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## **Materials and Techniques of George Grosz: American Watercolors**

When George Grosz emigrated to the United States in 1933, the artist best known for his vitriolic satire of the German masses and ruling class experienced a paradigm shift along with the change of environment. “I had simply lost all interest in human weaknesses and individual foibles,” wrote Grosz in his autobiography, “And the further I drew away from them, the closer I felt to nature.”<sup>1</sup> Critics have struggled with Grosz’s American career, assigning the apparent division between the American and German works to a multitude of motives and circumstances. At best, most pay only passing interest in the drawings, watercolors, and oils made after 1933; at worst, they attribute these works to the beginning of a long decline of a once potent and passionate artist.

Grosz has inspired many scholars to draw upon psychological and biographical explanations for the complexities and contradictions in his work. However, images were not simply a means for Grosz to express his personality or politics; he cared deeply about the making of art, both contemporary and that of the past. Grosz was particularly passionate about the art of watercolor, so much so that shortly before his death in 1959 he began to write a book on watercolor technique. This study will attempt to view Grosz’s work in a formalistic sense; to this end I will focus on his late watercolors, which exemplify his concern for the specificity of materials and technique, as well as some idiosyncratic aspects of his development as an artist.

<sup>1</sup> George Grosz, *A Small Yes and a Big No*, trans. Arnold J. Pomerans, (London and New York: Allison & Busby: 1955), p. 185.

Watercolor was a medium that Grosz used in his earliest sketches, and continued to use throughout his life. His watercolors also represent some of the most drastic examples of the development and modification of his style in America. Grosz regarded his watercolors of Cape Cod, made during the summers between 1936 and 1945, as products of his closest communion with nature and the restoration of his self-identity as an artist. He recalled in his autobiography: “I would roam for hours through the dunes at Cape Cod and try humbly – omitting nothing and adding nothing – to record my feelings with what modest gifts I possessed.”<sup>2</sup> During this time he also experienced a renewed appreciation for the works of the German Old Masters; by looking at nature and drawing from life, he sensed a connection to what he felt was the “pure drawing” legacy of Dürer and Altdorfer. He emphasized the fundamentals of art-making in his classes at the Art Students’ League and focused on perfecting his own technique in watercolors and oils.

I had the opportunity to examine four of Grosz’s American watercolors from the collection of the Metropolitan Museum of Art. Three of the watercolors, *Dune Country*, *Pine Trees*, and *Trees and Underbrush* were painted in Cape Cod in the summer of 1939. The landscape of Cape Cod was a favorite theme for Grosz which he depicted mainly in



Fig. 1) *Dune Country, Cape Cod 1939*  
Metropolitan Museum of Art



Fig. 2) *Pine Trees, Cape Cod 1939*  
Metropolitan Museum of Art



Fig. 3) *Trees and Underbrush, Cape Cod* 1939  
Metropolitan Museum of Art

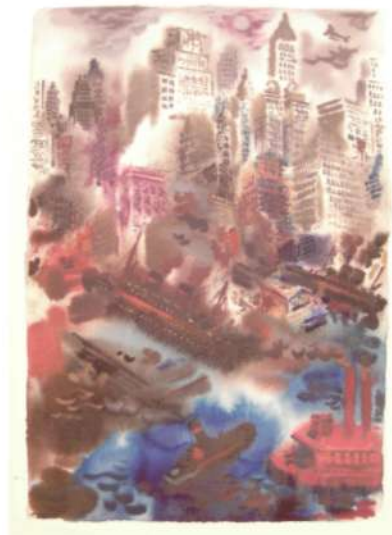


Fig. 4) *New York Harbor* 1936  
Metropolitan Museum of Art

drawings and watercolors, and, to a lesser extent, in oil. The fourth watercolor, *New York Harbor*, was painted in 1936 and depicts another recurring subject for Grosz.

These works were examined closely under magnification and under ultraviolet light. They were also examined *in-situ* using x-ray fluorescence at the Metropolitan Museum of Art and a sample was analyzed using FTIR at the Museum of Modern Art. In addition to these analytic methods, I made use of materials from the Archives of American Art, secondary source literature on Grosz, and an interview with Robert Cenedella, an artist, protégé, and former student of Grosz at the Art Students' League. It is my hope that an examination Grosz's materials and techniques can provide the art historian and conservator with a better understanding of the intent of these later pictures and their continuity with his earlier work.

The papers that Grosz used for watercolor vary from thick and rough to thin and smooth. According to Grosz's former student, Robert Cenedella, Grosz was "a fanatic about paper," and gave Cenedella a large stack of his favorite Whatman watercolor paper.

Grosz used only 100% rag paper which he bought from Joseph Torch on 14<sup>th</sup> street in New York City. The paper used for *Dune Country* and *Pine Trees* appears to be the same medium-weight, cold-pressed paper, whereas the paper for *Trees and Underbrush* is quite smooth and thin. The paper for *New York Harbor* is a thick and rough paper, and its bumpy texture has the visual effect of emphasizing the facets of choppy waves and skyscraper windows.

According to Cenedella, Grosz used pan watercolors rather than tubes, although he was not able to identify the brand of watercolor Grosz preferred. Sometimes he would prepare his papers with washes of one or multiple colors prior to painting, and sometimes he would do the washes on site. No underdrawing can be seen, but Grosz did often mark out the rectangular border of the painting with pencil, as can be seen in *Dune Country*, or lightly in watercolor as in *New York Harbor*.

In his small book on watercolor technique, Adolf Dehn wrote that Grosz's "favorite five-color palette is Prussian blue, alizarin deep red, cadmium yellow light, English red, [and] yellow ochre light. Emerald green can be added as a sixth color, which he sometimes employs."<sup>3</sup> As can be seen in *Trees and Underbrush*, Grosz preferred to use a limited color palette, employing a harmonious, if somewhat lurid, color-scheme. The colors, however, vary greatly from picture to picture. *Dune Country* has the most complex palette of the four works.

Using x-ray fluorescence, I examined several areas on each watercolor *in-situ* at the Metropolitan Museum of Art in order to identify the pigments. Prussian blue was indeed used heavily by Grosz and iron was identified in many of the dark blues and

<sup>3</sup> Adolf Dehn, *Watercolor Painting* (New York and London: The Studio publications incorporated, 1945) p.47.

greens, although XRF also indicated the presence of cobalt, mainly in the lighter washes found in the sky areas.

XRF identified mainly iron in the reds, such as the red of the bushes in *Dune Country*, indicating an iron-oxide based red. Cadmium red was used for the tugboats in *New York Harbor*. An anomalous instance of an area having a madder-like fluorescence was found on *Trees and Underbrush*. The fluorescing color looks identical in natural light to the other orange areas that do not fluoresce, which suggests that the color was perhaps added at a later time. As for the white that Grosz used in his watercolors, XRF identified the presence of both zinc and lead in some of the more opaque colors such as the lavender smoke in *New York Harbor*.

XRF also detected cadmium in most of the areas of yellow, orange, and green tested, such as the light yellow wash and bright leaf green of *Dune Country*. The exception was found in *Trees and Underbrush*, where XRF indicated arsenic in almost every color tested, suggesting the use of either Emerald green or orpiment. The brilliant, mint green color seen in the pine trees certainly has the appearance of Emerald green. Orpiment, or arsenic-sulfide was not commonly used after the nineteenth-century due to its extreme toxicity, whereas Emerald green, or copper(II)-acetoarsenite was in use until the 1960s. Copper was also identified in all those areas containing arsenic and additionally, iron was identified in the yellow areas, indicating that Grosz used Emerald green for the greens, and a mixture of yellow ochre and Emerald green for the yellows. In one dark green area that was tested, XRF identified cadmium along with copper and arsenic. When Emerald green is mixed with sulfur-containing colors such as cadmium

yellow, the mixture tends to darken<sup>4</sup>. Since no color change seems to have occurred in the green area, and cadmium was also identified in a wash at the very edge of the painting, it is likely that Grosz executed a cadmium yellow wash overall and let it dry before laying in the landscape elements. This helped Grosz achieve a particularly unified, even if somewhat jarring, color scheme.

One of the more special aspects of Grosz's watercolors is that there are discrete areas that appear to be coated with a transparent varnish. This varnish is found on all of the watercolors except *Pine Trees*. In raking light or at an oblique angle the varnished areas are particularly apparent, and it is easy to see that Grosz applied the coating in localized areas rather rapidly and haphazardly with a flat 1" brush. Grosz mainly applied this clear coating over the dark Prussian blues and dark greens. While the coating has the effect of saturating and deepening the colors, it also is highly reflective, so that depending on the angle of viewing, these areas can become washed out due to glare. Although he did concentrate on the dark blues, and reds in the case of *New York Harbor*, he did not restrict its use to these areas, and in the case of *Dune Country*, seems to have almost randomly applied it over the foreground area. Under ultraviolet light, the varnished areas fluoresce slightly against the dark background, and can be seen more easily in short-wave than in long-wave ultraviolet light. Under high magnification, the varnish is a thin but bulky layer on top of the watercolor, sometimes appearing clear and sometimes with particles of pigment in it. The varnish is filled with craters from burst bubbles.

I was able to take a tiny sample of the varnish from the edge of *New York Harbor* and analyze it using FTIR at the Museum of Modern Art. The spectrum was compared

<sup>4</sup> *Artists' Pigments: A handbook of their history and characteristics*, Elizabeth West Fitzhugh, ed. (NY, Oxford: Oxford University Press, 1997) p. 228.

with the IRUG Spectra Library and the sample was identified as egg white, which is consistent with the bubbly and glossy appearance of the coating. Egg white is a traditional temporary varnish for oil paintings, used into the nineteenth century by artists such as Vincent Van Gogh. Grosz certainly could have read Daniel Thompson's translation of Cennino Cennini's *Il libro dell'arte* which was first published in 1933, and lists a recipe for egg white varnish. Cennini specifies its use as: "to give one of your works the appearance of being varnished within a short time, without actually being so..."<sup>5</sup> Egg white, or glair, was used as a binder in some medieval pigments, but was not commonly used as a varnish for watercolors.

Cenedella claimed that Grosz developed this technique on his own and he also provided information that would most likely not have been discovered otherwise: that Grosz mixed egg white into his watercolors, especially the dark blues, greens, and reds. Instead of using plain water to wet the colors, he used a mixture of water and egg white. Cenedella explained that Grosz also applied egg white while the watercolor was still wet, although, judging by the absence of smearing in the colors, it seems that the watercolor must have been left to dry at least partially.

It is likely that Grosz read Max Dörner's 1921 influential treatise on artists' materials, as did many American artists of the time, especially after an English translation was published in 1933<sup>6</sup>. Dörner makes no mention of egg white varnish for watercolor, but does discuss the preparation of egg white tempera, which he describes as a "size-

<sup>5</sup> Cennino D'Andrea Cennini *The Craftsman's Handbook*, 1960 edition trans. Daniel V. Thompson Jr. (NY: Dover Publications, Inc., 1960), p. 99.

<sup>6</sup> Max Dörner, *The Materials of the Artist and Their Use in Painting*, trans. Eugen Neuhaus (New York: Harcourt, Brace, 1934)

color technique” or distemper.<sup>7</sup> While the use of egg white as a varnish perhaps hearkens to more traditional methods of art-making, Grosz employed this material in a truly experimental manner, and it is not known how these watercolors will change in appearance or may already have changed. In their article “A Short History of Eggwhite Varnishes”, Renate and Paul Woudheysen-Keller discuss the commonly grey appearance of early oil paintings with egg white varnishes, and it is possible that the varnish on Grosz’s watercolors may turn similarly dull. However, further research is required to determine what, if any, the effects of aging might be on egg white varnish over watercolors, and any future conservation treatment should take these concerns into account.

Grosz’s development of this idiosyncratic technique is quite characteristic of his work in all mediums, and also illustrates the seriousness with which he took his works in watercolor. While Grosz’s technique in oil has been documented somewhat, almost nothing has been written about the materials Grosz used or the techniques he employed in his watercolors. A sense of his philosophy regarding materials can be gained from what has been written about his work in oil.

In 1949 an article appeared in *Art News* that discussed some of the more particular aspects of Grosz’s paint preparation.<sup>8</sup> Amy Robinson wrote that Grosz added powdered white chalk or fine sand to store bought oil paint (which he felt was too smooth). He then added to the mixture of paint and sand his own preparation of beeswax, which had been combined with Venetian turpentine and mastic resin and cooked in a double boiler.

<sup>7</sup> Dörner, p. 217.

<sup>8</sup> Amy Robinson, “Grosz paints a picture: From the town beyond the river,” *Art News*, v. 48 (Dec. 1949) p. 35 -7+.



Grosz's efforts produced a heavier color which could be more effectively modeled.<sup>9</sup> In an interview for *American Artist* in 1949<sup>10</sup>, Grosz stated that he used sun-thickened linseed oil he prepared himself as a vehicle for his oil paintings, as well as a medium he prepared from hard copal resin and stand oil<sup>11</sup>.

Grosz was also somewhat eccentric in his use of brushes, many of which he made himself to achieve very particular effects. In 1932 Grosz's friend Marc Sandler wrote: "Grosz had become a fanatical collector of every kind of paint brush."<sup>12</sup> Amy Robinson remarked in an article for *Art News* that Grosz had a collection of over 500 brushes in all shapes and sizes sorted in jars in his studio. She explained how he made some of his brushes "from sections of shaving brushes which he ties together with silk thread and fastens with airplane glue into a whittled wooden handle."<sup>13</sup> Cenedella clarified the fact that Grosz did use these textured brushes for watercolor, in order to achieve specialized effects such as the stippled bushes and squiggly grass seen in *Dune Country*. Grosz also employed "brushes" he made from thin sheets of metal with forked edges, which he used to depict parallel lines for architectural elements such as the windows in the skyscrapers of *New York Harbor*. According to Cenedella, his interest in customized brushes was both a matter of speed and efficiency and of the confidence that he would be able to achieve a certain desired effect. To the same ends Grosz also used the technique of pouchoir, a direct method for hand coloring through a stencil, in some of his other watercolors from this time.

<sup>9</sup> Robinson, p. 37.

<sup>10</sup> Dorothy Grafly, "George Grosz: Painter and Prophet," *American Artist*, v. 13, 1949, 20-25 +.

<sup>11</sup> Grafly, p. 65.

<sup>12</sup> Marc Sandler, "Recollections of George Grosz," *Marc Sandler papers, 1947-1955*, Archives of American Art, #3683

<sup>13</sup> Robinson, p. 37.

Clearly, Grosz was an artist who took his materials very seriously, and worked to make store-bought items achieve the effects that he desired by perfecting them in his studio. Despite the pride that he felt in the technical mastery he had achieved, Cenedella recalled that Grosz used to say that “his right arm had been cut off,” meaning that his refined practice was being challenged by what he felt were new standards of art-making, exemplified by Jackson Pollock and the Abstract-Expressionist school in New York. Buoyed by the support of art critics such as Clement Greenberg, the action and color field paintings of Pollock and Rothko seemed to point to the future, leaving other styles such as Grosz’s in the past.

Grosz, however, was not alone among artists and critics of his time with respect to his interest in traditional methods, attention to detail, and use of natural subjects. Making ones own materials, or modification of store-bought materials was advocated by many artists’ magazines and manuals. In a section on the techniques of the Old Masters, Max Dörner criticized what he saw as a lax attitude toward materials on the part of modern artists, a view that Grosz undoubtedly shared. He wrote: “We shall see what infinite pains were taken by the old masters in the selection and preparation of their materials. It strikes one as curious, to say the least, when one hears modern artists insist upon their favorite superstition that originality and personal expression are better safeguarded by the use of a free and easy technique untrammelled by any regard for the laws of the materials.”<sup>14</sup>

In comparison with Abstract-Expressionism, Grosz’s work was perhaps guaranteed to be seen as outmoded. Unfortunately, such a comparison misses the interesting combination of tradition and innovation that Grosz achieved in his technique.

<sup>14</sup> Dörner, p. 316.

While he valued the particular qualities of all of his materials, he continued to modify them in order to achieve the specific visual effects he envisioned. Building on techniques he developed in his early graphic work, in these paintings he manipulated the qualities of flatness and layering inherent in the medium of watercolor. In his late career, Grosz moved away from depictions of urban society and sought to create landscapes that were lyrical and fully subjective to his own vision.

The contribution of the field of conservation is paramount to the understanding of an artist like Grosz, who in his passion for materials and technique represented a contrasting voice of modernity in the mid-twentieth century; another reaction to the experience of modern society and mass culture that was not canonized along with those Greenbergian monumental canvases, but nevertheless deserves to be seriously considered.

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