



Cover's photo: detail of *Checkerboard Tivoli Cinema* by George Braque, 1913. Public domain US. "After having made the [first] papier collé, I felt a great shock, and it was an even greater shock for Picasso when I showed it to him." Georges Braque in *Conceptual Revolutions in Twentieth-Century Art* (Galenson 2009,114).

Executive Editors Charlotte Thibault Denise Meyer

Editor-in-Chief and Creative Director Christiane Wagner

Senior Editor Jan Schandal

Associate Editors Laurence Larochelle Martina Sauer

Collaborators Marjorie Lambert Renata Brito

Art Style | Art & Culture International Magazine

editorial@artstyle.international

+1 347 352 8564 New York +55 11 3230 6423 São Paulo

The Magazine is a product of Art Style Communication & Editions. Founded in 1995, the Art Style Company operates worldwide in the fields of design, architecture, communication, arts, aesthetics, and culture.

ISSN 2596-1810 (Online) ISSN 2596-1802 (Print)

Theodor Herzi, 49 | 05014 020 Sao Paulo, SP | CNPJ 00.445.976/0001-78 Christiane Wagner is a registered journalist and editor: MTB 0073952/SP © 1995 Art Style Comunicação & Edições / Communication & Editions

Framing Emotional Perception: Affect and Effect of Aesthetic Experience, or Extensions of Aesthetic Theory Towards Semiotics

Martina Sauer

for Fay

Abstract

How does an audience receive a work of art? Does the experience only affect the viewer or does it have an effect and thus influence his or her actions? It is the cultural philosopher Ernst Cassirer and his successors in philosophy and developmental psychology as well as in neuroscience to this day who postulate that perception in general and perception of art in particular are not neutral in their origins but alive and thus meaningful. They assume that both are based on analogous principles: in the perception of moving forms and spatial forms in the world and rhythms of forms, colors, light and shadow in art. In practice, this means that perception and its felt effects have an effect on the feelings of the viewer and thus help him to inform himself directly and intensively about the world through art. In contrast to this general epistemological aesthetic theory, which philosophers in particular accept, it is to be shown that this assumption must be redefined not with reference to the world, but with reference to art and design. For the latter, the approach will be extended to a semiotic theory. The background is that in contrast to the world, the designed forms and thus the designed intentions of the artist and designer or his client in relation to the chosen theme have an impact on the viewer and thus on culture and its communicative dynamics.

Introduction

Although the traditional concept of the art denies a direct action relevance to the beholder, this is the accepted assumption for design. Against the background of the objectives of this study the assumed contradiction becomes of interest. Where are the differences between them? It is obvious even Plato and Kant had their difficulties marking the boundaries by noting that the possibilities even of art to evoke pleasant or unpleasant physical feelings (Kant 1991 [1790], 266-273) or, as Plato said, to arouse the 'musical enthusiasm' (Plato, cf. Grassi 1970 [1968], 164) can be used to manipulate the recipient.

What is striking is that to this day there is no answer to why there should be a difference between art and design. The need to find an answer to this question intensified when the first cracks in this assumed difference became visible through the abstract tendencies in the arts manifested from the middle of the 19th century onwards. At the latest since the earliest period of technical reproduction at the beginning of 20th century, and today's image-dominated multi-media use, however, it becomes increasingly difficult to distinguish between art and design.

As Kant and Plato have already indicated, there is only one common aspect of art and design that can clarify this question: For this, neither the judgments about their appearance (beautiful, ugly or comical) nor their attachment to higher ideas or epistemologically correct interpretations (good and true) can be taken into account, but their physically affective and finally also effective and thus actionrelevant power. For the latter is the only one that can be brought into direct connection with the object of art and design. Only it is based on the artistic work itself, and not on external judgements acquired in socio-cultural processes, as the philosopher Sabine Döring elaborated in 2010. (Döring 2010, 53-73) Against this background, the initial question is different. Does the viewer experience the affective power of art in a different way than that of design? If not as suggested here, it becomes clear that the affects and effects of art and design depend on the producer of art and design. The importance of the work in question therefore depends on the intentions of the producer. Against this background, the encounter with art and design proves to be a form of communication, in this case through images. This means that those who encounter a work of art and design exclusively with an aesthetic attitude and judge it only by pleasure and displeasure ('lust and unlust') do not realize that it influences us much more and also requires an evaluation in the sense of an approval or rejection of its implicit message. The message of art and design, and thus the recipient's response, becomes important, be it in the decision to buy a product or in the confirmation of an idea. If this assumption can be confirmed, then it is not only sensible, but also necessary due to the social significance, to expand classical aesthetic theory towards semiotics.

In research, this claim has been supported by cultural anthropological studies as well as developmental psychology and neuroscientific approaches since the beginning of the 20th century. The most important of these are the German cultural philosopher and former New-Kantian Ernst Cassirer and the developmental psychologist Heinz Werner and their successors, the American philosopher of process philosophy Susanne Langer and the co-founder of Bildakt at the Humboldt University Berlin John Krois, as well as the developmental psychologist Daniel N. Stern and the Italian neuroscientists Vittorio Gallese and Giacomo Rizzolatti. Their results are based on anthropological findings and thus on the hypothesis that the perception of art and perception in general is not objective, but affective-vital. The common basis is that they are based on analogous principles: the sensation of moving forms and spatial forms in the world and rhythms of forms, colors, light and shadow in images. In practice, this means that the universal principles of perception influence both the feelings of the viewer, and logically also the interpretation of all perceived things. On the other hand, however, there is a tendency in the research mentioned above - especially among philosophers - to postulate that in contrast to design, the perception of art has no influence on social interaction and cultural development. In concrete terms, these assumptions assume that art merely reflects the world, and that it is thus an "intensification of reality" that the artist has not changed in the sense of his own views (Cassirer 1944, 221-229, cf. also Langer 1985[1967], 127; Krois 2011[2001]: 251, cf. Sauer 2014, 68-70). In contrast I assert with this paper that all kinds of art whether art or design - awaken affective-vital 'aesthetic' experiences, and thus all kinds of art have influence on the viewer and thus on society. It is therefore no longer possible to distinguish between high and low art, as was usual. The aim of this essay is therefore to examine the common basis between aesthetics and 'Aisthesis' (perception). It is intended to show that affective-vital aesthetic experience can be seen as the motor of culturally relevant values that influence action-relevant (purchasing decisions as well as socio-political consequences) and aesthetic preferences (socio-culturally shaped).

The thesis of this paper that the 'aesthetic experience influences' (affects and effects) the viewer and his understanding of the subject—as defined by the producer—as well as his thinking and acting, is to be illustrated by the introduction of two examples, one form the field of art and one form the field of design: a painting by the Post-Impressionist Paul Cézanne and a Prada advertisement in a newspaper (Part 1), and by the presentation of parts of research in this field (Part 2).

Two Examples

The French painter Paul Cézanne is regarded as one of the fathers of modern art. His *Montagne Ste. Victoire* at the Kunstmuseum Basel is considered as an important late work painted between 1904-06 (fig. 1).

When describing this image, it soon becomes obvious: by reducing the painting to simple square blots ('taches') the details of the subject are almost undistinguishable. Nevertheless, a strong impression of silent majesty and timelessness is evoked, which is described as a main impression of Cézanne's late landscapes (cf. Imdahl 1963, 154). How is this possible? It is not a picture of a mountain at a lake with a boat. That means, this evaluation can hardly be taken from the motif. However, this meaning becomes, clear and comprehensible by sensing the uniformly distributed blots ('taches') as effective forces or rather

affective stimuli. This impression is communicated to the viewer by following one spot of color ('tache') after the other and being guided by the rhythm of the color distribution into light and dark green tones as well as complementary orange and blue tones, and thus reaching a certain inner rhythm through the evenly arranged rhythmic distribution. It is this active perception of uniformity that brings the viewer into a certain flow of perception or mood, whose characteristic feature is linked with the motif - the few references to a mountain and a broad undefined plane in front of it. A mood that is underlined by the bottom view of the motif above us on the horizon line. Thus, the qualities of one's own experience with the composition are transferred to the rudimentary motif. Virginity ('Unberührtheit') and loneliness, dignity and sublimity are combined with the motif of nature, they convey themselves as an expression of it. (Cf. Sauer, 2014a [1999/2000], 149-155).

So, it is the affective-vital aesthetic experience that stimulates the process of evaluation. Already this effect makes clear that the realization of the motif by Cézanne cannot be declared as a neutral or objective view of the mountain. In contrast, it is the realization of painter's understanding of the motive, that is realized through our perception. So, if we become aware that the image is an interpretation and thus the view of the painter (opinion) about the local mountain, which he presents as a worthy piece of nature, we are enabled to compare his interpretation with our view about it. A positive or critical assessment of the view expressed and thus a discussion of the relationship between man and nature can be triggered by the changed attitude to the work. (Ibid., 172-208)



Figure 1: *Paul Cézanne, Montagne Ste. Victoire,* 1904–06, oil on canvas, 59,9 cm x 72,2 cm. Kunstmuseum Basel. Photo: in the public domain.

.

Prada is a well-known Italian luxury fashion house specializing in ready-to-wear leather and fashion accessories, shoes, luggage, perfumes, watches, etc., founded in 1913 in Milano. In spring 2008 it lanced a campaign about bags in the German magazine *Süddeutsche Zeitung* with the Russian model Sasha Pivovarova, composed by the American photographer Steven Meisel (fig. 2).



Figure 2: PRADA advertisement, spring collection 2008. Source: Süddeutsche Zeitung, Magazin, 2008.

First of all, when we look at the photo we see an image of the same model with the same hair style and look, but wearing different dresses and handbags, in slightly altered positions in front of an abstract-inspired back-drop. At the bottom of the picture there is noted in a firmly serious manner in capital letters with small dynamic serifs: PRADA. Nevertheless, the appearance of the photo cannot suppress the impression of a certain dissonance between the model(s) and the products being promoted. All life is invested in the products whereas the model looks like a film still or even a doll in duplicated version of the same.

In particular, the attitude and poses of the models irritate us. They look too rigid and lifeless with the same long hair in a braid and identical make-up. Both have the same flawless, shiny, dull complexion. And though both turn their heads in different directions, they both draw an equally identical, blank face expression. The bodies and arms seem to be artificially stopped in their movements. Remarkably, this impression stands in striking contrast to the vibrant, colorful appearance of the clothes and handbags. Vibrant shapes and lines of the handbags and dresses correspond with the lively stylized foliate patterns on the back wall. In summary, here too it is not the recognizable motives, but the abstract formal appearance that exists between the monotonous and the living forms, each of which is associated with different motives that evoke the affective-vital, aesthetic feelings. In this case they are used to play out the meaning of humans and things against each other. They are intended to stimulate the consumer to buy the goods. The hidden statement behind it is to tell potential buyers that when they buy Prada clothes and handbags, they are full of life unlike to their otherwise 'unified and therefore monotonous life or appearance'. Behind it a current discussion becomes recognizable at the beginning of the 2000er years. Among other things, the trigger was the discussion of the first cloned sheep Dolly (1996-2003). Turning to the message of the image, it is clear, while men and women can be sculpted by beauty surgeons or cloned into an ideal but identical look, they do not look that way when wearing these Prada dresses and handbags. Because then it is their 'living forms' that always give people a lively individual look. In the end, it is a humorous message, one with a wink.

Again, it is the affective-vital experience with the forms (shapes, colors, etc.) that evokes the process of evaluation: a vivid contrast of effects between rigidity and liveliness, or uniformity and individuality. In this way, subjects and objects change their meaning: handbags and clothes become individuals or subjects, and humans become reproducible objects. When comparing people with their products based on the photo, the viewer's own opinion on the subject is invited.

State of Research

Both examples are intended to show that no distinction can be made between an aesthetic experience that allows an increased or intensified consideration of the topic and its communicative possibilities. That means, both images reinforce the respective view (topic) and communicate the respective view (opinion) of the producer. Here the double meaning of the term 'view' becomes obvious. The connection of the two, however, has far-reaching theoretical consequences. (cf. with respect to history Sauer 2015) The hitherto dual systems, aesthetic theory and semiotics combine. Both conceptions - be it the ideal that the aesthetic experience shows the essence or 'density' of an issue (cf. Goodman 1976, 252-255; Boehm 1985, 451 and Boehm 2008, 21-22) or be it the functional understanding, that the vital-affective experience communicates the message of the producer - both approaches refer to the same picture. Differences, however, become visible in relation to the aesthetic judgment. With the functional understanding is said, that it is not only lust or unlust but criticism or affirmation are triggered. This assumption implies that the appreciation of the beholder depends on individual opinions and thus emotions (wishes, fears, worries, etc.) in comparison with the producer's intentions. However, an independent judgment, that refers to higher ideas or the 'essence' of aspects in nature or world, as aesthetic theory states, cannot be upheld. On the contrary, it is asserted that the affective power is more or less purposefully produced by the artist and designer and will be understand by the beholder. The functional understanding makes it clear that there are artistic means that fulfil these communicative functions, that can be learned by the producer and perceived by the observer and also be analyzed by scientists.

Theory of Symbolism and Embodiment

One of the first researchers to support the idea of a functional understanding of perception in general and in art was the New-Kantian and cultural scientist Ernst Cassirer at the beginning of 20th century. After his emigration to the USA, his approach was followed by the process philosopher Susanne Langer and the philosopher and later Cassirer expert John M. Krois (see Sauer 2014).

It can be emphasized as central to Cassirer's philosophy that his understanding of the symbolic meaning that man creates, depends on a perception of world that is not objective but affective-vital. In his three volumes about the *Philosophy of* Symbolic Forms published between 1923 until 1929 he developed this idea. For him, the perception of world is based on a "libidinal power" (Cassirer 1964 [1929], 86). Cassirer called this kind of experiencing the world 'perception of expression' ('Ausdrucks-Wahrnehmung'). It is characterized by suffering or passion but less by taking of ideas: "Expression is at first nothing else than suffering; is far more a being grasped than of grasping." (ibid., 88 'ist weit mehr ein Ergriffenwerden als ein Ergreifen'). Consequently, it is not possible even by processes of abstraction to avoid this kind of perception (ibid., 78). His descriptions reveal two sides of the original perception: the immediate reactions to external stimuli (moving forms and spatial forms), and their affective-emotional reception (as expressive forms) (ibid. 86, cf. 94). In this way, the perception of man generates meaning which is relevant for imagination and action ('Bildkraft und Tatkraft') (ibid., 212). Acts therefore depend on these processes, because man orientates his actions according to the symbolic meaning what is afforded by the libidinal power of perception. However, this world of affective-emotional relevant symbolic meanings is forgotten through processes of externalization or abstraction in the symbolic conciseness of image, language and concept ('symbolische Prägnanz'). Only in his late book An Essay on Man (published 1944) does Cassirer assume that there is a domain in which this world becomes apparent: art. However, the action-relevant aspect of the 'perception of expression' ('Ausdrucks-Wahrnehmung') has no effect in this new context. According to the theory of aesthetic - as later Langer and Krois have also said - only the aesthetic experience of "living forms" matters (Cassirer 2007 [1944], 182-307, cf. 190). This gives us an intensified impression of reality. (ibid., 221).

Following Cassirer, it was Susanne Langer who wrote, that all signs and symbols of man must stem form sensual and emotional experiences (Langer 1942 [1965], 241-260, cf. 254). This connection is also regarded as essential for art and its reception. The non-discursive appearance e.g. of fine art (colors, forms, lines etc.) needs a non-discursive understanding (ibid., 256-260), which are qualities of feelings or patterns of tensions and resolutions (feelings), that create music as well as painting, sculpture, architecture, and all kindred arts (Langer 1967 [1953], 372). Following this idea Langer defines art as "the creation of forms symbolic of human feeling." (ibid., 40). Finally, Langer concludes in her two volumes *Mind. An Essay on Human Feeling*, published in 1967 and 1972., that the dialectic of tensions and resolutions characterize organic and mental as well as artistic forms. Her (image-) act-theory is based on the analogy of these aspects (Langer 1985 [1967], 199-252, cf. 206-207). But this objectification of feeling as quality is limited to art:

"Whereas anything made for any purpose, with perfect indifference to the 'quality of expression' (though the maker may aim to please by falling in with fashion), is not art at all. It is this quality that constitutes beauty in art." (ibid., 127).

This position of Langer's in the tradition of aesthetic theory raises a critical question: Is not design based on vital life experiences? It is Langer's own investigation of the structure of mind that she introduced at the beginning of volume one and summarized at the end of volume two which contradicts her assumption:

"As fast as objective impingements strike our senses they become emotionally tinged and subjectified; and in a symbol-making brain like ours, every internal feeling tends to issue in a symbol which gives it an objective status, even if only transiently." (Langer 1972 [1967], 342; Langer 1985, cf. 86-87).

If this is true, then it depends on the decision of the producer of art or design what is "objectified" by him. The ability of an artist and a designer is therefore to create forms of symbolic meaning by using the quality of expression and by choosing the subject while pursuing and realizing his/her own opinions and purposes.

Looking at John Krois' theory of embodiment, it becomes obvious that it corresponds with Langer's (image-) act-theory, even though he had not really taken up her research. So, he too, assumed that through art man has the opportunity to join in life's flow that is determined by feelings. Following on from Cassirer, Krois also said that art can objectify these feelings: "In art, a medium permits giving expressive meaning an objective form." (Krois 1987, 132). How is this possible? It was during the last year of his life in 2010, that Krois realized that feelings are not only related to decisions to fulfill desires and goals, but also to perception itself. It became clear to him that image-schemas and body-schemas are analogous. The image schemata are dynamic, non-optical forms (Krois 2011 [2010], 231). However, in contrast to earlier research in 2005, when he dealt with the philosophy of Alfred North Whitehead, Krois did not draw any conclusions from his most recent research with regard to the possibilities of manipulating the recipients (Krois 2018[2005], 1-27, cf. 16-18, cf. Sauer 2014b).

Developmental Psychology and Neuroscience

Does aesthetic experience have an affective and effective impact on the beholder? Even if Cassirer, Langer and Krois more or less continued to hold to the classical aesthetic theory, their functional understanding of the aesthetic experience is linking them to theories of embodiment and hence supported the thesis of this paper: that the aesthetic experience not only affects the beholder but has an effective impact on the beholder. It has a relevance for decisions and therefore actions and thus an impact on society. Developmental psychological and neuroscientific approaches are confirming this assumption (cf. Sauer 2015).

Initial findings are less to the effect of images than to human perception in contrast to animals, which was gained in Hamburg in the twenties and thirties at the department of psychology by Heinz Werner who shared an office with Cassirer. Werner's publication 1926 Einführung in die Entwicklungspsychologie was inspired by the interdisciplinary exchange with Cassirer. Werner's main thesis says that man is not originally distanced from the world. Rather, man takes the world as one that is determined by liveliness and action. Hence, everything which is perceived is considered as practical and functional or as a sign of actions and signals. The perception of forms is activated by movements; this also applies for animals too (ibid., 38-44). Therefore, the perception of the world is not objective but dynamic and physiognomic. In this way artists also recognize the world too (ibid., 45-47). Later, it was the developmental psychologist Daniel N. Stern who followed Werner's approach. With his research on newborns he showed that babies a few days old can already visually recognize the shape of a pacifier they had sucked on before. Newborns therefore do not recognize things but abstract representations, i.e. forms, intensities and patterns of time (Stern 1992 [1986], 74-103). Moreover, this kind of perceiving has a special quality. The considered elements will be translated into feelings or rather 'vital affects'. They can best be described with dynamic kinetic terms such as swelling, fading, explosive, decaying, bursting or attracting (ibid., 83). Stern said this faculty of differentiation is innate. It is purposefully used for social interaction or communication (ibid., 49). In addition, in citing Langer, Stern himself had already discerned a connection with the perception of art, so that the artist's style (i.e. the handling of forms) can be seen as a pendant to the spontaneous behavior in the field of 'vitality affects'. But in contrast to social interaction Stern explained that the beholder becomes aware of his actions or aesthetic experience (ibid., 225-230).

Stern's results are remarkably well in line with the investigations on mirror neurons carried out in 1996. The latter showed that when an action is observed by someone else, the same region in the brain is activated as if the observer himself had just done it. This mirroring of behavior is assessed as central for the understanding of others and social interaction. In direct exchange with a group of researchers, among them Giacomo Rizzolatti the original discoverer of mirror neurons at Parma, the empirically tested results from Stern proved to be true. While viewing, the beholder distinguishes between the goal and intention of an action and its vitality form (Di Cesare et al., 2013). Another member of the original group, Vittorio Gallese and the art historian David Freedberg, had already linked the results to art. They showed that we also mimic images, even abstract ones. In particular, formal abstract qualities are responsible for this (Freedberg, Gallese 2007, 197). This process can be described as an automatic emotional response or empathetic feeling that also addresses sensations that can become action-relevant. However, in contrast to the objections justified in some respects, as put forward by Ruth Leys (Leys 2012, 1-5), Stern's and Rizzollati's collaborative research as well as parts of research of other neuroscientists' research that pursued an approach to neuroaesthetics do not exclude cognitive aspects, and thus intentional and actionrelevant interpretations (Gallese, Freedberg 2007; Gallese, Cinzia di Dio 2012; Gallese 2019, 114, cf. explicitly Grabbe 2016).

Conclusion

How does an audience receive a work of art? Does the experience only affect the viewer or does it have an effect, and thus influence his or her actions? The description of an example of art and design as well as the investigation of embodiment theories in philosophy and science should show that these experiences are processes of evaluation. They are inseparably linked to their objects, i.e. the respective work of art and design. What is striking is that they were originally stimulated not by the motif but by the formal abstract elements of the work, be it by Cézanne's 'taches' or rigid attitudes and organic patterns of the figures, handbags and dresses in the Prada advertising. Research has originally linked this phenomenon to general perception. It is said to have a genetic, innate basis. This means that the general perception and the special perception of art and design are not objective but vital-affective. Therefore, perception can be defined as a doing that generates a first meaning. This meaning only has the character of a certain affective power that gives expression and meaning to reality or themes in art and design. This is why the traditional aesthetic theory speaks of truth and, ideality, good and beautiful or at least of a density or essence, that becomes conscious. It is the viewer who realizes this meaning through the perception of expression (through the feeling of vital affects). But what he experiences is based on concrete forms defined by the producer. So, the meaning of the work is that of the producer. Thus, the difference to epistemological aesthetic theory becomes clear, since the meaning cannot be seen independently of the producer's intention. It is not a transcendent idea or an epistem on world or nature realized by an artist. On the contrary, it is the composition of an artist or designer that is mimicked by the viewer and ultimately evokes an answer, be it positive or critical. Assuming that the aesthetic experience has not only an affective but effective impact on the viewer, the traditional epistemological aesthetic theory can be extended towards a semiotic theory. Instead of only pleasant or unpleasant feelings ('lust or unlust'), it is also affirmation or critique that is evoked. The aesthetic experience has proved to be a process of generating action relevant and thus cultural values, which also manifest themselves in generally or rather culturally generated aesthetic values about that what a society or culture considers beautiful (Döring 2010, cf. Fingerhut 2019). Thus, the image is not only a culturally determined decorative object, but a part of society. Like language, the image can be defined as a system of communication of cultural relevant values.

Author Biography

Martina is a scientific advisor at the Society of Interdisciplinary Image Science and the German Society of Semiotics. She was a scientific associate in philosophy of art, aesthetics, and design in Basel, Zürich, Bremen, and Witten, as well as a scientific associate at Bauhaus-University Weimar. Cf. for publications: researchgate.net, academia.edu, philpeople.org, and bildphilosophie.de.

Dr. Martina Sauer, e-mail: ms150@web.de Museum educator, Museum Frieder Burda, Baden-Baden.

References

- Boehm Gottfried. Zu einer Hermeneutik des Bildes. In *Seminar: Die Hermeneutik und die Wissenschaften*, edited by Gottfried Boehm und Hans-Georg Gadamer. Frankfurt a.M.: Suhrkamp, 444-471.
- Boehm, Gottfried. Augenmaß. Zur Genese der ikonischen Evidenz. In *Movens Bild.* Zwischen Evidenz und Affekt, edited by Gottfried Boehm, Birigt Mersmann, Christian Spies. München: Fink, 15-38.
- Cassirer, Ernst. Versuch über den Menschen. Einführung in eine Philosophie der Kultur (R. Kaiser, Trans.). Hamburg: Meiner, 2007 [1944].
- Cassirer, Ernst. Philosophie der Symbolischen Formen (Vol. 3), Phänomenologie der Erkenntnis. Darmstadt: Wissenschaftliche Buchgesellschaft, 1964 [1929].
- Döring, Sabine A. Ästhetischer Wert und emotionale Erfahrung. In Kunst und Philosophie, Ästhetische Werte und Design, edited by Julia Nida Rümelin and Jakob Steinbrenner. Ostfildern: HatjeCantz, 2010, 53-73.
- Di Cesare G., Di Dio C., Rochat M. J., Sinigaglia C, Bruschweiler-Stern N, Stern D. N., Rizzolatti G. The neural correlates of 'vitality form' recognition: an fMRI study: this work is dedicated to Daniel Stern, whose immeasurable contribution to science has inspired our research. In *Social Cognitive and Affective Neuroscience*, 9 (7), 2014, 951-960.
- Fingerhut, Jörg. Fingerhut. Perspektive, Komplexität und Leere in der japanischen und europäischen Tradition. Empirische Ästhetik und die Bilderfrage. In: *Bilder als Denkmittel und Kulturform*, edited by Y. Sakamoto, F. Jäger, J. Tanaka. Berlin (forthc.): https://www.academia.edu/39708569/Empirische_%C3%84sthetik_und_die_Bildfrage (28.10.2019).
- Freedberg, David, Gallese, Vittorio. Motion, emotion and empathy in esthetic experience. In *Trends in Cognitive Sciences*, 11 (5), 2007, 197-203.
- Gallese, Vittorio., Cinzia Di Dio. Neuroesthetics: The body in esthetic experience. In *The Encyclopedia of Human Behavior, 2,* 2012, 687-693.
- Gallese, Vittorio. Embodied Simulation. Its Bearing on Aesthetic Experience and the Dialogue Between Neuroscience and the Humanities. In Gestalt Theory 41, 2, 2019: 113-128.:https://www.researchgate.net/publication/334722167_Embodied_Simulation_Its_Bearing_on_Aesthetic_Experience_and_the_Dialogue_Between_Neuroscience_and_the_Humanities. (28.10.2019)
- Goodman, Nelson. Languages of Art: An Approach to a Theory of Symbols. Indianapolis: Hacket Publishing Company. 1976.

- Grabbe, Lars. Körper und Zeichen. Das Verstehen interaktiver Mediensysteme im Kontext phänosemiotischer Wahrnehmungsdynamik. In *Visual Past 2*, 7/2016, 1-25.: http://www.visualpast.de/archive/pdf/vp2016_0199.pdf. (28.10.2019)
- Grassi, Ernsto. Macht des Bildes: Ohnmacht der rationalen Sprache. Zur Rettung des Rhethorischen. Köln: DuMont, 1970 [1968].
- Imdahl, Max. Marées, Fiedler, Hildebrand, Riegl, Cézanne. Bilder und Zitate. In *Literatur und Gesellschaft vom neunzehnten ins zwanzigste Jahrhundert*, edited by Joachim Schrimpf. Bouvier: Bonn 1963.
- Kant, Immanuel. Kritik der Urteilskraft. Stuttgart: Reclam, 1991 [1790].
- Krois, John M. Cassirer: Symbolic forms and history. New Haven & London: Yale University Press, 1987.
- Krois, John M. Experiencing Emotions in Depictions. In *John M. Krois, Bildkörper und Körperschema. Schriften zur Verkörperungstheorie ikonischer Formen*, edited by Horst Bredekamp, Marion Lauschke. Berlin: Akademie, 2011 [2001], 232-251.
- Krois, John M. Tastbilder. Zur Verkörperungstheorie ikonischer Formen. In John M. Krois, Bildkörper und Körperschema. Schriften zur Verkörperungstheorie ikonischer Formen, edited by Horst Bredekamp, Marion Lauschke. Berlin: Akademie, 2011 [2010], 210-231.
- Krois, John M. Philosophy and Iconology. In *Ikonische Formprozesse*. *Zur Philosophie des Unbestimmten in Bildern*, edited by Marion Lauschke, Johanna Schiffler, Franz Engel. Berlin, Boston: De Gruyter, 2018 [2005], 1-27.
- Langer, Susanne K. *Philosophie auf neuem Wege. Das Symbol im Denken, im Ritus und in der Kunst.* Translation into German A. Löwith. Berlin: S. Fischer, 1965 [1942]
- Langer, Susanne K. Feeling and Form, A Theory of Art Developed from Philosophy in a New Key (4th ed.). London: Routledge & Kegan Paul Limited, 1967 [1953].
- Langer, Susanne K. *Mind*: An Essay on Human Feeling (Vol. 2). Baltimore & London: John Hopkins University Press, 1972.
- Langer, Susanne K. *Mind: An Essay on Human Feeling* (Vol. 1) (4th ed.). Baltimore & London: John Hopkins University Press, 1985 [1967].
- Leys, Ruth. 'Both of Us Disgusted in My Insula'. Mirror neuron theory and emotional empathy. In nonsite.org, 5, 2012, 1–33. https://nonsite.org/article/%E2%80%9Cboth-of-us-disgusted-in-my-insula%E2%80%9D-mirror-neuron-theory-and-emotional-empathy. (28.10.2019)
- Sauer, Martina. Cézanne, van Gogh, Monet. Genese der Abstraktion. Heidelberg: ART-doc 2014a [1999/2000]: http://archiv.ub.uni-heidelberg.de/artdok/2573/. (28.10.2019)
- Sauer, Martina. Ästhetik und Pragmatismus. Zur Frage der Vereinbarkeit von ästhetischer Theorie und Handlungsrelevanz bei Cassirer, Langer und Krois. In *IMAGE, Zeitschrift für interdisziplinäre Bildwissenschaft 20* (7), 2014b, 49-69: http://archiv.ub.uni-heidelberg.de/artdok/3196/ (28.10.2019).
- Sauer, Martina. Visualität und Geschichte. Bilder als historische Akteure im Anschluss an Verkörperungstheorien. In *Jenseits des Illustrativen. Visuelle Medien und Strategien politischer Kommunikation*, edited by Niels Grüne, Claus Oberhauser: Göttingen: V & R unipress, 2015, 39-60.
- Stern, Daniel N. *Die Lebenserfahrung des Säuglings* (W. Krege Trans.). Stuttgart: Kett-Cotta. 1992 [1986].
- Werner, Heinz. Einführung in die Entwicklungspsychologie (4th ed.). München: Johann Ambrosius Barth, 1959 [1926].