

By Michael F. Marmor and Peter Milton



Peter Milton, Interiors VII: The Train from Munich (1991), resist-ground etching and engraving, image 51 x 91 cm. Edition of 175. Printed by Robert Townsend, Georgetown, MA. Image courtesy the artist.

/ision is an inherent component of visual art, and a tool for artists as much as pigment, engraving implements or canvas. It serves to recognize a subject, create work with detail or color, refine work in progress and judge a finished product. And much has been written about artists with poor vision, or about aberrations in art that might be interpreted to indicate an eye disease.1 However, neither is terribly illuminating without the medical facts about an artist's eyes. Judging eye disease from art (i.e., from an artist's work) is usually in error, since artists have license to choose their subjects and technique for personal reasons. For example, there is every indication that El Greco did not paint elongated figures because of faulty optics.2 On the other hand, when eye disease can be documented, as is the case with the failing vision suffered by the aging Degas and Monet, one can learn much about the art and the motivation of

the artist through study of the works done with visual impairment.<sup>3</sup>

American artist Peter Milton (b. 1930) has congenital color deficiency ("color blindness") as well as a number of other visual problems (myopia, strabismus, cataracts) that have been correctable. This article is a collaborative effort that grew out of discussions between Milton and a visual scientist (Marmor) who has studied the role of vision and eve disease in art. Milton recognizes that eyesight, i.e., physical "ocular vision," has been a factor in his printmaking and has played a distinctive role in how he has conceptualized and approached his work throughout a long career. We describe the medical facts of Milton's visual status, while letting the artist speak for himself about his purpose and style.

Milton is well-known for black-andwhite drawings and etchings that are visually complex, delicately drawn and

that complicate the viewer's perception with elements of mystery, illusion and surrealism.4 They show architectural inventiveness and often contain historical allusions.5 The 1991 etching Interiors VII: The Train from Munich shows an architectural setting with different layers of depth and duplicated people. Milton writes that the image, in part derived from a station in Budapest, makes reference to Marcel Duchamp and René Magritte, to Milton's wife's escape from Germany as a child in 1939 and to Raoul Wallenberg and people lost in the Holocaust. The 1996 etching Points of Departure II: Nijinsky Variations juxtaposes audience and stage, showing the ballet while evoking the specter of aging with images, both young and old, of Degas, Mary Cassatt and the dancer Vaslav Nijinsky. Milton alludes to the changing reactions to the music of Igor Stravinsky, "from distress to veneration, epitomized

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Peter Milton, Points of Departure II: Nijinsky Variations (second state) (1996), resist-ground etching and engraving, 61 x 97 cm. Edition of 175. Printed by Robert Townsend, Georgetown, MA. Photo: Steve Mann. Image courtesy the artist.

by the mysterious floating sense of time." He describes his body of work—his "aesthetic visions"—as a search for coherence, "meshing all aspects of the art, between the integrity of the picture plane (design) and its window of space (illusion)," and balancing the mystery of the image and the exploration it induces in the viewer.

#### COLOR PERCEPTION

Milton has long acknowledged his red-green color blindness (a disorder better termed color-deficiency, as those most affected—primarily men—have some degree of red-green discrimination), and it was a major factor in his choice to work in black and white.

Colors are distinguished in a normal eye because there are three different visual pigments in the cone photoreceptor cells of the retina. Each cone contains either a blue-sensitive, green-sensitive or red-sensitive pigment—and when three normal pigments are present we can judge a full spectrum of color by the relative stimulation of these different cells. The genes for our red- and green-sensitive pigments

are on the X chromosome and the most common hereditary defects result from an alteration one of these pigments. If either the red- or green-sensitive pigment is absent (as it is in roughly 1.5 percent of men), then all colors between green and red look the same (since there is only one pigment with sensitivity in this range). More commonly (in 6–7 percent of men), the color sensitivity of one of these pigments is merely shifted, so that colors at the red-green end of the spectrum are



Peter Milton, **Sight Lines III: Eclipse** (2011), archival digital print, in two sizes (45 each): 43 x 71 cm and 58 x 94 cm. Edition of 90. Printed by Douglas Prince, Portsmouth, NH. Image courtesy the artist.

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Peter Milton, The Rehearsal (1984), oil on canvas, 138 x 245 cm. Collection of the Currier Museum of Art, Manchester, NH. Image courtesy the artist.

harder to discriminate. This is Milton's problem, and while he finds reds-yellowsgreens difficult to tell apart, color does give him pleasure and affects his aesthetic ideas. Color-deficient men can always distinguish blue from the yellow end of the spectrum. However, green lies between yellow and blue on the spectrum, which is like mixing the entire spectrum (and is perceived as white or gray). Thus, color-deficient artists generally avoid the color green.

Milton learned of his color-deficiency in first grade because he mixed up colored crayons. But he could see strong colors and thus presumed he would be able to make the kinds of judgments that would be necessary if he pursued a career as an artist. As a student Yale in 1950, he ended up working with one of the great scholars of color in art, Josef Albers, whose Interaction of Color is one of the standard texts on the subject.6 Milton discovered that a "warm" pastel shade he had chosen as a neutral background for a painting was perceived by others as a rather alarming pink! His confidence in color collapsed and he sought testing at Johns Hopkins medical school, where he was told that he had a severe red-green color defect.7 This was unhappy news, but Milton recognized that he could still

achieve many of his artistic goals in black and white. Comparison can be made to Charles Meryon, the great French etcher of Paris, who similarly gave up painting when he discovered his color blindness during his training in art.<sup>8</sup> Did Albers influence Milton's art? He probably did, though not with respect to color. Albers was responsible for teaching all aspects of art, and for him and his brilliant wife, Anni, art was a way of life. It is said that Milton was one of his favorite students, perhaps because they shared that intense commitment.

Milton acknowledges that to a large degree his color problem is old news from a distant past, which he has resolved and moved beyond. However, in 1984 he created an oil painting, The Rehearsal, just to see what he could do with color. The design and treatment of the subject is similar to his graphics, adding a muted palette dominated by ochre and amber. There are occasional highlights of brighter color, but yellows or reds are used primarily to lighten or darken the ochre, and green is avoided. This tonality is characteristic of the choices made by other color-deficient painters such as Paul Henry (1877-1958) of Ireland and Clifton Pugh (1924-1990) of Australia.9 Interestingly, Milton is especially pleased

with the rather subtle yellow and blue diagonal shadows across the windows at the right, which he sees as "being vivid in their delicacy." Milton feels that he experiences these colors in the same way as a normal observer, and adds wistfully that he wishes he saw everything that way.

This, in fact, is the central issue with respect to his choice to work in black and white. Milton did not want to employ a technique that would limit his choices (i.e., of colors) but, more importantly, he did not want a technique that would limit his awareness of how his work appeared to others. If he painted in color, his color deficiency would disrupt his ability to identify with his viewers. To Milton, that "can easily mean some treacherous ugliness creeping in to foul the nest, totally unbeknownst to the clueless artist." He is frustrated and angered by occasional misguided or gratuitous comments from people who suggest that a color-deficient choice of colors might create "interesting" art. The concept of "interesting" is not attractive to him: "It is a default word one uses when at a loss to find something good to say. Its use is a dead give-away that the thing you have just made has just fallen flat." Milton puts the idea to rest, saying, "My wincing at these suggestions is palpable."

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#### OTHER ASPECTS OF VISION

Color was not the only aspect of vision relevant to Milton's development. He remembers the epiphany when he first got glasses at about age eight and the world suddenly became clear and crisp. Many youngsters with myopia are pleased to get glasses, but if they have had excellent near vision all along, clarity in general is not a new experience. But Milton had marked asymmetry between the amount of myopia in his two eyes (so one or the other was always out of focus) as well as considerable astigmatism (which blurs vision independently from myopia), so that he had never experienced the joy of clear and accurate vision until he got glasses.10 He has worn glasses since that day and uses his excellent vision as would any artist. But the event left a lasting influence on his approach to art, prompting his great pleasure in precision and detail and in the "fine print" of his com-

Milton also has had ocular misalignment since childhood. He remembers a vertical imbalance between the eyes (images higher on one side than the other), which was corrected with prisms introduced into his glasses. As with the correction of visual acuity, these glasses gave him special pleasure through the recognition of binocular vision and depth perception. Milton's fascination with our sense of depth shows in his drawings, which exhibit accurate linear perspective along with the use of other depth cues such as size, haziness and overlap.

Now in his late 80s, Milton continues to work actively, exploring new subjects, new technologies (digital image generation and modification with Adobe Photoshop) and new image properties and precision.<sup>11</sup> But aging puts stress on the visual system, which reminds him anew of his dependence on clarity to visualize and create his work. The aging eye adjusts more slowly to changes in lighting, and he finds these adaptive delays annoying as he moves about in the studio. He developed cataracts in his late 70s and had them removed when his vision was only mildly reduced (to 20/40) because

that was as much blur as he was willing to tolerate. He developed some post-operative floaters and shadows (from debris in the vitreous gel inside the eye); these are rarely disabling, but Milton is so sensitive to any interference with clear vision that he had them surgically removed (vitrectomy). Older eyes also tend to be less tolerant of bright light and Milton is particularly bothered by glare. He has had some intermittent double vision, especially at times of fatigue; this is not an uncommon problem, and he tries to minimize conditions that might precipitate it, as it interrupts his concentration and creative process.

With this history of vision in mind, we can look at Milton's work with a different perspective. His search for "coherence," meaning a sense of completion in the mystery, historical allusions and aesthetic precision of his art, relates to his mastery of detail and depth. An example of his continued technical and aesthetic mastery is the digitally generated print Sight Lines III: Eclipse (2011), which superimposes images, places and historical moments in exquisite detail.11 It reflects on the work of photographer Eugène Atget, famous for his views of Paris at the turn of the century, and contains references to other early 20th-century photographers, including Henri Cartier-Bresson, Brassaï, Jacques Henri Lartigue and Alfred Stieglitz; it is set during the eclipse of 1912, two days after the sinking of the Titanic.

Clarity of vision has not merely been a tool of Milton's trade, but a sensation that is central to the internal visions that underlie his art. Within his world of black and white, he takes satisfaction in knowing that he sees the same subtle gradations of brightness and contrast as his audience. Milton says that "art ideally beguiles the viewer to engage by enticement, not force." It is "an invitation in, rather than an insistence hurled out." As he continues striving for improvement, he adds, "I do find solace in the mantra Samuel Beckett came up with, grumbling all the way: 'Try again. Fail again. Fail better.'"■

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Peter Milton is an artist and printmaker.

#### Notes:

- 1. For example, Michael F. Marmor and James Ravin, The Artist's Eyes (New York: Abrams, 2009), and Philippe Lanthony, Les Yeux des Peintres (Lausanne: L'Age d'Homme, 1999). 2 Ibid
- 3. Michael F. Marmor, "Ophthalmology and Art: Simulation of Monet's Cataracts and Degas' Retinal Disease," Arch Ophthalmol. 2006; 124:1765–69.
- 4. Peter Milton, The Primacy of Touch: a Catalogue Raisonné (New York: Hudson Hills Press, 1993). Peter Milton and Robert Flynn Johnson, Peter Milton: Complete Prints 1960–1996 (San Francisco: Chronicle Books, 1996).
- 5. Detailed notes for individual prints are available on the artist's website: <a href="www.petermilton.com">www.petermilton.com</a>.
- 6. Josef Albers, Interaction of Color (New Haven: Yale University Press, 1963).
- 7. His color discrimination was tested again for this report, using specialized ophthalmologic tests (HRR plates and Farnsworth D-15 panel). These confirmed a strong red-green color deficiency, typical of abnormality in the green-sensitive pigment (deuteranomaly). He could name strong colors in the yellow-orange-red range from pictures that lacked form or cues, but would guess at faded or darker colors and misname greens.
- 8. See Note 1.
- 9. See Note 1. Also, MF Marmor and P Lanthony, "The dilemma of color deficiency and art," Surv Ophthalmol. 2001: 45:407–415.
- 10. His measured refractive error later in life was -9.50 +3.00 in the right eye, -4.75 +1.00 in the left eye.
- 11. A new catalogue by Trudi Ludwig Johnson and Ann Shafer, Peter Milton, Etching Enigmas (Baltimore: Evergreen Museum and Library, Johns Hopkins University, 2016) details the technique of his early copper-plate etchings, particularly Interiors VII, The Train from Munich, and his transition to digital images such as Sight Lines III: Eclipse.