

## Chapter 5

# Assimilating Unease

## Moholy-Nagy and the Wartime/Postwar Bauhaus in Chicago

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László Moholy-Nagy's debut as leader of the New Bauhaus in Chicago was auspicious (Figure 5.1). A high-profile *New York Times* article in September of 1937, "America Imports Genius," hailed his arrival along with that of three other men of "genius": Albert Einstein, Thomas Mann, and Walter Gropius. The article cautioned, "The hospitality that America extends to these men should not be merely physical, but spiritual. We should not be in too great haste to 'Americanize' them—in the sense of attempting to indoctrinate them with all the beliefs we already hold. To make the most of their presence here we must think not only of what we have to tell them but of what they have to tell us."<sup>1</sup> Despite this plea, Moholy-Nagy was quick to claim America as his own. Especially as Europe plunged into war, Moholy-Nagy's unambiguous public statements reflected his desire to ingratiate himself with the country that he hoped would move the world beyond the war: "The present world crisis will bring unforeseen problems to all of us. We shall have to make decisions of great consequences, both to ourselves and to the nation. Whether or not Hitler wins, whether or not we get into the war, we shall undergo great strains because an equilibrium has been disturbed. Europe has lost the leading position which it had in culture and technics. America is now the country to which the world looks."<sup>2</sup> This last observation is an early iteration of a position which would be taken up by a number of critics of art and architecture in the postwar period, but a tension can nonetheless be detected in Moholy-Nagy's language—an uneasiness with which émigrés, understandably, conducted themselves, underscored here by Moholy-Nagy's references to "us," "we," and "the nation." The émigrés' anxiety about their status in the United States was often palpable; their anxiety about the war Europe brought to the world propelled their efforts to continue their work in spite of that uncertain status.



**5.1**  
The New Bauhaus, 1937, Chicago, IL (Photograph by Herbert Matter, 1938)

When the New Bauhaus opened in October of 1937 as the self-proclaimed successor of the famed German institution, which had itself gone through several iterations, lastly in Berlin, before closing in 1933, the United States was still emerging from its Great Depression, while—from the perspective of the emigrant former members of the German Bauhaus—the situation in Europe was becoming more dire.<sup>3</sup> When the Second World War broke out, the European Bauhäusler, who had experienced the darkening situation first-hand, were more politicized and also ready to contribute to the war effort in more practical ways, perhaps, than their American counterparts; although individual architects and artists took varied positions on the swiftly changing situation, the American public generally remained wary of entering another major war after the experience of the First World War. Many of the Bauhäusler now plunged adeptly into their new American cultural milieu, winning over government bureaucrats, private businessmen, and other officials, later capitalizing on these relationships during the postwar boom. As America welcomed fleeing members of the Bauhaus, as well as other modern artists and architects from across Europe, there was an assimilation of European modern forms and ideas to American conditions.<sup>4</sup> This assimilation occurred over a relatively short period of time, as Moholy-Nagy reflected in 1946: “When I came to this country ten years ago, I had to relearn completely my ideas about design. I had thought that European measures could be applied to America immediately with the same results as over there. . . . I never would have believed that a grown-up person could learn as much as I had to learn in this country.”<sup>5</sup> In the case of Moholy-Nagy at the New Bauhaus and its successor, the School of Design in Chicago, it is striking how the exigencies of the circumstances in which he found himself in America, and the very anxiety that this new situation generated, carried him almost overnight from a left-leaning artistic milieu to American government collaborations and very pragmatic assistance to his new country.<sup>6</sup> Gropius was later able to assert, “When Moholy-Nagy built up the Institute here in Chicago, he had the vision to lay its foundations in such a way that indigenous American design could be stimulated and developed.”<sup>7</sup> It was during the war years that the protagonists of the New Bauhaus—by this time, the School of Design—it will be argued, laid the groundwork for their acceptance in postwar America, both in terms of design research and connections established with American individuals and institutions. The school began to prepare for possible entry into war very early on, before Pearl Harbor, and, while the country was still in the midst of the war, looked to a planned segue from its wartime work to preparations for the postwar period, declaring as early as 1942 that it was adapting its program for “the present emergency as well as to the problems of postwar production.”<sup>8</sup> Indeed, the school’s ability to contribute novel, practical solutions to the war effort aptly positioned its mode of modern design for participation in postwar technological progress and the boom-time affluence that accompanied it.

In the process, under Moholy-Nagy, the attempt to revive and continue the Bauhaus experiment in America necessarily transformed the project the German institution had pursued. Perhaps surprisingly, this transformation was marked by an intensified turn towards the usefulness of design. This essay situates that development, and Moholy-Nagy’s school’s contribution to postwar modernism in

America, in the context of its involvement in the nation's war effort and the opportunities for anxious assimilation of émigrés like Moholy-Nagy that it afforded. While demonstrating the continuity between wartime efforts and the postwar boom, this chapter examines the ways in which these activities contributed to the increased acceptance of modernism in America, and the Chicago school's role therein—as well as the ways in which this connection to the war was formative for American postwar design.<sup>9</sup> The project Moholy-Nagy pursued through iterations of the design school he directed in wartime Chicago was indeed one of designing, and teaching, in war for a time and circumstances beyond war.

### **Anxiety, Assimilation, Integration**

Although they had been given plumb positions of power in institutions of higher learning, an act that in and of itself indicates a large amount of faith in them, former members of the Bauhaus had reason to be anxious about their tenuous status.<sup>10</sup> For the most part, the newcomers arrived with just the material possessions and artworks that they could bring with them, often with larger art collections left behind in trust with the hope of eventual exportation, with very little money (savings, if there were any, generally had to be left in Germany) and varying levels of proficiency in English, and they faced very different educational structures, cultures, and expectations in their new positions.<sup>11</sup> Hal Foster has asserted that Moholy-Nagy's prior critique of capitalism became muted after his arrival in the United States, and that the American version of the Bauhaus ideal revealed a belief on the part of Moholy-Nagy that the "modernist evolution in abstract styles was commercial design."<sup>12</sup> This is undoubtedly largely so. Yet for Moholy-Nagy this assimilation to American capitalism and the realm of the businessman-supported, non-profit institution (rather than government support which had been the—tenuous—mainstay of the German Bauhaus) was likely brought on more by pragmatism than core belief.<sup>13</sup> Dismayed by the commercial world's reaction to the work of his fellow artists, he worried privately, "the provocative statement of modern art is constantly annulled by checkbook and cocktail party. Am I on the same way?"<sup>14</sup> The tangible design contributions that he and his colleagues were able to make in their new country thanks to a certain partial but rapid assimilation were one palliative for the anxiety created by their uneasy status.

Former Bauhaus members were also quick to serve the US government in concrete ways. They were asked to join committees for which they gave generously of their expertise and time. For example, Gropius was a key member of the Harvard Group of the American Defense Committee, work for which he was warmly thanked by the group's leader in a letter of 1941: "I want to tell you how grateful we are for your contribution to the work of the Group and above all for your personal interest and sympathy."<sup>15</sup> Likewise, Moholy-Nagy served on the City of Chicago's Civil Defense Commission, was a key member of the Chicago Metropolitan Area camouflage section, and worked closely on various initiatives with the Office of Civilian Defense in Washington. They did so even as, during the war years, and thereafter, the relationship between the émigrés and their new government was not one based on open trust. The FBI kept extensive files on Gropius, Mies, and

others.<sup>16</sup> Moholy-Nagy's citizenship process was held up by several years by the FBI's investigation of him, which prevented the Naturalization Service from granting him citizenship until the FBI case closed.<sup>17</sup> Gropius was obliged to report his travel itinerary to the authorities every time he left Cambridge.<sup>18</sup> Yet he worked closely with American government officials to further their postwar aims. As Karen Koehler has brought to light, by 1944, in collaboration with the United States War Information Bureau, Gropius allowed a propagandistic radio play to be written about him for a series called *America, the Haven*.<sup>19</sup> A work of fiction, it was intended to reach retreating German working-class soldiers and was meant to be aired in areas of Germany liberated by the Allies.<sup>20</sup> It celebrated his life's work, touting a "cultural trust" placed in him and the achievements that he was to continue in America. The text from the radio play, written under the auspices of the United States War Information Bureau, frames Gropius's position in this manner: "I am an exile and yet I shall live. I will continue my work. . . . For there is a trust placed in me. A cultural trust."<sup>21</sup> It was perhaps this idea of "cultural trust" that formed the lens through which American officials saw the usefulness of the European émigrés and, in turn, what émigrés saw as their offering to America: the exportation of their ideas, forms, and educational working methods to the United States. But they also quickly offered pragmatic new design-objects and inventive solutions to wartime problems.

Of the émigrés' many responses to the instability of their position in America, a crucial one was to anchor and stabilize themselves not only through their design contributions and their teaching positions, but through their formal and informal social networks. They used a web of connections to each other to share information and opportunities in a foreign land and culture. And they helped each other to anchor themselves to interested, prominent Americans in the cultural sphere, such as Philip Johnson at the Museum of Modern Art, as well as the business realm, through figures such as Walter Paepcke, head of the Container Corporation of America (CCA), who backed the New Bauhaus financially and fostered further support for the institution through his network of contacts. Through Moholy-Nagy and the school, Gropius and Herbert Bayer came to know Paepcke closely, who, for his part, awarded them design commissions under the auspices of his company. These prominent Americans could help stabilize the positions of the newcomers, through key introductions, via direct financial support for their projects, by providing help in obtaining financial backing via a third party, or by lending expertise in navigating governmental and other systems which could help to establish them.

It is also significant that designers who moved from Germany, such as Gropius, Mies, Moholy-Nagy, Marcel Breuer, Ludwig Hilberseimer, and Erich Mendelsohn, showed little desire to return after the war despite the fact that the rebuilding of Germany would have afforded them many opportunities to build. Instead they were particularly committed to forging a career in their new country and pursuing the opportunities they saw for their work in America. This was in contrast to other groups of émigrés in the realm of art and culture, such as George Grosz, Bertolt Brecht, Theodor Adorno, and Max Horkheimer, who all returned to Germany. Moholy-Nagy, in New York in 1945 for a meeting of the American CIAM organization (Congrès Internationaux d'Architecture Moderne), which was promoting

postwar planning, was astounded to find “most French refugees dead-set on going back to France and England at the first possible moment.”<sup>22</sup> He felt of these compatriots who intended to return to Europe that it was “a great pity that we cannot bind them (with love and money) to this country.”<sup>23</sup> Of especial importance to Moholy-Nagy was this “binding” to his new country through as rapid an assimilation as possible.

In tandem with his efforts at assimilation, Moholy-Nagy frequently used the idea of “integration” to describe his vision of the design process, and this vision might be seen to correspond to the situation faced by these designers in America, too. Registering the anxiety surrounding technology in this period, Moholy-Nagy wrote often of a sought-for integration of the human and the technical world: “We feel that after the war, conditions will have a task of greatest importance for us: the integration of the neglected values of art and humanities with a hypertrophic technology.”<sup>24</sup> Such an integration was also foundational to his teaching aims: “By now technology has become as much a part of life as metabolism. The task therefore is to educate the contemporary man as an *integrator*, the new *designer* able to re-evaluate human needs warped by machine civilization.”<sup>25</sup> In war, the use of new materials and technologies clearly had devastating consequences. In Moholy-Nagy’s view this reality increased the need to use new knowledge and new design to positive wartime ends that could mitigate these consequences, from designing camouflaged shelter for citizens during attacks, to new safety equipment for those on the battlefields, to using the design process for restorative occupational therapy for those returning from war, all to be discussed here. The anxiety about the devastation caused by technological prowess that followed the First World War, which had been largely replaced by excitement in 1920s Weimar Germany, including at the original iteration of the Bauhaus, once again resurfaced for many during the Second World War.<sup>26</sup>

The *Chicago Sun* newspaper aptly summed up the school in wartime in this manner: “The work carried forward by this group can no longer be described as revolutionary, but rather as a unified and imaginative approach to both fine arts and design technology. Some changes in emphasis have come about in response to American ways of living.”<sup>27</sup> For Moholy-Nagy, adapting to America while integrating technology to serve the needs of man would also have to attempt to counteract the horrors of war. An era which had held so much promise seemed to have reached an impasse. Moholy-Nagy characterized the situation in this manner:

To state the case is almost too simple:

The industrial revolution opened up a new dimension—the dimension of a new science and a new technology which could be used for the realization of all-embracing relationships. Contemporary man threw himself into the experience of these new relationships. But saturated with old ideologies, he approached the new dimension with obsolete practices and failed to translate his newly gained experience into emotional language and cultural reality. The result has been and still is misery and conflict, brutality and anguish, unemployment and war.<sup>28</sup>

In response, Moholy-Nagy called for a well-balanced social organization to come out of a form of education in which everyone was utilized to his highest capacity. Although many designers, companies, and industries articulated their eager preparedness for the promised postwar boom ahead, in terms of retooling for peacetime production and consumption, Moholy-Nagy saw the need, even during war, to design *beyond* war—not just in terms of material goods, that is, but to envision for a future with a place for design and design education in a *society* beyond war.

This was the basis for the American version of the Bauhaus in Chicago—a stated repositioning toward the cultural realm and toward a concern for humanity. While the nexus of technology and culture had always been part of the German Bauhaus's aims, in its series of prewar iterations it did not broadly succeed in designing for a different society, despite its efforts to engage new industrial technology. What ultimately distinguishes the American institution in the war years from the original Bauhaus is the extent of its concern for pragmatic design solutions and the humane use of technology in aiding civilization—areas, namely, in which the war epitomized all that had gone wrong—concerns which also provided the New Bauhaus/School of Design's orientation toward the eventual postwar period.

During Moholy-Nagy's time at the German Bauhaus (he left in 1928, following Gropius's resignation) its legacy was assured through the highly successful *visual* iteration of ideas about modernism that the institution embodied. Indeed, the symbolically resonant objects produced at the Bauhaus under Gropius are much more likely to be found in museums today than any products of the New Bauhaus/School of Design—but these iconic modernist designs—chess sets, ashtrays, silver and ebony tea services—represented luxury objects in ideology, form, and type. Though ostensibly intended for mass production, they were expensive, difficult to fabricate, and remained out of reach of the many, failing to accommodate the altered economic realities necessary for the sale of modern objects on a mass scale.<sup>29</sup> This difficulty can be traced partly to the fact that the German Bauhaus was still profoundly shaped by the nineteenth-century heritage of *Kunstgewerbe*, or arts and crafts, and its post-World War I revival, which explicitly attempted to recover that heritage via the high-quality art object of the craftsman.

The New Bauhaus, on the other hand, partly by virtue of lacking a strong anchoring tradition, but also due to the exigencies of the coming war, would serve to cement and intensify a tendency away from craftsmanship toward a new emphasis on engaged, practical experimentation and pedagogical innovation. This trend was reflected in the school's first curriculum, which added "scientific subjects" (which included the fields of geometry, physics, chemistry, mathematics, and economics including statistics and marketing) as one-third of the preliminary course program, giving them a weight on a par with the two other categories of "basic design workshop" and "analytic and constructive drawing." As Moholy-Nagy wrote in the institution's first catalogue, the school's ambitious task was "to contrive a new system of education which, along with a specialized training in science and technique leads to a thorough awareness of fundamental human needs and a universal outlook."<sup>30</sup> The German Bauhaus had had lofty goals for its design with regard to the masses, but even these declared aims were outstripped by the new focus

formulated by Moholy-Nagy in Chicago, which signalled the extent to which a new social mode of design would require radically changed foundations. Moholy-Nagy's Chicago school went much further to put a new production paradigm for design into institutional and pedagogical practice.

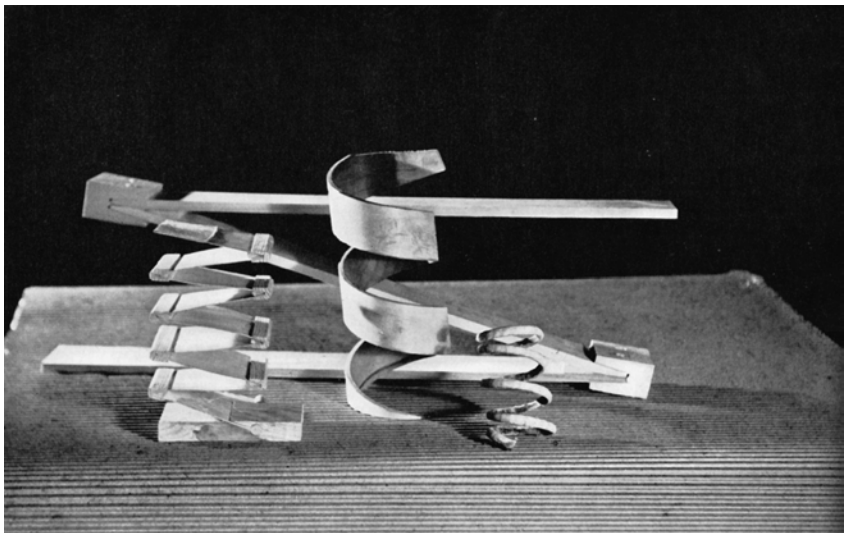
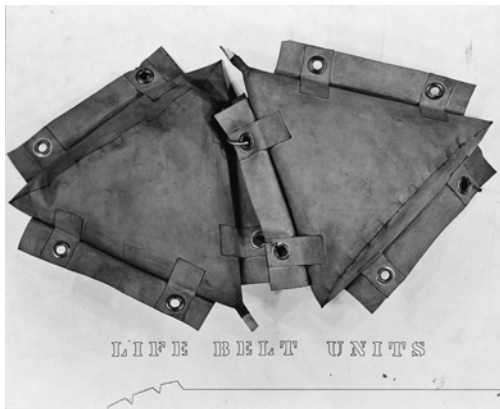
Other émigrés were also important facilitators of the Bauhaus legacy in America, and the housing and urban solutions proposed by these architects and their students for the postwar period were arguably as grounded in offering real solutions as those of Moholy-Nagy's school's were for design. Still, in the American phase of their careers the other key protagonists were notably focused on either art-related issues at art schools (Anni and Josef Albers at Black Mountain College, followed by Yale) or architectural concerns at schools of architecture (Gropius and Breuer at Harvard, Mies at IIT). Moholy-Nagy, in comparison, had a special, if especially precarious, platform—as the leader of a newly founded, independent school of *design* (and not as a division of a larger, less flexible, institution), from which to attempt to bring about an—of course vastly altered—version of what he and his colleagues in Dessau had sometimes envisioned.<sup>31</sup> Moreover, Moholy-Nagy's singular commitment to, and practice of, the labor-intensive Bauhaus educational working methods permitted him to conceive of changed design practices, in the pragmatically charged social and political context of the realities of the wartime situation, while, in the pedagogical setting of the school, actively undertaking the kind of transformations he thought this new practice would require. War and precarity provided the impetus to achieve a form of practical, problem-driven design that the original, still elite-oriented Bauhaus had never managed to fully put into practice. The uniqueness of the New Bauhaus/School of Design lay in its particularly remarkable unification of this effort in a school (like the former Bauhaus) and its community-oriented pedagogical practices, and in the singular way in which it integrated contingent war-related demands into these modes of learning. In doing so, the school's activities were always looking to a time and condition beyond the war. Not least for this reason, the research engaged in on behalf of the war effort, and its products, also had implications for changes in design processes in the postwar period.

## War Efforts

As the nation's circumstances changed—initially on the brink of war, then at war, and then facing the transition to postwar, peacetime production—the new Bauhaus reacted (while going through its own institutional reorganizations, into the School of Design). The school re-tooled its existing courses and introduced many new ones in order to focus on the evolving practical problems facing the country. Keeping the idea of working with industry at the forefront of the school's mission, Moholy-Nagy used the phrase “war industry” to refer to the war-related work in this period.<sup>32</sup> By this he meant efforts to design with and for industry in such a way as to directly aid the war effort: students worked on portable runways for temporary airfields and air-raid shelters, shock-proof helmet construction and a shock-absorbing wire-cloth pillow for helmets, an infra-red oven that cooked food at four times the usual rate, and parachute clothes.<sup>33</sup> An airplane door was designed in plywood, and the school experimented with a new system of friction welding of clear acrylic plastics intended



for the swifter repair, in the combat zone, of the easily shattered plexiglass and Lucite domes of airplanes.<sup>34</sup> Another useful product developed at the school was a new kind of barbed wire, sent to Washington for testing, intended for repairing holes in the plastic gunners' hoods on bombers.<sup>35</sup> Also devised during this period by student Elic Nekimken were rubberized-cloth flotation units that could be connected with notebook rings to form a lifebelt or raft (Figure 5.2). George Marcek contributed a ventilated helmet for a patient with a skin disease, which also potentially could protect healthy men from the sun's rays. A mobile machine gun unit by student Nolan Rhoades was intended to be constructed out of a few structurally simple parts



## 5.2

*Above:* Elic Nekimken, Life Belt Units, Student work, School of Design, 1942

*Below:* Four types of wooden springs ("V" or Victory Spring shown front left), Student work, School of Design, —early 1940s

welded together in an assembly line using standard automobile power, allowing for mass production at low cost; it was also designed to be light enough for two men to handle and to break down into stackable units for shipment. Rhoades's designs of a "guerrilla supply bomb" and "plastic balloon skin" made out of "weather proof cellophane and cheesecloth bound by alternate rectangular patterns of glue" illustrate the school's investigations in materials studies. These objects reached varying levels of actualization—some objects remained innovative ideas and never progressed further than the design phase—but they represent the school reacting systematically and creatively to perceived needs. Other ideas progressed to the prototype stage, exhibited as mock-ups both at the school and beyond. Finally, some ideas advanced to the degree that they could be manufactured and tested at the school, and then sent on to contacts in industry or defense authorities.

Wooden springs were perhaps one of the school's biggest innovations (Figure 5.2). Beginning in June 1941, students, working with faculty, designed at least twenty-four different spring prototypes in plywood or laminated wood.<sup>36</sup> The threat of a metal shortage stimulated this project, and it was successfully carried out before the ban on metal went into effect.<sup>37</sup> With it, wood ceased to be viewed as a mere substitute for steel and came to be appreciated as a structural material in its own right, especially because it withstood specific pressures and, unlike metal, could recover from fatigue when rested.<sup>38</sup> One of the school's prototypes, the "V" spring (for victory), was found to hold the same amount of compression weight and to withstand ten years' wear, proving as durable as metal springs.<sup>39</sup> Importantly, the V-spring was comprised not of large sheets of plywood, which was also beginning to be rationed for war use, but rather of small strips of veneer sealed with resins which conserved its moisture content and protected it from variations in humidity.<sup>40</sup> These strips were hinged at alternate ends and folded over wedges, zigzag fashion, at the joint of each "V," so that the size and shape of the wedges determined the amount of elasticity in the spring.<sup>41</sup>

The wood spring represented the school's first successful attempt at direct cooperation with industry; after it developed a prototype, a manufacturer conducted large-scale tests which led to its perfection and use.<sup>42</sup> A model wood-spring mattress was displayed by the Seng Company, a large furniture firm, at the 1942 Chicago furniture fair.<sup>43</sup> Moholy-Nagy reported that the school received its first check for \$2,500 in November of 1942, as an advance royalty payment on the wood springs.<sup>44</sup> The experiments with wooden springs also directly led to the development of an experimental stool in plywood, using the same application of technology as the springs. (One might note here, perhaps in tribute to his drive to find wood replacements for metal, that in these years the students apparently affectionately referred to Moholy-Nagy as "Holy Mahogany."<sup>45</sup>) Throughout these efforts, Moholy-Nagy was driven by a concomitant desire to articulate wartime designs toward postwar hopes, as is evidenced by his report to Nikolaus Pevsner in March 1943: "Through our success with the wood spring experiments . . . a large furniture manufacturer is interested in our bent wood solutions. This type of furniture can be seen as a forerunner of simplified and healthier design, having the potentialities of replacing the over-stuffed upholstered furniture."<sup>46</sup>

Elsewhere, individual designers such as, most notably, Charles and Ray Eames conducted wartime experiments in the novel use of plywood, veneers, and glues for leg splints and airplane nose cones and stabilizers that would likewise directly contribute to the war effort and then later find wide application in the Eameses' iconic furniture designs. Comparable schools of art and design, such as Cranbrook, however, neither assisted so assiduously in wartime design efforts, nor did they tend to attempt such direct cooperation with industry.<sup>47</sup> War-related activities at Black Mountain College were limited mainly to participation in the Enlisted Reserve Corps program, which was intended to provide officers with "leadership qualities" for the military by allowing enlisted students to defer service in order to complete their education first; the school was also approved by the US Relocation Authority to accept American-born Japanese transfer students from the Pacific coast.<sup>48</sup> Likewise, schools of architecture, which did offer some war-related courses (for example, camouflage courses were taught at the architecture school of the University of Pennsylvania, and troops were offered camouflage instruction under the auspices of the Landscape Architecture Department at Harvard), did not dramatically reorientate themselves to the war in the same manner as the School of Design, nor did they pursue wartime collaborations with industry in the same way.

For the duration of the war, the Chicago school's war-related design activities were consistently undertaken with an eye toward design transformations to come once the war was over. The school sought to engage in industrial research and development for war-fettered companies that could not spare their own designers or engineers for new product studies—an effort that effectively positioned the school and its students for the postwar period, giving it the opportunity to offer well-trained potential employees and expertise, as well as possible prototypes.<sup>49</sup> Already having established itself and its work, the school was called upon for design solutions by outside manufacturers. Beyond the wooden springs, the school sought to design other consumer goods with possible lasting application around the wartime shortages, as steel and other metals were withdrawn from civilian use. For example, a large mail-order company asked the school to experiment with a metal-less design for a chair for infants that had formerly been made of a canvas back and seat and metal frame.<sup>50</sup> Tackling the problem, students devised wood substitutes—a painted, easy-to-assemble, inexpensive version for lower-income homes, and a streamlined, bent-and-polished plywood example. They also experimented with substitutions for wooden dowels, alternatively testing the combination of resin with paper and cotton. Other materials which had been essential to the functioning of the workshops—such as rubber, paper, and plastics—were also rationed, necessitating further innovations.<sup>51</sup>

As a result of these investigations and new designs, Walter Paepcke, the Chicago businessman and key benefactor of the school, wrote on the school's behalf to the War Production Board:

Dr. Moholy-Nagy has recently had a conversation with Capt. Benjamin Gelb of the Consumer Product Branch of the WPB [War Production Board]. The School is most anxious to be recommended for a research



5.3

*Above:* Fiberboard chairs, Student work, School of Design, early 1940s  
*Below:* Fiberboard chair, Student work, School of Design, 1940–1945

contract on new types of household goods and domestic appliances. . . . It [the school] trains and educates young men and women to become practical industrial designers of all war and postwar products. . . . I am convinced that the School could do an excellent job on research assignments for the Consumer Product Branch. I am recommending it most highly for favorable consideration in this connection.<sup>52</sup>

Here was an attempt to position the school not only for more formal wartime commissions but also for postwar production.

Other furniture designs, similarly born out of wartime shortages, show the ways in which the school was already thinking about the transition to postwar furniture needs. Prototypes developed in the early 1940s illustrate the degree to which students were already engaged in work which featured low cost materials, mass production, and the ability to be packed flat (which saved shipping costs initially, but also allowed the user to easily store items of furniture). These prototypes include an inventive series of fiberboard chairs; some designs were entirely made of fiberboard whereas others used a tubular steel support structure (Figure 5.3). Further examples include the plywood “knock-down chair” by Robert Zinns of 1942, in which flat pieces of plywood were slotted into each other in lieu of fixed joints. Other experiments with plywood joints indicated that they could be strengthened by enlarging the gluing surface of the plywood edges.<sup>53</sup> Jack Waldheim’s “Z-Chair” used thin laminated wood instead of solid wood or thick plywood and featured a single, continuous, Z-shaped wooden support to form the base, legs, and armrests. In the immediate postwar period, wartime problematics and aesthetics continued to influence furniture designs such as Robert Beard’s 1947 “Collapsible Chair,” which could fold up completely flat, and Allan Johnson’s design for a cot which compressed, accordion-like, to a small size. Like many other designers and companies in this period, the school looked to the factory re-tooling that would follow the war, and many prototypes coming from the school in the postwar period were specifically designed to be manufactured on the same machines that had been producing ammunition parts.<sup>54</sup> Military production and use of plywood, Moholy-Nagy envisioned, would lead to veneer or plywood furniture manufactured using the same type of blanking dies used in airplane factories for wings and in fuselage construction.<sup>55</sup> Therefore the school devoted much design focus to lightweight, easily manufactured, laminated veneer and plywood furniture prototypes to be shaped on automatic molds that would only require several minutes per piece.

Amid these innovations, Moholy-Nagy was quick to assert that this ingenuity struck a long-established, particularly American note, as he told a newspaper interviewer:

[T]he old American spirit of patent furniture has been reawakened in the students. Between 1830 and 1880 thousands of new ideas for furniture were submitted to the [United States] patent office. It was an ingenious American development. . . .

Now we have taken it up again. And by being trained in the understanding of motion, joints, the transition of forces by lever, and the role of pivots and folds, and by combining this knowledge with new materials and new machines such as the infra-red oven for plastics and the electrical bending machine for plywood, the students have made a number of astonishing designs.<sup>56</sup>

This mannered assertion of a link to a particular aspect of American heritage, one that the United States had always used to distinguish itself from the traditions of Europe—that of American ingenuity—could be seen as one more important way to keep the school situated in its context, despite its foreign director and the many émigré members of its staff. The conditions under which they were working, the continuing precariousness of their personal situations, were likely never far from their minds.

### **The “War Courses” at the School of Design in Chicago**

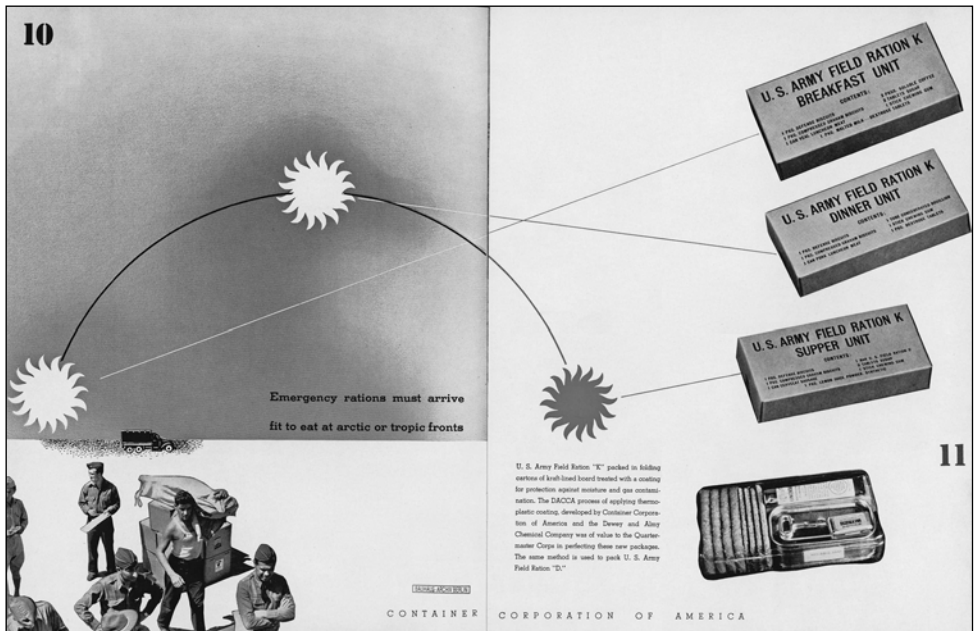
Beyond designing around wartime shortages and addressing war-related needs (and with an eye towards the period to follow), the school also offered an assortment of other new “war courses” during these years. The majority of these were designed to take up immediate wartime training needs—although even the survey art lecture course was retained and transformed to cover the Social Usefulness of Twentieth Century Art and its Relation to a Nation at War.<sup>57</sup> As the school’s summer session brochure of 1942 intoned, “In a country at war education and vocational training are faced with the problem of achieving maximum results in minimum time without sacrificing the objectives of general education. The School of Design in Chicago—because of its past educational policy—has readily adapted its program to the requirements of the present emergency.”<sup>58</sup> At a time when America’s entry into the war expediently drained schools across the country, the School of Design’s war courses significantly boosted the school’s enrollment; as Moholy-Nagy reported, “the year 1942 was more positive for the School than we had the right to expect. Through the preparation of war courses—camouflage, war designs and experimentation with substitutes—we had our highest enrollment counting the day and night students together—over 230 students in the last semester.”<sup>59</sup>

In accordance with the recommendations of the Wartime Commission for Higher Education, students could use summer session credit towards regular semester work, speeding up the timetable to graduation.<sup>60</sup> (In a nod to wartime privations students attending the summer session held in the countryside outside Chicago were instructed that it was “absolutely essential” to “bring all their ration cards, marked towels and one woolen blanket.”<sup>61</sup>) The school’s intensified program sought to keep “constant pace with war-time . . . requirements” while also making provisions for those “engaged in the war effort [by day] to pursue their education” through evening classes.<sup>62</sup> It also came to terms with the fact that it was losing students to military recruitment, but did not forego the opportunity to publicize the fact that it was supplying the military with well-trained recruits who were especially suited to meeting new situations with resourcefulness and inventiveness.<sup>63</sup>

Later on, war veterans were directly served too, as the school, working closely with the Veterans' Administration, designed a special course of study specifically for those attending under the terms of the GI Bill, allowing veterans to condense two-year courses into one year of study.<sup>64</sup> At times, veterans outnumbered regular students by a ratio of 4:1.

War-related classes offered by the school were much more practical and results-orientated than the earlier curriculum and included: Model Airplane Building, which taught the principles of aeronautics, including experiments in plane design; Design in Plastics Research, which investigated the potentialities of thermo-setting and thermo-plastics; and a course called Mechanical and Architectural Drafting Training for the War Industries.<sup>65</sup> Other wartime courses included a general course on Mechanical Drawing and Architectural Drafting, Blue Print Reading, and Photography for War Services.<sup>66</sup> In Production Illustration students now learned techniques potentially useful for the war effort, including explosion, x-ray, and cut-away illustration, axonometric projection, photomontage, superimposition, and single and stroboscopic motion projections. The school quickly re-organized, and in some cases, re-staffed, in order to provide these valuable wartime technical skills.

Notably, it also sought to use its particular expertise in visual design to aid in the war effort. A Visual Propaganda in Wartime course, also called the War



5.4

Gyorgy Kepes, *Paperboard Goes to War*, Booklet for the Container Corporation of America (Chicago: Brookes & Sons Company, 1942)

Displays course, working in cooperation with the Army, focused on silkscreen poster design, display, and mobile exhibition design, with the goal of educating civilians on topics such as air-raid precautions, accident prevention, and first-aid. The posters produced in this course had unsubtle slogans, common for the period, such as *The People are on the March*, *Wipe Out the Enemy*, *War Loan for the Future*, and *Smash Anti-Semitism*.<sup>67</sup> Posters designed by student Richard Filipowski, *Care Saves Wear* and *Deliver Us from Evil* (both from 1943), won prizes in Chicago and New York, respectively. For his graphic design contributions towards the war effort, Gyorgy Kepes, an instructor at the school, was awarded a War Committee citation for “extraordinary service rendered our Government.”<sup>68</sup> Faculty, such as Kepes, and former Bauhaus members in the close-knit circle of émigrés surrounding the school, such as Herbert Bayer, as well as students, also created designs for the Container Corporation of America in support of the war effort. Sponsored by the company’s president and benefactor of the school, Walter Paepcke, they—and other European modern artists—designed informational booklets, such as Kepes’s *Paperboard Goes to War* (Figure 5.4) and advertisements—for example, one by Herbert Bayer that informed citizens: “Paperboard that goes to war is paper that wasn’t burned. Save waste paper! Sell or give to local collections.” By providing crucial wartime information to citizens in a graphically compelling—and thus memorable—manner, these designers were able to aid the war effort on a wide scale.

### Constructive Interventions: Rehabilitation and Therapy

The Occupational Therapy course, designed to create a new framework for rehabilitating disabled servicemen returning from the war, was another cornerstone of the school’s wartime effort and gave it a chance to give its ideas about holistic design education a very public and social application. Sponsored by the Deputy Director of the Mental Hygiene Service of the Illinois State Department of Public Welfare, the school planned the training course in conjunction with veterans’ hospitals, working closely with various officials. Envisaging that the war and the postwar period would demand a large number of personnel for this task, Moholy-Nagy identified groups in immediate need of rehabilitation, such as Army and Navy aviators suffering from operational stress, soldiers experiencing breakdowns during training, and injured industrial workers, and sought to train a corps of rehabilitation personnel in new modes of responding to their needs.<sup>69</sup> Ultimately, Moholy-Nagy envisioned a larger-scaled project with new types of hospitals designed for what he termed “constructive rehabilitation” (as opposed to “sentimental rehabilitation”). These institutions would have housed general workshops, in which patients would have worked for periods from six months to a year, as well as special workshops and laboratories for more advanced recovery work that would take from one to three years.<sup>70</sup> He was prescient in this regard: psychiatric-hospital admissions doubled between 1940 and 1956.<sup>71</sup> The school’s effort to respond to this projected need highlights the degree to which Moholy-Nagy consistently thought not just in a pragmatic vein, but also about how the design school might address postwar social needs and societal changes.



By further developing its foundational teaching strategies to serve the projected onslaught of postwar recuperative needs, in what it viewed as a “constructive problem of education,” the school broke with traditional modes of therapy and instead applied contemporary ideas and practices in education, psychological research, psychoanalysis, and even scientific motion studies to its program of rehabilitation.<sup>72</sup>

Two new courses were implemented for training rehabilitation personnel: Rehabilitation I, which focused on sensory experiences, especially visual expression, and workshop exercises, and Rehabilitation II, which tackled issues more unusual for a design school—occupational, physio- and psychotherapy, psychiatric integration, mental hygiene, scientific motion studies, family counseling, and problems of industrial workers, namely fatigue and monotony.<sup>73</sup> Proposed rehabilitative activities for patients were similar to those already taking place at the school—photography, basket weaving, leather work, plastics, and other crafts, as well as writing, poetry, and drama. Students in the course produced sample pieces to simulate the work of bed-ridden patients.<sup>74</sup> Both the head of the Illinois Neuropsychiatric Institute and Franz Alexander, a notable psychoanalyst and physician at the Chicago Institute for Psychoanalysis (a fellow Hungarian, whom Moholy-Nagy had known at the University of Budapest, and who had worked previously in Berlin), supported the program, sending students, nurses, and social workers to attend classes as well as arranging for Moholy-Nagy’s appearance before several medical conventions.<sup>75</sup> The school also offered a related evening lecture series on the topic of rehabilitation, which featured twenty-seven experts in the fields of psychoanalysis, occupational and recreational therapy, “psycho-drama,” and other areas focused on the issue of addressing the potential needs of returning disabled men.<sup>76</sup>

The courses sought to serve a wider population using key Bauhaus ideas and classroom exercises. Through them, the school was able to reach a different variety of pupil—not self-pronounced artists but rehabilitation facilitators and, indirectly, the injured. These courses thus offered a new opportunity to use Bauhaus methods in support of a long-standing Bauhaus belief, held particularly strongly by Moholy-Nagy himself, in the creative potential of every individual. To that end, therapists, aides, nurses, and laymen were all trained to view rehabilitation as a practice of restoring confidence in the disabled servicemens’ own creative abilities.<sup>77</sup> As Moholy-Nagy explained, “Rehabilitation has different facets, but its main direction is at present to restore the patient physically and psychologically to the previous level of his normal status, by reestablishing his self-confidence and giving him opportunity to participate in purposeful production.”<sup>78</sup>

Concerned with both cultivation of psychological well-being and a productive end result, the rehabilitation courses, termed “constructive occupational therapy” by Moholy-Nagy, represented another effort to apply Bauhaus ideas to American circumstances. Occupational therapy may seem an odd choice for a design school, but its inclusion was much in keeping with Moholy-Nagy’s own pedagogical methodologies and with teaching practices developed at the German Bauhaus. What Moholy-Nagy termed “the Bauhaus approach” in occupational therapy was intended to “awaken hidden capacities, increase self-confidence, leading to inventiveness and

resourcefulness” through exercises aimed at self-discovery and “the awakening of consciousness about personal creative abilities.”<sup>79</sup> Particularly evident in these rehabilitation courses would have been the sensory-based, process-oriented pedagogic practice that Jeffrey Saletnik has described, in reference to the original Bauhaus, as “design-as-process.”<sup>80</sup> This approach, which viewed art objects as permanent exponents of the process of their conceptualization and making, was continued by Moholy-Nagy at the School of Design, as well as by other former Bauhäusler at other institutions in America. Moholy-Nagy sought, innovatively, to use methods of art-making developed at the Bauhaus, methods that remained at the core of his school in Chicago, to aid in the recovery of war-related disabilities, in another pragmatic mobilization of art in response to a perceived need and towards constructive ends. These courses also embodied a new application of the school’s focus: methods of design pedagogy, combined with the application of science and technology, were developed and implemented not in pursuit of a well-designed, useful *object*, but rather toward the aim of cultivating *individuals* as productive participants in the ongoing design of postwar American society.

### The Art of Camouflage

The second National Defense Course devised by the School of Design during the war years was the Principles of Camouflage course, offered alternately as the Industrial Camouflage course (Figure 5.5).<sup>81</sup> Given under the auspices of the Office of Civilian Defense in Washington, it presented another opportunity to test out the School’s ideas about the integration of practices and knowledges across varied fields in a new mode of “design.” Moholy-Nagy had been in discussion with various military and government representatives about introducing camouflage training into the school’s workshops as early as the spring of 1941; following the December attack on Pearl Harbor and his subsequent appointment to the Chicago Metropolitan Area camouflage section, he devised the course for the 1942 spring semester and then reached out to government officials to obtain official sponsorship for it. The development of the course so early in the war brought inquiries to the school on behalf of other institutions interested in offering camouflage courses, and Moholy-Nagy sought to organize a camouflage instructors’ conference in Chicago to bring together teachers of camouflage courses from around the country with the goal of creating a common policy. This proposal was superseded by the Office of Civilian Defense’s decision to organize camouflage instruction nationally, and an invitation to send a member of the School of Design to Fort Belvoir, Virginia for training followed.<sup>82</sup> Gyorgy Kepes, after leading the school’s initial Principles of Camouflage course in the spring of 1942 and then receiving certification at the Army Engineer School at Fort Belvoir, was made head of the newly created Camouflage Department.<sup>83</sup> The students in these courses included current pupils at the school, members of the pre-inducting class, which was also open to high school seniors, and professionals, such as architects and engineers.<sup>84</sup> The Office of Civilian Defense especially encouraged architects and engineers to participate in the training as “the ones to whom protective concealment problems will best be referred when such decisions are made by the War Production Board”; with completion of the course,



5.5

Camouflage Course, Student work, School of Design, 1942–1943

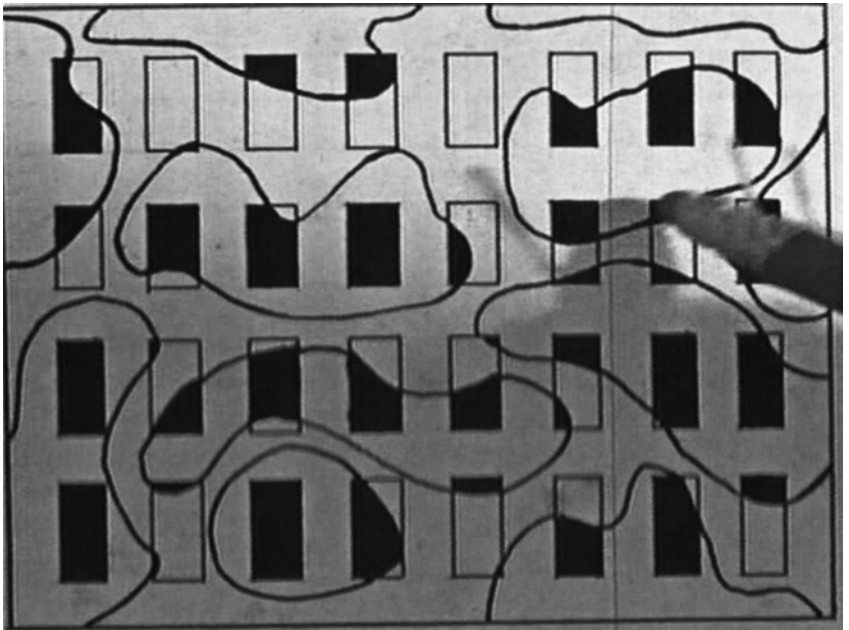
they would be qualified to “prepare plans, in accordance with principles established by the OCD [Office of Civilian Defense]”<sup>85</sup> The class was a War Services Project, and the work produced by the students was considered official government documentation. Several of the school’s students went on to work for the Army’s Camouflage Research Department or to active camouflage battalions in Europe.<sup>86</sup>

The course went beyond teaching the expected basic skills of military and industrial camouflaging of tanks, trucks, airplanes, and factories. Kepes led the students in designing a wide range of camouflage options that would conceal potential targets from ground observation, including by snipers, tanks, and submarine periscopes, as well as by low-altitude observation balloons, and from aerial attack methods, such as area bombing, timed precision bombing, dive bombing, and low-flying hedgehopping.<sup>87</sup> To aid the design process, students were trained in the fundamentals of aerial bombardment and the problems, including current modes of camouflage, that were typically faced by bombers.<sup>88</sup> From expert lecturers, they were instructed in infrared and night photography, the physiology of the eye and optics, atmospheric conditions, and certain landscape problems. In seeking new modes of camouflage, the students studied nature and animal camouflage, visual illusions, geometrical optics, techniques of basic photography, photo-topography, and stereoscopic photography, as well as practical skills such as estimation of costs for military bids.<sup>89</sup> Two films made at the school, *Exhibition Work of Camouflage Class* (1943) and *Design Workshops* (1944), show the students actively at work on camouflage problems—for example, utilizing aerial photographs to identify potential targets, or using principles of abstraction to conceal regular forms and patterns (Figure 5.6). This kind of application of various types of technical skills to a wide range of problems—both very concrete and also more conceptual—was different from the crafts-based Bauhaus training of an earlier, perhaps more innocent era, but it did continue the technological legacy of the school, adding to its American iteration a greater urgency and new forms of integration of art and science.

The school was in the unique position to combine science, technology, and art to aid the war effort, and the potential contribution of the visual artist toward this effort was continually stressed in the school’s wartime program. As Kepes pointed out in his introductory lecture for the 1942 camouflage course,

The present emergency demands a reorientation into new fields of activity. . . . Camouflage requires the combined knowledge of people with a great variety of training—architects, engineers, painters, sculptors, graphic artists. They are finding a synchronization of their divergent knowledge in the fulfillment of this urgent task. This synchronization may be achieved only through . . . a mutual exchange of knowledge in each particular field. Thus the aim of this course is to acquaint the participants with all the factors involved in camouflage, enabling them to utilize their expert knowledge efficiently.<sup>90</sup>

According to the course outline, the school consciously tried to avoid what it saw as “economic waste . . . caused by the inertia of professional isolation” whereby



5.6

Camouflage Course, Student work, School of Design, 1942–1943 (Film stills, *Design Workshops*, 1944, 16mm, color, silent)

“the painter saw only painting problems, the architect only architecture, [and] the engineer only engineering.” This was true of the school’s entire, broader design effort, which, like the course, took as its goal to engender “the necessary flexibility which emerges from a mutual grasp of each other’s problems.”<sup>91</sup> The philosophy behind the camouflage course supported its practical undertaking to combine the skills of several different professions and improve upon past methods of camouflage by merging specialties and disciplines. The Bauhaus had always striven to realize such a praxis across different fields of art and design; the war effort provided the School of Design with a clear impetus to achieve this melding by orienting it toward pressing, practical, and productive ends.

Beyond the collaboration with the Office of Civilian Defense for the camouflage course, the school also proposed itself as the site of an entire camouflage “research laboratory,” which would have prepared volunteers for civilian and military camouflage tasks and also trained teachers who could in turn train others. While the school was never fully expanded into this laboratory, it did conduct further research and development work, much of it highly situational. For example, specialists and students worked on potential methods of changing the appearance of the city of Chicago in order to camouflage it enough to confuse the enemy. The city presented unique difficulties due to its large lake and rivers; since it was supposed that general bombing could not be avoided, the idea was for precision bombing to be rendered inaccurate via large-scale camouflage.<sup>92</sup> Moving beyond standard blackout techniques, which interrupted travel and were ineffective for bodies of water, the group proposed a “moving-light” plan using “halation units,” large systems of lamps placed in patterns that would cast strong, confusing glows over or near target areas, rendering potential targets, such as workers’ homes, factory sites and airfields, invisible under a luminous haze; by extending this lighting out over the lake, the contour and location of Chicago’s lakefront, its most obvious marker, would have been distorted.<sup>93</sup> Students studied color combinations, geometrical optics, lights and shadows, fog and smoke, and other undisclosed means of pockmarking the city so that a bomber would have difficulties finding a target.<sup>94</sup> Faculty were hard at work as well; Kepes took on the problem of the nightly flares at the steel mills, which were easy beacons for bombers, by conducting laboratory experiments, the results of which proposed turning green flood lights on the steel mills to render their red flames nearly invisible.<sup>95</sup>

A large role was played by Moholy-Nagy personally too: he was appointed a member of the Mayor’s personal staff under the auspices of the City of Chicago’s Civil Defense Commission, a group in charge of camouflaging Chicago against air attack, especially the Lake Michigan waterfront. After completing a survey of the area in small planes and patrol boats, Moholy-Nagy worked on a number of potential methods of disguising distinctive elements of the city—the camouflaging of the oil storage tanks along the city’s south shoreline, for instance.<sup>96</sup> “The whole city could be camouflaged, if that were necessary,” Moholy-Nagy told the *Chicago Daily News* in 1942. “It depends on how much money could be spent on such a project. . . . Dummy buildings could be built on barges in the lake to change the contour of the city. In this way the Loop could be projected a mile or two into the water. The drives

could be covered over with painted burlap. Or scaffoldings could be built to resemble street intersections, or landscaped, to break up the length of the drives."<sup>97</sup> He also proposed obliterating the steel mills from the air through the use of smoke and suggested a signal in response to which janitors in every city building would throw a chemical in the boiler resulting in an instant blanket of blackness, blotting out the entire area. The role of artificial light and light manipulation in obscuring targets drew on one of Moholy-Nagy's own longstanding, primary artistic interests, giving him an opportunity to capitalize on his previous experiments.

A June 1942 article in the journal *Civilian Defense* labeled Moholy-Nagy and Kepes "among the best informed men in America on camouflage techniques," both in terms of theory and practical application.<sup>98</sup> It noted also, centrally, that camouflage should not be undertaken by individual organizations, industrial plants, or agencies, but must be operated on a community scale. Camouflage thus entailed in an uncanny way an almost seamless merging of important, originary Bauhaus ideals—the joining of the arts in work on a common goal, one that had aspects of both artistry and technology, and which could be undertaken only through working as a community and *within* a larger community.<sup>99</sup>

### **War Art: An Exhibition**

Important samples of the school's research and new inventions were presented to the public in a wartime exhibition entitled *War Art*.<sup>100</sup> This exhibition represented, at once, another of the school's efforts to disseminate its activities into the surrounding society, its foundational interest in improving means of visual communication generally, and the acute need it felt to substantiate the school's accomplishments in a situation characterized by competing, urgent priorities and constraints on funding and other resources. Organized by Moholy-Nagy and featuring work by students from the School of Design and the Illinois WPA Arts and Crafts Project, the exhibition ran just months after the American entry into the war, from April to May of 1942, at the Renaissance Society of the University of Chicago. (A related exhibition, under the auspices of Gyorgy Kepes's camouflage workshop, featuring much of the same work, was mounted at the school in 1943.<sup>101</sup> This exhibition was captured in a twenty-one-minute color film made at the school, *Exhibition Work of Camouflage Class*.) The *War Art* exhibition at the Renaissance Society was conceived to demonstrate not just the work that was being done at the school or under the auspices of the WPA but, more generally, "new developments in art in their application to war activities."<sup>102</sup> As Moholy-Nagy explained: "We are aware that many individual artists have contributed to the war objectives by their work, ideas and suggestions. These contributions, however, have not been generally publicized."<sup>103</sup> Even before Pearl Harbor, he noted, his own school had already begun to reorganize its work to meet anticipated needs; following that event, a much greater emphasis was being placed on actual war requirements, particularly domestic defense. The exhibition was accordingly intended to illustrate the "contribution of the creative artist and the craftsman as he adapts himself to the urgent needs of today."<sup>104</sup>

A relatively simple one-room exhibition, most of the designs on display were mounted posters on walls or small-scale models. In addition to elucidating



5.7

Above: Gyorgy Kepes or Ralph Graham, *War Art*, Catalogue cover for exhibition at the Renaissance Society, Chicago, 1942

Below: Exhibition of the Camouflage Workshop, School of Design, 1943 (Film still, *Exhibition Work of Camouflage Class*, 1943, 16mm, color, silent)



typical camouflage problems, it included a camouflage demonstration using two light boxes to show how light and shadow could conceal the character of forms. Also on display were designs of new materials, such as the cellophane and cheesecloth plastic “skin,” and designs featuring existing materials utilized in novel ways, such as the rubberized cloth flotation units. By the exhibition’s opening, some of the designs were already in active use at army, navy, and air training bases.<sup>105</sup> A number of designs were not allowed to be exhibited, however, as they were subject to censorship in the name of national security.<sup>106</sup> Curatorial files note that some of the restricted work included scale models of operations for landing and loading ordnance, and diagrammatic charts of airplane motors, ammunition components, and safety and production methods.<sup>107</sup>

In the catalogue accompanying the show, Moholy-Nagy described the circumstances of his wartime educational program: “In a country at war, education and vocational training are faced with the problem of achieving maximum results in minimum time.” He then connected them with the school’s unique pedagogic vision and practices. The school, he pointed out,

because of its educational policy—has readily adapted its program to the present emergency. Its class room and workshop training, the coordination of hand and brain, helps to make the individual resourceful and inventive. He knows from direct experience how to handle the tools of the craftsman, the basic machines of industry, and the problems of contemporary science and art. With such an integrated training of art, science and technology the students of the school were able to attack civilian and military tasks with courage, achieving surprising results, many of which have good possibilities.<sup>108</sup>

Moholy-Nagy also noted how, within the wartime context, he was directing his school to a broader conception of the kinds of needs to which design, both through its products and its practices, could respond. He saw the economic and technical needs that the war had brought to the fore and which would persist in altered form once the war was over, not in isolation, but rather in the context of the larger “human” side of need, of which the war and its effects formed powerful evidence. It was in the context of this perception and its implications for design praxis that the school’s contributions to the war effort could be understood: “The creative and inventive mind of the artist has always been alert to human needs. So today, the arts, the applied or practical arts in particular, are serving to meet the urgent needs of the present, and new techniques and development are utilized to aid in the national effort.”<sup>109</sup>

This exhibition, then, demonstrated the tangible results, in the context of war, of the school’s successful merging of technology and science, emphasized, singularly, by its evolving educational program for the creative problem-solving abilities of the trained artist and designer. Calling into new service the basic artistic skills that had always been taught at the school, including exercises in understanding and manipulating light, research into color and surface effects, the scientific testing

of differing materials, and the visualization of form in three-dimensional space or other views, such as aerial perspectives, the school could demonstrate that it had the capabilities to carry out the practical and productive designs that it espoused.<sup>110</sup> It thus continued to aim for what the original catalogue for the school had proclaimed in 1937: simply, the development of “a new type of designer, able to face all kinds of requirements, not because he is a prodigy but because he has the right method of approach.”<sup>111</sup> In showing its contributions to the war effort at this exhibition, the school was able to very visibly legitimate itself on several levels; it demonstrated that its unconventional teaching practices—which were being introduced in various institutions scattered across the country by former Bauhäusler now working in them but put into practice systematically at the New Bauhaus and the School of Design, under difficult and uncertain circumstances—could produce distinctively useful, practical results. This institution, led almost exclusively by foreigners who had moved to the United States from Germany, was ready to make serious contributions to a new homeland’s war effort.

In doing so it was working to address more general problems at stake for design that were brought forward by the war-exhibition format—such as the relationship between the visual and practical qualities of design products and the relationship between individual designers and a broader community. In presenting new ideas via new objects to a nation at war, the school and its protagonists were able to show that they at the school, and its mode of modern design more generally, were in the process of pragmatically facing the nation’s challenges—both in the present time of crisis, in which the attack on Pearl Harbor had led many Americans to question their country’s defensibility and readiness for war, and for the envisioned peacetime to follow. It was not enough to simply design for war and for peace in a pedagogical vacuum, and so the school strove to successfully communicate its design practice, largely through the objects it generated, to a broader public. Indeed, this communicative element was integral to the expanded conception of design that the Chicago iteration of the Bauhaus was struggling to put into practice. The *War Art* exhibition, as well as other exhibitions didactically demonstrating the products of the school’s workshops, were concrete examples of the school’s members mitigating their uneasy status, and that of the school, to a wartime and postwar audience, as part of its broader attempt to forge a new relationship between design and its audiences.

### **Creative Violence: Conciliatory Postwar Visions**

This essay has sought to underscore the novel pragmatism of Moholy-Nagy’s version of the Bauhaus—the degree to which the school in its American incarnation in Chicago was able to quickly adapt to the changed circumstances of a nation at war and to instigate an array of concrete solutions to wartime problems, introducing its new mode of design and design education in the midst of the war effort and positioning it, through this effort, for the changed peacetime to follow. Under Moholy-Nagy the New Bauhaus/School of Design addressed the war by offering specific programs and courses, forging key alliances with offices of the military, and using the school as a laboratory for solutions for the war effort. This pragmatism

manifested itself in the extent to which, under the leadership of Moholy-Nagy, the school managed to offer real design solutions to a nation at war—from useful objects made of non-rationed materials to visual design to innovative teaching practices. But it also reflected a significant and radical attempt to pursue, to a new degree, in changed forms, and under different circumstances, a holistic, integrated reconception of design as a social and pedagogical practice with links to diverse forms of knowledge and artistic and industrial production.

This project, which had begun at the German Bauhaus, received a charged, bold new formulation under Moholy-Nagy's direction and the pressure of events and acute circumstances in wartime Chicago. The combination of the broad anxiety produced by the war and the narrower anxiety felt by immigrants such as Moholy-Nagy—positioned precariously in the society that had received them and seeking to contribute skills and pedagogical practices that they had brought with them to fight against the state they had fled—seemingly provided the impetus for the émigrés to effectively redirect their efforts toward the kind of social transformation that the German Bauhaus Moholy-Nagy had been a part of had previously proclaimed but largely failed to usher into being. The result was a successful melding of art and technology with science to devise technically advanced objects and educational models for the war effort—a melding that arguably represented a realization to a new degree of the Bauhaus's originary ideals. While in Germany Bauhaus members often wondered why industry did not embrace their designs, in the United States Moholy-Nagy quickly and successfully cooperated with complex American bureaucracies, such as the Office of Civilian Defense, and private investors alike. Although the war found many Bauhäusler working in the United States in new capacities, furthering various aspects of the original school's methods and ideals, Moholy-Nagy particularly saw his work in America as a continuation of the German Bauhaus's organization and pedagogical methodologies, ones that he also viewed as potentially very useful to the war effort. A letter he wrote to the Wartime Commission of the US Education Department a few months after America's entry into the war captures what he saw as his school's contribution:

Our educational method, the coordination of hand and brain, the integration of workshop and intellectual training, may offer a good approach to your present problems, especially if the training in dexterity includes the basic machines of industry. . . . Continuing the educational work of the Bauhaus, the integration of art, science and technology, we have found that the youth of this country is very receptive to this type of training. It helps to make the individual resourceful and inventive, quick in decisions, courageous in approaching civilian and military tasks.<sup>112</sup>

The war indeed formed an urgently compelling new challenge for the reconception of design and design training that the "Bauhaus method" had embarked upon. The pragmatic approach that Moholy-Nagy frequently trumpeted to those he had to win over was joined by a philosophical one, itself bearing some congenial affinities with American philosophical Pragmatism, one in which Moholy-

Nagy and his fellow instructors and students used their particular areas of expertise to address problems of war, simultaneously cultivating a postwar role for modern design in America as a form of process-oriented, social problem-solving to be cultivated through new practices of pedagogy.<sup>113</sup> As the United States had watched the events unfolding in Europe with mounting alarm, Moholy-Nagy had not ceased to proclaim the potential social benefits of this design philosophy, as here in 1940, with an eye towards the role of design in war and beyond: "Training in design is training in [the] appreciation of [the] essence of things. It is penetrating, comprehensive. It includes development of various skills in using materials, but goes much beyond that. It involves development of attitudes of flexibility and adaptability to meet all sorts of problems as they arise."<sup>114</sup> In the face of war, Moholy-Nagy and his school had stood self-consciously at the ready, practically and ideologically. Moholy-Nagy was keenly aware of the circumstances when he made this statement—as a foreigner in a nation on the eve of war leading a school without particularly stable financial or social backing—and he did not shy away from using wartime contributions to both mitigate his own uneasy status and, at the same time, assimilate the school and its design practices.

Even before the war broke out, perhaps channeling what he had seen in Europe as he fled, Moholy-Nagy cautioned, according to the *New York Times*, that no artist may "dodge his epoch. He may be crushed by it, or he can become bitterly aggressive, or can make use of it in various creative ways. The Bauhaus would make use of it in a creative way."<sup>115</sup> The wartime experience to follow further influenced this insistence that crises were to be met creatively and that design had a crucial role to play in this response. Moholy-Nagy framed his position sharply, emphasizing the parallels between the war effort and the design effort, acknowledging the violence they both entailed: "We have to use creative violence to redesign our life, just as we are using a scientific-technological violence to win the war."<sup>116</sup> But as Moholy-Nagy explained in 1944, he saw art as a tool also, or ultimately, for harnessing aggression, suggesting that war could not but be detrimental to creativity, that the object of design in war—even when it was working directly on the war effort—was to design beyond war: "Art as [an] expression of the individual can be a remedy by sublimation of aggressive impulses. Art educates the receptive faculties as well as revitalizes the creative abilities. In this way art is rehabilitation therapy through which confidence in one's creative power can be restored."<sup>117</sup> In the midst of such a devastating war, a wariness about human potential abounded, and Moholy-Nagy saw in education, including design education, a possible guard against future violence: "We have to have a staff ready whose members have had time and concentration to watch closely the symptoms of war in our youth and to map a course for the future."<sup>118</sup> Moholy-Nagy's version of the Bauhaus in America during the war years took up the mantle of social responsibility with great vigor. Whereas the earlier Bauhaus had also conceived of art as standing at the center of a social project, it was during the war years that art found a guiding productive purpose in the activities of the new incarnation of the institution—whether employed to help veterans recover, to aid civilian instruction, or to design equipment or camouflage for use in the war. The "creative violence" Moholy-Nagy spoke of was to be applied

also to the practices of design itself, as an antidote to aggression and violence, in the name of cultivating a new generation that would not lead the world back into war as its predecessors had. This reformatory conception of design training was tidily summed up by Moholy-Nagy in 1943, describing his school as one that educates “by going back to the fundamentals and building up from there a new knowledge of the social and technological implications of design. The new generation of designers, who have such a training, will be invulnerable against the temptations of fads, the easy way out of economic and social responsibilities.”<sup>119</sup> Moholy-Nagy’s iteration of the Bauhaus in Chicago gave this conception a new urgency, making its case for the future value of the results of its instruction for the country: its role was to produce designers who would assume social, technological, and economic responsibility in the postwar period—following in the footsteps of those who had designed during the war, both for it and for the time beyond it.

Moholy-Nagy looked to the restorative power of art in the postwar period, putting a fragmented civilization back together again. In 1940 he had expressed his broad conception of design still in terms of peacetime life: “A designer trained to think with both penetration and scope will find solutions, not alone for problems arising in daily routine, or for development of better ways of production, but also for all problems of *living and working together*. There is design in family life, in labor relations, in city planning, in living together as *civilized human beings*.”<sup>120</sup> Once at war, the school continued to look ahead to future peacetime design needs—framed not to consumer ends, but rather in terms of production as benefiting of society: “After the war a great conversion from war to peace production will take place. Such inventiveness and resourcefulness are the qualities of the educational method of the School of Design in Chicago, these qualities will help the individual to find his right place in peacetime production. This should be to the mutual benefit of himself and the community.”<sup>121</sup>

In his graduation speech to the small class of 1942, Moholy-Nagy contended that in a time of war, it was a great privilege to be allowed the exercise of one’s skill in design—a privilege granted by society, made for its future benefit, bringing with it an obligation to use one’s creative skills for the “productive and harmonious existence of a new generation.”<sup>122</sup> It was this obligation that the New Bauhaus had sought to assume through its wide-ranging participation in the war effort—in the service, ultimately, of a more peaceful future in the postwar period, in which design would continue to play a socially beneficial role. This participation necessarily entailed collaboration and compromises, through which Bauhaus émigrés such as Moholy-Nagy, who had arrived under tenuous circumstances, managed to contribute much in several short, but crucial years. In Moholy-Nagy’s characterization of these contributions, and of the school’s functioning during the war years, as “a great privilege,” one continues to hear, perhaps, the conciliatory outlook that underscores the school’s anxious beginnings. The task of the present generation, he declared in 1944, to which the New Bauhaus/School of Design had sought to contribute the resource of an invigorated design process and pedagogy, was the “preservation and refinement” of the “*individual* within a harmonious *social* existence, the value of which will be measured in terms of cooperation and social

usefulness.”<sup>123</sup> When Moholy-Nagy died in November 1946, he was denied the further privilege, as he presumably would have seen it, of seeking to address design to the new and different social challenges of the boom period following the war, in which modern design was poised for far greater popular acceptance, though not without costs for the social design vision that the wartime Chicago design school under Moholy-Nagy had sought to put into practice. Moholy-Nagy had looked forward to the possibility of a vibrant postwar future, one in which the possibilities in a new country must have seemed expansive—but he presumably did so with an acute awareness of the persisting challenges of living together as human beings.

## Notes

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- 1 “America Imports Genius,” *New York Times*, September 12, 1937, sec. 4.
- 2 László Moholy-Nagy, “Relating the Parts to the Whole,” *Millar’s Chicago Letter* 2, no. 23 (August 5, 1940): 6.
- 3 On the recommendation of Walter Gropius, who had initially been offered the position, the organizing representatives of the Association of Arts and Industries invited Moholy-Nagy to be the school’s director. He arrived in Chicago in July of 1937 to meet with the association’s board, agreeing to lead the newly established institution, which opened in October. The school changed names and iterations frequently in its initial years of operation: it began as The New Bauhaus: The American School of Design in 1937 but was closed in 1938 by the Association of Arts and Industries. In 1939 it became independent from its original benefactors and was reopened and renamed the School of Design in Chicago. In the spring of 1944 it became the Institute of Design; it persisted in this form, despite Moholy-Nagy’s death in 1946, until 1949, when it retained its name but became a school within the Illinois Institute of Technology, as it remains today.
- 4 For a detailed analysis of the reception of European Modern Architecture in the United States, including a nuanced discussion of the tenuous position of Bauhaus émigrés, of attempts at assimilation vis-à-vis the contemporary culture of the United States, and of the many myths surrounding their success, see Kathleen James-Chakraborty, “From Isolationism to Internationalism: American Acceptance of the Bauhaus,” in *Bauhaus Culture: From Weimar to the Cold War*, ed. Kathleen James-Chakraborty (Minneapolis: University of Minnesota Press, 2006), 153–170. See also James-Chakraborty, “Changing the Agenda: From German Bauhaus Modernism to U.S. Internationalism,” 235–252, and Franz Schulze, “The Bauhaus Architects and the Rise of Modernism in the United States,” 224–234, in Stephanie Barron, *Exiles and Emigrés: The Flight of European Artists from Hitler* (New York: Harry N. Abrams, 1997). In

*Domesticity at War* (Cambridge, MA: MIT Press, 2007), Beatriz Colomina examines the architectural context in the immediate postwar years, viewing the engagement with the Second World War as the event that finally created the conditions for the development of modern architecture in the United States (12). She argues that there was a shift from war to domesticity to product design which resulted in a milieu that she terms an “obsessive, embattled domesticity” (19).

- 5 László Moholy-Nagy, Transcript of “Conference on Industrial Design, A New Profession” held at the Museum of Modern Art for the Society of Industrial Designers (11–14 November 1946), 54, 60, Institute of Design Records, University Archives, Paul V. Gavin Library, Illinois Institute of Technology, Chicago (hereafter cited as Institute of Design Records, IIT). Moholy-Nagy’s expertise on design education was held in high regard by 1946. He was introduced at the conference by Joseph Hudnut, dean of the architecture school at Harvard, as “the most able and vigorous and successful pioneer in educational discipline based upon objective analysis of the modern scene. We imitate him at Harvard, and he is imitated all over the world, chiefly because he has been able to see a role for the architect and the designer in the kind of training which he is developing which, I think, is going to be a keystone in the education of this new profession” (59–60).
- 6 Helping to smooth this transition would have been the post-Depression circumstances during Moholy-Nagy’s initial years in the United States, in which many government officials had participated in the administering of New Deal and WPA (Works Progress Administration) projects and thus would have been sympathetic to leftist ideals. The decision to let certain émigrés into the United States was sometimes predicated on how the government viewed their potential contribution to the country.
- 7 Walter Gropius, in “Three Addresses at the Blackstone Hotel on the Occasion of the Celebration of the Addition of the Institute of Design to Illinois Institute of Technology” 17 April 1950, 11, offprint, Institute of Design Records, IIT.
- 8 School of Design, *1942–43 Course Catalogue* (Chicago: School of Design, 1943), Institute of Design Collection, Special Collections, Daley Library, University of Illinois at Chicago, Chicago (hereafter cited as Institute of Design Collection, IUC).
- 9 For sources that examine connections in design from wartime to postwar boom time, see especially Donald Albrecht, ed., *World War II and the American Dream: How Wartime Building Changed a Nation* (Cambridge, MA: MIT Press, 1995); Andrew M. Shanken, *194X: Architecture, Planning, and Consumer Culture on the American Home Front* (Minneapolis: University of Minnesota Press, 2009); and Jean-Louis Cohen, *Architecture in Uniform: Designing and Building for the Second World War* (New Haven: Yale University Press, 2011). Although the focus here will be primarily on Moholy-Nagy, many other émigrés with key skills in art, architecture, and design, some who had been affiliated with the Bauhaus and some who had not, also contributed to the war effort in many ways, large and small. For example, former Bauhäusler Herbert Bayer, working closely with Edward Steichen as curator, designed the 1942 *Road to Victory* exhibition at the Museum of Modern Art, which drew on powerful visual narrative, intended to have maximum impact on the audience, to celebrate America and its resolute strength in entering the war; Bayer also designed the installation for MoMA’s 1943 *Airways to Peace: An Exhibition of Geography for the Future* and devised a series of flexible display units for posters and war propaganda that was used for traveling exhibitions put on by the US government. Following the war, he continued to aid US government efforts—for example, contributing the design for the 1957 United States Information Agency exhibition *Volk aus Vielen Völkern* (*Nation of Nations*) in Berlin. See Arthur A. Cohen, *Herbert Bayer: The Complete Work* (Cambridge, MA: MIT Press, 1984), 300–308. Modern German architects Erich Mendelsohn and Konrad Wachsmann advised the US government about traditional German building techniques and materials (and their relative combustibility), aiding the 1943 construction of a full-scale “German village” on the Dugway Proving Grounds in Utah. Fellow German émigrés Paul Zucker, Hans

Knoll, and George Hartmueller oversaw the construction of authentic interior furnishings, and Antonin Raymond, a Czech émigré, advised on a companion “Japanese village.” The two villages were repeatedly bombarded and rebuilt, in order to ascertain the most effective means of their destruction. Mendelsohn also advised on typical German factory construction, especially their roofs’ susceptibility to incendiary bombs. See Jean-Louis Cohen, 231–239.

- 10 For a contextualized discussion of the extent to which the exile experience of Walter Gropius was characterized by his efforts to avoid political controversy and separate art from politics, as manifested in his avoidance of historical specificity in the design and contents of the 1938 Museum of Modern Art exhibition and accompanying catalogue, *The Bauhaus, 1919–1928*, see Karen Koehler, “The Bauhaus, 1919–1928: Gropius in Exile and the Museum of Modern Art, N.Y., 1938,” in *Art, Culture, and Media Under the Third Reich*, ed. Richard A. Etlin (Chicago: University of Chicago Press, 2002): 287–315. Koehler notes the fear of—and hostility towards—new immigrants in 1938, the year that the exhibition opened. Anti-German and anti-Bolshevik propaganda was commonplace (Bauhaus artists had the potential to be identified pejoratively as either Germans or Bolsheviks), and in a period of continued unemployment in the United States, the new émigrés were also regarded as potential labor competition (296–300). See also Koehler, “Angels of History Carrying Bricks: Gropius in Exile” in *The Dispossessed: An Anatomy of Exile*, ed. Peter I. Rose (Amherst: University of Massachusetts Press, 2005), 257–280. For a wide-ranging study on exiled artists and architects of this period, see Barron, *Exiles and Emigrés: The Flight of European Artists from Hitler*.
- 11 Herbert Bayer is said to have arrived in New York with less than twenty dollars in his pocket. Sibyl Moholy-Nagy claimed that Moholy-Nagy, by insisting on speaking German, “lost most of his English vocabulary” en route from Chicago to Mills College in Oakland, where he had been invited to conduct a summer school in 1940. Sibyl Moholy-Nagy, *Moholy-Nagy: Experiment in Totality* (New York: Harper Brothers, 1950), 180. William H. Jordy has noted that Mies relied on others to translate for him during his initial four years in the United States before making an effort to speak English. Jordy, “The Aftermath of the Bauhaus in America: Gropius, Mies, and Breuer,” in *The Intellectual Migration: Europe and America, 1930–1960*, ed. Donald Fleming and Bernard Bailyn (Cambridge, MA: Belknap Press of Harvard University Press, 1969), 516. Once America entered World War II, uncertainty and isolation ensued, as Sibyl Moholy-Nagy’s diary entry of December 11, 1941, starkly captures: “War with Germany—that means severing the last connections with my family. No more letters.” Sibyl Moholy-Nagy, “Domestic Diary of America’s Participation in the Second World War,” 11 December 1941, 5, Sibyl and László Moholy-Nagy Papers, Archives of American Art, Smithsonian Institution, Washington, DC (hereafter cited as Moholy-Nagy Papers, Smithsonian). Beyond physical and economic hardship, there was also the continuing emotional hardship of emigration, to which an entry in Sibyl’s diary from the end of the war gives insight: “Laci [Moholy] came home. There is an unwritten code among emigrants—even when you are married. Every reference to Europe or to the past is guarded, casual, uttered only after the emotion behind it has been secured safely with an enforced dose of self-control. There is an emigrant etiquette, and Laci has adhered to it the same as I.” She then goes on to report their reactions to the end of the Second World War: “So the European victory, the defeat and death of the greatest objective enemy we have known in our life-time, the end of twelve incredibly strenuous years, was mentioned between us only in passing.” Sibyl Moholy-Nagy, Diary, 13 May 1945, Moholy-Nagy Papers, Smithsonian.

Part of the wartime and postwar endeavors of Bauhäusler such as Ludwig Mies van der Rohe, Gropius, and Moholy-Nagy were activities related to, understandably, simply trying to help family, friends, and colleagues who remained in Germany. The difficult realities of wartime and especially postwar Europe highlights another reason why Moholy-Nagy and others were to stay in the United States. Letters between Lilly Reich and Mies show that he supplied his extended family, Reich and her family, and former clients such as Carl Crous with CARE (Cooperative for American Remittances to Europe) packages—pre-packaged staples that could



be purchased for delivery to Europe. Reich repeatedly wrote Mies, asking for goods such as coffee, tea, rice, and eggs, and thanking him for the packages as they arrived safely. Once installed at Harvard, Walter and Ise Gropius began a tireless campaign assisting friends and colleagues trying to leave Germany, and they, like Mies, also sent provisions. They began a "Bauhaus Fund" which mailed parcels to former Bauhaus members remaining in Germany. The Moholy-Nagys, with little disposable personal income, and positions that were continuously unstable, sent a tremendous amount back to Europe. Sibyl's sister, in a letter thanking Sibyl for the latest food package, writes of the relief it gave, and reports of a darkening situation, in which the hitherto lack of food and clothing was made worse by the newer shortages in electricity, gas, and at times, water. Eva Pietzsch to Sibyl Moholy-Nagy, 3 January 1947, Moholy-Nagy Papers, Smithsonian. Subsequent letters detail their "fight to feed themselves" ("*Kampf ums fressen*"). The Moholy-Nagys also sent CARE packages, funds, and other assistance to friends, including the contemporary dancer Gret Palucca and artists Paul Citroen, Raoul Hausmann, and Kurt Schwitters. Lloyd C. Engelbrecht, *Moholy-Nagy: Mentor to Modernism*, 2 vols. (Cincinnati: Flying Trapeze Press, 2009), 1:272, 2:673–677.

- 12 Hal Foster, "The Bauhaus Idea in America," in *Albers and Moholy-Nagy: From the Bauhaus to the New World*, ed. Achim Borchartd-Hume (London: Tate Publishing, 2006), 97.
- 13 The original Bauhaus, especially under Gropius, as well as its predecessor led by Henry van de Velde, had always sought to minimize reliance on government support through commercial work and had the stated goal of forging an alliance with industry, yet it was unable to substantially achieve this; in America Moholy-Nagy did not have the option of receiving comparable, direct financial support from the government, although he actively sought it as a sponsor of the school's wartime activities. He also spent a great deal of energy courting companies, large and small, for funding, materials, and technical equipment. Without a stable source of income, his school was perpetually in crisis. After its original board of directors dissolved the school within its first year, Moholy-Nagy re-opened without a board that would fund the school, but rather with a "sponsors committee" of prominent cultural figures. Later, benefactor Walter Paepcke formed a board to support the school, a body to which Moholy-Nagy was not always deferential, having a strong personal vision for his school. Paepcke also tried to interest local institutions of higher learning in annexing the school and called in Gropius, Bayer, and Breuer to assess whether Moholy-Nagy could be advised in the direction the school should take to become more stable (see Alain Findeli's description of the "Moholy Affair" in "Design Education and Industry: The Laborious Beginnings of the Institute of Design in Chicago in 1944," *Journal of Design History* 4, no. 2 [1991]: 97–113). Gropius, ensconced in the stability of Harvard, and Mies at IIT weren't forced to face general financial difficulties nor were they responsible for contending with drops in student enrollment, both greatly exacerbated by the war. (The GSD dropped to twenty-six students and began admitting women to take up the places of absent male students. See Jill Pearlman, *American Modernism: Joseph Hudnut, Walter Gropius, and the Bauhaus Legacy at Harvard* [Charlottesville: University of Virginia Press, 2007], 200–201. At the School of Design, which had always admitted women, it was only during the war that it had more female than male students.)
- 14 Letter, Moholy-Nagy to Sibyl Moholy-Nagy, 26 April 1944, reprinted in Sibyl Moholy-Nagy, *Moholy-Nagy: Experiment in Totality* (New York: Harper Brothers, 1950), 216.
- 15 Harold J. Coolidge, American Defense, Harvard Group, to Gropius, 10 January 1941, Walter Gropius Papers, Harvard.
- 16 For discussion and reproduction of key FBI documents, see Margret Kentgens-Craig, *The Bauhaus and America: First Contacts, 1919–1936* (Cambridge, MA: MIT Press, 1999), 238–240 and Appendix.
- 17 A letter of explanation was sent to Moholy-Nagy from Joseph Edelman, an attorney retained by Moholy-Nagy to expedite his case. The letter also pointed out that other Hungarians had been naturalized within a period of six months to a year and a half, whereas at this point in the

process Moholy-Nagy had already been in the United States for eight years. Part of the FBI investigation seems to have been due to Moholy-Nagy's involvement, while in America, with the Hungarian Democratic Council, which sought to foster democracy in Hungary. See Edelman to Moholy-Nagy, 23 March 1945, and Moholy-Nagy to Andrew Jordan, District Director, US Department of Justice, 12 November 1945, Moholy-Nagy Papers, Smithsonian. Moholy-Nagy, after much effort and outreach in many directions, finally obtained his naturalization papers on April 10, 1946 (seven months before his death).

- 18 Karen Koehler, "The Bauhaus Manifesto Postwar to Postwar: From the Street to the Wall to the Radio to the Memoir," in *Bauhaus Construct: Fashioning Identity, Discourse and Modernism*, ed. Jeffrey Saletnik and Robin Schuldenfrei (London: Routledge, 2009), 28. See also a copy of the 1942 US Department of Justice "Regulations Controlling Travel and Other Conduct of Aliens of Enemy Nationalities" in the Walter Gropius Papers, Harvard.
- 19 For an extended discussion of this fictional radio play and its significance see Koehler, "The Bauhaus Manifesto Postwar to Postwar," 24–28.
- 20 *Ibid.*, 26.
- 21 *Ibid.*, 25.
- 22 As reported by Sibyl Moholy-Nagy in a letter to Robert Tague, 9 June 1945, Bauhaus Archive, Berlin.
- 23 Moholy-Nagy, letter to Robert Tague, 14 July 1945, Bauhaus Archive, Berlin. Moholy-Nagy seemed determined to stay from the very beginning, writing from Chicago, not long after his arrival, to Sibyl, who was still in London, "You ask whether I want to remain here? Yes, Darling, I want to remain in America. There's something incomplete about this city and its people that fascinates me; it seems to urge one on to completion. Everything seems still possible. The paralyzing finality of the European disaster is far away. I love the air of newness, of expectation around me. Yes, I want to stay." Moholy-Nagy letter to Sibyl Moholy-Nagy, 8 August 1937, reprinted in Sibyl Moholy-Nagy, *Moholy-Nagy: Experiment in Totality*, 145.
- 24 Moholy-Nagy to Dr. P.P. Keppel, Carnegie Corporation of New York, 7 January 1943, Institute of Design Collection, UIC.
- 25 Emphasis in original. László Moholy-Nagy, *Vision in Motion* (Chicago: Paul Theobald, 1947), 64.
- 26 This technological anxiety was compounded by the development of far more devastating, atomic weapons (a key local role was played by Enrico Fermi's laboratory at the University of Chicago) and their deployment at Hiroshima and Nagasaki; Moholy-Nagy reacted by painting *Nuclear I* and *Nuclear II* in early 1946. See Timothy J. Garvey, "László Moholy-Nagy and Atomic Ambivalence in Postwar Chicago," *American Art* 14, no. 3 (Autumn 2000): 22–39.
- 27 A.B.D. "School of Design on Threshold of Fourth Year," *The Chicago Sun*, January 3, 1942.
- 28 László Moholy-Nagy, *Vision in Motion*, 10. *Vision in Motion* was predominantly written in 1944, as the war still raged on, although it was not published until 1947, after the war's conclusion and also posthumously.
- 29 See Robin Schuldenfrei, "The Irreproducibility of the Bauhaus Object," in *Bauhaus Construct*, 37–60. Exceptions are mainly objects produced in the years that Hannes Meyer led the school, after the departure of Moholy-Nagy: several textiles from the weaving workshop were mass produced, and the Bauhaus wallpapers, not the iconic objects usually associated with the original Bauhaus today.
- 30 Moholy-Nagy, *The New Bauhaus Catalogue* (Chicago: School of Design, 1937), 4, Institute of Design Collection, UIC.
- 31 Among the varied continuations of the Bauhaus project in America, the New Bauhaus (and its later iterations) under Moholy-Nagy remained the institution most closely linked to the original Bauhaus's structure, program, and desired end results. Copious correspondence demonstrates that Gropius remained closely affiliated and invested in the school's future throughout its stormy history, beginning by nominating Moholy-Nagy as its first leader, then, over the years, advising Moholy-Nagy on how to structure the institution, lending his name to its initiatives, and stepping in periodically to reassure the school's administration and benefactors.

- 32 Moholy's "naive" use of this term (largely) preceded the advent of today's vast, for-profit military-industrial complex. See, for example, Moholy-Nagy, letter to George Kepes, 19 November 1942, Bauhaus Archive, Berlin. Kepes's name will be cited throughout this essay in accordance with how it appears in the original source quoted. The Hungarian Kepes was born with the first name "György," but (presumably as an act of assimilation) he used the German form of his name, "Georg," for the period of his Berlin years, then "George" during his initial years in America, later reverting back to "Gyorgy" but without the umlaut.
- 33 For images and short descriptions of these projects, see Box 23, Volume 7, Institute of Design Records, IIT.
- 34 Letter, Moholy-Nagy to Walter B. Kirner, National Defense Research Committee, 7 January 1944, Bauhaus Archive, Berlin.
- 35 "Design for Wartime Living and When Peace Comes," 1943, newspaper clipping of unidentified source, Institute of Design Collection, IIT.
- 36 László Moholy-Nagy, "Modern Designs from Chicago," *Modern Plastics*, December 1942; reprinted in: *Timber of Canada*, February 1943, 19.
- 37 "New Slant on New Product Planning: How Outside Help, from Private Research Groups and Schools, Can Ease War Plant Job of Finding Products for Tomorrow, Give Designers a New 'Lift,'" *Modern Industry*, June 15, 1943, 46–47. War Production Board (WPB) Limitations Order L-49 set severe restrictions on the total amount of iron and steel available for the manufacture of furniture springs. See *Official Weekly Bulletin of the Office of War Information, Washington D.C.* 3, no. 41 (October 13, 1942). The next *Bulletin* reported that used metal beds and bed-springs were being sold at inflated prices and ordered a review of all cases in which jobbers, manufacturers, and distributors might be violating the provisions of the general maximum price regulations for such items. *Bulletin* 3, no. 42 (October 20, 1942). On November 1, the production of metal springs for civilian use was banned altogether, and by December policies had been put in place to encourage the use of wooden springs, with the provision that furniture with wooden springs could not be approved for sale without demonstrable laboratory test reports showing that the new springs met standards prepared by the Office of Price Administration in cooperation with the National Bureau of Standards. *Bulletin* 3, no. 49 (December 8, 1942). The school's experiments with wooden springs began well in advance of these directives, putting the school at a distinct advantage.
- Similarly, the Museum of Modern Art in New York adapted its popular *Useful Objects* annual exhibition series to contend with wartime restrictions, opening *Useful Objects in Wartime* in 1942. On display were household objects featuring non-priority materials; the Conservation and Substitution Branch of the War Production Board made recommendations to the museum about possible inclusions and omissions. No metal objects were selected for the display, which relied heavily on glass and ceramic objects, and presented some unusual materials, such as a cornhusk doormat. The museum's bulletin featured images of common household objects such as steel ladles and Bakelite dishes with a large "X" struck through them, noting for which sector of war production the material was being requisitioned—for example, Lucite and Plexiglas for airplane construction and nylon for parachutes. Also included in the exhibition were articles designed in response to requests by men and women in the army and navy and supplies necessary for civilian defense. See "Useful Objects in Wartime," *Bulletin of the Museum of Modern Art* 10, no. 2 (December 1942–January 1943): 1–21. See also Mary Anne Staniszewski, *The Power of Display: A History of Exhibition Installations at the Museum of Modern Art* (Cambridge, MA: MIT Press, 2001), especially 209–235.
- 38 "New Slant on New Product Planning," 46–47.
- 39 "'Sleep Like a Log' on New Wood Springs," *Bruce Magazine*, May–June 1943, Institute of Design Records, IIT.
- 40 László Moholy-Nagy, "Modern Designs from Chicago," reprinted in: *Timber of Canada*, February 1943, 20.

- 41 "Wooden Springs," *Business Week*, October 31, 1942.
- 42 "New Slant on New Product Planning," 46–47.
- 43 "Wooden Springs," *Business Week*.
- 44 Moholy-Nagy to Kepes, 19 November 1942, Bauhaus Archive, Berlin.
- 45 "The New Springs," 34–35, undated, unidentified article, Institute of Design Records, IIT.
- 46 Moholy-Nagy to Nikolaus Pevsner, 18 March 1943, Bauhaus Archive, Berlin. The by now long-standing idea of promoting modern materials for furniture to replace stuffed upholstered furniture—an idea that modern architects had promoted vigorously in 1920s Europe—got renewed currency in Moholy-Nagy's Chicago context, where the modern plywood, Lucite, and metal chairs being designed at the school were introduced to a midwestern audience that would not necessarily have been familiar with the earlier European developments.
- 47 Moholy-Nagy's ideas may have directly influenced Charles Eames; according to R. Craig Miller, during the time that Eames was teaching design at Cranbrook (September 1939–June 1941) and simultaneously working in the Saarinen office, he often went to Chicago on weekends to consult with Moholy-Nagy. See Miller, "Interior Design and Furniture," in *Design in America: The Cranbrook Vision, 1925–1950* (New York: Abrams, in association with the Detroit Institute of Arts and the Metropolitan Museum of Art, 1983), 109. In comparison to the School of Design, Cranbrook did not offer comprehensive work in industrial design and in the late 1930s and early war years had considerable difficulty in maintaining a design department; for a period during the war, the department was closed (1943–1944). Likewise the metalcraft department was suspended for most of the duration of the war, due to shortages.
- 48 Black Mountain College Newsletter, "The College in a World at War," November 1942: 4–5.
- 49 "New Slant on New Product Planning," 46–47.
- 50 "Design for Wartime Living and When Peace Comes."
- 51 Alain Findeli, "Design Education and Industry," 100.
- 52 Walter Paepcke to Donald M. Nelson, War Production Board, 3 February 1944, Institute of Design Collection, UIC.
- 53 Moholy-Nagy, "Modern Designs from Chicago," 20.
- 54 See, for example, "Industrial Design: New Forms for Postwar Hardware," 51–53, unidentified journal, Institute of Design Records, IIT. The article, which featured prototypes being developed at the school, noted, "War production already hums twenty-four hours a day in many plants, and we are scheduled to reach total conversion next June. This means that re-tooling will follow when the war ends, bringing with it sweeping changes in the accustomed forms of all our manufactured products" (51).
- 55 Al Bernsohn, "The New Wood that Bends," April 1941, 23, unidentified journal, Institute of Design Records, IIT.
- 56 Emery Hutchison, "Stories of the Day," *Daily News*, June 28, 1944.
- 57 School of Design, *National Defense Courses* Brochure (Chicago: School of Design, 1942), Institute of Design Collection, UIC.
- 58 School of Design, *Summer Session 1942* Brochure (Chicago: School of Design, 1942), Institute of Design Collection, UIC.
- 59 Moholy-Nagy to P.P. Keppel, Carnegie Corporation of New York, 7 January 1943, Institute of Design Collection, UIC. In the fall of 1942 Moholy-Nagy could report that the school had 206 students of whom 134 were in the camouflage course. Moholy-Nagy to Robert J. Wolff, 6 October 1942, Bauhaus Archive, Berlin.
- 60 School of Design, *Summer Session 1942* Brochure (Chicago: School of Design, 1942), Institute of Design Collection, UIC.
- 61 School of Design, *Summer Session 1943* Brochure (Chicago: School of Design, 1943), Institute of Design Collection, UIC.
- 62 School of Design, *Day and Evening Classes 1943–1944* Brochure (Chicago: School of Design, 1943), Institute of Design Collection, UIC.

- 63 For example, see Moholy-Nagy to P.P. Keppel, Carnegie Corporation of New York, 7 January 1943, Institute of Design Collection, UIC.
- 64 School of Design, *Report on Public Relations Activities* (Chicago: School of Design, February 6, 1945), 1–2, Institute of Design Collection, UIC.
- 65 School of Design, *Academic Year 1942–1943 Brochure* (Chicago: School of Design, 1942), Institute of Design Collection, UIC.
- 66 School of Design, *Summer Session 1943 and Photo Classes 1943 Brochures* (Chicago: School of Design, 1943), Institute of Design Collection, UIC.
- 67 For these posters and others, see Box 25, Volume 9, Tab D, Institute of Design Records, IIT.
- 68 This was awarded by the Society of Typographic Arts. Raymond Heer, Secretary, The Society of Typographic Arts to George Kepes, 22 December 1942, Gyorgy Kepes Papers, Archives of American Art, Smithsonian Institution, Washington, DC (hereafter cited as Kepes Papers, Smithsonian).
- 69 Paper given by Moholy-Nagy at the 1943 Annual Meeting of the American Psychiatric Association. Moholy-Nagy, “New Approach to Occupational Therapy,” 1943, 1–9, Institute of Design Collection, UIC. Organizations across the United States, including other art-related cultural institutions, also began to address this need—specifically, the potential for artists, the arts generally, and museums to aid in the recovery process. For example, an exhibition at the Museum of Modern Art in New York, *The Arts in Therapy* (1943), looked to the potential role of the crafts in occupational therapy and the psychiatric use of media such as painting, sculpture, and drawing in therapy. The museum sponsored a contest for objects and projects of therapeutic and recreational value; second prize was awarded to School of Design members Juliet Kepes (wife of Gyorgy Kepes) and Marli Ehrman (head of the textile workshop) for a multi-textured, multi-sensory cloth children’s book. See “The Arts in Therapy,” *Bulletin of the Museum of Modern Art* 10, no. 3, (February 1943): 1–24.
- 70 Moholy-Nagy, “New Approach to Occupational Therapy,” 3.
- 71 See William Leuchtenberg, *A Troubled Feast* (Boston, MA: Little, Brown, 1973), 104; cited by Jean-Louis Cohen.
- 72 Moholy-Nagy, “Orientation Course in Occupational Therapy,” 1, Institute of Design Collection, UIC.
- 73 *Ibid.*, 3–4.
- 74 John Craig, “Stories of the Day,” *Chicago Daily News*, February 26, 1943.
- 75 Sibyl Moholy-Nagy, *Moholy-Nagy: Experiment in Totality*, 185.
- 76 Letter from Moholy-Nagy to Friends of the School of Design, 27 September 1943, Walter Gropius Papers, Harvard.
- 77 School of Design, *Summer Session 1943 Brochure*.
- 78 Moholy-Nagy, “New Approach to Occupational Therapy,” 1.
- 79 *Ibid.*, 4.
- 80 See especially [Chapters 1](#) and [2](#) of Jeffrey Saletnik, “Pedagogy, Modernism, and Medium Specificity: The Bauhaus and John Cage” (Ph.D. diss., University of Chicago, 2009), 18–121.
- 81 School of Design, *National Defense Courses 1942 Brochure* (Chicago: School of Design, 1942), Institute of Design Collection, UIC. Another example of the school’s work with local officials and government bodies was an informational booklet on camouflage that was produced by the course as a WPA (Work Projects Administration) activity, sponsored by the Chicago Metropolitan Area Office of Civilian Defense. See “Selected List of References on Camouflage,” November 1942, Institute of Design Records, IIT. The School of Design was not the only school to offer such a course; during the war years, institutions of higher education from Paris to Burma, as well as across the United States, offered courses of instruction on camouflage. See [Chapter 6](#) “Camouflage, or the Temptation of the Invisible,” of Jean-Louis Cohen, *Architecture in Uniform*, 187–219, especially therein “Didactics of Camouflage, from Chicago to Brooklyn,” 195–201.

- 82 Moholy-Nagy, letter to Walter Paepcke, 18 March 1942, Institute of Design Collection, UIC, and Moholy-Nagy to George Kepes, 19 November 1942, Bauhaus Archive, Berlin. During this period, Moholy-Nagy notes, he was also being apprised by officials of the structure of similar courses being organized at Pratt Institute in New York.
- 83 Kepes underwent 85 hours of specialized training from June 22–July 4, 1942. See Certificate, The Engineer School, Fort Belvoir, Virginia, Kepes Papers, Smithsonian.
- 84 School of Design, *Summer Session 1943* and *Principles of Camouflage Course Brochure* (Chicago: School of Design, 1943), Institute of Design Collection, UIC. Over 100 students graduated from the course.
- 85 School of Design, *Principles of Camouflage Course Brochure*.
- 86 Including Myron Kozman, Robert Preusser, and Jesse Reichel. John L. Scott, with László Moholy-Nagy and Gyorgy Kepes, "A Bird's-Eye View of Camouflage," *Civilian Defense*, July–August 1942: 10.
- 87 George Kepes, "Introductory Lecture for the Camouflage Course" (lecture summary, School of Design in Chicago, September 16, 1942), 1–4, Institute of Design Collection, UIC.
- 88 Means of obscurement that had come into use which were studied included artificial light patterns, blink lights, mercury vapor, false fires, mirror devices, and other forms of light projection. "Outline of the Camouflage Course at the School of Design in Chicago, 1941–1942," 3–4, Institute of Design Collection, UIC.
- 89 Ibid.
- 90 Kepes, "Introductory Lecture for the Camouflage Course," 1.
- 91 "Outline of the Camouflage Course at the School of Design in Chicago, 1941–1942," 1.
- 92 M. Seklemian, "A Study of the Principles of Camouflage Conducted at the School of Design Chicago," September 1942–January 1943, Institute of Design Records, IIT.
- 93 Ibid.
- 94 "Kelly and Army Plan Hiding of City from Foe," *Chicago Daily News*, May 8, 1942.
- 95 Ibid.
- 96 Donald S. Vogel, letter to George J. Mavigliano, 2 September 1983, in Mavigliano, "The Chicago Design Workshop: 1939–1943," *Journal of Decorative and Propaganda Arts* 6 (Autumn 1987): 42.
- 97 "Kelly and Army Plan Hiding of City from Foe." Moholy-Nagy also noted: "Germany is reputed to have spent \$1,000,000 in camouflaging the Fokker aircraft factory at Amsterdam alone. Chicago, of course, has some special problems of camouflage. There is the lake, which like a sore thumb sticks out and points to the city and to its largest industrial arm, the steel mills. Then there is the river, like a road sign. And the many beautiful parks, all good landmarks for fliers."
- 98 John L. Scott, with László Moholy-Nagy and Gyorgy Kepes, "Civilian Camouflage Goes Into Action," *Civilian Defense* 1, no. 2 (June 1942): 8.
- 99 Prompted by precisely this wartime difficulty of camouflaging cities, fear of aerial bombardment, and later the atom bomb, the decentralization of the city became an important aspect in postwar planning, impacting the location and shape of communities, industrial dispersion, and centers of knowledge and science. See, for example, Peter Galison, "War against the Center," *Grey Room* 4 (Summer 2001): 5–33; David Monteyne, *Fallout Shelter: Designing for Civil Defense in the Cold War* (Minneapolis: University of Minnesota Press, 2011); Jennifer S. Light, *From Warfare to Welfare: Defense Intellectuals and Urban Problems in Cold War America* (Baltimore: Johns Hopkins University Press, 2003); Matthew Farish, "Disaster and Decentralization: American Cities and the Cold War," *Cultural Geographies* 10, no. 3 (2003): 125–148; Margaret Pugh O'Mara, *Cities of Knowledge: Cold War Science and the Search for the Next Silicon Valley* (Princeton, NJ: Princeton University Press, 2004).

- 100 Other war-focused exhibitions and art-related activities were mounted across wartime America; for example, the Museum of Modern Art in New York presented an extensive series of exhibitions including *Britain at War* (1941), *Art in War* (1942), *Road to Victory* (1942), and *Camouflage for Civilian Defense* (1942), for which a second version was also prepared for touring in 1942–1943. The museum sponsored competitions, placing a selection of the entries on display, including the photography contest *Image of Freedom* (1941) and three poster competitions (former Bauhaus member Xanti Schawinsky's poster was among the winners): *National Defense Posters* (1941), *United Hemisphere Posters* (1942), and *National War Posters* (1942). A roster of circulating wartime exhibitions that traveled to ninety-three cities across America was also developed in this period. See "The Museum and the War," *Bulletin of the Museum of Modern Art* 10, no. 1 (October–November 1942): 3–19.
- 101 Sibyl Moholy-Nagy, *Moholy-Nagy: Experiment in Totality*, 184.
- 102 *War Art* Press Release, The Renaissance Society at the University of Chicago Records, The Archives of American Art, Smithsonian Institution, Washington, DC (hereafter cited as Renaissance Society Records, Smithsonian).
- 103 *War Art* (Chicago: Renaissance Society, 1942). An example of this small exhibition catalogue is available in the Renaissance Society Records, Smithsonian, in the Institute of Design Collection, UIC, and Institute of Design Records, IIT.
- 104 *War Art* Press Release, Renaissance Society Records, Smithsonian.
- 105 For example, according to the *War Art* press release, the "visual education charts" for teaching camouflage and mechanical skills.
- 106 *War Art* Press Release, Renaissance Society Records, Smithsonian.
- 107 Also restricted were designs of: camouflage for ordnance operations; three-dimensional illuminated panels that showed radio and weather charts; and specially designed furniture for officers' lounges and a servicemen's recreation center. See curatorial files, The Renaissance Society.
- 108 *War Art* (Chicago: Renaissance Society, 1942).
- 109 *Ibid.*
- 110 For a complete list of the skills taught as well as general aims, see the original 1937 school catalogue, Moholy-Nagy, *The New Bauhaus Catalogue* (Chicago: School of Design, 1937), Institute of Design Collection, UIC.
- 111 *Ibid.*, 4.
- 112 Moholy-Nagy to F.J. Kelly, Executive Director, Wartime Commission, US Office of Education, 13 March 1942, Institute of Design Collection, UIC.
- 113 Armed with a letter of introduction from mutual educator and colleague Charles Morris, Moholy-Nagy met with John Dewey in November 1938 in New York; at that meeting Dewey gave him his recently published book *Experience and Education*. Dewey was among the academics and intellectuals, such as Gropius and Alfred H. Barr, that Moholy-Nagy had enlisted to support his school. Dewey's 1934 *Art as Experience*, particularly Dewey's belief in the *process* of the development of a work of art as an *experience*, rather than simply the resulting work of art itself as the main object, likely would have influenced, and dovetailed with, Moholy-Nagy's own educational philosophies, especially those behind the first-year Basic Course. *Art as Experience* was a required text of the Product Design workshop, and Moholy-Nagy refers to Dewey's practices directly in *Vision in Motion* (71). See also Alain Findeli, "Moholy-Nagy's Design Pedagogy in Chicago (1937–46)," *Design Issues* 7, no. 1 (Autumn 1990): 4–19, especially 13–15.
- 114 Moholy-Nagy, "Relating the Parts to the Whole," 6.
- 115 Ruth Green Harris, "The New Bauhaus: A Program for Art Education," *New York Times*, May 29, 1938.
- 116 Moholy-Nagy quoted by Reed Hynds, "Blueprint for the Post-War World," *St. Louis Star-Times*, January 22, 1942.

- 117 László Moholy-Nagy, "The Task of this Generation: Reintegration of Art into Daily Life," *Department of Art Education N.E.A. Bulletin*, 1944, n.p. (2), offprint, Institute of Design Records, IIT.
- 118 Moholy-Nagy to P.P. Keppel, Carnegie Corporation of New York, 7 January 1943, Institute of Design Collection, UIC. Moholy-Nagy would continue to be disturbed by man's injurious power. For a discussion of Moholy-Nagy's concerns about the destructive power of nuclear energy following the dropping of the atom bomb on Hiroshima and his own 1945–1946 radiation treatments for leukemia, including a thorough discussion of his 1946 paintings *Nuclear I* and *Nuclear II*, see Garvey, "László Moholy-Nagy and Atomic Ambivalence in Postwar Chicago," 22–39.
- 119 László Moholy-Nagy, "Design Potentialities," (1943) in *New Architecture and City Planning*, ed. Paul Zucker (New York: Philosophical Library, 1944), 686–687.
- 120 Moholy-Nagy, "Relating the Parts to the Whole," 6. For a discussion of Moholy-Nagy's pedagogical aims at the new Bauhaus—including the conviction that the school should offer an education combining humanistic and technical spheres and emphasizing the integration of the designer into society—as well as Moholy-Nagy's belief that the designer could bring an integrated, humanistic element (including a biologically necessary "organic design") into a technologically mediated new form of vision, see also Reinhold Martin, *The Organizational Complex: Architecture, Media, and Corporate Space* (Cambridge, MA: MIT Press, 2003), 53–58.
- 121 School of Design, *Day and Evening Classes 1943 Brochure* (Chicago: School of Design, 1943), Institute of Design Collection, UIC.
- 122 Sibyl Moholy-Nagy, *Moholy-Nagy: Experiment in Totality*, 188.
- 123 Moholy-Nagy, "The Task of this Generation," n.p. (1). Emphasis in original.