Expression and Sensibility

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How to secure the quality of artists' paints? Towards the regulation of artists' paints in Germany

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ABSTRACT Disastrous experience with the poor condition of 19th-century German paintings led to a demand to create works of art of higher durability. Therefore, from the end of the 19th century in Germany, serious efforts were made to regulate the quality of artists' materials. As all initial efforts had been unsuccessful, the topic received increased attention at a Munich-based institute, the Doerner-Institut (now the Doerner Institut). From 1937, the institute focused on the regulation of artists' paints, which gained high priority in Nazi Germany. This contribution describes the ultimately unsuccessful attempts to secure the quality of artists' paints in a period of dictatorship and war.

Introduction

Discussion on the durability of paintings, the stability of artists' paints, artists' education and appropriate painting techniques became a key topic in the late 19th and early 20th century due to innumerable cases in which paintings declined into a ruinous state within a short time. In Germany, this discussion is associated with a number of leading personalities active in artists' paint manufacture and use, such as Adolf Wilhelm Keim (1851–1913), Alexander Eibner (1862–1935), Wilhelm Ostwald (1853–1932), Max Doerner (1870–1939), and the Deutsche Gesellschaft für rationelle Malverfahren (German Society for the Promotion of Rational Painting Techniques, hereafter referred to as the German Society).[1] During the so-called Third Reich, the quality of artists' paints and appropriate painting techniques became a central issue of the Doerner-Institut (since 2004 the Doerner Institut), established in Munich in 1937. At that time, Munich was the German centre for the education in painting and painting techniques. The absorbing history of this institute and its manifold activities has been published recently (Burmester 2016). Based on 16,000 hitherto unknown primary documents which were bequeathed to the author in 2005, and about 1,000 photographs, all of them unpublished, the book drew attention to the topic of this contribution, the so-called artists' paint regulation (*Künstlerfarbenverordnung*) (Burmester 2016: 107–14, 344–52, 505–19).

Attempts at regulation during the Weimar Republic

As has been recently described in the context of the art market and the development of art academies, the production of art in the late 19th and 20th century coincided with a significant crisis of materiality (Gramlich 2016). Parallel to this development, from the mid-19th century onwards, the industry produced artists' paints of complex compositions that were mostly unknown to the practising artist. From around 1900, German-made paints frequently contained synthetic organic pigments (Schäning 2010: 25–40; Lutzenberger 2009: 7–10, 169–87), and from the 1930s, media based on synthetic resins (Bewer 2010: 144 ff.; Pohlmann 2013: 97; Burmester 2016: 519–26). Disastrous experience with the poor condition of 19th-century paintings therefore led to an imperative to create artworks of greater durability. Efforts to regulate artists' paint began in the 1880s when, with the involvement of science, Keim first initiated discussion on paint quality (Kinseher 2014: 117 ff.).

One of the driving forces behind the intended legal control was indisputably the second Munich paint congress in 1921 (Anon. 1921; Trillich 1921). During this congress, a contribution by the chemist, Nobel Prize winner, philosopher, and amateur painter Wilhelm Ostwald on the scientific and practical aspects of colour, in which he presented his colour charts as well as a set of so-called Ostwald tube paints produced by Pelikan (Hanover, Germany), provoked a storm of protest (Anon. 1921: 1). Members of the Munich Academy argued strongly against Ostwald's *'lächerliche Farborgel'* (stupid colour organ), the *'Sozialisierung des Farbsehens'* (socialisation of colour vision), and particularly Ostwald's light-sensitive paint set (Doerner 1921a).[2] The protests bore fruit and Pelikan decided to withdraw Ostwald tube paints from the market until a more stable set was available.[3]

The Ostwald case suggested the desirability of legal control of the quality of artists' paints. Authorised by the Reichswirtschaftsverband bildender Künstler Deutschlands (Reich Trade Association of German Visual Artists) and by the publication of his influential book *Malmaterial und seine*

Figure 1 Max Doerner. (Photo: Heinrich Hoffmann, published in Liskowsky 1937)

Figure 2 Alexander Eibner. (Photo published in Roßmann 1935)

Verwendung im Bilde (Doerner 1921b), published in English as *The Materials of the Artist and their Use in Painting* (Doerner 1934), the painter, copyist, restorer and specialist in painting techniques at the Munich Academy, Max Doerner (Fig. 1), entered the scene.[4] Doerner and the chemist and specialist in painting techniques, Alexander Eibner (Fig. 2), were ordered by the Bavarian Ministry of Education to prepare a draft regulation for artists' paints. However, the further their cooperation proceeded, the more strained the atmosphere became, and finally both failed. Eibner and his laboratory (the so-called Versuchsanstalt) (Fig. 3) however, were not the only issue for Doerner. In December 1922, on the occasion of a meeting of the German Society, Doerner declared that artists' interests were actually being hindered not only by Eibner and his Versuchsanstalt, but also by the Society, which had so far been unsuccessful in formulating such a regulation (Burmester 2016: 107–14). In short, the Weimar Republic (1919–1933) never issued a regulation: due to personal disagreements between all parties involved, the goal of regulating the quality of artists' paints was not achieved in the 1920s.

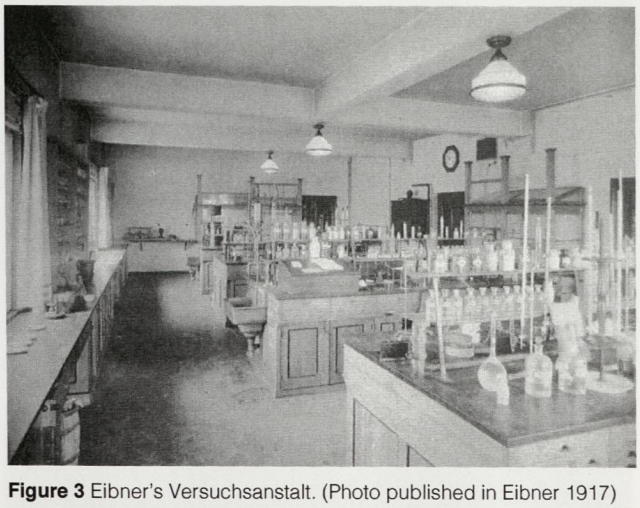

Figure 3 Eibner's Versuchsanstalt. (Photo published in Eibner 1917)

Failing in Nazi Germany

Only 15 months after the takeover by the Nazis in January 1933, the topic of the regulation of artists' paints gained new relevance. In June 1934, Doerner was asked by the Reichskammer der bildenden Künste (Reich Chamber of Fine Arts) to draft a concept for a Deutsche maltechnische Anstalt (German Institute for Painting Techniques) located in Munich.[5] The regulation of artists' paints was a key element of Doerner's concept for this institute.[6] Some years later and in line with general political development in Nazi Germany, not only was a regulatory control of all paint materials demanded, but also research into domestic raw and substitute materials (*Ersatzstoffe* or *Austauschstoffe*) as these were now seen as further relevant programmatic elements.[7] This new institute's overall task in the future was 'to secure the safety of materials'.[8]

In July 1937, the Reichsinstitut für Maltechnik (Doerner-Institut) (Reich Institute for Painting Techniques

Figure 4 Doerner-Institut at Leopold Str. 3 in Munich, *c.*1937–38 (Photo: Hans Roth (?), GRDI)

Figure 5 The optical emission spectrograph, 1949. (Haus der Bayerischen Geschichte Augsburg, Bayer. Pressebild)

(Doerner-Institut)) was inaugurated (Fig. 4). The small opening ceremony took place on the same day as the opening of the Nazi exhibition on the so-called *Entartete Kunst* (degenerative art). Both opening speeches were given by the painter Adolf Ziegler (1892–1959), an exponent of Nazi art, former student of Doerner and frequent companion of Adolf Hitler until 1939. Ziegler had received a full professorship at the Munich Academy in April 1934 (which had always been refused to Doerner) and was appointed president of the Reich Chamber of Fine Arts in 1936. He took on leadership of the institute after Doerner's death in March 1939 and from that time on, the institute and its staff became deeply involved in Nazi cultural politics (Burmester 2016: 437–554).

The changed political context from 1933 onwards speeded up all efforts on regulation: only three months after the opening, the institute's chemist Richard Jacobi (1902–1982) submitted a first draft for the regulation of artists' paints. Jacobi, a highly skilled former doctoral student of the Nobel Prize winner Heinrich Otto Wieland (1877–1957), can be seen as the intellectual initiator of all later drafts. Still true to Nazi party principles, Jacobi mentioned that the aim of the regulation should be to guarantee that paintings of the '1,000-year Reich' would survive the centuries to follow, as testimonies of the artistic production of Nazi Germany.[9] Jacobi's optical emission spectrograph (Fig. 5), set up in 1937, turned out to be a powerful tool for examining all tube paints on the German market. This study included inorganic pigments and fillers,[10] but no organic pigments, the so-called tar colours (*Teerfarben*). Although these were responsible for poor lightfastness and serious bleeding of colour, there were no appropriate analytical methods available to Jacobi at this time for characterising tar colours.

His analytical work involved colour makers such as Schmincke, Neisch, Düll and Behrendt, all of whom had different interests: Schmincke (Düsseldorf), for example, hoped for a recovery of painting technique.[11] Officials expressed their doubt that tubes from one of the colour makers involved contained what was labelled on the tube (*Feinste Akademie-Oelfarbe*).[12] Therefore, all colour makers were urged to reveal their paint recipes. Düll (Munich), however, attempted to keep the constituents of his tube paints secret, but eventually provided Jacobi with information on the suppliers of his paints and paint materials.[13] The small workshop of Fritz Behrendt (in Grafrath near Munich), on the other hand, successfully held back his business secrets (Kinseher 2014: 137, n. 673).[14] Some months later, and possibly as a consequence of this behaviour, all his paint media were confiscated. In spite of an intervention by the Doerner-Institut with the officials in Berlin, Behrendt had to cease production.[15]

While Jacobi examined each tube, his colleague, the painter Anton (Toni) Roth (1899–1971) and his paint technological department (Fig. 6) painted out many samples on canvas and rigid supports. Fresco techniques were tested on an outside wall (Fig. 7) shared with the Munich Academy. All experiments followed Doerner's dictum to '*Verfahren der Alten Meister auf moderne Malerei* übertragen' (translate the procedures of old masters to modern painting) as noted in Doerner's hand on one of the test panels. Doerner aimed to achieve the appearance of old master paintings with modern materials. In a typical approach, test panels were complemented by free sketches or copies of old master paintings to verify the applicability of the paint formulas in practical painting.

By 1939, the abovementioned substitute materials had become a serious issue in the daily life of Nazi Germany, including art production. Instead of linen canvas, pulped fabric was offered to artists by Pelikan.[16] Manganese black was no longer available, which turned out to be a handicap for Nazi monumental painting (*Monumentalmalerei*) on outside walls.[17] According to an official order, the common paint tubes made from tinned lead were to be replaced by aluminium-only tubes within three months.[18] This led Schmincke to express its concern that the high reactivity of aluminium with some of the paint components, as well as its low plasticity, could cause the tube to fracture. In the company's view, this and the poor colour permanence would be strong arguments for the consumer to buy foreign, non-German products.[19] Linseed oil and poppy oil were rationed, thereby increasing the interest in synthetic media (Fig. 8) such as Immunin (Burmester 2016: 519–25), a polyvinyl acetate.[20]

Despite these difficulties, in 1941, the pressure increased to create a final draft of the legal regulation of artists' paints. In many respects, this year was a turning point for Hitler's regime: at the institute, an incisive change in staff compromised all activities. Under obscure circumstances, Jacobi and Roth were forced to leave the institute (Burmester 2016: 443–8). Jacobi was replaced by Friedrich Müller-Skjold (1899–?), a chemist from Berlin, and a co-worker of another of Doerner's former students – the painter, expert in technical photography, specialist in painting techniques, and professor at the Academy for Fine Arts Berlin since October 1933, Kurt Wehlte (1897–1973). He and the art historian, restorer and painter Fritz Haeberlein (1895–after 1969) worked on a second draft for the regulation of artists' paints (*Künstler-Werkstoff-Verordnung* or *Künstlerfarbengesetz*).[21] Haeberlein had been active at the Doerner-Institut as an art historian and specialist in documentary sources since 1940. The legal regulation for artists' paints now turned into a prestige project, which brought together leading political circles including the SS intelligence service (Sicherheitsdienst SD), and the Reich Ministry for Economy, as well as all colour makers and paint industries. To ensure the success of what was now deemed to be an issue of national interest,[22] both Müller-Skjold and Haeberlein were exempted from military service.[23]

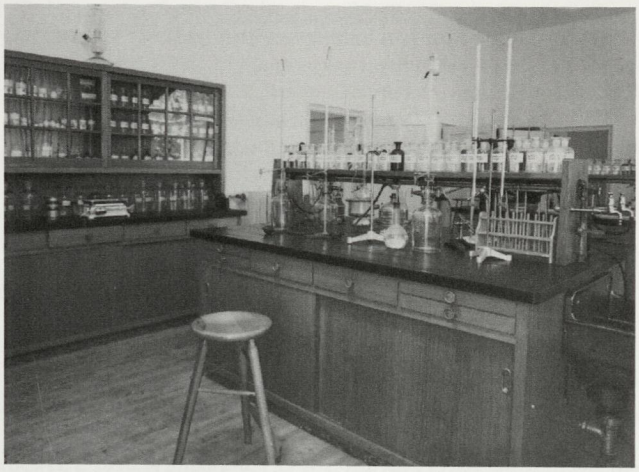

Figure 6 Paint testing laboratory at the Doerner-Institut, 1937–38. (Photo: Hans Roth (?), GRDI)

Figure 7 Fresco test areas on the wall shared with the Munich Academy. (Photo: Hans Roth (?), GRDI).

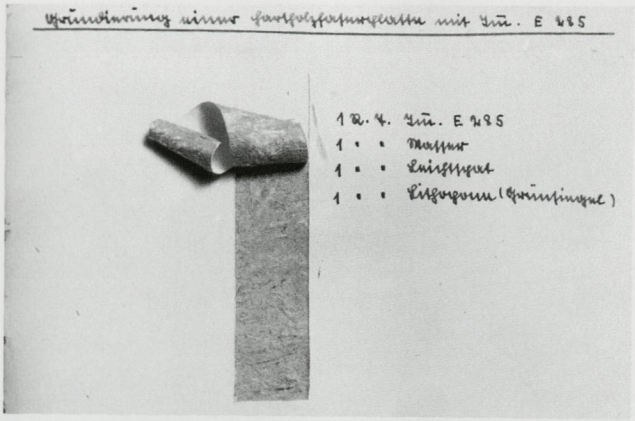

Figure 8 Immunin test panel. (Photo: Hans Roth (?), GRDI and ARDI 18, 1 and 2)

Like his predecessor, Müller-Skjold analysed many tube paints from the German market, including those from occupied territories such as products from Lefebvre-Foinet and Lefranc (both Paris, France) and Talens & Zoon (Apeldoorn, The Netherlands). Accepted paints could now contain tried and tested tar colours, which had always been explicitly excluded in former drafts.[24] As specified in March 1942, 48 different colours and tones were seen as sufficient.[25] Later, the war economy made it necessary to reduce the number to 26 colours[26] – a huge reduction in comparison to the approximately 800[27] to 900[28] different colour tones available at that time on the German market. The regulated colour set was only to be sold to members of the Reich Chamber of Fine Arts, as stated by its president Ziegler.[29] This excluded 'degenerate' artists persecuted by the Nazis, such as Willi Baumeister (1889–1955), who since 1941 had not been allowed to paint or to exhibit (Burmester 2016: 507–8). The regulation of artists' paints was now intended to be used as a political tool.

As a consequence, the planned reduction in the number of colour tones forced many colour makers to withdraw products from the market. Surprisingly, most colour makers willingly accepted the plans for a radical reduction because the production of artists' paints caused huge problems. The general shortage of raw materials such as linseed oil, turpentine, beeswax and mastic created insurmountable difficulties for the industry, even for the Doerner-Institut, which worked under the protection of the government. For example, Schmincke declared a delivery of 54 eggs as 'decisive for the war effort' (*kriegsentscheidend*). The company expressed its fear that the will of the Führer would not be satisfied, and the 'valuable and long-standing effort to educate the artist towards a healthy and efficient painting technique would be in vain', if these 54 eggs could not be provided.[30] In another case, the institute, in reply to an enquiry from the Reich Chamber, estimated that for roughly 2,000 artists in German territory '250 kg chromium oxide' per year would be needed for green paints.[31] This, however, was far too much, as all metals were required by the defence industries for military production. The shortage was so serious that even the disputed aluminium tubes which had earlier replaced tinned lead tubes were now to be replaced by paperboard tubes with plastic caps.[32]

More and more paint was now being used for military purposes: Neisch delivered 85% of its egg tempera to the Wehrmacht and the defence industries.[33] However, due to the fact that many of the staff of the colour makers – both men and women – were sent to the front and the factories were being bombed heavily, paint production in Nazi Germany finally collapsed. In the end, even the abovementioned production of a reduced palette of 26 colour tones was an ambition that could not be realised. Years before this had been predicted by the agencies involved, which had suggested the postponement of any regulation of artists' paints until the end of the war.[34]

Despite all existing and anticipated difficulties during wartime, the fear of being ordered to the front encouraged the staff of the Doerner-Institut to continue work on the legal regulation of artists' paints. In mid-October 1942, Haeberlein personally delivered a final draft to the Reich Chamber in Berlin. However, Ziegler, who was to remain president of the Reich Chamber for only for a few more weeks, decided to bring together additional representatives of the pigment and paint industries. In February 1943, these new members of the working group bemoaned a lack of standardisation of the materials used for their paints.[35] This, as well as the absence of a definition for the term 'artists' paint', complicated all efforts for a regulation covering such paint.[36] It is hard to believe that the paperwork on the proper declaration of artists' paints continued until April 1944, when the norm RAL 840 K[37] of the Reichsausschuß für Lieferbedingungen (Reich Committee for Delivery Conditions) was finally issued. A governmental order of September 1944 reduced all artistic activity during wartime to a minimum.[38]

Conclusion

As in the Weimar Republic, the regulation of artists' paints never came into force during the so-called Third Reich. Due to serious shortages of raw materials between 1941 and 1945 all attempts to secure the quality of artists' paints failed, and the struggle for more durable artworks in Nazi Germany was lost.

Notes

The following abbreviations have been used: ARDI = Altakten Reichsinstitut für Maltechnik (Doerner-Institut) and GRDI = glass plates of the Doerner-Institut, both now at the Bundesarchiv Berlin; NMD = estate of Max Doerner (in private ownership), copies are held at the Doerner Institut, Munich.

1. Although 'efficient painting techniques' also conveys the sense of the original name in German (Kinseher 2014).
2. M. Doerner, Draft of a Resolution of the Academy of Fine Arts Munich, 16 February 1921, ARDI 53,4.
3. G. Wagner (Schmincke) letter dated 6 February 1922, ARDI 56,10.
4. Reichswirtschaftsverband bildender Künstler Deutschlands (Berlin) to M. Doerner, letter dated 18 November 1921, NMD Briefe/Notizen 1874–1931, p. 155.
5. E. Hönig to M. Doerner, letter dated 18 June 1934, NMD Briefe/Notizen 1930–1940, p. 360.
6. M. Doerner, letter dated 30 June 1934, ARDI 35,1.
7. M. Doerner to A. Pietzsch, letter dated 22 March 1937, ARDI 15,PQ.
8. 'um die Sicherheit des Materials zu verwirklichen', W. Grabow (Farbenfabrik Günther Wagner, Pelikan, Hanover) to M. Doerner, letter dated 5 June 1937, ARDI 56,10.

9. R. Jacobi to M. Doerner, letter dated 20 October 1937 and Draft of an Artists' Paint Regulation, October, ARDI 55,2.
10. R. Jacobi to M. Doerner at Glattfelden, near Zurich, letter dated 22 October 1938, ARDI 55,2.
11. Schmincke to the Doerner-Institut, letter dated 17 October 1939, ARDI 56,6.
12. Reichsverband der Werbungstreibenden (Berlin) to Doerner-Institut, letter dated 1 November 1938, ARDI 26,QP.
13. G. Düll (Georg Düll Farben- und Lackfabrik Munich) to M. Doerner, letter dated 3 December 1937, ARDI 56,33.
14. F. Behrendt to the Doerner-Institut, letter dated 28 January 1939, ARDI 56,5.
15. F. Behrendt to the Doerner-Institut, letter dated 9 November 1941, ARDI 2,7.
16. Pelikan to the Doerner-Institut, letter dated 8 November 1939, ARDI 56,10.
17. H. Neisch to the Doerner-Institut, letter dated 24 March 1939, ARDI 56,13.
18. Überwachungsstelle für unedle Metalle (Control Agency for Base Metals), Order 44 Regarding the Use of Base Metals for the Production of Paint Tubes, 24 August 1938, ARDI 56,6.
19. Schmincke, Memorandum on the Use of Aluminium Tubes for Artists' Paints, 7 January 1939, ARDI 56,1.
20. Schmincke to the Doerner-Institut, letter dated 30 September 1940, ARDI 56,6.
21. F. Haeberlein, *Antrag auf Erlaß einer Künstler-Werkstoff-Verordnung* (Request for a Decree of an Artists' Paint Regulation) worked out by the Doerner-Institut 14 October 1941, ARDI 55,3 as well as ARDI 65 and 66; F. Haeberlein to the Kriegswirtschaftsstelle im Reichsforschungsrat (War Economy Agency at the Reich Research Council), Berlin, letter dated 8 November 1941, ARDI 12a,1.
22. Doerner-Institut, Schedule of Responsibilities, 20 January 1943, ARDI 2,2.
23. See note 21, letter dated 8 November 1941.
24. Report 2 July 1941, ARDI 57,5.
25. A. Ziegler to the Reichsstelle für industrielle Fettversorgung (Reich Agency for Industrial Fat Supply), Berlin, letter dated 4 May 1942, ARDI 2,5.
26. Reich Chamber of Fine Arts Circular Letter No. 39 (including a list of 26 colour tones), ARDI 19,2.
27. A. Ziegler to the Reichsausschuß für Lieferbedingungen (RAL) (Reich Committee for Delivery Conditions), letter dated 9 July 1942, ARDI 2,5.
28. A. Ziegler to the Reichswirtschaftsminister (Reich Economy Minister), letter dated 4 March 1941, ARDI 55,2.
29. See note 28.
30. '... [die] wertvolle und langjährige Erziehungsarbeit [wäre ansonsten] umsonst gewesen, [den Künstler] wieder zu einer gesunden und rationellen Maltechnik zu erziehen', in Schmincke to the Reichsernährungsministerium (Reich Ministry of Nutrition), letter dated 19 November 1941, ARDI 2,6; F. Haeberlein to the Reichskammer der bildenden Künste (Reich Chamber of Fine Arts), letter dated 15 April 1942, ARDI 2,5.
31. A. Ziegler to the Doerner-Institut, letter dated 27 February 1942, ARDI 2,6; F. Haeberlein to A. Ziegler, letter dated 2 March 1942, ARDI 2,6.
32. F. Müller-Skjold to the Reichskammer der bildenden Künste (Reich Chamber of Fine Arts), letter dated 11 July 1944, ARDI 3,2.
33. F. Müller-Skjold, Report on Dutch Artists' Oil Paints *Driekruis Meesterklasse* in Distress Tubes from the Company Felix Mulder (Amsterdam) of 11 July 1944, ARDI 3,2.
34. Wirtschaftsgruppe Chemische Industrie (Chemical Industry Association) to the Reichswirtschaftsministerium (Reich Ministry of Economy), letter dated 17 April 1941, ARDI 55,2.
35. Verein Deutscher Bleifarbenfabrikanten (Association of German Lead Containing Paint Industries), Düsseldorf, to the Reichskammer der bildenden Künste (Reich Chamber of Fine Arts), letter dated 12 January 1943, ARDI 55,1.
36. A. Ziegler, note of 13 March 1943, ARDI 55,1.
37. Instruction for the Declaration of Artists' Paints RAL 840 K, first draft of October 1943 and second draft of March 1944, ARDI 55,1 and 65; RAL to the Doerner-Institut, letter dated 28 March 1944, ARDI 55,1; RAL to the Doerner-Institut, letter dated 29 March 1944, ARDI 55,1.
38. Deutscher Normungsausschuß (German Standards Association) to the Doerner-Institut, letter dated 4 September 1944, ARDI 32,1.

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