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Chicanery and Conspicuousness: Social Repercussions of World War I Ship Camouflage

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Chicanery and Conspicuousness: Social Repercussions of World War I Ship Camouflage

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Roy R. Behrens “Chicanery and Conspicuousness: Social Repercussions of World War I Ship Camouflage”

1. The possibilities of camouflage will not have been exhausted until appearances become so deeply distrusted that people will stare wide-eyed at the reality of a thing and imagine it to be false. Effective concealment then will be in open and conspicuous display of the thing to be hidden.

Editorial, New York Tribune, 1918 [\[1\]](#).

2. SHORTLY AFTER World War I, an American Impressionist artist named Everett Longley Warner prepared a slide presentation on the procedures that he and others had used in designing ship camouflage [\[2\]](#). Warner was an expert on the subject because he had played a prominent role in the U.S. Navy’s development of wartime camouflage. A half-century later, in 1972, nine years after Warner’s death, documents pertaining to his service (sketchbooks, correspondence and notes) were destroyed or damaged in a fire at his vacant studio. Among the items that survived were selections from his lecture slides, several fire-damaged ship models, and unpublished typewritten statements about his contributions to camouflage [\[3\]](#).



Fig. 01: World War I-era photograph (c1917) of the room in which scale-model camouflage-painted ships were stored before being tested. The two men in the photograph are Everett Longley Warner (left), who headed the Design Subsection in Washington D.C., and Harold Van Buskirk (right), the executive officer for the two-pronged Camouflage Section (both Design and Research). All images in this essay are from the author's collection, and in public domain. They are originally from government archives or from vintage publications for which the copyright has expired.

3. The notes for his slide talk on ship camouflage were also retrieved. Numerically keyed as the captions for the photographs he showed, they begin with the following story:

4. Perhaps some of you may remember a cartoon which appeared during the war, a drawing showing an inquisitive stranger talking with the gateman at a railway crossing. The gate was painted with the usual black and white stripes, and lying in the river beyond the tracks was a steamer painted with similar markings. Said the stranger, "Why do they paint the stripes on the gate?" "Oh, that's to make it more visible." "Well, why do they paint the stripes on the vessel out there?" "Oh, that's to make the ship less visible." [4]

5. Warner opened his presentation with that particular story for good reason. Throughout WWI there had been widespread confusion about the purpose of camouflage. Most people assumed—as may still be true today—that the goal of camouflage is to make an object invisible or nearly so, either by background matching (figure-ground blending), or by mimetic resemblance (the resemblance of one thing to another). In Warner's reference to that wartime cartoon, the use of strident, prominent stripes for camouflage seemed counter-intuitive at best. How could one expect to make something less visible by making it more conspicuous?

6. This question had been raised before. As early as 1909, another American artist, Abbott Handerson Thayer, had claimed that proponents of the theory of natural selection (of which Thayer was mostly supportive) had been partly mistaken. While Darwinians largely conceded that cryptic animal patterns contributed to low visibility and concealment, at the same time they insisted that vividly colored components do not enable camouflage. Instead, such patterns work as ways of attracting an optimal mate (as "sexual display") and especially eye-catching examples were called "nuptial dress" [5].

7. Thayer balked at this and other claims about the function of conspicuousness. He continued to insist that virtually all coloration in nature was contributive to camouflage. True, certain colors are conspicuous when viewed in isolation in a museum showcase. But they nonetheless aid concealment when observed within the setting of their natural surroundings (which Darwin himself had aptly called an "entangled bank") [6]. As proof, Thayer offered a wealth of examples of paintings and photographs, in one of which he arranged four butterflies against a monotone background. Three of these were evenly colored (dark, light and middle tone), while the fourth consisted of high contrast multi-colored shapes (the kind of pattern that scientists claimed contributed to sexual selection).

8. Thayer included that butterfly demonstration in *Concealing Coloration in the Animal Kingdom*, the influential book that he and his son, artist-naturalist Gerald Handerson Thayer, produced in 1909. Instructing the reader to study that image from a distance, he asked: Of the four butterflies, which is the first to break apart and thus become harder to recognize as an integral, continuous thing? He concluded (to the surprise of everyone but himself) that it is the brightly colored butterfly that breaks up first. A few years later, in response to WWI, he would repeat the same experiment with ship silhouettes [7].

9. Unfortunately, in other pages of his book, he took this idea to wild extremes—and it got him in terrible trouble. As the volume’s frontispiece, he used an elaborate painting of a peacock, already the ersatz mascot of European artists of the Decadence and the Aesthetic Movement, as famously immortalized by James A.M. Whistler’s *Peacock Room* [8]. In his book, Thayer portrayed that ostentatious bird in all its magnificence (high intensity blues and greens; eyespots on the tail feathers) appropriately posed in a setting of multi-colored foliage in which the vivid coloring of the plants is all too conveniently close to that of the peacock.

10. To compound the offense, he also published in his book paintings of rose-colored flamingoes, in which their plumage colors are an exact match for the sunrise or sunset behind them. It was such brazen examples as these—which were loudly and publicly ridiculed by former U.S. President Theodore Roosevelt (world famous, he was the leading authority on game hunting)—that would substantially undermine Thayer’s attempts to contribute to Allied wartime camouflage [9].

11. This unsavory exchange on animal coloration—Can conspicuous coloring also conceal?—continued at a smoldering pace until it reignited in the third year of World War I. In part because of the loss of American civilian lives in the sinking of the RMS *Lusitania*, the U.S. had finally entered the war against Germany in 1917, just as the British were trying to deal with the threat of increased submarine attacks. In that year alone (from March until December), 925 British ships were sunk by German U-boats. In a single week in April, 55 British ships were successfully destroyed, for an average of about 8 ships per day. Not surprisingly, this prompted second thoughts about the effectiveness of “low visibility” camouflage—at least in relation to ship concealment—which had been accomplished by painting entire ships in an allover coating of battleship gray (the nautical equivalent of the khaki-colored field service uniform).

12. In April 1917, a new approach to ship camouflage was put forth by a British painter and poster designer named Norman Wilkinson, who was a lieutenant in the Royal Navy Volunteer Reserve. It was erroneous to assume, Wilkinson said, that a ship could ever be invisible. However indistinct its 13. shape, the smoke from its smokestacks was readily seen, and the sounds of its engines could also be heard (from miles away) by underwater listening devices. Unlike land-based camouflage, Wilkinson claimed, the best protection for a ship was not to make it hard to see, but to make it hard to hit. And the most reliable way to accomplish that was “...to

paint a ship not for low visibility, but in such a way as to break up her form and thus confuse a submarine officer as to the course on which she was heading” [10].

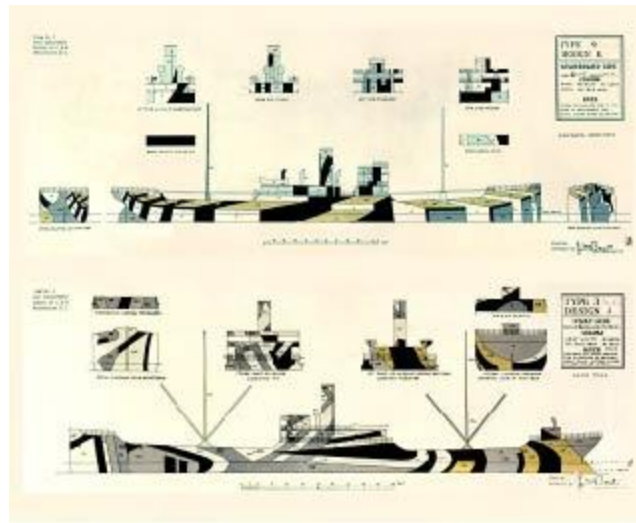


Fig. 02: There are no full-color photographs of WWI ship camouflage, because color photography (as we know it) had not yet been perfected. These are large-sized colored lithographic plans, prepared by camouflage artists and sent out as instructional plans to those who painted the actual ships. Some of these have been preserved, with the largest collections currently housed at the National Archives and Records Administration, and the Fleet Library at the Rhode Island School of Design.

13. Later that year, when this method was sanctioned by the British Admiralty, it was initially given the name of dazzle-painting or dazzle camouflage. It is still called that today, but during and after WWI, it quickly acquired alternative names such as baffle painting, jazz painting, razzle-dazzle and disruptive coloration. Despite wartime censorship, dazzle-painted merchant ships could still readily be observed by the curious public as their flagrant patterns were being applied at major shipping yards, or when spotted at various harbors, coming in or going out.

14. Dazzle camouflage went viral with the public (both British and American) in 1917, and throughout the remaining months of the war, the presumed hilarity of “high visibility” camouflage was a boundless source of amusement. In newspapers and magazines, the inclusion of jokes, cartoons and puzzles about camouflage proved to be a reliable way to boost a publication’s sales. Wartime news reports proclaimed that dazzle camouflaged ships looked like crazy quilts at county fairs, bewildering barber poles, the diamond designs on a harlequin’s suit, “a flock of sea-going Easter eggs,” “a Russian toy shop gone mad”—and even, the delirium tremens. How could they not be noticed? Repeatedly, the skeptics asked (as in the cartoon that Warner described): *How can one expect to make something less visible by making it more conspicuous?*

15. Not only were camouflage patterns annoyingly conspicuous, they were also remarkably similar to the still-reviled Modern art that had premiered at the Armory Show—Cubism and Futurism, in particular. In response to that exhibition, avant-garde art had been discredited by the same pundits and cartoonists who would soon make fun of camouflage. Among the most outspoken was Theodore Roosevelt (once again) who, having earlier referred to Abbott H. Thayer as “a poor lunatic goose,” dismissed avant-garde artists as “the lunatic fringe” [11]. Roosevelt’s opinion of such abominable nonsense was in keeping with that of the public, so that when brightly-colored schemes were officially adopted for WWI ship camouflage, journalists quickly began to refer to dazzle-painting as “cubist painting on a colossal scale,” “a futurist’s bad dream,” and “a floating art museum” [12].

16. There are scores of published eye-witness accounts of the bemused yet bitter confusion that wartime observers felt when they stood in total amazement in the presence of a dazzle-camouflaged ship. A typical example is a passage in a memoir by William James Dawson, who described it in the following way:

17. Beside the landing stage lay a ship strangely camouflaged, as if a company of cubist artists had been at work upon her. She looked like an old lady of sober habits, who had been caught in the madness of carnival, and dressed as a zany. She was adorned—or disfigured—by stripes of color that ran in all directions, splashings of green, splotches of gray, curves of dull red, all mixed in uttermost confusion and with no discernible design. I was told that this extraordinary appearance was designed to give the ship invisibility: thus clothed she would flee like a ghost over the gray perilous waters, a phantom thing of blurred outlines, as if evoked from the waters themselves [13].

18. Aside from affirming the likeness between Cubism and dazzle-painting, there is a subtext in this quote that alludes to a volatile issue of the same time period. The writer refers to a ship as a woman (“She looked...She was adorned...She would flee”) as has been an unbroken tradition for as long as anyone seems to recall. But the further implication is that, if ships are female, they must be virtuous females, and not “adorned—or disfigured” by lurid, garish colors that advertise licentiousness.



Fig. 03: Cartoon (signed ERH) with the headline "A free tip for the army: why not try women camoufleurs?" *The Ogden Standard* (Ogden UT). December 3, 1917, p. 11.

19. In the later years of WWI, there was no shortage of comments about the luridness of dazzle camouflage. Another observer remembered a day when he saw a single ship, painted in battleship gray, but anchored in a harbor beside a gaggle of camouflaged others, adorned in "blazing color schemes." To his mind, the ship with subdued coloring looked like "a Puritan maiden that had fallen by accident into a blowsy company of painted Jezebels" [14]. In another example, the word "tramp" was purposely used as a double entendre. In maritime jargon, a "tramp ship" or "tramp" is a merchant ship that travels about with a flexible route or schedule, looking for fortuitous opportunities; while, in derisive street slang, a "tramp" is a woman who "sleeps around." In a WWI press report, a US Navy correspondent recalled in the passage that follows how disturbed his sensibilities were by a ship that had been painted in dazzle camouflage:

20. *I remember a little tramp remorselessly striped, funnels and all with alternate slanting bands of apple-green and snuff brown; I have an indistinct memory of a terrible mess of milky-pink,*

lemon-yellow and rusty black, which earned for the vessel displaying it the odious title of “The Boil.” We saw the prize monstrosity in mid-ocean. Every school of camouflage had evidently had a chance at her. She was striped, she was blotched; she was painted in curves; she was slashed with jagged angles; she was bone gray; she was pink; she was purple; she was green; she was blue; she was egg yellow. To see her was to gasp and turn aside [15].

21. In all three of these examples, the ships are referred to as women, then rebuked as “painted women,” a reference to prostitutes. Twice it is even suggested that formerly innocent ships had been metaphorically violated by deranged, promiscuous artists by having been coated with tawdry designs: In one case, Cubist camoufleurs “had been at work on her,” while in another “every school of camouflage had evidently had a chance at her” [16].

22. The level of resentment toward avant-garde artists is apparent in these statements. At the same time, the Armory Show was not the only disturbing development in 1913. On March 3, while that art exhibition was still ongoing—and exactly one day prior to the inauguration of U.S. President Woodrow Wilson—thousands of women’s rights advocates marched down Pennsylvania Avenue, in protest of (among other issues) the denial of women the right to vote. If the status quo was threatened by European Modernism—whose male adherents, according to a recent account, were seen “as preening peacocks, squandering virility for beauty” [17]—there was reason for even greater alarm if women could claim to be socially equal to men.



Fig. 04: Even as the war ended, the use of devious camouflage tricks by women (as a means of undermining men) was a ubiquitous topic. In the June 15, 1919, issue of The Washington Times, Columbia University art educator Alon Bement (an important teacher for Georgia O’Keeffe, and himself a ship camouflage artist) published a full page article on “‘Camouflage’ for fat figures and faulty faces: Prof. Bement shows how the scientific laws of light, color and pattern can be applied to your household, your clothes and even your features.”

23. The demand for women’s rights stirred up the age-old suspicions between genders. Among the common rejoinders from men was the assertion that it has been males—not females—who have been the victims of duplicity. Throughout human history, they said, women have taken advantage of men, so that, one way or another, they have always had the upper hand. For example, women change the way they look through cosmetics, dyes, clothing and fashion-based special effects. They resort to fraudulent methods to look younger, more attractive, and alluring in size and proportion. They cunningly use their emotions, predictably becoming tearful whenever that option benefits them.

24. They argued that, even if, in certain respects, women were equal to or better than men, the reason for that would not be due to higher intelligence, to greater emotional stability, or to judgmental objectivity, but because of their inborn proclivities toward manipulation and deceit. After all, as one writer stated:



Fig. 05: During WWI, a small number of women were allowed to serve in the U.S. Navy's Camouflage Section, not as camouflage designers, but as model makers. One of those women (unidentified) is shown here constructing a model, which would later be painted by men.

25. *They've been doing it all their lives. Think of the rouge, the switches and the powder puff. Then ponder over pads and braces. Why, as we gather it, half the art of being an up-to-date young woman is camouflage [18].*

26. Echoing that, yet another writer claimed that the first camouflage expert in human history was Eve in the Garden of Eden. And since that initial deception, has not every woman made expert use of camouflage? The answer is:

27. *Of course she has, and will continue to do it just whenever it suits her ideas. If she wants to win a post that wheedling won't accomplish, she camouflages her face with tears, and lo, she arrives at the desired end. And what she can do with rouge and powder passes all understanding. It is camouflage carried to a fine art. What man could tell that the short-frocked, finely-complexioned, sixteen-year-old hatted person at a distance was over forty and the mother of six? This is camouflage, and with a vengeance... [19]*



Fig. 06: Civilian women volunteers formed the Women's Reserve Camouflage Corps, and were trained in camouflage methods, including (as shown here) the construction of outfits that blend in with a natural surrounding.

28. For those who champion equal rights, such assertions are painfully derisive now. But among the most detailed back then is an essay by an artist and Columbia University art educator who had actually served as a ship camoufleur during the war. His name was Alon Bement, and the distinction for which he is far better known is his role as a pivotal teacher for the painter Georgia O'Keeffe. In 1919, he published in the *Washington Times* a full-page, illustrated essay on the potential value of camouflage in the civilian lives of women. Quaintly headlined “‘Camouflage’ for Fat Figures and Faulty Faces,” its subtitle confirms that its subject consists of “How the Scientific Laws of Light, Color and Pattern Can Be Applied to Your Household, Your Clothes and Even Your Features” [20].

29. As women became increasingly identified with camouflage, the question more commonly asked became (usually with comic, malicious intent, but sometimes half-seriously): If women are naturally proficient at deception and concealment, why doesn't the government hire them as wartime camouflage workers? And, in fact, that's exactly what happened—but to a half-hearted, shallow extent.



Fig. 07: In 1918, the U.S. Navy built a temporary wooden recruiting station in the middle of Union Square in New York City. Shaped like a ship in every detail, it was christened the USS Recruit. In July, as a way of calling attention to recruiting and fundraising, the Women's Reserve Camouflage Corps painted the landlocked vessel in a riotous "dazzle camouflage" scheme. The camouflage plan was developed by men.

30. In 1916, in advance of America's entry into WWI, a congressional act was passed that provided for Yeoman positions in the U.S. Navy Reserve. These were positions intended for men, but in the statute's wording, the generic word "persons" was inadvertently used instead. Faced with a shortage of wartime workers, Secretary of the Navy Josephus Daniels decided to interpret this as either men or women, and in March of the following year, he sanctioned the enlistment of the country's first female sailor. Such women enlistees, of whom there were eventually more than eleven thousand, were officially titled Yeomen (F), but they were also commonly known as Yeowomen or Yeomanettes. Throughout the war, the majority of these women served as clerical staff, but smaller numbers were also trained as electricians, chemists, pharmacists, telegraphers, radio operators, and camouflage personnel [21].

31. The executive officer in charge of the Navy's Camouflage Section was a USNR Lieutenant named Harold Van Buskirk, who in his prior civilian life had been an architect and Olympic fencing champion. Under him, the supervisor of the Design Subsection in Washington DC was none other than Everett L. Warner, with whose wartime conundrum about the purpose of camouflage we initially started this essay: Can conspicuous coloring also conceal? [22].



Fig. 08: Featuring dazzle camouflage schemes in parades and other gatherings increased attendance at wartime events. In this photograph of the 1918 Fourth of July parade in New York City is a float in the shape of a camouflaged ship, most likely provided by the Women's Reserve Camouflage Corps.

32. In surveying the artifacts from Warner's studio fire as well as other materials in government archives, there is ample indication that women were employed on the Navy's camouflage staff, but presumably not as designers. Aside from clerical duties, their tasks were nearly always limited to shaping the parts and assembling the wooden ship models. With few exceptions, only men were allowed to design dazzle schemes or, for the most part, to paint the schemes on the models.

33. In March 1918, another group of civilian women formed the Women's Reserve Camouflage Corps. Initially they focused on ground camouflage, under the instruction of US Army Lieutenant H. Ledyard Towle. As women, it was assumed that they would be especially skilled at sewing and clothing construction, so that much of their training consisted of designing and testing hooded outfits that "would harmonize with any scenery and make the wearer practically indiscernible at a distance of twenty feet" [23].

34. That same year, it was decided that the public's heightened interest in dazzle camouflage could be used for a Navy recruiting campaign. Under construction at the time was a wooden recruiting station, shaped to look convincingly like a scaled-down battleship, and positioned prominently in Union Square in New York City. At first, it was painted in battleship gray, but someone suggested that it should instead be covered with an extravagant dazzle camouflage scheme. Soon that plan was carried out. Overnight, on July 11-12, 1918, twenty-four members of the Women's Reserve Camouflage Corps applied a "wild, fantastic design of many colors" (a scheme that, of course, was designed by a man) [24]. Warner recalled that the idea of dazzle-painting the recruiting station was his. A "prismatic recruiting station," he said, "would be infinitely more effective than a plain gray one in inducing young men with enthusiasm and imagination to 'join the colors'" [25].

35. This land-locked ship-shaped building, aptly named the USS *Recruit*, was allowed to wear its dazzle design for only nine days (thereafter it returned to gray), but, however short-lived, the coverage in the media was of considerable value as a promotional gimmick. It soon became the practice for Navy personnel to arrive at public recruiting events astride a miniature camouflaged ship, and, in New York City's Fourth of July parade in 1918, among the featured novelty floats was a dazzle-painted ship, disruptively adorned (of course) in red, white and blue.

36. Nor was this limited to ships. As described by a woman supporter of the Women's Reserve Camouflage Corps, "Tanks, ambulances, and trucks were camouflaged at the request of different branches of the government to encourage recruiting, for wherever the camoufleurs went in their uniforms, spreading their bright paints, a crowd was sure to gather" [26]. In the fall of 1918, this same group dazzle-painted a tank that was exhibited in front of the New York Public Library. The tank, according to news reports, was covered with "a crazy-quilt of the most violent and incongruous colors imaginable—colors that command the attention of every passer-by. The object is to aid recruiting for the tank service" [27].

37. As the war officially came to a close, restrictions on information were gradually lessened. As Navy camouflage artists looked back on four years of destruction and conflict, they wondered if positive use could be made of wartime innovations. During the war, there had been infrequent collisions in which one or both of the ships involved were wearing dazzle camouflage. Each circumstance was of course unique, but camouflage enthusiasts sometimes claimed that these navigation mishaps were proof of the visual bewilderment caused by dazzle-painting. During the war, in an eight-month period in 1918, 96 American ships had been sunk, 18 of which were camouflaged. But of those 18, only 11 were sunk by torpedoes, while 3 were hit by enemy mines. The remaining 4 were victims of "friendly fire," having collided mistakenly with Allied ships. Now that the war had ended, maybe ship camouflage could be reverse-engineered, and conspicuousness applied in ways that would clarify—not confuse—the shape, course and location of approaching ships.

38. As a writer at the time explained: "In other words, instead of reducing [the] visibility [of a ship], it will be purposely heightened." A ship would be purposely painted in ways that would make it "extremely hard, if not next to impossible, to deceive the eye as to the course upon which the vessel is moving." Applying the principle further, "...lighthouses, lightships, buoys and other navigational marks will be garbed so that they will stand out sharply and guide surely under conditions where they have failed heretofore" [28].

39. World War I ended conclusively in 1919. Those artists, architects and others who had designed camouflage for the Army and the Navy were faced with finding fruitful ways of returning to civilian life. Homer Saint-Gaudens, head of the Army's Camouflage Corps, and son of Augustus Saint-Gaudens (the most famous sculptor of his time), returned to his peacetime vocation as a Broadway set designer. In 1921, he became director of the Department of Fine Arts at the Carnegie Institute in Pittsburgh. Three years later, Saint-Gaudens hired former camoufleur Everett L. Warner as a painting teacher at the same art school. At the end of the war, Warner had

unsuccessfully tried to return to his pre-war career as a professional studio artist, but the avant-garde was in its ascendancy—and, ironically, although his dazzle camouflage schemes had been accused of being inspired by the avant-garde, his professional interest in American Impressionism was quickly dismissed as archaic.

40. At the same time, another WWI camouflage artist was immensely successful in making the transition from Army to civilian life. That person was none other than H. Ledyard Towle, the New York-based Army lieutenant mentioned earlier who had been the chief instructor for the Women's Reserve Camouflage Corps. Unlike other veteran artists, Towle chose not to abandon his expertise in the practice of camouflage. Instead, he repackaged his abilities as “reverse camouflage” [29]. Through calculated emphasis—concealment combined with conspicuousness—he used it to play up a product's appeal while playing down its various flaws. By 1924, he had launched an ever-expanding career (as the first “corporate colorist”) in which he did for automobiles and other industrial products (for marketing purposes) what Warner and others had achieved for wartime ships (for defense purposes).

41. As one example, an important turning point took place in June 1927 at General Motors in Detroit. In a meeting with the president and research chief of GM, Towle set up side-by-side three twin pairs of Chevrolets. The only difference between the paired vehicles was their two-tone color schemes: by his studied selection of colors, Towle produced the illusion (by which the onlooking executives were fully convinced) that some of vehicles were noticeably longer, more graceful, trim and streamlined (and infinitely more appealing) than were the ones beside them. It was the year of GM's first La Salle, and a portend of Towle's collaborative work with legendary “automobile stylist” Harley Earl.

42. Only a few years earlier, the color of affordable cars had been (in the words of Henry Ford) “any color so long as it is black.” But the perfection of durable lacquers (such as those with the trade name Duco), in the richest assortment of colors, brought unheard of possibilities to the appeal of automobiles, and soon after by extension to the widest range of industrial and household products—furniture, appliances, bathroom fixtures, clothing, and, a few years later, to the factory workspaces in which these things were being produced.

43. In the 1940s, Pittsburgh Paint and Glass introduced (for the purpose of safety) a factory coloring system called “Color Dynamics.” As explained in an ad for the system, it is “exactly the opposite of camouflage. Instead of obscuring and hiding, color becomes an agent charged with the duty of making it easier for workers to see their work...” [30] “On machines,” the text continues, “color is used to highlight the operating parts so that they stand out,” and on trucks, cranes and conveyors, “colors of high visibility are employed. These act as danger signals and are recognized as an important safety factor.”

44. In other words, components that might have been hidden in WWI ship camouflage (for the purpose of causing confusion) were now made clearly visible, whereas those that were blatantly prominent in dazzle-painting (so as to throw off the aim of the U-boat gunner) were now

purposely suppressed. Through calculated color choice, using “the visual chicanery that Towle [with Everett Warner, Alon Bement and others] [had] used in camouflage...,” designers had arrived at a peacetime functional blend of conspicuousness and concealment [31].

Author’s Postscript

My completion of this essay was coincident with, if separate from, two other theme-related events. On Veteran’s Day (November 11, 2017), I gave a public lecture, titled Military Service and Suffrage: The Untold Role of Women in World War I Camouflage, at the University of Northern Iowa, sponsored by The American Democracy Project and Office of the Provost. On the following day, a public exhibition, titled Hidden Figures: The Untold Story of Women’s Role in WWI Camouflage, comprised of forty historic photographs from my research collection, opened at The Betty Strong Encounter Center and Lewis and Clark Interpretive Center in Sioux City IA. That exhibition, which continues through June 3, 2018, included some of the photographs that accompany this essay.

Notes

[1] Editorial, “The Advertised Offensive.” New York Tribune. March 23, 1918, p. 8.

[2] Warner was born in Vinton, Iowa, in 1877. The only substantial discussion of his artistic achievements is an exhibition catalog by Fusscas (1992), which acknowledges the work he did as a camouflage designer. Other aspects of his life are equally interesting: His friendship with Leo Stein, Gertrude Stein’s brother; or that his maternal grandparents were Stephen and Mary Riggs, prominent missionaries who lived among the Dakota Sioux for forty years, in an effort to convert them to Christianity. Warner’s grandfather was a linguist, and compiled the first grammar and dictionary of the Dakota language, then used those in translating the New Testament. He was also the interpreter in 1862 at the trials that resulted from the Sioux Uprising, which ended in the hanging of 38 Native Americans, the largest mass execution in US history.

[3] Warner’s studio, located in Westmoreland, New Hampshire, burned in 1972, nine years after his death (Fusscas 1992: 43). Through the courtesy of his youngest son, Thomas Warner, I have seen photographs of the fire-damaged ship models, and I have photocopies of several of the remaining documents on ship camouflage, albeit with burned edges. Available online is a one-hour autobiographical talk titled Everett Warner: Looking Over the Artist’s Shoulder, narrated by the artist (c1963). Accessed on December 17, 2017 at <https://www.youtube.com/watch?v=4ILgs0p6fYE> > Warner’s official website, accessed on December 17, 2017, at <http://www.everettwarner.net/>, is an informative resource.

[4] Warner typewritten lecture notes, provided by his son.

[5] See Thayer, G.H. (1909), pp. 4-6. For detailed discussions of the camouflage theories of both father and son (Abbott H. Thayer and Gerald H. Thayer), see Behrens (2014) and Murphy (2016).

[6] Darwin (1869), p. 489. He writes: “It is interesting to contemplate an entangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting around us.” For an extended discussion of this, see Donald and Olsén (2009).

[7] A selection of Abbott Thayer’s ship camouflage experiments are reproduced in Post (2014), pp. 54-58, and in Murphy (2016), pp. 101 and 103.

[8] See Merrill (1998). See also Murphy (2016), p. 86.

[9] Wild (2016).

[10] Wilkinson (1969), p. 79.

[11] Quoted by Murphy (2016), p. 87.

[12] Behrens (2009), pp. 38-39.

[13] Dawson (1918), p. 11.

[14] Whitaker (1918), p. 17.

[15] Beston [1919], pp. 121-122.

[16] *Ibid.*, p. 123.

[17] Murphy (2016), p. 86.

[18] ERH (1917).

[19] *The Week* (1918).

[20] Bement (1919).

[21] See [Wikipedia article on Yeoman](#) (F). Accessed on December 17, 2017

[22] For detailed eye-witness account, see Warner (1919).

[23] James (1920).

[24] Smith (1921).

[25] Warner (1919).

[26] James (1920).

[27] “Another Kind of Camouflage” (1918).

[28] Skerrett (April 1919), p. 179.

[29] Blaszczyk (2012), p. 224.

[30] Ibid.

[31] Ibid., p. 125.

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