Taken from the German book: Winkler, Hartmut: Ähnlichkeit. Berlin: Kadmos 2021 https://homepages.uni-paderborn.de/winkler/Winkler--Aehnlichkeit.pdf

Chapter 10, 11, 16 (pp. 159-193, 277-289)
Web-publication 2024
https://homepages.uni-paderborn.de/winkler/Winkler-Separate-and-connect.pdf

# **Hartmut Winkler**

# Separate and connect

Identity and difference – the basic polarity of the semiotic process.

- Chapter 10, 11 and 16 in my book, Similarity' -

# Chapter 10:

# Similarity, identity, and difference

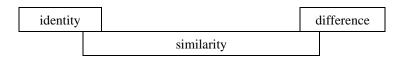
What does it mean to identify oneself or something?

#### 1. intro

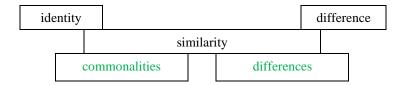
As announced in the introduction, I now come to the core of my argument: The present tenth chapter provides what I consider the real innovation of my book; I will examine what it means that similarity has its place between identity and difference; and I will show that here – in the interplay between identity and difference, similarity and schema formation – is hidden one of the basal mechanisms that determine media.

This, I admit, is a far-reaching thesis. All the more reason, I would argue, to give the unfolding of the individual steps some time. While the present chapter seeks to clarify identity and identification, the following one, the eleventh, will focus on difference. In my concluding chapter, I will sum up the yield specifically for the field of semiotics.

Let us start again with the basic scheme I have outlined above. If two things or events are similar to each other, they are neither identical nor completely different; between the poles of identity and difference spans the wide area of similarity.



Things that are similar may differ in many respects, but some peculiarities they must have in common, they must be comparable.<sup>1</sup>



The same is true for repetition. It, too, connects identity and difference.



<sup>&</sup>lt;sup>1</sup> I have discussed this aspect in Chapter 7: Similarity - in what way.

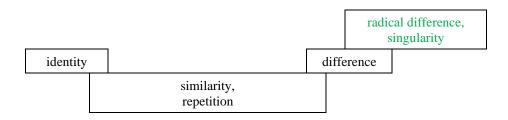
### 2. identity?

The concepts of identity and difference are initially used here colloquially; but if one looks more closely, the pole of identity in particular proves to be treacherous; and it turns out that there are completely different types of identity, which in turn has some consequences for the question of similarity.

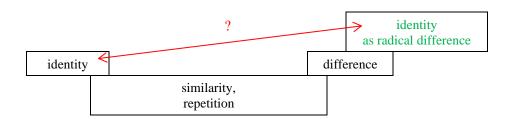
Our idea of similarity is tied to the practice of comparison. Two things are confronted with each other and turn out to be more or less similar.<sup>2</sup> So if it is always about at least two things: Can they ever be 'identical'? In the strict sense, certainly not.

One could almost say that exactly the opposite is the case; because a first type of 'identity' would bring it close to individuality. Persons/individuals in particular are identical with themselves and identifiable as individuals insofar as and to the extent that they are radically different from each other. And the same is true of other things; if a thing or event is unique – one might think of a work of art or a great catastrophe – it would be called incommensurable. In this case, neither something 'similar' nor a repetition are conceivable.<sup>3</sup>

In this way, identity would be radical difference or singularity. Both, however, would precisely not fall on the left side of my sketch, but – somewhat astonishingly – on the right.



#### Or rather:



So how can this be possible? Obviously, there must exist another type besides identity as radical difference, and 'identity' on the left must mean something else. All considerations that are to follow serve to come closer to this question.

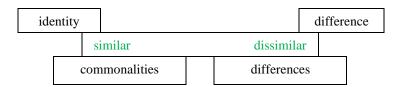
### 3. intermediate consideration

If one compares two things with each other and finds commonalities/similarities, these things will never coincide completely, never be completely 'identical.' Accordingly, 'identity' can only be the most extreme point of the spectrum in which similarity varies. So one would first of all have to assume the existence of a pragmatically reduced identity.

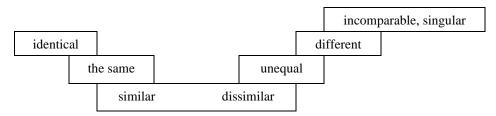
<sup>&</sup>lt;sup>2</sup> ...or it is the other way around: In a mass of heterogeneous material, two things stand out as similar.

<sup>&</sup>lt;sup>3</sup> Whether or not there are actually completely incommensurable things is another matter.

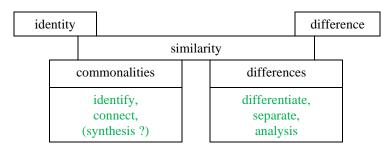
Second, one will have to realize that similarity itself is by no means a neutral concept that would be positioned midway between identity and difference; rather, the term similarity has a clear bias insofar as it increases on the left while it recedes on the right:



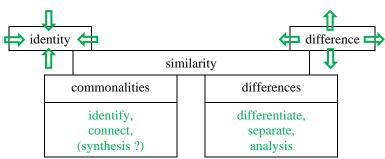
In addition, and this would be a third point, one should realize that everyday language has a much finer gradation:



Finally, it may be worthwhile to take a look at the concrete activity of comparison and to use the corresponding verbs instead of nouns:



Now it becomes clear that at the pole of difference, centrifugal forces, forces of repulsion, are at work, at the pole of identity, however, centripetal forces:



And this actually changes the picture. For possibly more important than identity is the action of *identifying*. One can identify oneself by showing an identity card, one can identify oneself with a group or with an actor, one can identify one thing with another, and finally one can identify a thing *as something*, and this means recognizing it.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup> Cf. Ritter, Joachim (ed.): Historisches Wörterbuch der Philosophie. Vol. 4, entry: Identifikation [Identification]. Basel: WBG 1976, p. 140.

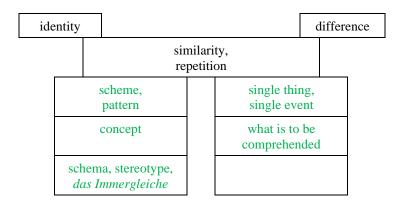
All of this suggests that the discussion on similarity is possibly about much more than the comparison of two things, that the question pursued here takes on a completely new significance. For what does it mean when – mediated by similarity – two of the most basic and possibly most far-reaching cultural techniques, separation and connection, analysis and synthesis, confront each other? At this point, my reflection relates to a whole field of traditional questions of cultural studies.

# 4. identifying something, identifying oneself

Thus, to choose a particularly prominent witness, Adorno discusses the problem of identification by using the example of conceptual thinking. He wants to distinguish – quite basally – the concepts from the things that are to be comprehended. While things are always concrete in a radical way, it is also for Adorno the main characteristic of concepts that they subsume, that is, that they always encompass a number of intrinsically heterogeneous things. Concepts therefore have a necessarily abstract character. This abstractness has two faces: On the one hand, it is inevitable because without it there would be no conceptual thinking; on the other hand, the abstractness distances the concepts from the concrete individual things. The abstraction of concepts thus *wrongs* that what is to be comprehended – this is the really unusual thought in Adorno's 'Negative Dialectics.'

In my sketch, the concrete things would fall on the side of difference, the concepts on the side of identity. And at the same time, the concept of identity has also changed: If one follows Adorno, the hallmark of identificatory thinking would be that one identifies a thing or an event with something else or as something. Comparing two things would be a special case. The more general case would be that on the side of identity there is an already established concept or pattern against which the respective individual concrete is measured.

And the same would apply to all types of patterns and schemata; for example, to those that govern the *image media*, as Horkheimer/Adorno make clear in the Dialectic of Enlightenment<sup>7</sup> when they criticize the strict schematism of the culture industry and accuse it of ultimately producing *das Immergleiche* – unending sameness – in repetition.

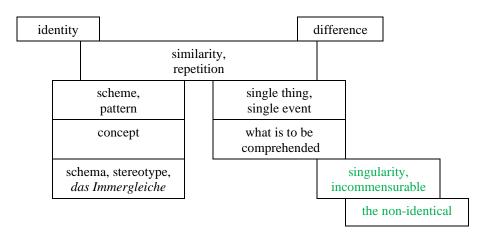


<sup>&</sup>lt;sup>5</sup> Adorno, Theodor W.: Negative Dialectics. New York: Continuum 1973, pp. 11, 135ff. [1966].

<sup>6 ...</sup>at least in case one considers the single things as single in a radical way, as (initially) singular...

<sup>&</sup>lt;sup>7</sup> Horkheimer, Max; Adorno, Theodor W.: Dialectic of Enlightenment. Philosophical Fragments. Stanford: UP 2002 [1947].

And finally, Adorno coins – as a counter concept to identifying thinking – the concept of the 'non-identical,' which is supposed to capture that which eludes schematization.<sup>8</sup> For Adorno, the exponent of the non-identical is art, <sup>9</sup> and above all twelve-tone music, which taboos repetition and seeks to push back schema formation in a systematic way.

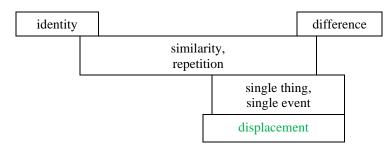


The singular/incommensurable and the non-identical resemble what above has been called radical difference.

#### 5. Derrida, Butler

Twenty years later, Derrida argued in a similar vein. <sup>10</sup> Derrida focuses not on similarity but entirely on repetition, and he emphasizes more strongly than Adorno that it is *heterogeneous* individual events that repetition chains together. In Derrida, repetition results in *differance* (and precisely not in unending sameness). Derrida is critical in the extreme of any notion of identity. (He largely excludes the obvious objection that repetition necessarily contains a moment of similarity and thus of identity).

And another twenty years later, Butler takes up Derrida's argument. <sup>11</sup> She makes the political point that repetition, by causing *displacement*, performatively produces the new. And this argument, too, would fall entirely on the side of difference.



What is new about Derrida's and Butler's concepts is that time now plays a greater role; on the one hand, insofar as repetition, unlike similarity, is always processual, always bound to time; and on the other hand, insofar as both Derrida and Butler focus on displacement and change.

<sup>&</sup>lt;sup>8</sup> Adorno, Negative Dialectics, op. cit.

<sup>&</sup>lt;sup>9</sup> Cf. Adorno, Theodor W.: Aesthetic Theory. London: Routledge 1984 [1970].

<sup>&</sup>lt;sup>10</sup> Derrida, Jacques: Of Grammatology. Baltimore: Johns Hopkins Univ. Press 1995 [1967].

<sup>&</sup>lt;sup>11</sup> Butler, Judith: Gender Trouble: Feminism and the Subversion of Identity. New York: Routledge 1990; pp. 16-34, 121ff., 140ff.

And equally new is that it is now definitively no longer a matter of comparing only two things or events. Repetition, rather, can effortlessly chain together a very large number of individual occurences.

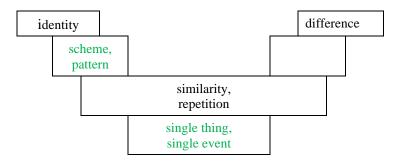
In Derrida as in Butler, however, this would be my objection, the concept of pattern is missing. Patterns, schemata, and stereotypes have a fundamentally different status from single events. If it was said that it is patterns that individual events confront and by which similarity (identity and/or difference) is measured, then it follows that these patterns have a disproportionately greater weight of their own, a greater stability and persistence.

So how can all this be thought together? Are identity and difference, similarity, comparison, single event, and pattern connected in a regular mechanism? I think that – again drawing on schema theory – one can indeed show such a mechanism, and that it offers a key to an extended understanding of similarity.

# 6. intermediate consideration: Is the single thing or single event only different?

Before this is possible, however, I think it makes sense to modify the idea I have just developed in one point: In my sketch, schema and single event opposed each other, the schema on the side of 'identity,' the single event on the side of difference. The single event, then, seemed to fall entirely on the side of difference. Derrida and Butler would indeed see it this way, because in the end, they consider the single event singular and incommensurable;<sup>12</sup> and differently/similarly Adorno, because he sees in the respective individual the counterpart of schematization.

This choice, however, seems to me by no means obligatory. Therefore, I propose to detach the single thing or single event from difference and to position it – even if provisionally – in the neutral middle between identity and difference:



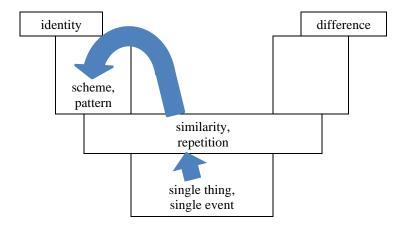
This has the advantage that it initially remains open in which way single event and schema interact and which role 'identity' and difference play in this interaction.<sup>13</sup>

<sup>&</sup>lt;sup>12</sup> This view was also held by other poststructuralist authors; an example is Deleuze, for whom the concept of 'singularity' is of great importance and who – similar to Derrida – wants to exclude any moment of identity even from the concept of repetition (cf. Deleuze, Gilles: Difference and Repetition. London/New York: Continuum 2001 [1968]).

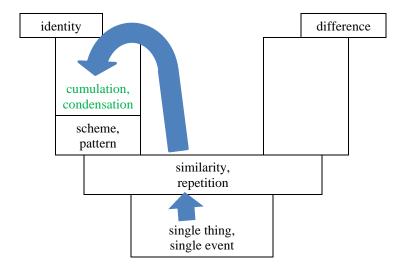
<sup>&</sup>lt;sup>13</sup> And there is a second argument in favor of this: One of the results above has been that the single thing or event is also not simply given, but that it detaches itself from the context as a single one only in the play between identity and difference (cf. chap. 5). So, if there is indeed a 'mechanism' that relates single event and schema to each other, then one will have to take this into account as well.

#### 7. schema formation

Now, I think, all that is needed is ready. As far as the mechanism is concerned, I would like to start again with the question of how the formation of patterns or schemata comes about in the first place. I have described it in my consideration of schema formation: All theories dealing with pattern emergence would here refer to repetition. Accordingly, the answer can only be that it is nothing else than the (repeated) detection of similarity which — cumulatively — leads to the formation of patterns.



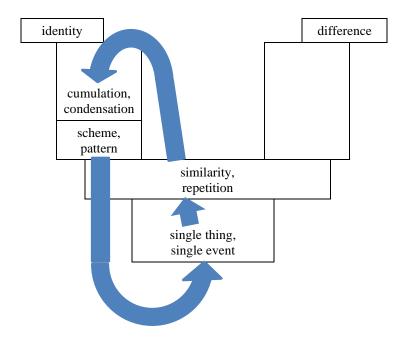
Elsewhere I have made the suggestion to bring into play the concept of condensation in correspondence to the concept of displacement.<sup>15</sup> If it is repetition that produces schemata and patterns, then it has a quantitative aspect; for surely a great many individual events are necessary for this to happen. The concept of condensation retains this quantitative relationship; patterns and schemata are the product of condensation. Each case of similarity strengthens the schema and writes back into the schema.



Finally, this provides the opportunity to remodel the whole context as a temporal process. And since it is about repetition, the idea that it is a *cycle* imposes itself – again:

<sup>&</sup>lt;sup>14</sup> This applies to schema theory as well as to cognition theory, theories of habitus, social memory, theories of perception such as Gestalt theory, and, finally, theories of individual socialization.

<sup>&</sup>lt;sup>15</sup> Winkler, Hartmut: Docuverse. Zur Medientheorie der Computer. Munich: Boer 1997, pp. 13-184 (https://homepages.uni-paderborn.de/winkler/Winkler--Docuverse.pdf); W., H.: Diskursökonomie. Versuch über die innere Ökonomie der Medien. Frankfurt am Main: Suhrkamp 2004, pp. 110-130 (https://homepages.uni-paderborn.de/winkler/Winkler--Diskurs%C3%B6konomie.pdf).



Thus, not only is the schema dependent on repetition (dependent on what resembles each other and repeats itself in the individual things and events), but the schema also exposes itself to the shift that the individual event, insofar as it is always also different, causes. Schemata are stable *and* changeable, and themselves subject to shifts. (In schema theory, as I have mentioned in a previous chapter, this adaptation is called 'tuning').

What my sketch captures only in the concept of condensation but what it cannot really show is the difference in weight: the fact that something like inertia (and thus resistance to adaptation) develops on the scheme side.

## 8. intermediate consideration: Aren't the schemes always already there?

And yet another objection suggests itself at this point: For what does it mean to ask how it comes to the formation of patterns in the first place? Is it not part of the concept of schema that it is prior? *Aren't schemata always already established?* When we learn to speak, do we not adopt the vocabulary and rules of the language we inherit? And is this not ultimately true of all schemata, patterns, and rules? Aren't we socialized into stably established codes of behavior that existed long before us and that will effortlessly outlast our lifetimes?

All this is true. And yet we must insist that patterns and schemata do not fall from the sky. As fixed and predefined as they appear, it is also clear that they have developed in the course of the historical process. And within the historical process – through repetition.

If the schemata and patterns appear 'fixed,' it is because they have become *solidified* in numerous cycles of repetition. This is especially clear in the case of stereotypes; no one wants stereotypes to emerge, no one invented them, planned them, or consciously brought them into the world; only in a long chain of 'Westerns' does the fact emerge that it is a genre at all, i.e., an organized set of stereotypes.

First of all, therefore, repetition affects products; that is, what can be observed in texts, images, or films. Exactly the same, however, applies to the recipients: They go through an individual media socialization, and it takes a whole chain of individual media experiences for them to identify genres or stereotypes as such. On both levels – discourse and media socialization –

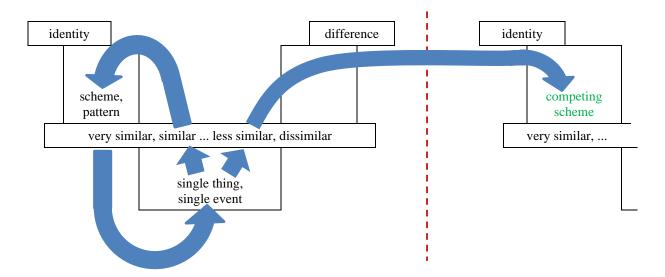
individual events turn into repetition, and repetition turns into structure formation. This is exactly what metaphors like 'solidification,' 'condensation,' or 'hardening' want to show.<sup>16</sup>

So both are true: The schemata are antecedent *and* the result of repetition. They appear as antecedent if one considers only a single event, a single repetition cycle. If, on the other hand, we look at the chain of repetitions taken as a whole, it becomes clear that the repetition itself produces the schema.<sup>17</sup>

# 9. competing patterns, formation of new patterns, and schemata

So let us return to the outlined path and again take up the problem of similarity, identity, and difference; for one thought is still missing which can complement and round off what has been said – in my eyes somewhat perplexingly. Namely, what happens, one will have to ask, if difference prevails instead of similarity (or within similarity not the moment of identity, but that of difference)? When the single thing or event is similar but not sufficiently similar to fit the schema in question?

In this case, I think the fact comes into play that there is not just one pattern, but that each pattern competes with a large number of other patterns.



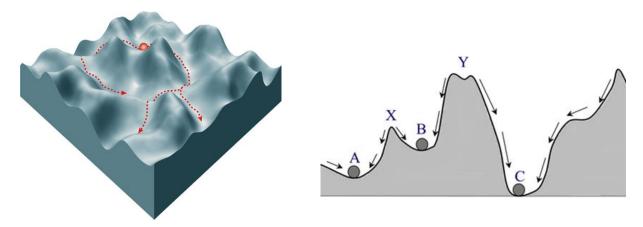
In this respect, similarity is a sorting machine that makes decisions according to the measure of similarity: If the similarity is sufficient, the single event enters the schema in question via condensation; if there is a competing schema to which the single event is more similar, the single event enters the cycle of the competing schema.<sup>18</sup>

<sup>&</sup>lt;sup>16</sup> The notion that fluid practices turn into structures has a somewhat difficult time gaining traction in German media theory; one reason for this might be that one cannot assess the incalculably large area of practices, and cannot observe the transformation, the emergence of the patterns and schemata themselves.

<sup>&</sup>lt;sup>17</sup> Goldstone, who examines the connection between similarity and categorization in 1994, passes the core of the matter with his head held high because he obviously cannot imagine a circular connection in any way. When he says: "Similarity cannot explain categorization if it is dependent on categorization for definition", one can only reply: Sorry, exactly that is the case, exactly this circularity has to be comprehended. (Goldstone, Robert L.: The role of similarity in categorization: Providing a groundwork. In: Cognition, 52 (1994), pp. 125-157, here p. 132).

<sup>&</sup>lt;sup>18</sup> Ramscar/Port refer to a text of Anderson's that argues in a completely parallel way: "[T]he RATIONAL model of categorization (Anderson 1991) [...] creates hybrid representations in which a new item may either be used to update an existing cluster of similar examples [...] or, if unique enough, it may initiate a new cluster. Which choice is made is a function of the probability that the new item belongs to an existing cluster. When this probability is

This can be visualized via the image of a hilly landscape through which balls are rolling: 19



Here, gravity ensures that the balls gather almost automatically in the valleys (where the balls stand for the individual cases and the valleys for the schemata, patterns, or categories). The peaks operate as points of 'repulsion' (centrifugal forces act here), the valleys as attractors (they act centripetally).

The treacherous peculiarity in the case of the schemata would be that the mountains and valleys are not predetermined but that they also change; although very slowly, depending on the course of the rolling balls.

#### 10. conclusions

All these are no more than ideas or models, and they are -I readily admit - themselves somewhat model-like/schematic/abstract. So what, one will have to ask, is the yield?

I argue that the outlined 'machine' – let me get away with the metaphor – is of absolutely fundamental importance for understanding cultural and semiotic processes. One of the crucial puzzles seems to me to be in what way schemata, patterns, concepts, or categories emerge, in interrelation with the concrete discourses – textual universes, visual worlds... – that are the main object of cultural studies. The discourses themselves are material; they may be complex and ramified, making observation notoriously difficult, but at least in principle they are – de Saussure says: in praesentia – exposed. Exactly this is not true for schemata, patterns, concepts, and categories.

A part of them, the concepts, are visible as words on the surface of the discourses. But already those who ask for their 'meaning' find themselves referred to such obscure things as the competence and the memory capacity of the language users. The situation is even more precarious in the case of image schemata or stereotypes, which have no undoubted material counterpart in the manifest images. In this respect, whether an image fulfills or even materially contains a certain stereotype must always remain debatable.

below a given threshold, a new cluster is created. If above the threshold, the existing cluster that it is most similar is updated to reflect the new exemplar." (Ramscar, Michael; Port, Robert: Categorization (without categories). In: Dabrowska, E.; Divjak, D. (ed.): Handbook of Cognitive Linguistics. Berlin/Boston: De Gruyter Mouton 2015, p. 85 (emph. H. W.)). However, the aspect of condensation is also missing here.

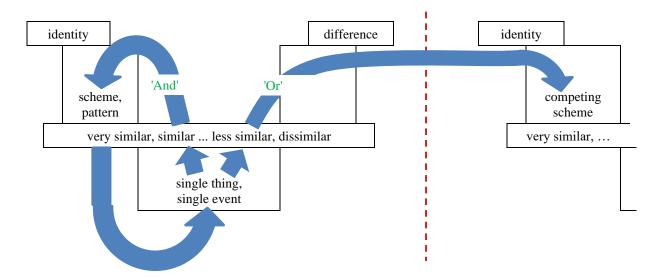
<sup>&</sup>lt;sup>19</sup> Fig. 3d: © Nature Reviews Molecular Cell Biology, reprod. authorized; https://www.researchgate.net/figure /Cellular-reprogramming-as-navigation-through-a-complex-attractor-landscapeIn-a-complex\_fig1\_26797458, 12. 2. 19; Fig. 2d: © Ghaderi, Ali: A mathematical theory for mixing of particulate materials, PhD thesis, University of Surrey, 2006. https://www.researchgate.net/figure/5-A-Heterogeneity-landscape-the-arrows-denote-the-directions-in-which-the-mixture\_fig9\_262876747, 12. 2. 19; reprod. authorized.

How does one deal with such a situation? No one would deny that there are schemata and patterns. And likewise that patterns (schemata and stereotypes, regularities, genre laws...) have great power insofar as they structure the discourses beneath their surfaces. But how – to ask the question again – do schemata and regularities emerge?

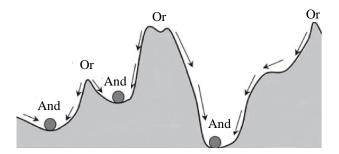
The answer lies in similarity and in the machine outlined above. At the pole of 'identity,' there is accumulation; the centripetal force of similarity ensures that individual things and individual events are layered and condensed. The price, that was Adorno's point, is generalization. With each run, with each new individual event, each new case of similarity, each individual repetition, the schema moves further away from the individual events; it becomes more abstract. And at the same time, it gains independence and stability.

And conversely, each individual case, insofar as it is also different, questions the schema and – as a tendency – wears it away. That stabilized schemata exist at all, that they can hold their own against the gnawing entropy of difference, shows that both sides do not simply balance each other out. This, I think, is because as similarity diminishes, there is always another schema available that is more 'similar.' The leap to this alternative relieves the original schema and diminishes the force of the difference it would erode.

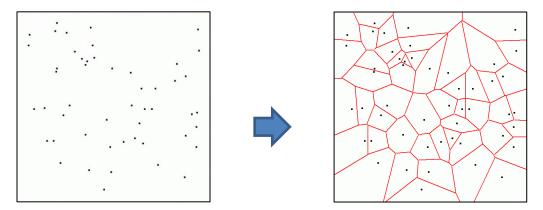
That is why I called the whole thing a sorting machine. In a last, somewhat bold step, I would therefore like to assign the 'And' and the 'Or' to the two possibilities. The 'And' on the side of the accumulation, the 'Or' on the side of the jump to the alternative.



I am referring here to the colloquial, not the logical And and Or. The 'Or' provides the distinction, boundary, or repulsion, which, as has been said above, acts as a second force in the field.



Bhatti/Kimmich follow a similar idea when they refer to prototype theory<sup>20</sup> and to the so-called Voronoi diagrams, a type of algorithm used for pattern recognition:<sup>21</sup>



Voronoi algorithms start from a given set of points and calculate what the boundaries of the surfaces surrounding them look like.<sup>22</sup>

All this suggests that distinction, delineation, and repulsion are as important for the constitution of the schemata as the centripetal forces of the 'And' that provide accumulation and condensation. Apparently, the schemata must *move apart*, must differ, so that condensation can take place within them. Apparently, then, *condensation and distinction condition each other*; they are to be thought of as equally strong and as symmetrical, systematically intertwined in a common mechanism.<sup>23</sup>

And now, at the very end, it becomes possible to refer also back to the first type of identity mentioned above, identity as radical difference. Identity as radical difference singles out the moment of repulsion from the described interaction in order to favor it in a unilateral way. This is possible (and plausible), as already stated, in the case of the identity of individuals. Unlike in the case of collective products (patterns, schemata, concepts, or group identities), difference and distinction are conspicuously dominant here; and what delimits an individual does not seem to emerge in the process of identity formation, but – in the case of human individuals – is always already given in the closedness of the skin bag. (To what extent the 'And' of condensation also plays a role in the case of individual identity formation would have to be proven by recourse to, e.g., socialization theories).

<sup>&</sup>lt;sup>20</sup>Bhatti, Anil; Kimmich, Dorothee: Einleitung. In: Bh./K. (Eds.): Ähnlichkeit. Ein kulturtheoretisches Paradigma. Konstanz: UP 2015, pp. 11ff.

<sup>&</sup>lt;sup>21</sup> Ibid, p. 12; Fig.: Illustration of Voronoi algorithms; I have taken the right part of the figure from: http://www.algorithmic-solutions.info/leda\_guide/images/voronoi\_diagram.gif, © Algorithmic Solutions; reprod. authorized.

<sup>&</sup>lt;sup>22</sup> The boundary is chosen so that each point within a surface is closer to its 'center' than to any other center. The result is a kind of tile pattern called Voronoi tessellation. (Cf.: https://de.wikipedia.org/wiki/Voronoi-Diagramm); moreover, it is important to know that the graphical representation is only an illustration; the algorithm itself is not bound to the two dimensions of a sheet of paper.

My objection would be that in the case of identity and schema formation, which I am concerned with, the points/centers are not predetermined at all. The task would rather be to describe the process in such a way that centers ('and') and boundaries ('or') take shape simultaneously and in interaction. Particularly interesting in this context are algorithms which allow a so-called 'mean shift clustering';

<sup>(</sup>see, for example: https://www.youtube.com/watch?v=Evc53OaDTFc).

<sup>&</sup>lt;sup>23</sup> Within the framework of other basic ideas and concepts, other authors have also recognized this connection: "Rosch et al. (1976) argue that *the distribution of features among concepts results in natural clusters that maximize within-category similarity and minimize between-category similarity.*" (Ramscar/Port: Categorization, a. a. O., p. 81 (emph. H. W.)).

What emerges from all of this, then, is the sketch of a general theory which, starting from schema formation, will – I am convinced – shed a genuinely new light on the established questions of semiotics. The main result of my consideration is that behind or below semiotic processes, a dialectic of separating and connecting is in progress. And it seems to be this dialectic that sustains and gives rise to schemata and signs. My concluding chapter, as I have said, will sum up the results specifically in terms of semiotics.

I think it is somewhat astonishing that between identity and difference, separating and connecting, And and Or, single thing and repetition, something like a dynamic connection can effectively be shown. And I think it is even more astonishing that *similarity* is at the center of all this. Of all things, this 'soft' category that philosophers consider unfit for theory.

# **Chapter 11:**

# Separating, differentiating, analyzing

The second pole in the field of similarity is difference.

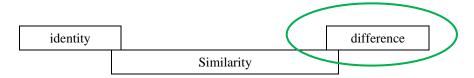
Somewhat ironically one would like to cite Heidegger: "The close relation of identity and difference will be shown in this publication to be that which gives us thought." 1

#### 1. intro

Let's set out once more to explore the territory of similarity from a different angle. The previous chapter focused on *identity*. And specifically a pragmatically reduced concept of identity: My question was how we identify things, e.g., how we recognize a donkey as a donkey.

The result was that patterns or schemata are needed for this; asked where these come from, the answer was that schemata emerge in a kind of condensation: multiple repeated events pile up; schema formation extracts what is common (similar, 'identical') about them and establishes it as a schema or pattern.

And towards the end of my reflection, the question of *difference* arose, which is the counterpart of identity in the field of similarity.



In certain cases, I wrote, the pattern recognition runs into problems because the similarity becomes doubtful and more and more differences become apparent. This led to the hypothesis that perception<sup>2</sup> – if I choose this example once more – in these cases deflects to other, competing patterns: The perceived is identified with an alternative pattern which seems to fit better, which is thus *more similar* to the current perception. I now want to take up this question of difference and examine it in a slightly more systematic way.

<sup>&</sup>lt;sup>1</sup> Heidegger, Martin: Identity and Difference. New York/Evanston/London: Harper & Row 1969, p. 21 [1957].

<sup>&</sup>lt;sup>2</sup> Perception is the most vivid example of schema formation because it is here that one can most readily imagine the mechanisms. However, as the previous chapters have certainly made clear, schema formation is by no means a matter of perception alone.

# 2. if the difference prevails

My first suggestion was to distinguish between 'And' and 'Or': The cumulative formation of schemata follows a logic of 'And'; the jump to a competing schema follows a logic of 'Or.'

This, however, presupposes that the competing patterns to which the perception jumps already exist. And here now the question arises, no longer how patterns in general, but how *competing* patterns come about. Stratification and accumulation, the repeated finding of similarity, I think, can only make plausible the emergence of individual patterns. Is there a mechanism that, on a par with the cumulative 'And,' also explains the 'Or'?

The first step is certainly the 'No,' the decision that similarity is not sufficient to identify the current perception with a certain pattern. With this 'No' the original pattern is put at a distance. For alternative patterns to come into play, however, it takes more. What is needed is the power of a *distinction* that has this 'No' as a condition, but which then certainly follows its own rules. So let us first summarize a few points about the problem of differentiation.

# 3. differentiating

"Differentiation (distinctio, διάκρισις, διορισμός)", says German Wikipedia, referring back to Eisler's Dictionary of Philosophical Terms,

"is a basic activity of thinking. It exists in the '[...] active determination or clarification of differences, dissimilarities, othernesses.' It is a prerequisite of classification and understanding. *The practice for differentiation is comparison*."<sup>3</sup>

#### And Ritter adds:

"Differentiating [...] occurs both at the level of perception on observable objects and at the level of thinking on intentional objects. [...] The Latin term 'distinctio' gains terminological significance, serving as a counter term to both 'identitas' [!] and 'confusio."

Differentiation is therefore bound to comparison; and in order to be able to differentiate at all, *differences* must catch the eye:

"Difference does not indicate the dissimilarity [...] of a and b, but the viewpoint from which in another respect identical things are different from each other."

This leads back to the question of *features*, which I discussed in the seventh chapter; for as soon as perception compares, it cannot stay with the objects as a whole but must break them down into aspects or features. Some of these features will be similar, the same, or 'identical,' others will vary and thus be responsible for the difference.

And more than that, one can push the difference to the point where the features that create the difference function disjunctively:

<sup>&</sup>lt;sup>3</sup> Wikipedia (Germ.): Unterscheidung. https://de.wikipedia.org/wiki/Unterscheidung, 13. 3. 20 (transl. and emphas. H. W.).

<sup>&</sup>lt;sup>4</sup> Ritter, Joachim (ed.): Historisches Wörterbuch der Philosophie: Unterscheiden. Vol. 11, Darmstadt: WBG 2001, p. 308 (transl. and emphas. H. W.).

<sup>&</sup>lt;sup>5</sup> Ritter: Unterschied, op. cit., p. 310 (transl. H. W.).

"The difference is the quality which divides two subclasses of objects by being attached to everything that falls under 'a' and denied to everything that falls under 'b."

Here, the distinguishing feature acts binary, like a toggle switch. In any case, however, it is a matter of *contrast*. Differences make it possible to *take things apart*.

But at this point, have we not moved too far away from the question of similarity? Is not similarity, as Kimmich says, the realm of the 'vague,' of the precisely not reliably distinguishable, not distinguished? Closer to the aforementioned 'confusio' than to neat distinctions? We shall see. And my suggestion is to stay a little longer with the problem of distinction for the time being.

## 4. language as a machine of distinction

One medium that organizes itself – first and foremost – by way of contrasts is language. "It is [...] a fact", Lyons writes in his Semantics,

"that binary opposition is one of the most important principles governing the structure of languages." "[D]ictionaries will classify as antonyms pairs of lexemes [words] which [...] are related in a variety of ways ('high'/'low', 'buy'/'sell', 'male'/'female', 'arrive'/'depart', 'left'/'right', 'front'/'back', etc.). What all these examples have in common [...] is their dependence upon dichotomization."

Structural semantics, in particular, has placed this aspect at the center of its conception of language. And Lyons adds:

"We can leave to others to enquire whether the tendency to think in opposites, to categorize experience in terms of binary contrasts, is a universal human tendency which is but secondarily reflected in language or whether it is the pre-existence of a large number of opposed pairs of lexemes in our native language which causes us to dichotomize, or polarize, our judgements and experiences." <sup>10</sup>

Language, in this view, is an *analytical medium*; a medium that allows or suggests making distinctions. The structure of vocabulary retains a whole system of pre-articulated distinctions and, stably conventionalized, makes them available for further use.

#### 5. Luhmann

Niklas Luhmann has also dealt with the problem of differentiation. And he insists that differentiating always means *drawing boundaries*. "In all of his more recent publications," Reese-Schäfer reports,

"Luhmann starts from George Spencer Brown's operational logic, which begins with the instruction: 'Draw a distinction!' We cannot make a designation without making a

<sup>&</sup>lt;sup>6</sup> Ibd., p. 311 (transl. H. W.); Ritter refers to a historical definition from the Scholastic period.

<sup>&</sup>lt;sup>7</sup> I have already cited this book several times: Kimmich, Dorothee: Ins Ungefähre. Ähnlichkeit und Moderne. Paderborn: Konstanz UP 2017.

<sup>&</sup>lt;sup>8</sup> Lyons, John: Semantics. Vol. 1, Cambridge: UP 1977, p. 271 [1977].

<sup>&</sup>lt;sup>9</sup> Ibid. (add. H. W.).

<sup>10</sup> Ibid.

distinction. In order to observe anything at all, the system needs a boundary across which it can observe. One must therefore draw a boundary line."<sup>11</sup>

The point is that Luhmann includes the position of the observer. Whereas one would commonly assume that the person making the distinction stands outside (or above?) that decision, Luhmann separates inside and outside, locating the observer on this side of the drawn boundary. "It is a defining point of distinction that one cannot be on both sides at once." "One can clarify this," Luhmann writes,

"with the help of the concept of form on which George Spencer Brown bases his 'Laws of Form.' According to this, forms are no longer to be seen as (more or less beautiful) shapes, but as boundary lines, as markers of a difference, which forces one to clarify which side one designates, that is: on which side of the form one is located and where one has to start accordingly for further operations. The other side of the borderline (of the 'form') is given at the same time. Each side of the form is the other side of the other side. No side is something by itself." Observation can observe other things, but not its own distinction. This is its blind spot."

This is, even if I will not really use it hereafter, an important consideration. And secondly, it is important that Luhmann emphasizes that distinctions always have an operative character, are always bound to time, are always practice.<sup>15</sup>

## 6. analysis

Distinctions have – the keyword has already been mentioned in connection with language – to do with the different cultural techniques of *analysis*.

"An analysis (from Greek ἀνάλυσις [...] 'dissolution') is a systematic investigation in which the object of study is broken down into its constituents (elements)."  $^{16}$ 

This definition assumes that it is always already certain what these constituents or elements actually are. Therefore, the verb is more interesting at first: To analyze things means to determine such constituents and elements in the first place and then to clarify how they relate to each other and to the original 'whole.' Seen in this way, analysis means to *take things apart*. This applies to the activity of the mind, insofar as one would first think of mental operations when thinking of 'analysis;' at the same time, however, it seems important to me that analysis also has a media-practical side.<sup>17</sup>

<sup>&</sup>lt;sup>11</sup> Reese-Schäfer, Walter: Luhmann zur Einführung. Hamburg: Junius 1992, p. 71 (transl. H. W.). In my consideration of the context, the drawing of boundaries has already appeared once. There, it was about the border that encloses the object and separates it from its surrounding space, as well as about the technique of drawing that particularly emphasizes this border as an 'outline' (cf. chap. 5, section 6).

<sup>&</sup>lt;sup>12</sup> Reese-Schäfer, op. cit. (transl. H. W.).

<sup>&</sup>lt;sup>13</sup> Luhmann, Niklas: Die Gesellschaft der Gesellschaft. Vol. 1. Frankfurt am Main: Suhrkamp 1997, p. 60 (transl. H. W.).

<sup>&</sup>lt;sup>14</sup> Reese-Schäfer, op. cit. p. 71 (transl. H. W.).

<sup>&</sup>lt;sup>15</sup> Ibid, pp. 71-75.

<sup>&</sup>lt;sup>16</sup> Wikipedia (Germ.): Analyse, https://de.wikipedia.org/wiki/Analyse, 1. 3. 20 (transl. H. W.).

<sup>&</sup>lt;sup>17</sup> ...and that is the main reason why I called it a cultural technique.

# 7. diagrammatics

Thus, to choose one example, recent research on *diagrammatics* has shown that in many cases, one needs a *flat surface* to be able to take things apart. In the case of diagrams, this is particularly pronounced; "diagrams are visual representations that show relations or ratios."

Diagrams are a peculiar hybrid of image and writing,<sup>20</sup> they operate, say Bauer/Ernst, "at the interface of perception and imagination, of sensuality and reason."<sup>21</sup> But in order for diagrams to reveal relationships, they must first break down their object into its individual aspects:

"This assumption may be based on the meaning of the Greek syllable 'dia.' It can be translated as 'apart,' 'through,' and 'between'; sometimes its meaning corresponds to the prefix 'zer-,' as in the German verb 'zerlegen.' Diagrams break down a context into its parts, thereby exposing the structure of that context to the observer."<sup>22</sup>

And this directs the attention to the media-technological means by which this breaking apart takes place. Diagrams make use of two-dimensional surfaces;<sup>23</sup> and even more clearly than writing, which lines up its characters in rows and – at least in principle strictly linear – uses only one spatial axis.

In diagrams, more often than in pictures, for example, individual elements or objects are juxtaposed on the white of the background; an aspect that Krämer, Mersch, or Dirmoser understand as 'interspatiality':<sup>24</sup>

"Diagrammatic structures make use of 'interspatialities,' as spatiality in general denotes their basic principle." <sup>25</sup>

<sup>&</sup>lt;sup>18</sup> Krämer, Sybille: Die Schrift als Hybrid aus Sprache und Bild. Thesen über die Schriftbildlichkeit unter Berücksichtigung von Diagrammatik und Kartographie. In: Hoffmann, Thorsten; Rippl, Gabriele (eds.): Bilder. Ein (neues) Leitmedium? Göttingen: Wallstein 2006, pp. 79-92.

<sup>-</sup> Krämer, Sybille: Operative Bildlichkeit. Von der 'Grammatologie' zu einer 'Diagrammatologie'? Reflexionen über erkennendes 'Sehen.' In: Hessler, Martina; Mersch, Dieter (eds.): Logik des Bildlichen. Zur Kritik der ikonischen Vernunft. Bielefeld: Transcript 2009, pp. 94-121.

<sup>-</sup> Krämer, Sybille: Notationen, Schemata und Diagramme. Über 'Räumlichkeit' als Darstellungsprinzip. Sechs kommentierte Thesen. In: Brandstetter, Gabriele; Hoffmann, Frank; Maar, Kristen (eds.): Notationen und choreographisches Denken. Freiburg/Berlin/Vienna: Rombach 2010, pp. 29-45.

<sup>-</sup> Krämer, Sybille; Cancik-Kirschbaum, Eva; Totzke, Rainer (eds.): Schriftbildlichkeit: Wahrnehmbarkeit, Materialität und Operativität von Notationen. Berlin: Akademie 2012.

<sup>&</sup>lt;sup>19</sup> Bauer, Matthias; Ernst, Christoph: Diagrammatik. Einführung in ein kultur- und medienwissenschaftliches Forschungsfeld. Bielefeld: Transcript 2010, p. 9 (transl. H. W.).

<sup>&</sup>lt;sup>20</sup> Ibid, p. 28.

<sup>&</sup>lt;sup>21</sup> Ibid, p. 10.

<sup>&</sup>lt;sup>22</sup> Ibid. (transl. H. W., emphasis in the original).

<sup>&</sup>lt;sup>23</sup> Krämer highlights this aspect in particular in the concept of 'Schriftbildlichkeit.'

<sup>&</sup>lt;sup>24</sup> Krämer's texts were cited in FN 18.

<sup>- &</sup>quot;Furthermore, the structure of pictorial knowledge is characterized by a logic of contrasts, which is due to the 'spatiality,' the 'interspatial' constitution of visual media, as well as by a 'topological differentiality' which, as it were, provides the formatting of pictorial space." (Heßler, Martina; Mersch, Dieter (eds.): Logik des Bildlichen. Zur Kritik der ikonischen Vernunft. Bielefeld: Transcript 2009, p. 12 (transl. H. W.).

<sup>-</sup> Dirmoser, Gerhard: Denkfiguren. Denkfiguren. Verwendung von Diagrammen in Wissenschaft und Kunst. http://gerhard\_dirmoser.public1.linz.at/FU/Denkfiguren\_Diagrammatik.pdf.

<sup>&</sup>lt;sup>25</sup> Mersch, Dieter: Wissen in Bildern. Zur visuellen Epistemik in Naturwissenschaft und Mathematik. In: Hüppauf, Bernd; Weingart, Peter (eds.): Frosch und Frankenstein. Bilder als Medium der Popularisierung von Wissenschaft. Bielefeld: Transcript 2009, pp. 107-134, p. 121.

The white of the background is therefore already suitable for isolating and separating objects from each other.<sup>26</sup> In other cases, similar to tables, lines are drawn, thus marking explicit boundaries. In diagrams, one can observe how things are physically taken apart.

A second important aspect is that diagrams are *operative* writings.<sup>27</sup> With the isolation and the "visualization of elements and relations, certain possibilities of the reconfiguration of the object, circumstance, or event context are also suggested."<sup>28</sup> Once they have been released, then, the objects can be brought into new relations – even on a trial basis; this ties in with theories that determine the media as a whole as a sphere of trial action.<sup>29</sup>

And finally, this is the third aspect, Bauer/Ernst make clear that one can easily return from the materiality of diagrams to mental operations, insofar as "thinking – especially descriptive thinking, which takes place before the inner, mental eye – also proceeds diagrammatically."<sup>30</sup>

"What is emphasized above all is the possibility of using diagrammatic structures to make invisible relations 'visible."

The whole approach is designed to treat both sides – the mental and the media-material aspect – with equal attention. And the question of the relationship between the two is decided very plausibly in terms of an interaction:

"It should be borne in mind that within diagrammatics, the semiotic translation process between internal-mental operations and external-material structures (and vice versa), consequently between consciousness as well as cultural performances, constitutes one

- Krämer, Sybille: Operative Schriften als Geistestechnik. Zur Vorgeschichte der Informatik. In: Schefe, Peter; Hastedt, Heiner; Dittrich, Yvonne (eds.): Informatik und Philosophie. Mannheim: BI-Wissenschaftsverlag 1993, pp. 69-84;

<sup>&</sup>lt;sup>26</sup> To a certain extent, this also applies to writing itself: "Does not writing, with its two-dimensionality and logic of gaps, already have an inherent diagrammatic trait?" (Schneider, Birgit; Ernst, Christoph; Wöpking, Jan (eds.): Diagrammatik-Reader. Grundlegende Texte aus Theorie und Geschichte; Berlin/Boston: De Gruyter 2016, p. 10).

<sup>&</sup>lt;sup>27</sup> Krämer also coined the term operational writing;

<sup>-</sup> Krämer, Sybille: Kalküle als Repräsentationen. Zur Genese des operativen Symbolgebrauches in der Neuzeit. In: Rhein berger, Hans-Jörg; Hagner, Michael; Wahring-Schmidt, Bettina (eds.): Räume des Wissens: Repräsentation, Codierung, Spur. Berlin: Akademie 1997, pp. 112-122;

<sup>-</sup> Krämer, Sybille: Operationsraum Schrift. Ein Perspektivwechsel im Schriftverständnis. In: Grube, Gernot; Kogge, Werner; Krämer, Sybille (eds.): Schrift. Kulturtechnik zwischen Auge, Hand und Maschine. Munich: Fink 2005, pp. 13-32;

<sup>-</sup> Krämer, Sybille: Zur Sichtbarkeit der Schrift oder: Die Visualisierung des Unsichtbaren in der operativen Schrift. Zehn Thesen. In: Strätling, Susanne; Witte, Georg (eds.): Die Sichtbarkeit der Schrift. Munich: Fink 2005, pp. 75-84.

<sup>-</sup> Krämer, Sybille: Operative Bildlichkeit. Von der 'Grammatologie' zu einer 'Diagrammatologie'? Reflexionen über erkennendes Sehen. In: Heßler, Martina; Mersch, Dieter (eds.): Logik des Bildlichen. Zur Kritik der ikonischen Vernunft. Bielefeld: Transcript 2009, pp. 94-123.

<sup>&</sup>lt;sup>28</sup> Bauer/Ernst, Diagrammatik, op. cit., p. 24 (transl. H. W.).

<sup>&</sup>lt;sup>29</sup> This is a thesis I have also repeatedly advocated (W., H.: Diskursökonomie. Zur inneren Ökonomie der Medien. Frankfurt am Main: Suhrkamp 2004, pp. 200, 220ff.; W., H.: Prozessieren. Die dritte, vernachlässigte Medienfunktion. Paderborn: Fink 2015, pp. 59, 129, 227, 246ff.);

Bauer/Ernst state: "Diagrammatics links the interplay of con- and reconfiguration with the concept of the thought experiment, the concept of heuristic fiction, the concept of modeling and simulation of facts or sequences of events, and with other procedures that mediate between theory and practice and establish a control loop of descriptive thinking and trial action, of design actions and cognitive processes, of acts of investigation and mediation." (Bauer/Ernst, Diagrammatik, op. cit., p. 15 (transl. H. W.)).

<sup>&</sup>lt;sup>30</sup> Ibid, p. 20 (transl. H. W.).

<sup>&</sup>lt;sup>31</sup> Ibid, p. 29 (transl. H. W.); the thesis that media have the property of translating abstract topologies into concrete ones goes back to Yuri M. Lotman.

of the central problems and explanatory goals."<sup>32</sup> "Diagrammatics, then, is a theory which helps to describe the exchange process between mental cognitive processes and external media, which include complex semiotic representational systems such as writing."<sup>33</sup>

For my question about the techniques of distinction, all of this is more than helpful.

#### 8. tokens

A second example of a cultural technique of analysis that uses material, media-technical means is provided by the prehistory of writing. The archaeologist Schmandt-Basserat has described that thousands of small clay objects, so-called 'tokens,' have been found in Mesopotamia, whose function has been a mystery for a long time; and she has been able to prevail with the thesis that they were 'counting stones' which represented certain goods, livestock, merchandise, or levies.<sup>34</sup>



The point of these tokens was that one could calculate with them; one could form quantities, add, subtract, or divide – and all of this actually with the hands (operatively); so even if one had no mathematical skills. To calculate with tokens means – even more clearly than in the case of diagrammatics – to put together or to take apart tangible signifiers on a table.<sup>35</sup>

## 9. articulation

I would like to add another media consideration to the sections on diagrammatics and tokens. In media theory, the term 'articulation' is discussed in various contexts, which – at least regarding one of its facets – also denotes a media technique of distinction, of separating, or taking apart. First, the concept of 'articulation' is associated with oral language:

"In the linguistic or phonetic sense, articulation (Latin articulare 'to pronounce clearly') refers to the realization of phonemes and words of human languages by the organs of articulation, i.e., the neuro-muscular process of speaking (in the case of spoken languages) or signing (with hands, in the case of sign languages). In the context of speech production in spoken languages, articulation is defined in a narrower sense as the speech

<sup>&</sup>lt;sup>32</sup> Bauer/Ernst, Diagrammatik, op. cit., p. 22 (transl. H. W.).

<sup>&</sup>lt;sup>33</sup> Ibid, p. 36 (transl. H. W.).

<sup>&</sup>lt;sup>34</sup> Schmandt-Besserat, Denise: Before Writing. Vol. 1: From Counting to Cuneiform. Austin: Univ. of Texas UP 1992; Fig.: © Staatliche Museen zu Berlin - Vorderasiatisches Museum, Foto: Olaf M. Teßmer; reprod. authorized.

<sup>&</sup>lt;sup>35</sup> With the restriction, however, that when dealing with the counting stones, it is only about their number. In this respect, one can at best speak of an 'analysis' of mathematical relations or of quantity relations...

movements of the organs of articulation, as distinguished from respiration and phonation (vocalization)."36

When we speak, we produce sounds with our vocal cords which we simultaneously structure. With the help of our organs of articulation (pharynx, oral cavity, tongue, teeth, lips), we give the continuous flow of air that we exhale a tonal *form*.

And for this, the consonants are especially important. While the vowels provide the necessary volume and ensure that the voice reaches the ear of the receiver, it is the consonants which structure the sound stream by inserting unvoiced sound events into it.<sup>37</sup> In the suddenness of the occlusives<sup>38</sup>, this structuring power becomes particularly clear. Somewhat figuratively speaking, we 'chew' the sound stream of the voice when speaking.<sup>39</sup>

Over time, the concept of articulation has been generalized; and Schwemmer, for example, extends it, starting from oral language, to the whole sphere of culture:

"We call the structuring of an utterance its articulation. Even if this term is usually reserved for and exemplified by linguistic utterances, I would also like to use it generally for other forms of utterance, such as pictorial or gestural utterance, and moreover for our actions in general."

# Other authors agree with him:

"It is not only speaking that makes people articulate beings. Articulation begins where people point at something and leads through the various expressions of feeling and thinking to the most complex cultural forms."<sup>41</sup>

"The central aspect of articulation," Jörissen writes,

"lies [...] in the symbolic conciseness that is achieved through articulation. The basic idea of Ernst Cassirer, to which Schwemmer refers, is that only in the articulated form of cultural expression one can speak of culture at all." 42

<sup>&</sup>lt;sup>36</sup> Wikipedia (German): Artikulation (Linguistik), https://de.wikipedia.org/wiki/Artikulation\_(Linguistik) (transl. H. W.); Wikipedia cites: Pompino-Marschall, Bernd: Einführung in die Phonetik. Most introductions to phonetics curiously consider it superfluous to define the concept of articulation at all. They proceed straight to the rules and mechanisms of articulation.

<sup>&</sup>lt;sup>37</sup> Voiced consonants like the 'M' represent, roughly speaking, a hybrid form....

<sup>&</sup>lt;sup>38</sup> "Plosives [...] are the consonants in whose articulation the respiratory airflow is blocked. The instantaneous release of the blocked airflow creates a small 'explosion' that produces the sound. Thus, the naming is based on the mode of articulation. For example, closure occurs through contact of the lips (example: [p], [b]) or tongue with the place of articulation in the vocal tract (examples: [t], [d], [k], [g])." (Wikipedia (German): Plosiv; https://de.wikipedia.org/wiki/Plosiv, transl. H. W.).

<sup>&</sup>lt;sup>39</sup> At the same time, the theory emphasizes that the sound stream, physically speaking, remains continuous and that – again a case of pattern recognition – it is ultimately the listeners who break down the sound stream into words and sentences. Both assumptions do not contradict each other because the sound stream is certainly both: physically continuous and yet 'articulated.'

<sup>&</sup>lt;sup>40</sup> Schwemmer, Oswald: Kulturphilosophie. Eine medientheoretische Grundlegung. Munich: Fink 2005, p. 49 (transl. H. W.).

<sup>&</sup>lt;sup>41</sup> Publisher's announcement for the volume: Roussel, Martin; Niklas, Stefan (eds.): Formen der Artikulation. Philosophische Beiträge zu einem kulturwissenschaftlichen Grundbegriff. Munich: Fink 2013, https://brill.com/view/title/51438, 30. 3. 20 (transl. H. W.).

<sup>&</sup>lt;sup>42</sup> Jörissen, Benjamin: Anthropologien der Medialität. In: Kulturelle Bildung online, 2013, https://www.kubi-online.de/artikel/anthropologien-medialitaet, 30. 3. 20 (transl. H. W.).

On the one hand, the concept of 'articulation' is now related to phenomena of culture in general, but on the other hand, one falls back on concepts such as 'expression,' 'feeling,' or 'thinking,' whereby articulation appears to be centered – possibly hastily – on the individual subject. It is all the more important that Schwemmer also provides more materialistic definitions of articulation; for example, when he establishes articulation above all as the *generation of form*:

"In order [...] to make further progress, we have to look at the side of structuring, which is inherent to the cultural phenomena themselves. Or, to put it differently: We have to see the cultural phenomena as structuring, as form-generating achievements. This is the decisive change of view that enables us to develop a cultural-theoretical perspective. It is a shift of focus from the 'outside' or the 'surface' of cultural phenomena *to their immanent structuring*, *to their self-structuring*. [...] The structuring of an utterance we call its articulation."

And more clearly, insofar as Schlemmer, which is by no means common in philosophy, also wants to include considerations of *media*. "New and decisive in Schwemmer's argumentation," writes Jörissen.

"is the media-theoretical aspect: for cultural forms are medially situated. The 'patterns of conciseness' themselves [...] are subject to [...] medial structures as 'forms of shaping': there is no articulation outside of medial structural conditions. Every articulation, therefore, requires a medium, and medial form-generating possibilities are 'constitutive for the inner structuring of articulation'; their analysis is therefore one of the 'main tasks of any reflection on cultural theory.' Media are thus *structural conditions* of the possibility of articulation."<sup>45</sup>

"Any articulation," says Schwemmer himself,

"requires a medium. With this formula it is first indicated that every inner structure of an utterance can only be realized in a substance, in a material." <sup>46</sup>

Articulation, too, then – the keyword of structuring makes this clear – is a media technique of separating and differentiating. Articulation, too, divides things by taking them apart. And if we return to oral language, which has been mentioned at the beginning of the section, the spectacular thing is that this 'taking apart' is apparently also possible in the medium of the acoustic. The concept of articulation seems suitable to generalize and expand our notion of the analytical power of media.

# 10. back to schema theory

My brief passage through diagrammatics, tokens, and articulation has made it clear that differentiation has a practical-operational, a media-technical side. This is certainly true more generally, insofar as the head is always interrelated with the eyes and hands; and moreover, practical operations have the advantage that they can be better observed as mental processes. With the aforementioned techniques in mind, it becomes clearer what differentiating is all about.

<sup>&</sup>lt;sup>43</sup> "Expressive acts are about the articulation of something, be it a conviction, a mood, a desire, a representation, or any other kind of communication." (Schwemmer, Kulturphilosophie, op. cit., p. 37 (transl. H. W.)).

<sup>&</sup>lt;sup>44</sup> Ibid., p. 49 (transl. and emph. H. W.).

<sup>&</sup>lt;sup>45</sup> Jörissen, Anthropologien der Medialität, op. cit.; J. citing Schwemmer, op. cit. pp. 53, 55 (transl. and emph. H. W.).

<sup>&</sup>lt;sup>46</sup> Schwemmer, op. cit. p. 53 (transl. H. W.).

But now I would like to return to my actual topic, schema theory. In the chapter on identity and identification, I have tried to show, with the help of relatively abstract models, how schemata and patterns emerge in cycles of condensation/stratification. So how does my consideration of separating and differentiating fit into this context?

My thesis is that there is a *systematic interaction* between identifying and differentiating. In the mechanism of schema formation/recognition, the two are intertwined. Perception – to use the example once more – constantly matches individual perceptions with patterns (experiences and expectations) that are the product of past perceptions; and it simultaneously produces these patterns by typifying and schematizing individual perceptions in a long chain of iterations.

Identity and difference (identifying and differentiating) are equally involved in this mechanism. Both take place at the same moment: *Only the interplay of identification and differentiation, attraction and repulsion, layering/cumulation and moving apart makes up the overall process.* 

My idea is that of a double movement: Step by step, with each repetition, the schemata acquire 'identity' and stability; and at the same time, the differences that separate the schemata from each other are stylized and accentuated; with each iteration, then, the schemata move apart. In this way, in this double movement, the schemata gain form and contour.

However – this is my second point – identifying and separating/differentiating obviously have different roles in this process: Identity and identifying concern the individual schema (which acquires stability and 'identity' through stratification/cumulation), whereas difference, separating, and differentiating concern the relation of schemata to each other.

This would mean that both occupy a different space and have a different range: Identity/identification/stratification/cumulation act 'locally,' just at the location<sup>47</sup> of the pattern in question. Difference/differentiation/separation, on the other hand, organize the space that spans *between* schemata and patterns. The suggestion of the last chapter to distinguish between centripetal and centrifugal went in a similar direction; <sup>48</sup> and so did the idea that the mountains of the 'Or' divide things, while the valleys of the 'And' gather them. <sup>49</sup>

But is this really the case? Are the different schemata really only separated from each other by differences (by repulsion)? Or are they not always also connected – however subliminally – by relations of similarity? And if this is so: Does this similarity not necessarily introduce a moment of identity into the relations as well?

My consideration of the 'features' of similarity<sup>50</sup> produced exactly this result: that the features provide a manifold overlapping and, in spite of all differences, entangle the schemata and patterns in an immensely manifold net of similarities. This net, like that of the differences, has its place in the space *between* the schemata.

For the time being, the fact remains that separating and differentiating are the other side (the complementary mechanism) of identifying. The fact that schema formation unfolds an *analytical power* and is able to separate things from each other constitutes – more conspicuously than its other, identificatory side – its cultural achievement. Analysis, ratio, and reason are closely connected; and all three depend on the techniques of dissecting the world.

The idea that difference and identity/identification form a common mechanism, however, means that both – necessarily – remain dependent on each other. And if this is so, then all the

<sup>&</sup>lt;sup>47</sup> Elsewhere I warned against using topological metaphors to designate relations, which are ultimately *semantic*...

<sup>&</sup>lt;sup>48</sup> Ch. 10, section 3.

<sup>&</sup>lt;sup>49</sup> Ibid., section 8.

<sup>&</sup>lt;sup>50</sup> Ch. 7: Similar – in what way.

doubts formulated about 'identity' must ultimately also affect difference. A 'pure' difference, untouched by the problems of identity, does not exist; it is a purifying fantasy that has dominated theory formation for a while.

In any case, the leap from the individual schema to the relations which connect the schemata with each other is important. This point in particular will be the subject of my concluding chapter.

[The following is an excerpt from the final section of the book:]

## 3. identity and difference

The realm of the similar, as I said, is located between identity and difference; only that which is neither completely identical nor completely different can be similar. So let me turn to these two categories once again.

The issue was how schemata and patterns can emerge at all. If similarity is 'soft' and 'fuzzy' and if schema formation has its basis in similarity, one will have to explain how schemata nevertheless gain boundaries, 'identity,' and contour.

The 'identity' of schemata, as has certainly become clear in my reflection, can only be a pragmatically reduced one, which must be imagined – also procedurally – as dependent on the play of similarity, identity, and difference. When Deleuze implies that the tradition of philosophical ontology has always given priority to identity, in order to then push it off the throne with a heroic gesture, <sup>6</sup> then this is – quite obviously – not the identity that is of interest here. <sup>7</sup>

<sup>6</sup> Deleuze, Gilles: Difference and Repetition. NY: Columbia UP 1993, pp. 15f., 33ff., 51f.... [1968].

<sup>&</sup>lt;sup>7</sup> As I said, I am far more concerned with 'recognition,' which Deleuze also clearly rejects: "The form of recognition has never sanctioned anything but the recognisable and the recognised, form will never inspire anything but conformities. Moreover, while philosophy refers to a common sense as its implicit presupposition, what need has common sense of philosophy? Common sense shows every day – unfortunately – that it is capable of producing philosophy in its own way. Therein lies a costly double danger for philosophy. On the one hand, it is apparent that acts of recognition exist and occupy a large part of our daily life: this is a table, this is an apple, this the piece of wax [...]. But who can believe that the destiny of thought is at stake in these acts, and that when we recognise, we are thinking? [...] We said above that the image of thought must be judged on the basis of what it claims in principle, not on the basis of empirical objections. However, the criticism that must be addressed to this image of thought is precisely that it has based its supposed principle upon extrapolation from certain facts, particularly insignificant facts such as recognition, everyday banality in person; as though thought should not seek its models among stranger and more compromising adventures." (Deleuze, Difference and Repetition, op. cit., p. 135). But if acts of recognition "exist and occupy a large part of our daily life," would this not be reason enough to be interested in recognition, and in its role in cognition? Recognition may be part of our everyday experience. But as far as the theory of media is concerned, its role is unclear. As is, therefore, 'identity.'

And the same, I think, is true of difference. When Deleuze writes about the program of his book, "difference and repetition have taken the place of the identical and the negative, of identity and contradiction," then I would say – admittedly from the vantage point of a non-philosopher – why should that be? Why should difference take precedence in this way? Are not all five – difference, repetition, identity, negativity, and contradiction – in equal need of explanation? And in need of explanation not on the heights of philosophy, but first functionally, in the attempt to describe their interplay by observing media processes? This was the reason for focusing my considerations precisely on the recognition that Deleuze calls an "extrapolation from certain [...] particularly insignificant facts [...], everyday banality in person."

The result of my consideration was that in the process of schema formation, similarity does not remain what it is. I described schema formation as dependent on repetition, as a *cycle* that decides in each run anew about similarity and dissimilarity, 'identity' and difference. With the outcome that at the pole of 'identity' the most similar cases accumulate (or those that are considered as similar as possible), so that from the aggregation of these similar cases a schema is formed.

What is less similar or dissimilar – that was the second crucial point – is sorted out and sent off to another schema. Less similar or dissimilar means *different*; what is less similar or dissimilar is *distinguished*. And difference, too, will have to be conceptualized – apart from a philosophical consideration – as being a pragmatically reduced one.

'Identity' and difference, attraction and repulsion interact; their interplay allows the schemata to gain stability, to strengthen their boundaries and identity with each new case, each run through the cycle. The schemata emerge in a process of *hardening*. And along with the schemata, the semantic space emerges in which these schemata – positioned relationally – have their respective 'places.' <sup>10</sup>

Somewhat riskily, one might call this a *second-order articulation*; second-order because one would speak of 'articulation' first at the level of individual material utterances, and risky insofar as it is certainly sensible to limit the term to that level...

The schemata harden, but they resemble similarity in that they also remain – at least relatively – 'soft.' None of the individual cases falling under a schema completely fulfill it. Thus, for the concept of schema – just as for that of similarity – a certain 'vagueness' remains constitutive.

#### 4. signs

At this point the *signs* finally come into play. If my consideration is a semiotic one, or at least claims to contribute tesserae to a reconditioned semiotics, then it will have to make a proposal also to the central concept of the sign.

And the key points have already been mentioned. Schema formation is a process of typification and hardening. The assessment of similarity not only accentuates certain aspects and excludes the dissimilar, but also creates a new entity – namely the schema itself – that enters the world and begins a life of its own.

<sup>&</sup>lt;sup>8</sup> Deleuze, ibid, p. XIX.

<sup>&</sup>lt;sup>9</sup> I quoted the passage in footnote 7...

<sup>&</sup>lt;sup>10</sup> ...in my eleventh chapter, I warned against conceiving semantic relations straightforwardly (or metaphorically) in topological terms...

And when typification and hardening are well advanced, one would speak of a 'sign.' Signs retain and immobilize – now in actual tangible form – what were once judgments and hypotheses about similarities.

This makes it possible to play these special things – the signs – back into the discourse and to operate with them in the discourse. As placeholders, as conventionalized-hardened-preconceived judgments about similarity, they function like a ready-made part: all judgments about similarity which are incorporated in the sign no longer have to be made live in the discourse. And at the same time, this is the dialectic, the hypotheses about similarity that the sign contains are retested with each new usage.

My proposal, then, is to take the notion of schema more seriously than the concept of sign, and to view signs as a form of schema that is particularly hardened.

Such a determination not only builds bridges between perception, technical images (photography and film), and explicit sign systems, such as writing and language, but it also allows us to grasp the difference between these media: because the technical images, photography and film, possibly exist only because they are precisely less hardened than linguistic signs. By presenting – that was the point in my fourth chapter – concreta, they show schema formation in actu; and they make visible the process which is petrified and hidden in concepts and signs.

## 5. once again, more precisely...

Possibly, however, it may be good to look at the thesis again in a little more detail. Signs, like schemata, emerge in the process of hardening. Only when schemata reach a certain degree of stability, when their identity is firmly consolidated and they are sufficiently differentiated and set apart from each other, schemata can become signs. Signs, then, are schemata that are highly typified and stably conventionalized. And signs are characterized by the fact that the schema carries a label. One has chosen a material signifier that now stands for the schema.

While the schema had its precarious place in the minds of many, the sign appears as an independent thing. As a material signifier, it enters – thing among things – into social circulation; and once reified, the schema, which is now a sign, can claim all the properties of things: a material existence in external space, operability/manipulability, material persistence (duration), intersubjective accessibility, and several other qualities.

In the sphere of signs (and that means the media), what has been said for schemata continues: The same dialectic between identifying and differentiating reigns; now it is the singular sign on which the meanings accumulate and which distances itself from the other signs via differentiation

The same rules apply: Signs are also dependent on repetition, integrated in cycles that connect single event (actualization/utterance) and schema/sign; here, too, we find accumulation and 'condensation.' Now, however, the play of identifying and differentiating unfolds in the discourse; and it is the discourses that feed the sign as a product of accumulation (in the case of the schema, these were perception, event, or 'experience'). The material that enters into the accumulation of signs is already symbolically pre-structured.

And at the same time, the decisive feature that separates the signs from the schemata becomes clear here: I described it in my ninth chapter: In the case of the sign, the separation from the other signs always already seems to be guaranteed. The spatial distance, the white space, which, for example, separates letters and words from each other, seems – together with the high degree of typification – to secure the 'identity' of the signs; the basis for how we take for granted that writing consists of 'signs.'

In photography and film such white empty spaces do not exist; the image cannot be dismantled into material 'elements,' and it remains up to the recipient to isolate 'objects,' for example. Accordingly, the intuition resists speaking of 'signs' here; and accordingly, the semiotics of the 1960s shipwrecked in the project of nevertheless asserting such signs. Hence my proposal to use the more general concept of the schema instead of that of the sign. And, starting from there, to describe what the systematic preconditions are for recipients to nonetheless dissect images in the process of understanding.

At the same time, one will have to realize that also in the case of writing, the seemingly clear organization is less evident than one should think. For *although* it is true that in the structure of the signifying material (in the empty spaces between the individual signs) an organization is always already guaranteed, and *although* it is true that the signs are highly typified and seem to be able to assert 'identity' unproblematically – all this, however, obscures the fact that ultimately the signs also remain dependent on the time axis, are a product of history and hardening.

And this in several respects. Media-historically, insofar as schema formation reaches much further back – ultimately into natural history – and historically forms the basis of the formation of signs; by definition, insofar as – if one follows my thesis – schemata 'harden' into signs. And principally, insofar as signs preserve all the peculiarities of schema formation: For signs, too, despite the appearance of material stability, can claim only a very relative firmness or identity for themselves; since they remain dependent on discourse, and discourse writes back into the sign with each actualization (with each run of the cycle), they can counter the threat of displacement only with the weight they have gained in past cycles, in accumulation and condensation.

It is, I think, a decisive gain of the outlined schema concept that it also ties the concept of the sign back to the time axis, dynamizing and liquifying it. Here, above all, it becomes clear that the alleged 'identity' is by no means an eternal one.

#### 6. mimesis

Considerations about mimesis have only played a marginal role in my text, although they suggest themselves in the context of similarity. Now, however, I shall venture at least a single thesis on this almost intimidatingly difficult question.

Mimesis was already a classical category of ancient Greek aesthetics and is often understood – abbreviated – as 'imitation.' Derived from the  $\mu \tilde{\imath} \mu \rho \varsigma$ , the performer in the theater, art as a whole was regarded as mimetic, although the term has many facets of meaning and in antiquity also included representations without an antetype, i.e. without 'imitation.'

Whenever it really is a matter of imitation, similarity – needless to say – comes into play. The portrait is measured by whether it 'resembles' the person portrayed, and a TV thriller is demanded to be 'realistic,' i.e. to take up certain aspects of everyday experience and to incorporate them into the space of fiction. Mimesis is always linked to the question of how art and the media relate to the world.

Thus mimesis stands for a very precarious type of resemblance, because imitation crosses the boundary between the non-symbolic and the symbolic. And in modernity, almost all elements that play a role here have been discarded: With abstraction, art seemed to leave the terrain of 'imitation;' art theory turned away from notions such as 'mirroring;' in semiotics, signified and reference were dismantled, and the question of how signs relate to the world was first

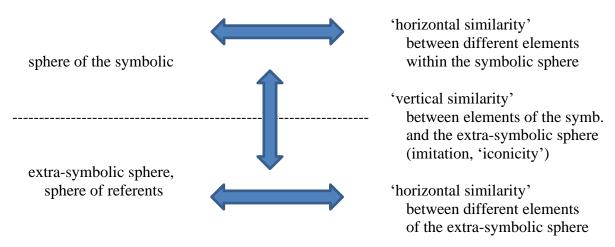
<sup>&</sup>lt;sup>11</sup> The thesis of 'reflection'/'mirroring' (Widerspiegelung) was advocated by Lukacs, for example (L., Georg: Ästhetik. In: Werke Bd. 11 und 12, Neuwied/Berlin: Luchterhand 1963), and incurred the wrath of literally hundreds of authors (only some of whom had even read the book).

declared naive and finally taboo. Media studies adopted the cliché that signs only refer to other signs and no longer to things of the world, or, supported by a (misunderstood?) discourse analysis and theories of performativity, denied that one should distinguish between the symbolic and the extra-symbolic at all.

As valuable the arguments are as *critical ones*, I do not think that the *problem* of reference is settled by them. The difficult question of what kind of relation the signs maintain to the world proves to be stubbornly vital and does not care whether the theory has valid answers.

Simplified answers, however, are indeed unacceptable. While it seemed plausible for a long time, for instance, to distinguish arbitrary from iconic signs, and to define the former as 'social agreement' and the latter by the fact that – for instance in photography – the image *resembles* the depicted, this certainly cannot be maintained. <sup>12</sup> If it is a matter of resemblance, and if I have insisted on a 'mimetic' dimension in my text, then certainly not in this sense. It must be about a less direct resemblance. So what can be said about it?

When I have spoken of 'similarity,' I have done so initially in avoidance of the boundary in question, i.e., with regard to elements that are either *all* symbolic or all extra-symbolic. I would like to call this similarity 'horizontal,' as opposed to a 'vertical' similarity that crosses the boundary. (To maintain the boundary itself in a definitional sense, however, I consider inevitable).

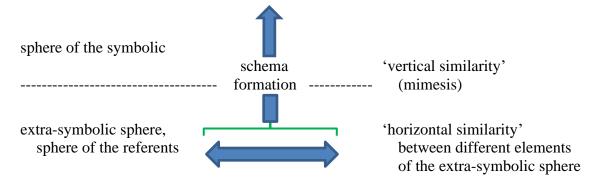


Mimesis and imitation would belong to the 'vertical' type. But what is then gained by my restriction? Don't mimesis and world reference then simply fall out of my consideration?

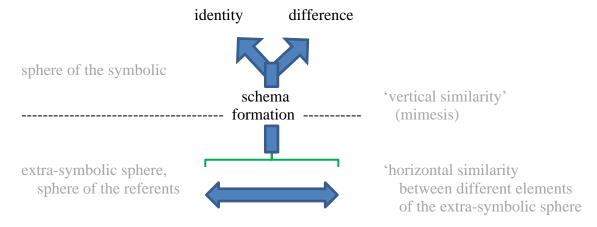
Indeed, I think that only an indirect path leads from horizontal to vertical similarity and to mimesis. If perception detects similarity between two elements it finds in the perceptual field, then this similarity remains 'horizontal.' But if this perception repeats itself and solidifies step by step into a *schema*, it will cross the boundary at some point, simply because schemata in general are symbolic. Horizontal similarity, that would be my thesis, turns into vertical similarity.

Accordingly, the sketch attempted above would have to be modified:

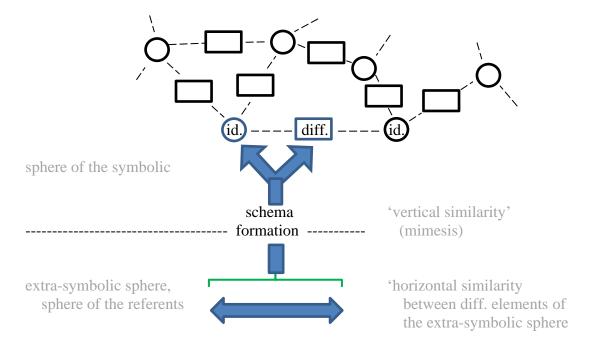
<sup>&</sup>lt;sup>12</sup> "The natural resemblance of an image to the reality it represents is theoretically expressed by the term 'iconic sign.' Now this concept is repeatedly subjected to *revision* [...]. [...] The conviction that the iconic sign seemed to be unassailable in contrast to the arbitrariness of the linguistic sign collapses, leaving us with the suspicion that the iconic sign, too, is entirely arbitrary, conventional, and unfounded." (Eco, Umberto: Die Gliederung des filmischen Code. In: Knilli, Friedrich (ed.): Semiotik des Films. München: Fischer Athenäum 1971, pp. 70-93, here p. 73f. (transl. and emph. H. W.)).



In this sense, vertical similarity is in no way dependent on the fact that the signifiers and the signified actually 'resemble' each other (and certainly not individual things and individual signs, as 'iconicity' assumes). Rather, the assertion of 'similarity' is a matter of structure: signs and schemata are related to reality because they record similarity. Schema formation reworks similarity into schemata. What emerges is a system of differential schemata that records similarity at the pole of 'identity' and distinction at the pole of 'difference.'



Identity and difference harden in repetition; and it is in the interplay between identities and differences that the network of symbolic representations is articulated, which – taken as a whole – contains a very large number of identities and differences:



Only this network can claim to represent reality (the sphere of the extra-symbolic) and to be 'mimetic.' And this also only because an infinite number of perceptions, observations, acts of thinking, and distinctions – in condensed form – have been laid down in its structure.

Whether the net represents the reality adequately or inadequately is another matter. But in any case: Since it takes its path via schema formation, vertical similarity can be only a "nonsensical" one.

# 8. the process of semiosis

The semiotic, the world of signs, is not based on the world as it is, but on perceptual schemata, and more generally: on schematization processes. Signs benefit from the fact that the world is always already a structured and schematized one; and they carry this structuring and schematization further by reifying the schemata themselves. The material signifiers provide the schemata with tangible labels in order to stabilize them and to fix their 'identity.'

And because signs are dependent on the use of signs (and thus again on iterations), the double movement also continues in the semiotic sphere: Every single iteration fosters the identity and stability of the individual sign and its differentiation from other signs.

And finally, the abstract character of signs also goes back to schematization: If it is possible to make accessible a very complex world with the help of a relatively small number of signs, it is only because the signs are highly typified, more schematic and more abstract than what is signified. Abstraction, too, is the result of the process of conventionalization and typification outlined here; and thus it seems possible to discuss even problems of *form* and specifically 'abstract' systems like formal languages or even music<sup>13</sup> in compatible terms.

This is – in my eyes – the basic mechanism of semiosis,  $^{14}$  the rule on which everything that has to do with signs has its foundation.

## 9. similarity

So what does this mean – vice versa, so to speak – for similarity? I think that also here an answer is now possible. *Semiosis is a machine that splits up the similar and decomposes it into identity and difference.* 

If theory rejects similarity and favors identity and difference, <sup>15</sup> then it only reenacts what takes place within the media themselves, which – ever since media have existed – is their main process, their characteristic, the actual work that they do: *the media constantly rework similarity into identity and difference*.

If similarity is threatening, buzzingly ambiguous and hardly capable of being theorized, identity and difference must appear as a secure bulwark. Schema formation, sign processes, and sign systems, which, as I have shown, depend on similarity for their functioning, therefore simultaneously stand for the overcoming of similarity; for its transformation into something solid that is no longer threatening or not quite so threatening.

<sup>13 ...</sup>clarifying this would certainly be a more than interesting task in its own right...

<sup>&</sup>lt;sup>14</sup> Once again: 'Mechanism,' as I have said several times, is a metaphor, because the matter – of course – is not a mechanical one; it is meant to draw attention to the fact that it is about regularities; about an interplay of many factors that are functionally interconnected and that itself has a stably conventionalized character. (In the same sense, Freud, for instance, spoke of a 'psychic apparatus'...).

<sup>15 ...</sup>difference more than identity; that was the thesis in my third chapter.

And at the same time this solution is illusory because the similarity – having barely been banished – returns like something repressed. Firstly, insofar as there is no actual 'identity,' because identity is nothing but an extreme in the spectrum of similarity, and in the process of identifying there is always something left that remains dissimilar after all and undermines any 'identity'; secondly, because – even if this is more controversial – the same ultimately holds true for difference; and finally, insofar as the iterations by no means only stabilize the signs; because each new iteration, this was Derrida's argument, exposes the sign to the challenges of a new context, which opens up the game of identity and difference anew.

If there is any truth in this, signs emerge from the material of similarity, which they simultaneously leave behind and make forgotten. Identity and difference are the result of overaccentuation; 'identity' exaggerates the aspect of similarity until – at least seemingly – every trace of difference evaporates; 'difference' over-accentuates the differences that separate things, even if they are similar in other respects.<sup>16</sup>

As an exaggeration/over-accentuation, identity and difference are less stable than thought. Similarity haunts them. In this respect, too, similarity proves to be surprisingly vital...

#### 10. media

Schema and sign – and one will have to emphasize this again, because it is by no means a consensus or standard in media studies – thus move into the center of the media definition. Not communication or technology, not the individual media, which in their diversity always draw attention to themselves, not 'information' or 'the digital,' but alone the common/comprehensive property of operating with schematization is what constitutes media.

Media, that would be my concluding thesis, organize similarity. Or more precisely:

- 1. Media are social machines that reduce complexity by observing similarity, that schematize/typify it, and make it available to the discourse in typified form as a set of signs.
- 2. Media banish the uncanny inherent in similarity by splitting it into identity and difference, through the creation of signs as quasi-objects, through conventionalization and reification.
- 3. And at the same time, every new text, every new image, every algorithm raises the problem anew and constantly restarts the game between similar and dissimilar, identity and difference testing the already established signs again and again.

<sup>16</sup> "Rosch et al. (1976) argue that *the distribution of features among concepts results in natural clusters that maximize within-category similarity and minimize between-category similarity.*" (Ramscar, Michael; Port, Robert: Categorization (without categories). In: Dabrowska, E.; Divjak, D. (eds.): Handbook of Cognitive Linguistics. Berlin/Boston: de Gruyter Mouton, pp. 75-99, p. 81 (emphasis H. W.)). The passage has already been quoted in the chapter 'Identity.'