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Gestalt Psychology: Incoming

1.

In a letter to Meinong in 1891, Ehrenfels ackowledged that many of his ideas had been anticipated by Mach. Mach himself, in his answer to Ehrenfels's envoy of the paper Ü*ber die Gestaltqualitäten*, reminds him that he had already formulated an analogous concept in a short article published in 1865. The article was to be included by Mach in the collection of his "popular scientific lectures" first published in English in 1896 [Kindiger 1965, pp. 74-75; Ehrenfels 1890; Mach 1896].

Mach's 1865 considerations are not easy to come to terms with. In order to understand the arguments developed by Mach we have first to clarify some important details concerning Mach's indebtedness (even if critical) to Herbart's theory of spatial vision. This theory seems to be the starting point for Mach's discussion.

As Mach reminds us [Mach 1896 p. 117], Herbart believes that spatial vision is based on *Reproduktionsreihen* of the *Reihenfolge* of our *Vorstellungen.* In other words, spatial vision is the product of innumerable clashes between the "forces" (the intensities) of the *Vorstellungen,* presentations. Herbart, in fact, maintains that the soul is absolutely simple: presentations are its means of self-preservation. The presentations of a single continuum (a colour, for example) are homogenous, but at the same time of greater or lesser intensity. Their clashes give rise to multiplicities which, in effect, appear to be unities resulting from "fusions" [*Verschmelzungen*]. In their turn, the "fusions" make possible new presentations. The "fusions" are also composite presentations, where two or more elements come together simultaneously. "Fusion" is simultaneous even if it involves elements occurring in succession. This second case is the most common and at the same time the most important. We are confronted with countless *Reihenfolgen*, "serial successions" of presentations. We realize that our knowledge is limited: it comes into being only as a succession of presentations involved in their reciprocal "inhibition" [*Hemmung*]. A "fusion" takes place between that part of a presentation which survives its "inhibition" and the presentation which is the cause of the "inhibition" itself. Among the presentations suffering the "inhibition" there is a connection established by those parts of the presentations which are not driv-

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en back under the "consciousness threshold" [Bewußtseinsschwelle]. In general, we can state that the "residues" of the "inhibited" presentations are able to link together the presentations distributed along a "serial succession" [Herbart 1964, vol. V. p. 308; vol. IV, p. 324, 375 ff.].

2.

This is the basis of Herbart's approach to the problem of the reproduction of presentations. Not just a single presentation, but a whole series of presentations may undergo "inhibition" and be driven back "under the consciousness threshold". How is it possible, then, to reproduce a presentation or a series of presentations – in other words, to have them cross this "threshold" again? How can they be made to find new strength, enabling them to catch our attention again? We need an answer first of all where the reproduction of a "serial succession" of presentations is concerned.

The reproduction may have its origin in a new strength accruing to just one of the presentations in the series. Thanks to the "fusion" of the "residues", all the presentations are tightly linked together. The connections between the presentations become progressively clear, and the possibility emerges of an increasingly complete reproduction of the entire series. In this context the aid offered by the "residues" is decisive, as already remarked in the simpler case of the "fusion" of two presentations *a* and *b.* When *a* regains strength this promotes the awakening of *b*, which is connected to it. This means that *a* "aids" *b.* But this "aid" can only be directly proportional to the "residue" of *b*, with which *a* unites. So *a* can revive *b* only to the level of intensity presented by *b* at the moment of its "fusion" with *a.* Viewed in this way, the reproduction clearly has its limits. It is always a *mediated* reproduction, making use of a series of steps whereby the path followed by the association of ideas is in effect retraced in reverse [Herbart 1964, vol. IV, p. 377, 391; vol. V., p. 317, 327].

3.

It must be recognized, nonetheless, that the reproduction made possible by the "aid" provided by the "residues" is a *mediated* operation only from the point of view of abstraction. In fact, from the psychological point of view, we are confronted with an act of *immediate* recognition. This happens firstly when we are led to recognize the *Gestalten* of the "serial successions" of our presentations.

In his *Psychologie als Wissenschaft* Herbart pointed out that the *Gestalten* are to be recognized as the basis not only of the reproduction, but also of all the "inhibitions" and "encouragements" [Begüngstigungen] typical of the force relationships existing among the presentations. Herbart spoke of "inhibitions" and "encouragements" due to the *Gestalten* and explained by a "very simple example" the

"fairly important psychological phenomenon" represented by the "reproduction due to the *Gestalt*". He explains:

> "It makes no difference to us if a piece of writing is presented as black on white or – on the blackboard – as white on black, and we read it with the same ease if it is written in red ink or in gilt lettering. How does it happen? Surely" – he continues – "only by a reproduction of signs which are already known. But if someone has learned black lettering how is it that black shapes come to him when he sees the red ones and the gold ones?"

There is an "inhibition" between these shapes – the very opposite of a reproduction. In principle it would seem that a reproduction – an *immediate* reproduction – should not therefore be possible. But experience tells us that it is indeed possible, and in the simplest of ways. The phenomenon can only be explained by a "mediating element" [*Mittelglied*] coming into play. Herbart identified this "mediating element" in the "obscure spatial image" which appears in connection both with the red and with the black, and which "called forth by the one, immediately calls forth the other" [Herbart 1964, vol. V, p. 325, 417; vol. VI, p. 101].

Herbart was convinced that he was dealing with laws affecting the whole mechanism of our presentations. In his *Psychologische Untersuchungen* of 1840-41 he was concerned with an improved formulation of these laws. In particular, Herbart tried to make clear that the "inhibition due to the *Gestalt*" is quite a distinct form of the inhibitions that may come about in plain sense experience. Further, he rejected as a prejudice the thesis of space as presentation of something simultaneous. We cannot have a simultaneous presentation of reality, he declared. All our presentations take place in serial succession: they are the expression of an endless activity made up of connections and clashes. On the one hand Herbart points out that the "inhibitions" and the "encouragements" due to the *Gestalt* are caused by the presentation we have of the *Gestalten* into which two or more presentations have "fused" - in other words the *Gestalten* represent a qualitative leap compared to the elements on which they are founded. On the other hand he was at pains to remind us of our inability to grasp simultaneousness, insofar as our knowledge develops by means of presentations deeply involved in the succession of time. A true understanding of the *Gestalt* seems also to be possible only if we make a clear distinction between the determined and *recognizable* form assumed by the mutual relationship entertained by a series – a chain – of elements on the one hand and the bare sum of the elements. *Gestalt* – or *Gestaltung* – has to be regarded as that which results from a "leap across partial presentations" which leaves behind it an "overall impression". In fact, the sum of all the places we have perceived as coloured, of all the sounds to which we have attributed a tonality – in short, of all our perceptions taken in succession – will never ensure a true view of the totality of our experiential data. We perceive these places and moments insofar as they

are connected by the mutual play of "inhibitions" and "fusions". This way, we are confronted with something very near to the "aspiration" [*Streben*] of numbers to distinguish one from another and at the same time to take on a *Gestaltung*. Herbart was very clear in stressing that spatial *Gestalt* had to be considered only an example of the true character of our perception of reality. Setting out to clarify the notion of "inhibition due to the *Gestalt*", he emphasized that, in order to understand this notion, it was necessary to bear in mind a series of examples where the *Gestaltung* taken on by presentations was in no way dependent on spatial relationships. At the same time one must have always in mind that *Gestalt* is something qualitatively "other". In the *Gestalt*, in the *Gestaltung,* the "quality of quantity" expresses itself [Herbart 1964, Vol. XI, pp. 64-66, 326, 342; Vol. IV, p. 390; Vol. V, pp. 91, 417-418; Vol. VI, p. 226; Vol. IV, pp. 289, 307, 324, 375, 417; Vol. V, p. 416; Vol. VI, pp. 90, 91, 95, 97-100, 100-101, 341; Vol. XI, p. 400].

4.

In his 1865 paper, Mach showed himself to be well aware of Herbart's theory. Mach, however, didn't refrain from placing Herbart's theses and example under close scrutiny, first of all in the case of the "reproduction due to the *Gestalt"*. Mach criticized the thesis of the red letter and the black letter having in common the same "obscure spatial image", which gives the two letters an "analogous determination". Mach was well aware that Herbart referred this "determination" to the single, same "level of fusion" possessed by the two letters. The outline of the two letters is the same, in fact, and therefore is "inhibited" in equal measure and yields equal "residues", with which the (equal) outlines of the two letters "fuse", at the same level of intensity. Mach thought however that Herbart's explanation was an unwarranted simplification of the question, simply ignoring the central fact of the qualitative difference between the colours of the letters. The fact that the two letters are recognized as equal was unquestionable, but Herbart's explanation did not appear to weigh up all the aspects of the phenomenon of the recognition of "equal *Gestalten* of different colours" [Mach 1896, p. 118; Herbart 1885-1917, Vol. VI, p. 101].

Mach's reservations derive largely from his conviction that it was necessary to bear in mind the new findings of the physiology of the sense organs. It will be also useful to examine – even if very briefly – the theses Mach had put forward just at the beginning of the '60s in his work on optics and acoustics. We limit ourselves to the report *Über das Sehen von Lagen und Winkeln*, 1861.

Mach referred to the known fact that it is only a small area of the retina that can guarantee clear and sharp perception of images. In the case of images of a certain size, we must suppose that a series of eye movements subdivide the images into parts that are presented, one after the other, to the "point of clear vision". Exper-

imental observation had backed this supposition: "many psychologists" – wrote Mach – were also led to the conviction that recognition of *Gestalt* (primarily of the *Gestalt* of the plane figures) is ensured by the movements by which the eyeball follows the outline of these figures. Mach developed also a lot of further experimental observations. He examined the simplest case - straight lines lying in different directions – and attempted to establish what happens when the eye moves in order to bring all points of the line – one after another – in front of the "point of clear vision". It is obvious, he remarked, that each movement of the eye could be traced to a change in eye muscle tension. Mach was able to prove the relationships between the two movements (the one of following the line, the other of stretching and relaxing) by basing his investigation on Fechner's psychophysics. He then extended his experimental observations to angles. He established that, given the same angle, the evaluation of the latter's opening seemed to be affected by the different points of view assumed by the observer. This is particularly true in the case of figures that are congruent from the point of view of their *Gestalt*, but – as in the case of square and rhombus – present themselves to the eye in different positions. There was more: Mach emphasized that comparative judgement of the opening of two angles is also conditioned by the colour of the surface enclosed by their sides [Mach 1861 pp. 215-216; 223-224].

5.

Mach was firmly convinced that it was only through research of this type that the construction of an "exact psychology" could be ensured. Mach was convinced that an investigation based on physiological and psychophysical research had by now completely supplanted Herbart's concept of "psychology as a science based on metaphysics, mathematics and experience". Nonetheless he never broke completely with Herbart's psychology, and even spoke up more than once in its defence against the over-hasty judgements expressed by many scientists. In effect, Mach was proposing a clarification in physiological (and, in prospect, psychophysical) terms of what Herbart had stated in his discussion of the phenomenon of the "reproduction due to the *Gestalt*". Let us return to the example of the two letters, red and black. Carefully safeguarding the accepted fact that there is a qualitative difference between their colours, Mach at the same time believed that it was necessary to specify the nature and characteristics of the "obscure spatial image" which ensures the overcoming of this qualitative difference. "If" – he wrote – "two equal *Gestalten* of different colours reproduce themselves and are recognized as equal, this is only possible because of a qualitatively equal presentation contained in both series of presentations".

There is no doubt that Mach felt no sympathy towards Herbart's views about the soul. Despite this, Mach's positions appear to show more points of convergence

with, than of divergence from, those of Herbart. This is confirmed when we look at the further considerations Mach set out concerning the problem of structured form – the *Gestalten* – in this same short report of 1865 [Mach 1861, pp. 215-216, 223-224; Herbart 1964, Vol. V, p. 416; Vol. VI, pp. 90, 98-99, 388-389].

In fact, after having listed all the reasons provided by observations and experiment in order to confirm the role of eye muscle sensations, Mach devoted again his attention to the reproduction problem. He devoted his attention to the reproduction of presentations that aren't homogenous, but are at the same time ordered along a series, within which, though quite divergent from a qualitative point of view, they marked themselves out on account of an "equal or similar form". Mach – who would deal again with the question in his *Die Analyse der Empfindungen* – emphasized that this way we are confronted with series of presentations to which we assign "equal forms" in the case not only of spatial vision, but also of temporal perception, and so on. This is a kind of equality that comes out when we abstract from the existence of specific qualitative differences. Mach thus came to a generalization of what he had already stated concerning the equal "muscular sensations" necessary to explain our recognizing *Gestalten* of different colours as equal. It is known that this opened in many regards the way to Ehrenfels' *Gestaltqualitäten*. It is also true, however – and this is something that historical research has so far neglected – that also Herbart's ideas had offered a very significant contribution in this regard [Mach 1896, pp. 118-119].

6.

For many years, until the 20s of the new century, German psychologists (and German philosophers) were to confront themselves with the problems connected to the way physics would be able to explain a lot of psychological processes. The confrontation seems, however, highly problematic. In many cases, one has to note a kind of mutual lack of trust. This lack, anyway, was greater on the psychologist's side, as remarked in 1924 by Wolfgang Köhler in his *Die physischen Gestalten* [Köhler 1924 pp. ix ff.]. The debate on the foundation of scientific psychology held by psychologists didn't show a true interest in the ideas developed by physics about the "Eigenschaften in sich zusammenhängender physikalischer Systeme". This being the case – Köhler observed - one did not need to wonder whether the ideas by Ehrenfels and Wertheimer had been received "als etwas unklare Neuerungen". As is well known, Köhler firmly rejected as a true proof of scientific backwardness the same scepticism of many of his biologist contemporaries.

At the same time, however, Köhler showed himself to be not only well acquainted with the ideas held by many of his fellow psychologists and biologists in their confrontation with the so-called "mechanistic", but also highly sensitive towards the cultural atmosphere nourishing and inspiring those ideas. Köhler in fact en-

titled this chapter of *Die physischen Gestalten* "denn was innen das ist außen". The title was a Goethean title. Köhler, however, could not aim to be considered a refined Goethe-specialist. Goethe's widely quoted sentence comes from the *Urworte orphisch* in *Zur Morphologie* [Goethe 1817-1822, p. 440]:

> Müsset im Naturbetrachten
> Immer eins wie alles achten.
> Nichts ist drinnen, nichts ist draußen:
> Denn was innen das ist außen.
> So ergreifet, ohne Säumnis,
> Heilig öffentlich Geheimnis.
>
> Freuet euch des wahren Scheins,
> Euch des ernsten Spieles.
> Kein Lebendiges ist ein Eins,
> Immer ist's ein Vieles.

7.

Köhler's quotation of Goethe's *Epirrhema* wasn't a naive exhibition of scholarship. Köhler was well acquainted with the role assigned to Goethe's ideas about the mutual friendship of science and art in the inquiry of nature by many philosophers and scientists of his time, as tested by the editions [e.g. Troll 1926] of Goethe's scientific writings published in the first two decades of the XX. century. There is no doubt, however, that the wide audience for Goethe's views on art and science has to be traced to the sovereign elegance of the dresses the genius of the great poet was able to tailor for his ideas – and not only to his ideas themselves.

In Goethe's all-season collection, *Gestalt* is entitled without doubt to the first place. Moreover, we must remember the widely acknowledged thesis that we are indebted to Goethe for the introduction of the *Gestalt* notion (or concept) in order to designate what we now mean by *Gestalt.* Needless to say, at the same time we can dispense with ascertaining the true lineage of the *Gestalt*. I frankly acknowledge the perfunctory meaning (if indeed it has any meaning at all) of such an inquiry from the point of view of contemporary debate. But the historical inquiry has its own rights, and perhaps – from an other point of view – also some use in explaining what happens when the introduction of new ideas is unavoidably bound to the usage of old words. We limit ourselves to some quotations. We say "quotations" because we are so lucky to be able to rely on an extraordinarily useful tool: the *Wörterbuch der deutschen Sprache*, the "Grimm".

When we open volume 5 of the "Grimm" – published in 1897, a few years later than von Ehrenfels' *Über die Gestaltqualitäten* – we read that, from a general point of view, one has to take into account "Gestalt" as "die Art, wie sich etwas in

festem Umrissen, mit unterscheidenden Merkmalen darstellt". It is also possible to understand "Gestalt" as "die Form, die Figur einer Person oder eines Dinges". We don't lack, of course, quotations from Goethe. The "Gestalt" of the Strasburg Minster imposes itself in its "feste, greifbare, klare Form". The beauty of Helen of Troy is "die Gestalt aller Gestalten", and at the same time it is the idea of something like an "abstract form" that is meant by "Gestalt". [Grimm 1897, cols. 4184, 4187, 4189].

8.

Goethe's quotations in the "Grimm" came not only from the *Faust* and from Goethe's writings on art. The dictionary also took into account the huge number of pages Goethe had dedicated to the study of nature. This happened in order to give evidence for a very important fact: Goethe [Goethe 1817-1822, pp. 389-395; 439-440] had remarked that movement plays a decisive role in denoting "den Complex des Daseins eines wirklichen Wesens". The "Gestalten" are in many (if not in most) cases the "Gestalten" of living organisms, and also their meaning is never the meaning of something "Bestehendes". On the contrary: referring to "Gestalt", we are in fact led to underline "daß vielmehr alles in einer steten Bewegung schwanke". In this way, Goethe had drawn the attention of his contemporaries on the "dynamical" meaning of "Gestalt", giving the idea of a kind of evolving and adapting structural organization.

It would be in any case highly interesting to give even a short account of Gestalt's fortune during the entire 19th century. We limit ourselves, however, to remembering Vischer jr. 1873 ("lebendige Gestalt", "organische Gestalt", "bewußte Gestalt"), Fiedler 1887 (gestaltete Form, Gestaltung zur klaren Sichtbarkeit, Formgestaltung), and Magnus 1906 (Goethe's morphology as "Lehre von der Gestalt des organischen Wesens"). One has also to remark on the pivotal role played by scholars involved in the debate about the arts and their mutual relationship: from this stems a significant increase in the attention devoted to the way one has to consider "Gestalt" as resulting from the "fusion" of elements involved in many cases of emotions [Cohn 1901].

9.

Speaking of "Gestalt" doesn't mean only movement of a kind of elastic structure, but the way our sentient and especially perceptual activity seems to be at the same time "oriented" and coloured by emotions, i.e. by states of mind we are led to consider as resulting from a "fusion". In fact, we are unable to detect the elements of the "fusion": each "post festum" analysis would however "freeze" the emotion, depriving our sensations – first of all the chromatic and the auditory ones – of their true, ultimate, deep emotional value.

The echo of Goethe's ideas – as advanced and developed in the *Farbenlehre* – begins also to resound.

> "Since color occupies so important a place in the series of elementary phenomena, filling as it does the limited circle assigned to it with fullest variety, we" – wrote Goethe in his *Farbenlehre* – "shall not be surprised to find that its effects are at all times decided and significant, and that they are immediately associated with the emotions of the mind. We shall not be surprised to find that these appearances presented singly are specific, that in combination they may produce an harmonious, characteristic, often even an unharmonious effect on the eye, by means of which they act on the mind; producing this impression in their most general elementary character, without relation to the nature or form of the object on whose surface they are apparent. Hence, color considered as an element of art, may be made subservient to the highest aesthetic ends." [Goethe 1810, p. 247].

The echo of Goethe's ideas and words will be, with the new century, particularly clear in Kandinskij and, later, in Klee too. But at the same time we are obliged to remark that the story to be told would be a very long and complicated one. The story would be however highly interesting and, perhaps, also revealing, dealing with about thirty years of German cultural history, a cultural history where science, art and philosophy are deeply intertwined. We have clearly in mind – we would refrain from going as far back as Schopenhauer – first of all Helmholtz and Hering, Mach and Stumpf, in order to reach Katz's *Erscheinungsweisen der Farben* in 1911 and, later, Allesch's book, published in 1925 with a very similar title [Katz 1911; Allesch 1925]. But in order to reach these latter – and Kandinskij and Klee – we would be obliged to involve in our story a lot of other less renowned – but in any case highly professional – players, coming not only (as is obvious) from physiology and psychology, but also from the practice of the arts, and above all from the arts where the phenomenon of synaesthesia is most clearly at work: music and painting.

10.

We know well the role music has played in the history of *Gestaltpsychologie*, beginning with Ehrenfels' *Gestaltqualitäten*. We know well how decisive is music in the development of Wertheimer's idea and obviously in the emerging of "Wertheimer's problem". And Helmholtz's and Stumpf's views about sound and rhythm are always there in the background.

But one should not at all underestimate the role color has played in the debate about the foundations of scientific psychology at the end of 19th century. At the same time we are obliged to state some unquestionable facts. The flourishing of sense physiology in Germany since 1840 isn't characterized by a strong interest in color perception, i.e. in the way colors are appreciated and judged by the

perceiving subject. Physiological optics constitute in many regards the "core" of the experimental work initiated by Johannes Müller and pursued by his pupils: above all by Hermann Helmholtz. From a strictly experimental point of view – i.e. from the point of view of an inquiry working with the tools offered by mathematics and physics – it is the "mechanism" of vision that comes first. This implies obviously that colors are investigated as spectral colors, i.e. as rays of light refracted by the prism. This clearly Newtonian standpoint is overtly opposed to Goethe's (and Schopenhauer's) ideas about the production of color in the eye. But at the same time it is also true that even firm advocates of Newton's theory of colors like Helmholtz begin in the '60s to show themselves ready to acknowledge the soundness of Goethe's (and Schopenhauer's) ideas if applied to a so-to-say "phenomenological" description of chromatic perception, i.e. to observation of the physiology of vision. In fact, we don't find in any case scientists overtly appealing to Goethe's and Schopenhauer's ideas. Since Goethe's days the research has greatly improved. The observational data on which it is possible to rely have undergone an exponential increase. These data are nourishing in many regards the new sciences of psychophysics with Gustav Theodor Fechner and of experimental psychology with Wilhelm Wundt. As in the case of experienced scientists like Ewald Hering and Ernst Mach, the increasing interest in the phenomena of color perception leads to a critical attitude towards a strictly Newtonian point of view, i.e. towards an examination of the problem of color perception restricted to the spectral colors in the prism. Such an examination meets many difficulties not only in explaining how it is possible that color perceptions are produced even in absence of physical light, but also in giving a satisfactory account of an unquestionable fact. The fact, namely, that where the angles of diffracted rays in a prism are infinite, there is a very narrow number of fundamental color sensations. The opinions thereupon are diverging. But at the same time it is also true that a convergence is unavoidable concerning the role physiology has to play in explaining color perception. Color perception seems to be a highly complex phenomenon, but there are also no doubts about its central relevance from the point of view of understanding the strategy followed by the sentient, knowing and acting subject in situating himself in the environment.

There is also an increasing opinion that the appreciation of quality by our senses is before all the problem of our appreciation of colors, of the difficulty of reducing to the Newtonian spectrum the colors we experience in our perception and whose names seem in so many cases highly volatile. In this way, the role played by Goethe's ideas is a very significant one. I say, of course, significant not only from the point of view we are used to name "phenomenological", as acknowledged in fact even by many of the adversaries of Goethe's obsessive struggle against Newton. I say significant also – and I would say above all – from an historical point of view. And indeed from a very important point of view. Goethe's ideas

had contributed in a decisive way to avoiding, in the German debate between the 19th and the 20th centuries, the loss of seeing the dynamical complexity of our perception of the world. The fact of this influence is unquestionable. We rely on a huge number of documents. There are no difficulties in tracing it. And in many cases we are led to remark on the influence exerted not only by Goethe himself, but also by Goethe's followers, whose writings – we have in mind before all an outsider like Rudolf Steiner [Steiner 1883] – find a wide audience among people involved in the arts, but also among scientists. But it is the kind of deep influence that very often is exerted not by rigorously organized theories, but by fascinating views about the way we live in our world.

Summary

One has not to forget that Gestalt psychology – at least until the 1920s – has been deeply roooted in Germany's science, philosophy – and art. The people involved in launching the Gestaltist programme are deeply indebted to Herbart's ideas about psychology as science, to Fechner's psychophysics, to Helmholtz's and Wundt's physiological psychology, to Hering's and Stumpf's phenomenological approach to the study of perception, to Mach's analysis of sensation. These people, in turn, are deeply indebted to Goethe's ideas about the development of the living organism and also to the latter's ideas about art. One is entitled to consider all this a commonplace, laying stress at the same time on the achievements of the historical work on the rise of *Gestalt psychology*. This paper aims, however, not only to tell again a well-known story, but also to detect some connections that have remained undetected, until now.

Keywords: Psychology as science, sensation and perception, Herbart, Mach, Goethe.

Zusammenfassung

Man darf nicht vergessen, dass die Gestaltpsychologie – zumindest bis in die 1920er Jahre – zutiefst in deutscher Wissenschaft, Philosophie und – Kunst verwurzelt war. Die Menschen, die daran beteiligt waren, das Programm der Gestalt ins Leben zu rufen, sind ebenso Herbart´s Gedanken zur Psychologie als Wissenschaft zutiefst verpflichtet wie Fechner´s Psychophysik, Helmholtz´ und Wundt´s physiologischer Psychologie, dem phänomenologischen Ansatz zur Untersuchung der Wahrnehmung von Hering und Stumpf, bis hin zu Mach´s Analyse der Empfindung. Ebenso sind alle diese Leute zutiefst Goethe´s Gedanken über die Entwicklung des lebendigen Organismus verpflichtet, und auch seinen Ansichten über die Kunst. Man kann all das mit Recht als Gemeinplatz ansehen, und so gleichzeitig Druck auf die Leistungen der historischen Aufarbeitung des Aufstiegs der Gestaltpsychologie ausüben. Wie auch immer, in diesem Beitrag soll nicht nur eine wohlbekannte Geschichte noch einmal erzählt, sondern einige bisher unentdeckte Verbindungen aufgedeckt werden.

Schlüsselwörter: Psychologie als Wissenschaft, Empfindung und Wahrnehmung, Herbart, Mach, Goethe.

References

Allesch, von, J.G. (1925): Die ästhetische Erscheinungsweise der Farben, *Psychologische Forschung,* VI, 1-91; 215-281.

Cohn, J. (1901): *Allgemeine Aesthetik*. Leipzig: Engelmann.

Ehrenfels, C., von (1890): Über Gestaltqualitäten, in F. Weinhandl (Hrsg.) (1978): *Gestalthaftes Sehen. Ergebnisse und Aufgabe der Morphologie*, Darmstadt: Wiss. Buchgesellaschaft, 11-43.

Fiedler, C. (1887): *Der Ursprung der k*ünstlerischen Thätigkeit, Leipzig: Hirzel.

Goethe, J.W. (1810): *Zur Farbenlehre.* Frankfurt a.M.: Deutscher Klassiker Verlag.

Goethe, J.W. (1817-1822): *Hefte zur Morphologie*, *Erster Band* [1817-1822], in J.W. Goethe (1987): *Schriften zur Morphologie*, Frankfurt a.M.: Deutscher Klassiker Verlag, 1987

Grimm, J. (1897): *Deutsches Wörterbuch*, Vierten Bandes erste Abtheilung, zweiter Theil, Leipzig: Hirzel.

Herbart, J.F. (1964): *Sämtliche Werke*, eds. von K. Kehrbach & O. Flügel, 19 vols., Aalen: Scientia.

Katz, D. (1911): Über die Erscheinungsweisen der Farben und ihre Beinflussung durch die individuelle Erfahrung, *Zeitschrift für Psychologie und Physiologie der Sinnesorgane,* Ergänzungsband 7.

Kindiger, R. (Ed.) (1965): *Philosophenbriefe. Aus der philosophischen Korrespondenz von Alexius Meinong*, Graz: Akadem. Druck-und Verlagsanstalt.

Köhler, W. (1924): *Die physischen Gestalten in Ruhe und im stationären Zustand*, Erlangen: Verlag der philosophischen Akademie.

Mach, E. (1861): Über das Sehen von Lagen und Winkeln durch die Bewegung des Auges, *Sitzungsberichte der mathematisch-naturwissenschaftlichen Klasse der Kaiserlichen Akademie der Wissenschaften,* Band 43, II Abt., 215-224.

Mach, E. (1896): Bemerkungen zur Lehre vom räumlichen Sehen [1865], in Id., *Populär-wissenschaftliche Vorlesungen*, Leipzig: Barth, 117-123.

Magnus, R. (1906): *Goethe als Naturforscher*, Leipzig: Barth.

Steiner, R. (1883): Einleitung zu: *Goethes naturwissenschaftliche Schriften*, Stuttgart-Berlin-Leipzig: Union Deutsche Verlagsgesellschaft, 1883-1897, 5 vols, vol. II, pp. vii-lxxiv.

Troll, W. (1926): *Goethes morphologische Schriften,* ausgewählt und eingeleitet von Wilhelm Troll, Jena: Diederichs.

Vischer, R. (1873): *Ueber das optische Formgefuel. Ein Beitrag zur Aesthetik*, Leipzig: Credner.

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