

Extrait du Rhuthmos

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# Rhythm as Aesthetic Issue (Part 2)

- Recherches
- Le rythme dans les sciences et les arts contemporains
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## Successive vs. Instant Rhythm (Schmarsow - 1905)

In chapter 5, 6, and 7, Schmarsow presented again one by one what he called "The Three Configuration Principles" resulting from the "creative dispute" of the man with the world. But these principles were arranged differently. In chapter 5, he first dealt with "symmetry and proportionality" together, while chapter 6 was devoted to "alternating series" and "central symmetry." "Rhythm" was treated, at considerable length, only in chapter 7 (p. 87-99) as the keystone of the ensemble, but it was already slowly introduced in the two previous chapters.

In chapter 5, Schmarsow resumed his reflection on the primacy of the bodily experience in our aesthetic perception. This experience was first to be taken in its entirety and not to be reduced to the sole hearing process.

The experiences in one's own body are decisive [*das Maßgebende*] for the creative dispute with the outside world. They are so much so that it seems daring, even wrong, to only allude to the refined abilities of the ear to account for it. (*Basic Concepts of the Science of Art*, 1905, p. 54, my trans.)

As in his previous essays, Schmarsow included in our bodily experience the complex movements of the eyes. But it was first and foremost based on motion, especially on grasping and walking which he described as a "swinging gait."

Among the movements of man, of course, the most effective is that of walking, the most sensible change is the change in place, and the swinging gait [*der pendelnde Gang*] the strongest of the driving forces. In addition, the movements of the arms as levers along the body define their own realm and with them the activity of the hands. [...] The mobility of the eyes provides larger scope and increased precision but it is also restricted by their position on our head. (*Basic Concepts of the Science of Art*, 1905, p. 56, my trans.)

More than that. Even when we stand still, he noticed, there are some movements going on inside of our body and most of those movements are alternate as those of breath, blood circulation, and pulse-beat.

On the other hand, our steady state of rest is moved inwardly. Even if we do not walk and handle things, we breathe air in and out with our lungs and are thus subject to a periodic alternation in our whole organism. With the flow of refreshed blood the senses sharpen, with the ebb their efficiency fades away. In between, however, we notice the restless persistence of the pulse-beat, or directly, when the heart pounds more energetically, when we deliberately pay attention to it, or when we listen, in the stillness of the night as the other senses rest, to the perceptible beat [*Takte*], or compare its faster tempo with the regular course of the breath [*sein schnelleres Tempo mit dem regelmäßigen Zug des Atems*]. (*Basic Concepts of the Science of Art*, 1905, p. 56, my trans.)

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"This organically animated body" provided the model both for the division and unification principles that were presupposed in Friedrich Vischer's definition of "*Regelmäßigkeit* - regularity" as "*Gleichmäßige Wiederkehr unterschiedener, doch gleicher Teile* - Uniform recurrence of different but like parts" (which had been already discussed by Wölfflin, see [above](#)), in other words of aesthetic rhythm. However, surprisingly, this capacity of the body was not directly derived from its basic rhythmic animation.

Schmarsow noticed that in Vischer's definition the "parts" should be clearly separable or distinguishable, but that, paradoxically, they also had to be, at the same time, able to identify to each other in order to aggregate into a continuous "flow." However Vischer did not explain how this could be the case (p. 56-57). This was actually allowed, Schmarsow argued, by the physiological functioning of our visual perception which projects our "height vertical line" on every objects we encounter, scans starting from it their forms on both sides, before coming back to the middle. Although the basic rhythmicity of the body was certainly to be taken into account, this combination between a fixed reference point and a mobile alternating scanning process was thus the real basis of the paradoxical nature of *Regelmäßigkeit*.

This brings us back to the observations we have made concerning the differentiation of dimensions from our unitary body. For here, too, the same source of our concept of unity applies. On every thing that comes into view we apply our height vertical line as a dividing line and split it into left and right parts. Through this diremption, the width unfolds and then withdraws from both sides to the middle. This procedure determines whether the two sides belong to a single entity or are separable elements, perhaps only temporarily adjacent to each other. The existence of a thing of the outside world is proven only if it owns its own middle axis. It is the landmark of the object. It challenges us to simultaneously perceive the elements while they blend without resistance into the course of their succession [*successiven Verlaufe*]. (*Basic Concepts of the Science of Art*, 1905, p. 57-58, my trans.)

Naturally, as Wölfflin had rightly noticed (p. 59), our aesthetic predilection for symmetrical object could be accounted for by the fundamental "structure our body."

We long for symmetry because we are organized in pairs and oriented on a symmetrical basis. Because we have two corresponding hands as well as feet to move and palpate and because we need two corresponding retinal surfaces in both eyes to see, we cannot help but apply this paired symmetry to all objects. It becomes a fundamental habit to perceive corresponding phenomena as smooth and therefore pleasing to us. (*Basic Concepts of the Science of Art*, 1905, p. 60, my trans.)

But this explanation was too limited. Our dual overall structure was actually the basis of a much larger integrating process of the whole visual field based on the successive movements of the gaze fixation point.

Our mind is only able to compare two objects. If other stimuli appear in our field of vision beside the two we have just compared and recognized as symmetrical, then we have only the possibility to shift our viewpoint, that is to compare the second with the third, the third with the fourth, and so forth. Thus, we move the central axis or the fixation point from one insertion point to the next, from one symmetrical pair to another, thus combining simultaneous with successive perceptions. (*Basic Concepts of the Science of Art*, 1905, p. 61, my trans.)

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Should we observe it in its entire course, we may realize that the zigzagging movement of the gaze weaves, so to speak, a complex web covering the whole visual field and associates the seemingly opposite poles of division, segmentation, on the one hand, and association, continuity, on the other. The most fundamental basis of rhythm was thus to be discovered in man's exploration process of his surroundings through his moving gaze.

A simultaneous perception takes place each time a critical point is set; a successive perception is brought about each time the latter is transferred to another spot. In between, however, the diremption of the fixation point on both sides and the comparison of the outcome through its centripetal return act as mediators. The more often this procedure repeats, the easier the examination becomes, the brisker its course. (*Basic Concepts of the Science of Art*, 1905, p. 61, my trans.)

As a matter of fact, through the repetition of this perceptive procedure, the dual symmetrical structure could give way to a mere series of similar elements, a line of dots "serving only as a guide to the passing of time," that is, the "first arrangement principle of linear extension."

The more frequent the recurrence of the same elements, the more pressing the expectation of the same impressions. The importance of the compared objects gradually recedes, sinking below the level of interest, and the very succession of the moments becomes the main thing; suddenly the course accelerates. Thus the symmetry, by repetition of the very same elements, results in the simple series [*die einfache Reihung*], the first arrangement principle [*Gliederungsprinzip*] of linear extension in space [*Längeausdehnung im Raume*]. [...] If the ordered elements are absolutely similar, then we have a complete uniformity or a regular course, in which, in the end, what matters no longer depends on the peculiarity of the elements or stimuli, but only on the uninterrupted succession in the chosen direction. The dotted stimuli [*Die punktuelle Reizeinheiten*] form a line, serving only as a guide to the passing of time, as in the hourglass the individual grains slide from the upper glass vessel into the lower one. (*Basic Concepts of the Science of Art*, 1905, p. 61-62, my trans.)

From this pre-rhythmic uninterrupted flow, Schmarsow then envisaged the generation of the first rhythmic embryo by introducing in the original continuous series a "foreign intruder."

As soon as a diverging element enters the similar series, the essence of the phenomenon changes completely. In our enumeration of the configuration principles [*Gestaltungsprinzipien*], we usually pass without much ado from the simple to the so-called *alternating* succession of two different elements. [...] For the sensitive intuition, as an experience, the matter is already different. [...] Should we imagine the occurrence of such a case as a surprise, then its full significance becomes clearer. If we insert a *b* somewhere in the simple series *aaaaaaaaa*, we immediately compare this foreign intruder with the next *a* before and after it. The *b* captures our attention while we look on both side at its neighbors on the left and right. (*Basic Concepts of the Science of Art*, 1905, p. 62, my trans.)

The "simplest complex" thus appeared in the form *aba* in which Schmarsow found again the same pull-in-and-out

movement he already came across in his analysis of symmetrical arrangement. However, this embryonic series was not yet a full alternating succession, a concept that he was to elaborate completely only in the following chapter. Here, Schmarsow turned his attention toward another issue. He noticed that, due to the stress put on the middle element, this "simplest complex" resulted in the emergence of a "firm vertical rod" which allowed the principle of "proportion" to take over.

Thus *aba* is the simplest complex there is. Both comparisons lead to dissimilarity; the lingering on the unknown [element] results in a noticeable standstill in the process of scanning in the adopted direction. After the two comparisons with the neighboring [elements], there is a displacement on both sides and a return from the symmetrical pair to the dissimilar [element] in the middle. [...] With this [movement] a simultaneous perception introduces itself into the steady flow of successive perceptions. We recognize the symmetry between *a* and *a*; however, in between, there is no neutral interval as a dividing line or a critical point, but a positive one: the new element *b*. From his usual point of view, the viewer's subjectivity hits an object that acts like a firm vertical rod between the scales of a balance. Instead of symmetry, we have now a three-part group. And the value difference between the three terms requires a new relationship: *proportionality*. (*Basic Concepts of the Science of Art*, 1905, p. 62-63, my trans.)

The physiological symmetry of our body and our ability to divide things by their middle axis while gazing around were thus the origins of our capacity to recognize regular series, alternating series, which concerned primarily the horizontal axis, but also the principle of proportion which, in turn, primarily concerned the vertical one.

Vischer's statement that the proportion applies to the vertical direction leads us to the specific domain where it becomes effective. Gottfried Semper also explains that proportionality is the configuration principle of the height dimension; the vertical is the proportional axis, because the proportional order of the parts is given according to this line. [As far as we are concerned] we have tried to explain how man comes to first grasp this dimension from his own structure. (*Basic Concepts of the Science of Art*, 1905, p. 63, my trans.)

Of course, conversely, the natural vertical axis of man and the principle of proportion it entailed could lead, when compared with other vertical axes of fellow human beings to recognize symmetry. "Symmetry and proportion" were thus tightly related to each other (p. 67-68).

## Depth vs. Plane Rhythm (Schmarsow - 1905)

In chapter 6, Schmarsow elaborated further the physiopsychological analyses engaged in the previous chapter in order to generate the concepts of "alternating series" and "central symmetry." His aim, he explained, was to oppose Riegl's claim that symmetry was "inextricably linked with the idea of the plane," that "depth disturbed, if not eliminated it," and that "it had therefore been, within the fine arts of the Antiquity, the most important means of showing the isolation of the material individuals within the plane" (quotes by Riegl, p. 70).

Starting from the "continuous series" *aaaaaa* and the "simplest complex" *aba* already identified in the previous

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chapter, Schmarsow reconstructed step by step all possible rhythmic combinations, by introducing one, two or more "dissimilar components." As Semper (see [above](#)) and Riegl (see [above](#)) before him, he illustrated his view with the most ancient and primitive ornaments which were composed of alternating beads, teeth, or flowers, sometimes set in complex arrangements. Formally speaking, his effort was not very different from his predecessors'. As them, he noticed that these ornaments, as most of primitive dances, formed round ensembles. But, unlike them, it was systematically derived from the physiology of the body and the sight.

The principle of *alternating series* does develop from the simple symmetry through the insertion of a dissimilar middle term as the example *aba* in the simple series showed us if, while maintaining or resuming the chosen direction of the series, a second dissimilar component occurs repeatedly, thus proves to be similar to the first unknown one, and thus no longer forms a barrier as a known quantity [*abababa* - PM]. The more often the repetition of the alternating elements takes place, the smoother it runs. In this easy course [*bequemen Verlauf*] of two dissimilar elements, which is still related to the commuting of the arms and legs, we can envisage the activation of a third element now again unknown. Once more, a stop in the succession occurs. The process of distinguishing and comparing over and over results in the new group *abcba*, which, as such, still demands a simultaneous perception. Yet, in any case, it will again be flowing [*kommt wieder in Fluß*] with the return of the third element *c*. So the next series may continue until the completion of the string [*Kette*], which is placed as a necklace or a belt, as a bracelet around the arm or around the ankle, as a wreath around the head. (*Basic Concepts of the Science of Art*, 1905, p. 72, my trans.)

From this Schmarsow concluded, on the one hand, that the most ancient aesthetic rhythmic series were closed upon themselves and, on the other hand, that they were arranged according to a "central symmetry" which might be described "as a *multi-axis symmetry in the plane*." Contrarily to Riegl's claim, the plane that was implied in these rhythmic series was not reducible to a vertical visual plane but involved the possibility of man to move into the depth in front of him, or around him, and even to turn back in the opposite direction.

What here appears in the round dance or in the circular adornment is the so-called *central symmetry*, whose planimetric situation on the horizontal ground surface may be more correctly described as a *multi-axis symmetry in the plane*. The decisive site of this plane, however, is the horizontal [level] under the feet of the perceiving subject (or at most around his head), not the vertical position as a parallel plane, as the one we assume in our field of vision and when we build some walls. The subject stands as a body in this sphere of space, which, according to his position, submits the second and the third dimensions to the ground (or make them unfold into the sky). Width and depth axes indeed, but clearly according to the position of man. The depth of space lies before him wherever he turns his front to, while the lateral elevation of his arms indicates the transverse axis. He therefore perceives the symmetry on the left and right from himself, and as a matter of fact around his whole periphery, when he turns around his own vertical, or lets the circulation pass by around him in silence. (*Basic Concepts of the Science of Art*, 1905, p. 73, my trans.)

Likewise, the plane supporting proportionality was not the plane resulting from our vision but the one unfolding under our feet in all directions.

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[Similarly], he perceives proportionality not so much in the elevation of the parts than in the depth extension in front of him, that is by pursuing from the center all the radii of the circle as [possible] directions of his movement into the vastness around. The whole thing then looks like *radiation* from the center. (*Basic Concepts of the Science of Art*, 1905, p. 73, my trans.)

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However, proportion in the depth, which unfolded "on the axis of movement" [*Bewegungssachse*], was "as a matter of principle" [*prinzipiell*] different from proportion in the height which, in turn, depended on "the axis of growth" [*Wachstumachse*]. Schmarsow recalled that Semper had termed this particular configuration principle "'*Richtung*' oder '*Direktion*' - Direction" (p. 73-74). This second kind of proportion characterized "the course of the successive moments of one movement in one direction" (p. 74). It was assessed not any more by separating the elements "through the insertion of vertical lines [as in flat symmetry] but from the direction of our forward movement" (p. 75).

Generally speaking, man was constantly involved in "a dispute" with the whole surrounding space in which he persistently moved. Man's cosmos was not to be confused neither with the "macrocosm" of the universe nor with the "microcosm" of the physical nature. The "multi-axis symmetry" in the plane tended therefore to turn into a new configuration principle which Schmarsow described by using a mathematical concept concerning the measurements of volumes of various solid figures in three dimensions: a "*stereometric symmetry*."

The view from above, the feeling and the touch on all sides, the local relationship to the ground at our feet: all directions intersect in this dispute in space [*Auseinandersetzung im Raume*], but always between the earth's surface or the horizontal surface, on the one hand, and the top of man's head, on the other. Thus, our human cosmos again differs, on the one hand, from the macrocosm of the universe, of which the natural sense perceives nothing but the changeable firmament, and, on the other hand, from the microcosms of the material world, which are designed according to other laws and which we therefore call inorganic Nature. In contrast to the previously considered multi-axis symmetry in planimetric forms, we stand here before the phenomena of perfect *stereometric symmetry*. (*Basic Concepts of the Science of Art*, 1905, p. 76-77, my trans.)

This was naturally the same with proportionality which had to be assessed in three dimensions. But this could be done "systematically" as in mathematics or "genetically" as in natural science (p. 77). In the first case, this led to concept of "system" as described by Kant at the end of the *Critique of Pure Reason*: the system of a crystal, the system of the planets, or a philosophical system (p. 78). In the second case, Schmarsow introduced the concept of "organization" or "organism" in the vegetal and animal world (p. 79). All human arts resulted, therefore, both from this particular "organized and organic nature" of man and from its "dispute" with the surrounding space based on the combination of "simultaneous and successive perception."

Here, therefore, the co-determination of one's own nature as an organic creature, a soulful individual and a thinking mind involuntarily and quite naturally enters into the human work of art, as long as a conscious choice of substances and means takes place between one or the other path and by this very means differentiates the arts. In ornamentation itself we observe this process of differentiation, which prepares itself in the choice of simultaneous or successive perception. (*Basic Concepts of the Science of Art*, 1905, p. 79-80, my trans.)

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