

Josef Albers put into perspective

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Josef Albers (1888-1976) undoubtedly has outstanding achievements both as an artist and as a colour teacher. Even if these can hardly be separated from each other, it is primarily Albers's didactic work that is to be examined here and put in perspective. This seems to be appropriate especially in the current situation where a new orientation in colour education is increasingly being tackled on an international level - first and foremost by the Colour Literacy Project. With its approach based on perception and experience, the project rightly refers to Josef Albers and his *Interaction of Color* [1-2]. The work and its creator are widely perceived in a rather glorified way, but we should not lose sight of the fact that Albers also had his predecessors and that his work is by no means as original as it is often portrayed. Furthermore, certain aspects of his conception of colour are considered outdated today. The aim of this article is to show this and thus to give Albers's undeniably unique work its proper place within the framework of a contemporary didactic approach.

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Albers's reception and Interaction of colour

Especially in times of change and awakening in colour education, one likes to refer to the rare forerunners, first and foremost Josef Albers. However, he tends to be regarded as an almost Messianic figure, whose achievements are unquestioningly regarded as exemplary for the teaching of colour. Thus, among experts in colour education, only the name "Albers" needs to be mentioned, with which the aura of the Bauhaus teacher and renowned colour artist resonates, then - so it seems - there is an unspoken agreement about this ingenious role model, whose views and methods with regard to a colour didactics in his *Interaction of Color* seem to serve as exemplary without reservations.

Interaction of Color was first published in 1963, three years after the end of his teaching career at Black Mountain College and Yale. It is not simply a book from which one takes information and which one can read again and again. In addition to text contributions, it consists mainly of carefully produced silkscreen plates of considerable size (33 × 25.5 cm when folded in the middle), the quality of which Albers tested and approved in both editions (the American in 1963 [1], the German in 1973 [2]). To be able to study Interaction of Color, the plates must be looked at and for this purpose removed from a large and 18-pound unwieldy cassette. These originals are rarely available in second hand bookshops. Currently two American editions - one for \$17,500 and one for \$20,000 - and a German edition - at a price of €6800 - are offered (as of January 2023).

There is a new edition with reprints of the plates [3], but these are offset printed and do not remotely match the quality of the originals (Figure 1).

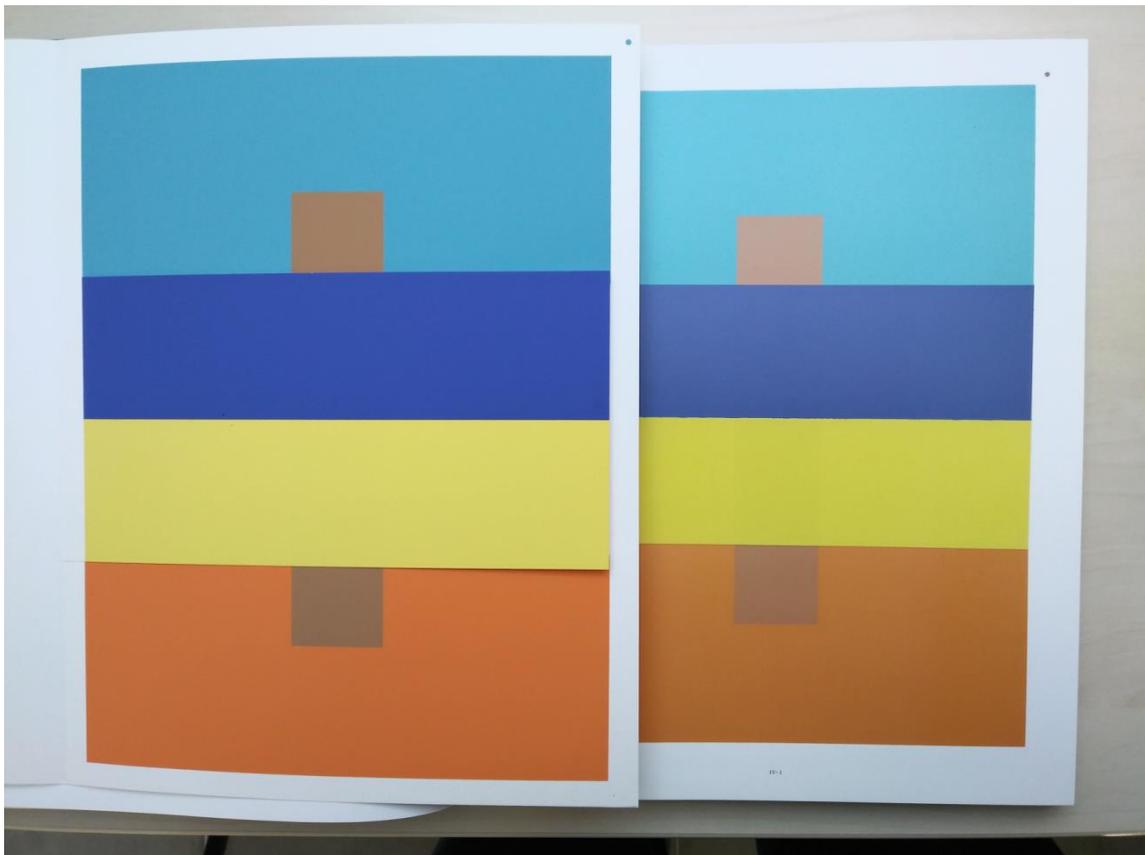


Figure 1: Comparison by means of a photo of Plate IV-1 from the German edition [2] authorised by Albers (left) with the new edition from Yale [3] (right). The colour deviations with the lower brilliance of the colours are clearly visible in the photo. This plate from the new edition still contains the fold-up mask for colour comparison, which is missing in many other plates in this edition, which considerably reduces or even nullifies the didactic use.

Since there were already considerable tensions between author and publisher regarding quality standards in the course of the production of the originals during his lifetime [4 p.ix-x], Albers would have probably disapproved of this publication, which appeared long after his death. For the American edition, 2000 copies were planned, of which Albers approved only about 1800 due to quality deficiencies of some of the silkscreen prints [5 p.7]. The German edition was produced in 1000 copies.

Thus, it is hardly surprising that only a few Albers's admirers got to see this outstanding work of colour plates in the original; and those who were able to look at them hardly had time to study them

thoroughly, since its cost and rarity allow it only to be consulted under special conditions in library reading rooms. The times are long gone when *Interaction of Color* could simply be borrowed by students at a university in the Ruhr area and transported home on the carrier of a bicycle for self-study - as happened in the 1990s [6]! The possibility to have this work permanently at hand as a didactic tool to teach the basics of colour to pupils or students is - at least nowadays - hardly available to anyone. The rarity of this publication combined with the great sensitivity of the plates, which must be approached with care, and which must literally only be touched with kid gloves, have probably also contributed to the aura of the work - in addition to Albers's reputation as a Bauhaus teacher. Thus, the study of his work is often limited to a few passages of text, which are translated into numerous languages and, at best, are available to all with small-format reproductions in offset printing or in digitalised form on monitors. In any case, there can be no question of the necessity of a comprehensive and intensive examination of Albers's *Interaction of Color* in schools, training and studies.

Either way, it is difficult to do justice to Albers. On the one hand, the examination of his work requires the intensive visual study of the originals to do justice to his intention and to be able to profit from it in the sense of a sensitive colour sense training, which the work undoubtedly guarantees in a hitherto unique way. On the other hand, the work and the achievement of Albers may and must be viewed critically, if it is to be accorded its appropriate significance for today's colour didactics, and the achievement that has led to it is to be classified and appreciated accordingly. Therefore, the first step is to look at possible influences and precursors.

The consequences of Albers's handling of sources and predecessors

Albers's fame is undoubtedly due partly to his Bauhaus background, but also to his connections to renowned artists such as Robert Rauschenberg, Richard Serra, Donald Judd and Kenneth Noland (among many others), many of whom were his former students. However, neither of these two factors have an obvious connection to *Interaction of Color*, at best only indirectly. For Albers did not devote himself to the focus on colour, as it resulted in *Interaction of Color* and as it was expressed in his artistic work - especially the series *Homage to the Square* - until after his Bauhaus period, and even the oeuvres of Rauschenberg and Serra did not become famous for their treatment of colour. Just as many of Albers's students later became famous artists, other students of his became excellent teachers like Lois Swirloff or Sewell Sillman who later continued his teaching at Yale University [7 p.95]. The latter would therefore have much greater justification to be mentioned in connection with *Interaction of Color*, but it is characteristic of the often all too one-sided view of Albers that this is not usually done, for teachers just contribute less than artists to mythmaking.

But Albers himself also promoted this mythmaking, for he deliberately concealed the majority of sources from which he was inspired and influenced. With the words: "*I descend from my father, and from Adam, and that's enough ... I come from a craft background,*" he likes to dismiss all outside influences [8 p.24]. Incidentally, this applies equally to his development as an artist and as an educator. Accordingly, the sources from which he drew for his colour didactics also remain mysterious, which further enhances the legendary character of *Interaction of Color*, but greatly complicates research efforts to uncover possible influences and often lends them a speculative character. This is true of both Albers's time at the Bauhaus and the period before it, which, however, has only recently come increasingly into research focus with two very insightful works [7-8].

Possible influences from the Bauhaus period

Obviously, already strongly influenced by the legendary character of the work and the artist's personality, the focus of research is mainly and often very one-sidedly on Albers's Bauhaus period, in which the main influences of his later teaching approach to colour are sought. [4 p.xii, 9 p.165-171, 10 p.152]. In this regard, the following should be noted:

Albers came to the Bauhaus in 1920, where he attended Itten's preliminary course, whom he replaced three years later, first as Young Master (Jungmeister), before teaching as Bauhaus Master (Bauhausmeister) from 1925 to 1933. During his short time as Itten's student, Albers certainly also became familiar with some aspects of Itten's colour teaching [10 p.152], the content and extent of which, however, could hardly be reconstructed until today, and of which Albers - according to his own statement - was also only slightly impressed [7 p.196-197]. After he had taken over the preliminary course in 1923, Albers himself did not teach a course with the focus on colour throughout his entire Bauhaus period - a whole decade, after all.

Over time, however, something like colour instruction became established in various other courses led by Paul Klee, Wassily Kandinsky, and Ludwig Hirschfeld-Mack, among others, each with a different focus and orientation [9 p.9]. Albers certainly had knowledge of this teaching by his colleagues, although no direct insight as an active course participant. In addition, Wilhelm Ostwald gave lectures on his theory of colour at the Bauhaus in 1927, which Albers also had the opportunity to attend.

The Bauhaus also dealt with literature on colour theory, whereby the works of Goethe, Runge, Schopenhauer and Hölzel as well as those of Chevreul and Bezold are mentioned [7 p.195-197, 10 p.149-152]. They deal with, among other aspects, simultaneous contrast and the Bezold effect, which must have been of particular interest to Albers as is clearly shown by his later *Interaction of Color*. However, Albers need not have been at the Bauhaus specifically to become familiar with these even then generally known and widespread works. Albers always kept up to date with colour theory literature and even had current German literature on the subject obtained and forwarded to him immediately after his emigration to the USA [7 p.255].

Albers's preoccupation with colour at this time probably owed more to his artistic interest and had less to do with his teaching activities at the Bauhaus. The latter flowed, indirectly at best, into *Interaction of Color* through his teaching method. This was characterised by a consistently inductive approach. The starting point was not imparting theoretical knowledge, but materials that were to be explored experimentally in an open and creative atmosphere and exploited with regard to their creative use. Intensive perception, the urge to explore, and the collection and exchange of individual experiences based on concrete materials (Albers came from a family of craftsmen) were equally a challenge and the goal for the students [7 p.73-76].

Possible influences from the time of Albers's training years – as an artist and drawing teacher

The influences prior to his Bauhaus period, when Albers completed his training as an artist and as a drawing teacher at different stations, may be significantly greater on his later preoccupation with colour at Black Mountain College and at Yale than those from his Bauhaus years.

Thus, already in Albers's early artistic work, especially in the still lifes from the years 1914 to 1917, a deliberate exploration of colour can be detected [8 p.22]. In 1919, in the painting class of the renowned

Franz von Stuck (1863-1928) in Munich, Albers's last station before the Bauhaus, Albers remarked that his teacher “did not reach him” [8 p.35]. In retrospect, however, he admitted that he had learned a lot from Stuck, especially concerning colour, and that Stuck's statements about the properties of colours having different spatial effects on the canvas can be found in his *Homage to the Square* paintings [8 p.25].

Research has not yet tapped into the colour didactic literature that Albers may have studied during his training years. In the course of his training to become a drawing teacher in elementary schools, Albers was very likely already familiar with the 19th-century works of Goethe, Runge, Schopenhauer, Chevreul and Bezold, which were also discussed at the Bauhaus (see above). In addition, however, there were numerous special textbooks for drawing lessons, often containing chapters on colour with innovative suggestions for teaching, which Albers must also have been very interested in at the time.

Thus, colour exercises for studying the effect of nested colours (Figure 2), which seem like ornamental forerunners of the *Homage to the Square* series, can already be found in the *Zeichenunterrichtsbrieft* (drawing instruction letters) of the Komotau drawing teacher Franz Ludwig Rodt [11]. These letters appeared in four editions from 1907 to 1914 and were thus current and well-known at the time of Albers's training. The examples are also connected with the request to make further attempts of this kind of colour combination with evenly-coloured shapes, which already anticipates the method of Albers's later teaching.

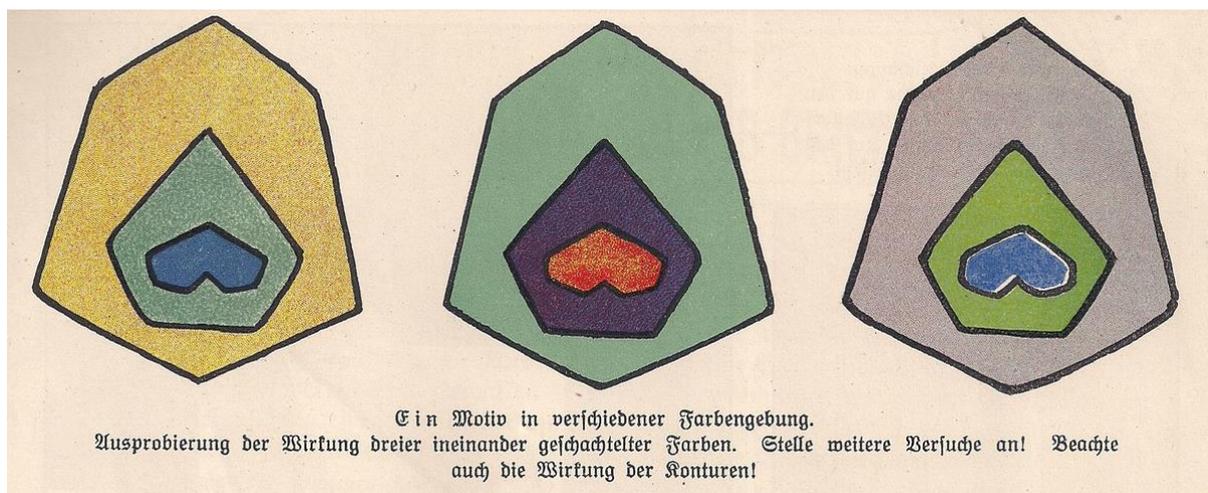


Figure 2: Exercise by Rodt on studying the effect of three nested colours for drawing lessons in schools [11 p.103].

Even if this is only a striking coincidence, this example shows that the drawing teachers of the time, who were characterised by a strong desire for reform and innovation, also contributed their own ideas on colour and the use of colour materials in their publications, which could well have been inspiring and in part even formative for Albers.

Rodt's example is only one of many that show striking parallels to aspects of colour didactics or complexes of themes that Albers may have taken up. *The Free Studies* from *Interaction of Color* (1 p.XVIII) with compositions mostly of self-selected, but once or twice during a course with prescribed colours in the form of a so-called *restricted palette*, seem like the free adaptation of the chapter on *The Composition of Colours (The Free and the Restricted Palette)* from the work *Der Weg zur Farbe (The Way to Colour)* by the Austrian drawing teacher and reform pedagogue Richard Rothe (1885-1955). This book was published in 1928 [12 p.30-37] in the first edition and in 1931 in the second edition. Rothe writes about the tasks with the restricted palette:

"All these tasks lead the student away from the compulsory use of the local colour (Dingfarbe) to a freer use, he learns to recognize the expressive and mood value of the colour. He sets out to reproduce certain colour combinations because he has had the opportunity to become acquainted with the special effects of certain colour complexes precisely with these tasks. In this way, the student should be shown ways to develop freely, he should be given glimpses of new perspectives. However, this should only be given as a suggestion, not as a rule. It is to say: try how far your freedom reaches; not everyone has to go the same way, try to find your own." [12 p.36]

Albers could easily have subscribed to all of this, and it suggests that not only before his time at the Bauhaus, but also during and especially after it he became acquainted with didactic literature on drawing instruction, and was inspired by colour didactic tasks and problems with regard to his colour teaching in the USA.

This applies in particular to the work of Philipp Franck, who was Albers's teacher before his Bauhaus period, and who published his guidelines and experiences on teaching drawing only in 1928 [13] and around 1930 [14], a few years before Albers emigrated to the USA. Philipp Franck (1860-1944) is one of the few whom Albers explicitly mentions and whose reformist pedagogical approach he particularly appreciates [7 p.11, 7 p.31-33]. Like Albers himself, Franck was an artist and educator who, as director of the Königliche Kunstschule zu Berlin, which Albers attended from 1913 to 1915, was responsible for the training of drawing teachers, and who was instrumental in fundamentally reforming drawing instruction in Prussia. In line with the so-called Kunsterziehungsbewegung (art education movement) at the beginning of the 20th century in Germany, which radically broke with the old teaching methods in which mechanistic copying of templates predominated, Franck also advocated the precise observation and representation of natural objects according to form and colour (Figure 3).



Figure 3: Two examples from Philipp Franck's so-called training school (Übungsschule) with depictions of fish [14 plate I] and doves [14 plate XLIV], executed by 13-year-old pupils in very differentiated colourfulness with glued coloured papers.

Even if the associated learning to see was on everyone's lips in reformist pedagogical circles at the time, Franck concedes it a central role by propagating the necessity of a proper education in seeing -

quite in accordance with Albers's later credo 'to open eyes'. For Franck, learning to see means to adjust one's vision comparatively and to use it correctly in this sense [13 p.10]. Just like Albers later, Franck considers exact, critical and comparative seeing as the primary source of knowledge, which makes children not only capable of cognition and enjoyment, but also independent, purposeful, energetic and inventive and thus contributes to the release of their individual creative powers [14 p.81].

What Albers continues to share closely with Franck is learning on the basis of personal experience instead of imparting book knowledge. The starting point here is the craftsman's handling of material, because - according to Franck's view - although not every good craftsman is an artist, art grows out of craft, and craft in art consists in the knowledge and mastery of material [13 p.7-9]:

"Children must realize that purpose and material determine form. They must get a feeling for material and learn to think in the material." [14 p.19]

Studying materials in this way, experimenting with them, observing their behaviour closely, and exploring their creative potential is part of Albers's fundamental teaching method throughout his life.

Furthermore, Franck brought up the then revolutionary idea that teachers should not only take children seriously [13 p.21], but could also learn from them [14 p.9]! It was exactly this kind of learning from each other that Albers practiced in his courses and it is not without reason that he thanks his students in the dedication to *Interaction of Color*, which came about in exactly this way [7 p.194-251].

In addition to these more general pedagogical aspects, however, Albers also owes Franck important impulses for dealing with colour, without which *Interaction of Color* would probably not have come about in this way. Thus, it is first of all significant that Franck establishes the necessity of a training of seeing precisely by using the example of the relativity of a specific colour, which can appear different depending on its environment. Franck considers this phenomenon, the explanation of which he attributes to Goethe, to be equally significant both scientifically and artistically, since it makes us aware of the contradiction between knowing and seeing, between mind and body, and this has important implications for the education of seeing [13 p.23]. Franck developed a method of dealing with colour as directly as possible and without disturbing side effects by collecting immediately available coloured illustrative material that can be easily combined with one another, that is also inexpensive and easy to handle, namely coloured paper that is collected in a box for teaching purposes, which became very extensive over time:

"This enormous colour box was created by first filling it with many coloured papers and then adding new papers to the leftovers. One kept an eye out for coloured papers, collected, in addition to the coloured glossy papers bought in stores, which were often not very beautiful, also duller and richer colours, as they were to be found, for example, in the crepe papers of the gardeners in a large selection, picked up every finely tinted wrapping paper, as well as the linings of the envelopes and all kinds of bags, as the merchant dispenses them. Thus the number of colours grew with the leftovers from year to year. Transparent tissue papers were also used to paste over the sharp and garish colours, and often quite strange artistic effects were achieved with the transparency of these papers." [14 p.72]

Albers adopts this kind of colour box 1:1 for his colour lessons in the USA, only with him it consists of a large suitcase full of coloured papers, which Albers brings to the classes and which immediately unfolds inspiring potential among the students after it is opened [7 p.198]. As a primary access to colour, Albers prefers coloured papers to paints for the same reason as Franck, because they save time and don't expose students to the discouraging experiences in mixing. In addition, no colour deviations occur and, above all, they arouse a permanent and active working interest [1a p.III]. It remains to be noted that *Interaction of Color* contains a conspicuous number of panels on transparency effects of colours, which are hardly mentioned in colour-theory or didactic literature, in contrast to simultaneous contrast or free colour compositions. This interest in transparency effects may be largely due to the fact that

Albers worked a lot with coloured glass, especially during his Bauhaus period; however, it is also echoed in the transparent tissue papers from Franck's colour box, which led to the strange and special artistic effects he emphasised.

Striking parallels to Paul Renner's colour didactic principles

In the text section of *Interaction of Color*, Albers expresses harsh criticism right at the beginning, which seems strangely inserted and is also personally tinged, without, however, naming the persons he meant.

In one case, the criticism is at least understandable insofar as it refers to the form of presentation of the shapes of uniform colour, with which certain effects are to be clarified, which also counts as one of Albers's great didactic achievements and is an outstanding quality feature of *Interaction of Color*. In concrete terms, Albers criticises the form of presenting simultaneous contrast on fields of squares of the same size, each with a smaller square placed in the centre, and attests to its author a lack of seeing and understanding [1a p.IV]. This refers to Albers's former teacher at the Bauhaus Johannes Itten (1888-1967), whose work *Kunst der Farbe* (*Art of Color*), published only two years earlier, contains such representations [15 p.87].

Before Itten's publication of *Kunst der Farbe*, there was only one other work in post-war Germany that was devoted in detail to the treatment of colour for drawing or art instruction, and Albers's criticism is also directed against its author [1 p.II]. This was the artist, drawing teacher and renowned typographer Paul Renner (1878-1956), who had already been dealing with the subject since 1929 with a series of essays on colour and the teaching of colour [16-18], which was then published again the following year in a summary [19] and in full length almost unchanged as a chapter in a book [20], before he published a significantly expanded version under the title *Ordnung und Harmonie der Farben*, which had been on the market since 1947 [21]. And while Albers was working on the completion of his *Interaction of Color*, almost at the same time the editing of an English-language version of Renner's work took place, which was then published in 1964 under the title *Color Order and Harmony by Reinhold* in New York [22] and simultaneously underwent a second German edition.

The only strange thing is that in his *Interaction of Color* - that is, a work that deals exclusively with colour - Albers does not target Renner with regard to specific colour aspects but criticises him for the poor legibility of his Futura sans serif typeface, with which Renner had become successful and famous. Albers here is accusing Renner (without mentioning his name) with lack of competence in the field of both the history and the practice of typography [1 p.II]. The motivation for Albers's defamation of Renner in the field in which Renner had his greatest merits, without going into his colour publications, remains open. The fact is that Albers has a great deal in common with Renner, both in terms of the artistic significance of colour and in terms of colour teaching. Thus, with regard to the artistic-creative handling of colour, Renner pleads for the gathering of personal experiences instead of following rules and colour recipes [20 p.184-185] and the highest goal is learning to see, to open the eyes of the students in order to recognise the different appearances that result from the relativity of colours and to take them into account accordingly in artistic-creative terms. In order to demonstrate to his students this relationship of tension, which arises again and again through changing neighbourhoods of colours, he uses colour papers in the classroom [20 p.186-187]. Renner speaks in this context of the mercurial character of the colours [22 p.20] and also uses the term 'interaction' for this [22 p.72]. Thus, Renner not only has some points in common with Albers, but the basic didactic approach is the same in both -

with the important difference, however, that Renner clearly precedes Albers. The following comparison of statements from the two, as shown in Figure 4, should clarify this.

<p>Paul Renner (1878 – 1956)</p>		<p>Josef Albers (1888 – 1976)</p>	
<p>Augen öffnen To open eyes</p>			
<p>„All our teaching methods can only have this one goal, that they open the eyes of the student; that they teach him to see colors; [...] ... to a critical and productive seeing. ...“ (1930) [19 p.40]</p>		<p>„To open eyes. That was my goal and it still is. This is exactly what I want to achieve with all my pictures: Seeing should become active. Not just passively let pass, but see for yourself, search, feel, recognize, experience. Yes: You can learn to see creatively!“ (1970) [5 p.11]</p>	
<p>In der Realität sind alle Farben relativ Color is the most relative medium in art</p>			
<p>„Only in the idea there are absolute colors. In reality, all colors are relative.“ (1930) [19 p.39]</p>		<p>„In visual perception a color is almost never seen as it really is – as it physically is. This fact makes color the most relative medium in art.“ (1963) [3 p.2]</p>	
<p>Wechselwirkung der Farben Interaction of Color</p>			
<p>„Yes, we are faced mostly with an extremely complicated system of reciprocal effects (Wechselwirkungen). And, to see through all these relationships, and to master them, if possible, as an artist – that is the task with which every painter, even the most gifted, is occupied until the end of his days.“ (1947) [22 p.76]</p>		<p>„The purpose of most of our color studies is to prove that color is the most relative medium in art, that we almost never perceive what color is physically. The mutual influencing of colors we call – interaction (Wechselwirkung).“ (1963) [3 p.66]</p>	
<p><i>In German, Albers uses the term "Wechselwirkungen" for "Interaction", while the English translator of Renner translates his term "Wechselwirkungen" instead of "Interaction" with "reciprocal effects".</i></p>			

Figure 4: Comparison of statements by Renner and Albers.

Albers certainly owes much to Renner, but Renner's Color Order and Harmony was and is no competition to Interaction of Color. Renner gives only one central colour exercise to sensitise to colours and colour combinations, the results of which are strongly reminiscent of Albers's free exercises carried out in stripes, and which, moreover, are only illustrated small and in not very appealing print quality of the post-war period (Figure 5), with which Renner is satisfied [22 p.74]. Albers's achievement, on the other hand, consists precisely in the presentation of excellently prepared and excellently printed plates, which have emerged from a multitude of different experiments and exercises, and which stimulate one's own research. With Renner, the description of the method is the starting point for learning; with Albers, it is the results themselves that not only invite but also demand seeing!

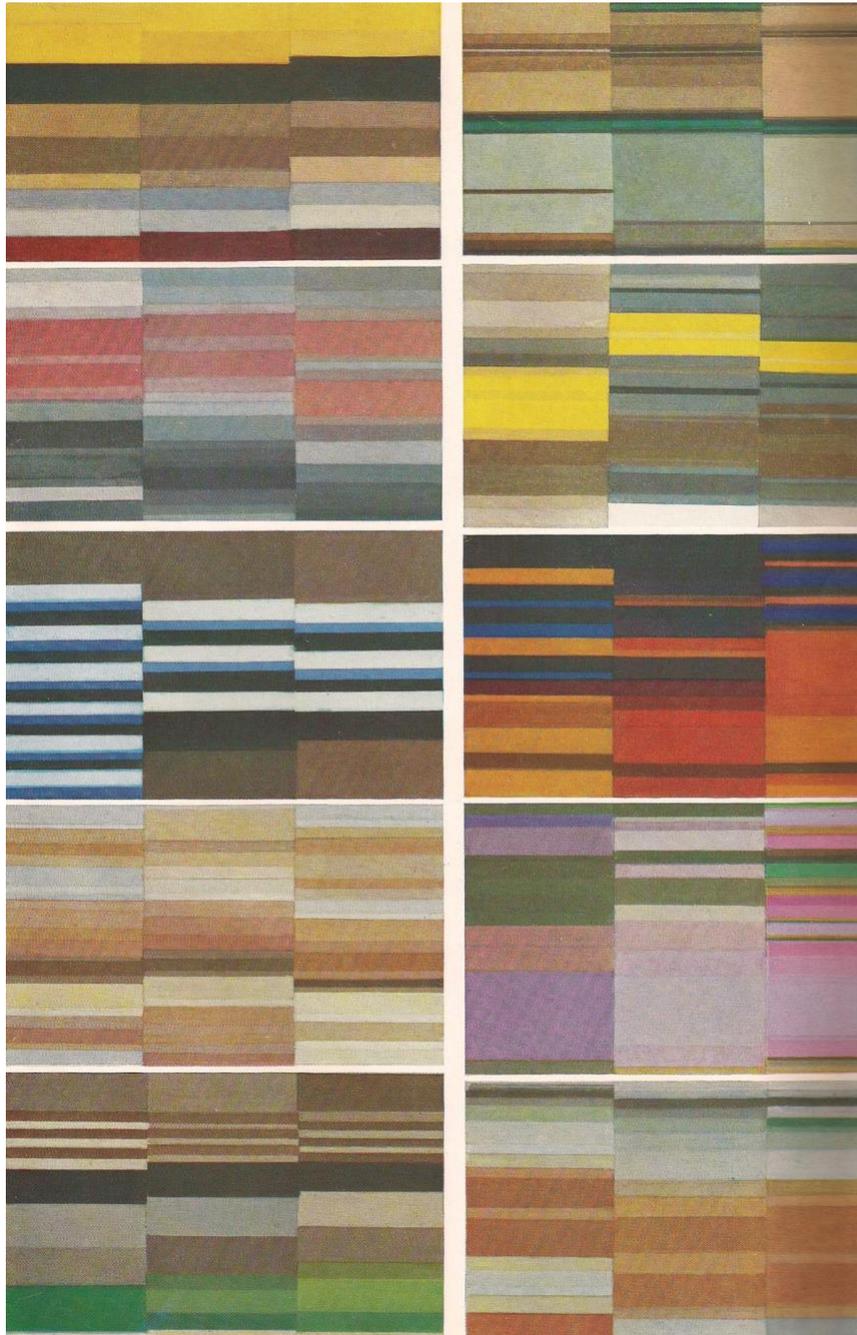


Figure 5: Ten examples of student work showing colour analysis of natural objects from memory with progressive refinement of the colour combinations in two further stages [21 p.76-77].

Albers's concept of colour

Renner was already closer to our contemporary view than Albers as far as his conception of colour was concerned. Renner, who had studied Hering as well as the phenomenologists Husserl and Schapp, consistently regarded colour in the sense of Goethe as a "sensual quality", which he clearly separated from the physical level with *its wave lengths and the rate of vibration of the 'coloured' light rays* [22 p.26]. For him, the reality of colour - quite in line with the contemporary view - is on the level of appearance, and he quotes the German artist Max Liebermann, who said "*Only the illusion does not deceive.*" [22 p.18]. Throughout his *Interaction of Color*, Albers is also concerned with the 'real' colours, but in his view these are only apparent ones that do not exist in reality! For him, the reality level of colours clearly lies in physics, which is expressed particularly succinctly when he says:

"In visual perception a colour is almost never seen as it really is – as it physically is. [...] In order to use colour effectively it is necessary to recognize that colour deceives continually." [3 p.2]

Albers thus declared physics as the "factual fact" reference level in order to be able to explain the relative character of the coloured phenomena - "actual fact" - triggered by the physical colour stimulus, instead of recognising the result of the perceptual process as the real colour. The problems that such a view fundamentally entails are convincingly explained by the art historian Michael Bockemühl (1943-2009) in the course of his discussion of one of the *Homage to the Square* paintings:

"But how could the "factual fact" be distinguished from the "actual fact" in this structure at all? Which is valid: the first impression, the one after 5 seconds or the one after 20 seconds? If colour changes in such a way in the duration of viewing, which colour value is the factual fact? With what right is the red in one area distinguished from the brown in the other area, if both colours are encountered as one colour under different viewing conditions? [...]"

When colour appears, it can always only look like it looks. And if it looks different, then the colour is just different: but that means that it is actually a different colour." [23 p.81-82]

Bockemühl's quasi-phenomenological argumentation is in line with the nowadays generally accepted view that colour is not a physical but a psychological phenomenon. Albers himself, however, assumed all his life that what comes to our consciousness as colour is not reality but only a *Schwindel* (hoax) [7 p.195]. This, however, he has masterfully staged in his *Interaction of Color*!

Conclusion

Interaction of Color, with its portfolio as its centrepiece, is a hitherto unique didactic work and tool, which, however, can only develop its full usefulness for teaching in the sense of stimulating and motivating visual training in the two original editions authorised by Albers [1-2]. Of course, Albers's didactic legacy is not limited to the examples presented in *Interaction of Color*. Albers himself stressed the importance of discovering your own solutions and "variants" to the exercises - not copying the originals. As with every pedagogical tool, everything depends on the intelligence, sensibility and skill of its user.

The circumstance that Albers does not name most of the sources that inspired him to create various aspects of this work in no way diminishes his achievement as author, but it does of those he fails to recognise. Much research will be needed to trace all of these indirect participants and their possible influence on Albers's didactic legacy. One goal of this article has been to have at least exemplified this need for research.

The fact that Albers's work cannot be adopted unconditionally within the framework of contemporary colour didactics is shown by his traditional conception of the epistemology of colour, which, alas, is still the predominant one, especially in circles of art educators [24 p.120-122], which is why this aspect in particular should not be underestimated in the course of the exemplary function of *Interaction of Color* for contemporary colour didactics.

Albers's *Interaction of Color* is widely considered as an important written source, missing from hardly any bibliography of didactic works on colour. But, contrary to conventional colour literature, in *Interaction of Color* the text is only an accompaniment to the carefully screen-printed and didactically ingeniously presented panels!

Today's market prices prove that in the meantime the artistic character of the plates has surpassed their didactic appreciation. And indeed, the creation of *Interaction of Color* can hardly be separated from Albers's simultaneous work as an artist with his *Homage to the Square* paintings. In this respect, it is also explainable and understandable that Albers is viewed as a renowned artist and not as a researcher, in whose texts the traceability of the sources would be an essential quality criterion.

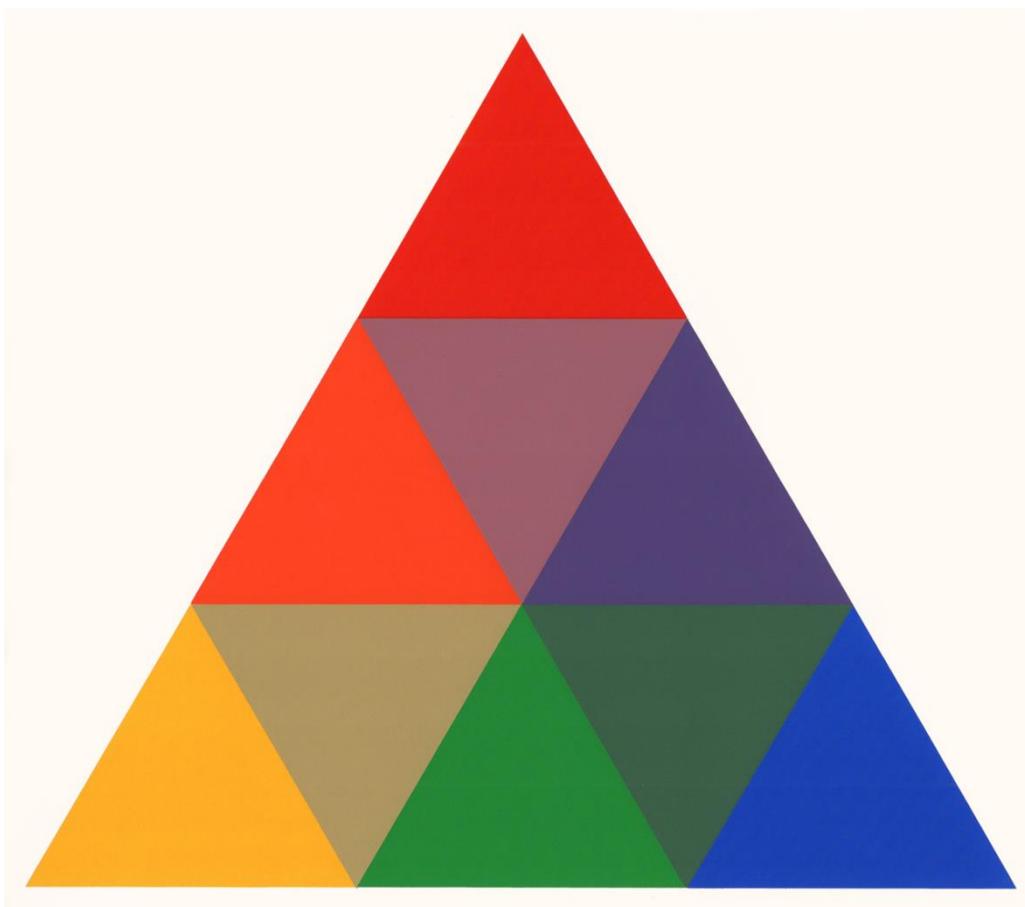


Figure 6: Screen-printed 9-part colour triangle by Josef Albers with primary, secondary and tertiary colours [2 plate XXIV-1], which, contrary to Albers's description, did not result from mixing the secondary paints, otherwise there would have been no olive green between green and violet.

One must never forget to emphasise that *Interaction of Color* has, probably more than any other art pedagogical work, drawn attention to the phenomenality of colour. But even Albers, as the colour theorist and colour educator Aemilius Müller (1901-1989) has already noted [25 p.26], was not completely free of mistakes in his own field. For example, in the colour triangle (Figure 6), the tertiary colour mixed from violet and green does not result in a blue-grey as he asserts in the German edition [2b p.45], but in olive green, which shows that here he did not live up to his own credo of trying things out for himself and looking closely, but obviously relied on inaccurate theoretical statements that were widely circulating at the time [26 p.45], which, however, brings him back into the sympathetic sphere of the normal human being.

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