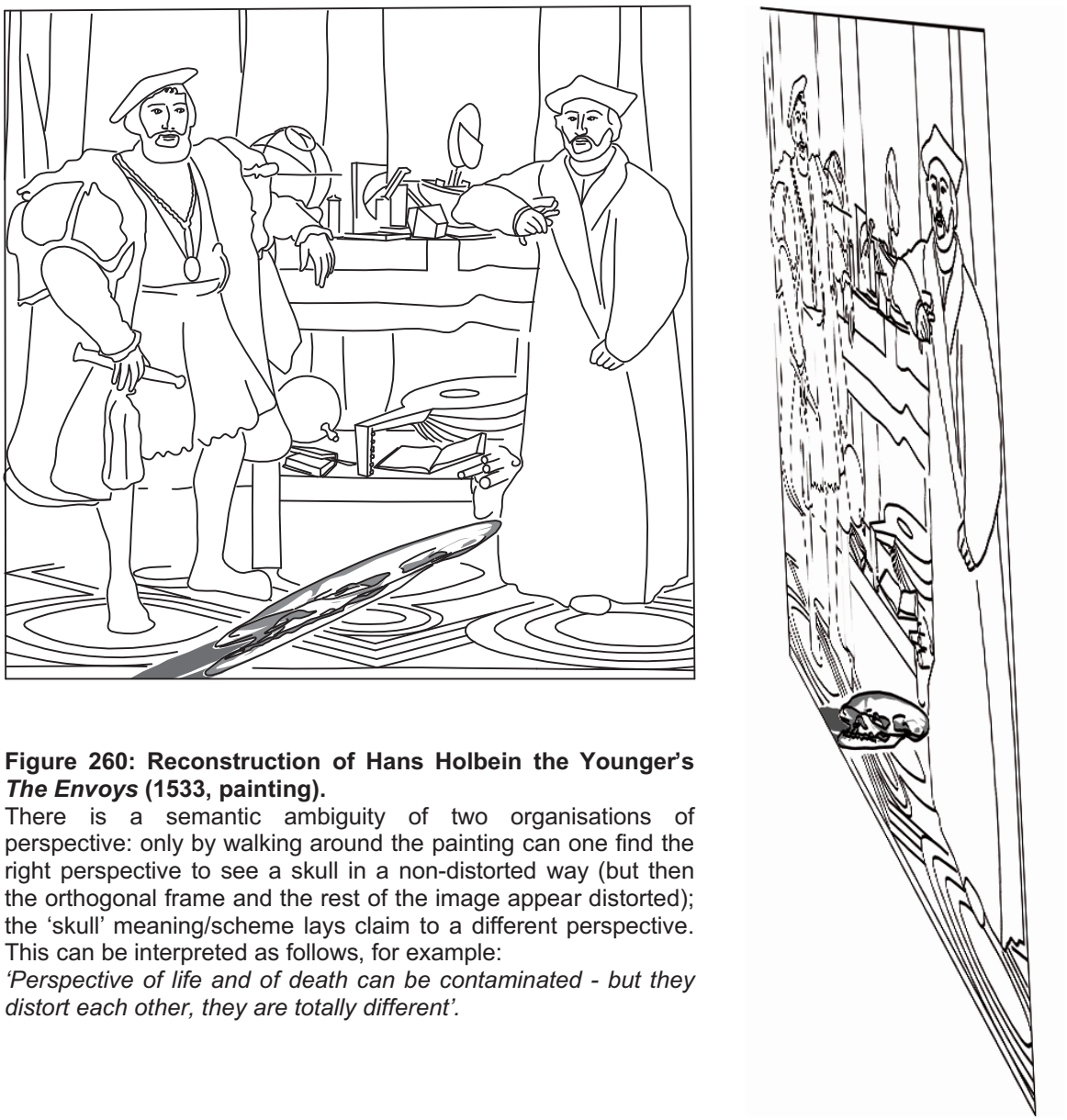


Figure 260: Reconstruction of Hans Holbein the Younger's *The Envoys* (1533, painting).
There is a semantic ambiguity of two organisations of perspective: only by walking around the painting can one find the right perspective to see a skull in a non-distorted way (but then the orthogonal frame and the rest of the image appear distorted); the 'skull' meaning/scheme lays claim to a different perspective. This can be interpreted as follows, for example:
'Perspective of life and of death can be contaminated - but they distort each other, they are totally different'.

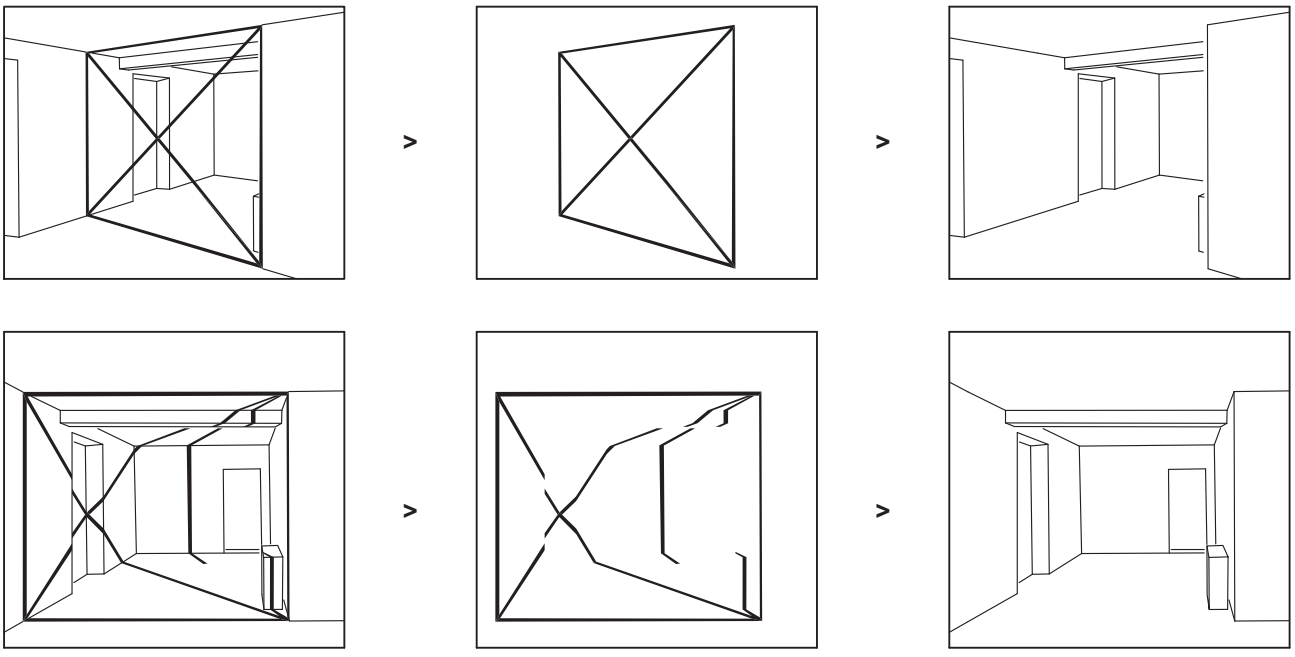


Figure 261: Reconstruction of Felice Varini's *Trapezoid with two Diagonals No. 1* (1996, installation in a room).
Anamorphic Illusions such as this one show a non-distorted geometry only from one perspective; the non-

disturbed trapezoid could be seen as a scheme which in this case appears as if it was disturbed and fragmented (detractio + transmutatio). The C1, S2 and S4 criteria provide stimulation to reconstruct the trapezoid. It can be comprehended as a view on a square in space. So two-dimensionality and three-dimensionality are semantically contaminated twice: trapezoid as a plane square in space and a trapezoid as a plane, here anamorphically represented in space.

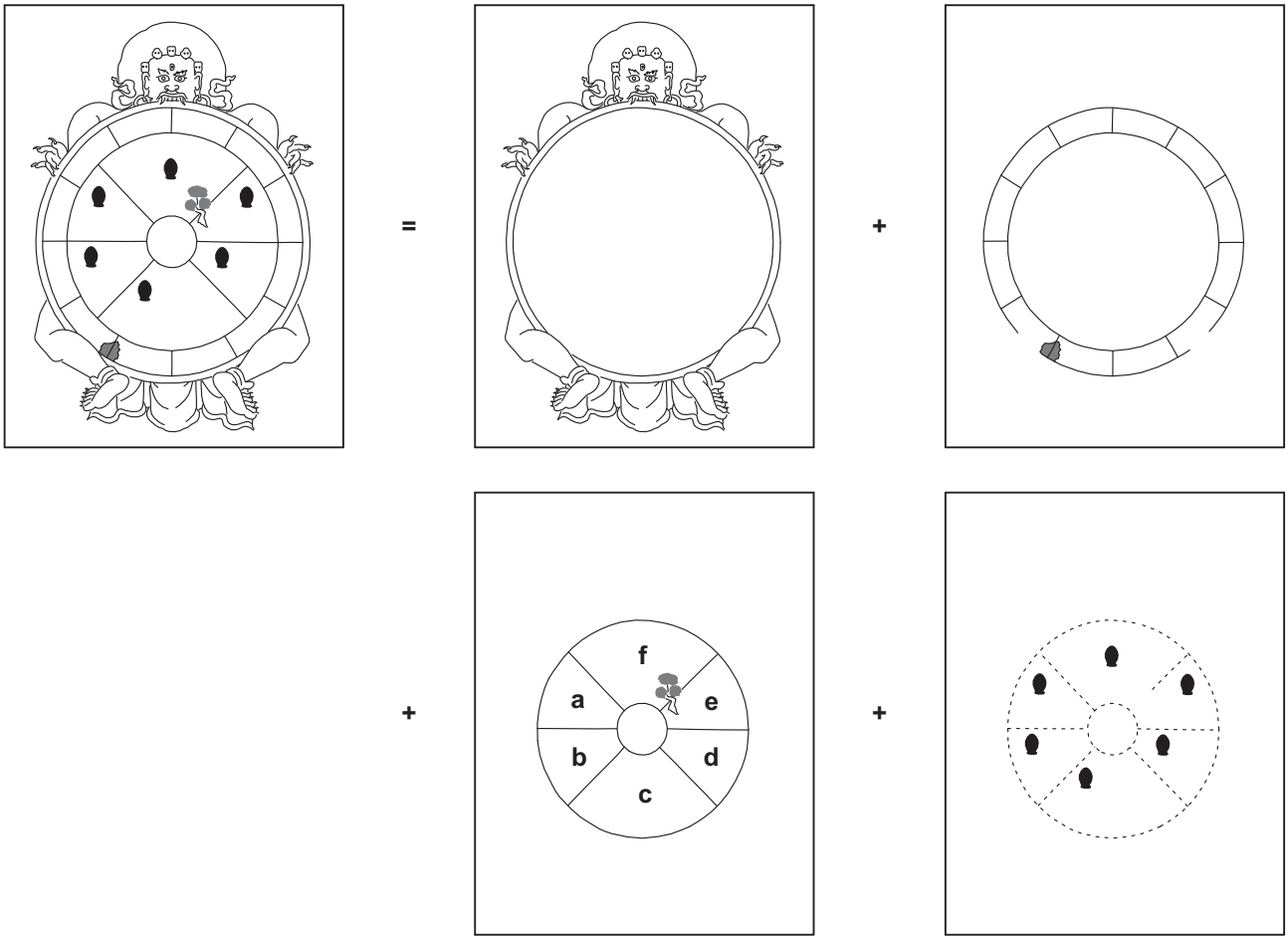


Figure 262: Reconstruction of the Buddhist convention of a complex image: *Wheel of Life/Wheel of Rebirths*

Figure 2: Yama, the god of Death, holds and moves the wheel, which is a complex image composed of 12 + 6 + 1 = 19 partial images, because he is omnipresent, type Mixture M because the feet and the upper part of the Master of Death can be cognitively unified by similarity of colour and form across the circle: M(S1/2 versus C3 of the ring).

Figure 3: twelve partial images in the ring show the lessons of karma (the ring has a formal emphasis on C3 because of the spokes of the wheel);

Figure 4: six partial images in the interspaces between the spokes of the wheel point to the axis of the wheel in the middle because of C3 (of the ring) and C1 (of the spokes); these images show the six spheres/six stages of life, the one round image in the middle shows three animals as partial signs for ignorance/lack of knowledge which are the basis of all harm: a pig (a metaphor/symbol for blindness), a cock (greediness) and a snake (hate).

The six partial images show: a) the human domain (selfishness, ignorance, desire), b) the animal domain (lack of knowledge, indifference, instinct), c) the domain of hell (hate, rage) d) the domain of the hungry ghosts (greediness, hunger, thirst), e) the domain of the jealous gods (fortune and pride); all these are based on the Buddhist principle that the acts of a person lead to reward or punishment in the next life. The Buddhist aim is the escape from the cycle of birth and death and to attain nirvana (calmness, happiness, peace). A tree is part of both domain e) and f) (Hybrid)

Figure 5: in each image (of the group of six images), the same figure of the Buddha appears to bring redemption, so one can identify the Mixture M type (S2 six similar figure versus C3 border lines of the six images)

This image is an example of the use of border lines as forms of partial images to organize attention and meaning by their indexicality. This visible opposition between parts and the whole (with a central axis as point of centralisation and of decentralisation) could be named ambiguity of the whole versus the parts: Hybrid H (C3.1 the whole versus C3.2/3/4... parts).

2.2.3 Syntactic-semantic ambiguity of partially disturbed illusion of spatial depth in works by the French artist group *Nabis*

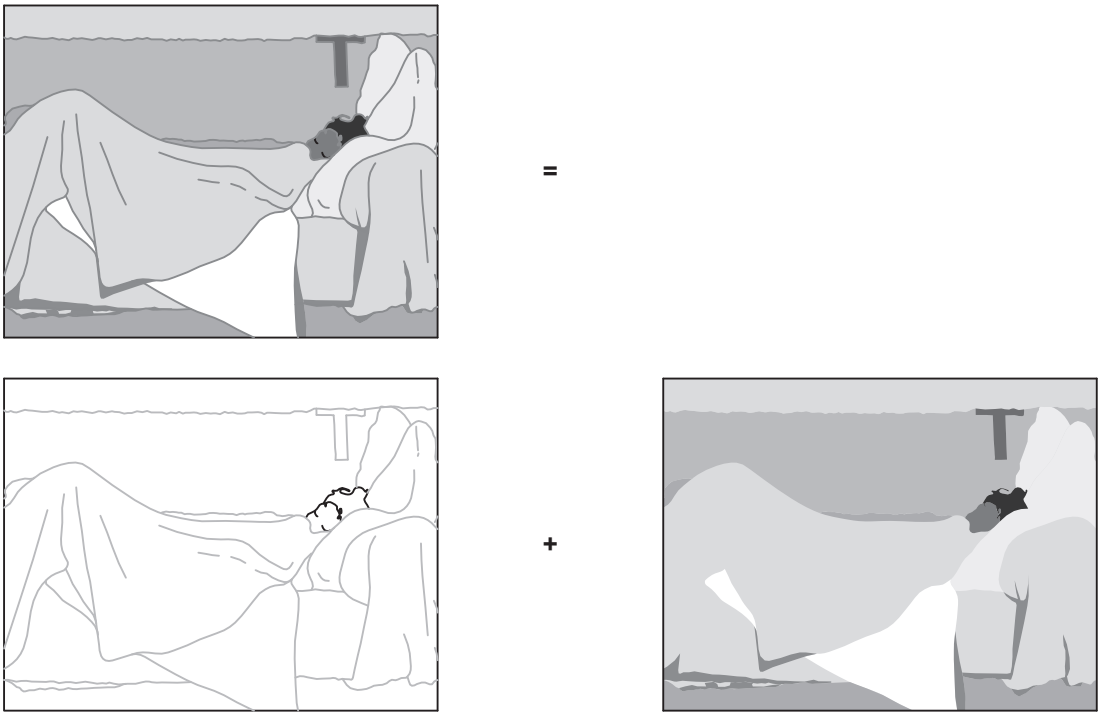


Figure 263: Reconstruction of Edouard Vuillard's *In the Bed* (1891, painting).
The Nabis group of French artists in the 1890s placed aspects of spatial illusion in opposition to purely planar aspects. The example shown here shows the anti-spatial effects evoked by bifurcation of outlines (Hybrid H (C1.1 versus C1.2, see second figure) and monochromatic planes (see third figure) with colours with Minimal Difference to each other: MD (S1.1~ S1.2 ~S1.3...). The illusion of spatial depth is produced only by covering and by some small shadows, a resemblance to reality only by contours of the eyes and the hair of the figure. The anti-spatial effects could be seen as awareness of medium, as syntacticisation, which was a tendency in late 19th-century art (Impressionism and Post-Impressionism).

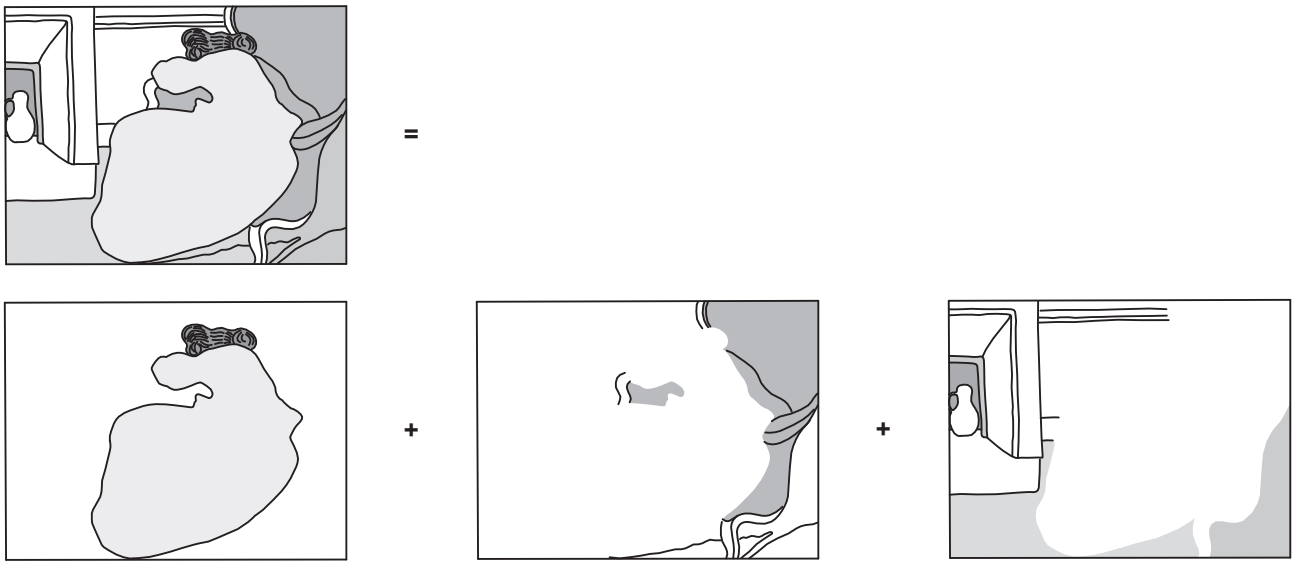


Figure 264: Reconstruction of József Rippl-Rónai's *Woman in an armchair* (ca. 1890, drawing and watercolour)
Semantic ambiguity: semantic detractio of illusion of spatial depth/anti-spatial effects (round edges of spatial objects, thick and stylised contours as arabesques and homogeneous colour-fields) versus spatial effects (converging lines of the fireplace, objects covering each other). There is no syntactic ambiguity as in the example above, but **pragmatic complementarity** (representational function versus this metacognitive function).

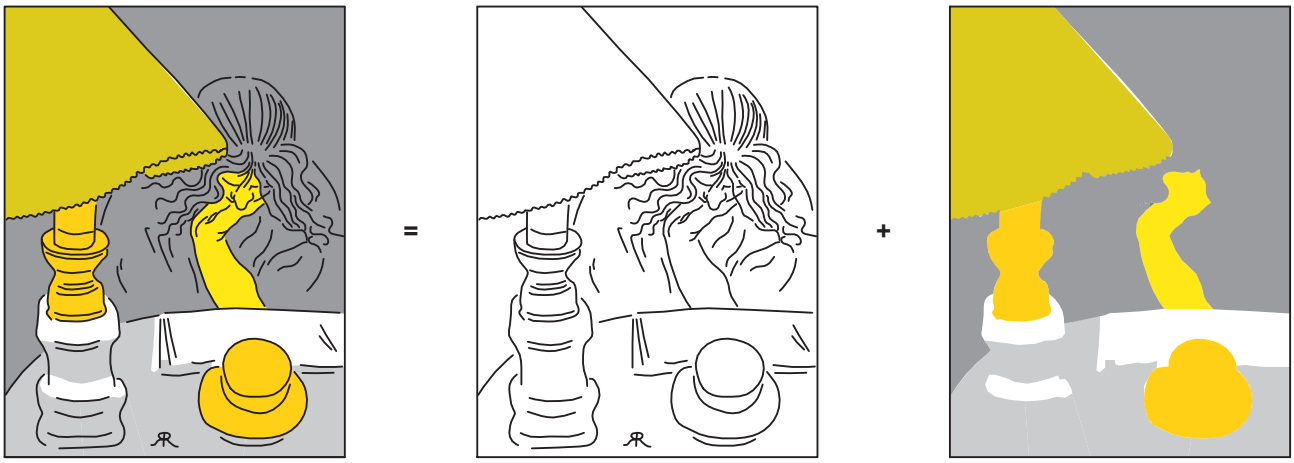
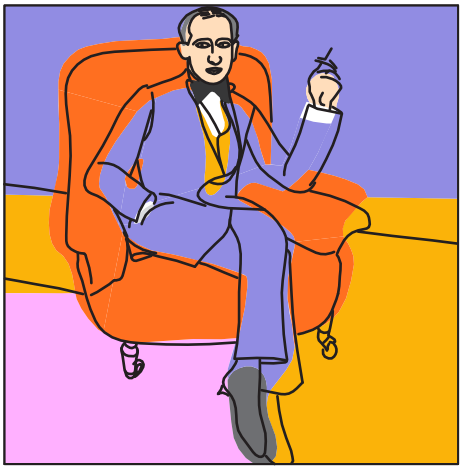
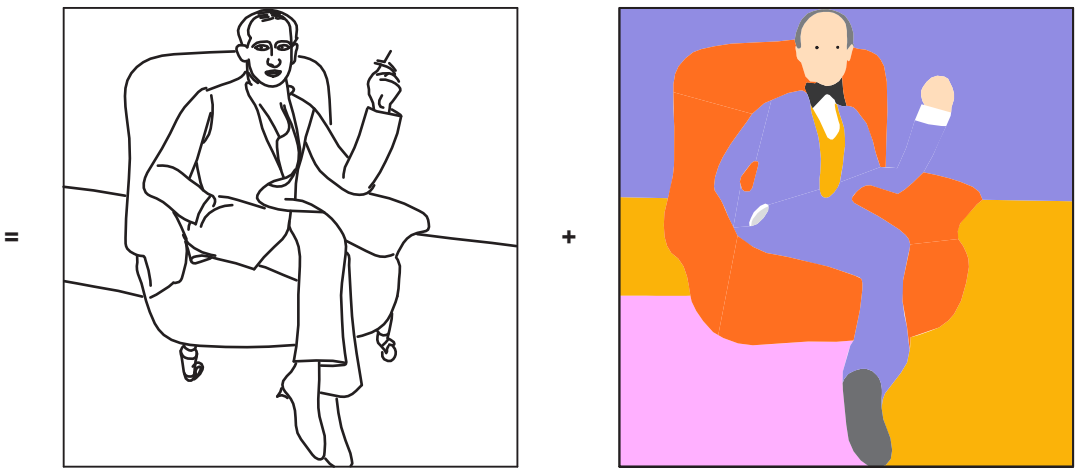


Figure 265: Reconstruction of József Rippl-Rónai's *Reading Woman* (1894, lithography)
Divergence of contours against their fillings:
Syntactic ambiguity: Hybrid H of a dark plane going across the contours of the woman (C4 dark ground-plane versus C1+ C3 contours of the figure).
Semantic ambiguity: semantic detractio as an abstraction in lines and in planes which are anti-naturally in divergence from each other; this kind of syntacticisation to the plane leads to contamination of figure and ground.
Pragmatic complementarity: representational function versus this metacognitive function

Figure 266: Reconstruction of Pjotr Wassiljewitsch's *Portrait of the Componist Arthur Lurie* (1915, painting)
Divergence of contours against their fillings (as Hybrid H (C3 contours versus C4/S1 planes), similar to the example above) which could be called interruption of the homogeneity of formation.
This divergence can be viewed as a psychological transformation (e.g. *'psychological instability in wartime, reflected by contamination of the figure and its background'*).
The French painter **Raoul Dufy** based his painting on the same divergence of contours against their fillings - but perhaps more for decoration purposes.





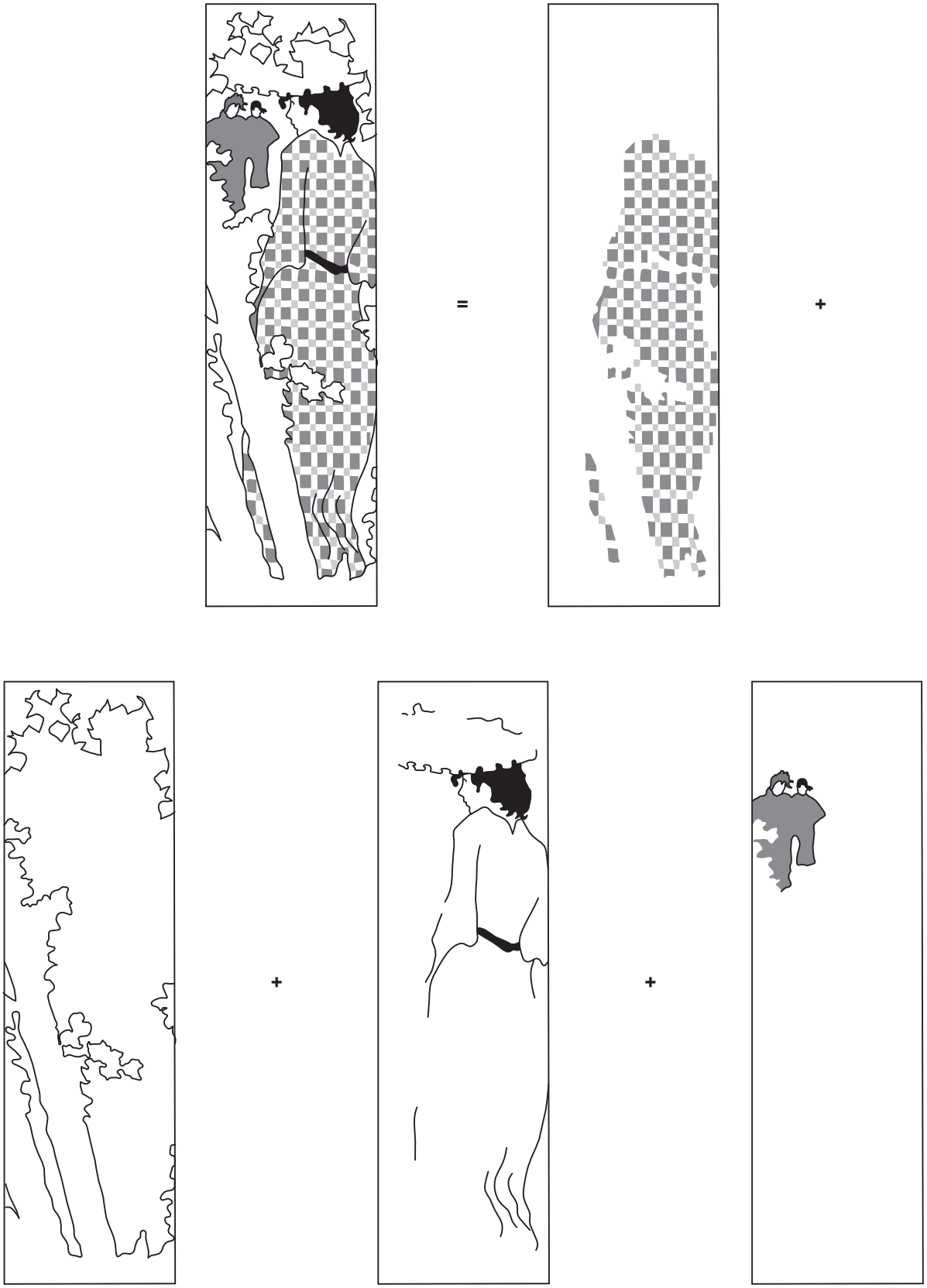


Figure 267: Reconstruction of Pierre Bonnard's *Woman in chequered dress* (1890- 91, painting).
Semantic ambiguity: semantic detractio of illusion of spatial depth/semantic antonymity of spatial effects (nearer and bigger objects cover other smaller objects) versus anti-spatial effects (the chequered dress shows no sign of spatial depth such as shadows or curves, every plane tends to monochromatism, the tree fits in the rectangle of the image)
Pragmatic complementarity: representational function versus this metacognitive function

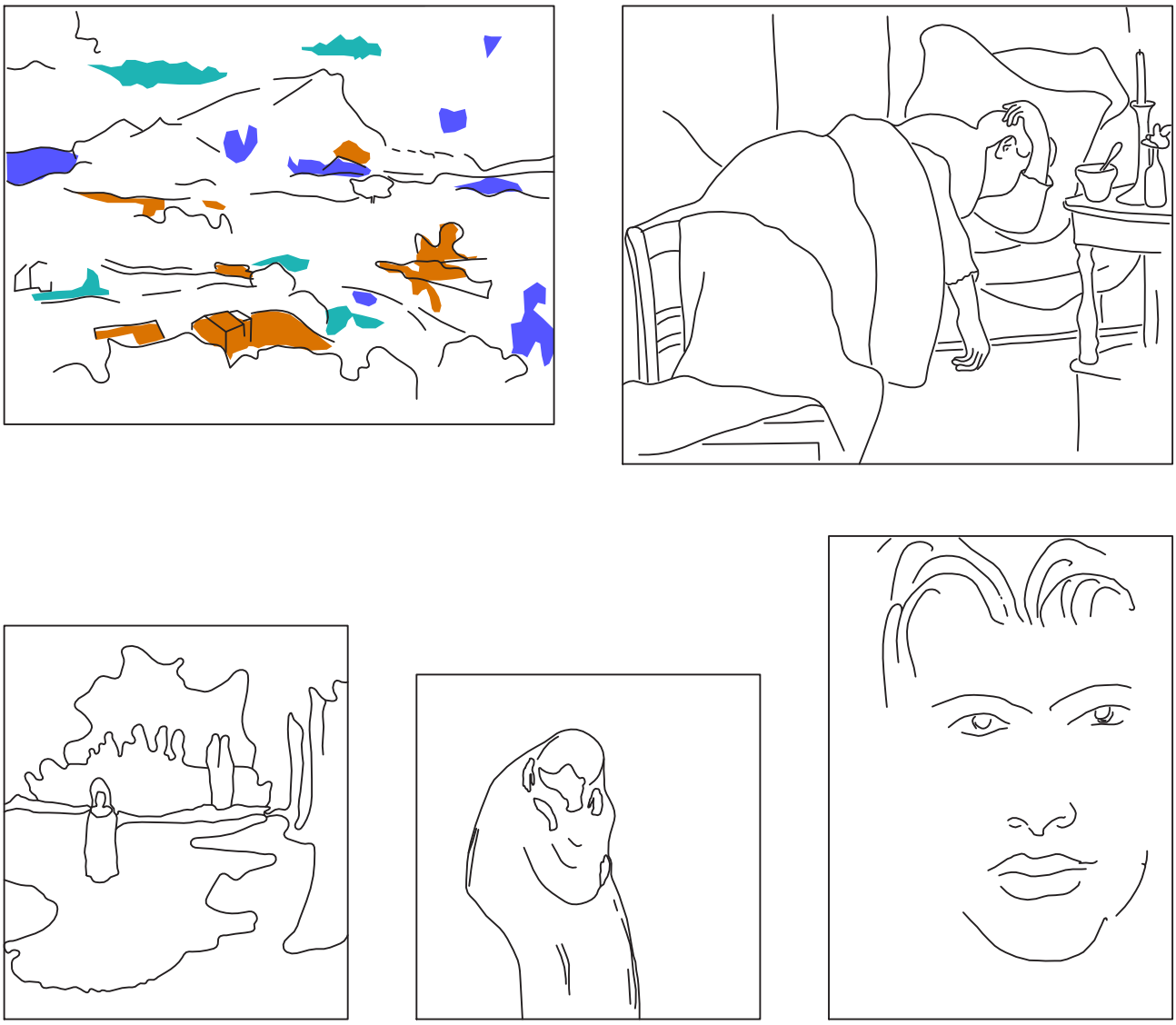


Figure 268: Methods of 'putting a figure into absence' as negation of the identifying contours ca. 1900 in comparison: a) P. Cézanne (*Montagne Sainte Victoire,* 1902 - 1906), b) J. Rippl-Rónai (*Woman in Bed*, 1891), c) M. Denis (*Sunspots on the Terrace*, 1890), d) E. Munch (*The Kiss IV*, 1897 - 1902) and e) H. Matisse (*Massia*, 1914).

Around 1900, some artists concentrated on a **syntacticisation** of the image in the form of an **aesthetic contamination of three- and two-dimensionality**, e.g. by a contamination of figure and ground: plastic figures and spatial illusion are dissolved into a uniform grid or into colour structures (and thus into a unified 'all ground'): in dot grids in works by Seurat, in line hatching in works by van Gogh, in patchwork structures in works by Cézanne and Vuillard, in emphasised contours in works of successors of Gauguin (see the barely identifiable contour arabesques in the work by Denis), in Sfumato in works by **Carrière**, etc. The central aesthetic ambiguity here is the **pragmatic antonymity** 'conventionally iconic-sensual representation by presenting plastic and spatial three-dimensionality' versus 'negation of this kind of representation by dissolving the figure into its ground'.

In works by Cézanne, the objects to be depicted are rejected by syntactic ambiguity Hybrid H (identifying contour lines C3 versus an 'overwriting' patchwork of S1 colour constellations). In works by the Nabis artist Rippl-Rónai, the face in the centre is completely removed (detractio of the face); in works by Denis, the contours are simplified and stylised to arabesque-like lines (detractio of contour details and transmutatio/substitutio of contours). In works by Matisse, parts of the contour lines are removed (detractio of line segments), which nevertheless still allow sufficient coherence for remembering the shape 'face' via C1 and C3. In works by Munch, there is a contamination not of ground and figure as in the other examples, but of figure and figure into each other, also by detractio of identifying contour lines. Munch's works dissolve the figures of a man and of a woman into each other by removing their facial contours, thus resulting in the contamination of both; the content of this operation is opened up between the antipodes of two interpretations: 'unnatural monstrosity' and 'fusion of love'.

Two ways to negate a figure and space (to generate content) are conceivable: aesthetically ambiguous contamination of figure and ground (or of figure and figure) by their similarisation (e.g. through a 'carpet' of coloured spots in the work of Cézanne) and/or contour line negation by detractio.

2.2.4 Polysemy as semantic ambiguity which can be mediated by syntactic ambiguity as well

Polysemy concerning the illusion of spatial depth or the represented object is semantic ambiguity because two meanings are in opposition (a versus b); this semantic ambiguity can be mediated by syntactic ambiguity. Examples for polysemy in images are: two possible axes of illusionary spatial depth in parallel projections (such as isometry) or two possible figures described by a contour (see the ***Cup of Rubin***).
Some aspects of the formation can define one object as 'far away' but others as 'near by'; a circle with a black and with a white half-contour within a grey ground can define this circle as a **'hill' and as a 'hollow'**; **Willi Baumeister** used this ambiguous formation for his serial of drawings of the 1940s for the Gilgamesh epic.

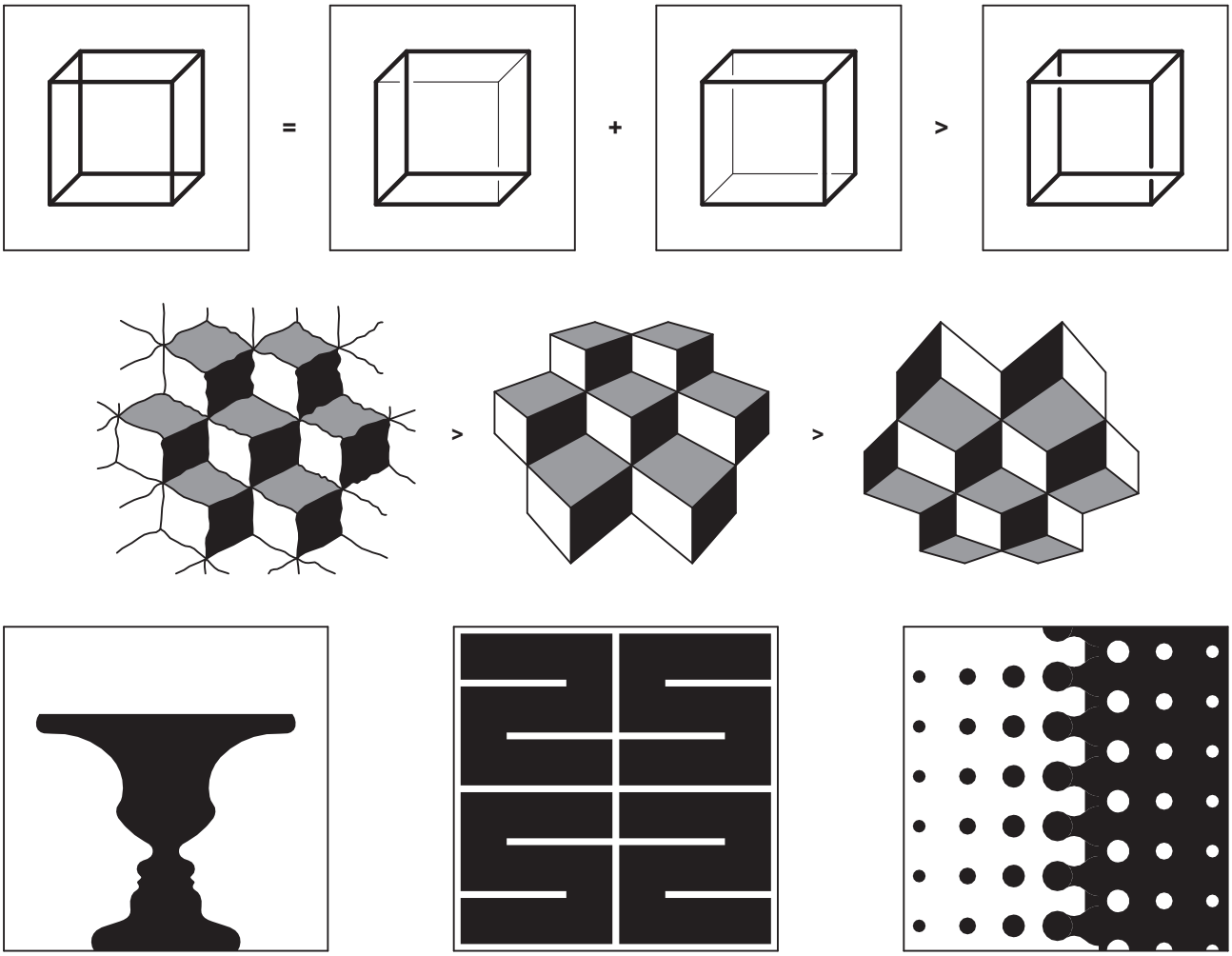


Figure 269: Variation of the polysemy of *The Cube of Necker* and of a detail of the tessellated pavement of the House of the Trident, Delos island (8th century BCE) to monosemy
and three examples for polysemy/syntactic ambiguity of exchange of the roles of figure and ground: *The Cup of Rubin* (Edgar John Rubin, 1921), *Aesthetic Effect of the inversion of the functions by fluctuation of the attention* (Vera Molnar, 1960) and a development of figures of circles into the ground and vice versa.
The Cube of Necker allows two interpretations of the axis of spatial depth due to the **Hybrid H** type of ambiguity **at the two points of intersection**; by interrupting the two lines and by giving them less thickness, you achieve monosemy of spatial depth as organisation of attention. The transformation of the **isometry** (i.e. polysemy without syntactic ambiguity) below to two perspectives uses size for monosemic organisation of attention.
Rubin's cube (1921, last row) uses the criterion **C3** to point to both sides of the contour which divides the attention **(syntactic equilibrium/MD (C3.1 ~ C3.2))**; the effect (together with polysemy of contour: 'heads' versus 'cup') is that both sides can be interpreted as 'figure' and 'ground'. One could also identify a **semantic equilibrium/MD** between the offers to build meaning: One face is only a fragment of a head (whereas the cup is a whole and in the centre of the image), but there are two faces; this **Minimal Difference MD** between two C3-potentials to attract attention is syntactic ambiguity linked to polysemy as semantic discrepancy ('faces' versus 'cup'). The two images following this polysemic image show that this kind of **Minimal Difference MD** between two indexical C3-potentials to attract attention can be used for non-representational images as well. The image of Vera Molnar shows four S-forms pointing to the environment of their forms: one complex thin grid. The equilibrium between these two potentials to attract attention (four S-forms versus one thin grid) bases on: a) simplicity/complexity of the forms (the S-form is less complex than the grid which attracts attention), b) colour within the white page (black attracts more attention on this white page), c) size (the thin grid can be realised more easily) and d) number (one grid is less complex than four S-forms).

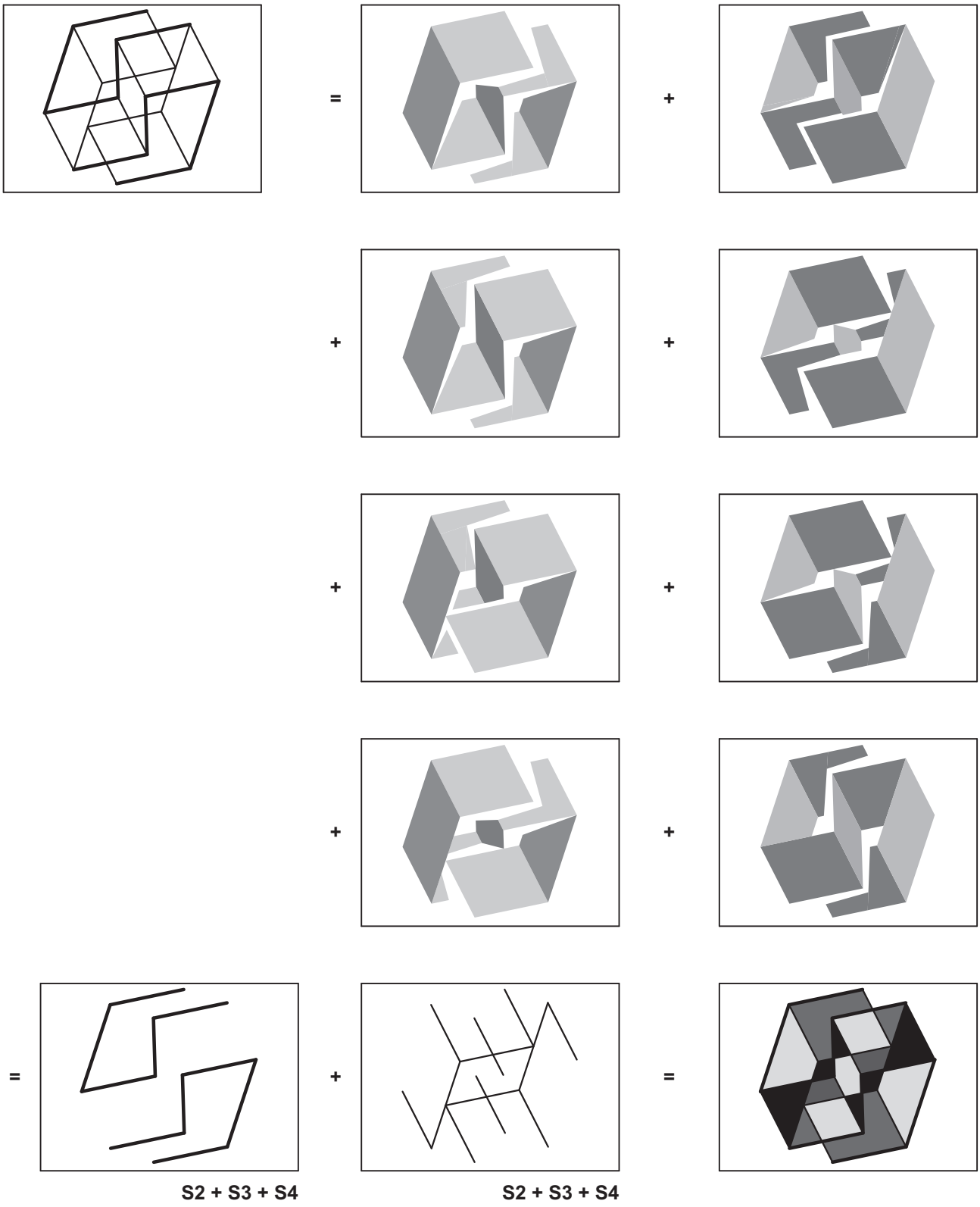


Figure 270: Reconstruction of Josef Albers' *Structural Constellation S V-3* (1959, scratch-drawing)
Eight possible interpretations of the spatial polysemy of the work are shown; the polysemy is based on points of intersection (Hybrid H C1.1 versus C1.2). The last interpretation is non-representational as far as representation of space is concerned; they are based on S2 (symmetry of point), S3 (thickness of line) and S4 (orientation of lines).

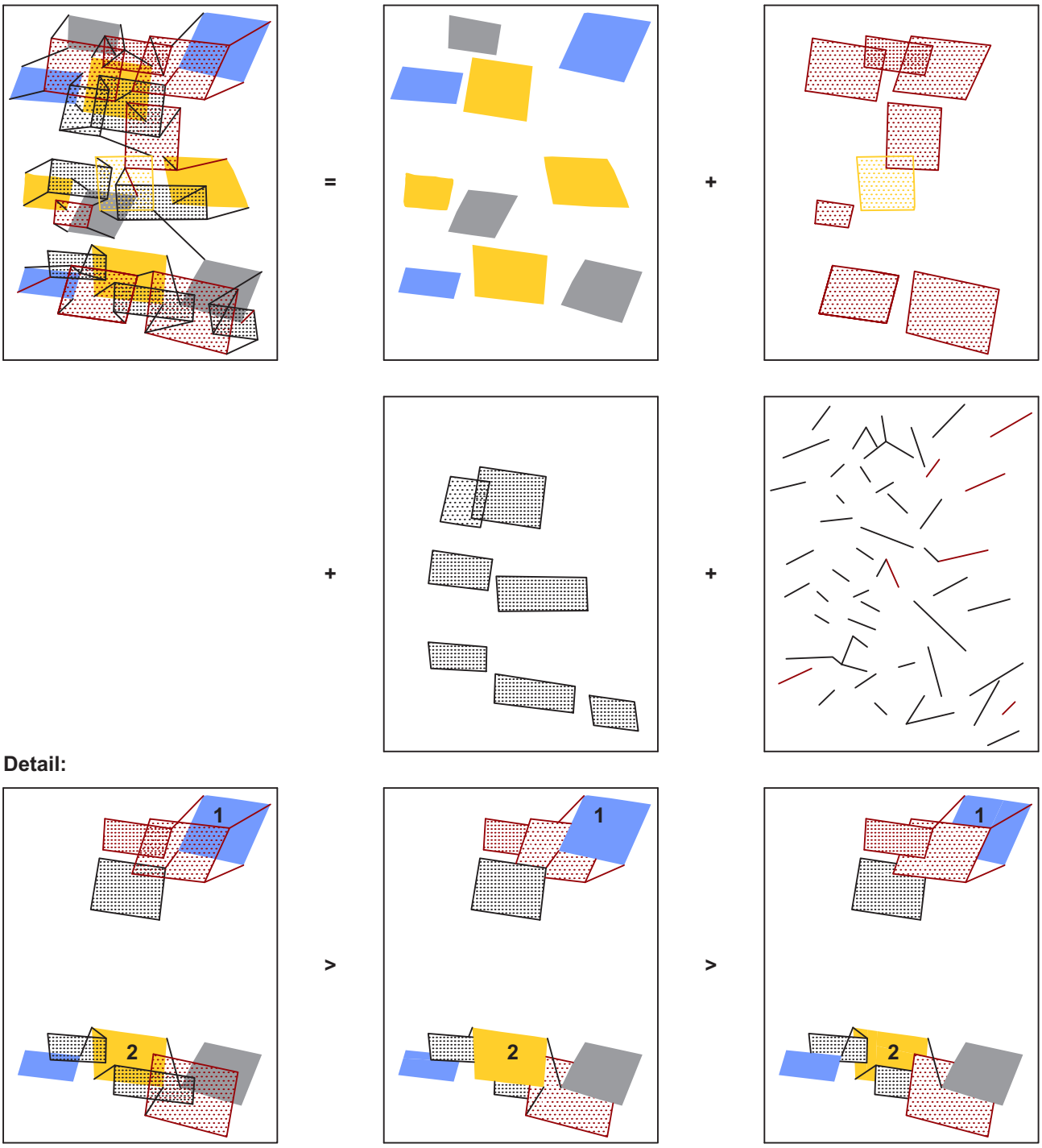


Figure 271: Reconstruction of Paul Klee's *Sailing City* (1930, ink-drawing and watercolour)
Syntactic ambiguity: Mixture M of four yellow, three grey and three blue planes: Mixture M (S1.1 yellow versus S1.2 grey versus S1.3 blue, see second figure); these planes are 'covered' by 15 hatched planes which lead to ambiguity of the Hybrid H type in the 'overlapping' zones in which nearly every criterion of cognitive unification (S1- S4 and C1- C4) leads to direct competition.
Semantic ambiguity: In the details below, the spatial polysemy of the work (achieved by connecting lines between the planes) is shown: without covering of planes by 'nearer' planes the definition of spatial depth remains instable (see last two plates as clear definitions of spatial depth).
The title is an example of the semantic discrepancy type of ambiguity ('city' versus 'boat'), which finds its equivalent in the uncertainty of spatial polysemy. The human mind tends to reduce the complexity of this highly ambiguous meaning; in this case, the complexity of meaning could be reduced by finding an interpretation (as semantic complementarity by an aspect of metaphorical comparison) like the following: *'perception of a city while walking through it is the appearance and disappearance of perspectives of walls which now appear similar to sails'.*

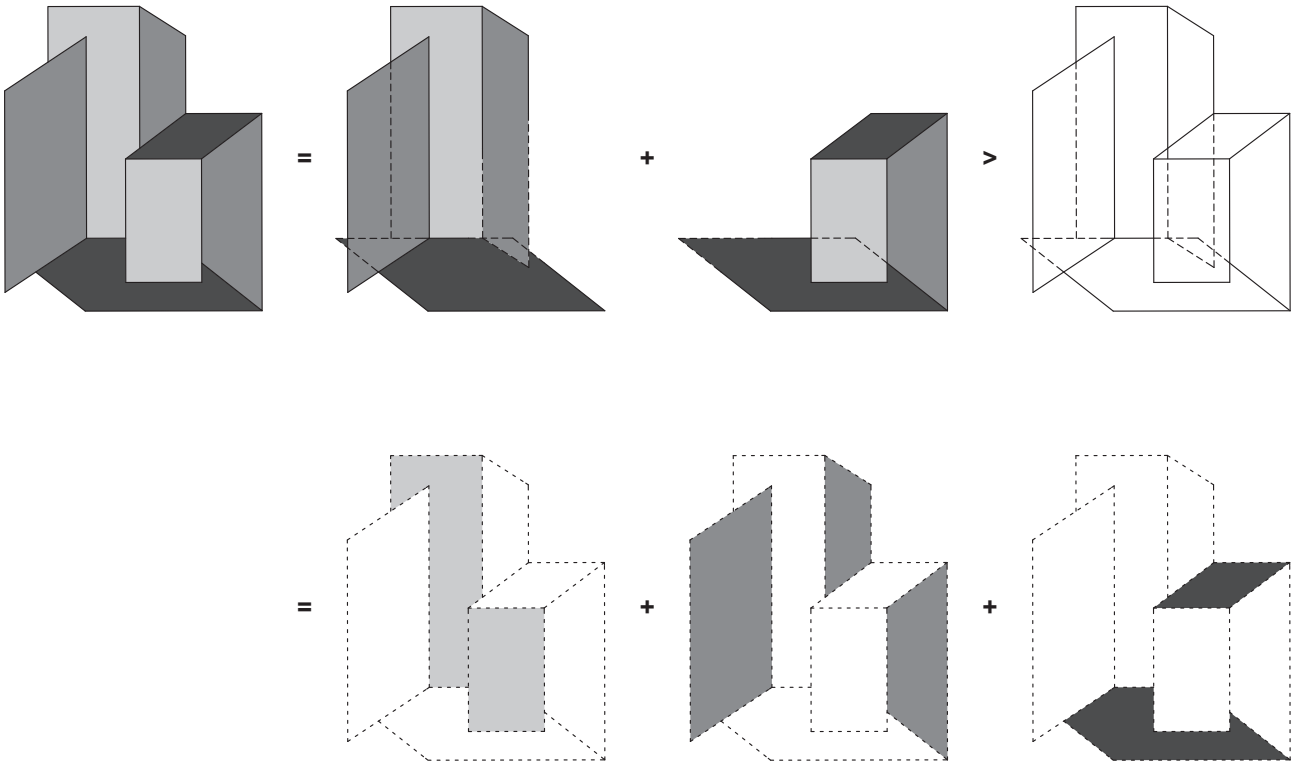


Figure 272: Reconstruction of László Péri's *Spatial Construction No. 4* (1921, wooden object, painted)
The diagonal planes lead the mind to a polysemic and therefore ambiguous interpretation as a representation of space: one plane can be interpreted as seen from above (second figure) and also as seen from below (third figure). This 'cognitive discord' results in concentration on the way of the contours (see fourth figure), which does not provide a monosemic solution, either. The non-representational interpretation of the last three figures comes into focus, therefore, but these offer syntactic ambiguity as Mixture M of three groups of mixed planes distinguished by their three colours. So this complexity leads again to spatial interpretation, etc. etc.

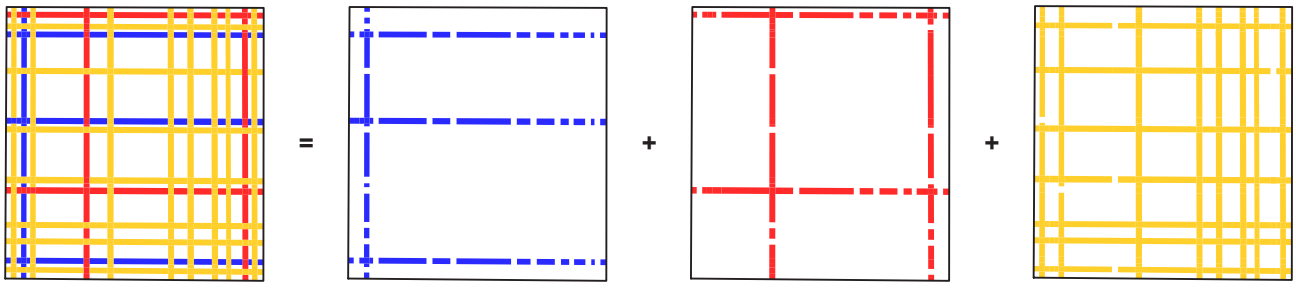


Figure 273: Reconstruction of Piet Mondrian's *New York City* (1942, painting)
Syntactic ambiguity: Mixture M of three groups of interrupted lines (appearing as three 'grids') due to three colours (S1.1 - S1.3) and their reference to each other (indication into each other by means of criterion C1); rectangular areas of one grid of one colour are claimed by the other two grids (Hybrid H (C3.1 versus C3.2 versus C3.3); type 7 of Geometric Minimal Difference MD (lines to plane).
Semantic ambiguity: two monocular criteria of optical depth are semantically antonymous with each other: the 'density of texture' criterion and the 'covering' criterion give different information about the position of a line in respect of spatial depth; the yellow grid has a higher density of texture (which means that it appears as 'far away') but it covers the blue and the red grid (which means that it appears as 'near by', see the numerous interruptions in the second and the third figure). But six times the yellow grid is covered which could be named 'disturbance of spatial order of depth' (see fourth figure). This complexity of spatial depth can be correlated with the title which proposes also another iconic interpretation as a kind of map.
Pragmatic ambiguity: pragmatic complementarity of representational function ('city') and metacognitive function due to the explained ambiguity at three levels

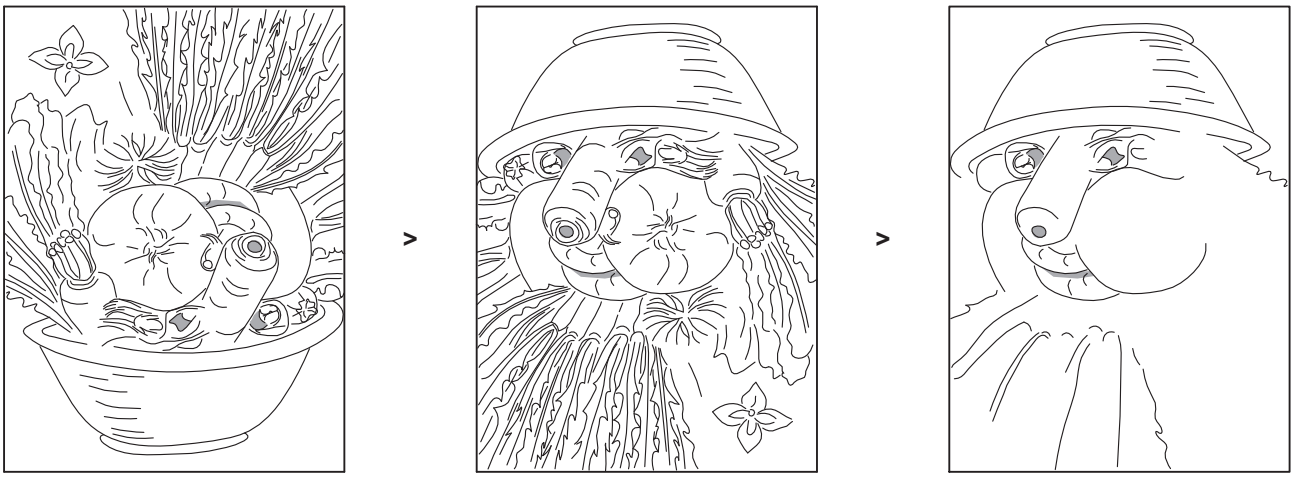


Figure 274: Reconstruction of Giuseppe Arcimboldo's *The gardener - Joke with vegetables* (ca. 1590, painting with two possible hangings: 0 and 180 degrees)
Semantic ambiguity: The principle of the remembered figure ('Gestalt') leads (information-theoretically formulated) to a **reduction of data to information** in cognition because a lot of details (vegetables) escape attention, the contour of a head is focused (see third figure). This could be named a **semantic detractio** of details in cognition. The two meanings are in the relationship of **semantic discrepancy** ('vegetables' versus 'face'), but the title suggests **semantic complementarity** ('gardener' versus 'vegetables'). But this reduction of vegetables to a face is not stable. There is an equilibrium/Minimal Difference of both offers to build meaning.
Pragmatic ambiguity: pragmatic antonymity of two antagonistic modes of perception (detailed perception of vegetables versus abstract perception for 'divining' the face/detractio).
Pictorial-rhetorical operations are **modes of producing aesthetic ambiguity** - but also **modes of perception**: re-adjectio in cases of cognition of fragmented figures, abstraction of details like in this case (detractio, see third figure), variation of the appearances of a concept to gain semantic prototypes (transmutatio or substitutio).
Adjectio focuses attention on the criterion of **quantity**, detractio on **modality** ('absence' of the piece taken away), substitutio on **quality** (of the substitution in contrast to its new environment) and transmutatio on **relation** (ality of the elements whose positions were swapped).

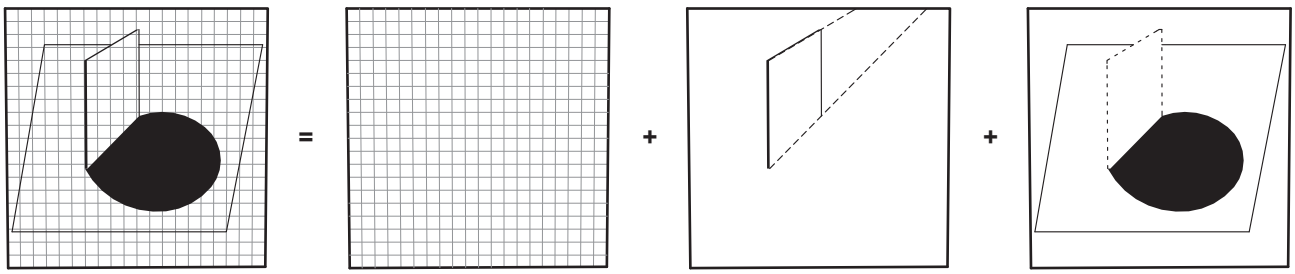


Figure 275: Reconstruction of Attila Kovács's *Coherersibility 1 v* (1968 - 1995, painting)
Semantic ambiguity: semantic entities are in semantic antonymity (two-dimensional versus three-dimensional character, perspective versus parallel projection, Euclidian versus non-Euclidian geometry):
the grid (see second figure) emphasises the planar character of the medium, an orthogonal wall **in perspective** (see third figure), a platform **in parallel projection** with a **round** shadow of the **orthogonal** wall (which has no inner shadow to the side of its horizontal shadow, see fourth figure). The relationship between round shadow and its rectangular shadow producer ('wall') could be called **semantic antonymity** (round versus rectangular).
The independence of the shadow image from its shadow producer is an ambiguous motive in literature; in the book *Peter Schlemihl* by **A. v. Chamisso** a man sells his shadow to another figure (**semantic transmutatio**).

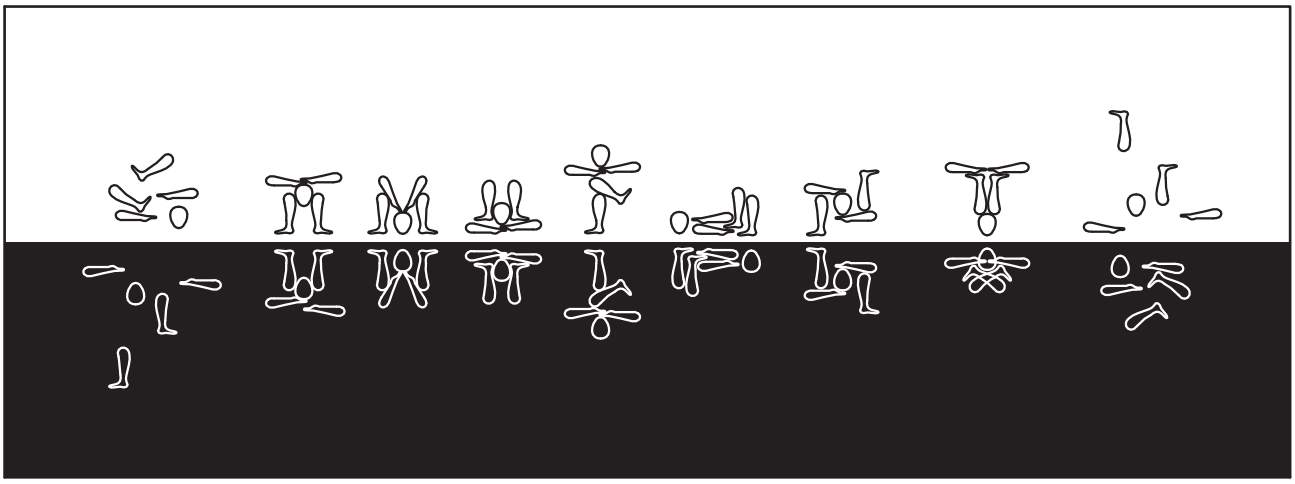


Figure 276: Axel Rohlfs: *For Lacan* (2011, visual poetry)
From the second constellation (of parts of bodies) onwards, there is symmetry about the horizontal, in the sixth constellation symmetry about a point, from the eight onwards there is no symmetry. In allusion to **Lacan**'s theory of the reflected image of your own body (as the source of illusionary thinking in unities), this work shows antonymity of objects versus their reflected images, which could also be called **syntactic-semantic transmutatio**.

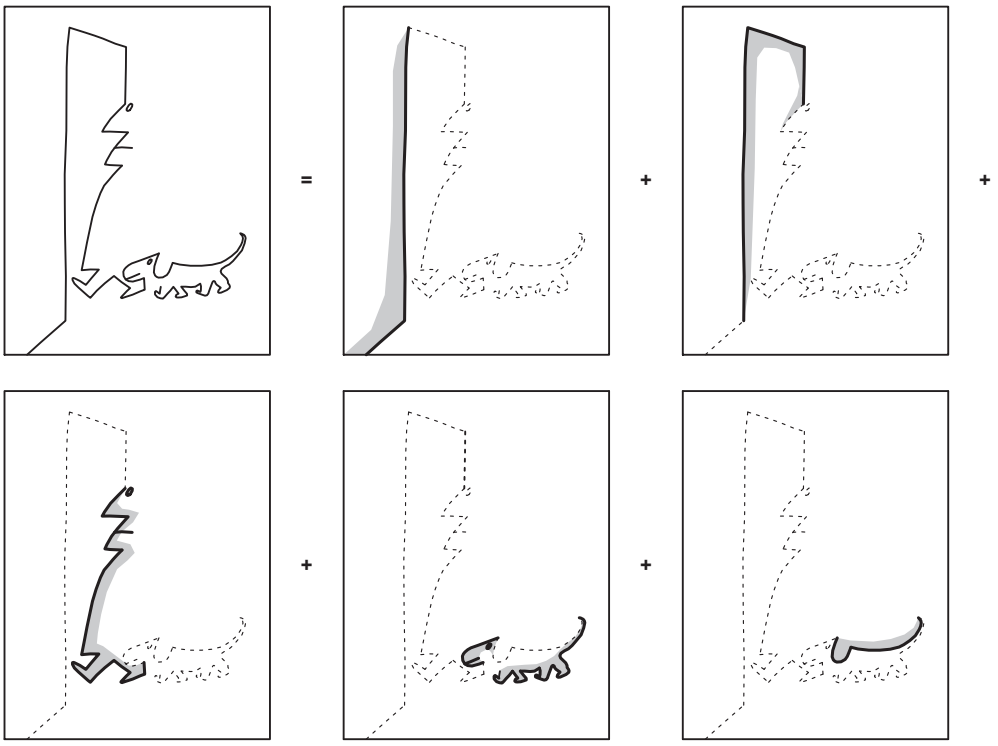


Figure 277: Reconstruction von Saul Steinberg's *Man with Dachshund* (1959)
Syntactic ambiguity: one line describes (fragments of) five planes by the C3 criterion, so there is a Minimal Difference MD of the potentials of attraction of attention (to one and to the other side of the line, see grey planes in the plates); one part of the lines 'belongs' to two different 'figures' (Hybrid H).
Semantic ambiguity: one outlines defines (as a contamination, fragments of) four objects (semantic detractio): a wall, an entrance, a man and a dog. The sixth figure shows the suggestion of a negative representation of space.

2.2.5 Syntactic-semantic ambiguity of sequence:
sequence versus counter-sequence and disturbance of sequence

Linear sequences can be found in and around the nonlinear image:
a) a sequence of several images or of partial images in one image as a representation of the '**timeline**' of a movement or an evolution,
b) monocular criteria of optical depth as a representation of the '**depth line**' of an illusion of space; monocular criteria can be described as a sequence of Minimal Differences (of colours, sharpness of contour, size..., see above).

This two sequences of images/of monocular criteria can be disturbed in one step (semantic substitutio), or two sequences are contrary (semantic transmutatio/antonymity). A disturbance of a sequence of a monocular criterion means syntactic and semantic ambiguity, because in such a case a syntactic order is visibly deranged at only one step; but if two sequences are contrary, one can refer to semantic ambiguity: a shown object appears at the same time as far away and as close.

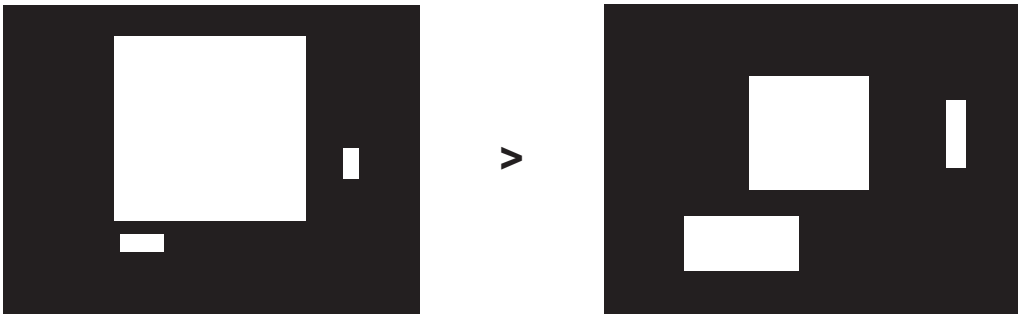


Figure 278: Structure of Hans Richter's *Rhythm 21* (two stills from a 1921 black and white animated film)
There are **opposing sequences of size development**: as the film progresses, the square becomes smaller, one rectangle longer, the other larger. As a result, the square seems to recede into the depths, one rectangle seems to grow upwards standing on the spot, the other rectangle seems to approach the viewer. This is not a pictorial, but a **film-temporal-syntactic ambiguity of two opposing temporal form sequences**, with which a **semantic antonymity of two opposing, depth-illusory movements** can be connected.

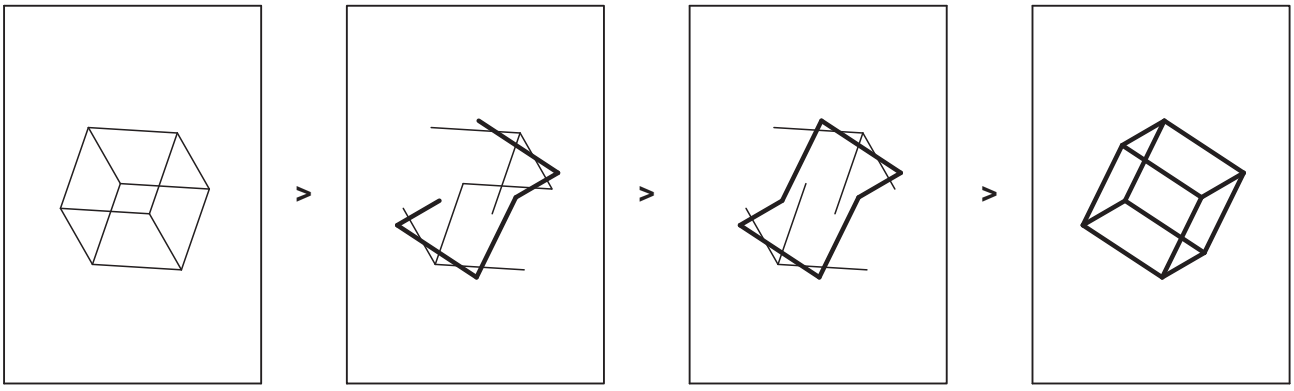
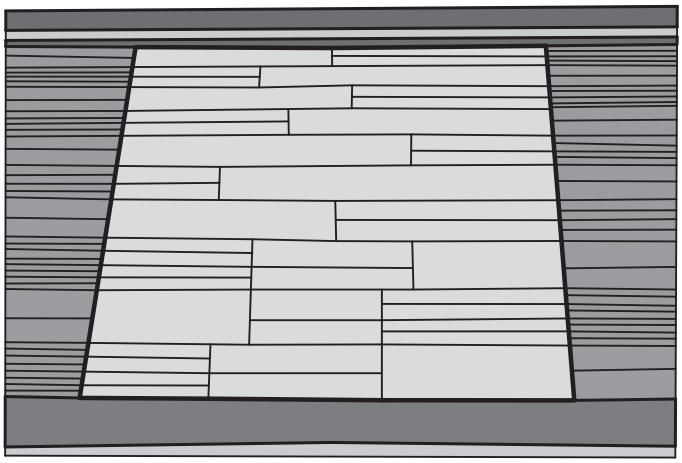


Figure 279: Structure of Manfred Mohr's *Signs with Counter-Signs* (1977; serial of 26 prints of which four are shown).
One sequence of 'appearance' of a cube and one of 'disappearance' of another cube are shown, one drawn into the other. Due to disturbance of symmetry (at the syntactic level already), one can speak of syntactic detractio and re-adjectio; but in the third figure, both groups of lines (distinguishable according to the criteria thickness of line S3 and to orientation S4) are point-symmetrical, therefore these two groups of lines might not be regarded as fragments of cubes. However, the two groups of lines are always in syntactic ambiguity of the Hybrid type (C1/3.1 versus C1/3.2); besides that, there is also semantic contamination of two representations of spatial cubes.

Figure 280: Reconstruction of Paul Klee's *Measured Fields* (1929, drawing and watercolour)
There is semantic antonymity of two contrary sequences of monocular criteria of optical depth:
- the interpretation of 'below = nearby' is evoked by:
convergence of the flanks ('perspective') of the central light plane, reduction of the distances of the modular parallel lines (see second figure) and the change into bluish colours in direction to the top of the image (not shown here)
- the interpretation of 'above = faraway' is evoked by:
reduction of density of texture in direction to the top of the image (at the bottom of the image one module of parallel lines is subdivided into eight/four sections, at the top of the image into four/two sections, which leads to almost constant distances of the subdividing lines, see third figure).
The vertical lines (see third figure) are semantically antonymous with the converging flanks ('perspective', see second figure). The horizontal lines seem to belong to several different areas (> Hybrid H (C1 of the horizontal line versus C3 of one rectangle, see third figure).



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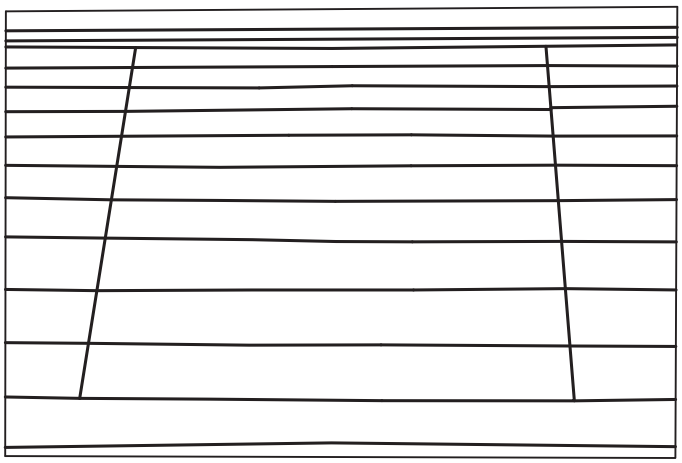

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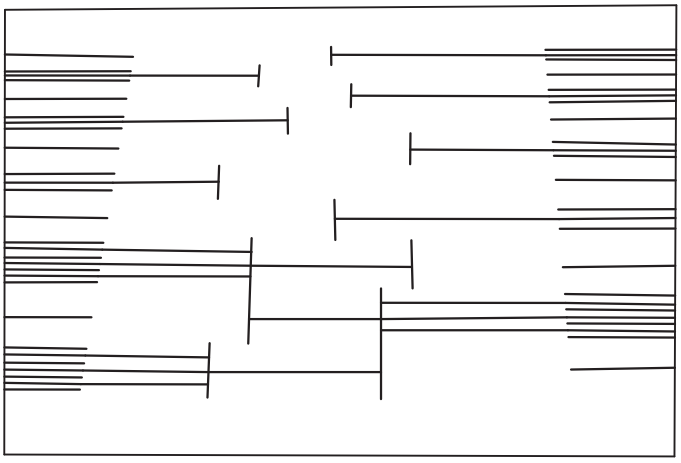
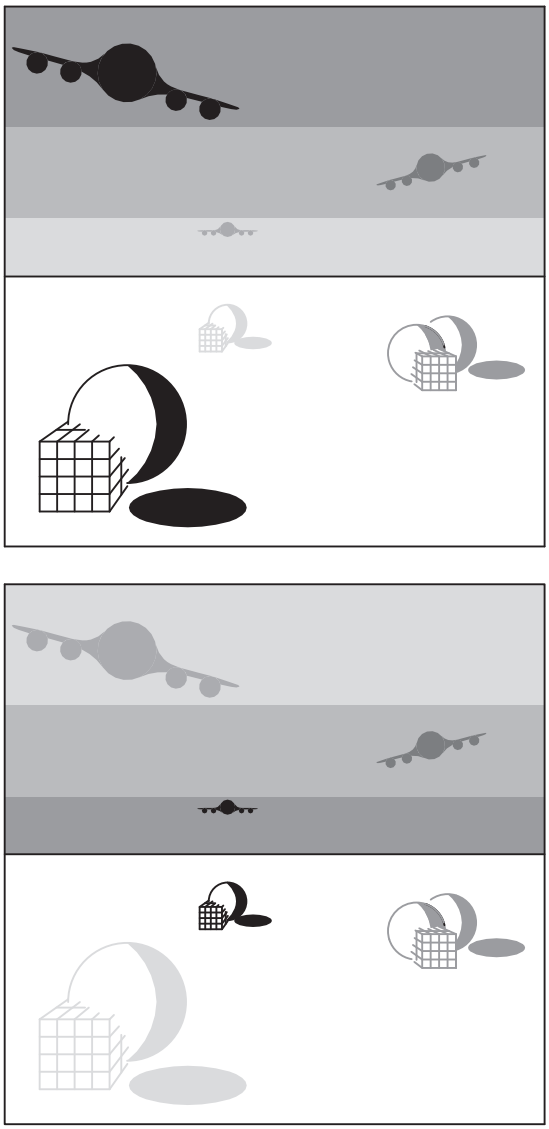


Figure 281: Examples of semantic antonymity of sequences of monocular criterion

First figure:
The following monocular criteria of optical depth are in semantic redundance:
sequence of size/covering/fading of colour/contours getting blurred/density of texture/of approximation of inner and outer shadow/of approximation to the horizon

Second figure:
The monocular criterion of fading of colour is semantically antonymous with the other criteria: relatively large objects (with low density of texture, clearly separated inner and outer shadow and at a large distance from the horizon) have faded colours (which suggests that these are far away from the viewer).
In photography the similar phenomenon of blurred contours of objects a small distance away is called the **blur effect**.
Such effects lead to **pragmatic complementarity** of two functions:
showing versus (metacognitive) 'hiding'.



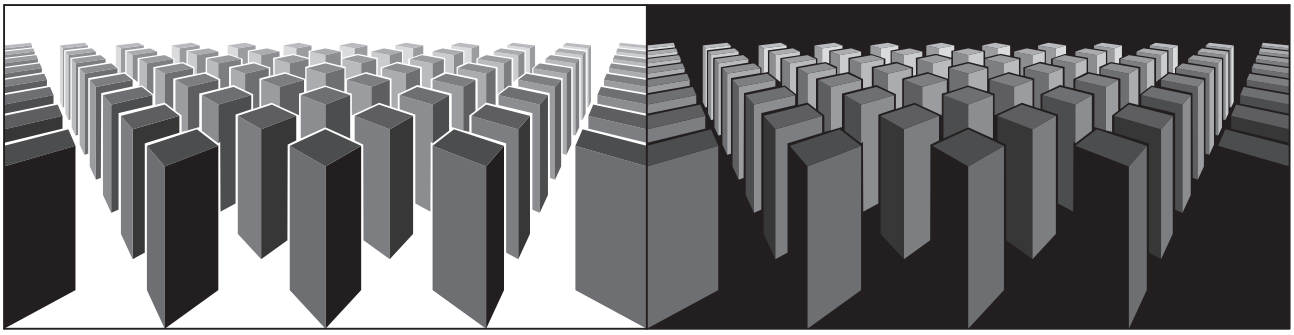


Figure 282: a) Monocular criteria of optical depth and distinction of the figures from their ground; the following page: b) Semantic antonymity of sequences of monocular criteria of optical depth
a) The more a plane is distinguishable from its environment and from adjoining planes, the more attention it can attract and the more it acquires the status of a 'figure' (before 'its' ground) and even of being nearer to the viewer.
b) At the closer distance to the eye (maximum six metres), one refers to binocular seeing because the difference between the images on the retina are interpreted in order to estimate the distance of the object. The distance of an object which is more than six metres away is interpreted with the help of monocular criteria (see chapter above).
Each of the following figures shows the deviance of the sequence of one monocular criterion from those of the others:

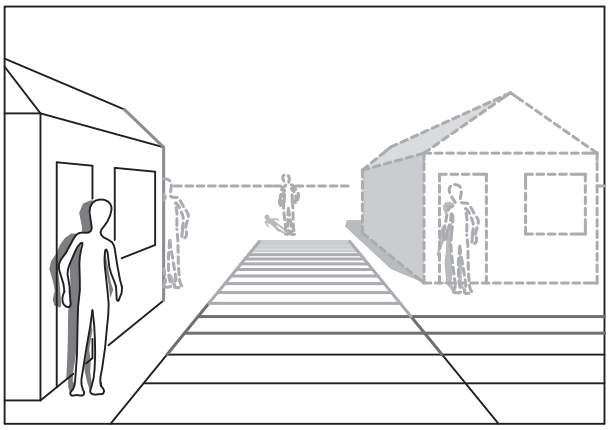
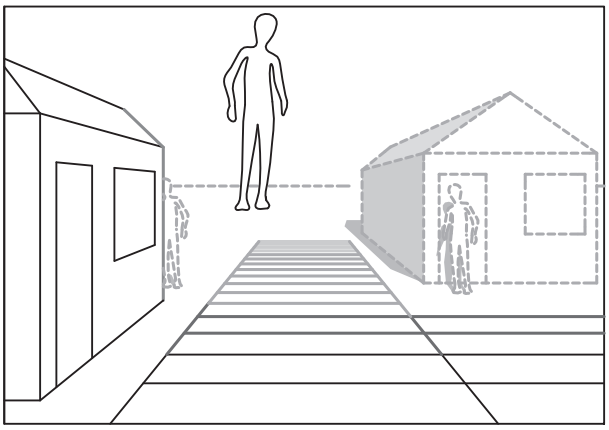
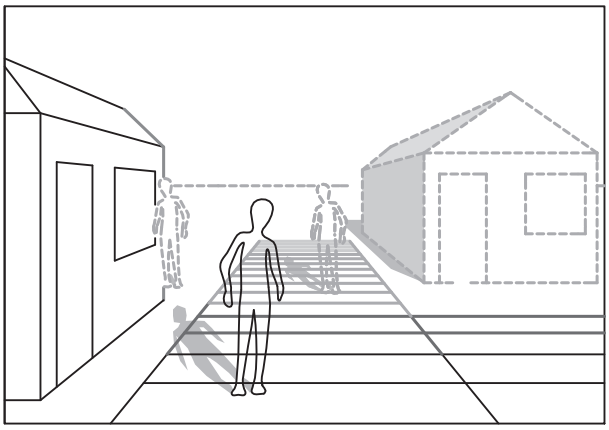


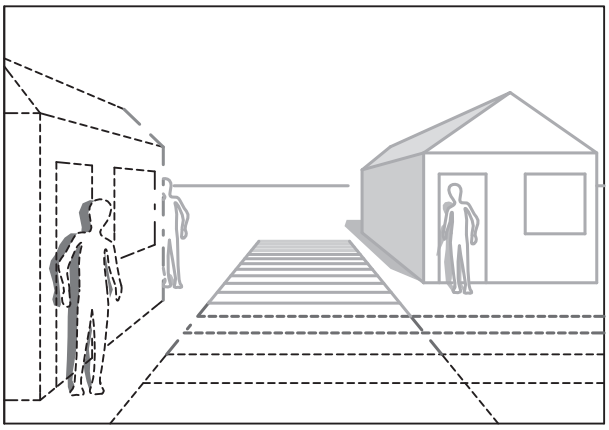
Image without deviance of a monocular criterion from the others



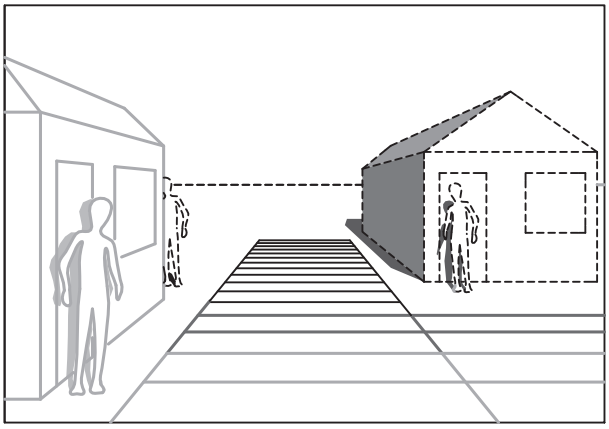
Deviance of the 'sequence of distance to the horizon line' criterion



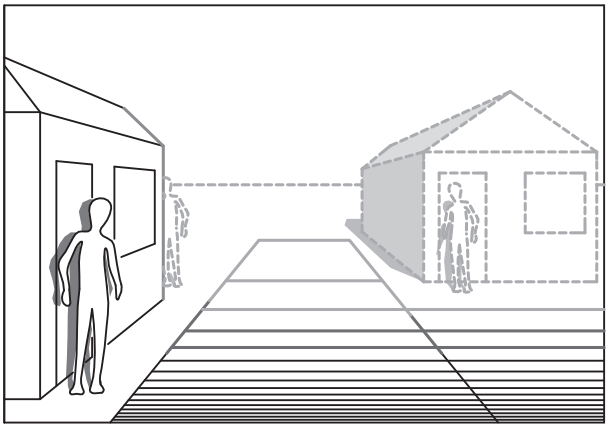
Deviance of the 'sequence of covering' criterion



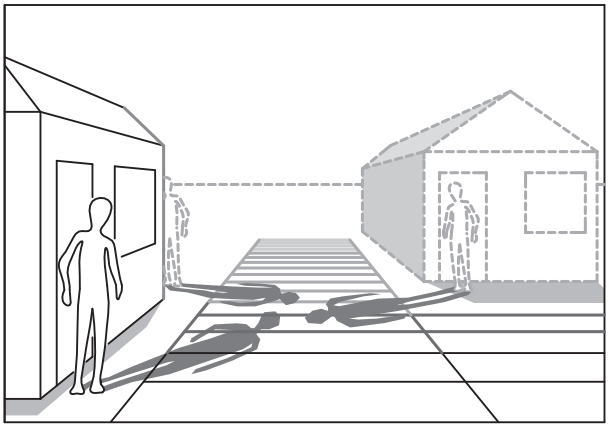
Deviance of the *'sequence of blurring of contour'* criterion



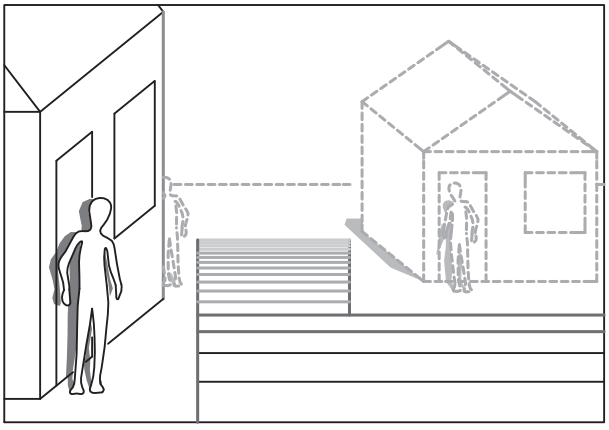
Deviance of the 'sequence of fading of colour' criterion



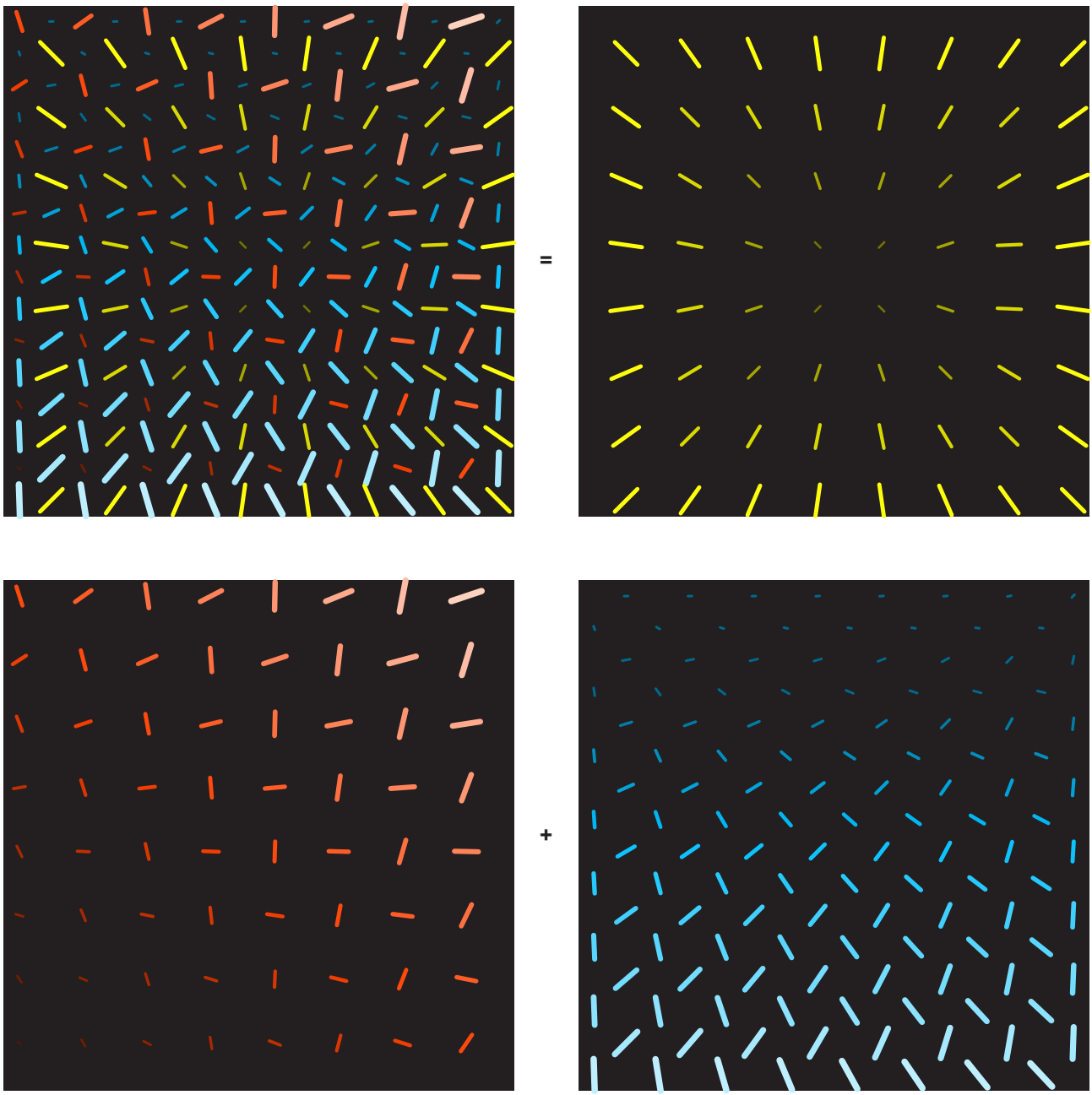
Deviance of the 'sequence of density of texture' criterion



Deviance of the 'sequence of approximation of inner and outer shadow' criterion



Deviance of the 'sequence of approximation of lines of perspective' criterion



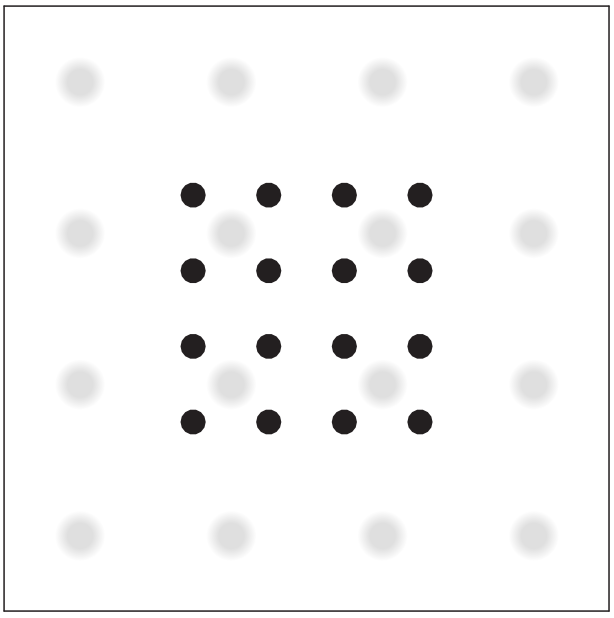
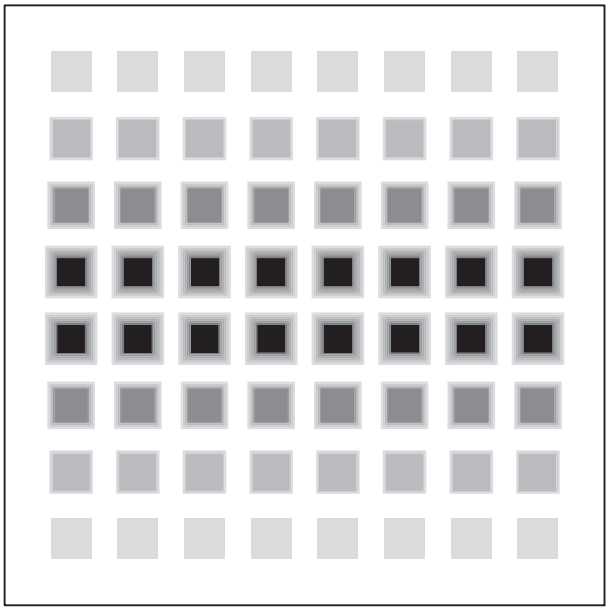


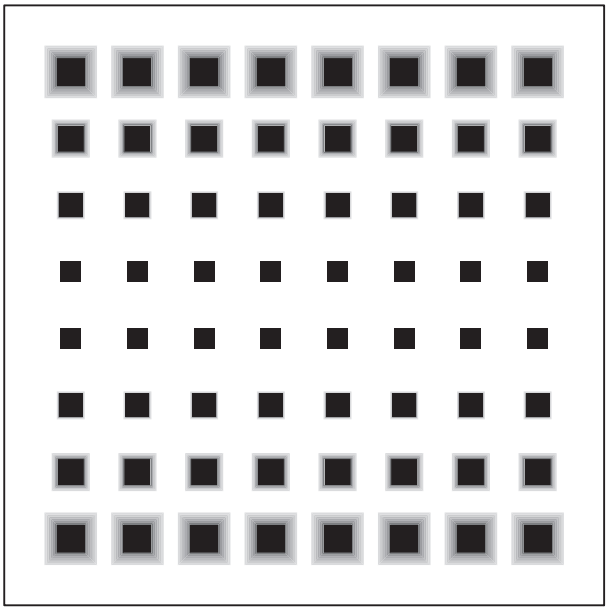
Figure 283: Reconstruction of Axel Rohlfs' *Polyperspectivity PP 10* (first = original, 2020, computer print from *The Art of Fugue in Polyperspectivity*) and *Counter-Movement* (computer print, 2020).

- About *PP 10*: syntactic contamination/Mixture of three groups via S1 and S4, spatial-semantic discrepancy between three different perspectives.
- About *Counter-Movement*: syntactic contamination/Mixture via S2 /(Non-) Sfumato, S1 and S3. In one grey circular plane, two monocular depth criteria define the element as 'near' (relatively larger and further apart from each other in their group > S3 and C2), two others as 'far' away from the spectator (relatively faded in colour /similar in colour to the white ground and blurred /sfumato > S1 and S2); one can therefore refer to spatial-semantic ambiguity as the antonymity of 'near' versus 'far'.

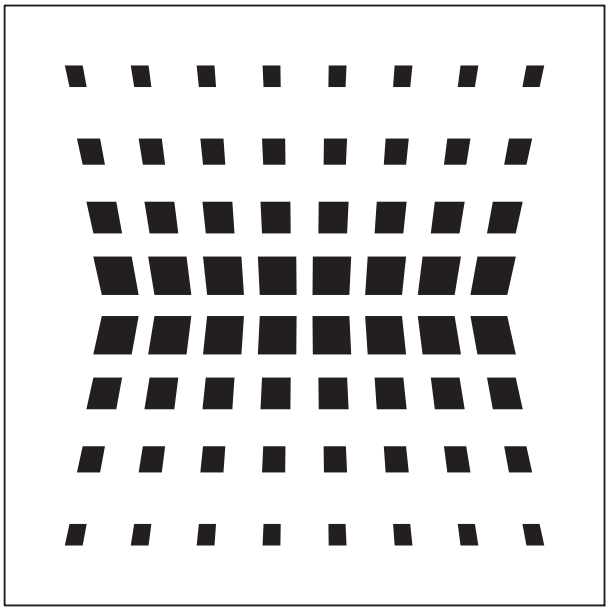
Figure 284 (four pages): Semantic antonymity of sequences of monocular criteria of optical depth in images with a character between representational and non-representational (four pages)
Images which seem to be non-representational sometimes lead to several interpretations, one of which could include spatial depth as 'meaning', but this would be representation of space. An example is the serial *'Homage to the Square'* of the 1950s and 1960s by **Josef Albers** (see figure 139). Such images therefore have semantic antonymity (polysemy of representing space versus the opposite) and pragmatic antonymity (icon versus non-icon for the purpose of metacognition/contemplation).
The following examples show antonymity of sequences of monocular criteria of optical depth, using two unification criteria (S1 - S4, C1 - C4) for an opposition of both: one defines an element as 'nearby', whereas the other criterion defines it as 'far away':



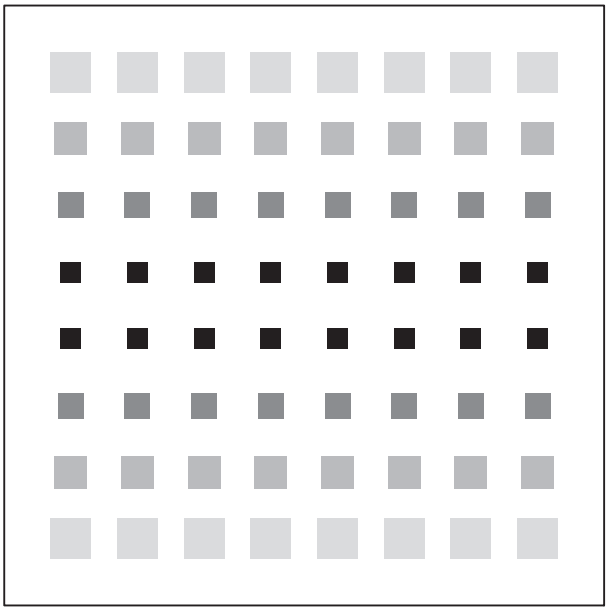
Sequence of fading of colour S1.X versus sequence of blurring of contours S2.X



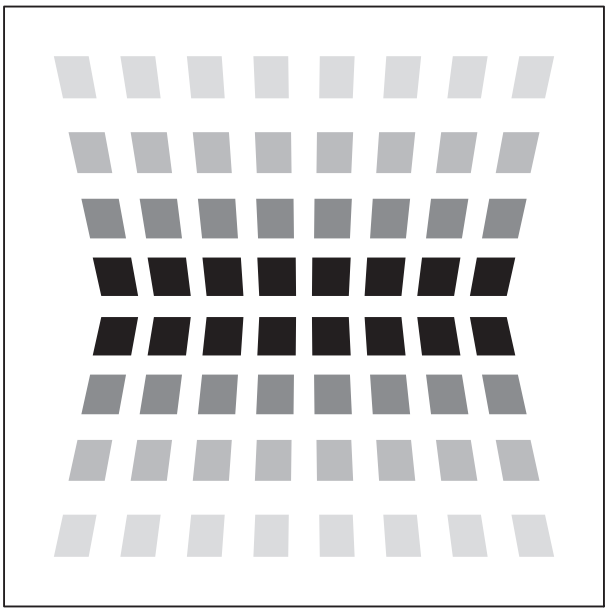
Sequence of blurring of contours S2.X versus sequence of size S3.X



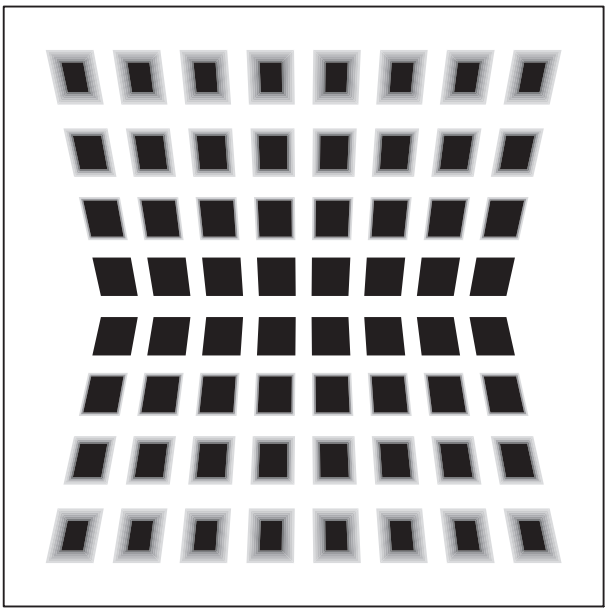
Sequence of size S3.X versus sequence of approximation C2.X



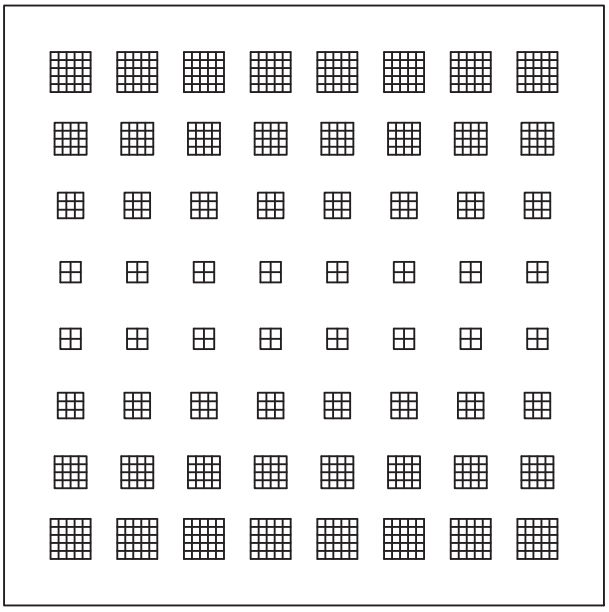
Sequence of fading of colour S1.X versus sequence of size S3.X



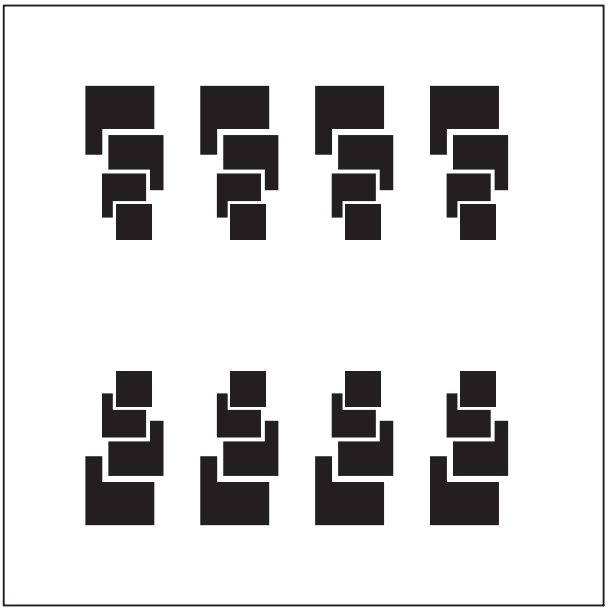
Sequence of fading of colour S1.X versus sequence of approximation C2.X



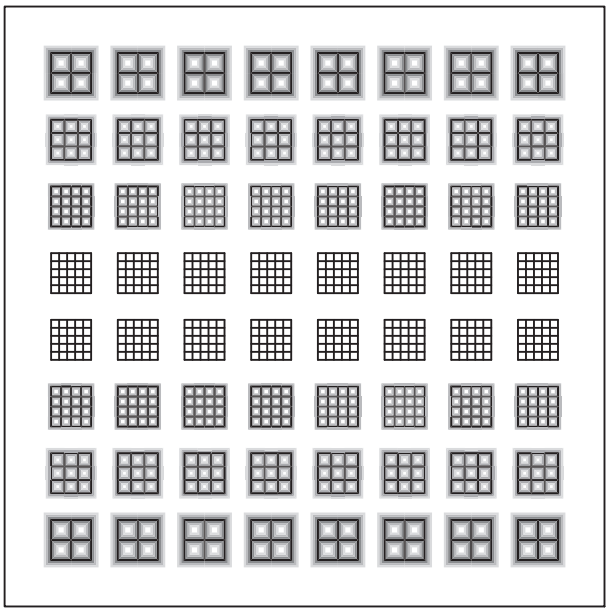
Sequence of blurring of contours S2.X versus sequence of approximation C2.X



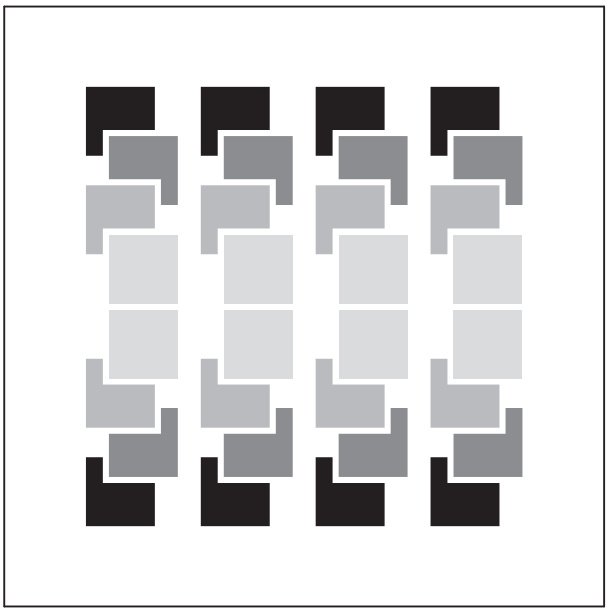
Sequence of density of texture C2.X versus sequence of size S3.X



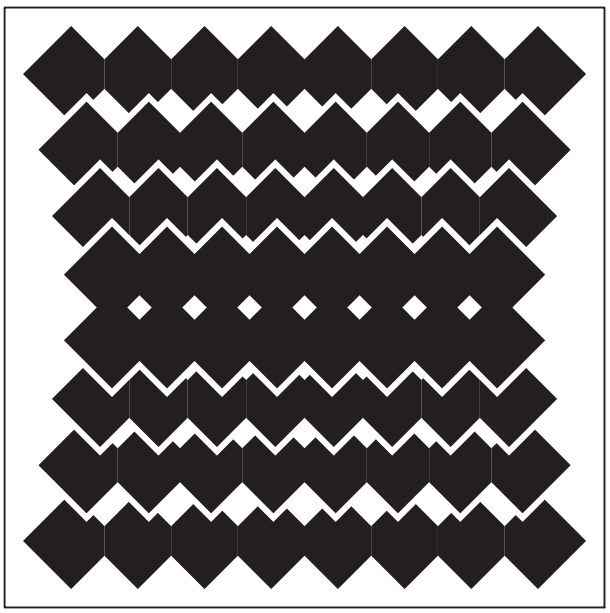
Sequence of covering C3.X versus sequence of size S3.X



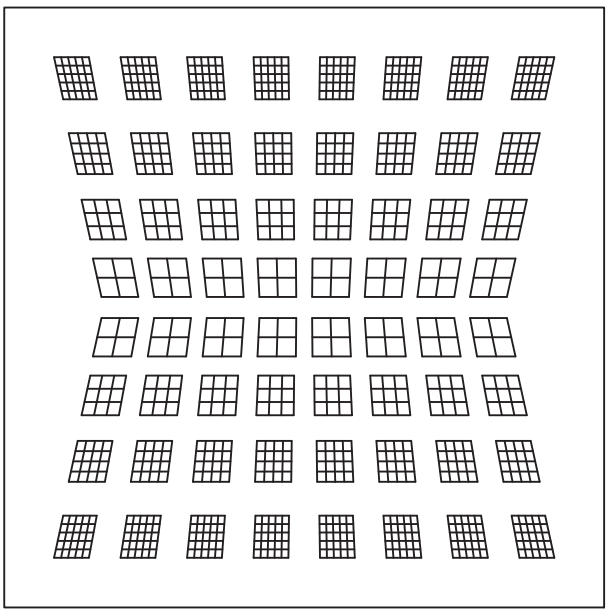
Sequence of blurring of contours S2.X versus sequence of density of texture C2.X



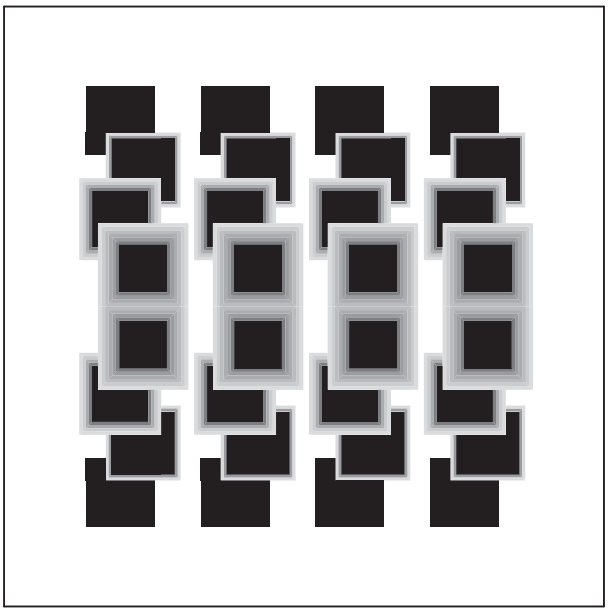
Sequence of covering C3.X versus sequence of fading of colour S1.X



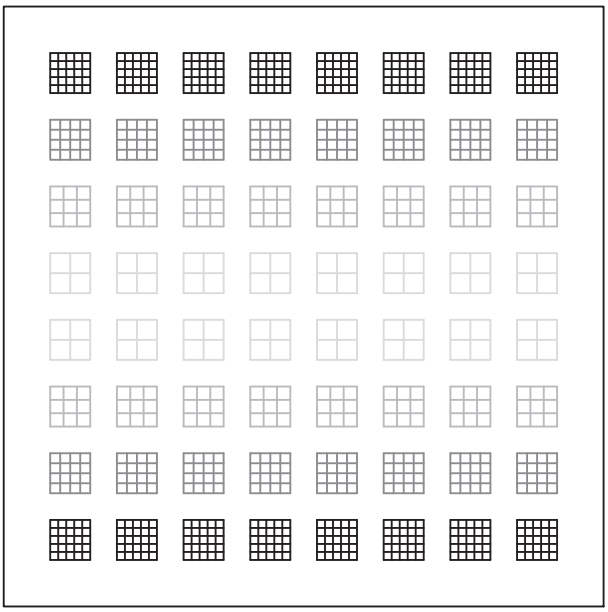
Sequence of covering C3.X versus sequence of approximation C2.X



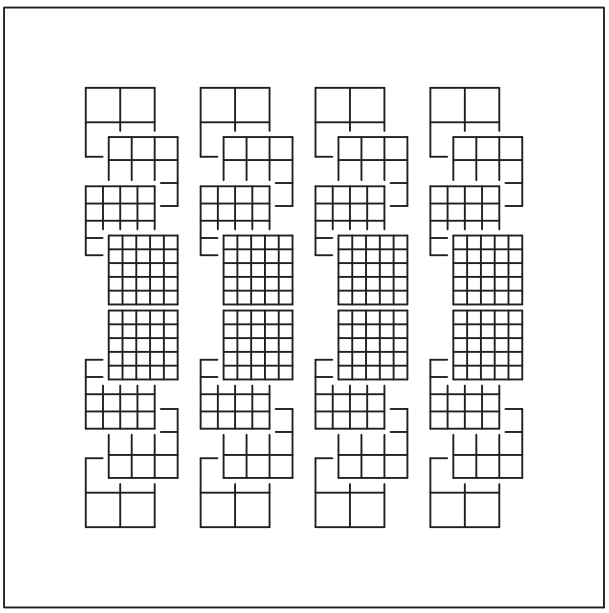
Sequence of density of texture C2.X versus sequence of approximation C2.X



Sequence of covering C3.X versus sequence of blurring of contour S2.X



Sequence of density of texture C2.X versus sequence of fading of colour S1.X



Sequence of covering C3.X versus sequence of density of texture C2.X

2.2.6 Semantic contamination of viewpoints or of moments by syntactic contamination of partial images

Not only modern art explores the possibilities of semantic contamination of space and of time in complex icons with syntactic ambiguity:

- **Futurism** uses syntactic ambiguity of crossing contours (> Hybrid H) or crossing indices of contours (> Mixture M) to show several moments of a movement, instead of only one as in 'normal' images: the object moves.
- **Cubism** uses syntactic ambiguity of fragments of views of different points of view (syntactic detractio + Mixture M), instead of only one as in 'normal' images: the painter moves.

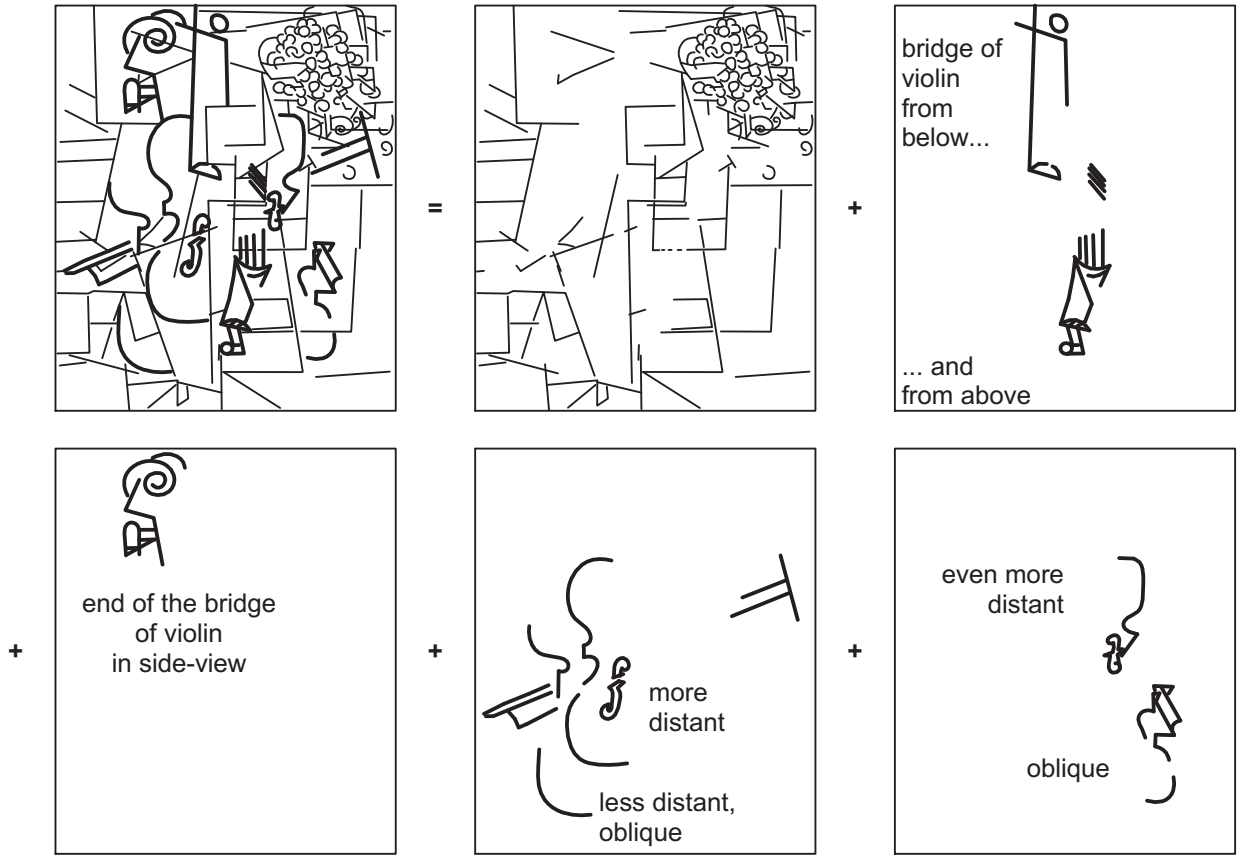
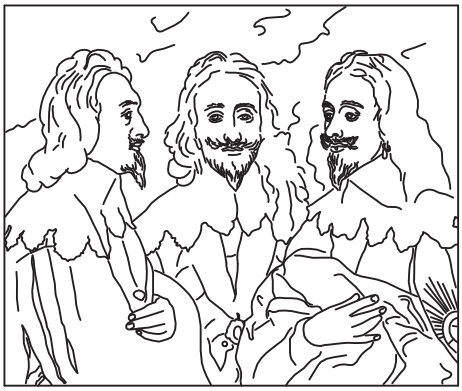


Figure 285: Reconstruction of Pablo Picasso: *Violin and Grapes* (1912, painting)
Syntactic ambiguity: Mixture M (C1.1+ S2.1 rectangular structure of the second figure versus C1.2+ S2.2 curves of the violin of the following plates), syntactic detractio/transmutatio due to disturbed symmetry (of the violin)
Semantic ambiguity: semantic complementarity of seven abstracted, fragmented and contaminated views on the 'violin' object (semantic detractio/transmutatio, see third - fifth figure, may be as a protocol of the 'walk' of the attention?)

Figure 286: Structure of Anthony van Dyck: *King Charles I in three Positions* (1636, painting)
There is semantic complementarity of three positions in **space** and of three costumes (as a sign of three moments of **time**), but no syntactic ambiguity because partial images are added to each other.



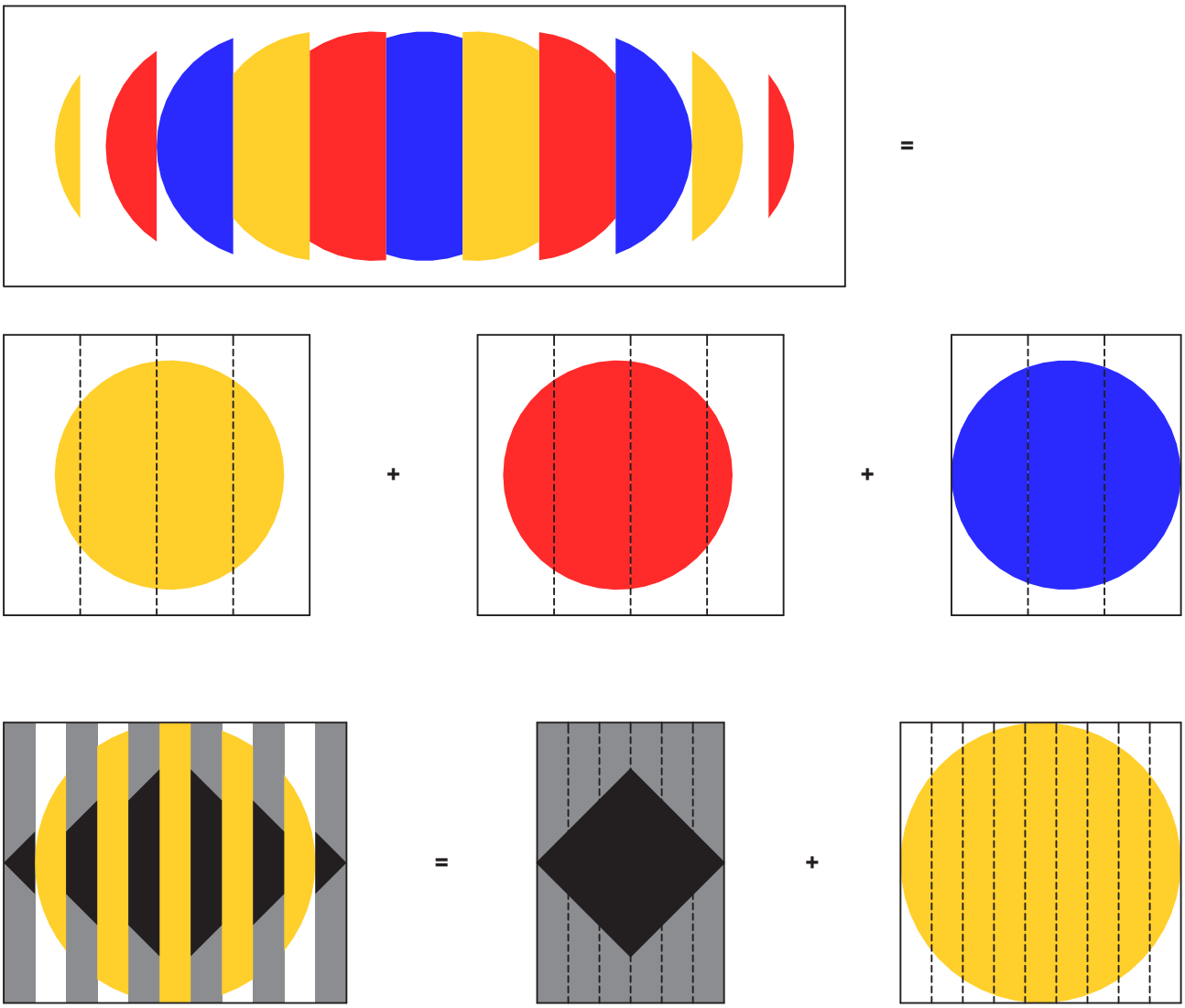


Figure 287: Structure of Jirí Kolár's 1960s *'Rollages'* serial (distortion by collage)
Mass media photos were cut into strips by Kolár. These strips were mounted on paper, in conjunction with strips of another print of a photo.
In the **first example**, three prints of the same photo are cut in three different ways and are combined to create the impression of vibration/movement (~ 'semantic detractio + transmutatio'); after a while, cognition reconstructs the fragments of one print with its complementary pieces across the other stripes, above all by using the C1 criterion of contours (> syntactic detractio/transmutatio + Mixture M).
In the **second example**, two prints of different photos are cut into stripes and combined, but every second stripe of one photo (grey circle) is substituted with a stripe of the other photo; its motif (black square) is therefore distorted. This can be identified as syntactic ambiguity: Mixture M (of two groups which are cognitively unified one across the other due to C1, S1...) and syntactic substitutio + transmutatio of two schemes (grey circle and black square).

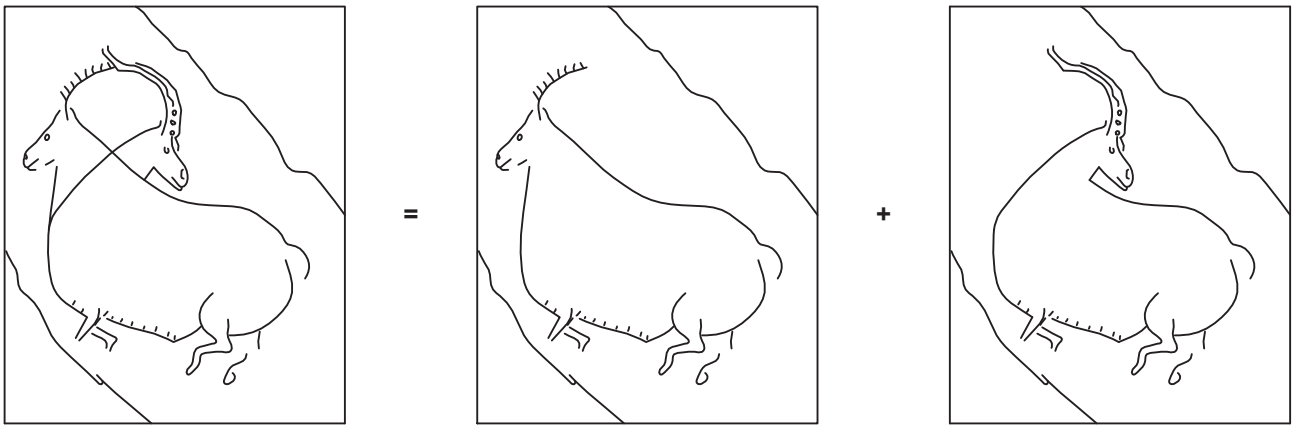


Figure 288: Reconstruction of prehistoric drawing carved in stone at Vale do Côa (Portugal): *Ibex turning around* (ca. 18.000 BCE, detail).
Syntactic ambiguity: bifurcation of a line at the neck of the ibex (Hybrid H (C1.1 versus C1.2), a point of intersection of two lines on the other side of the neck (Hybrid H (C1.1 versus C1.2) and therefore an overlapping of two areas (Hybrid H (C3.1 outline of ibex looking forward versus C3.2 outline of ibex looking back)
Semantic ambiguity: semantic complementarity of two moments of one movement; this is an example of the principles behind the **chronophotography** of Marey, film and Futurism long before the Futurism of our times (see below).

Figure 289: Reconstruction of Marcel Duchamp's *Nude, descending a staircase No. 2* (1912, painting).
Syntactic ambiguity: Mixture M (C1.1 versus C1.2 versus..., S2.1 curved forms versus S2.2 lines), sometimes Hybrid H at points of intersection of lines
Semantic ambiguity: contours of head, hand, leg and so on are contaminated as the representation of moments of a movement, but a clear assignment of one hand to one head, for example, is impossible.

Figure 290: Reconstruction of Jean Metzinger's *In the Stadium* (ca. 1911 - 12, painting)
Syntactic ambiguity: Hybrid H (C3 contour of the racing cyclist versus S1 + S2 background), within the symmetrical contour of the racing cyclist some three kinds of planes can be distinguished: planes of the racing cyclist/of the street/of the stadium, so the following types of ambiguity can be identified within the cyclist form: syntactic detractio of the symmetrical form of the racing cyclist + Hybrid H (C3 of the contour of the racing cyclist versus C4 of the planes), Mixture M of these three groups of planes
Semantic ambiguity: semantic detractio/substitutio of parts of the body of the racing cyclist, contamination of three spaces (as representation of movement?): of the body of the racing cyclist, of the stadium and of the street (outside the stadium?). The street is represented with horizontal lines; these could refer to movement of the viewer-painter himself. This would mean a contamination of two modes of view of the painter: standing versus in motion. The racing cyclist would represent a synthesis of both modes by syntactic Mixture M then. The curved lines in one wheel of the left bicycle directly show movement; the bicycle in the centre is represented as a kind of shadow which could refer to movement as well.

2.3 Semantic ambiguity
2.3.1 Semantic ambiguity and syntactic-semantic ambiguity: contamination of representations of the inner and the outer human body

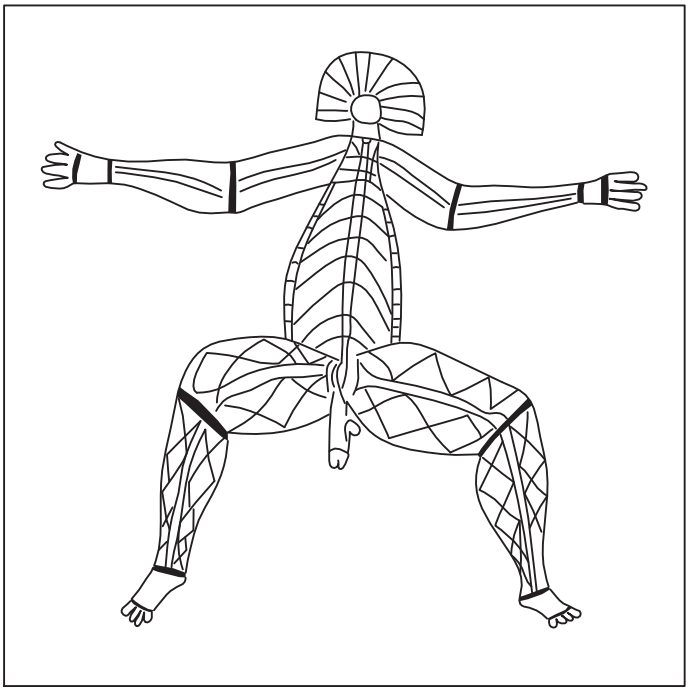


Figure 291: Structure of a work of Aboriginal art: *God, Kakadu* (ca. 6000 BCE, painting on rock)
Semantic ambiguity: quasi-semantic substitutio of a view of the outer body, which leads to semantic complementarity of a 'roentgenogram' (outline of the outer body versus interior/skeleton of the human body)

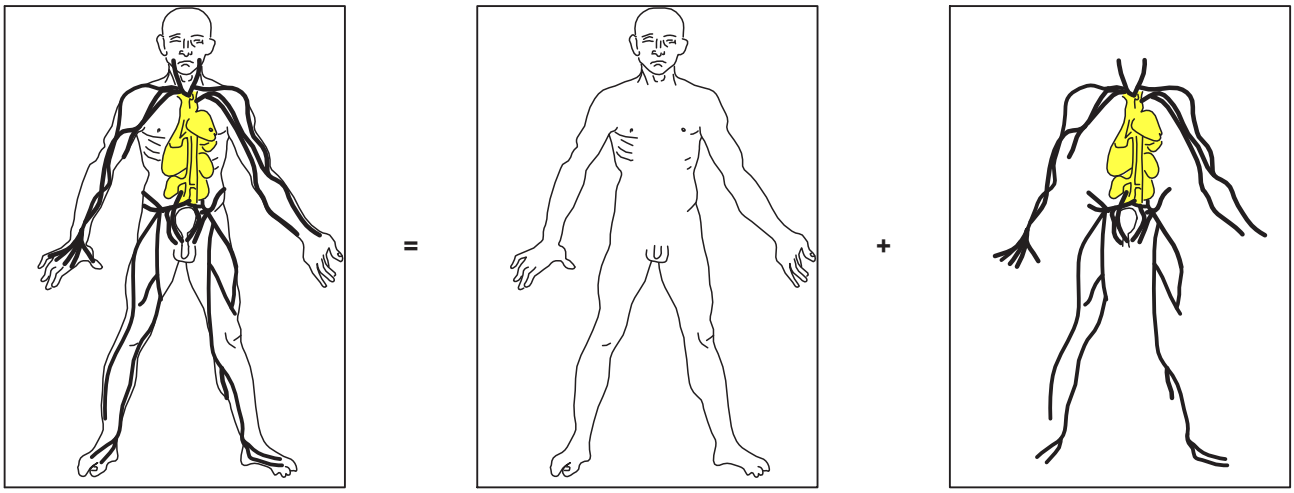


Figure 292: Structure of Leonardo da Vinci's *Heart, Lungs, Arteries/anatomical Study* (ca. 1490/95, coloured drawing)
Syntactic ambiguity: bifurcation of the lines of the arteries (Hybrid H (C1.1 versus C1.2), one nipple is in the coloured plane of the heart (Hybrid H (C3 + C4 heart versus S2 pair of nipples)
Semantic ambiguity: similar to the work above, semantic substitutio + complementarity (outer versus inner body)
In Italian Renaissance art, there are numerous ambiguity phenomena, such as the aforementioned one or the **Sfumato** technique used by da Vinci; this is a contamination of figure and its background by blurred contours (i.e. Minimal Differences MD of colour) of objects nearby, thus creating the impression of a large distance or untouchableness. **Titian** and others painted cloth that shows changing colours depending on the point of view ('**Taft Changeant**'). In Mannerist art (**Parmigianino, El Greco,** et al.) representations of human bodies are lengthened, like in Gothic art (semantic substitutio + adjectio).

2.3.2 Semantic ambiguity of contamination of symbols versus icons, of ideas versus phenomena and of two cognitive channels

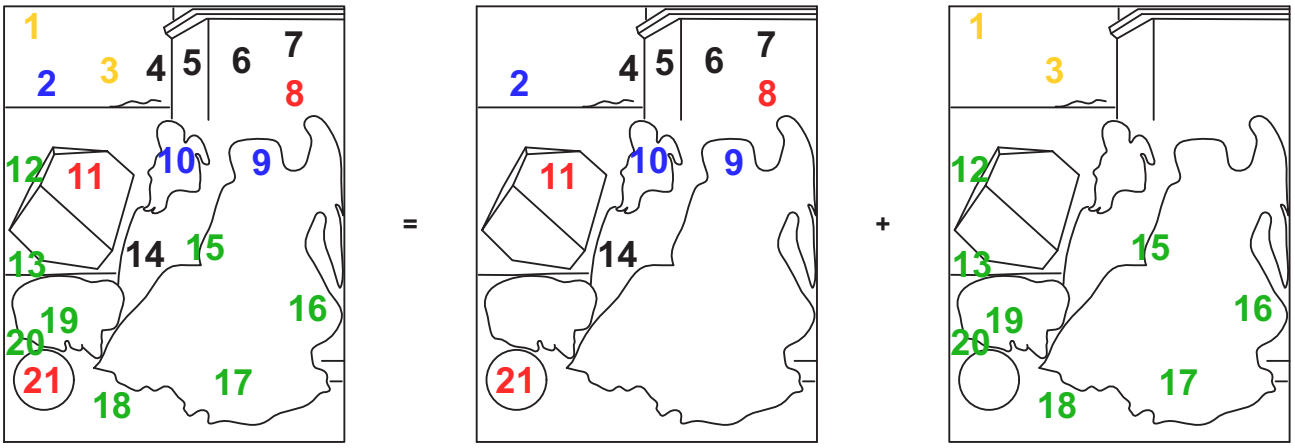


Figure 293: Reconstruction of the contamination of five groups of objects (which are distinguishable by their different potentialities to become a symbol) in Albrecht Dürer: *'Melencolia I'* ('Melancholy I' 1514, etching)
The five groups of objects form constellations which are mixed:
yellow = inorganic nature, blue = mythological creatures with their accessories, black = instruments with direct reference to measurement in general or symbolic reference to measurement of time/to transitoriness, red = mathematical objects, green = everyday tools, objects or animals):

1 (moon-)rainbow above the sea, 2 flying (mythological) creature/monster holds the title 'Melencolia I', 3 star (Saturn/comet/meteor), 4 ladder with seven rungs, 5 pair of scales in equilibrium, 6 hour glass with sun dial, 7 bell with rope going out of the image, 8 Magic Square (result of every row of addition is the same which could mean: 'result of every life is death'), 9 figure resembling an angel, decorated with fresh branches, 10 Putto with tablet for writing/drawing, engraver's tool and scraper for etching, 11 polyhedron, 12 instruments of alchemy: basin full of burning pieces of coal, melting pot and tweezers, 13 hammer, 14 millstone, 15 dividers and closed book, 16 bowl, 17 bag/purse, 18 tools on the ground (from left to right): marking gauge, plane, tongs, saw, ruler, nails, mouthpiece of bellows, 19 hound, 20 writing utensils/sword knot tool, 21 ball.

Dispersed objects which even today are understood as symbols lead to the tendency of interpreting every object as a symbol, but a distinction should be made from personal associations and culturally based interpretations. The limits to the potential of becoming a symbol are not definite, probably not in Dürer's lifetime either. This uncertain symbolic potentiality could be part of the meaning as well. The contamination of symbolic and iconic potentiality lead to their reciprocal enrichment of meaning: everyday objects become 'symbolic traps' of spiritualisation (which lead to less capability of managing everyday life) and symbols as ideal objects become profane within tools of everyday life as 'iconic traps' limited to everyday life. This dual process of loss by enrichment might be one **dilemmatic source of melancholy** in addition to limitation/death as the end of every life (see **8 Magic Square (result of every row of addition is the same which could mean: 'result of every life is death')**).
The multi-constellation of five groups of dispersed objects/symbols is similar to the syntactic ambiguity of the Mixture M type; this could be interpreted as a representation of 'contingency' (in a philosophical sense), as density of data from the world outside without the possibility of making distinctions. The objects as objects are in semantic discrepancy, but there is a cognitive tendency to reduce the complexity by interpretation based on the title 'Melancholy I'.

2.3.3 Semantic ambiguity of deviance of a pictorial-rhetorical change ('ars') from a remembered scheme ('natura')

2.3.3.1 Semantic adjectio

The following images of rhetorically altered human bodies of a miraculous people (based on ancient texts) are taken from the world chronicles of **Hartmann von Schedel**; the co-text 'world chronicles' suggests that the pictorial-rhetorical operations in these images have been used to produce meanings of a possible world (see possible world theory).
René Magritte's surrealistic counter-examples belong to the context of surrealistic initiation of associations as a kind of psychologically felt/perceived reality.

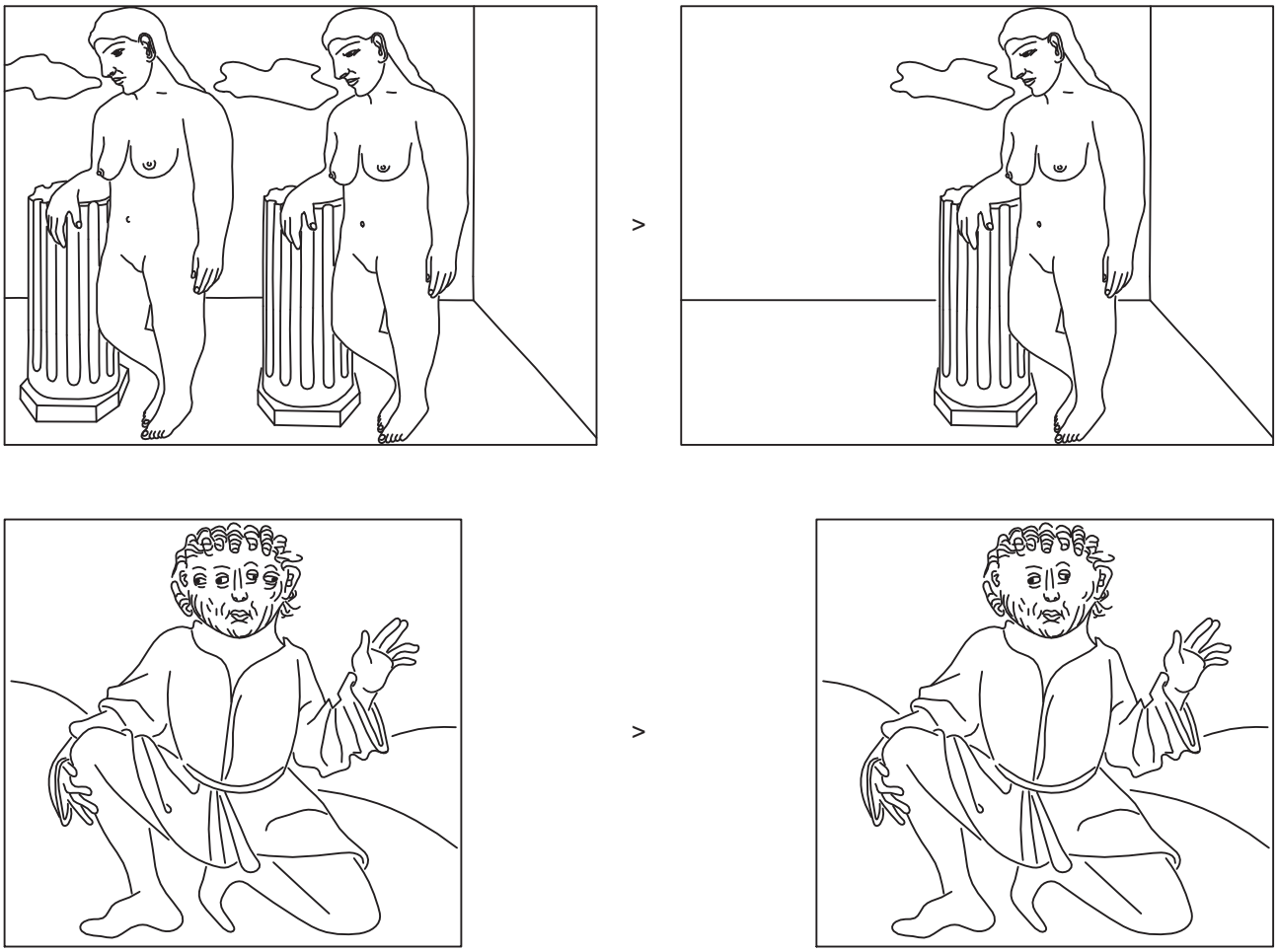


Figure 294: Comparison and variation of two examples of semantic adjectio:
structure of René Magritte: *The enchanted Pose* (1927, painting) and
structure of Michael Wolgemut + Wilhelm Pleydenwurff: *Miraculous People/Man with four Eyes* (Schedel's World Chronicles, 1493, wood print in a book)
Magritte is adding its whole copy to an individual body in a pose which lead to a semantic antonymity (individuality versus non-individuality). This means a strong cognitive discord that moves the recipient to interpretations of weaker opposition such as semantic discrepancy or complementarity. A complementary relationship between the two partial bodies/images could be won by declaring one as original and one as a copy of it (time) or by supposing that this body can appear at different places at once (space).

Wolgemut/Pleydenwurff add two eyes but they have to enlarge the face as well (semantic adjectio + transmutatio of contour of the face). The addition leads cognition to the focus on quantity.

2.3.3.2 Semantic detractio

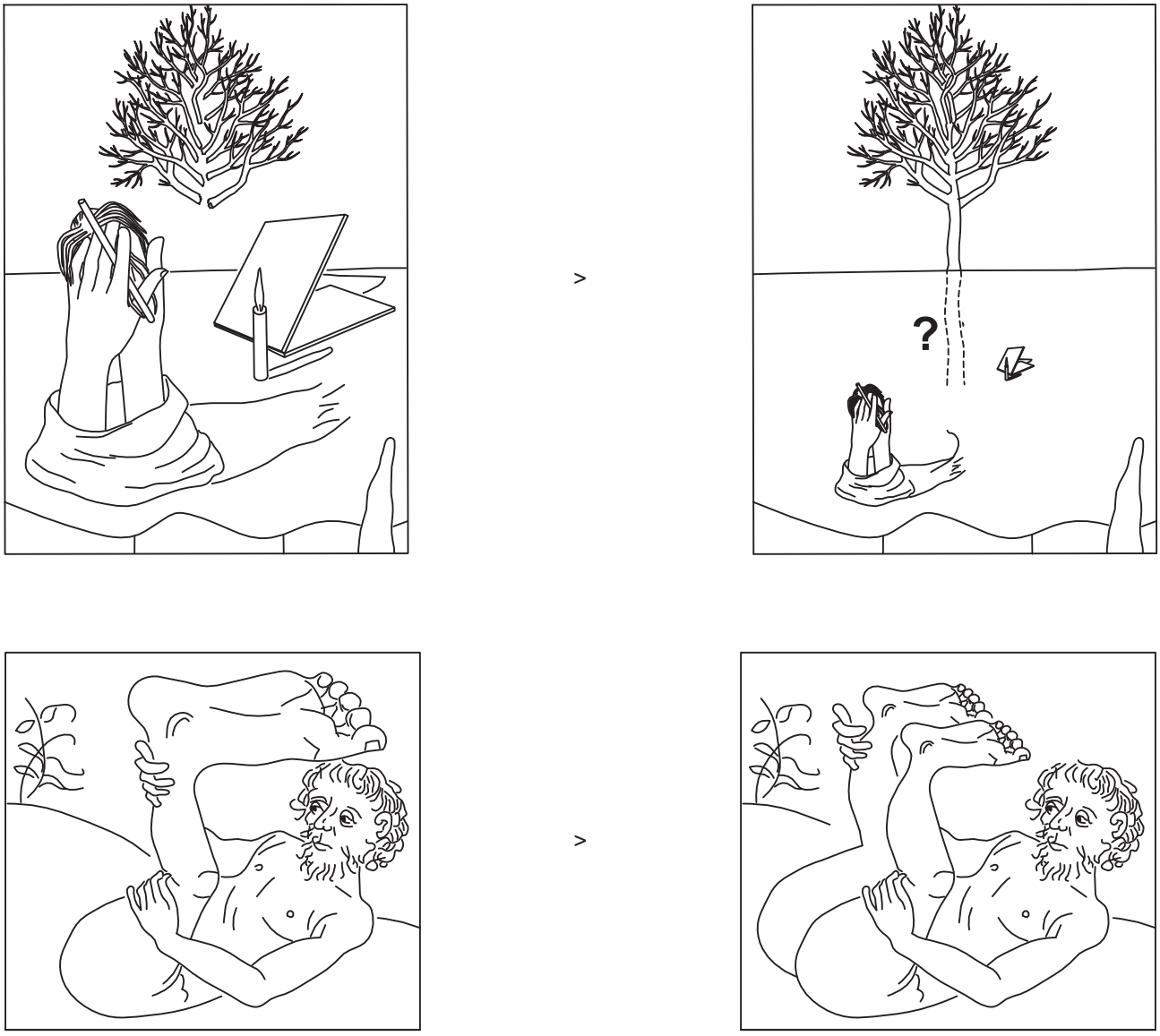


Figure 295: Comparison and variation of two examples of semantic detractio:
structure of René Magritte's *Dawn of Day in Cayenne* (1926, painting) and
structure of Michael Wolgemut + Wilhelm Pleydenwurff's *Miraculous People/Skiapode (human being with one foot)* (World Chronicles of Schedel, 1493, wood print in a book)
The tree without trunk has several indices C1 which point to an empty place (a kind of sign for 'absence'). Spatial and temporal embedding of this fragment of tree seem to be uncertain: where is the position in space (see second figure)? Does it appear or does it disappear? The fragments of hands (semantic detractio) have a clear position but these and the candle seem to be enlarged relative to the fragment of tree (semantic substitutio + adjectio).
The form of the human being with one foot has asymmetry which even creates the impression of syntactic deviance, not just semantic deviance. The foot is enlarged in every direction (semantic substitutio + adjectio as well): a missing foot would be so strange, so the authors had to enlarge the foot.
Magritte emphasises the impossibility and unnaturality of his dream image as semantically antonymous with nature by creating the impression of absence and of unnatural proportions, the human being with one foot could be seen as something still possible within our biological world (it is a world chronicle!).

2.3.3.3 Semantic substitutio

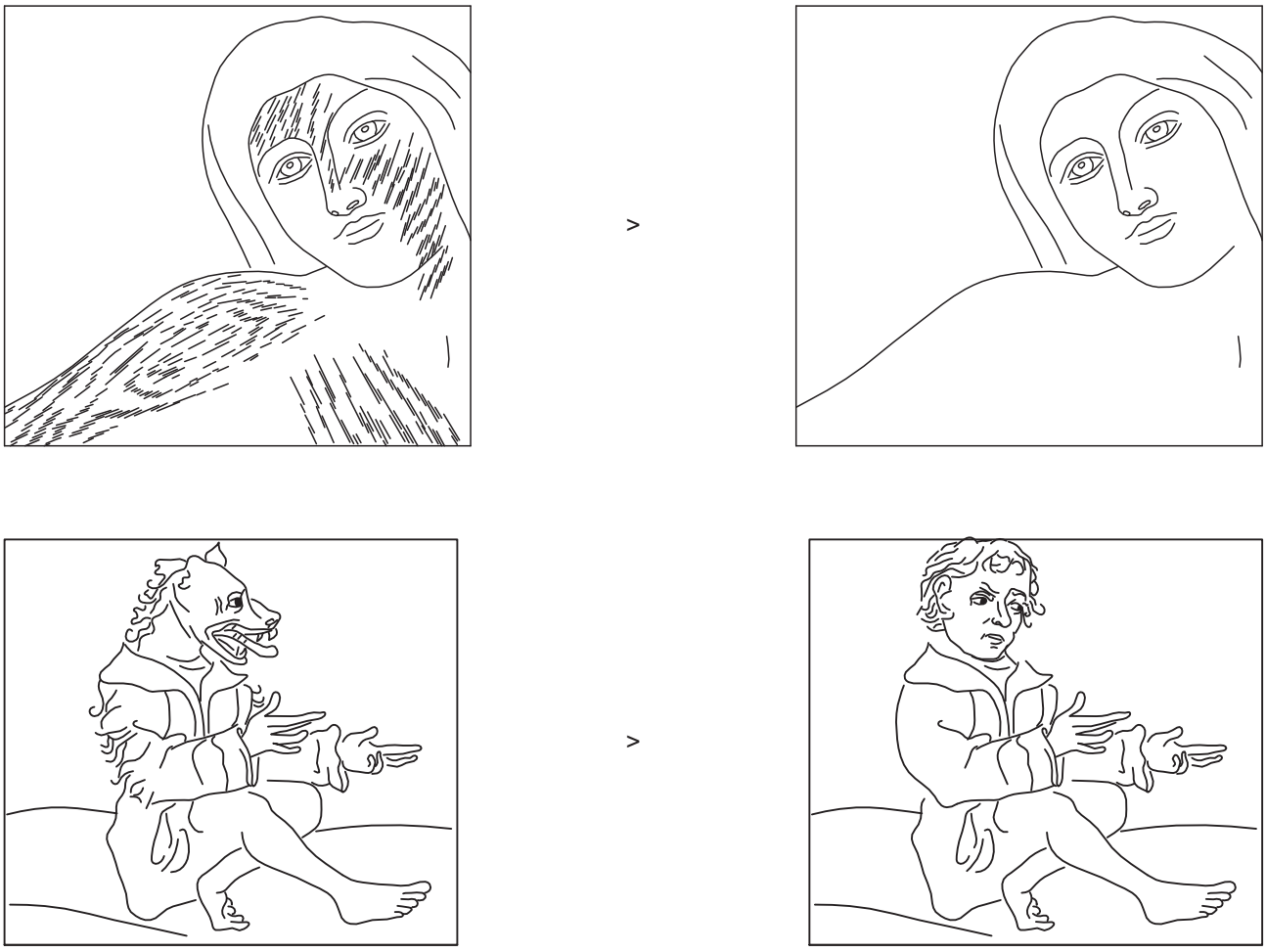


Figure 296: Comparison and variation of two examples of semantic substitutio:
structure of René Magritte's *Discovering* (1927, detail, painting) and
structure of Michael Wolgemut + Wilhelm Pleydenwurff's Miraculous People/*Kynokephale (human being with the head of a dog)* (World Chronicles of Schedel, 1493, wood print in a book)

René Magritte has substituted part of the skin of a woman with the texture of wood; there is no sharp borderline between the two surfaces, but Minimal Differences MD. This substitution may also appear as the addition of streaks of wood.

Wolgemut/Pleydenwurff substituted the head of a human being with the head of a dog (semantic substitutio) and added hairs to the rest of the body (adjectio); in addition to one main operation, there are often other operations.

Substitutions often lead to contamination as a clear opposition of two distinguishable semantic concepts; in these two examples, we find the following contaminations: 'wood/tree' versus 'human being' and 'dog' versus 'human being'. The relation between the concepts is a discrepancy which can be interpreted as complementarity by producing associations such as *'The vegetative/animal tendency in a human being.'*

Such contaminations produce uncertainty with regard to temporal embedding: is it a process of transformation or a stable state? If it is a transformation: from one entity to the other, or vice versa? Spatial embedding is linked to the concepts 'wood/tree', 'dog' and 'human being': space of nature versus space of culture (see textiles of the human being): in the process of interpretation, it is possible that there is reciprocal enrichment of meanings between the two concepts in contamination.

2.3.3.4 Semantic transmutatio

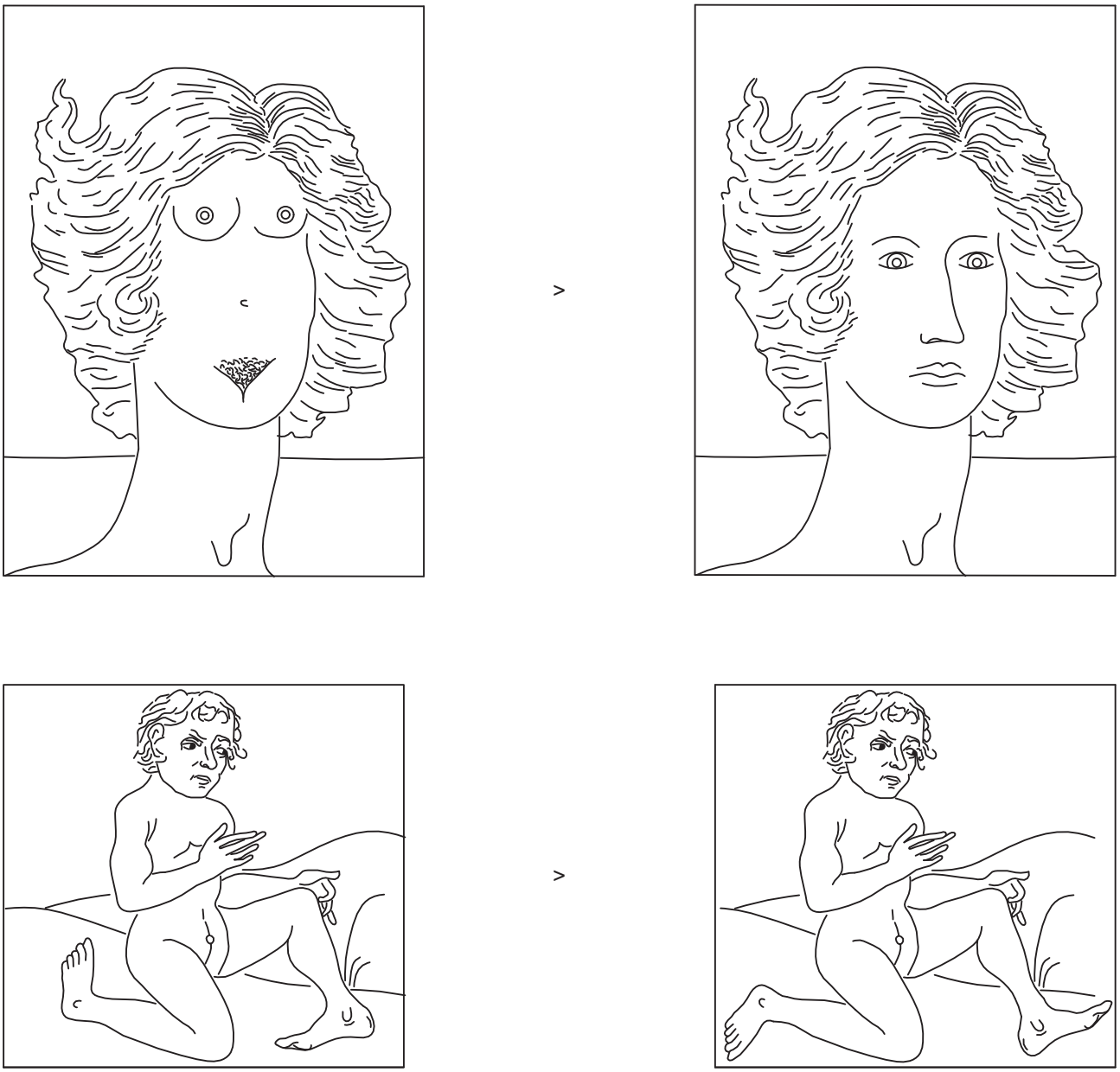


Figure 297: Comparison and variation of two examples of semantic transmutatio:
structure of René Magritte's *The violation* (1934, painting) and
structure of Michael Wolgemut + Wilhelm Pleydenwurff's *Miraculous People/ Antipode* (human being going backwards) (Schedel's World Chronicles, 1493, wood print in a book)
In Magritte's works, one can identify swapped positions of breasts/eyes, navel/nose, genitals/mouth; the substitutions have a reduced size (semantic detractio/transmutatio of contour). The reciprocal enrichment of contaminated concepts means an enrichment of the two contaminated functions of the swapped body parts as well; in addition to this, there is semantic antonymity (forms of high individuality for recognition (face) versus forms of less individuality (lower part of the body), ability to speak (mouth) versus no such ability (genitals)).
Wolgemut/Pleydenwurff have changed the direction of human movement, so one can identify a 180-degree linear-semantic transmutatio of the concept of 'going straight forward'.

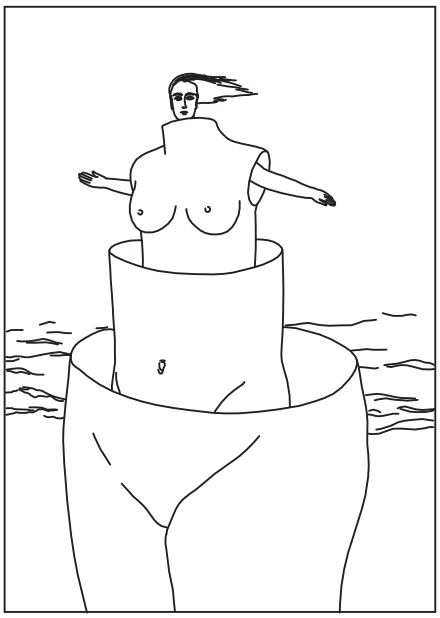
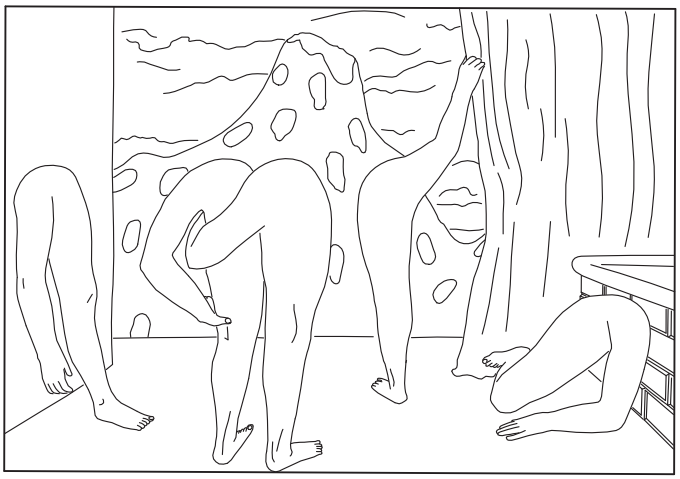


Figure 298: Structure of René Magritte's *The Importance of Wonders* (1927, painting)
One can identify semantic substitutio + detractio (substitution of parts by similar but smaller parts) and semantic detractio (the inner parts of the body have been taken away). Assignment to the 'transmutatio of contour' type should be reserved for partial morphing without distinguishable parts as objects of substitution, as in this case.
Substitutio does not lead here to a contamination of two concepts (although one could speak of a contamination of four dimensions, which could be interpreted as a mental image of self-perception, for example).

Figure 299: Structure of René Magritte's *Entr'acte* (1927, painting)
There is a combination of semantic detractio + transmutatio + adjectio (removal of the parts of the body which define its sex + moving of the remaining parts to each other + addition of links between the fragments which appears as a kind of morphing= transmutatio of contour); the consciousness seems to be removed from the (missing) brain into the muscles. The missing determination of sex can be correlated with the title 'Entr'acte': a period between two parts of a drama in which fixed roles are absent.



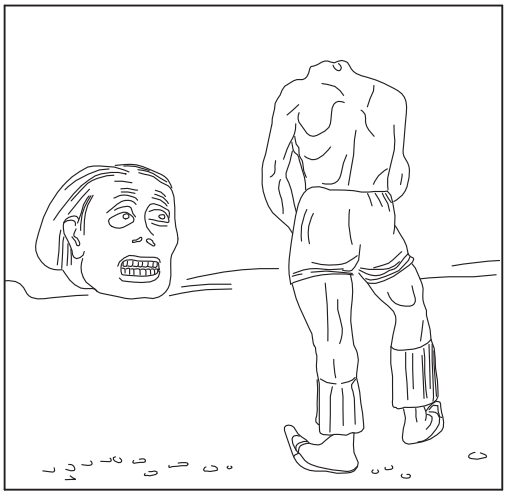


Figure 300: Structure of Alfred Kubin's *Self-Contemplation* (ca. 1901/02, drawing)
Semantic detractio + transmutatio + adjectio (removal of the head + moving it around + enlargement of it); the two fragments refer to each other, so one can still speak of 'transmutatio' and not just detractio. If the head were far away and did not look at 'its' other part, one could hardly recognise it as transmutatio.

Figure 301: Structure of Salvador Dali's *Metamorphosis of Narcissus* (1937, detail, painting)
Semantic adjectio of a contour, thus creating the impression of semantic substitutio: the head seems to be substituted with an egg, and the arms and one leg with fingers, within this added contour (change of the left motif) or vice versa (change of the right motif), the rest of the body has been removed (right motif in comparison to the left motif) or vice versa: the empty spaces between the fingers are filled. Due to the disturbed order of addition, one could also speak of syntactic deviance. However, the left motif refers more to 'Narcissus' as the object of a pictorial rhetorical change, so the right motif might be the *'Metamorphosis of Narcissus'* into an opened form, something formally similar to this mythological figure which produces metaphorically poetic associations as **secondary similarities**, to something other than just his reflected image in the left corner.

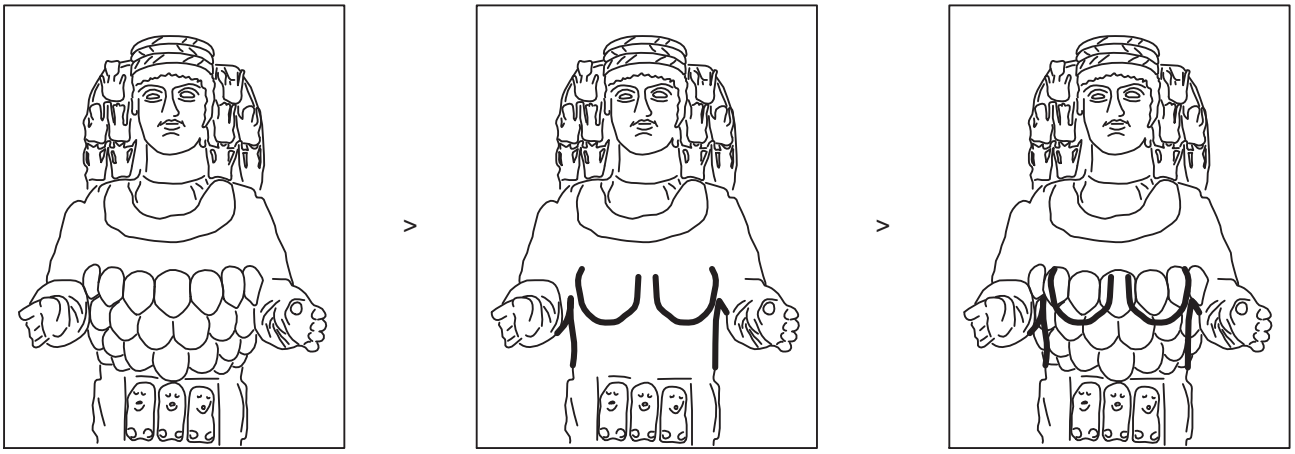


Figure 302: Reconstruction of the two cognitive 'foils' of the ancient figure *Artemis of Ephesus*, which produce semantic ambiguity (ca. 125 - 175 A.D., stone sculpture)
Semantic substitutio of two breasts by numerous smaller breasts (detractio + adjectio); the third figure shows the two contaminated cognitive foils (of perception of the work and of the remembered natural human figure), which reciprocally reduce their cognitive presence ('reciprocal absence of two cognitive foils').

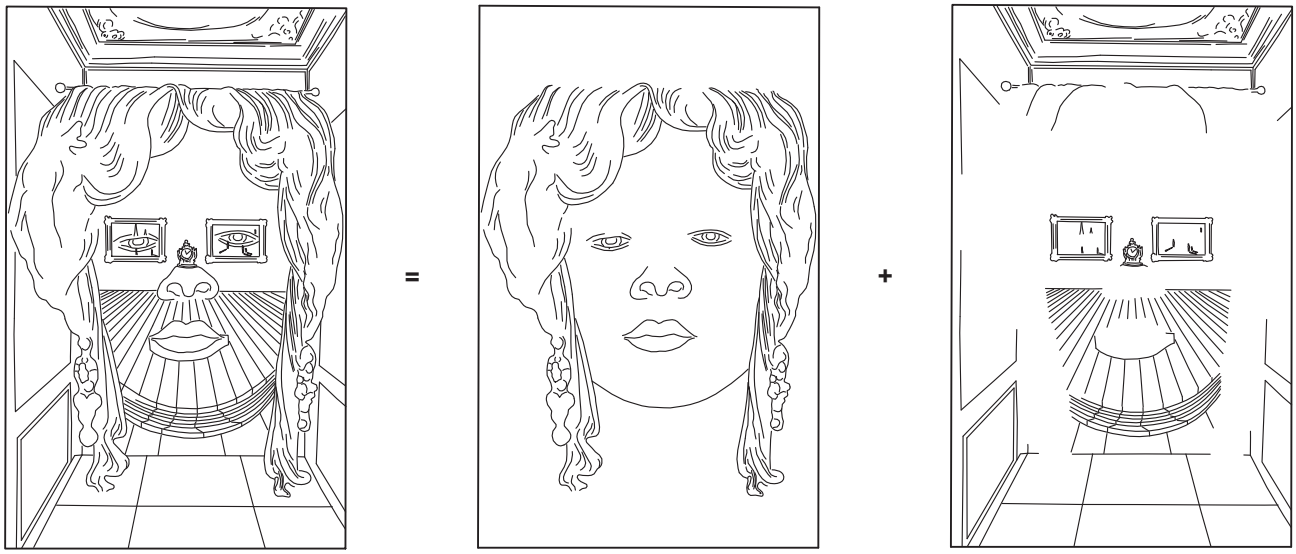


Figure 303: Reconstruction of Salvador Dali's *Face of Mae West Which Can Be Used as a Surrealist Apartment* (1934 - 1935, painting- probably on a print of Mae West in a newspaper)
Parts of the print of the face have been overpainted with representations of interior decorations of an apartment (see third figure), which could be referred to as technical **semantic substitutio** with subsequent semantic contamination of a face with an apartment. The relationship between the two concepts is **semantic discrepancy**, which can be reinterpreted as **semantic complementarity** at the level of an allegory: *'by mass media objectified woman'/'lodging of the desiring look'*. But elements of the face have now a **double similarity** with elements of a face and of an interior. This leads to an **intense reciprocal enrichment** between the two contaminated meanings of the double representation: hairs/curtain, chin/stair, mouth/sofa, nose/fireside, eye/lake in a landscape; similarity of the forms of the two concepts is the premise for the contamination.

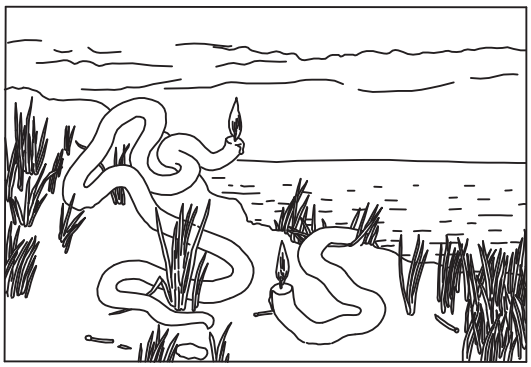


Figure 304: Structure of René Magritte's *The Return to Nature*, (1938/1939, painting)
Semantic transmutatio of the contours of two candles into **double-representations** of candles and of snakes which lead to semantic antonymity (living versus dead). This can be re-interpreted as semantic complementarity in the kind of an allegory, for example in this way: *'The flame stands for 'enlightenment'; it is threatened by wind/nature/real life; there are two candles of enlightenment which deal with theirselves- and not with the environment'.*

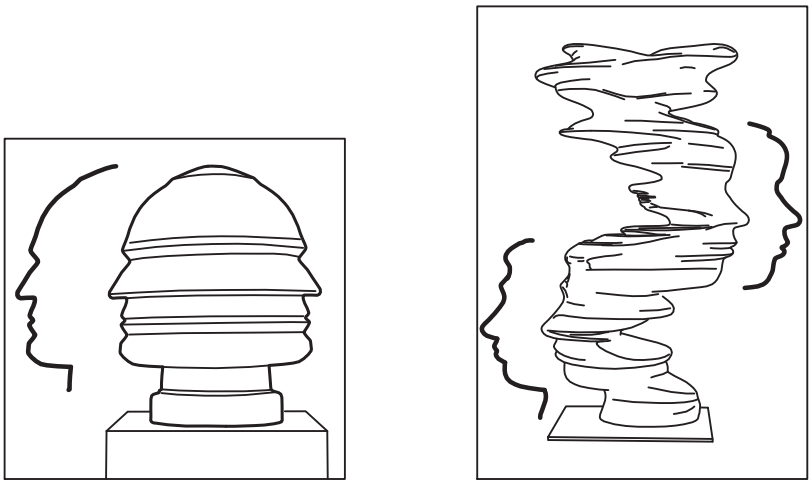


Figure 305: Structure of Renato Giuseppe Bertelli's *Profilo continuo - Testa di Benito Mussolini* (1933, bronze-like painted terracotta sculpture, in that period also available as a glass shade for an electric lamp), and Tony Cragg's *Bent of Mind* (2008, metal sculpture)
Aesthetic ambiguity can be used for propaganda as well: a super-sign consisting of sub-signs was created by means of rotation (semantic adjectio + transmutatio) of the facial profile contour line of Mussolini (semantic detractio).

Mussolini's idea of the Mediterranean as Italy's 'Mare Nostrum' can be associated connotatively with this all-round orientation of Mussolini. The ONE axis of rotation can easily be interpreted connotatively as a symbol for Rome: space, movement and ideology are connotatively and symbolically contaminated into fascist totality. The original, aesthetic-metacognitively ambiguous Futurist idea of a multitude of still distinguishable, i.e. still frictionless, moments of movement in one picture in the 1910s becomes a single space-time continuum in this work (see title). In his work entitled 'Ritratto di Benito Mussolini con sfondo di Roma' (1938), **A.G. Ambrosi** painted the dictator's head in contour lines and shadowy areas, penetrated by a bird's-eye view of Rome (Type Hybrid: C3 head contour versus C1 of the city structure that runs through it): Syntactic and semantic ambiguity can also be 'stolen' by propaganda in order to 'symbolize' the penetration of space with ideology.
Tony Cragg also uses face profile rotation in his work, but he uses several axes of rotation (not only ONE) and several faces that are also fragmented, and contaminated vaguely and frictionlessly distinguishably into one another, which is why an **atelic content** opens here. The propaganda work by Bertelli leads to ONE telic and symbolic meaning of ONE rotation axis.

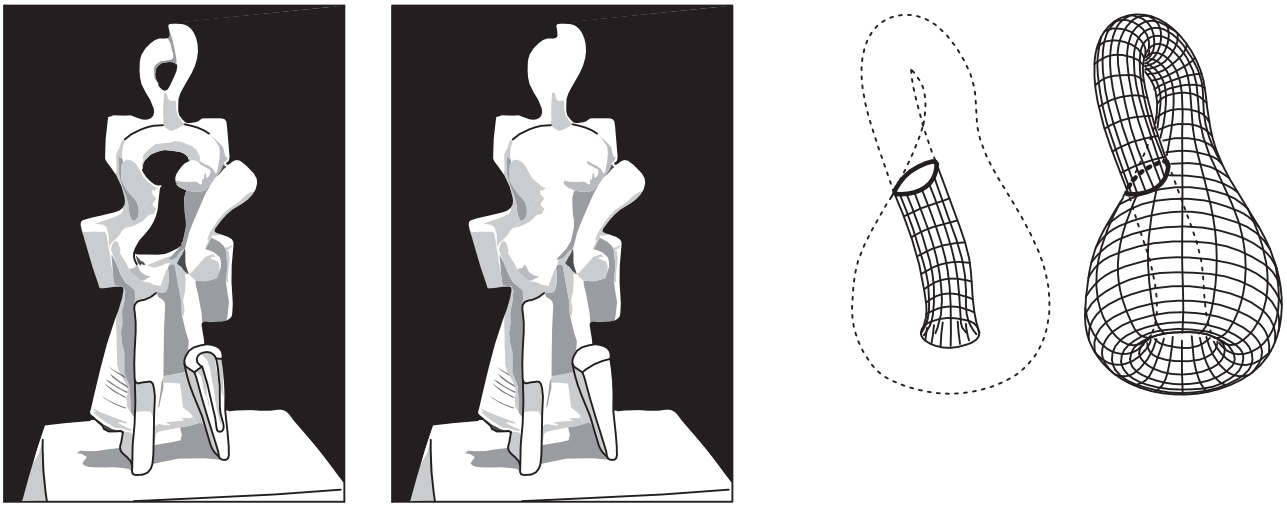


Figure 306: Variation of Alexander Archipenko's *Walking Woman* (1912, sculpture, left original, right without negative volume), as a double torus placed in comparison with another topological form: the *Klein bottle*
Semantic contamination as complementarity of spatially positive and negative representation of the interior and exterior of a human body due to semantic detractio of the belly of the human figure. There is no syntactic ambiguity, because the principle of the sculpture is the torus (ring). In 20th-century art, the representation of negative volumes was a key topic for artists like **Rudolf Belling, Henry Moore** and **Barbara Hepworth.**
However, the *Klein bottle* has syntactic ambiguity in the form of a ring of penetration of one partial volume through the other one. This work has also surfaces to an interior and the exterior space (**Felix Klein,** 1882, right figure, see thick line). For this ring of intersection of two curved planes/volumes, one can identify the Hybrid H type of ambiguity (C1.1 first plane versus C1.2 second plane).

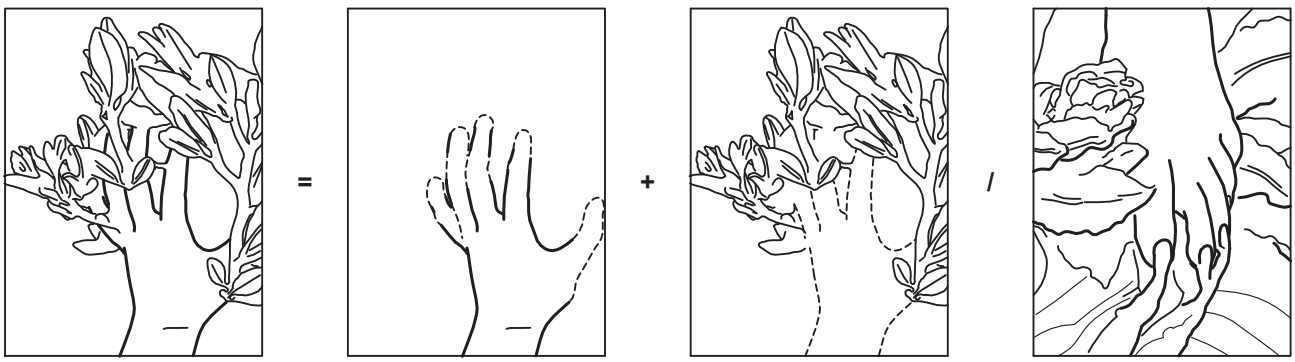


Figure 307: Reconstruction of Giovanni Lorenzo Bernini's *Apollo and Daphne* (marble sculpture, 1622-1625, two details)
Morphing as transformation of one form/entity to the other form/entity by **Minimal Differences MD** of form could be seen as syntactic ambiguity. In this case, one can refer to the contamination of fragments of a tree and of a human body as **semantic discrepancy/complementarity**: semantic detractio (fragments) + adjectio (adding of fragments) + transmutatio of contour (for the links between the fragments).
Ovid's *Metamorphoses* are based on similarities of forms of human beings and of nature.

2.3.4 Ambiguous relationships between the meaning of the text and of the image: semantic antonymity, discrepancy and complementarity

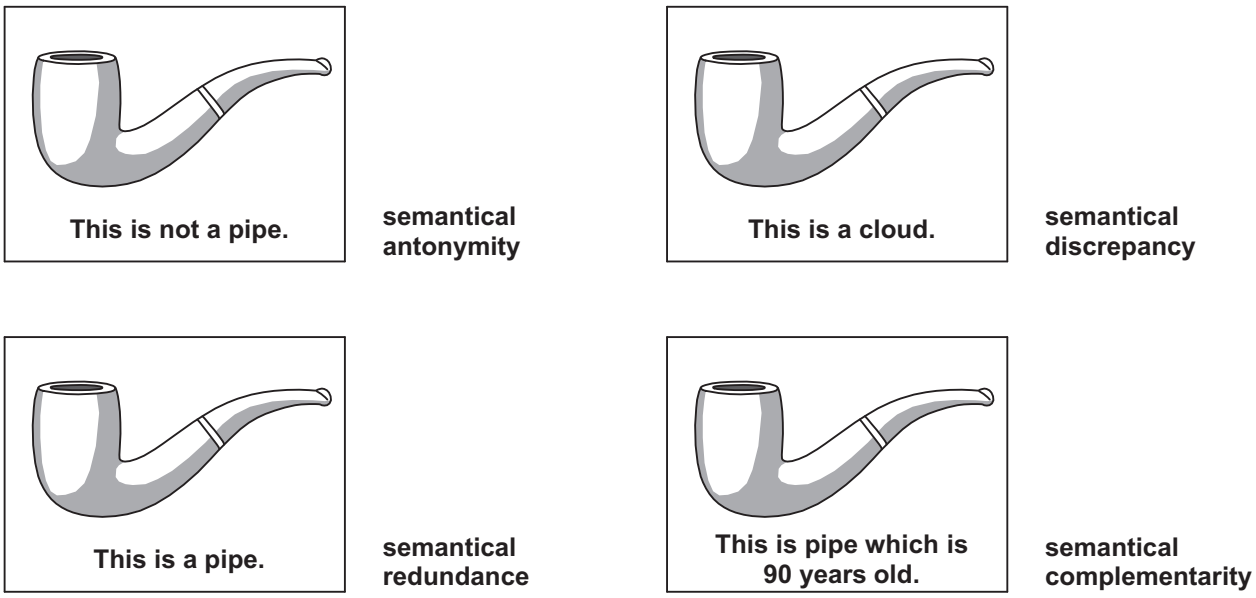


Figure 308: Three variations of René Magritte's *The Treason of Images* (1929, painting, original top above)

Semantic complementarity of text and image is often based on the complementary geometry of each medium: a nonlinear image (two dimensions) can represent information about a space, a linear text (one dimension) about time. By using texts which have empty spaces ('0') between entities/words ('1'), one can act (for example promise something) or deny. Ambiguous opposition of two meanings in one work of art cannot be stated in the case of semantic redundance.

Magritte's work shows the **semantic antonymity** of representing/'being' versus not representing/'not being', thus pointing to the fact that 'representing' is not identical with 'being'. *The treason of images* can be found in the fact that images can replace reality cognitively; **Lacan** even speaks of the misleading of the human psyche by images: they convey the illusion of unity not only of your body in its reflected image, but also of unity of existence. **Iconoclasm** as the oldest theory of image refers directly to the problem of representation by images.

Dadaists and Surrealists used semantic discrepancy, for example in the way they combined objects by chance. In this case, **spatial and temporal embedding as parts of a concept** are contaminated, thus resulting in reciprocal enrichment of meanings by associations. Semantic discrepancy often leads to the impression of chaotic contingency.

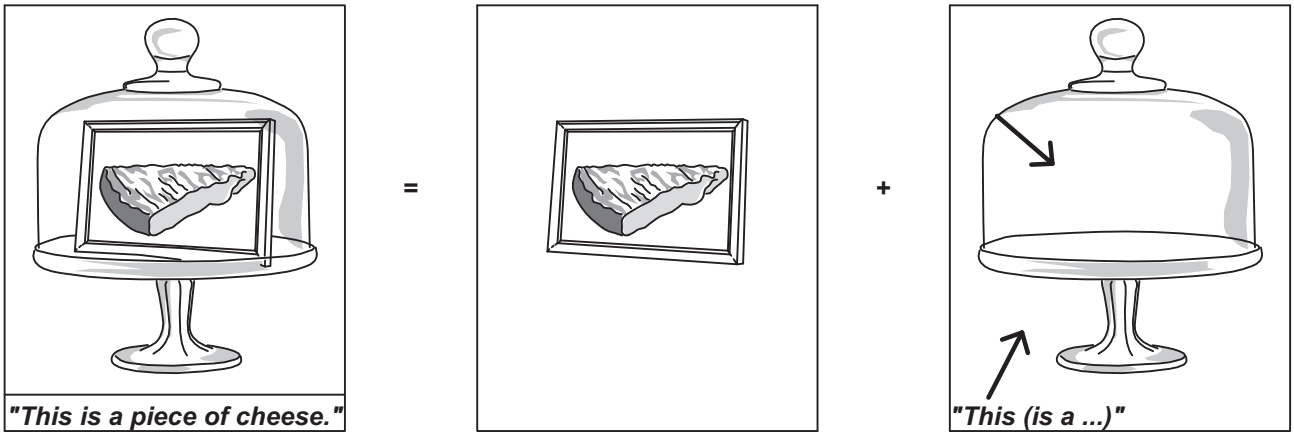


Figure 309: Reconstruction of René Magritte's *This is a piece of cheese* (1937, object of an oil-painting under a shade).

This work is a complementary pendant to Magritte's *The Treason of Images'* (*'This is not a pipe'*, 1929, see above). The shade and the title as indices redefine the oil painting as a real cheese (see third figure).

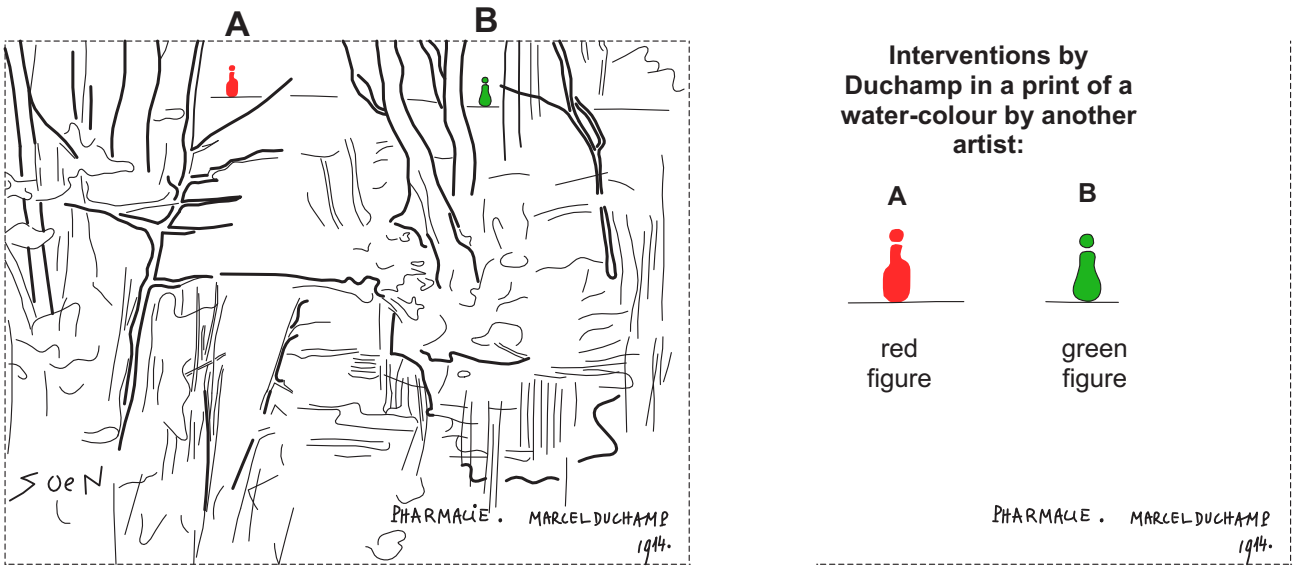


Figure 310: Structure of Marcel Duchamp's *Pharmacy* (1914, print of a watercolour by the other artist 'SOEN', to which Duchamp added a title, his signature, the date and two figures in red and green, detail)
There is **semantic discrepancy** between the meanings of the title and the image. Due to the higher complexity of the discrepancy, the recipient tends to reinterpret the image as **allegorical complementarity**: red and green are complementary colours which could stand for chemical reaction. Reduction of complexity (of numerous data or semantic discrepancy, as like in this example) to information is the principle of everyday cognition, whereas aesthetic ambiguity stands for 'deautomatisation' (**Viktor Shklovsky**) of that everyday cognition, which leads to awareness of cognition, to **metacognition**.

2.3.5 Interpictorial ambiguity of pre-image versus after-image

Within our economy of attention, the operations of aesthetic ambiguity described above can be used for metacognition or just to attract attention for financial purposes.
The interpictorial image can show an opposition between the function of the quoted image and its new function, like mocking in a parody; it can therefore have **not only semantic but also pragmatic antonymity/discrepancy or complementarity**.

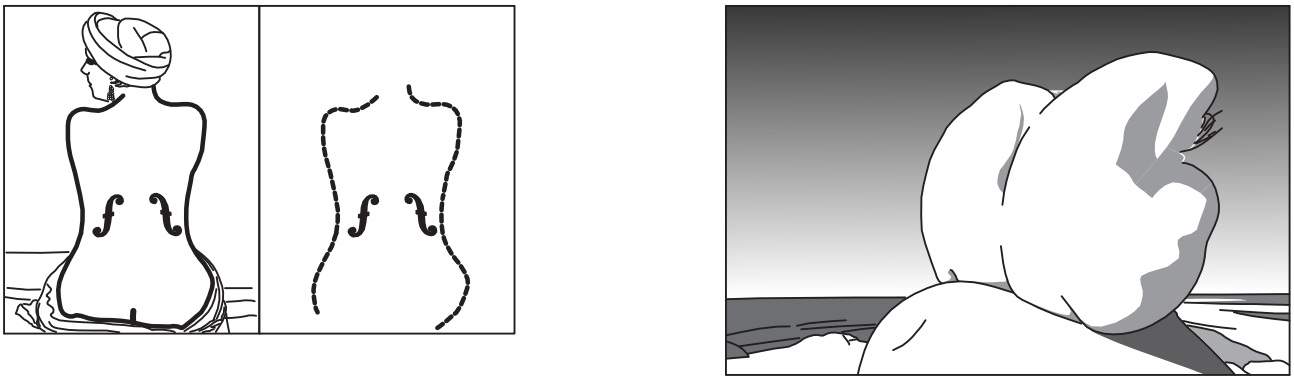


Figure 311: Reconstruction of Man Ray's *The Violin of Ingres* (1924, photo of a painted photo in black and white) and Kishin Shinoyama's *Nudes* (1968, photo in black and white).
In the work of Man Ray one can identify **semantic adjectio** of two f-shapes which are fragments of a violin (**semantic detractio**) to a female body, thus producing an interpretation of the human body as a violin due to formal similarity. As 'free radicals', the f-fragments redefine their surroundings. The meanings 'body' and 'violin' are in semantic discrepancy, but the relationship can be reinterpreted as semantic complementarity by assigning the function of an allegory, e.g. for a meaning such as 'interaction of humans as a search for tones'.
Interpicturality as a reference to Man Ray's predecessor, **Jean Auguste Dominique Ingres** (painter of *'The Bather of Valpincon'* (1808), in which a woman in a similar posture is in the centre of the image) produces another kind of ambiguity: **pre-image versus after-image**; the reception of both influence each other.
Shinoyama's work uses a similar view of a female body, but in the context of non-figurative painting rather than poetic allegory (pragmatic contamination of two functions: iconic representation versus non-figurative painting): at first glance, the shapes are not interpreted as female bodies.

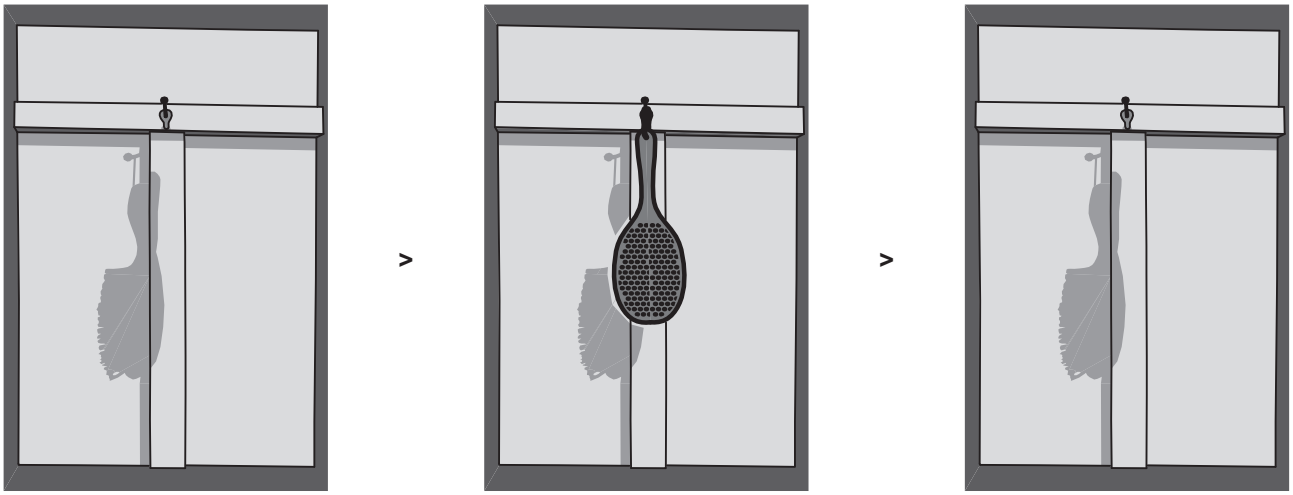


Figure 312: Reconstruction of Jiro Takamatsu's *Shadow of a Brush* (1965, painting on a wood panel with a hook)
This work can be understood as an interpictorial allusion to the photographs of disappeared objects that produced a kind of shadow caused in 1945 by the atomic bombs dropped on Japan; such 'shadows' were reproduced in magazines. These photos have to be remembered in order to interpret the work, but there is no intense semantic ambiguity between the meanings of these photos and this object, but rather a pragmatic ambiguity of two functions: documentation versus art function (mediated by the technique of oil painting). At first glance, the work seems to be based on semantic detractio of the brush; but understood as atomic photography, the brush is not missing in the object. However, the dual character of photography becomes clear: it is an icon (of the represented object 'brush') and an index (of the light of the atomic bomb which faded the colour of the wood, which is why a kind of shadow appears).

2.3.6 Semantic ambiguity based on non-verbal communication

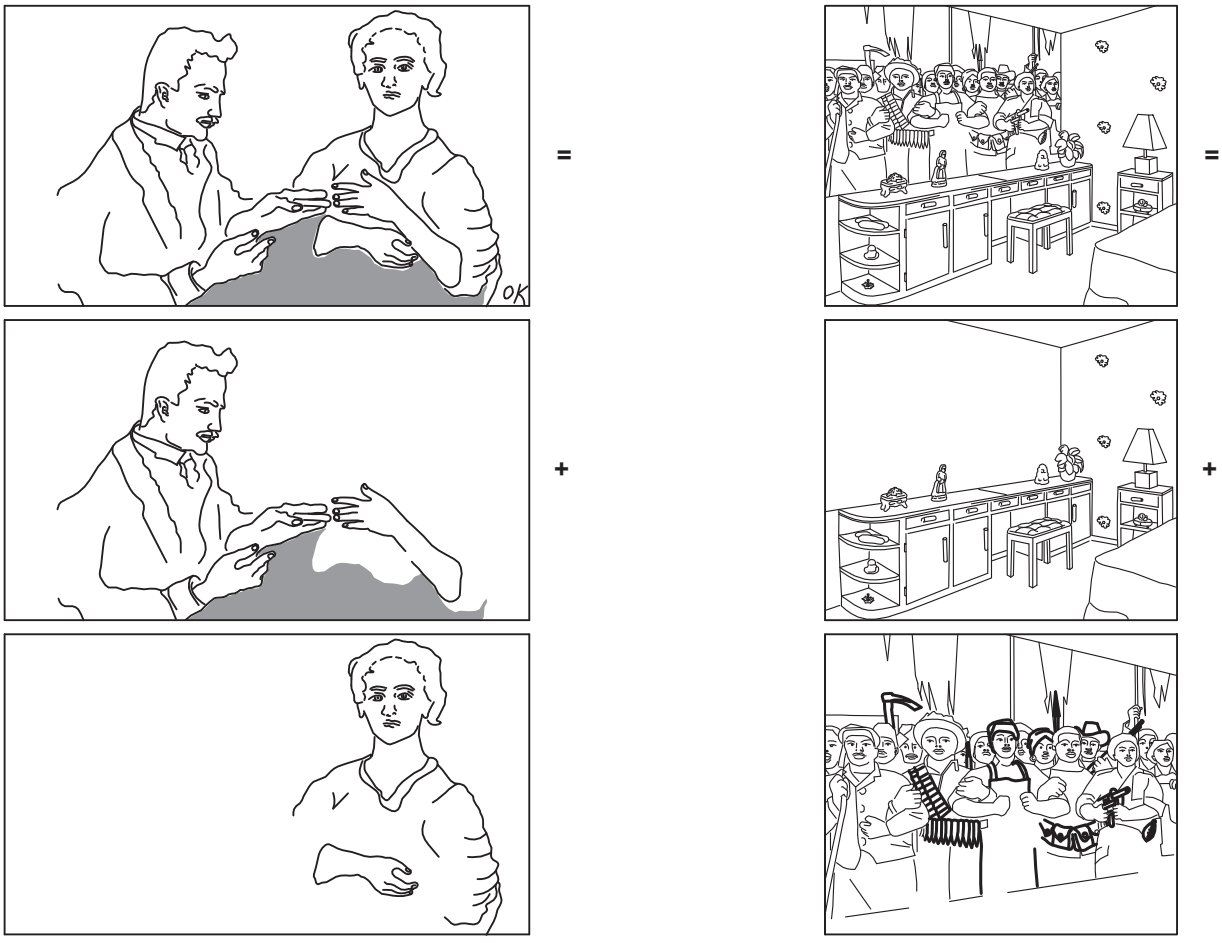


Figure 313: Reconstructions of Oskar Kokoschka's *Hans Tietze and Erika Tietze-Conrat* (1909, oil painting) and of Erró's *American interior no. 7* (1968, painting)

Kokoschka's portrait of a couple is a semantic-pragmatic antonymity of **non-verbal sub-signs within a super-sign** of rapprochement and separation: the woman's lack of eye contact does not allow a statement to be made as to whether she is also striving for the desire for contact expressed through the man's hands, which is also underlined by the fact that the man strives towards the woman with two hands and with his gaze directed at one hand, while the woman's other hand points to her own body. The connecting dark surface between the two and the similarity between the two body silhouettes against the background cannot bring any clarity, either, especially since the body of the man on the left in the picture appears dissolved into the background. In Errós work there is a connotative-semantic antonymity of private space versus public space, or artifacts of western consumer society versus a phalanx of communist internationalism (which is defensive or attacking). This collage thus shows two contaminated partial meanings from two set pieces from the mass print media of two cultures: that of a probably Maoist propaganda image, which was integrated into the image of a bourgeois/Western-looking interior; two channels are contaminated (pragmatic antonymity of two channels). At the level of non-verbal communication, one can identify semantic-pragmatic antonymity: presence (offensive communist phalanx) versus absence of the enemy (in the middle class interior).

Axel Hübler (2001, chapter 1) distinguishes between the following six semantically relevant fields of non-verbal communication, in which, however, one cannot always speak of signs (intended by the sender):
1) Body movement or kinetic behaviour (see image parameters S4, C1): Hans Tietze in Kokoschka's picture seems to be moving towards the woman. The crowd shows gestures and other movements such as bodies stretched up, reaching for weapons and arms (facial expression: self-controlled, gaze behaviour: wide-open eyes, i.e. offensive and observing, postures: phalanx formation by crossing arms);
2) physical characteristics (such as height, weight, body odour, appearance, hair and skin colour, see image parameters S1 - S3): while Kokoschka's individual figures are drawn with nervous lines, Erró's phalanx is about young, strong and predominantly male people from all continents, more as types than as individuals;
3) contact behaviour (see image parameter C4): whereas Kokoschka's pair only suggests touching, Erró's is about lining up or hooking up;
4) proxemics (spatial-communicative behaviour, see image parameters C2): whereas Kokoschka shows ambiguous proxemics, the phalanx is about celebrated closeness and attention of everyone to the viewer, inclusion of everyone, clear standing order (contact culture of 'communism');
5) artifacts: in Kokoschka's work the clothes and the background develop a nervously drawn or flowing life of their own, in Erró's work the objects of the collaged crowd are objects of attack such as machine guns, grenades, ammunition belts, spears, hoes, but also objects of identification with world cultures and with social classes such as workers dungarees and hats (super-symbol of communist internationalism);
6) situation-dependent factors: in Kokoschka's work the surrounding space appears as an unreal space through informal scratch marks in swirling clouds of colour, in Erró's work it is contaminated (one almost overdetermined public AND one private sub-area). This excess of clear, indexical/non-verbal communication through the depicted human phalanx of one pictorial sphere stands in tragicomic contrast to the absence of residents/bourgeois opponents in an abundance of their living artefacts in the other pictorial sphere. But as a viewer of the work one could also locate oneself mentally as standing in the attacked space.

The painter **Kehinde Wiley** quotes poses as non-verbal signs from ancient portraits of rulers in Europe for portraits of Afro-American people in today's clothing, e.g. the ruler pose from the portrait of the English King Charles by **A.v. Dyck** for the portrait of a young Afro-American man in today's sporty outfit (*'Le roi à la Chasse'*, 2006), thus resulting in connotative-semantic antonymity (an ancient pose of a symbolic system versus a symbolic system of today).

2.3.7 Semantic ambiguity in works of visual poetry

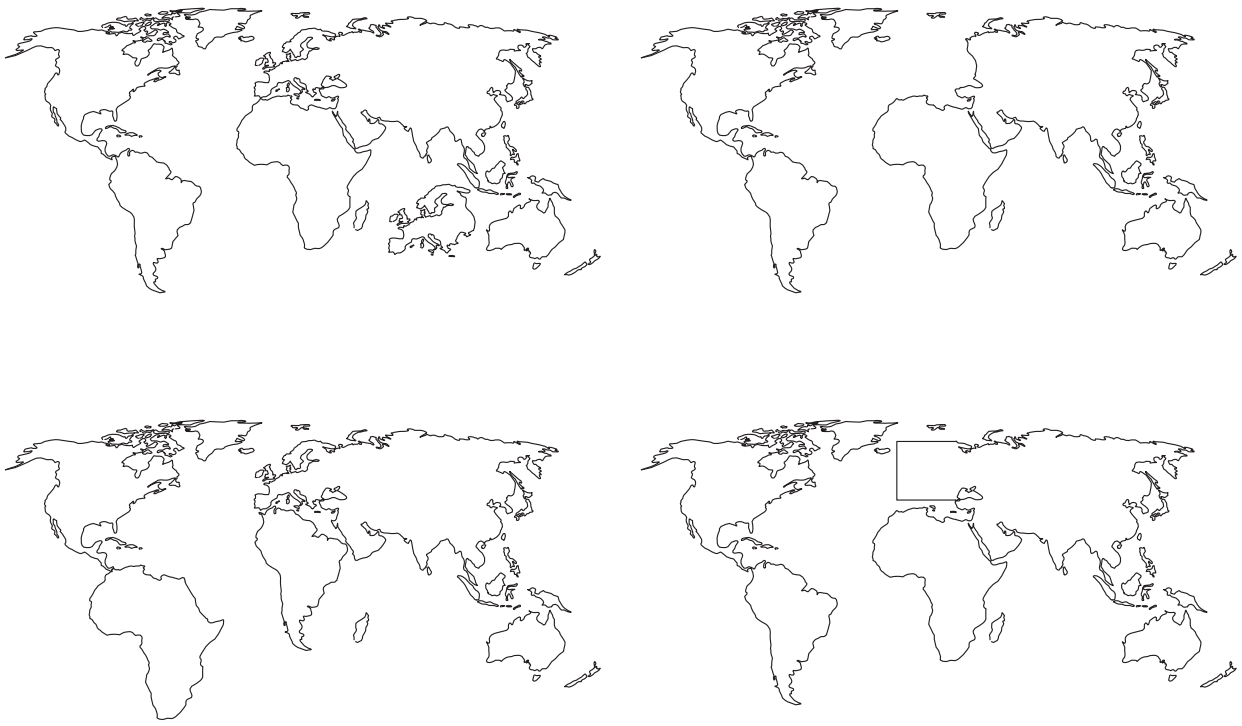


Figure 314: Axel Rohlfs' *Four changed maps of the world* (from the book '*es geht weiter…'*, 2014)
The map of the world is an ideogram because partial signs (contours of continents) are at fixed places; these can be objects of pictorial-rhetorical operations. However, the interspaces between these parts of the image (like the Mediterranean) then change as well; this is a difference from rhetorical changes in language where you have empty spaces between words with no meaning. In images one has to cut a piece out of a whole, and the line of the cut (here the contour of a continent) has its own meaning.
Semantic adjectio directs attention above all to the criterion of (over-)quantity, semantic detractio to the aspect of modality (absence of Europe), semantic transmutatio to the aspect of relation (of South America to Europe and Africa to North America) and semantic substitutio to the aspect of quality (of the complexity of the shape of Europe in comparison to a square).

Figure 315: Axel Rohlfs: *Untitled* (from the book '*es geht weiter…'*, 2014)
A non-verbal symbol in the form of an ideogram is changed four times. One can hardly reconstruct the original symbol in the case of detractio of the middle finger. The cognitive discord of deviance produces associations such as:
a) adjectio: '*strengthening of the message'*, b) detractio: '*censorship'*, c) transmutatio: '*criticism by young and old'* , d) substitutio: '*posthumous criticism'*.

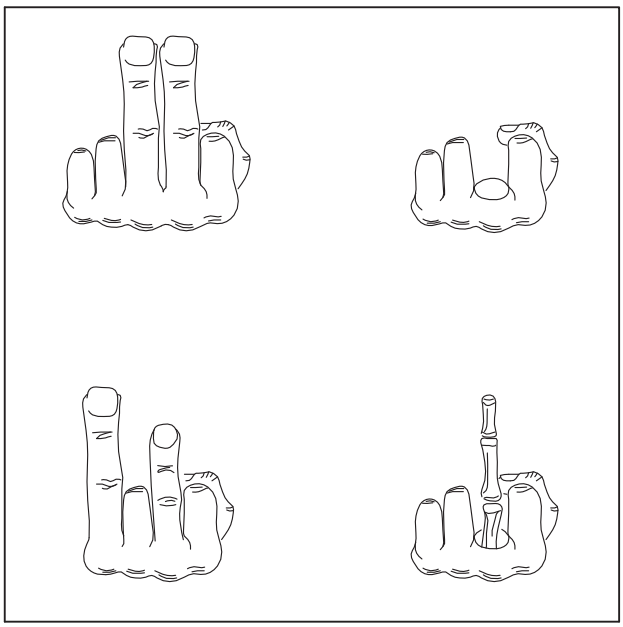


Figure 316: Axel Rohlfs: *Six colours* (2003, triptych painting)
Semantic complementarity of the colour named by the text versus colour of the letters (both colours are complementary): blue versus orange, green versus red, yellow versus lilac. This ambiguity could be described as **semiotic auto-reflexivity** due to the separation of sign and meaning.

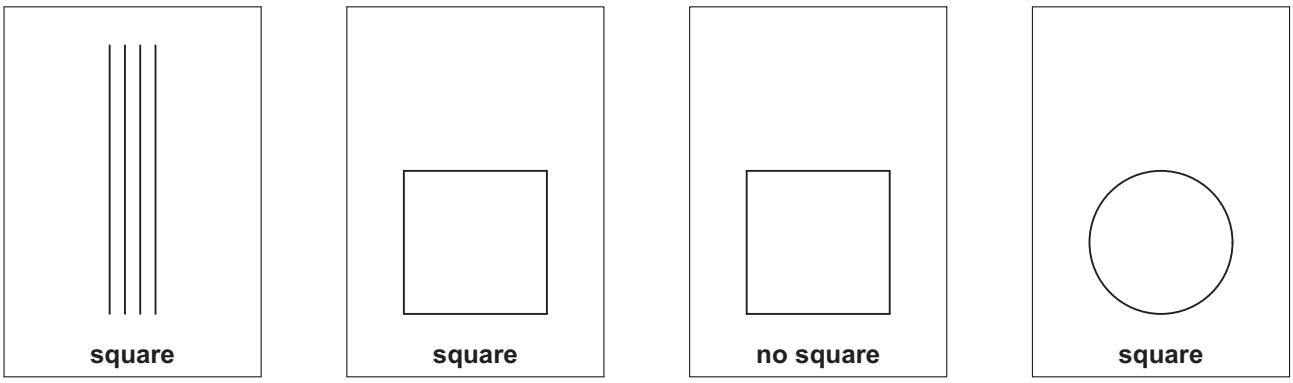


Figure 317: Three variations of Heinz Gappmayr's *Square* (1971, original at the beginning).
At first glance one may identify **semantic antonymity** of the meaning of the text and of the image, but one then realizes that a square out could be constructed from the four lines. An attribution to **semantic complementarity** also seems possible (the parts versus the whole square). This leads to questions of verbal distinguishing: Can four lines be called a 'possible square'? The variation to antonymity (contradiction) is similar to Magritte's work *The Treason of Images* (see above), the circle of the third variation can be reinterpreted as a square in non-Euclidian geometry: the tendency to reduce complexity becomes visible in this reinterpretation.

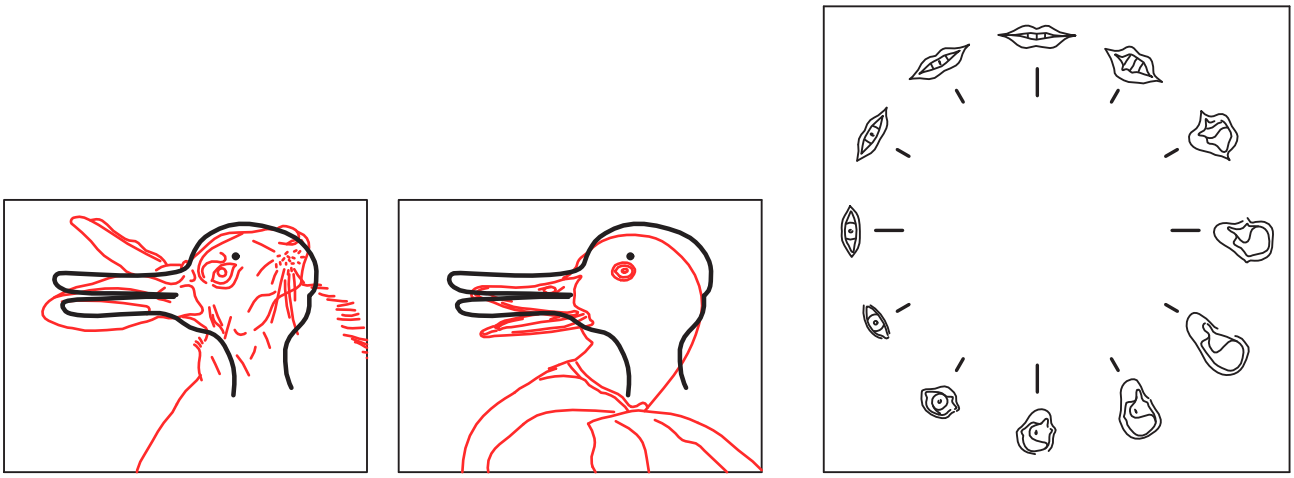


Figure 318: Morphing: a) Wittgenstein's *Rabbit-Duck-Head* (probably based on Joseph Jastrow's image from 1888) superimposed with red naturalistic representations of a1) a European rabbit and a2) a duck; b) Axel Rohlfs: *Untitled* and *Bühler* (visual poetry, both 2008)
a) The overlappings of the *Rabbit-Duck-Head* with two naturalistic representations in red show that the base for the illusion is morphing as a bunch of deviance operations on two natural models ('natura') to an 'ars' as intermediate shape between the rabbit's and the duck's head: abstraction (semantic detractio of details such as feathers or fur as well as the trunk body as identifiers) and topological distortion/morphing of the contours (substitutio of surfaces or transmutatio of the contour line).
This *Rabbit-Duck-Head* is thus similar to the much older intermediate-form sculpture between phallus and female body in Figure 244, or to Brancusi's princess-phallus intermediate form in Figure 245. B) Three iconic signs 'mouth', 'ear' and 'eye' and three symbolic characters ':', '!', '?' are morphed endlessly into each other. These three signs refer to the **Karl Bühler's** theory of the three functions of a sign, namely **:** (representation), **!** (appeal) and **?** (expression). The minimally differentiated contaminations (MD (S2.1 ~ S2.2 ~ S2.3 ...)) of two icon-forms or two symbol-typeface forms each contain 'form parts' of two form sources. The contour shape distortion can be interpreted as a step-by-step semantic transmutation of the contour line points in the direction of new contour line points (this is how the morphing images were also drawn in CAD).

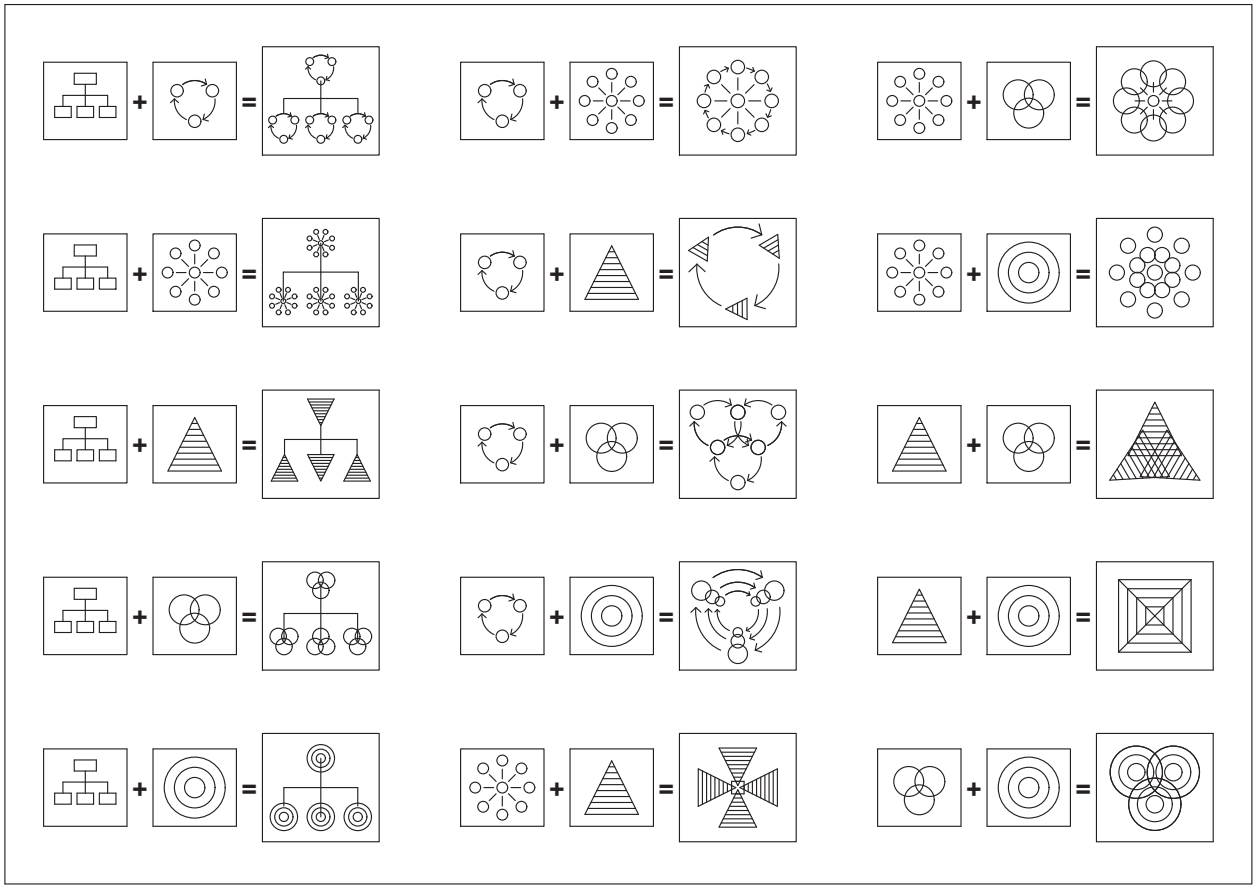


Figure 319: Axel Rohlfs: *Insertion/Schematical representation...* (from the book '*... und zum dritten!*', 2011)
The **linear and nonlinear** diagrams types used by the *'Windows'* computer program (which stands for prefabricated organisation of thoughts) are contaminated. The **syntactic ambiguity** of the contaminated geometries produces **semantic ambiguity** of contaminated and therefore widened meanings.

2.4 Semantic-pragmatic ambiguity

2.4.1 Object art as intervention in actiocepts with and without interventions in concepts

A tool (changed in a work of art) is not only an isolated object for the recipient but it is linked to a situation and therefore to pragmatics: the recipient re-experiences mentally (with the help of his body memory) the situation of the use of the tool. A situation can be described with the following general characteristics:

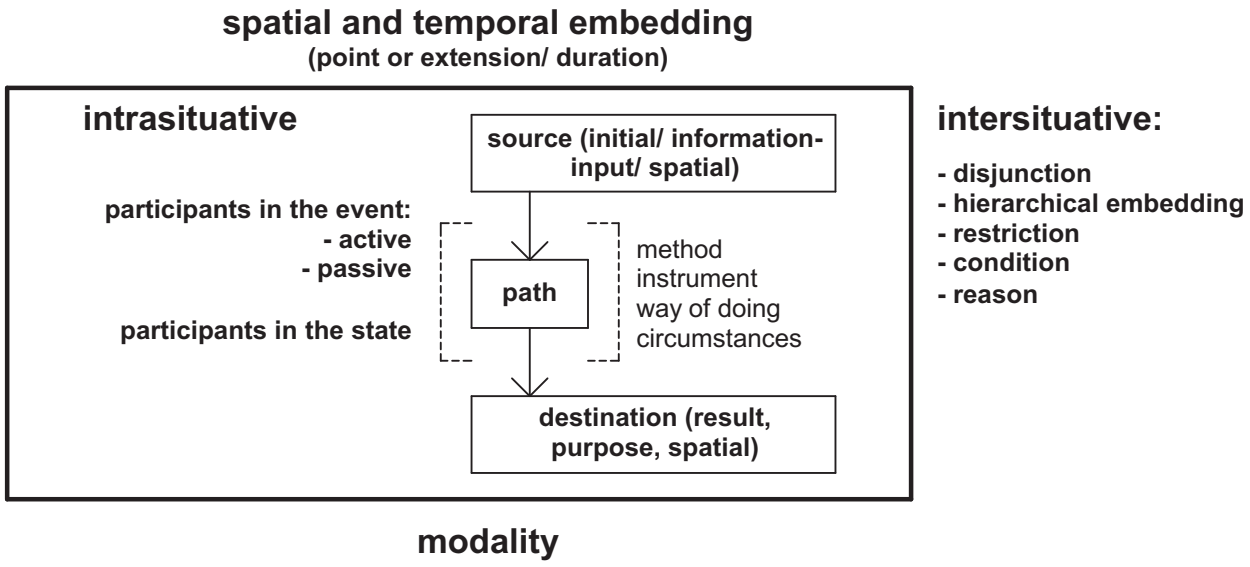


Figure 320: General description of a pragmatic situation according to the meta-language MultiNet (Helbig 2008) with linear and non-linear aspects as potential objects for operations producing pragmatic ambiguity (see plate 223 for semantic object)

Three cognitive entities in the reception of a work of art can be distinguished:
A) **percepts** (groupifications of elements as products of perception made by the 'ordinary recipient' by unifying the elements of the image according to the eight unification criteria S1 - S4 and C1 - C4, described above),
B) **concepts** (as part of the dictionary of 'prototypes of objects' in the memory of an 'ordinary recipient')
C) **actiocepts** (as part of the dictionary of 'prototypes of situations' in the memory of an 'ordinary recipient');
both kinds of dictionary overlap:
A tool, for example, is an object with relation to a situation, to action; the reception of a changed object of everyday life as a work of art includes a **mental performance** of the haptic use of this tool. Therefore, the reception of a tool includes mental enacting, and involves more than the reception of a concept such as 'river'.
An intervention in the pragmatic structure of a tool made by an art object substitutes a new aesthetic function for the conventional function of the tool (**pragmatic substitutio** of the old function of the tool + **contamination** of old and new function). This substitution can already be achieved by a **new spatial or temporal embedding of the tool** in the new unconventional environment of an exhibition, or additionally by **giving the tool a title** that defines the object as an icon or even as an allegory; two objects can also be recombined (as fragments). Here are examples by **Marcel Duchamp** for these **four stages**:

- first stage: giving a new embedding and just the new function of contemplation to an object of everyday life:

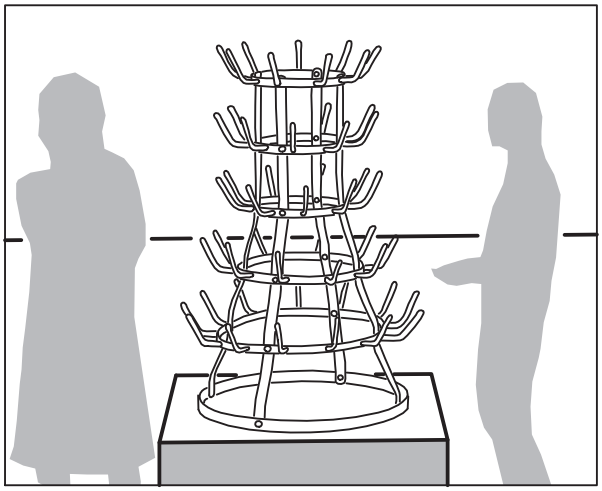


Figure 321: Structure of Marcel Duchamp's *Untitled/Bottle Rack* (concept dating from 1914 /edition dating from 1964, bottle rack transposed in an exhibition room)
Syntactic ambiguity of type 9 of Geometric Minimal Difference MD lines to volume
Pragmatic substitutio + discrepancy (old embedding versus new embedding, old function of drying bottles versus new function of contemplation, for example of the syntactic ambiguity)

- second stage: giving a new embedding and a title to an everyday object which defines it as an icon:

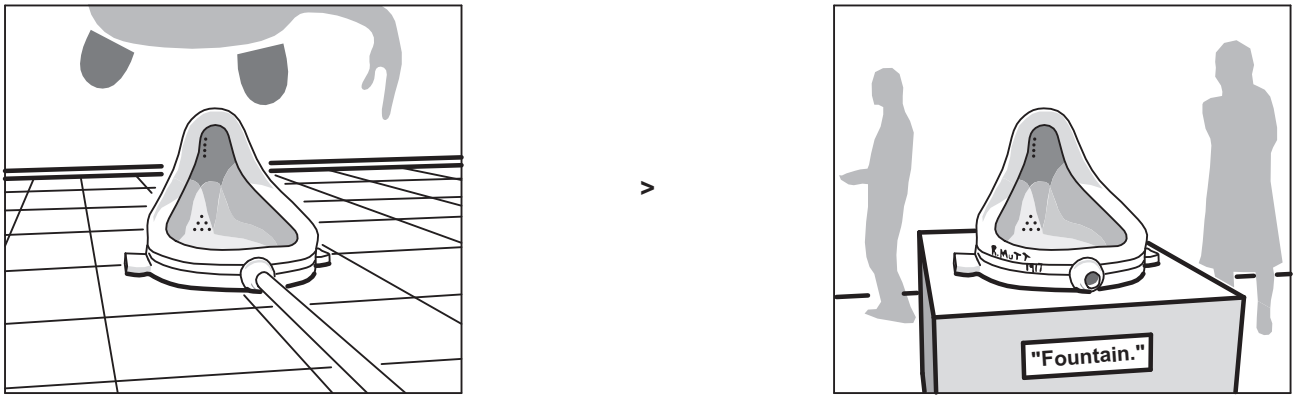


Figure 322: Reconstruction of Marcel Duchamp's *Fountain* (original concept dating from 1917/edition dating from 1964, urinal with pseudo-signature *'R. Mutt'*, date and title, turned around and transposed in an exhibition room)
The title and the new position of the object leads to an interpretation of the work as a **weak icon** for a fountain due to weak similarity of the form of urinal to a fountain. Another reference as an index is also possible (by means of C3): something can be embedded in the object. One can identify **semantic discrepancy** (urinal object versus 'Fountain' title) and **pragmatic substitutio + antonymity** (old 'profane' versus new 'sacred' embedding and art function). The signature is an ironic simulation, so the pragmatic antonymity type can be attributed to it as well(seriousness of a signature versus irony of its simulation).
Duchamp's variation of the idea of a Ready-Made leads to an instable border between the **order of things** and the **order of signs**, which are put into a reciprocal relationship.

- third stage: giving a new embedding and a title to an everyday object which defines it as an allegory

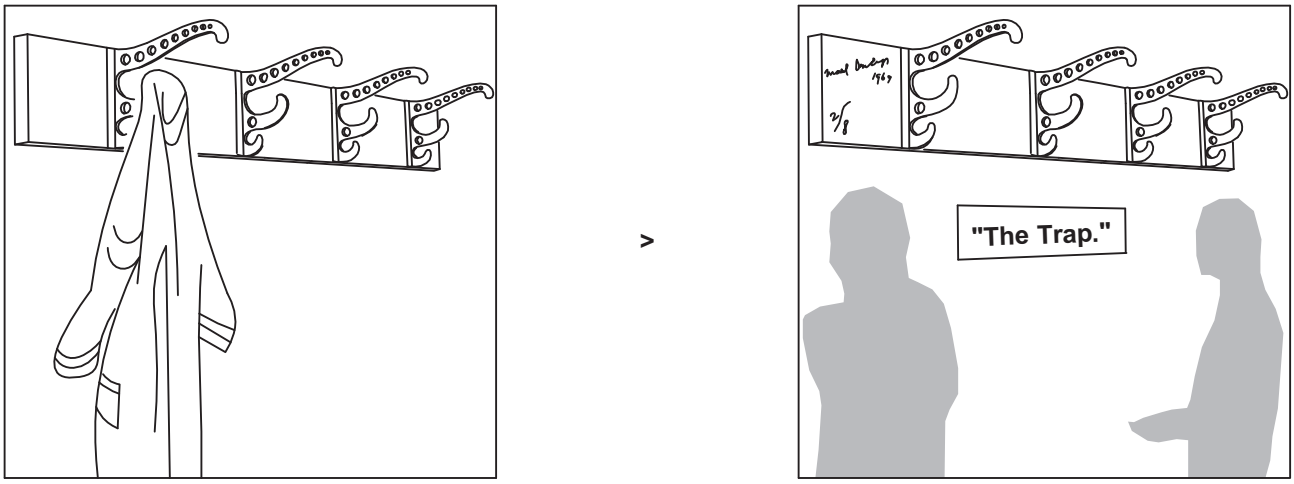


Figure 323: Structure of Marcel Duchamp's *The Trap* (concept dating from 1917, edition dating from 1964, coat-hook board with signature 'Marcel Duchamp 1964', number of edition and title, transposed in an exhibition room)
The title *'The Trap'* leads to an interpretation as a **surrealistic allegory** due to the similarity between a coat-hook board and a trap: both define a fixed position of coats/creatures (**semantic-allegorical complementarity**) Coats are thus personified to persons/animated to animals. The world of dead objects becomes surrealistically vivid; coats refer to the human body, the numerous coat hooks can be interpreted as a kind of massification.
Transposing the everyday object into an exhibition space means **pragmatic substitutio** of the old embedding/function of the object by a new embedding/function, which thus produces **pragmatic discrepancy** (old function versus new function of allegory).

- fourth stage: giving a new embedding to a combination of two (fragmented) everyday objects

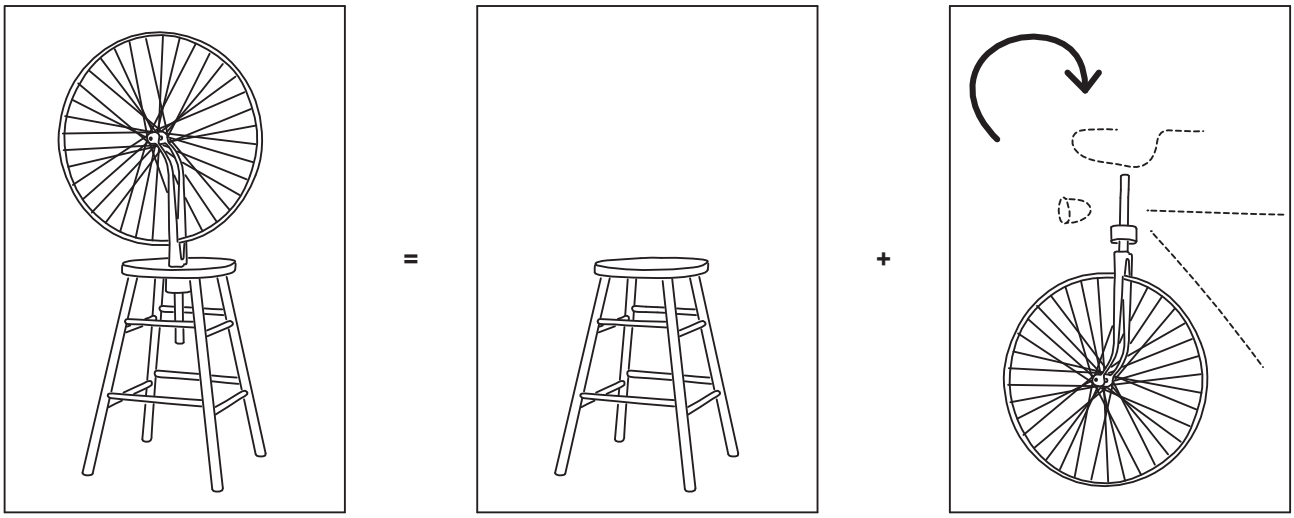


Figure 324: Reconstruction of Marcel Duchamp's *Untitled/Wheel of bicycle* (concept dating from 1913 /rebuilt in 1951, assemblage of a wheel (as a fragment of a bicycle) to a stool)
Assemblage of a fragment of a bicycle (**pragmatic detractio**) to a stool (**pragmatic adjectio**); this stool can now be seen as a fragment of the former actiocept 'sitting' as well, because one cannot sit on it any longer (**pragmatic detractio**). The wheel has been turned around (**pragmatic transmutatio**) so that it becomes a **kinetic object of contemplation** instead (**pragmatic substitutio** of riding/sitting versus contemplating) which leads to **triple pragmatic antonymity** (sitting on a stool versus moving with a bicycle versus contemplation of a gained kinetic object).
The unconventional intercourse with an everyday object by giving it a different function ('**transfunctionalising**') is a main topic in **Raoul Vaneigam's** philosophy of **Situationism**; he refers to this operation as a **change of perspective**, as an opening of the mind to **playful tactics**, as **anti-conditioning** and as **disturbance of the conventional thinking in hierarchical sub-sections**.

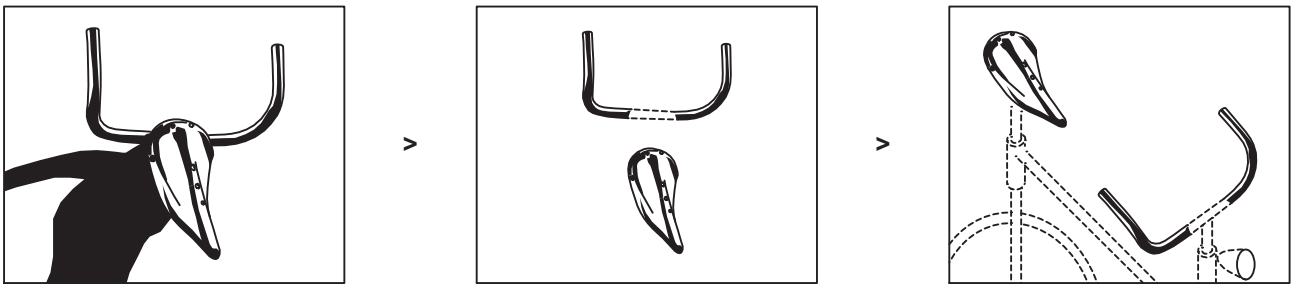
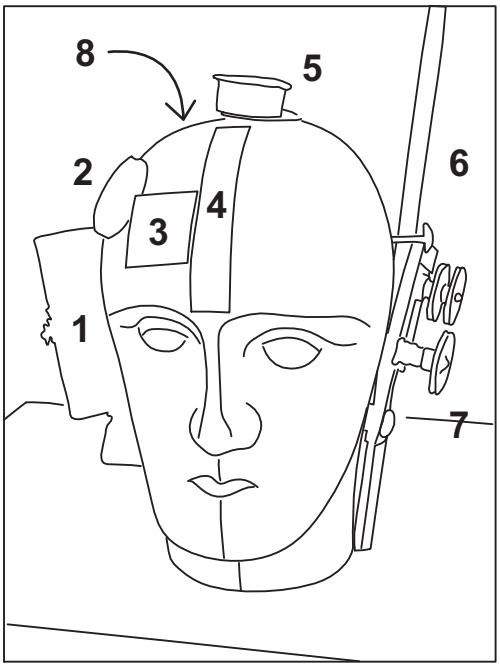


Figure 325: Reconstruction of Pablo Picasso's *Head of Bull* (1942, cast in bronze of two objects)
- Syntactic ambiguity: Mixture M of a groupification of two similar curved lines across a central curved plane (Mixture M (S2 + C1 versus C4, see second figure)
- Pragmatic detractio + transmutatio (two fragments of a bicycle recombined) + **pragmatic substitutio** (old materials metal/leather versus new material bronze)
- **Pragmatic substitutio + discrepancy** (function of riding versus function of an icon/trophy which means an animation of an object similar to **Duchamp's** art object *'The Trap'*, in which a coat goes into the 'trap' of a hook); this pragmatic discrepancy is of high complexity, so the recipient will tend to construct an **allegory of pragmatic-semantic complementarity**: '*similarity of riding a bike/of coping with objects to fighting with a bull/getting a trophy'* etc.

Figure 326: Structure of Raoul Hausmann's *Mechanical Head /The Spirit of our Time* (1919, assemblage of objects on a wooden representation of a head)
1 = opened jewel case (inside: printing roll, pipe stem), 2 = clockwork, 3 = label of pasteboard with the number '22', 4 = tape measure, 5 = extendable tiny field cup (eventually from World War I), 6 = wooden ruler, 7 = bronze piece of a camera which was already antiquated in 1919, 8 = purse (at the rear of the head).
- Semantic antonymity (industrially fabricated objects versus carved wooden head; objects with relation to measurement/planning versus their positioning by chance)
- Pragmatic substitutio (of the normal embeddings of the objects by an assemblage to an icon 'head') which leads to **semantic/pragmatic discrepancy** (icon versus tools; various functions versus each other), which can be reinterpreted as a **reciprocally allegorical complementarity** due to the title, for example in this way:
a) *'the tools take the head as their new unifying embedding/as their object'*
b) *'Homo Sapiens is reduced to an abstract icon without individuality within his own world of objects which are mounted in a random constellation'*



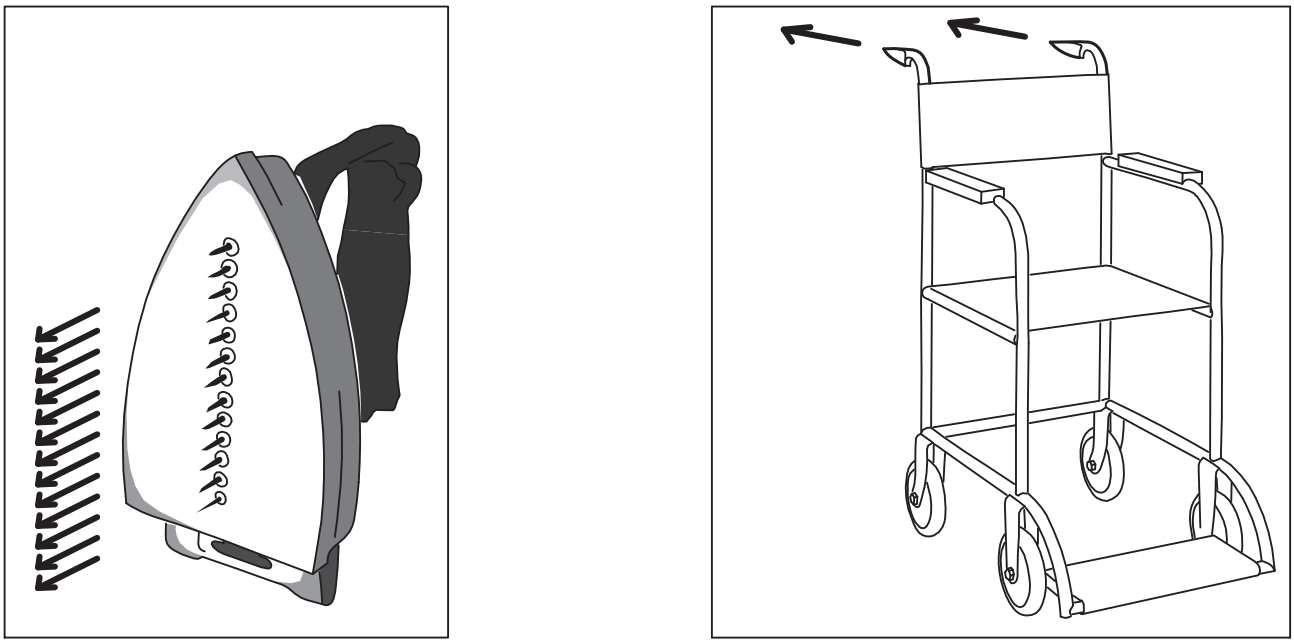


Figure 327: Comparison of the indices of destruction and of injuring:
- Man Ray's *Gift* (1923, art object of 13 nails mounted to a flatiron):
pragmatic adjectio of nails to a flat iron (which point to the object of destruction), **pragmatic substitutio + antonymity of three functions** (old function 'ironing' versus new function 'destroying' versus function of an art object as a synthesis of both)
- Mona Hatoum's *Untitled/Wheel Chair* (1998, three-dimensional imitation of a wheel chair with pointed knives instead of handles):
pragmatic substitutio + antonymity (pointed knives versus handles; 'being injured' versus old function 'helping/moving somebody' > 'being object' versus 'being subject'). Two knives point to the potential user, the recipient of the wheel chair which leads to a kind of **intervention in his consciousness of body**; this work can therefore be assigned to a changed actiocept as pragmatic ambiguity. Even just looking at a changed tool of everyday life activates the memory of movements linked to the tool, and the awareness of body; the art of everyday tools can therefore be assigned to pragmatic ambiguity: you **re-enact the (changed) movements mentally**, an intervention into a tool becomes an intervention into inner re-enacting, into pragmatics. For this reason, a differentiation between **semantic ambiguity of concepts/objects** and **pragmatic ambiguity of actiocepts/tools** seems to be reasonable; but concepts and actiocepts are part of the collection of memorised prototypes. Such memorised prototypes and redundant schemes like a square are the object of operations in visual rhetoric.

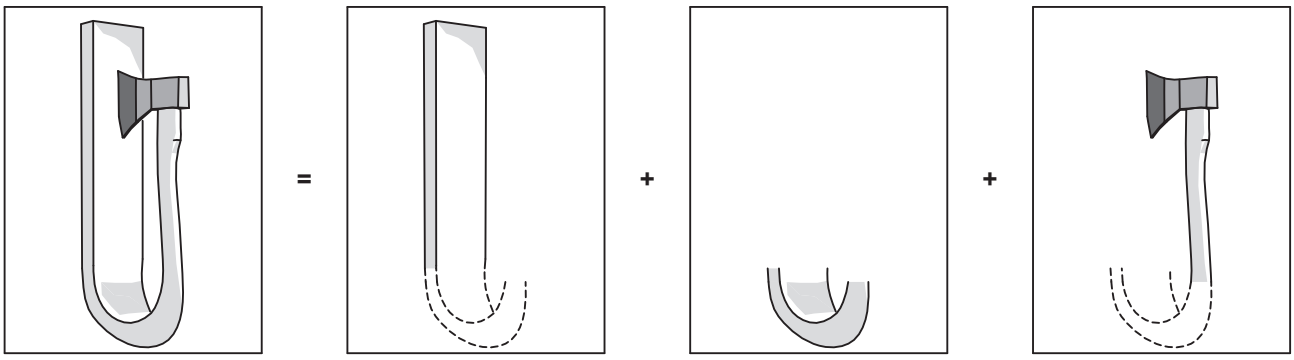


Figure 328: Reconstruction of Timm Ulrichs' *In the own flesh* (1972, object art, wood and steel)
Two complementary articles of everyday use (second figure: 'plank' and fourth figure: 'axe') are transformed one into the other in stages of **Minimal Differences MD**, with a morphing zone (see third figure):
pragmatic complementarity (contamination of instrument versus its object which refers to the title); the relationship between art object and its title is **allegorical semantic complementarity**.

Figure 329: Reconstruction of Daniel Spoerri's *Kichka's breakfast I* (1960, assemblage of eleven instruments such as two egg cups with eggshells mounted on a tray that is fixed to a chair which is screwed onto a wall)
Spoerri fixed together all the objects involved in a breakfast for two persons. Gravitation seems to be overcome. These objects refer to each otherm and together they refer to a past situation.
Pragmatic substitutio + antonymity (a) private versus public space of an exhibition room, b) mobility of the instruments (as actiocepts with clear references to the axes of the human body) versus immobility as intervention in the recipient's body awareness, c) gravitation versus impression of no gravitation, which may cause vertigo, d) several old functions versus one new function of a documentary art object)

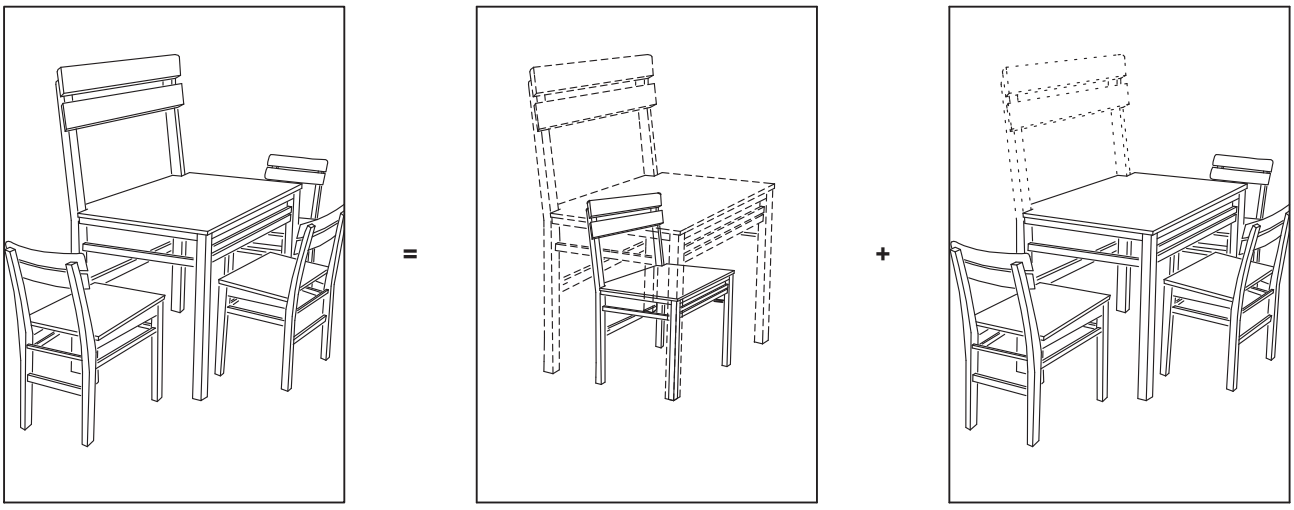


Figure 330: Reconstruction of Timm Ulrichs' *Chairtable with three chairs* (1968, object art)
Pragmatic substitutio + adjectio of the dimension/proportion (one chair as representation of the actiocept 'sitting on a chair' is enlarged by the factor 1.6 relative to three other chairs), which leads to its possible new function as a table (**pragmatic substitutio** of the function) but also to a possible impression of the recipient being reduced in size; within the 'enlarged chair' object, two functions are in **pragmatic complementarity** (support for persons versus support for objects)

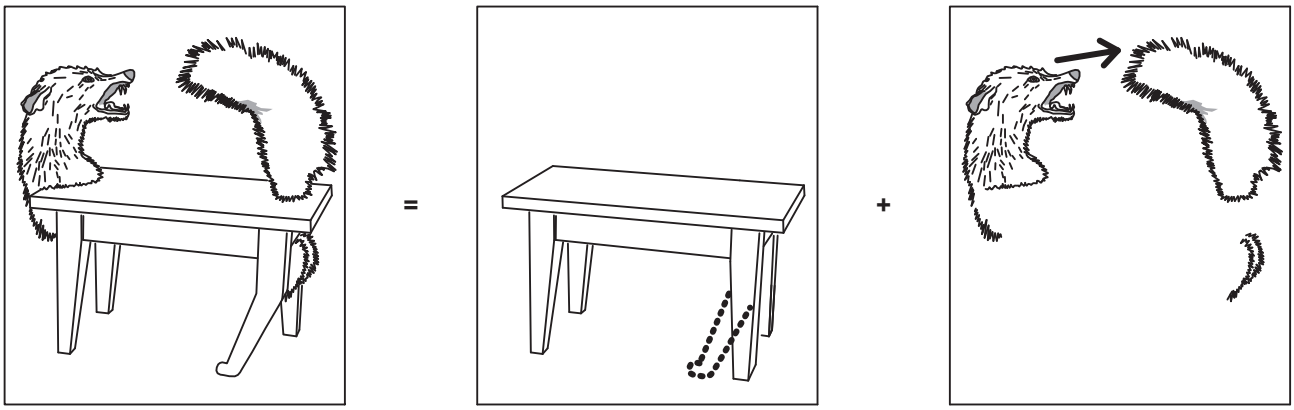


Figure 331: Reconstruction of Viktor Brauner's *Wolftable* (1939- 1945, assemblage of stuffed pieces of a wolf's pelt and a table with one substituted element)
- Pragmatic-semantic substitutio + discrepancy (table instead of the body of the wolf > table versus wolf), the discrepancy can be reinterpreted as an allegory on the contamination of nature and civilisation in human existence (*'homo homini lupus est'*)
- Semantic adjectio + contamination/discrepancy (of the title 'wolftable' = 'wolf' + 'table')
- Pragmatic substitutio + antonymity (normal index of aggression against others versus auto-aggression)
- **Pragmatic substitutio + discrepancy** (one element of the actiocept 'table' was substituted with an element which has similarities to a table and to the leg of an animal: table versus wolf (dual function as icon and as instrument), see dashed line in the second figure)

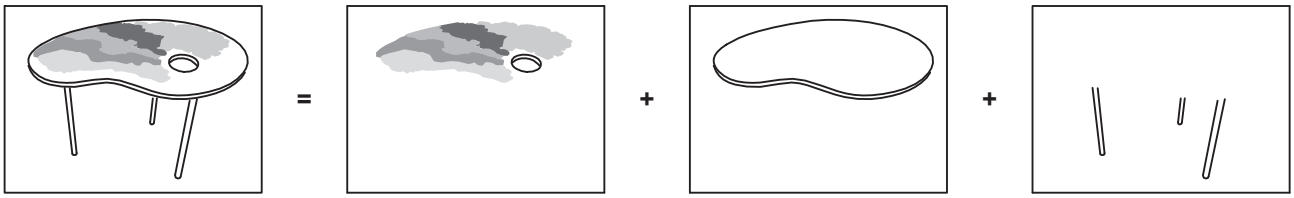


Figure 332: Reconstruction of Man Ray's *Palettable* (1940-1971, object art, painted wooden figure in the form of a palette carried by three sticks)
This object can be divided into three parts (second - fourth figures): 'palette' actiocept (second figure), 'table' actiocept (fourth figure) and parts which can be attributed to both actiocepts (third figure, bio-romanticism of curved contours was a common style in design in the 1940s and 1950s).
- **Pragmatic discrepancy** of functions ((enlarged) palette versus table)
- **Pragmatic adjectio** (enlarging of the palette) which may produce the impression of being reduced in size; **Marcel Duchamp** did the opposite in his collection of works *'De ou par Marcel Duchamp ou Rrose Sélavy (La Boîte-en-valise)'* (1941): the reduction in size of objects.
- **Pragmatic antonymity** of oscillating between two oppositional impressions (of the palette being 'too big' and of yourself being 'too small'): the recipient's consciousness of body is disturbed by the enlarged actiocept 'palette' questioning his dimensionality. In contrast to a concept, such an actiocept influences the recipient's body awareness. The distinction between semantic concepts and pragmatic actiocepts, between semantic ambiguity and pragmatic ambiguity therefore seems rational; but pragmatics includes the sphere of semantics, memory includes actiocepts of actions with objects and concepts of objects.

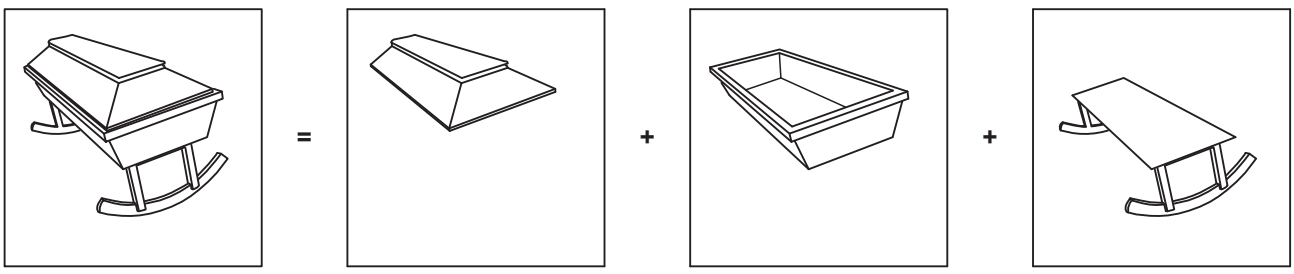


Figure 333: Reconstruction of Timm Ulrichs' *From the Cradle to the Bier* (2007- 2016, object art, wood)
- Pragmatic adjectio (of a base to a bier ?) **+ pragmatic/semantic antonymity** ('cradle' versus 'bier' standing for 'life' versus 'death') or **semantic complementarity** ('beginning' versus 'ending' or reciprocally complex: 'the ending in the beginning and the beginning in the ending'), reflected in the polysemic element of the third figure which cannot be assigned to one of both concepts.

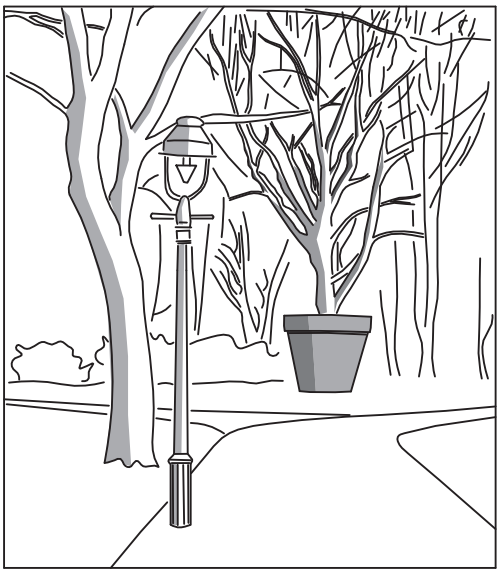


Figure 334: Structure of Timm Ulrichs' *Tree in a Pot* (1968 - 1994, installation in the form of a pot around a tree in a public park in Celle, Germany)
- Pragmatic substitutio + adjectio (enlargement of the size of a pot as an actiocept relatively to a tree) which lead to the impression that the objects of the park are reduced in size (**quasi-pragmatic substitutio + detractio**). Normally, the size of a pot has a relationship to the hands of a human, therefore the hands may appear as if they were enlarged (**quasi substitutio + adjectio**) or reduced in size in direct comparison with this pot (**quasi substitutio + detractio**); so one can identify a kind of polysemy of dimensionality.

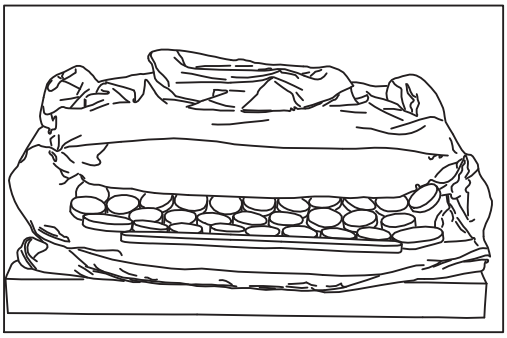


Figure 335: Structure of Claes Oldenburg's *Soft Typewriter, Ghost-Version* (1963, sculpture made of cloth)
- **Pragmatic transmutatio** of contours and **pragmatic substitutio** of consistency (robust metal versus soft cloth), which may appear disgusting due to the actiocept 'touching while typewriting' within the awareness of body

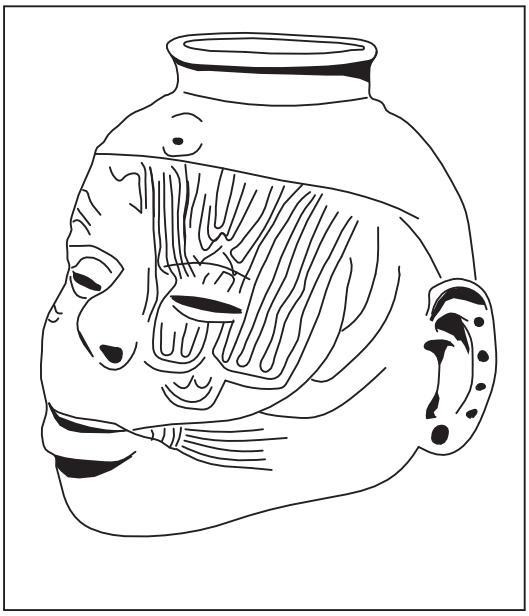


Figure 336: Structure of an Effigy Bowl of the Mississipians (North-East Arkansas, 1000 CE?, ceramics)
Contamination of the art function of icon/allegory and the function of a tool (like in Duchamp's Ready-Mades) are well known in tribal art.
- **Syntactic ambiguity of a Mixture M** (cognitive unification of lines by the S2 and C1 criteria across the form of an eye)
- perhaps **semantic complementarity** of a representation of inner parts of the body by these lines versus representation of the surface of the head (similar to the piece of **Aboriginal art** shown above, interpreted as a kind of 'roentgenogram')
- **Semantic-pragmatic discrepancy** (icon standing for the 'head' concept versus 'jug' tool) or by reinterpretation **allegorical semantic(-pragmatic) complementarity** (e.g. (giving/containing) 'thoughts'/'soul' by iconic formation versus (giving/containing) 'water' by formation as a jug)

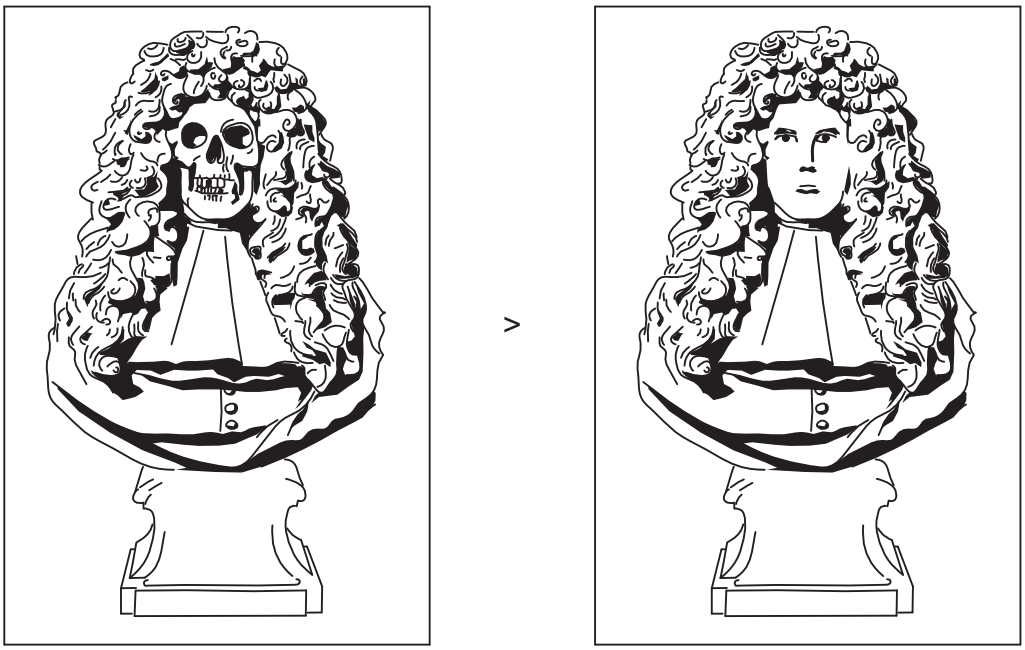


Figure 337: Reconstruction of a vanity bust (original left, Italian School, first half of the 18th century, ceramic sculpture)
- Semantic ambiguity: semantic substitutio + antonymity (person/individuality versus death/mortality = anti-individuality)
- Pragmatic substitutio: the base of the bust is a functional convention for a three-dimensional portrait and therefore for the longing to escape death, but there is not a portrait of an individual, but rather a representation of death and mortality, so there is a substitution of function: eternalising with a portrait versus remembering death by substitution of individuality by super-individuality within a framework of the portrait as a kind of pragmatic index.

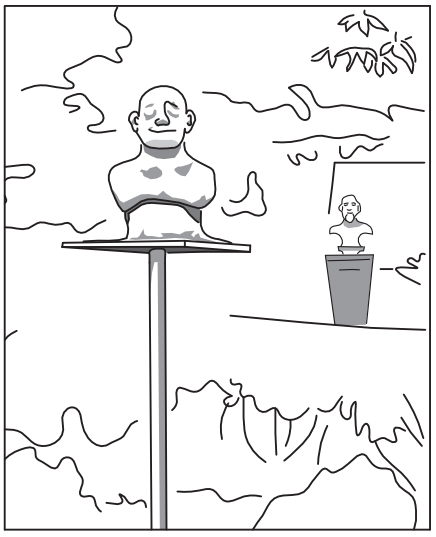


Figure 338: Structure of Dieter Rot's *P.o.th.a.a.vfb. /Portrait of the artist as 'Vogelfutterbüste' (i.e. bust for bird food)* (1968 - 1969, object made of chocolate and bird food, in this case placed in a public garden with other portraits).
- Pragmatic ambiguity: pragmatic substitutio + antonymity of material/consistency within the framework of the European conventional function *'portrait with a bust in the public space'* (edible and transitory versus eternal material bronze/stone of a conventional three-dimensional portrait in a public space: (European) **convention versus its subversion**, see conventional pendant in the background;
- Semantic ambiguity: possible allegorical semantic complementarity by reinterpretation like this: *'part of a person is transitoriness made visible by offering the 'flesh of the body' to the birds like the Parsis do it in their cult with dead bodies'*

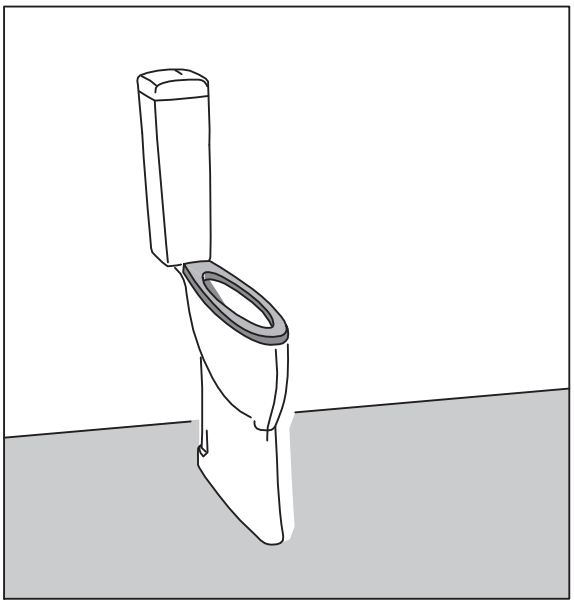


Figure 339: Structure of Erwin Wurm's *Toilet - Narrow* (2014, object art)
Distortion of a tool in one dimension:
- Pragmatic ambiguity: pragmatic detractio of volume/**pragmatic transmutatio** of the contour of a tool with direct impact on the body awareness of the recipient looking at it (claustrophobia, for example), **pragmatic substitutio + discrepancy** (old function versus art function); this leads to:
- Semantic ambiguity: semantic substitutio + antonymity (one kind of extension of space in all dimensional axes versus abnormality of different kinds of extension) which can be reinterpreted as **allegorical semantic complementarity**, for example like this: *'two-and-half-dimensionality of civilisation'* .

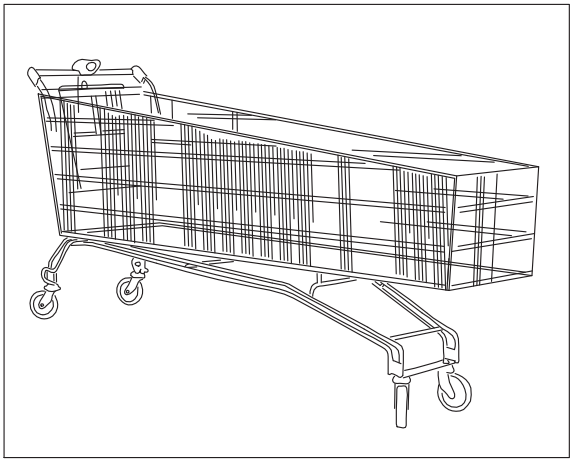


Figure 340: Structure of Maurizio Cattelan's *Less than ten items* (1997, object art)
In this case we also find a distortion of a tool ('shopping cart') in one dimension:
pragmatic transmutatio + adjectio of a contour/volume of a tool;
pragmatic antonymity (title *'Less than ten items'* as an appeal for limitation versus enlargement of the shopping cart) which includes **irony** as a simulation: **ironic pragmatic antonymity** of pretending versus hidden counter-intention, of seriousness of the appeal at first glance versus humour at second glance which can be reinterpreted as **pragmatic complementarity**: critique of consumerism

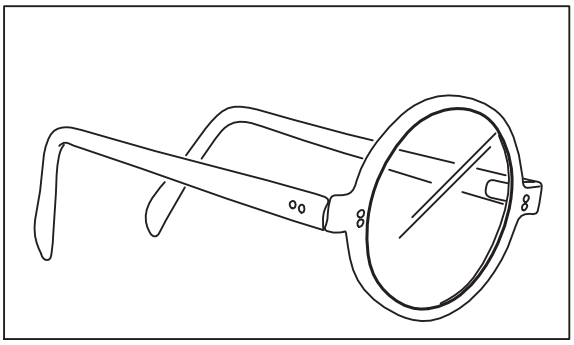


Figure 341: Structure of Marcel Marien's *The Unfindable* (1937, object art)
- pragmatic detractio of one glass out of the actiocept 'seeing with a pair of spectacles' with direct impact on the consciousness of body of the recipient
- **pragmatic substitutio** old function of 'seeing clearly' versus new function of a **cipher** (in connection to the title) that can be interpreted just by associations (e.g. *'the human body prefigurates perception, therefore a lot is 'unfindable' for a normal human being'*)

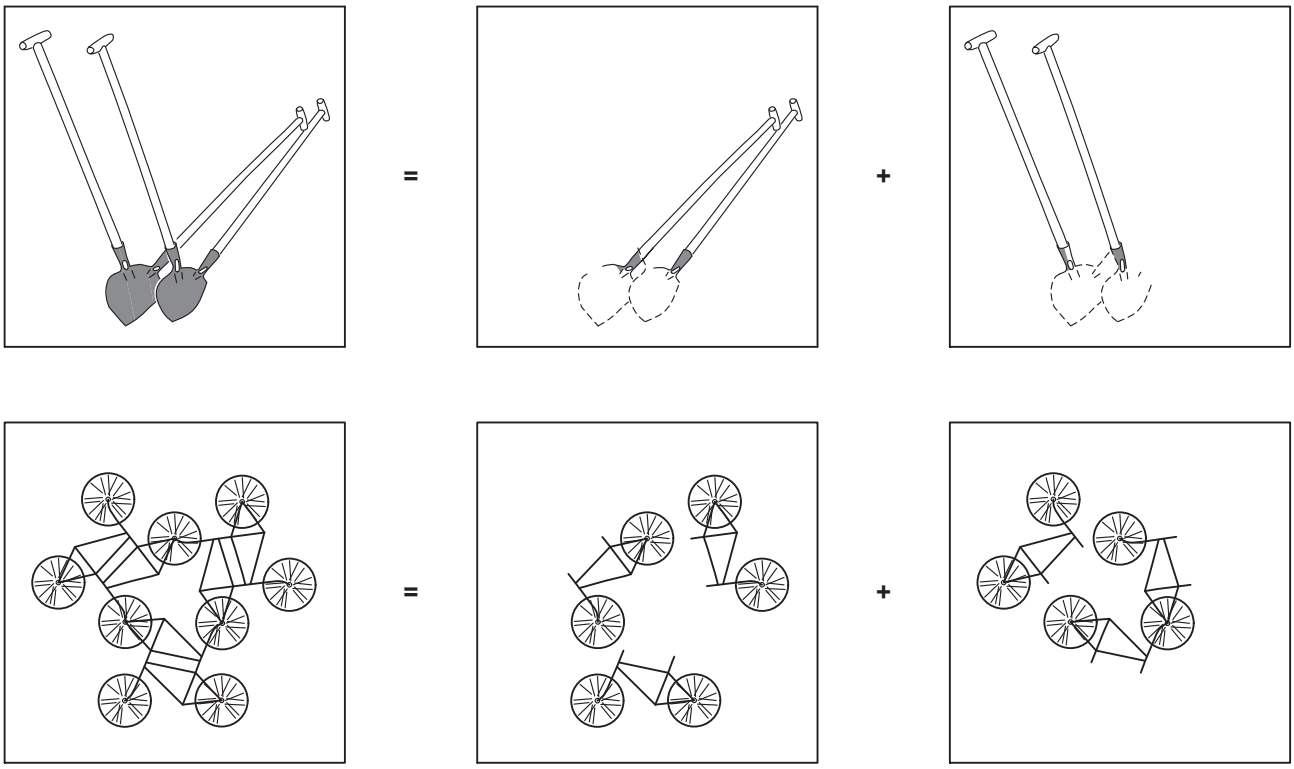


Figure 342: Reconstruction of Joseph Beuys' *2 x Spades with two sticks* (ca. 1970, object art, wood and metal) and of Ai Weiwei's *Forever (Stainless Steel Bicycles in Gilding) 3 Pairs* (2013, object art, metal)
- pragmatic detractio (an example of a tool as its change to a fragment) + **pragmatic adjectio** of this fragment to another example of this tool.
- pragmatic detractio (reduced functionality) in the work of Beuys, **pragmatic substitutio** (impossible function of riding versus function of art) in the work of Ai Weiwei.
These types of pragmatic ambiguity can lead one to an **allegory**, for example by interpreting thus: *'antagonistic relationships lead to immobility of a society'* (work of Ai Weiwei) or *'solidarity which confesses that it is not as productive as social particularism'.*

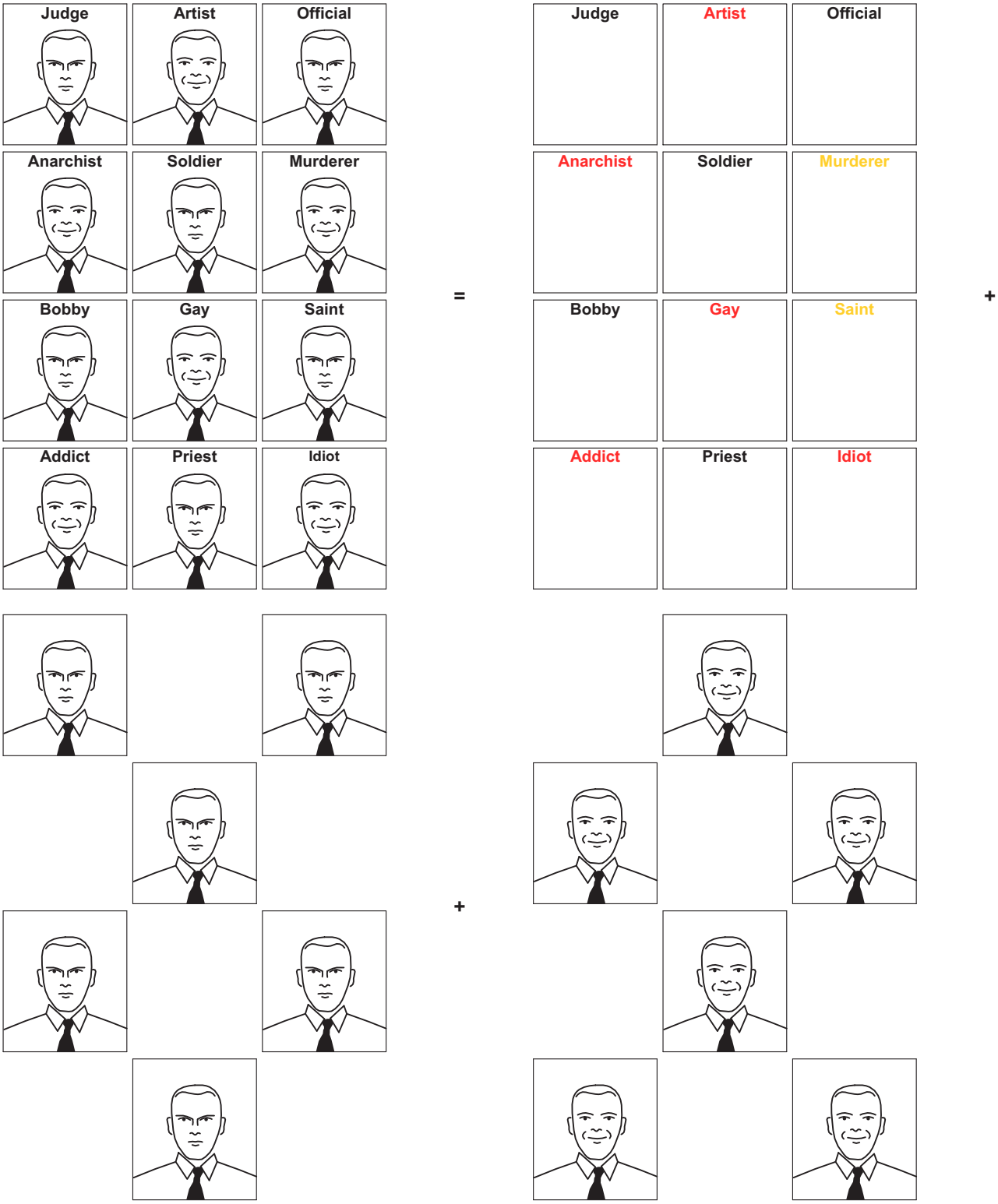


Figure 343: Reconstruction of Jürgen Klauke's *The Human Countenance in the Mirror of Sociological-Nervous Processes* (1976/77; original top left: copies of two photographic portraits of the artist alternating with changing titles)

The principle of representation by text + image is reduced to the absurd because two portraits of one individual with exaggerated miming are used to represent twelve (stereo)types (red: with outsider position, black: with insider position, yellow: judged persons). This can therefore be referred to as **ironic simulation** of showing **= pragmatic antonymity** (showing versus questioning/criticising showing).

One can also identify **semantic antonymity**, because this person can be seen as a kind of 'container' for twelve opposing characters, which may be reinterpreted as the opposition of official versus hidden behaviour, or as a development within one life, as less complex **semantic complementarity**.

Even **syntactic ambiguity as Mixture M** of two groups of similar (facial) forms can be identified.

2.4.2 Interpicturality as a special kind of semantic-pragmatic ambiguity

A work of art may quote the syntactics, semantics and pragmatics of another work; a **parody**, for example, entails a pragmatic ambiguity of two functions: old simulated/quoted function, and commentary on it.
German pop-artist **Sigmar Polke** painted a parody: a white quadrangular canvas with a black triangle in the top right corner. The title written on the canvas itself explains that this work is meant to be a parody (on minimal art): *'Higher creatures commanded: paint the top right corner!'* (1969); pragmatic antonymity can be identified (old function minimal art versus counter-function criticising minimal art).
Another phenomenon of interpicturality is **collage**. For a collage, pieces of a printed image in magazines, cooking books etc. are cut out and recombined. A collage is therefore syntactic, semantic and pragmatic detractio + adjectio, which results in pragmatic contamination of different (former) functions.
Marcel Duchamp used an original watercolour of a landscape by another artist for a kind of ready-made in 1914; he added a figure in yellow and one in lilac and wrote the title ***'Pharmacy'***, his signature and the date on it (see figure 336).
Robert Rauschenberg erased a drawing of the artist **Willem de Kooning** (*'Erasergate'*, 1953), which may be called pragmatic antonymity (production versus destruction of an image); traces of the old image remained as indices to the gestures of De Kooning and of Rauschenberg.
The situationist and artist **Asger Jorn partly overpainted** a trashy German painting of a deer being followed by a hind with his abstract Expressionist gestures (*'Hirschbrunft im Wilden Kaiser'*, 1960); this may be called pragmatic adjectio/substitutio + antonymity (old function of a traditional **icon** versus new function of **indexical** expression) in combination with semantic antonymity (well known entities 'deer' and 'hind' versus non-representing excrescences of colour).

Figure 344: Axel Rohlfs: *Indexical Triptych 2* (2006, visual poetry from the book *what you see is what you get*)
Only the hands in images of the Holy Communion by three painters are shown: 1) Leonardo da Vinci (1495-1498) 2) Taddeo Gaddi (um 1340-1350) 3) Domenico Ghirlandajo (1480); one could speak of **intertextuality as semantic detractio**, which means an emphasis on the indices of hands. But the hands cannot be assigned clearly to only one body (**poly-assignment of fragments of body as semantic contamination by indices**).
The row of hands has similarities to a row of letters of a poem; for this reason one could refer to **pragmatic ambiguity** of two forms of media (image versus text).

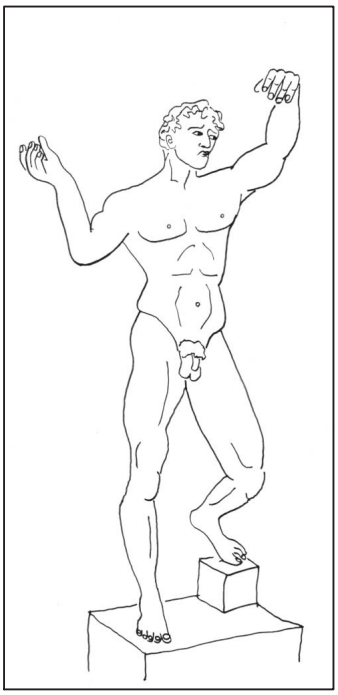


Figure 345: Axel Rohlfs: *Man in the Pose of Arno Breker's Sculpture of a Woman with the Title 'Grace'* (ca. 1940s) (from the book *schemenata*, 2008)
- Semantic ambiguity: intertextually semantic substitutio + antonymity (body of a man as substitution for the body of a woman in a quoted work versus the quoted pose of Arno Breker's sculpture of a woman that is generally assigned to the non-verbal genderlect of women)
- Pragmatic ambiguity: intertextually pragmatic antonymity of 'Cross-Posing' (function of the cited 'female' pose of a work from the Nazi period in Germany as a declaration of the unity of body and gender versus gender-theoretical function of a differentiation between body and pose/gender-role).
Mikhail Bakhtin's theory of carnival includes **cross-behaviour** between social classes, sexes, etc., for example in the form of cross-dressing and cross-posing. He develops this idea of contamination into a theory of **polyphony in literature**: two voices (e.g. of one figure and of the narrator) speaking at once in one phrase. **Julia Kristeva** developed her theory on quotation of one text in another, of contamination of two texts, of **intertextuality** on the basis of Bakhtin's theory.

2.4.3 Image staging and narratological categories

The setting of an exhibition, or the integration of parts of the body (of the viewer into 'his' view/image) can add a kind of narrative to the image. In one installation in the ***'International Exposition of Surrealism'*** exhibition (1938, Paris), one could hear the noise of soldiers' boots from loudspeakers and smell the aroma of roasted coffee beans: linear and nonlinear items of information were contaminated.

Marcel Duchamp stretched a rope through the space for the ***'First Papers of Surrealism'*** exhibition (1942), so that a kind of net appeared (type 9 of Geometric Minimal Difference MD lines to volume/space and pragmatic antonymity: conventional 'being able to move in the exhibition space' versus not being able).

The integration of parts of the viewer's body in the image refers to the image as subjective, quasi-'narrated'; when other narrative elements (such as distortion of the view and extreme perspective from the ground up to something threatening, like in comics) are added, the image is redefined as a **mental image**.

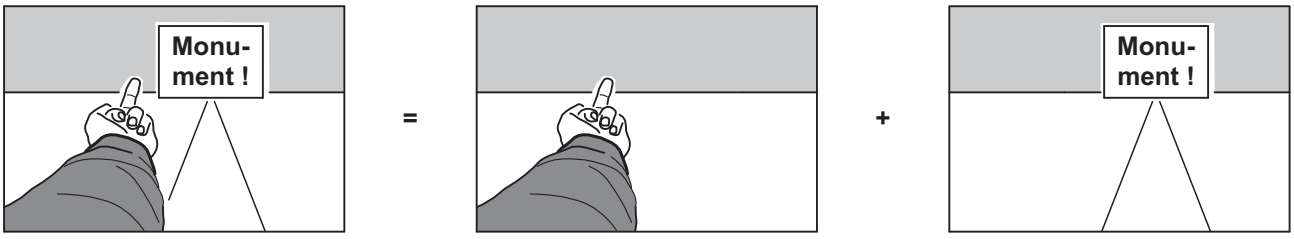


Figure 346: Reconstruction of Ai Weiwei's *Study of Perspective* (serial of photos, begun in 1995)
- Semantic Ambiguity: semantic antonymity: 'the sacred' (of the monument) versus 'the profane' (of the non-verbal symbol of the artist shooting the photo), high sociolect/culture versus low sociolect/culture
- Pragmatic ambiguity: pragmatic antonymity (appeal of the monument to subordinate oneself under its order versus the artist's refusal to do so)
Monumentality is expressed in various (deviant?) ways by the examples of architecture the artist photographed for this serial: extreme horizontality of the Forbidden City in Beijing and of a big ship or extreme verticality of the Eiffel Tower in Paris. The title refers to the perspective of the artist's hand and of the roads pointing to a monument. The artist/narrator makes a comment on the object of reference, so a correlation can be made to **authorial narrative behaviour**.

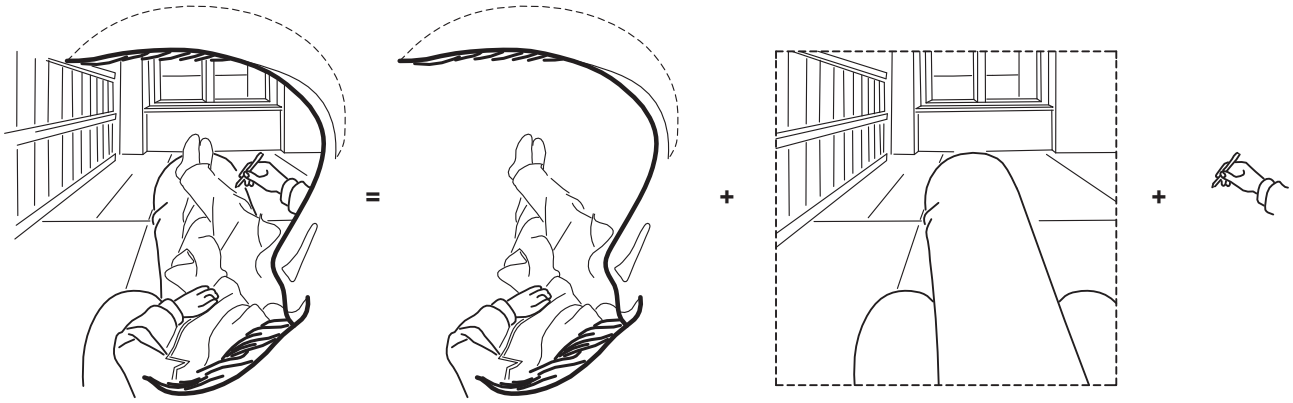


Figure 347: Reconstruction of Ernst Mach's *Internal Perspective* (1886, illustration in a book)
- **Semantic-pragmatic complementarity**: Three perceptions (of the 'interior' object, of the perceiver and of the hand drawing these two perceptions) are contaminated.
The artist is quasi-narrator of the situation, a (distorted) part of the narrated world and the main figure in the situation; he may therefore be called a **quasi-autodiegetic narrator**; the distortion of the body in extreme perspective directs attention to cognition itself.
The figure on the right shows the originally unnatural substitution of the perceivable parts (of your own body while looking) in conventional images.

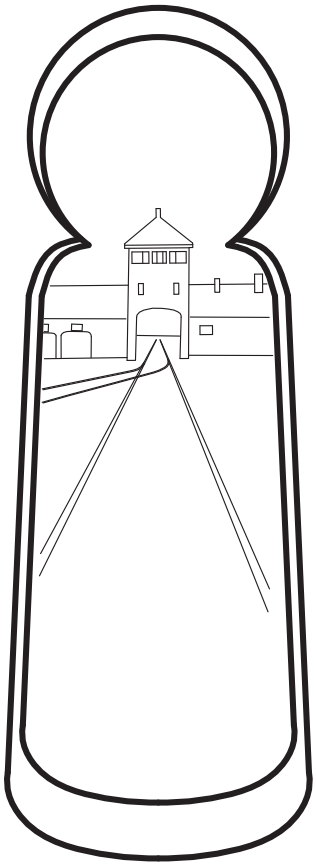


Figure 348: Axel Rohlfs: *Double-Lexicalisation* (from the book of visual/concrete poetry '*what you see is what you get'*, 2006).
Semantic-pragmatic antonymity (keyhole ~ 'look into a private sphere' versus the railway station of the Auschwitz concentration camp ~ 'look on a public place')

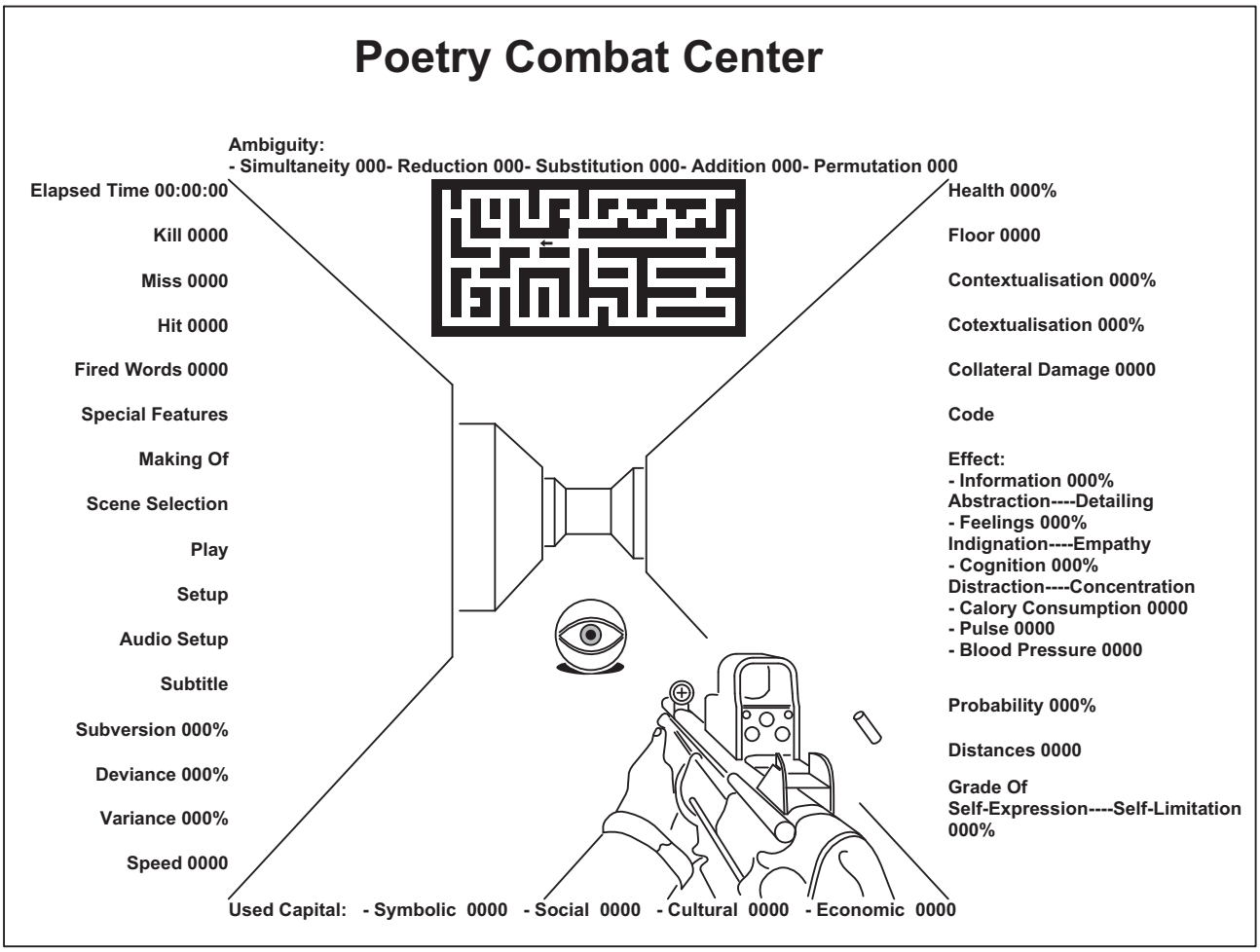


Figure 349: Axel Rohlfs: *Poetry Combat Center* (from the book of visual/concrete poetry *es geht weiter...*, 2014)
This kind of interface (similar to those of ego-shooter computer games) defines the image as a mental image by showing parts of a body in perspective and a framework with texts as 'thoughts'. Texts and image are in (allegorically poetic) semantic-pragmatic complementarity as an allegory on producing poetry; shooting at an eye, for example, becomes a metaphor for metacognitive processes reflected in poetry. A metaphor is a contamination which includes the concept stated in the text/shown in the image, and the concept to which this refers.

Figure 350: Axel Rohlfs: *Untitled* (2008, from the book of visual/concrete poetry *through*)
Nonverbal comments of a figure speaking can be integrated in the image by speech and thought balloons as symbol-indices, by balloons in different formations which symbolically or metaphorically represent moods of the figure.
In this example, twelve bubbles representing emotions point into each other; so there is a bunch of emotions concerning something to be said but which remains unspoken (**pragmatic discrepancy/complementarity** of emotions and absent content and absent figure as **pragmatic detractio**).

2.5 Pragmatic ambiguity

Examples of **pragmatic antonymity** of aspects of a common action are not rare; one is the **Zen Buddhist koan** *'What is the sound of one hand clapping?'* (**Master Hakuin Ekaku**, 1686-1769). In this case, two aspects of the actiocept 'clapping with the hands' are in ambiguous opposition: **instrument** (only one hand) **versus aim** (noise) of the action; by this antonymity the appeal creates a paradox and therefore cognitive discord. Cognition tries to reinterpret in order to achieve less complexity - but may fail.
Timm Ulrichs created several works based on such a **pragmatic antonymity by paradoxical appeals:**
a) In one work, the appeal '*Think always of forgetting me! Timm Ulrichs * 31.3.1940*' (1969) is engraved on a gravestone which stands in a cemetery (pragmatic antonymity way of doing (thinking of) versus aim of doing (forgetting)
b) In his ***Text-Shields*** serial (1967-1974), Timm Ulrichs used pragmatic antonymity in different ways by printing paradoxical phrases on shields:
- *'Can you answer this question for me?'* (reference of a question versus empty self-reference)
- The phrases *'look below'* at the top and *'look above'* at the bottom of a shield lead to a an endless circuit (path versus endlessness)
- *'To read with closed eyes'* (way of doing (closed eyes) versus aim of doing (reading)
- *'Do not read this sentence till the end!'* (way of doing (reaching the end of the sentence) versus aim of doing (not reaching its end)
c) In a newspaper, he announced his marriage to the fictional person *'Anna Blume'*, who appears in poems by **Kurt Schwitters**; in this case, one can refer to a pragmatic contamination of fictional and non-fictional world by pragmatic substitution of a fictional person for the 'natural person' element in a public act.

Substitutions for the usual surroundings of everyday objects **(pragmatic substitutio)**, for example **Bas Jan Ader's** happening called *'All my clothes'* (1970), in which he put all his clothes over the roof of his house.

The Greek sculptor **Andreas Lolis** creates imitations of cardboard boxes using marble as material, which means pragmatic antonymity: high material + function versus low material + function (e.g. *'Untitled (cardboard box)'*, marble sculpture, 2012).

In his *'Tickled in a Dream'* installation (2016), **Taro Izumi** created pragmatic ambiguity of two antonymous actions: a photo shows two football players flying through space, two constructions near this photo can be used as furniture for lying down in the same position in space as the football players have.

In their art action *'Imponderabilia'* (1977), **Marina Abramovics and Ulay** stood naked at either side of a passage in a wall, looking at each other, visitors had to squeeze through. Pragmatic antonymity of space (public exhibition space versus conventionally private sphere of nakedness as pragmatic detractio of clothes) was strengthened by the narrowness of the path (pragmatic detractio of width). The visitors disturbed the connected glances between the naked artists by crossing this line (pragmatic antonymity of paths by adjectio).

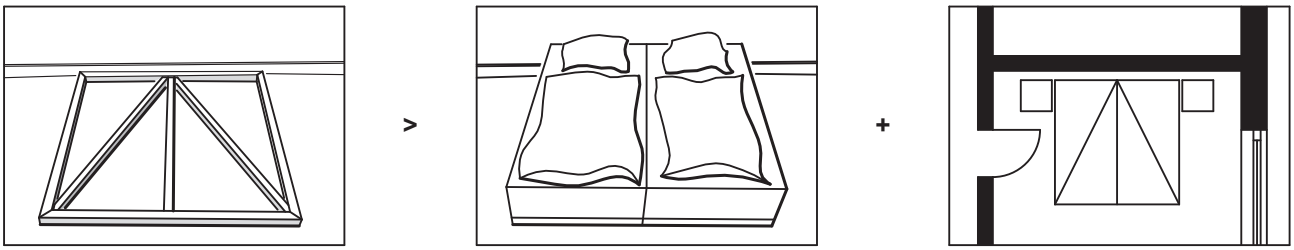


Figure 351: Reconstruction of Timm Ulrichs' *Double Bed /Materialised architectural Symbol according to DIN 1356* (1969, object art/installation of wooden beams on the ground)
DIN 1356 is an old German norm for symbols to be used in architectural plans; its symbol for 'double bed' was built of beams and with the dimensions of a real bed. This produces **pragmatic complementarity** of two spheres of use: use as a sign versus (suggested) use as the signified physical object 'bed'.

Figure 352: Basic structure of a withholding of image
Text and image can be combined in such a way that the image to which the text refers seems to be absent.
- Mel Ramsden of the artist group **Art + Language** combined in his diptych '***Secret Painting***' (1967-1968) a monochromatically black image beside a white one with the following text:
'The content of this painting is invisible; the character and dimension of the content are to be kept permanently secret, known only to the artist.'
Therefore the black image cannot be seen as monochromatic art such as works of **Alexander Rodchenko** or **Yves Klein** because the text opens up a space of interpretation by declaring an 'absence'.
Withholding in this case means reference to showing without showing, therefore pragmatic antonymity.
- The artist group *Club Two* created the video *'Black on White'* (2003) in which a voice talks about images of the Shoah, but these are substituted with figures containing texts (black on white) which pose questions concerning representation and memory. In a documentary context, representation is questioned (**pragmatic antonymity**).

2.6 Pragmatic-syntactic ambiguity

Marcel Duchamp's *Bottle Dryer* has been already mentioned as an example of **pragmatic-syntactic ambiguity**: pragmatic substitution of the embedding of the object (wine cellar versus exhibition room) and of the function (drying versus perceiving the syntactic ambiguity of the object of Geometric Minimal Difference MD lines to volume).

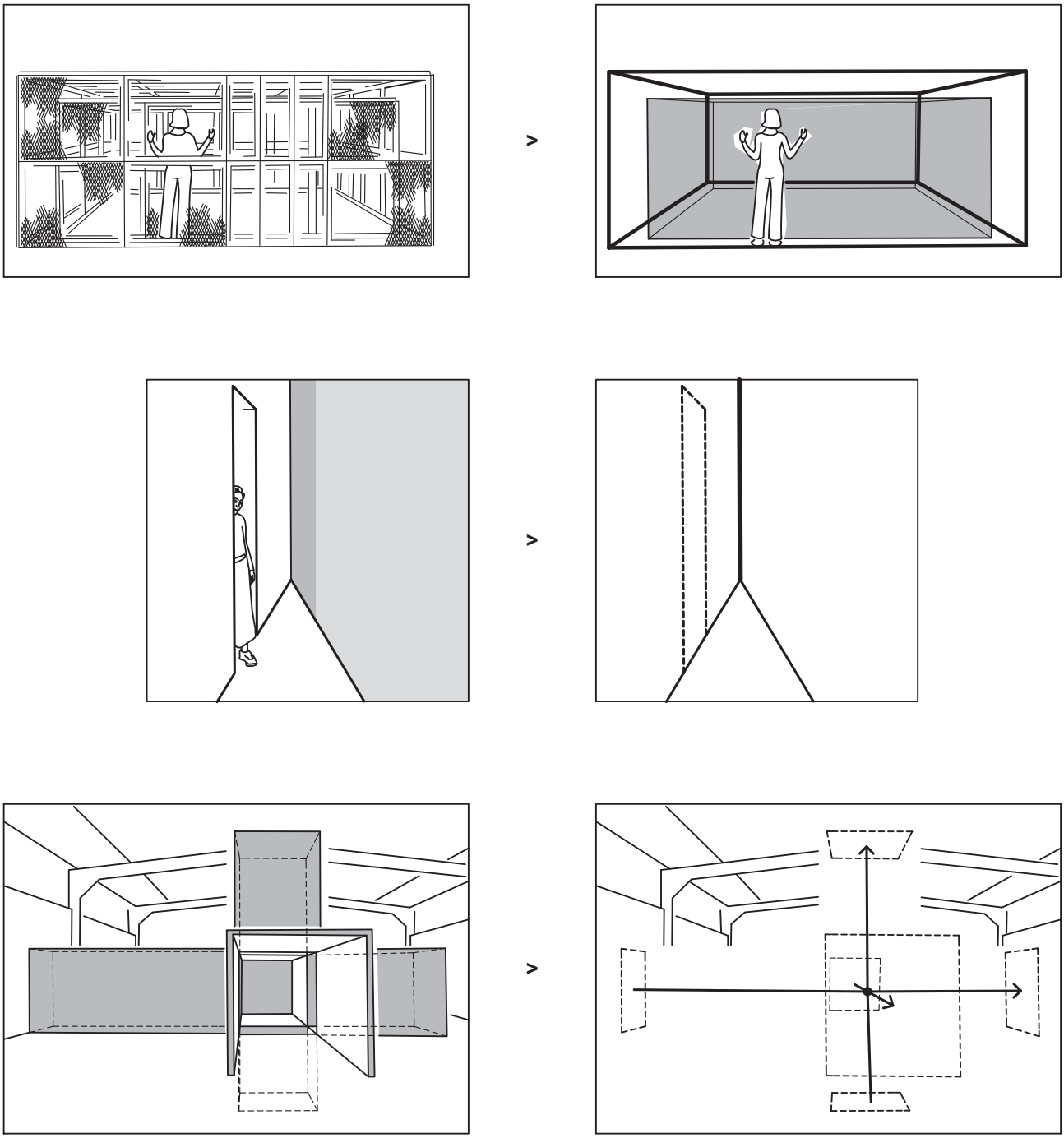


Figure 353: Reconstruction of the Geometric Minimal Difference in three installations by Bruce Nauman: In these three works, **syntactic ambiguity has an impact on the actiocept** *'walking through the exhibition room'*; so these works can be assigned to syntactic-pragmatic ambiguity.

a) *Double Steel Cage* (1974, one metal cage surrounding another metal cage),

- Syntactic ambiguity: Geometric Minimal Difference **type 15 - lines to planes to volume:** lines (wires of a cage) lie together in such a way that the whole appears as blurred planes, which lie together in such a way that the whole appears as a blurred volume); you cannot enter this volume within an exhibition room ('withholding of space instead of an image like above'). Due to the repetition of a cage-like volume within itself (self-similarity), one can refer here to ambiguity of the Hybrid H type (part versus the whole). The interspace between the two cages is so narrow that a visitor can only squeeze through it (pragmatic substitutio normal width versus narrow width); one can thus refer, conversely, to Geometric Minimal Difference MD of type 12 (volumes to plane: volumes lie together in such a way that the whole appears as a blurred plane).

b) *Left or Standing Standing or Left Standing* (1971, two walls converging with each other)
- Syntactic ambiguity: Geometric Minimal Difference **type 16 - volumes to planes to line,** because two walls converge to a line of intersection.
c) *Room with My Soul Left Out Room That Does Not Care* (1984, three converging metal tunnels)
- Syntactic ambiguity: in an abstract sense one can identify Geometric Minimal Difference **type 18 - volumes to planes to lines to point (?)** due to the fact that the installation resembles a Cartesian coordinate system. Such a system points to its point of origin, but in this case by leading the visitor along lines to the central point from which he has six possible views outward.

In another installation, he built a corridor (ten metres long, only 50 cm in width, which means **pragmatic detractio** of width, ***'Live-Taped Video Corridor'***, 1969 - 1970); at the end of this corridor, two monitors stand one on top of the other; the lower one shows the space of the corridor without a visitor, the upper one shows the actual visitor: the more the visitor approaches the monitor, the smaller the image of the visitor from behind that appears on the monitor, because the camera is fixed at the entrance filming his back. The impression is **pragmatic antonymity** of movement (approaching the monitor) and its counter-movement (receding from the camera opposite the monitor): the closer the visitor gets to the monitor, the more distant his representation becomes; this can produce numerous associations concerning the relationship of human and (electronic) media. The monitor under the other one shows exactly the same room without the visitor, which creates the impression of being absent in this room (**semantic-pragmatic detractio**).
The images of the monitors are in **semantic-pragmatic antonymity** (presence versus absence of the visitor) at the beginning of the movement, and when the visitor has finished approaching the monitor one could refer to **pragmatic complementarity**, because the absence shown in one monitor could be interpreted as the end of the visitor's receding from the camera by approaching the monitor.

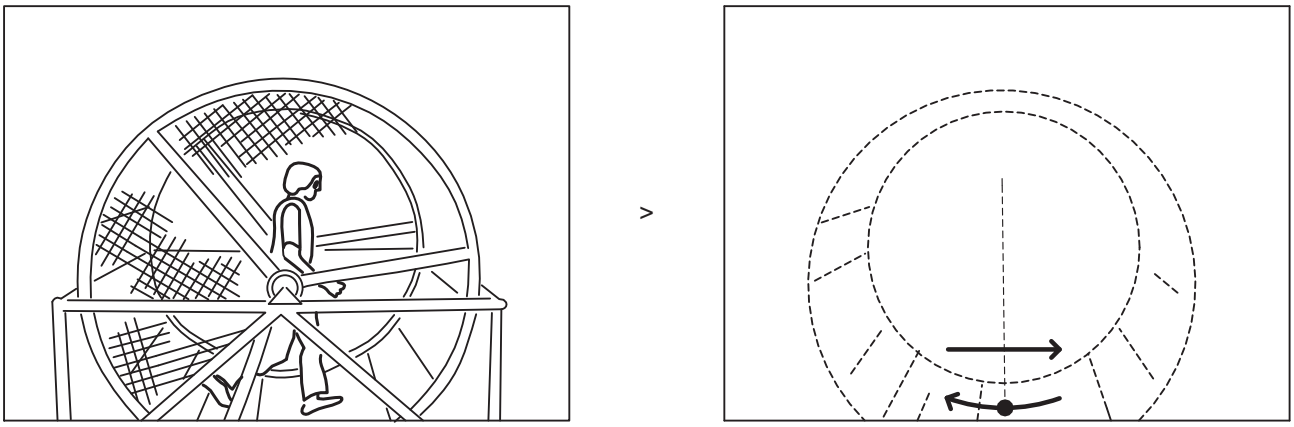


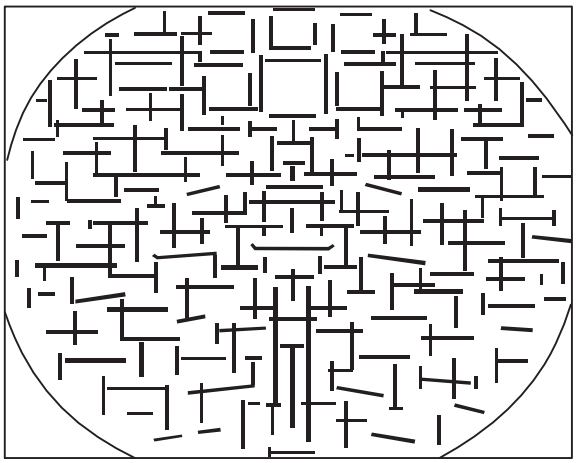
Figure 354: Reconstruction of Timm Ulrichs' *Olympic Treadmill* (installation of an art object on the terrain of the 1972 Olympic Games in Munich)
Walking forwards in this treadmill produces a counter-movement of the wheel, but does not lead to a change of position; one can therefore refer to **pragmatic antonymity** (going forwards versus the wheel's counter-movement; walking versus staying in the same position). The visitor's moving in space is limited to a movement on a line due to planes, but this results in him standing on a point; one may therefore associate syntactic ambiguity with this experience: **Geometric Minimal Difference of type 18** (volumes to planes to lines to point).

2.7 Syntactic-semantic-pragmatic ambiguity

The ***'schizo look'*** of the early punk movement combined two halves of two different costumes from different social backgrounds by vertical cutting and sewing, sometimes combined with two different hair style halves. This is an example of syntactic-semantic-pragmatic ambiguity as **duality of non-verbal sociolects**:
a) Syntactic ambiguity: within one volume there are two halves with partial dissimilarity and partial similarity (**syntactic substitutio** within a symmetrical body which leads to the contamination **Hybrid H** (C3 contour of body versus two parts defined by the criteria S1- S4).
b) Semantic ambiguity: these two halves can be assigned to two different nonverbal sociolects which may be in **semantic discrepancy or antonymity** (conventionally 'high' versus 'low') due to **semantic substitutio** within one 'body' entity.
c) Pragmatic ambiguity: ironic subversion of the order of sociolects and of conventional classifying of people according to their appearance by **pragmatic substitutio** leading to **pragmatic antonymity** (representation of social background versus anti-representation/denial of social determinism).

Another practice in the nonverbal communication domain is **cross-dressing** as an exchange of clothes between male and female persons (**duality of nonverbal genderlects** as semantic-pragmatic contamination). **Mikhail Bakhtin** declared the contamination of sociolects and genderlects during the carnival season to be a social practice for experiencing the relativity of every social order.

Figure 355: Reconstruction by variation of colour from black to red and green of Piet Mondrian's *Pier and Ocean IV* (1914, drawing)
- Syntactic ambiguity: Mixture M (S4.1 horizontal versus S4.2 vertical, see second - fourth figures) for lines without points of intersection and **Hybrid H** in points of intersection (C1.1 horizontal line versus C1.2 vertical line); this combination of Mixture and Hybrid leads to a **secondary semantic ambiguity of two spatial impressions**: 'hovering without definition of the spatial depth of a line' (Mixture) and 'lines being fixed in one common plane' (Hybrid); **syntactic detractio/adjectio** (see last row of plates) of disturbed symmetrical rectangles in symmetrical constellation.
- Semantic ambiguity: strong abstraction of the piece of represented world to which the title points (**semantic detractio**);
- Pragmatic ambiguity: the abstraction of the objects is very strong, therefore the function of representation is so weakened that the recipient may search for a second function: 'seeing of seeing' (metacognition) or just contemplation; this may be called **pragmatic antonymity** (representation versus non-representation) or **pragmatic complementarity** (recognising representations of objects/semantics versus contemplation of syntactics or perceiving of perceiving).
As early as 1954, **Vera Molnar** made a similar reconstruction by variation (of the two oppositional cognitive layers) of another work in the *Pier and Ocean* serial: ***Decomposition of a Mondrian*** (1954, red and blue stripes on a photo reproduction of a Mondrian, Stiftung für Konkrete Kunst und Design Ingolstadt). Other possible variations, instead of that of colour, could be: thick versus thin lines (criterion S3) or dashed lines versus continuous lines (criterion S2).



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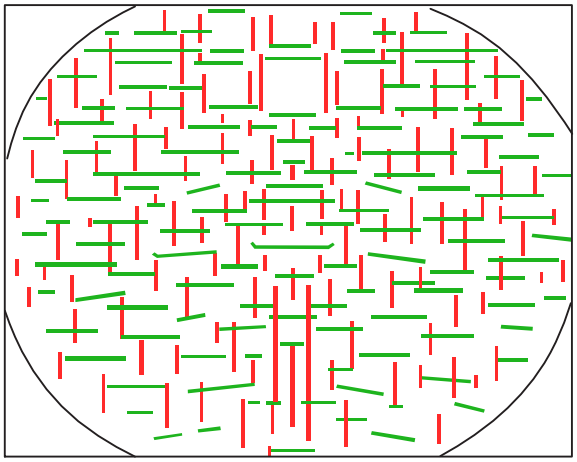

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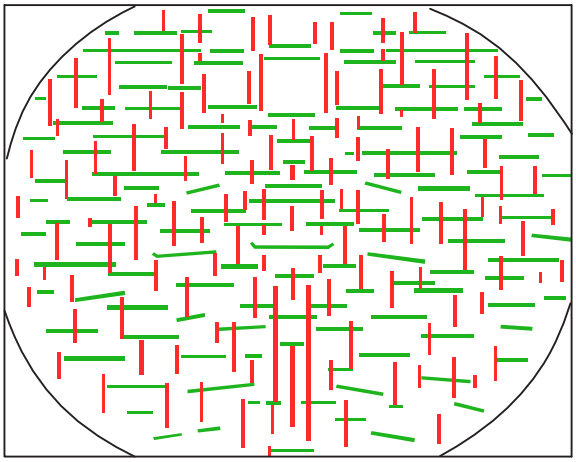

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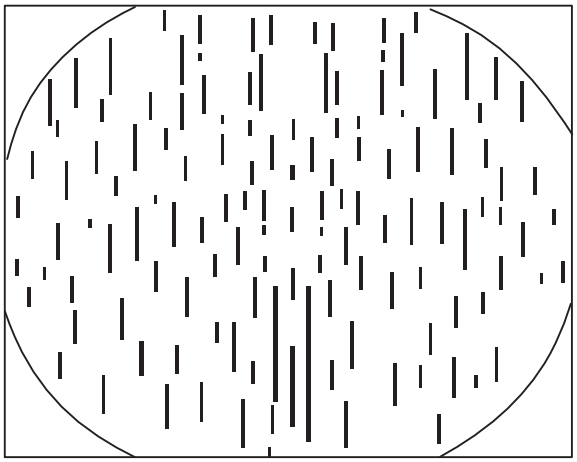

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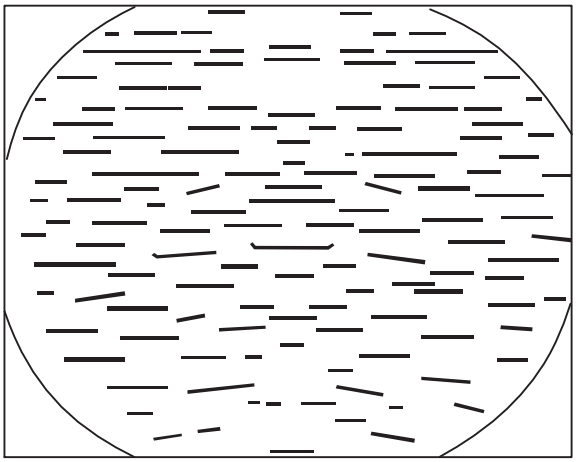

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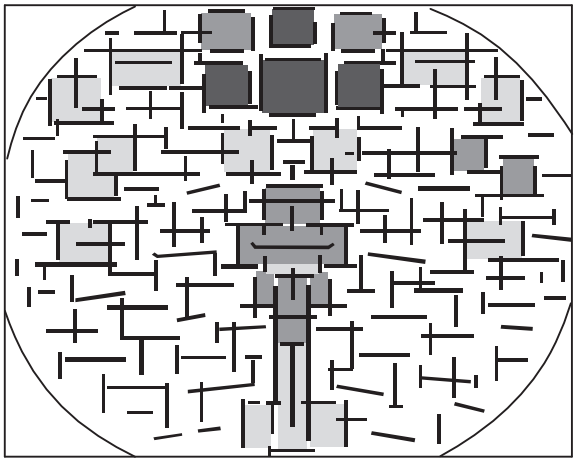

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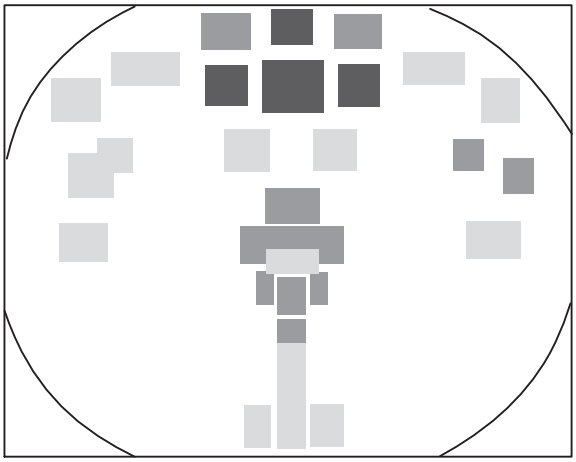

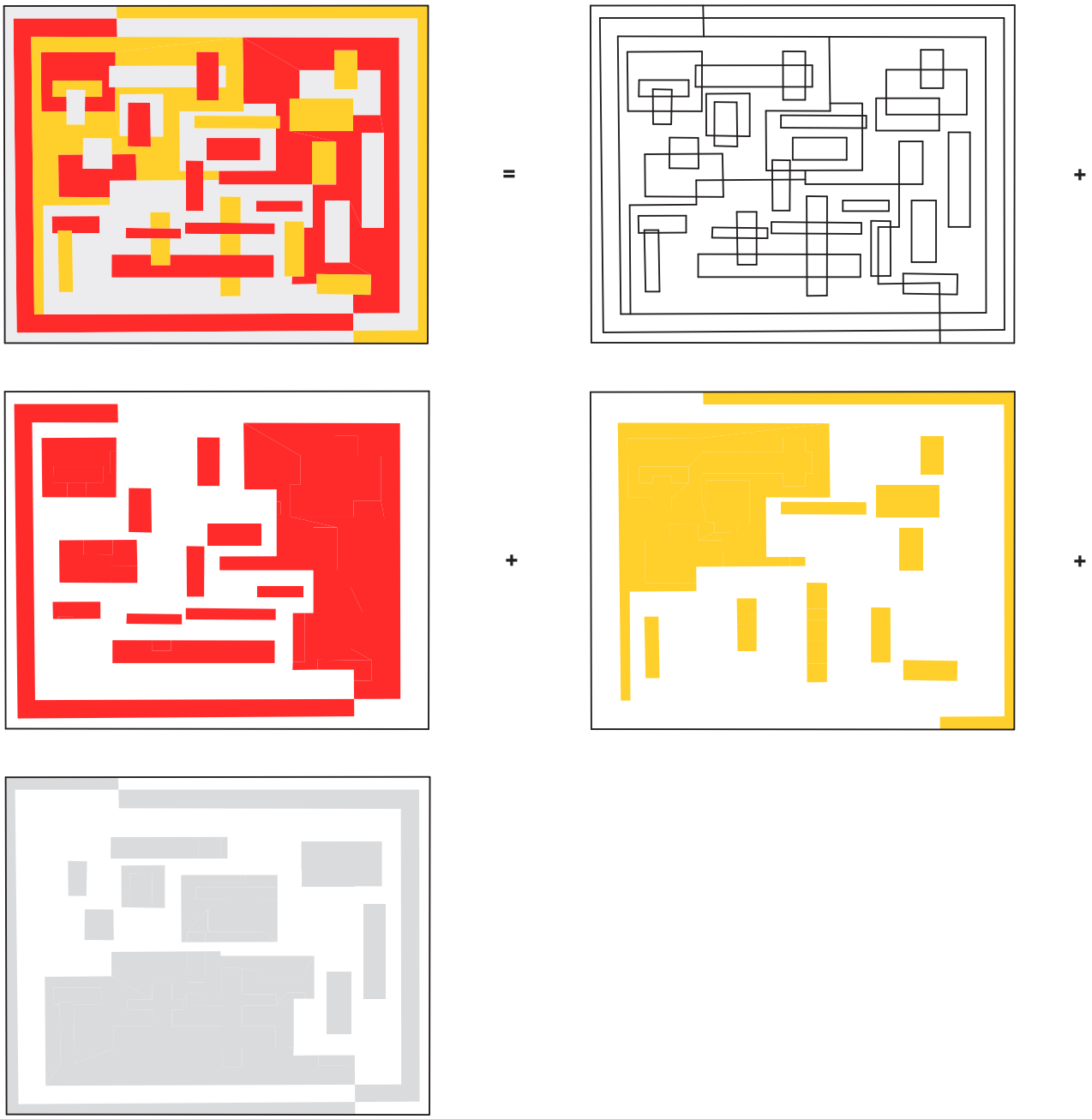

Figure 356: Reconstruction of Vilmos Huszár's *Hammer and Saw* (1917, painting)
Syntactic ambiguity: Mixture M of dispersed planes and Hybrid H of crossing planes distinguishable by their three different colours (S1.1 red versus S1.2 yellow versus S1.3 white), similar to the syntactic ambiguity of the work by **Mondrian** above,
Semantic ambiguity: each colour is used for kinds of 'figure', 'background' and 'frame' (see third - fifth figures), so these three types of representation are contaminated by their similarity of colour. In addition, three contaminations in red, yellow and white are contaminated and are in opposition to attract attention. Parts of the image are polysemic: is one of the four fragmented frames in red, yellow and white part of the saw?
There is **semantic antonymity** of spatial depth, because one colour is sometimes overlapped by another colour and sometimes it itself overlaps another.
Pragmatic ambiguity: similar to works by Mondrian, but in this work the level of abstraction is even higher than in Mondrian's *'Pier and Ocean'*; without the title, one could hardly recognise the representations as representations (of hammer and saw).

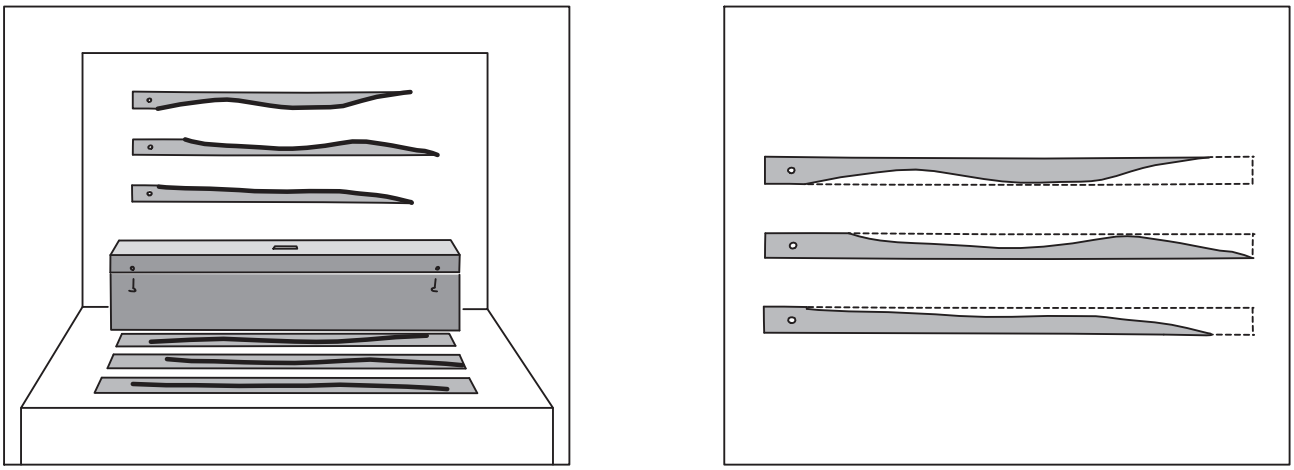

Figure 357: Reconstruction of Marcel Duchamp's *3 Standard Stoppages* (1913-14, edition dating from 1964, three rulers cut at one side in a form by chance within a box)
Duchamp obtained random lines by letting three threads fall onto a ground: there is only one straight line, but uncountable curved lines.
- Syntactic ambiguity: syntactic substitutio (perceivable as disturbed symmetry of rectangle of a ruler)
- Semantic ambiguity: semantic substitutio of three straight edges by curved edges in three rulers (as representations of the three dimensions x, y and z?) + **semantic antonymity** (Euclidian geometry versus non-Euclidian geometry as two systems of spatial meaning, determination versus chance)
- Pragmatic ambiguity: pragmatic substitutio + antonymity (Euclidian geometry as a system of planning/doing versus non-Euclidian geometry, planning versus letting chance happen)

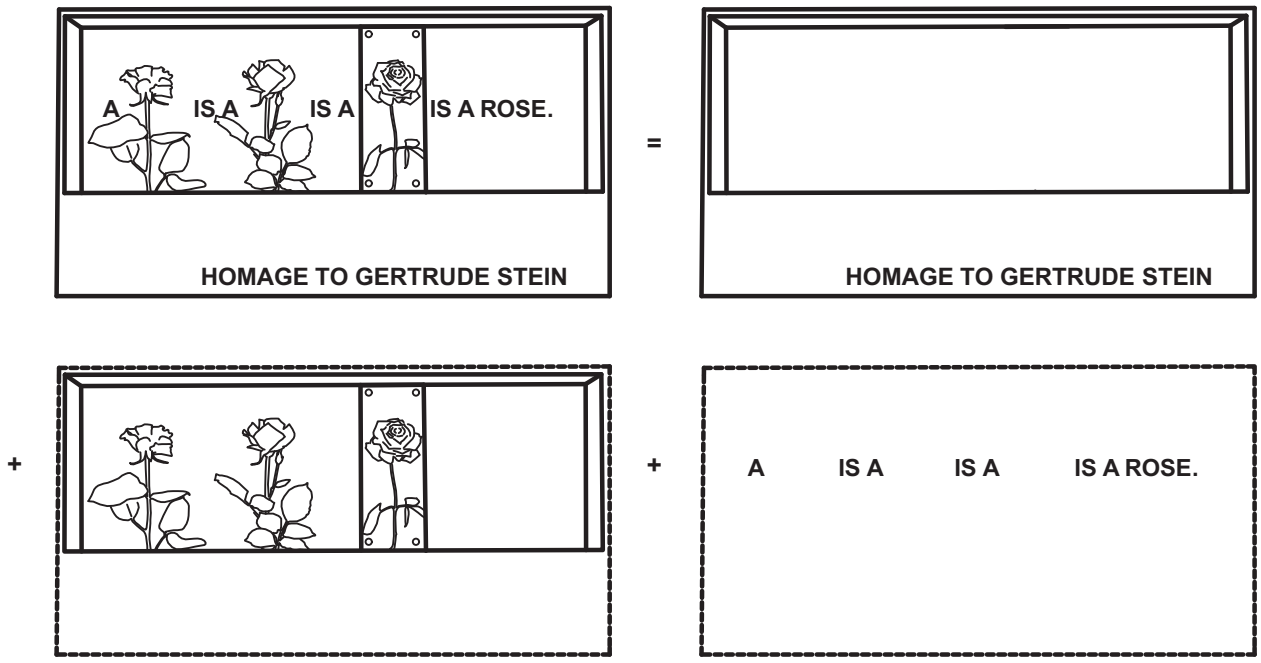

Figure 358: Reconstruction of Timm Ulrichs' *Homage to Gertrude Stein (in increasing grades of abstraction)* (1972 - 77, object art: open box with a real rose, an artificial rose as a three-dimensional icon, an image of a rose as a two-dimensional icon and a fragment of a sentence as text)
A sentence is fragmented by objects substituting for words (**detractio/substitutio**), the quotation of **Gertrude Stein**'s famous phrase '*A rose is a rose is a rose.*' is enlarged by one additional element (**intertextual addition**).
Syntactic ambiguity: Mixture M of the printed forms mixed with other forms.
Semantic ambiguity: (complementary?) contamination of the real world and its mental representations by a fragmented sentence (**semantic detractio**): one specimen of the prototypical concept 'rose', a three- and a two-dimensional icon representing the concept 'rose', one printed word 'rose' representing the prototype 'rose' which shall be interpreted as abstraction in increasing grades according to the title. The fragment of a sentence offers an interpretation of Gertrude Stein's phrase as the correlating identification of cognitive entities: real object = iconic representation = prototype; identification of objects, icons and words is logically incorrect but cognitively correct, because cognition is impossible without schematisation/abstraction.
Pragmatic ambiguity: (complementary?) contamination of perceiving the real rose and of giving meaning to iconic and to symbolic signs: 'real things' are cognitively redefined as concepts (only existing for us in the brain), signs are redefined as objects.

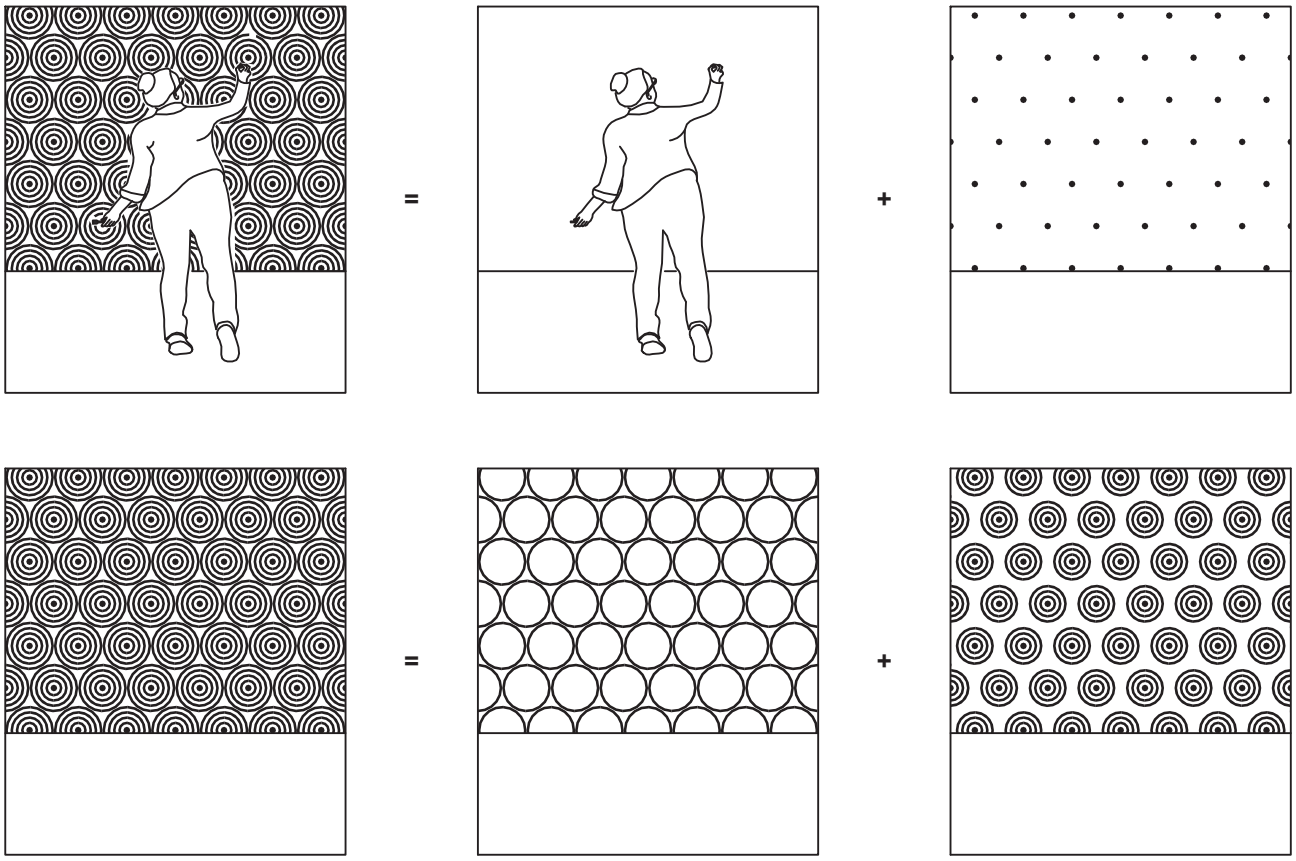

Figure 359: Reconstruction of Jacob Dahlgren's *I, the World, Things, Life* (2004 - 2016, installation of dartboards on a wall, with the appeal to visitors to throw at these)
- Syntactic ambiguity: Mixture M of two general cognitive groups (white planes versus black planes)**, Mixture M** of four more complex cognitive groups (black points versus black circles versus white circles versus white triangular interspaces); **Hybrid H** in points of contact of two circles (C1.1 versus C1.2) which produces a tendency to wander with one's eye through the installation; the C3 criterion of the round contours produces a counter-tendency (also towards spatial interpretation of groups of concentric circles in competition); so there is a lot of competition between possibilities for cognitive unification of elements.
- Semantic ambiguity: allegorically semantic complementarity (actiocept versus title), for example like this: *"Throwing' at 'things in competition' as active self-definition of the subject in the 'world', possibilities for cognitive unification of elements in endless competition as 'flickering world'; whenever you have not hit one 'thing', you may have hit another one.'*
So the normal sequence of syntactics/perception > semantics/giving a meaning to the sign > pragmatics (inner and outer reaction) has changed: attention has to be diverted by the installation (pragmatics) to find an allegory according to the title (semantics); the experience of not trying to hit a chosen target but to throw 'blindly', using chance, can be part of an interpretation of the title '***I, the World, Things, Life'***.
- Pragmatic ambiguity: the actiocept *'throwing darts at a dartboard'* is rhetorically changed because there are numerous dartboards added to a single dartboard (**pragmatic adjectio**), so the risk of failure is reduced (**pragmatic detractio**). The everyday object ´dartboard´ forms in its repetition and arrangement a kind of Op Art (**pragmatic adjectio** of the additional function *'metacognition'* to the old function of *'playing darts'*, both functions are in **pragmatic discrepancy**). The viewer realises that he/she has multiple abstract perspectives on the change of an actiocept. This is an example of syntactic-semantic-pragmatic ambiguity.

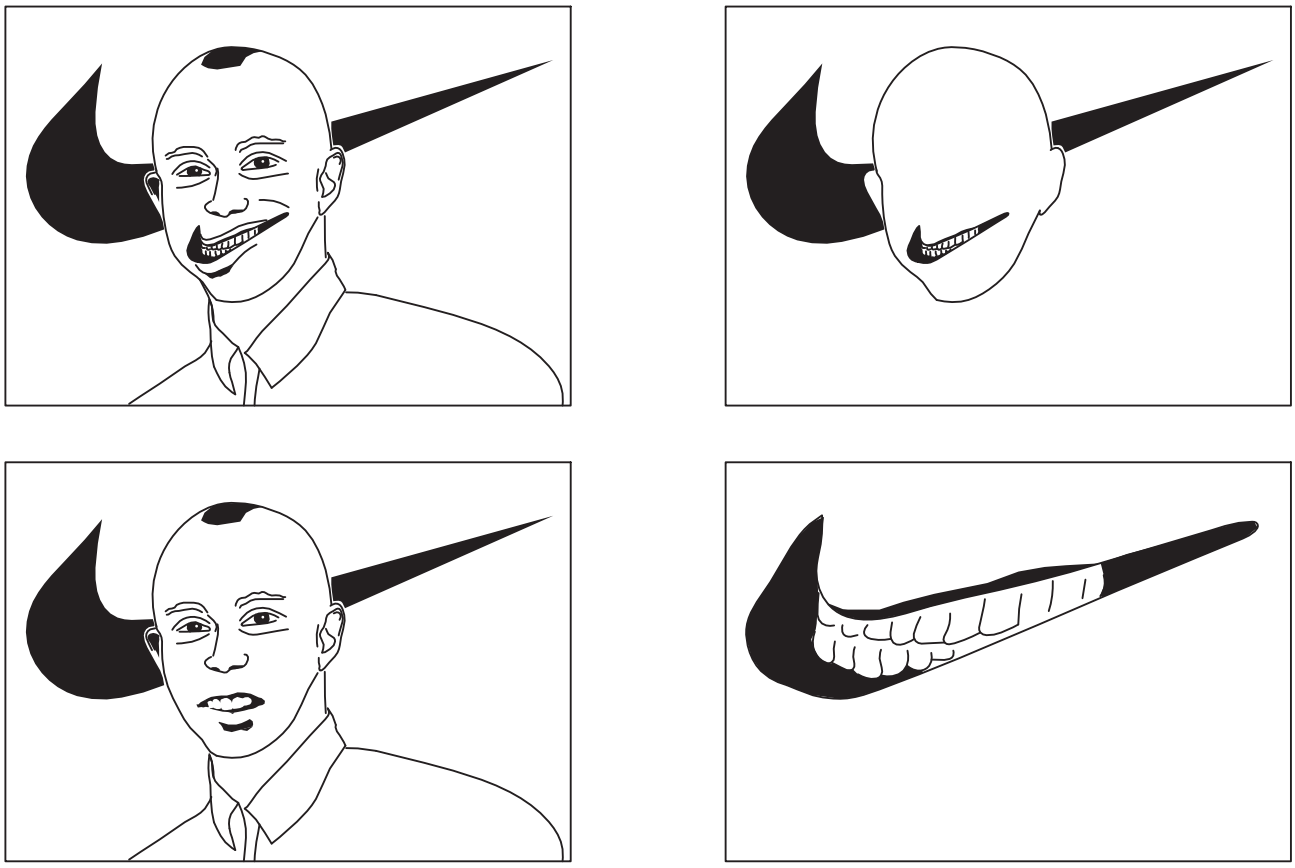

Figure 360: Reconstruction of a work from the Adbusters movement (unknown artist, without date, digitally manipulated photo of a well-known person posing in front of the logo of a firm)
- Syntactic ambiguity: Hybrid H in the shape of the mouth (S2 similarity of the two curved shapes of 'mouth' and 'logo' versus C3 of the oval/face); **Mixture M** (S1+ C1 of two parts of the curved form in the background versus C3 of the oval/face), **syntactic transmutatio** (disturbance of the symmetry of the face in the mouth)
- Semantic ambiguity: semantic transmutatio of the natural contour of a mouth (deformation which can be interpreted metaphorically: *'deformation of the character'*); the syntactic Hybrid H can be interpreted critically as an aggressive contamination of character and manipulation by showing teeth.
- Pragmatic ambiguity: pragmatic substitutio + antonymity (of the old function 'advertisement' versus 'criticising advertisement')
The Adbusters movement uses advertising elements to criticise its manipulation of the recipient; the Situationist **Raoul Vaneigam** would have called this 'purloining', the members of the movement call it 'subvertising' (verbal contamination of the words 'subversion' and 'advertising'); 'adbusters' is a contamination of the words 'ad' (i.e. short form for 'advertisement') and 'to bust'

3.0 Summary: metacognition and aesthetic ambiguity

To **analyse/produce an ambiguous work of art** one can follow a sequence of questions:

1) Do you find out/want a deviance from a scheme and/or a contamination of cognitive entities in the work of art?

Aesthetic ambiguity is based on the **opposition of cognitive entities in their reception**, such as percepts (syntactics), concepts (semantics), actiocepts (pragmatics); there are two kinds of opposition:

a) Deviance (scheme versus its deviance) changes a syntactic/semantic/pragmatic **scheme** which is highly redundant (e.g. symmetry) and can therefore be **still identified** after a change by detractio/adjectio/substitutio/transmutatio.

b) Contamination (entity a versus entity b) of several offers to unify elements to a cognitive entity is based on **oppositional criteria**:

- for syntactic ambiguity there are four similarity criteria (S1 - S4) and four contiguity criteria (C1 - C4);
- for semantic ambiguity and pragmatic ambiguity there are interlinked aspects which describe a concept or an actiocept. Such links are linear (e.g. source-path-destination, as in a function or in spatial embedding) or nonlinear (e.g. spatial embedding).

To (re-)construct all (possible) cognitive oppositions evoked by the work you may:

a) draw a **series of cognitive sub-images as a kind of 'mental film' of fluctuating attention** (gained by (re-) construction or variation) and

b) add **formulae** to it by using the typology of 21 types of ambiguity:
syntactic/semantic/pragmatic ambiguity (entity a **versus** entity b).

Problems may be:

- Every image shows a formation with regard to one syntactic criterion; you cannot **reduce the complexity** of the work to an opposition of only two (main) criteria in every case.
- It may be difficult to extract the different kinds of operations of deviance and of contamination when they are **mixed**. Two operations of deviance, substitutio and adjectio, may create the impression of a contamination; substitutio, for example, may be done in so many parts of an entity that an 'original entity' cannot be identified.
- Not everyone discovers deviance or contamination due to a **lack of exercise or sensibility towards ambiguity**.
- After having seen a lot of ambiguous art works, their methods may not have the same effects on the recipient (**attrition**).

2) Does such an opposition lead to another opposition within the reception of the work?

The three semiotic spheres (syntactics/perception, semantics/giving meaning to the art sign, pragmatics/inner and outer action) **interact and are interdependent**: syntactic ambiguity of a sign is a sub-sign for a sub-concept of the art sign (two contours of figures drawn into each other signifies e.g. concept of 'sympathy'), semantic ambiguity may result in pragmatic ambiguity as well (concepts of beauty versus concepts of decay lead to actiocept of attraction versus actiocept of disgust).

You should always bear in mind that semantic or pragmatic ambiguity

a) as a duality of scheme versus its **deviance** may lead the recipient's cognition:
- by detractio towards **modality** (of the absent part taken away from the scheme),
- by adjectio towards **quantity** (of sum and over-sum of elements),
- by substitutio towards **quality** (of something different put into the place of something which was taken away),
- by transmutatio towards **relation** (of a part that was taken away and put somewhere else).

b) as duality/triality... (i.e. **contamination**) of cognitive entities leads to reciprocal ('poetically anti-distinctive') enrichment of the semantic/pragmatic entities or relativity of syntactic entities and therefore of perception.

Problems may be **difficult to distinguish**:

- **Optical illusions** show the interaction between syntactic criteria: the cognitive effect of one formation depends on neighbouring formations; it is difficult to describe this interaction.
- **Denotation** (general meaning of the dictionary, known to everybody(?)), **connotation** (meaning only known to members of a culture or sub-culture) and **association** (meaning produced by an individual on the base of personal feeling and memories) **overlap** in the process of giving meaning to an art sign (semantics) and sometimes can hardly be distinguished.
- Complexity of semantic/pragmatic antonymity is generally **reduced by reinterpretation** to discrepancy or complementarity, because these two types are less complex than antonymity; re-interpretation is possible by a switch to a more abstract level of metaphor or allegory.
- **Concepts and actiocepts overlap**; a concept/an object of semantics is always a possible or actual tool and has therefore a relationship to consciousness of body, to an actiocept of pragmatics.

3) Does these oppositions refer to one of six functions of an art sign according to Roman Jakobson?
General metacognition is achieved by the opposition of cognitive criteria of unification: one criterion limits the other; this opposition of criteria therefore produces awareness of cognitive criteria and therefore cognition about cognition (i.e. metacognition). **Homo Pictor** can expose his own cognition and work on it metacognitively through images. Even a non-representational ambiguous work of art can be seen as a sign with semantics and pragmatics, as an index pointing to cognition by opposing criteria of cognition.
The work's **metacognitive value of use** can be specified by stating an opposition of functions within one of **Roman Jakobson's** six general functions of communication by signs:

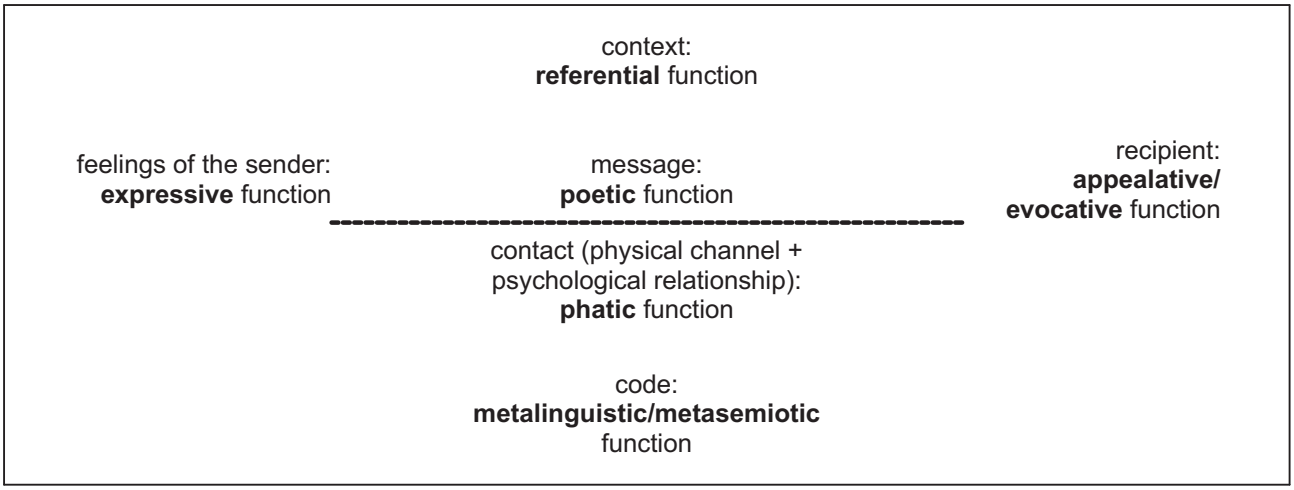

Figure 361: Six aspects of communication which are constitutive for the six functions according to Roman Jakobson

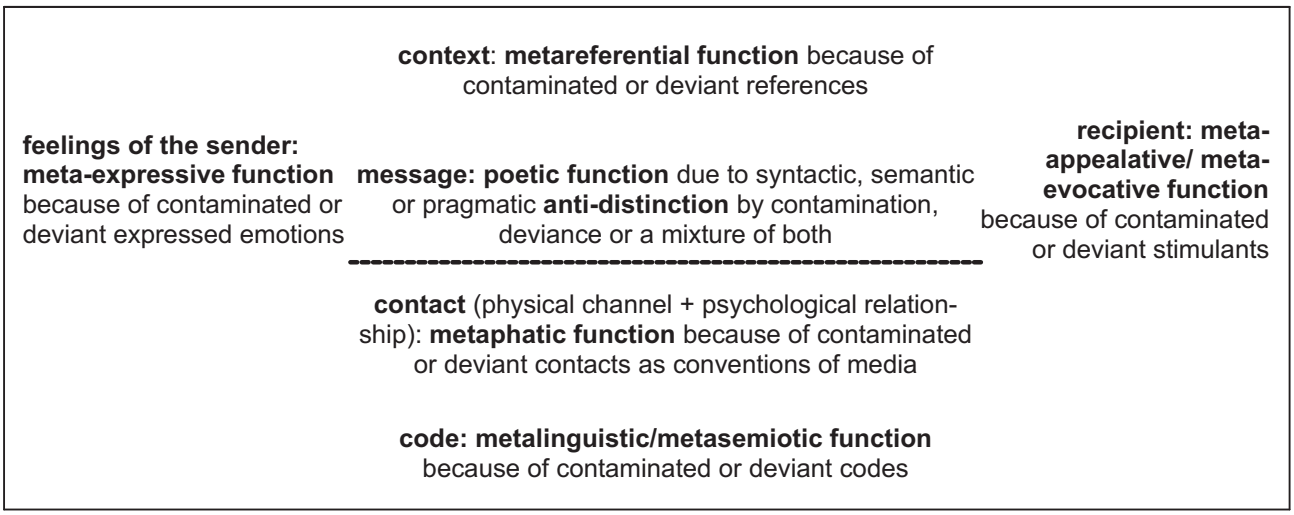

Figure 362: Six aspects of communication which can be constitutive for six metacognitive/ metacommunicative functions in ambiguous art works.

Problems may be:
- Every sign fulfils **every function** - but each function to a **different degree** which is not easy to determine.
- An image which does not represent a concept (which is not an icon) and which shows syntactic ambiguity does have an impact on the perception as a part of pragmatics; its syntactic ambiguity could be **interpreted as a sign for abstract ideas** such as: *'deautomatisation'* (see Victor Shklovsky's art theory), *'substitute linear-utilitarian function of cognition with nonlinear situationist fluctuation of attention', 'substitute thinking in units with thinking in an ambiguous way'*, etc.

There are **analogies between syntactic and semantic organisation of attention**:
the relation of **figure versus ground** is similar to the relation of **subject to object in a sentence**; the relation of organisation (of data coming to the human senses) to information and organisation (of physical or biological elements) to physical or biological phenomena show both analogies, such as the principles of self-similarity or of symmetry. By emphasizing this aspect you could declare a non-representational image to be a sign for an abstract idea, for example a psychological idea:
figure= person, ground= environment of the person, both together= sign for self-cognition of the artist.
A contamination of figure and ground could be seen as a sign for 'anxiety', 'lust' etc., deviance from a scheme as a sign for self-cognition of the artist as being deviant from society's expectations.

Deviance or contamination lead the attention to a disturbed scheme or to opposed criteria of cognitive unification; for this reason, one can speak of a metacognitive function of aesthetic ambiguity. A distinction can be made between the following oppositions within one of the six aspects of communication:
A1) deviance from a scheme of expression (**meta-expressive deviance**)
A2) contamination of expressions (**meta-expressive contamination**),
B1) deviance of a scheme of appeal (**meta-appealative/ meta-evocative deviance**)
B2) contamination of appeals (**meta-appealative/ meta-evocative contamination**),
C1) deviance from a scheme of reference **(metareferential deviance)**
C2) contamination of references (**metareferential contamination**),
D1) deviance from a scheme of syntactics, semantics or pragmatics (**poetic-antidistinctive deviance**)
D2) contamination of unifications of syntactic, semantic, pragmatic elements (**poetic-antidistinctive contamination**),
E1) deviance from a scheme of contact with its conventional function (**metaphatic deviance**)
E2) contamination of contacts (**metaphatic contamination**),
F1) deviance from a scheme of code (**metalinguistic/metasemiotic deviance**)
F2) contamination of codes (**metalinguistic/metasemiotic contamination**).

A1) meta-expressive deviance:
Non-verbal expression is a function performed by connotative signs (smiling is a cultural sign for aggression in Japan, in Europe for sympathy and happiness) and by personal signs (which only can be interpreted in the form of associations) and by reflexes of the body.
The **exaggeration or reduction of grades of conventional posture and miming** can be regarded as meta-expressive deviance. In the series of *Character heads* by the Baroque sculptor **Franz Xaver Messerschmidt** (1736-1783), the miming is grotesquely exaggerated (semantic adjectio), whereas Khmer sculptures of the Buddha show only a trace of smiling which hardly can be identified as smiling (semantic detractio).
Ludwig Meidner's drawing *South-West-Corso, 5 o'clock in the morning, Berlin* (**Figure 133**) shows a deviance within a perspective due to several points of perspective for parallel lines instead of only one; this violates the rules of perspective. By using this deviance, the image can be reinterpreted as an image of the artist's instable cognition (who could be drunken so early in the morning); but a point of perspective is also a representation of the viewer of the image within the image, therefore it could be seen as a self-portrait as a multiple personality (semantic adjectio > pragmatic deviant meta-expression).
The shown figure of the **Etruscans** (**figure 271**) has a contamination of two degrees of abstraction (torso)/naturalism (head) which could be interpreted as a **dual expression** (of two spheres within the consciousness of body), as **meta-expressive pragmatic antonymity**: high sensitivity concerning the head versus low sensitivity concerning the torso. The deviance of lengthening of the torso may be regarded as a longing for the spiritual which fits to this pragmatic antonymity. The **sensory homunculus** (Fig. 266) can be linked to this meta-expressive antonymity, but by the criterion of degrees of size, not by the criterion of degrees of detailing. Ambiguous works involving deviant psychological transformation of the human body are discussed in section 2.2.1.

A2) meta-expressive contamination
The contamination of objects of desire and of disgust in **memento mori still lives** (fruits, flowers versus decay, worms) of the Baroque period correlates with the contamination of beauty and of illness within the body of a 'femme fragile' (a topos at the end of the 19th century in Europe) or with the contamination of beauty/lust and decay/pain in the 'nice dead body' (in Christian paintings of dead saints).
For his war documentary *The Enclave* (2012 - 2013), **Richard Mosse** used an infrared film to film scenes in a region of war in the Congo; the green colour of trees and grass is substituted with a purple colour, humans remain black which could be interpreted as a dual expression concerning nature and war.
The surrealist technique of a **exquis** combines expressions of several artists within one work of art: the artists draw on a part of one piece of paper which will be folded in a way that only the ends of some lines are visible to the next artist and so on.
Ai Weiwei's *Study of Perspective* (Figure 384) shows the artist's expression of denial to the expression of subjection by power shown in monuments; two **expressions in pragmatic antonymity** are shown by showing two codes in antonymity: high versus low nonverbal code (meta-expressive by metasemiotic function).
In **Lacan**'s psychology, aesthetic ambiguity as **cognitive disunity** may be seen as a **meta-expressive reference** to the **divided subject** which is not able to be totally self-aware. Lacan regards the **illusion of unity** produced, e.g. by the reflected image of your own body, as the source of impossible desires to be a unit and therefore as the source of mental illness.
According to **Hocke**, **Mannerist** works can be linked to terms similar to 'ambiguity', such as **disharmony**, **doubt**, **heterodoxy**, **irregularity**, **antonymity of logic versus vital expression**, **of intellectual search versus nervous stumbling in metaphorical associations and in hallucinations** and to the figure of **Daidalos**, the creator of the **labyrinth** of Crete (s. Hocke 1959, p. 302- 304). And indeed, eyes may wander as chaotically in syntactically ambiguous images as humans in labyrinths.

B1) meta-appealative/ meta-evocative deviance
Art which changes tools could be seen as double-appealative/ double-evocative works that contain a kind of appeal of the tool (*'use me as a tool!'*) and a new appeal (*'use me as a work of art!'*); **Man Ray**'s work *Gift* (figure 365) even contains three appeals: *'Use me for ironing clothes!'* versus *'Use me for destroying clothes!'* versus *'Use me as a work of art!'*

B2) meta-appealative/ meta-evocative contamination:
Timm Ulrichs created several works based on **pragmatic antonymity by paradoxical appeals**; in one work the appeal '*Think always of forgetting me! Timm Ulrichs * 31.3.1940*' (1969) is engraved on a gravestone which stands on a cemetery: pragmatic antonymity way of doing ('*thinking of*' = path within a source-destination-path versus aim of doing *'forgetting'* = destination within a source-destination-path); this paradox lays open the structure of an action by opposing its elements: path versus destination within a source-destination-path. This work can therefore be described as meta-appealative/ meta-evocative contamination.
Works which have **two channels**, such as a **mock documentary** ('documentary' channel versus 'mockery' channel about the 'documentary' channel) often show a contamination/antonymity of two appeals as well (ironic *'take the documentary with talking experts and footage seriously!'* versus *'do not take it/all documentaries seriously!'*), because a channel has a kind of appeal due to the cultural convention regarding the function associated with this channel. Similar ironic use of footage and therefore conventions of channels with their indirect appeals can be found in collages of Dadaism, pop art (see figure 338), situationist guerrilla communication such as the **Adbusters movement** (see figure 398).
Syntactic and semantic ambiguity show oppositional criteria as stimulants towards cognitive unification; in a wider sense, these stimulants can be regarded as appeals to unify elements cognitively; oppositional appeals can also be identified, therefore, in syntactically and semantically ambiguous art works.

C1) metareferential deviance:
An ambiguous work of the deviance kind has a double reference to **scheme and its disturbance** (**'natura' versus 'ars'**). The comparison of deviant works of **René Magritte** with those of **Wolgemut/Pleydenwurff** (see figures 319 - 322), showed above, include **direct double references** (scheme versus its deviance) **abstract double references** (real world versus dream-world/possible world). **René Magritte's** *Entr'acte* (figure 324) shows an under-determination of the sex of recombined fragments of human bodies which can also be seen as a double reference. Substitution of parts of a face/'subject' by parts of an interior/'object' (figure 328), or a strange formation of candles/'culture' resembling snakes/'nature' (figure 329) are mixtures of deviance and contamination showing a reference and a metareference to the aforementioned abstract concepts; for this reason, these works can be called metareferential.
A **sensory homunculus** (figure 266) has two references: to the natural body of a human being and to the invisible sensory sensibility of each part of this body (outer body versus inner cognition); similar to this metareferential double reference are images of a body showing outer and inner parts of the body (see figure 316 and 317). A more abstract similarity can be found in **Alexander Archipenko's** *Walking Woman* (see figure 331) which refers to the surface of a body and to its inner volume.

C2) metareferential contamination:
A contamination has at least two references to entities which are combined.
Works with syntactic-semantic, semantic-pragmatic and syntactic-pragmatic ambiguity **refer to several abstract semiotic objects** (percepts, concepts, actiocepts).
Syntactic-semantic ambiguity of icons produces a **metareferential double reference** to the represented object and to the way of representing; two contours of heads drawn into each other (figure 256, 257) show syntactic ambiguity that can be interpreted as a sign for an abstract concept such as 'love'. This is also a double reference. Syntactic-semantic ambiguity of a partially disturbed illusion of spatial depth in works by the ***Nabis*** group of French artists (see chapter 2.2.3) is a double reference to three-dimensional space and to the two-dimensional image.
Some images 'pretend' to represent concepts by their title, but these concepts cannot be identified in the image due to a high level of abstraction (figures 393, 394). Such works of syntactic-semantic-pragmatic ambiguity have three references: to the object named by the title, a reference by syntactic ambiguity to (criteria of) perception, and a reference to functionality itself by means of a double function (showing versus contemplating).
All **metaphorical or allegorical representations** have two references: the shown object versus the concept which is represented indirectly by this shown object.
Polysemy is also multireferential; **Willi Baumeister**, for example, made illustrations for the Gilgamesh epic using two colours for one contour: black on the one side, and white on the other, opposite side. This creates the impression of a relief, but one cannot determine whether it is a positive 'Greek' relief (standing as a 'hill' above the base plane) or a negative 'Egyptian' relief (sunk as a 'crater' below the level of the surrounding base ground); this **'crater-hill-illusion'** as **spatial polysemy** can be linked to a connotative double-reference to Greek and to Egyptian culture.
Arcimboldo for example used **polysemic double reference** (to vegetables and to the person of the gardener, figure 299).

Polysemy can be stated as contaminations of:
- **several possible axes of depth** (**Josef Albers**, figure 164 and **Josef Albers, Paul Klee** and **László Péri**, figure 294- 297 and **monocular criteria of spatial depth in counter-development**, plates 305- 309),
- **figure and ground** (**Michelangelo**, figure 195),
- **figures and landscape** (**Paul Klee**, figure 278),
- **two-dimensionality and three-dimensionality** (**Vera Molnar**, figure 224),
- **object and movement of the viewer** (**Pablo Picasso**, figure 310),
- **several moments in the life of one person** (**Anthony van Dyck**, figure 311), of one movement of one animal (figure 313) or of a human body (**Marcel Duchamp**, figure 314).
A serial of operations towards ambiguity (see Ready Mades by Marcel Duchamp) refers also to the whole system of possible operations, to the system of 21 types of operations towards ambiguity itself and therefore for example to the idea of hermeneutical-eidetical variation.
The system of 21 operations can be seen as a reference to **Situationism** and its idea of playful tactics of defining another use of world and signs that are captured in hierarchies of normal thinking; a link to the concept of **polyphony of mixed voices by Mikhail Bakhtin** can be made in some cases such as **clearly visible interpicturality** as well.

D1) antidistinctive-poetic deviance:
Poetry uses antidistinctive (i.e. ambiguous) techniques which lead to an aesthetic surplus by setting free cognitive criteria in comparison to everyday automatic communication:
- **rhyme** as **syntactic Hybrid H** (similarity of two sounds versus contiguity of sounds of one word):
one sound can be assigned to a word and to a group of similar sounds following each other
- **rhetorical tropics** as **semantic substitutio** (what is said in the text/what is shown in the image as a substitution versus the concepts substituted= actually meant by the author):
a) a **metaphor** shows/says a concept which has at least one aspect **similar** (i.e. redundant) to that of another concept; for this reason a metaphor is a **contamination** of two concepts which lead the recipient to reciprocal enrichment of these two meanings. The aspects of one concept are partly redundant, partly discrepant to the aspects of the other concept;
b) a **metonymy** shows/says a concept which is in the relationship of **contiguity** (i.e. a kind of complementarity) with another concept which is the concept meant by the author; for this reason a metonymy is a **contamination** of two concepts.
You can see pure syntactic ambiguity of non-representational art works as an exercise in ambiguous perception or as an indexical sign of oppositional criteria of perception which point to each other. In this case you could speak of communication by indexical signs.
Disturbing cognitive unification in the reception of an ambiguous work of art means a reference:
A) to cognitive unification and its criteria as rules of distinction and connection of a 'visual grammar'/'language' (**metalinguistic function**).
B) to cognitive disunification = anti-distinction as the base for the poetic function.

D2) antidistinctive-poetic contamination:
Semantic or pragmatic contamination of entities (concepts/percepts) lead to **reciprocal enrichment and relativisation of these contaminated entities.**
Semantic contamination may be achieved by syntactic similarity or contiguity of different entities:
- In **Rahgu Rai**'s black and white photo *Woman pushing a Cart in Delhi* (1979) there is **syntactic similarity of two entities**: boxes on a cart have forms similar to the buildings partly hidden by the boxes. For this reason both entities (grey boxes and grey houses) are syntactically unified which may lead to an allegorical interpretation of reciprocal enrichment such as 'building as transport-boxes for transcendent human existence, transport-boxes which are immobile in an abstract sense: hopeless efforts of human existence'.
The idea of similarity between two entities can be illustrated by **morphing** one form stepwise to the other (see figure 356).
- Two contours of heads drawn into each other (see plates 256 and 257) have **syntactic contiguity of two entities**, thus producing semantic ambiguity and an interpretation of the syntactic contiguity as a sub-sign for friendship, for example.
The reception of an anti-distinctive, ambiguous work of art leads to an **endless interpretation** based on reciprocal enrichment and relativisation of contaminated concepts/actiocepts; deviance could even be called a cognitive contamination of a remembered scheme, its deviance visible in the work of art. The ambiguous art sign refers to reference as a principle itself by double reference; the ambiguous art sign is autotelic.
The ambiguous art sign shows criteria for cognitive unification as distinction by using these criteria for anti-distinction. The criteria of cognitive unification towards **distinction** (**'visual grammar'**) are the basis for the **metalinguistic function**, the use of these criteria for **anti-distinction** (**'visual anti-grammar'**) is the basis for **poetic function**. An ambiguous work shows these criteria of cognitive unification (metalinguistic function) by disturbing these criteria (poetic function); metalinguistic function and poetic function are complementary. Anti-distinction slows down reception ('deautomatisation' according to **Shklovsky**): the 'cognitive machine' itself attracts attention.
In cases of deviance and of contamination, **reduced cognitive presence** ('absence') can be identified as a modality of a disturbed scheme or of contaminated entities.

E1) metaphatic deviance:
Elimination of sensual channels (**syntactic detractio**) can be stated in the work *A Bruit Secret* (1916) by **Marcel Duchamp**, in which an object can only be heard, clapping, by moving between two metal plates; **Yves Klein** eliminated all sensual channels to a hidden object apart from the tactile sense in his project *'Tactile sculpture'*. Both **sensual fragments of 'real' objects** of the physical world are metaphatic by syntactic detractio, referring to the absent channels and therefore to the principle of sensual channels, the principle of the human body as the medium of perception.

Timm Ulrichs used **technical adjectio** (of a copy of a copy...) for his work *'Walter Benjamin: 'The work of Art in the Age of its technical Reproducibility. - Interpretation: Timm Ulrichs. The photocopy of the photocopy of the photocopy of the photocopy'* (1967, serial of 100 fading photocopies of photocopies of the cover of the book of **Walter Benjamin**). The photocopies are in syntactic **Minimal Difference MD** to each other, the copies become less and less readable, which is an allusion to the Benjamin's idea that a work of art loses its aura through technical mass-reproduction. **Andy Warhol**'s repetitions of photographic prints on canvas in the 1960s show a similar meta-phatic deviance by technical adjectio; the materiality of the physical channel silkscreen printing is emphasised by **Minimal Differences MD** of the prints to each other.

When two-dimensional channels are converted into three-dimensional objects in space (or vice versa), there is a special kind of metaphatic function by **deviant change of dimensionality of channel (detractio/adjectio of one dimension of a channel)** which draws the attention to the channel. Examples are:
- **Timm Ulrichs'** installation *Double-bed/materialised architectural symbol according to DIN 1356*, in which a two-dimensional symbol for a double bed in ground plans is realised as a wooden object on the floor (figure 389);
- **Keith Haring**'s sculpture *Boxer* (1987) consists of folded metal plates showing two-dimensional figures in an abstract pictographic style, turned into three-dimensionality (figure 127).
- Timm Ulrichs' object *Homage to Gertrude Stein (in increasing grade of abstraction)* consists of a real rose, a three-dimensional and a two-dimensional icon of a rose and the word 'rose', connected by the phrase 'a (object real rose) is a (3D-icon of a rose) is a (2D-icon of a rose) is a rose' (figure 396); this sequence of abstraction by channels is metaphatic.

E2) metaphatic contamination:
Works that **combine two media to form a bi-medium**, two physical (and maybe psychological) channels tend to be semantically ambiguous, often complementary, for example in the case of text plus image: linear texts can be used to describe temporal concepts, nonlinear images can show spatial concepts (complementarity); a text can deny the status of the image (antonymity) or offer a totally different concept (discrepancy). All these three semantic relationships of text and image show the limits of one of both media; a metaphatic function can thus be identified. **Withholding of an image** described or named by a text which adjoins an empty, 'absent' image is a special kind of text-image-relationship (figure 390).

Interpicturality combines two images which could be of different types of channels and their codes; this would lead to a metaphatic opposition of channels (see chapter *2.3.5 and 2.4.3*).
A parody of a channel is a metaphatic double-channel with the opposition 'original channel' versus 'its subversion':
- Mock documentaries ironically use the authentication strategies of a documentary, such as talking heads, the role of an expert, (manipulated or pseudo-)original footage, to criticise the belief in such films;
- Works by the **Adbusters** movement use advertising attraction strategies to criticise the way advertising manipulates.
These subversions of a channel of the mass media have their spiritual roots in Situationism and Dadaism.
A **collage** can combine two oppositional channels; an example is **Erró**'s collage *American Interior No. 7* (1968, figure 338), in which a Communist propaganda image is mounted in an image of an American middle-class interior as a kind of wallpaper.
Within the possibility of interpicturality **direct work on the original** of another artist is the most extreme kind. Probably the first to do this was **Marcel Duchamp** who changed the watercolour made by another person by adding two figures in yellow and lilac, the title 'Pharmacy', his signature and the date '1914' to it. The original channel 'landscape' was changed by the title to the channel 'allegory' which means a metaphatic contamination of two channels. The Situationist painter **Asger Jorn overpainted** trashy naturalistic paintings with abstract expressionist gestures which means an opposition two channels with two **styles**.
Ready Mades are tools which become art signs; in the case of **Duchamp's** *'Fountain'* (figure 359) the art sign can be received as an **icon**, in the case of his work *'The trap'* (figure 360) as an **allegory**. But the materiality of the old tool is in opposition to the icon/the allegory; therefore the work is quite metaphatic by deviance.
René Magritte's object *'This is a piece of cheese'* (figure 335) consists of a painting of a cheese under a glass shade. The glass shade puts emphasis on the materiality of the represented cheese, therefore it is a negative hint at the materiality of the painting that does not have the materiality of a cheese.
Joseph Kosuth's installation ***'One and Three Chairs'*** (1965) places a real chair between a photo of this chair and a figure with the definition of 'chair' written on it; the real object becomes a kind of medium between image and text, which implicates metaphatic function.

Giovanni Francesco Caroto (1480-1555) integrated a second image within his naturalistic portrait in oils of a young boy (*Child with a Drawing*, without date): the boy is showing the viewer a childish drawing of a human figure, probably made by himself. This work is a **metaphatic contamination/antonymity of two techniques** in comparison (oils on wood versus (reproduced) charcoal on paper) which shows different possibilities and restrictions of channels that are based on different materials. But there is a **metasemiotic contamination** as well: a restricted/childish image code versus an elaborated/adult image code.
Jiri Kolar crumpled a mass reproduction of a portrait of Ingres and ironed it (see figure 280); the reproduction becomes a fragment, its 'mass reproduction' channel is disturbed and therefore set free by an index of destruction.
Bill Viola uses in several of his video-works the technique of 'slowest motion' (e.g. ***'The Quintet of the Astonished'***, 2000); this leads to a contamination of two channels: film versus photo.
Wim Delvoye manipulated a digital photo of a mountain such that an engraved message in the stone is readable: '*Out walking the dog Back soon Tina'* (2000); the channel 'public monument of long life' is in ambiguous opposition to the channel 'small notice put to door in an apartment'. This opposition points to three aspects of a channel: durability, public/private space, high and low code of a medium
Gary Hill bound a book with the title *'The humiliation of the word'* by Jacques Ellul on a monitor (*'Bind'*, 1994); only the title of the book is readable, the image of the monitor is invisible: Two media fragment each other. Metaphatic antonymity of two channels is visualised as a fight between two media within an economy based on attracting attention.
French philosopher **Maurice Merleau-Ponty** declares that the human **consciousness of body appropriates objects for orientation**; tools are between the world of objects and the world of consciousness of body, they are in an **inter-world** between these two worlds; art of object relates ambiguously to both worlds and to the world of art signs which may evoke awareness of that appropriation.
Within the human body, there is a **contamination** of two systems for transmitting information:
digitally by neurons, analogically by hormones. These systems can be correlated to text (words and interspaces between words in line) and image (nonlinear).
Virtual reality may appear as reality without materiality (which would mean semantic detractio).

F1) metalinguistic/metasemiotic deviance:
Every kind of ambiguity refers to criteria in opposition or to changed schemes which are based on criteria; criteria is the base for **visual grammar** as a system of rules of unifying elements by using criteria. With regard to this statement every kind of ambiguity is metalinguistic/metasemiotic.
Beside this 'visual grammar' there are **codes of non-verbal communication** such as socially determined clothes, gestures, behaviour of distance and so on; figure 383 shows **cross-posing** as a contamination of a female genderlect of posture within a male body.
The **Etruscan** figure with a naturalistic head and an abstract torso (figure 271) shows metasemiotically an antonymity of **naturalism versus abstraction as a scale** which is part of visual grammar.

F2) metalinguistic/metasemiotic c**ontamination:**
Syntactic contaminations such as formation with Minimal Difference to two geometric types (point, line, plane, volume, plates 87-127) are syntactically metasemiotic because syntactic criteria is set free by two oppositional tendencies of interpretation: as a point (without C1) and as a line (with C1) for example.

When the homogeneity of formation within an image is interrupted, when two parts of the image seem to have different systems of showing (non-representational art) or different systems of representing (representational art), this can be identified as a **contamination of different imaginary systems** within the 'image' entity, which refers metasemiotically to visual grammar (see chapter *2.1.2 Interruption of the homogeneity of formation*).

A **contamination of different codes** leads to a metasemiotic contrast of their different spatial, temporal, social embeddings, their dictionaries and their rules; the opposition between contaminated codes in art works is often pragmatic antonymity (for example 'sacred' versus 'profane', 'male' versus 'female'...) which reminds us of **Mikhail Bakhtin's** concept of **carnival and polyphony**.

In a **bi-medium (**such as text plus image) you have not only a reciprocal reference of one content to the other but also a **contrast of two potentials of representing**: the digital and linear text can represent time better than the analogous and nonlinear image (which can represent space better than the text). In an image one can find contamination of all kinds of signs (indexical, iconic and symbolic signs, see **Albrecht Dürer's** *Melencolia*, figure 318) which results in a metasemiotic contrast of direct indexical link, quite direct iconic showing and indirect symbolic reference.

A round shadow of a rectangular wall (as a **sub-icon of a sub-icon within an icon**, see figure 300) is a metasemiotic **rupture of the representational system** and therefore metasemiotic; a similar phenomenon is an image which seems to be **neither totally two- nor three-dimensional** (see figure 288 and the following images). **Monocular criteria of spatial depth** uses criteria of colour, form, size... to define an element in the image as close to or far away from the viewer; one criterion may define an element as nearby, another criterion as faraway; this also results in metasemiotic opposition (see figure 305 and 309).

Holbein's double portrait with a lengthened skull (see figure 285) affords two points of view, one for the world of living people/life, another one for the lengthened skull/the world of death; **two perspectives are contaminated,** thus referring metasemiotically to perspectivity itself.

Poetic anti-distinction slows down and points **metasemiotically** to the process of **distinction as data management** (i.e. reduction of a large amount of data to one item of information). This management of attention is based on cognitive unification by criteria (oppositions of figure versus ground, of object versus its embedding, of subject versus object). Syntactic criteria may **interact** to create ambiguity (e.g. appearance of a colour in a colourful environment versus the same colour in a white environment, see chapter 1.3.1.2). Syntactic ambiguity becomes a **sub-sign** for an abstract concept, semantic ambiguity may lead to different pragmatic effects: the interaction of the three semiotic spheres is much more complex than in everyday communication. This interaction itself attracts attention.
In an abstract perspective you can link ateleological anti-distinction to **mythological thinking/associative stream of consciousness**, teleological distinction to **logical thinking/data-management**.
Ateleology (~ aimlessness) means endlessness as well, and can evoke a state of meditation and contemplation.

Both kinds of thinking have risks:
- unreflected logos uses distinctive units for the illusion of simplicity and unity of body, life and world;
- unreflected mythos uses ambiguous anti-distinction for endless ecstasy and denial of criteria.

The six functions may be found in different constellations and grades in an ambiguous work of art.
Every ambiguous work evokes **cognitive dissonance**: instead of cognitive unification the work offers cognitive disunification by contaminated entities or a disturbed scheme; **cognitive unification of everyday communication and disunification of the ambiguous work of art point to each other by bordering each other**.

Normally an image is nonlinear; but a sequence in an image creates, for example, the illusion of spatial depth or a person pointing to another one. Normally a text is linear, but the idea of concepts bordering each other or metaphors are nonlinear. An image or a text can be received in two ways, as a sequence of objects/stations (successively) or as figure/subject versus its background/object (simultaneously). The two kinds of reception cannot be translated into each other directly.

Aesthetic ambiguity may provoke instability, fluctuation, uncertainty, aimless- and endlessness of its reception; it may be regarded as a **super-sign for contingence** and as a **symptom of human scepticism** with regard to syntactics/perception, semantics/assigning of meaning and pragmatics/(re-)action.

The two media of linear text and nonlinear image are fundamentally different in geometric/cognitive terms and in terms of their permitted scope, so the question that arises for linguistic interpretations of visual art is how **nonlinear image content** can be translated at all into **linear textual meaning**. Nonlinear, atelic content of the image should not be confused with linear, telic meaning of the text. Text provides words; words are generally unambiguously symbolic/lexicalised signs that are unambiguously demarcated from one another by empty spaces, and one could therefore speak of digitality (space between two words = zero). Pictures, on the other hand, are mostly 'analogue' - there are generally no white gaps between colour fields in pictures. Colour fields do not have a lexically fixed meaning like words, so pictures tend to be less unambiguous/more ambiguous than texts because they are not lexicalised. Broad scope for aesthetic ambiguity opens up between the syntactics and semantics of an image (see also the other zones of overlap in the Borromean knot on page A). A word (as a bundle of semantic grouping criteria such as 'red-haired' and 'four-legged' for the word 'fox') is placed in a sentence line with a beginning (left) and end (right) according to a clear grammatical order with hierarchy (subject of the sentence = ruling, object of the sentence = ruled; cf. the quotation from Raimer Jochims on page 96). Language thus provides geometrically/cognitively seen sentence lines that implicitly suggest monocausality and monofinality as well as monoprocessuality. This is a (quite often terrible!) simplification of what is to be represented textually. In the image, on the other hand, there are unregulated transition areas (i.e. not lexically or grammatically regulated, and therefore ambiguous per se) as play areas between syntactics, semantics and pragmatics (see Borromean knot on page A), but also the possibility of integrating symbol-signs and index-signs into the image (as an icon-sign). This again produces ambiguous transition areas between these three sign types (see Figure 293). The different potentials of text and image to represent concepts, and the tendency of modern art to overcome these limited representational possibilities of the image by means of aesthetic ambiguity, which can be seen as a main function of aesthetic ambiguity, are presented on page 35.

Two ways out of the dilemma posed by the basic untranslatability of nonlinear image content into textual meaning are offered (without losing too much of the content of visual art):

1) The grammatical quasi-prohibition of play in the sentence line is suspended in the nonlinear **word constellations** of Eugen Gomringer (founder of the worldwide movement of Concrete Poetry in 1954). In such a word constellation, words are spread across the sheet of paper instead of being lined up in a sentence line. In such a word constellation, mental linking lines criss-cross between the words (> type of aesthetic ambiguity: syntactic-semantic Mixture M).

A word constellation could thus be an adequate linguistic interpretation of aesthetically ambiguous visual art.

2) A **flowchart** of several possible interpretations is also a nonlinear linguistic interpretation of aesthetically ambiguous art; such a flowchart could show several possible interpretative mediations (by means of several grouping criteria) of the sides into which attention is split aesthetically ambiguously (by means of other grouping criteria). This mediation between the sides of split attention has no prescribed comparative aspect, so it has many comparative aspects of a flowchart. The bifurcations of a flowchart as an interpretation of the work correlate with the bifurcations of the aesthetically ambiguous splitting of attention and also with the medium of the image. The image medium is: **nonlinear/atelic, anti-distinctive/analogue, and allowing and enabling 'spaces' for play**.

Aesthetic ambiguity can be considered an essential feature of visual art. The art-specific use of aesthetic ambiguity involves thematisation of **metacognitive and media-specific sign-transition-as-play-areas** in order to create atelic art content. The four zones of the Borromean knot (see Figure A) formed by the overlap of the three circles (for syntactics, semantics and pragmatics) are predestined for operations of aesthetic ambiguity, because in these four zones the transition from one of the three circle entities to another circle entity is not lexically or grammatically regulated within visual art. Therefore, this transition from one of the three entities to another can easily be disrupted by aesthetically ambiguous operations, so that attention is divided aesthetically ambiguously between the two entities. For example, an image can be designed in such a way that its effect fluctuates aesthetically ambiguously between a syntactic 2D surface effect and a semantic 3D spatial impression. The following **sign-transition-as-play-areas** of aesthetically ambiguous works of visual art (which can only be received in a de-automated way) are discussed in this work (and can be taken as the basis for a definition of - not only aesthetically ambiguous - art):
1) sign-transition-as-play-areas between grouping criteria and grouping itself, between aesthetically ambiguous anti-coherence (as anti-sign-formation) and search for coherence (as sign-formation);
2) sign-transition-as-play-areas between use of the aesthetically ambiguous artwork as a sign and as a non-sign;
3) sign-transition-as-play-areas between nonlinear-indiscrete media of visual art and the sentence-linear and word-discrete medium of its discussion;
4) sign-transition-as-play-areas between nonlinear formations (above all by means of similarity S1, S2, S3, S4) and linear formations (above all by means of contiguity C1, C2, C3, C4) of actually nonlinear pictorial works of visual art;
5) sign-transition-as-play-areas between the grouping criteria of the three semiotic levels/reception entities syntactics/percepts, semantics/concepts, pragmatics/actiocepts (especially their four per se ambiguous overlapping areas in the Borromean knot):
Between syntactic grouping criteria of similarity and syntactic grouping criteria of contiguity (within syntactics), between figure and ground (within syntactics, important also for the overlap between syntactics and semantics in the Borromean knot), between syntactic 2D surface effect and semantic 3D spatial impression (overlap between syntactics and semantics in the Borromean knot), between representational system and the represented object of the image (overlap between syntactics and semantics in the Borromean knot), between perceived syntactic figures and remembered/conceived semantic figures (overlap between syntactics and semantics in the Borromean knot), between more abstract and more concrete semantic/pragmatic grouping criteria (within semantics or pragmatics), between features and ordinary feature couplings (in deviations from these couplings, within semantics or pragmatics), between the six everyday communication functions according to Roman Jakobson and the six metacommunication functions in visual art of pragmatics (within pragmatics), between evocation of cognitive presence and evocation of cognitive absence (within pragmatics), etc.;
6) sign-transition-as-play-areas between the three sign-types index, icon, symbol and their four per se ambiguous overlapping areas (see Dürer's *'Melencolia I'* in Figure 293);
7) sign-transition-as-play-areas between aesthetically ambiguous operations and between objects of these operations;
8) sign-transition-as-play-areas between operations/objects realised in the artwork as pars-pro-toto signs and unrealised but conceivable operations/objects of aesthetically ambiguous art in general (art redefined as sign algorithms with operations on objects);
9) sign-transition-as-play-areas between the status 'original image' and 'after-image' with a requirement of co(n)-textualisation (see my deformations of sculptures by Arno Breker in Figure 239 and in Figure 345);
10) sign-transition-as-play-areas between super-sign and sub-sign;
11) sign-transition-as-play-areas between assimilation and isolation (see section 1.3.1.2 Interaction and relativity of syntactic criteria for cognitive unification: Optical Illusions).

These sign-transition-as-play-areas of the image medium allow a diversity of aesthetic ambiguity; this diversity is associated with **opportunities**:
e.g. **exceeding the normal media potential** of the image, **metacognition** and **sign-awareness or even scepticism** towards representation using signs, as well as experiencing **sensual fullness** of the ambiguously conflicting grouping criteria, rather than automatic identification under a single term.
Aesthetic ambiguity, however, is also associated with **risks**:
e.g. the risk of **propaganda** based on image rhetoric (see Figure 305 of Mussolini propaganda in which aesthetic ambiguity is misused to arouse and **direct** attention instead of **dispersing** it), or the risk of **counter-enlightenment based on the mixing of criteria**, rather than conceptual differentiation with the aid criteria.

4.0 Appendix

4.1 Used Literature (radically shortened list of the original dissertation)

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For further publications about aesthetic ambiguity see the original of my dissertation:
This version here is just a shortened version of it (see online: www.dnb.de).

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Figure 300 (page 167): Structure of Alfred Kubin's *Self-Contemplation* (ca. 1901/02, ink drawing paper, 31.4 x 39.4cm (paper), Albertina, Vienna)

Figure 301 (page 168): Structure of Salvador Dali's *Metamorphosis of Narcissus* (1937, detail, oil on canvas, 50.8 x 78.3cm, Tate Gallery, London)

Figure 302 (page 168): Reconstruction of the two cognitive 'foils' of the ancient figure *Artemis of Ephesus* , which produce semantic ambiguity (ca. 125 - 175 CE, stone sculpture, roman copy, Ephesus-Museum, Selcuk, Inv.- No. 718, Turkey)

Figure 303 (page 169): Reconstruction of Salvador Dali's *Face of Mae West Which Can be Used as a Surrealist Apartment* (1934 - 1935, gouache probably on a print of a photo of Mae West in a newspaper, 31 x 17cm, The Art Institute of Chicago)

Figure 304 (page 169): Structure of René Magritte's *The Return to Nature*, (1938/1939, gouache on paper, 27.4 x 39.5cm, private collection, catalog raisonné 1148)

Figure 305 (page 169): Structure of Renato Giuseppe Bertelli's *Profilo continuo - Testa di Benito Mussolini* (1933, bronze-like painted terracotta sculpture, in that period also available as a glass shade for an electric lamp, Mussolini himself recognised it as an official portrait of him, 34 x 27cm, Museo di arte moderna e contemporanea di Trento e Rovereto, it is exhibited there without a note on Mussolini…), and Tony Cragg's *Bent of Mind* (2008, metal sculpture, bronze, 200 x 100 x 100cm, art market)

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Figure 315 (page 175): Axel Rohlfs: Untitled (from the book '*es geht weiter…'*, 2014)

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Figure 318 (page 176): Morphing: a) Wittgenstein's *Rabbit-Duck-Head* (from: Wittgenstein, Ludwig (written 1936 - 1946, published 1953): *Philosophische Untersuchungen*, Teil II, Kapitel xi); probably based on Joseph Jastrow's image from 1888) superimposed with red naturalistic representations of a1) a European rabbit and of a2) a duck;
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Figure 323 (page 179): Structure of Marcel Duchamp's *The Trap* (*'Trébuchet',* concept dating from 1917, edition of eight pieces dating from 1964, coat-hook board with signature 'Marcel Duchamp 1964', number of edition and title, transposed in an exhibition room, 19 x 100.1 x 11.6cm, Israel Museum Jerusalem)
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Figure 339 (page 186): Structure of Erwin Wurm's *Toilet - Narrow* (2014, object art, resin and wood, 76 x 11 x 67cm, artist's collection)

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Figure 342 (page 187): Reconstruction of Joseph Beuys' *2 x Spades with two sticks* (ca. 1970, object art, wood and metal, part of the installation *'The pack'* of the year 1969, Neue Galerie, Kassel) and of Ai Weiwei's *Forever (Stainless Steel Bicycles in Gilding) 3 Pairs* (2013, object art, metal, 282.8 x 317.3 x 17.4cm, art market)

Figure 343 (page 188): Reconstruction of Jürgen Klauke's *The Human Countenance in the Mirror of Sociological-Nervous Processes* (1976/77; original top left: copies of two photographic portraits of the artist alternating with changing titles, 12 pieces of paper, each 60 x 50cm, installation 240 x 150cm, art market)

Figure 344 (page 189): Axel Rohlfs: *Indexical Triptych 2* (2006, visual poetry from the book *what you see is what you get*)

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Figure 346 (page 190): Reconstruction of Ai Weiwei's *Study of Perspective* (serial of photos, begun in 1995, the artist takes photos of well known monuments integrating his hand in the image)

Figure 347 (page 191): Reconstruction of Ernst Mach's *Internal Perspective* (1886, illustration in a book, see Mach, Ernst (1886): *Die Analyse der Empfindungen und das Verhältnis des Physischen zum Psychischen*. Figure 1)

Figure 348 (page 191): Axel Rohlfs: *Double-Lexicalisation* (from the book of visual/concrete poetry *what you see is what you get*, 2006)

Figure 349 (page 192): Axel Rohlfs: *Poetry Combat Center* (from the book of visual/concrete poetry *es geht weiter...*, 2014)

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Figure 351 (page 194): Reconstruction of Timm Ulrichs' *Double Bed /Materialised architectural Symbol according to DIN 1356* (1969, object art/installation of wooden beams on the ground, ca. 207.5 x 207.5 x 15cm, art market)

Figure 352 (page 194): Basic structure of a withholding of image

Figure 353 (page 195): Reconstruction of the Geometric Minimal Difference in three installations by Bruce Nauman:
a) *Double Steel Cage* (1974, one metal cage surrounding another metal cage, 457 x 185 x 330cm, Museum Boijmans van Beuningen, Rotterdam), b) *Left or Standing Standing or Left Standing* (1971, installation of two white walls approximating to each other, yellow light, Dia Art Foundation, New York), c) *Room with My Soul Left Out Room That Does Not Care* (1984, three converging metal tunnels, yellow light, 973.8 x 1206 x 1446cm, Staatliche Museen zu Berlin, Nationalgalerie/Hamburger Bahnhof)

Figure 354 (page 196): Reconstruction of Timm Ulrichs' *Olympic Treadmill* (installation of an art object on the ground of the Olympic Games in Munich 1972, construction in wood and steel, 118 x 250 x 150cm, Christiane Möbus collection, Hannover)

Figure 355 (page 197 /198): Reconstruction by variation of colour from black to red and green of Piet Mondrian's *Pier and Ocean IV* (1914, coal drawing on paper, 50.2 x 62.8cm, catalog raisonné B 70, on loan to Gemeentemuseum Den Haag)

Figure 356 (page 199): Reconstruction of Vilmos Huszár's *Hammer and Saw* (1917, oil on wooden figure, 35 x 46cm, Gemeentemuseum, Den Haag)

Figure 357 (page 200): Reconstruction of Marcel Duchamp's *3 Standard Stoppages* (1913-14, edition of eight pieces in 1964, three rulers cut at one side in a form by chance within a box, box: 129.2 x 28 x 23cm, Israel Museum, Jerusalem)

Figure 358 (page 200): Reconstruction of Timm Ulrichs' *Homage to Gertrude Stein (in increasing grades of abstraction)* (1972 - 77, object art: open box with a real rose, an artificial rose as a three-dimensional icon, an image of a rose as a two-dimensional icon and a fragment of a sentence as text, box: 40 x 75 x 7.5cm, edition of 15 pieces, art market)

Figure 359 (page 201): Reconstruction of Jacob Dahlgren: *I, the World, Things, Life* (2004 - 2016, interactive installation of black and white dartboards on a wall, appeal to visitors to throw at these with red arrows, 520 x 2200cm, Norrköpings Konstmuseum, Sweden)

Figure 360 (page 202): Reconstruction of a work from the Adbusters movement (unknown artist, without date, digitally manipulated photo of a well-known person posing in front of the logo of a firm, see www.adbusters.org/ <http://www.adbusters.org/> spoofads, 2018)

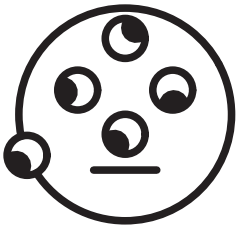
Figure 362 (page 204): Six aspects of communication which can be constitutive for six metacognitive/ metacommunicative functions in ambiguous art works

Unity of the attention,

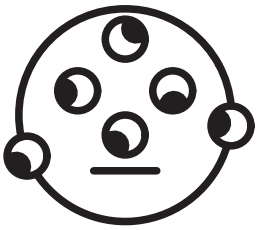
aesthetically ambiguous splitting of the attention on two sides,

aesthetically ambiguous splitting of the attention on three sides,

aesthetically ambiguous splitting of the attention on four sides,



aesthetically ambiguous splitting of the attention on five sides,



aesthetically ambiguous splitting of the attention on six sides...