Introduction

"THIS IS THE STORY OF GERALD MCCLOY and the strange thing that happened to that little boy." These words, despite their singsong cadence and children's-book diction, ushered in a new age of the American cartoon marked by a maturity widely perceived to be lacking in the animated shorts of Disney Studios and Warner Bros. Released in November 1950, *Gerald McBoing Boing* instantly made its production studio, United Productions of America (UPA), a major name in the Hollywood cartoon industry, netting the studio its first Oscar win two years after it began making shorts for Columbia's Screen Gems imprint. Six years later, in 1956, every single short nominated in the Best Animated Short Film category was a UPA cartoon.[1] *Gerald McBoing Boing,* a seven-minute Dr. Seuss–penned short about a small boy who finds himself unable to speak in words—only disruptive sound effects emerge from his mouth—became a box office sensation as well as a critical success. The *New York Times* observed, "Audiences have taken such a fancy to this talented young man that there has been a heap of inquiries about him and his future plans."[2] The *Washington Post* called it "so refreshing and so badly needed . . . that its creators, United Productions and director Robert Cannon, rate major salutes," and international publications such as the *Times of India* dubbed it "the first really fresh cartoon work since Disney burst on the scene."[3]

The qualities that made UPA stand out—an abstract, graphic sensibility marked by simplified shapes, bold colors unmodulated by rounding effects or shadow, and a forceful engagement with the two-dimensional surface of the frame, as well as an insistence on using human characters—convinced audiences that it was aiming for an adult demographic while also retaining a childlike heart, positioning itself as a popular explorer of the human condition. More than speaking to the human condition, however, UPA was speaking to the *modern* condition; contemporary reviews formed a growing chorus of voices referring to the studio as "modern" above all else.[4] Often considered an animated extension of modern art, not least by its own artists, the studio parlayed the abstract forms of modernist painting into whimsical cartoons designed to entertain moviegoers, repurposing for the screen, among others, Paul Klee, Raoul Dufy, and Stuart Davis.[5] However, UPA cartoons also engaged with a larger and more contemporary modernism, one percolating through the design community burgeoning in the postwar years and dominated by European émigrés who fled to the United States during World War II. This modern design, the backbone of the midcentury modernism that is the subject of this book, extended throughout all areas of cultural production in America in the middle decades of the twentieth century, determining the styles of painting, architecture, graphic design, and even live-action cinema, as well as other fields outside of the purview of the present study. Animation is much closer to the heart of this midcentury modernism than is commonly accepted in historical narratives of modernism's "influence" on the American cartoon. Rather, animation was a *partner* in this modernism, carrying out specific and important work alongside other, more putatively serious fields.

This book marks out a space for midcentury animation in scholarship on cinematic modernism, offering a new lens through which to view midcentury modernism's impact on cinema. UPA's cartoons are often situated within the history of postwar consumer culture, part of a narrative in which high modernism steps down from its pedestal and offers itself for sale to an expanding middle class. However, there is another way to view the animation that began with UPA and quickly spread to countless American animation studios, one that reimagines midcentury modernism as more than a period style popularizing more serious artistic experimentation, or a consumer phenomenon occurring alongside the work of the high modernists. Cartoonists, artists, architects, and designers were working with the same raw materials—vision, space, and abstract form—to fashion a new way to experience a new, modern America. In examining animation as part of a larger project of reorienting human vision, I also challenge the film studies tradition in which postwar cinematic modernism is aligned with a European art cinema descended from modernist experimentation in literature and theater.[6] Midcentury American modernism—the stuff we now look back on fondly as consumer kitsch, or disdainfully as pretentious and oppressive metal-and-glass boxes—came into contact with cinema in ways that have yet to be explored, and the two spoke to each other in ways that have yet to be accounted for. The postwar American cartoon is fertile ground on which to begin such an exploration, and the primary practitioner of modernism in the postwar American cartoon is the studio United Productions of America.

UNITED PRODUCTIONS OF AMERICA: A THUMBNAIL HISTORY

The history of United Productions of America is well documented; however, a brief summary is useful here.[7] UPA, or rather Industrial Film and Poster Service, as it was first called, was founded in 1943 by Stephen Bosustow, Zack Schwartz, and David Hilberman, three ex-Disney employees who left the studio in the aftermath of the 1941 strike.[8] Following the production of their first filmstrip, a welding safety training piece called *Sparks and Chips Get the Blitz,* they quickly established themselves as independent animators in the sponsored film market, changing the company's name again to United Film Productions and producing animated shorts for industrial, educational, and political use.

Lacking the budgets of their entertainment industry contemporaries, they developed a spare, streamlined visual style that enabled fast production and simple animation. Their left-leaning politics secured them regular government work under the Democratic FDR administration, including the United States Army's First Motion Picture Unit, where many Hollywood denizens went to make wartime training films.[9] After the success of their army training films, *A Few Quick Facts about Inflation* (1944) and *A Few Quick Facts about Fear* (1945), they concentrated their energies in the yet again—and now finally—renamed United Productions of America in December 1945, serving mainly the government market. However, as anticommunist sentiment rose after World War II, their once-popular political views and their support of labor unions and Democratic presidential candidates became liabilities, and reliable government contracts began to dry up. In the absence of demand for sponsored films made by pro-union lefties, and of sufficient funds from low-paying industrial and educational assignments, they turned to the theatrical market, and in 1948 they struck a deal with Columbia Pictures' Screen Gems division.

It was here that the UPA cartoon style entered the public consciousness, to much critical acclaim. The studio's first two theatrical releases, *Robin*

Hoodlum (1948) and *The Magic Fluke* (1949), both received Academy Award nominations, resulting thereafter in less studio interference and greater creative autonomy for Bosustow and John Hubley, who had been running the studio since Hilberman and Schwartz's departure in 1946.[10] With autonomy came greater visual experimentation, and their theatrical work consequently saw the greatest development of their graphic design–oriented style. The 1950 short *Gerald McBoing Boing* struck bigger than any of their previous films, winning them their first Oscar as well as an avalanche of praise from the popular press—and not just from film and animation outlets. Lifestyle magazines, architecture and design journals, and theater and arts magazines all gave nods to UPA's signature style. For the first time, Amid Amidi notes, cultural critics "who, prior to UPA, often grudgingly acknowledged the animation medium, now couldn't stop singing the praises of the studio's graphic inventiveness."[11] In 1955 the Museum of Modern Art followed suit, offering them the high-culture blessing of an exhibition devoted solely to them, *UPA: Form in the Animated Cartoon*.

UPA's organizational structure resembled a revolving door: animators came, drawn by the promise of a workshop for stylistic experimentation, and went, parlaying their cultural capital as UPA cartoonists into jobs at other studios or their own startups.[12] This rapid turnover, coupled with the intense praise from both mainstream and specialized press, had a galvanizing effect on American animation across the board. By the mid-1950s, UPA style had become cartoon style. Even the relatively conservative Disney Studios released a small handful of modern pieces in line with UPA's output, the most famous of which is the 1953 pair *Adventures in Music: Melody* and *Toot, Whistle, Plunk and Boom*. As the fifties wore on, however, theatrical revenue declined sharply, and the animated prefilm short became a luxury. Production houses began to drop their animation studios, which were shifting to the cheap, assembly-line television cartoon model. UPA's own 1956 foray into television animation, *The Boing Boing Show,* was an underwatched, overbudget failure, and in 1959 Columbia shut down its animation house, selling UPA in 1960 to Henry Saperstein, who turned it into a television studio for *The Mr. Magoo Show.* By the end of its run, UPA had produced 109 sponsored films, ninety theatrical shorts, animated inserts in seven live-action films, over two hundred television commercials, over three hundred television shorts, and two feature films. In the process, it changed the face of American animation for decades to come.

It is for these reasons, though not only these reasons, that I focus on UPA as the exemplar of what animation historian Amid Amidi has called the "modern cartoon," and that I use the terms "UPA-style cartoon" and "modern cartoon" interchangeably.[13] While other studios working in the "UPA style" play significant roles in this book, UPA's centrality is due not only to its reputation in its contemporary moment, but also, and more importantly, to its position as a proponent of a specific kind of modernism. If in what follows "Animation Learns a New Language," John Hubley and Zack Schwartz's 1946 manifesto in *Hollywood Quarterly,* plays a large role, it is because it is the clearest expression in the field of animation of a determination to change the form of the cartoon to fit a new, changing, modern world, and its insights and arguments extend beyond the cartoons produced directly by UPA whether later practitioners claimed allegiance to the manifesto or not.[14] Literature scholar Jennifer Wicke, in writing about modernism as a larger phenomenon, tweaks long-standing assumptions about authorial intent by arguing, "Modernist writers such as Joyce don't intend a single meaning or message, but do intend for their work to be received and consumed in dialectical relation to surrounding works, discourses, events, experiences, and so on—they intend the *slant* to the message, if you will."[15] Even if other, later producers of "modern cartoons" were merely picking up UPA's popular style—an unflattering charge I am not interested in leveling—their cartoons were still produced and consumed in a midcentury modernist moment in which UPA had slanted the cartoon with new meanings, and I do not see a reason to deny modernist intent, or modernist effect, to modernist form merely because the producers did not write an article about it. UPA's outspoken modernist impulses survive in the wider animation practice the studio helped to establish, transmitted through both its visual style and the resonances of this visual style with the design-based, architectural, and artistic currents in which the studio's cartoons floated.

LIMITED ANIMATION: WHAT IT IS AND WHAT IT ISN'T

Much has been said about UPA's pioneering of the process of "limited animation," a stripped-down form of cartooning that began during the World War II years of the First Motion Picture Unit and reached its zenith in the Saturday morning cartoons of the 1960s. Unfortunately, the discussion tends to conflate UPA's reduced animation process with its simplified graphic language and to lump both under the designation "limited animation." This is not my moment to throw economics to the winds and rescue UPA's pristine artistic legacy from the taint of budgetary constraints. Schwartz, Hilberman, Hubley, and their colleagues innovated based on a mixture of creativity, ideology, and financial necessity, and those lines, I believe, should remain blurred.[16] At the same time, we should be clear about what we mean when we talk about UPA style, and about what we mean when we talk about limited animation.

To replicate the smooth movement of photographic cinema, a cartoonist draws twenty-four images per second of film, the same number of frames that produces the sensation of lifelike movement in live-action cinema; this is so-called full animation.[17] At bottom, limited animation means drawing twelve frames per second of film, or eight, or six, instead of full animation's twenty-four, or it means redrawing only the parts of the frame that have to be moving. It is a cartooning practice that involves reusing frames or parts of frames in an effort to cut back on labor and thereby save money—for instance, a character's mouth may move while the rest of its body remains still so that only the mouth has to be redrawn for each individual frame, or its body may alternate between a series of easily readable positions rather than progressing through the full sequence of "in-between" positions necessary for a fluid, lifelike motion.[18] In short, movement is limited to essentials. Central to this definition of limited animation is that it is indeed a particular kind of *animation;* that is, it refers to the way a cartoon moves, not to the way it is drawn.

It is true that graphic abstraction and limited animation are often fellow travelers, and that both are responses to the same budgetary pressures. Just as it is cheaper to draw twelve frames per second rather than twenty-four, so is it cheaper to put a character in front of a solid green background than to hire someone to paint a forest or to invest in a multiplane camera and film in five layers. The financial need to restrict character movement to essential body parts also demands, or at least asks for, simpler character design and more abstract background design. But this is true only to an extent, and it is most certainly not true to the extent that UPA's cartoonists built their reputations by agitating for a simpler, bolder graphic approach to animation not because it was less expensive, but because it was better suited to the social, cultural, and visual concerns of America in the postwar era than was Disney's three-dimensional, flesh-and-blood naturalism. To conclude that UPA's graphic style developed under the same budgetary duress as its practice of skipping frames in its animation is to engage in economic determinism at the expense of the historical record, which indicates that the demand for a spare, abstract visual style predated the opportunity to forge it.[19]

While limited animation and graphic abstraction often occur together, then, they are not necessary bedfellows. One may imagine a fully rounded, detailed character animated in a minimalist fashion, or conversely, a simplified, geometrically stylized UPA character pulsing with full-animation life. In a 1973 interview, John Hubley explains: "The simplified nature of the UPA style was due to the fact that we were working on lower budgets. We had to find ways of economizing and still get good results." Notably, he is speaking specifically of the animation process, not of graphic stylization. He continues, "So we cut down on animation and got into stylized ways of handling action. . . . There's no substitute for full animation. What the character can do if you make use of full drawings is really irreplaceable. You just can't fake it."[20] In part, this half-lament explains UPA's use of limited animation, but it ultimately says little about the graphic innovations for which the studio is famous today. To explain UPA's visual style requires an exploration of its cultural context, a valuable element of cartoon history that becomes lost if we too easily equate graphic abstraction, limited animation, and low production budgets. UPA's graphic abstraction is a central element in the growth (and resurgence) of a uniquely American modernism, one that transcends the specificities of cost-cutting in the animation industry to engage with art, design, and new ways of seeing during and after World War II.

MIDCENTURY MODERNISM AND POSTWAR AMERICA

Periodization by way of wars can be a perfunctory practice; however, there is a general consensus, not least by the design community at the heart of this book, that in American history there is a "before World War II" and an "after." The full shift from Depression-era scarcity and recovery to consumer-culture abundance, the redirection of wartime technology to the domestic market, the newfound centrality of the suburbs at the expense of the urban center, the new cultural protagonist of the "organization man," the increasing presence of women in the workforce, the relentless bomb drills and paranoia of the Cold War, and the coalescence of the Civil Rights Movement, among countless other social and cultural developments, point to the postwar era as a qualitatively different time in the United States.[21] The modernism that rose to address these changes has been characterized in various ways and to numerous effects. For example, American studies scholar W. T. Lhamon finds in it tremors of a nascent social rebellion leading to the liberation of a culturally pluralist and egalitarian postmodernism. Conversely, historian Daniel Singal figures midcentury modernism as a more entrenched and traditional modernism's swan song before its eventual lapse into caricature by the 1960s counterculture. And literature scholar Matei Calinescu views the immediate postwar period as a hard, immediate shift to a postmodernism where industrial modernity and its critical "other," aesthetic modernism, wear themselves out and call a truce, riding off into the sunset of a consumer culture that has subsumed them both.[22]

Happily, the task of identifying once and for all the moment when modernism ends and postmodernism begins lies outside the scope of this book. Instead, the goal here is to linger over this midcentury moment and to explore the ways in which its particular form of modernism manifested in the material world. My key assumption here is that, *pace* the scholars discussed immediately above, midcentury modernism is not a transitional period, either the dying-off of a "real" modernism or the stirrings of an oncoming postmodernism; rather, it is a discrete modernist moment that requires a pause to assess its very specific dimensions, concerns, and contributions. Corollary to this assumption is another one, my belief that talking about "modernism" as if it were a single, unitary phenomenon is a thankless and futile endeavor, one better replaced by talk of iterations of modernism. This conception of modernism as an iterative phenomenon allows for an accommodation of the various forms modernism has taken across its numerous manifestations throughout time and space, sidestepping the need to reduce an inherently multifarious idea to a monolithic ideal. With modernism reaching across so many boundaries in this postwar phase, it perhaps becomes more productive to talk about modernisms, or an assemblage of different threads that compose the fabric of midcentury modernism. While I prefer the latter designation, I feel the singular-vs.-plural question is less important than the reality subtending it, which is simply that modernism was doing many different things in America after World War II.

These many things, different threads of the modernist fabric, have also been conceptualized in various ways. Architecture historian Reinhold Martin's "corporate modernism," characterized by the remaking of the downtown urban landscape in a sleek, steel-and-glass modernist mold, uses design theory—particularly that of György Kepes and László Moholy-Nagy, to whom this book is indebted as well—to explain the physical changes in urban space throughout the postwar era. However, Martin emphasizes the burgeoning culture of electronics and cybernetics, of Norbert Wiener and IBM; I share his Crary-meets-Foucault model of "new kinds of cities, new kinds of architectures, and with them a new 'self,'" but I depart from him in my focus on fields outside of architecture (and on architecture outside of the corporate office building), and in my extension of Kepes and Moholy-Nagy more in the direction of visual design than of network theory.[23] This is not to deny the centrality of network and informatics theory to midcentury modernism, and especially to these two designers so central to this moment and to this book. Together with Martin, scholars such as Orit Halpern, John Harwood, Justus Nieland, and Fred Turner have explored the intersections between a burgeoning cyberculture and the design profession in the decades following World War II.[24] But it *is* to acknowledge a slightly different focus: if these scholars examine the expansion and multiplication of screens and the interconnection of objects into complex and overwhelming networked 'environments' (and even, as Nieland and Halpern argue, to teach new vision *by* overwhelming), we may also see a countervailing impulse to *reduce* stimuli, to simplify the form of those very objects that are ultimately placed in networked relationships. The former leads to the expanded cinema of Gene Youngblood, the Eameses, and other design practitioners, while the latter leads to the modern cartoon.[25]

More central to my own vision of the modernist project of Kepes, Moholy-Nagy, and UPA is media historian Lynn Spigel's concept of an "everyday modernism" enabled by television: "Television offered a *quotidian* form of postwar modernism, showing the public how to enjoy new trends in the visual arts as an everyday national pastime. In the process, television contributed to a redefinition of the American vernacular that was ultimately based on the idea that American modern art was commercial art, with no apologies and no excuses."[26] This everyday modernism, characterized by a sense of all-overness and interdisciplinarity, or what Spigel calls "a new visual culture born of the corporate ethos of postwar consumer society," reorients Martin's "corporate modernism" beyond corporate architecture (though Spigel does address corporate architecture) and into the corporate world's wider engagements with modernism: the streamlined logos of corporate identity programs and the investments of television corporations in disseminating modernism through their programming and design practices.[27] Spigel's everyday modernism, however, definitionally entails a practice of "tactical poaching in which people could steal from a variety of artistic and decorative orthodoxies to create their own more eclectic sense of style," a valence that does not occupy my own exploration, which is primarily concerned with the production end of the media circuit.[28]

To Spigel's "everyday modernism" we may add film historian Miriam Hansen's "vernacular modernism," according to which cinema was "the single most inclusive cultural horizon in which the traumatic effects of modernity were reflected, rejected or disavowed, transmuted or negotiated," processes which thus, as in Kepes, could be used to reeducate the besieged modern sensorium.[29] Her notion of cinema—and of visual culture more broadly—as a force that can be used to retune the senses lies at the heart of my project. But Hansen's model is a methodological mismatch, encompassing all cinema by virtue of its inherent modernity as a technological mode developed in, and in part constitutive of, modernity itself; conversely, my interest lies in a particular visual approach shared among particular strains of art, architecture, graphic design, animation, and live-action cinema.

In *Late Modernism: Art, Culture, and Politics in Cold War America,* historian Robert Genter offers a three-part taxonomy of midcentury modernism that hits closer to home.[30] He defines a midcentury modernism receptive to, and even constituted by, a communicative instinct that is at work in the writings of the modernists above, and in UPA's animation as well. Calling this postwar intellectual development "late modernism," he distinguishes it from other modernist philosophies of the time: the "high modernism" aiming to protect the autonomous artwork from the degradations of mass culture and politics on the one hand, and on the other, the "romantic modernism" oriented toward the artwork not as an autonomous object but as an expression of the artist's inner self.[31] In opposition to these, late modernism argues that art is neither an apolitical autonomous object nor an expression of the private self, but a form of rhetoric; art must persuade and communicate, must engage in a back-and-forth with a skeptical audience in an attempt to shift their worldviews.[32] Genter's schema offers an alternative to the abovementioned practice of positioning modernism's midcentury explosion in popular appeal as a capitulation to market forces and an abdication of the serious engagement with modernity in favor of the glib superficiality of consumer culture or postmodernism. Rather, an expressly rhetorical modernism critically engages with mass culture, advancing its worldviews for public consumption and debate instead of walling them off in a sacred preserve already populated by like minds.

An understanding of UPA's modernism as rhetorical acknowledges the studio's significant investments in sponsored and training—that is, nonentertainment—films and provides an illuminating context for the consideration of its theatrical entertainment shorts. This diversity of UPA's artistic portfolio shows an unequivocal interest in turning the cartoon to rhetorical ends, whether to train, as in the Air Force training film *Flat Hatting* (1946); to persuade, as in the campaign film for FDR, *Hell-Bent for Election* (1944); to educate, as in the sponsored film for the American Cancer Society, *Man Alive!* (1952); or to advertise, as in the Mr. Magoo–themed commercials for Piel's Beer (1957).[33] Yet in addition to these outspoken rhetorical aims, UPA cartoons of all kinds also take up another rhetorical position, one that recalls Genter's invocation of late modernism as "a deliberate attempt to use the aesthetic form to challenge the choice of lens through which individuals made sense of the world around them and to persuade them that the visions offered by the artist were not merely more poetic but possibly more liberating."[34] The stylistic developments that originated on the UPA animators' drafting tables grappled with literal worldviews—that is, they provided visual experiences of the modern world. These visual explorations, akin to the refashioning of the visible world taking place in modern art, architecture, and design at midcentury, thus advance a particular rhetoric of vision, a preoccupation that defines the studio's contributions to modernist thought.

Thus, if postwar America merits its own periodization because of the wide array of cultural and technological shifts accompanying the end of World War II, for the design community—and this group includes the artists working at UPA—a narrower shift underlay the transition to a new period: the onset of an ever-accelerating sensory chaos and the concomitant need for a wholesale remaking of vision. Media historian Justus Nieland describes "the expanded scales of sensory experience afforded by postwar technologies, and an exemplary encounter with significant changes in the scope, speed, and nature of media now understood as an 'environment' that made quasi-evolutionary demands on the future of the human organism."[35] If this sounds familiar to students of modernism, it should: these concepts—new technologies, and with them new speeds, new mediations of life, and new pressures to adapt to all this newness—are central to what is often (and unhelpfully dismissively) referred to as "the modernity thesis."[36] In a thumbnail, as technological innovation, rapid urbanization, and scientific revolution converge at the end of the nineteenth century, a qualitatively new condition—modernity—arises, overturning preestablished rhythms and ways of life and assaulting the unprepared human sensorium with a host of new stimuli. These historical and social changes give rise to new forms of art and culture—modernism—that attempt to grapple with these concrete changes in lived experience. Walter Benjamin's "shock," Charles Baudelaire's "the transient, the fleeting, and the contingent," and film historian Benjamin Singer's "hyperstimulus," among other designations, have structured our understanding of turn-of-the-century modernity and its logics of sensory overwhelm, as well as of modernist literature, art, and cinema as they negotiated that overwhelm during the early decades of the twentieth century.[37]

In a sense, then, we may see midcentury modernism as a resurgence of this energy in the wake of the changes wrought by World War II's own acceleration of technological innovation and social change. The magnitude of this change seems clear; Nieland refers to the above-quoted shift as "the transfigured *physis* of the midcentury," and to the attendant disorder as "the vexing new nature of the postwar."[38] Likewise, science and design historian Orit Halpern points out: "Postwar design and communication sciences, believing the world to be inundated with data, produced new tactics of management for which observers had to be trained and the mind reconceived."[39] More shock, more overwhelm, more hyperstimulus, and therefore modernism must be updated for a new iteration of modernity's sensory dislocations. Spigel notes the increase in popular discussion of perception in the postwar era, arguing that art critics of the time "observed that transformative developments in science, art, technology, and consumer/media culture required new theorizations of visual experience in the postwar world."[40] If questions of visual perception entered the public consciousness through books, art exhibits, and television specials, they also formed the backbone of a design movement that saw vision as the primary ground upon which an effective and putatively liberatory midcentury modernism would fight its battle.

GYÖRGY KEPES, LÁSZLÓ MOHOLY-NAGY, AND A NEW LANGUAGE OF VISION

At the forefront of this movement were two Hungarian émigrés, György Kepes and László Moholy-Nagy.[41] Moholy-Nagy's New Bauhaus in Chicago (from 1944 the Institute of Design, and from 1949 affiliated with the Illinois Institute of Technology, at which point it became the first American program to offer a PhD in design) brought Bauhaus design principles to the United States, training a new generation of American designers and artists in the methods and practices of the Nazi-disbanded German art school.[42]

Teaching basic courses with titles such as Fundamentals of Vision and the Light and Color Workshop, Kepes and Moholy-Nagy instructed the artists, photographers, designers, and architects who went on to define this particular strand of midcentury modernism.[43] During and immediately after the war, Kepes and Moholy-Nagy published two books that set the tone for midcentury American design. Kepes's *Language of Vision* was published in 1944, and Moholy-Nagy's *Vision in Motion* in 1947. It is impossible to overstate the influence of these two publications on American design; as artist Elsa Kula writes in a 1960 issue of *Print* Magazine, "[*Vision in Motion* and *Language of Vision*] are required reading in many schools of design; in some they are used as texts, and there is hardly an art director who does not have them on his bookshelf."[44] Moreover, as Reinhold Martin documents, these heavily illustrated books gathered images from various sources—New Bauhaus class assignments, scientific publications, artists' works—and, thanks to their positions as foundational textbooks, disseminated them across the country, functioning as a sort of clearinghouse for cutting-edge and experimental postwar imagery.[45]

And most importantly for my purposes here, they made their way into Hollywood. Most histories of UPA nod to Kepes's influence on the studio's artists—studio founder Zack Schwartz had read *Language of Vision,* director Bill Hurtz had found it interesting—but it is UPA animator and Terrytoons creative director Gene Deitch, in a 2011 internet project aimed at documenting his recollections and interactions with the Hollywood animation community across his career, who offers the smoking gun: "Hub [John Hubley, creative director of UPA] gifted me with two books that became the underpinnings of my entire career"; one of them was *Language of Vision,* "by the master Hungarian graphic designer and filmmaker, György Kepes. Everything you need to know about the dynamics of graphic design is in there!"[46] Hubley's penchant for bestowing copies of Kepes's book upon his new hires indicates an engagement deeper than simple appreciation by some of UPA's artists, suggesting instead a studio-wide ethos informed by the graphic design theories of the New Bauhaus.

Language of Vision and *Vision in Motion* thus function as touchstones throughout this book, occupying the gravitational center of midcentury modernist design thanks to their widespread permeation of the American design profession at the most foundational levels. In both, the central dilemma is a rapidly changing world to which humankind has not yet caught up, a visual chaos engendered by technological development that has outstripped its masters.[47] New technologies have provided new views of the world, from X-rays and aerial views to microscopy and extreme close-ups.[48] Kepes refers to it as "the world made newly visible by science," a change that necessitates new ways of understanding and perceiving this new visual material.[49] This new mode of seeing, what Kepes calls a new "language of vision" and Moholy-Nagy calls "vision in motion," is capable of grasping stimuli in networks of relation, in simultaneity and in motion, motion both of the object (transformation) and of the seeing subject itself (transportation).[50] The solution lies with artists, who can retrain human vision by rehearsing these new experiences on the picture plane. Kepes argues, "In the last hundred years technological practice has introduced a new, complex visual environment. The contemporary painter's task is to find the way of ordering and measuring this new world."[51] (Compare turn-of-the-century modernism's attempts to capture the fleeting and the ephemeral with Kepes's goal, as quoted by Halpern: "The essential vision of reality presents us not with fugitive appearances but with felt patterns of order.")[52] Spectators, through experience of responsibly produced art and design, would thus find their perception reeducated to successfully navigate this new postwar world. Moholy-Nagy agrees: "In fact, one could say that all creative work today is part of a gigantic, indirect training program to remodel through vision in motion the modes of perception and feeling and to prepare for new qualities of living."[53]

The centrality of vision here is essential, and contemporary media were a key element of this strain of midcentury modernism. Kepes notes, "The motion picture, television, and, in a great degree, the radio, require a new thinking, i.e., seeing, that takes into account qualities of change, interpenetration and simultaneity."[54] Telling here is Kepes's equation of thinking and seeing; this seeing-as-thinking stems from Gestalt theories of perception in circulation at the time.[55] The solution, running through both Kepes and Moholy-Nagy, is a simplification of form, a reduction to fundamentals of line, plane, shape, and color in order to enable a simpler, more immediate grasp on relationships of objects in space. And if, as Kepes argues, new forms of media are part of the increasing visual complexity of the postwar world and it is the artist's job to help with this simplifying effort, UPA's signature style begins to make a significant amount of design sense. Employing the simplified abstract forms advocated by these midcentury modernists, the modern cartoon joins the effort of helping to reorient the human sensorium amid environmental overstimulation. The theories of animation laid out by Hubley and Schwartz in "Animation Learns a New Language" likewise advocate a kind of seeing-as-thinking that informs the studio's approach not only to their training cartoons but to their theatrical shorts as well.

This midcentury modernism, then, is fundamentally interdisciplinary, reaching out into not only art and animation, but also graphic design and architecture, all of which were taught at the New Bauhaus by Moholy-Nagy, Kepes, and their colleagues as part of an integrated curriculum patterned on that of the school's German predecessor. *Language of Vision* and *Vision in Motion* decry the harmful effects of specialization, a bureaucratic development that by the postwar era had separated emotion from thought and science from art, and had reduced democratic community to separate, mutually exclusive fiefdoms staffed by "human machines with record output in specialized fields."[56] As Kepes notes in a 1972 interview looking back on *Language of Vision* and the New Bauhaus years, "I sensed that one cannot do anything well if one doesn't see the whole human horizon. And the human horizon includes literally everything."[57] Bringing about this new vision would thus not only make life easier for people living in the tumult of postwar modernity; it would also unite them in a vision-based body politic held together by what Moholy-Nagy envisioned as "a biological bill of rights" based on the assumption that the binaries structuring modern consciousness—art/science, feeling/thought—could be shattered by teaching everyone to see fully, to apprehend their entire world through a simplified, streamlined vision.[58]

MODERN INSTITUTIONS, MODERN IDEOLOGIES

Here we may find another difference from turn-of-the-century modernism: if in turn-of-the-century modernism a wide variety of reckonings with modernity proliferated in galleries and salons imbued with radical energy and rule-breaking abandon, midcentury modernism was oriented toward a streamlined and institutionally affiliated program of democratic uplift. It is explicitly pedagogical, filtered through the Bauhaus sensibility of its practitioners and imbricated in the dominant corporate and governmental structures of its new American context. As a result of these entanglements, the role of design itself also changed in this period. Nieland finds in the design profession "a new cultural prestige and world-historical mission at midcentury," one in which "designers routinely functioned in media-pedagogical capacities with a worldly scope, playing important roles within a broader Cold War administration of culture."[59] This focus on worldliness carries with it an unmistakable political dimension, one linked to the postwar project of capitalist democracy. Fred Turner traces the contacts between Bauhaus émigré designers and American intellectuals in the lead-up to World War II, illuminating the ways in which Moholy-Nagy's "new man" became a central figure in a national attempt to create a democratic personality type to challenge the fascist authoritarian personality.[60]

Yet as both he and others have noted, to merge art and institutions is to commingle ideologies in unanticipated ways. The utopian aims of midcentury design—aims inherited from the socialist ideals of the Bauhaus—adapted to the American context in their transmission across the Atlantic, maintaining a logic of democratic uplift and transparent communication while melding with the corporate structure of the postwar American economy.[61] In this sense, the consolidation and dissemination of midcentury modernism is a story of artists and designers with revolutionary and utopian aims linking arms with larger systems of social control. For Turner, "the World War II effort to challenge totalitarian mass psychology gave rise to a new kind of mass psychology, a mass individualism grounded in the democratic rhetoric of choice and individuality, but practiced in a polity that was already a marketplace as well," a consumerist logic he calls "the managerial mode."[62] Conversely, for art historian John R. Blakinger, Kepes's Bauhaus-aligned utopia borne of the marriage of art and science—and funded by MIT starting in 1967—was imbricated in the US military's use of scientific research in the prosecution of war: "by generously funding the arts, the Institute justified its even more generous funding of the sciences. . . . One culture—art—justified the corrupt activities of the other."[63] These two forces, Cold War militarism and postwar consumerism, are not, in the end, so separate; the famous Nixon-Khrushchev "Kitchen Debate" of 1959 is one of many clear manifestations of the capitalist-democratic ideology to which postwar design adapted itself.

UPA itself emerges from a place of utopian ideals mixed with pragmatic adaptation to institutional support. Beginning, as mentioned above, as a wartime training outfit paid by the US government, the studio's use of design principles in the service of American militarism is clear. Likewise, the use of UPA-style animation to explain organizational efficiency and atomic physics to the lay public draws a vivid line between innovations in cartoon form and the exploits of the army and the Manhattan Project. Moreover, the studio's television commercials in the 1950s and 1960s are evidence of a willingness to mingle artistic goals with the burgeoning consumerism of the postwar era.

Given its overtly (generally left-wing) politicized origins and its participation in the postwar growth of the advertising profession, UPA's story is not one of the maintenance of aesthetic purity amid the winds of political and cultural change. Rather, it is about midcentury animation as a presence *mediating* this change.

Nieland points out midcentury design's concern with "the reconciliation of order and growth, security and change, through the cognitive and perceptual training that saw individuals and individual units in broader webs of 'relationships,' and that allowed for the kinds of networked communications and decisions upon which nothing less than the future of the world depended."[64] This do-or-die impulse in the face of an increasingly global existence can be seen as well in Turner's aforementioned organizations aimed at bringing citizens together into networks of democratic actors dedicated to the preservation of peace and harmony, and we may also find it in UPA's work, such as the 1945 film *Brotherhood of Man.* A propaganda film sponsored by United Auto Workers, it preaches racial harmony and the necessity for common ground and fellow-feeling between different races and ethnicities in America. But it is also a response to UAW's need for racial harmony *on the factory floors of automobile manufacturing plants*—that is, UPA's left-leaning utopian goals were conscripted in the service of a smoothly functioning consumer capitalism.[65]

Across media, these attempts to shift individuals' perspectives reveal a strain of control running parallel to midcentury modernism's stated goal of uplift and democratic defense. As Turner notes of the New Bauhaus, "They wanted their school to produce not only a new kind of design, but a new community of designers, and above all a new kind of person."[66] Robin Schuldenfrei confirms this social engineering aspect of such design, which was "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."[67] Midcentury modernist design is about designing *people:* viewers, users, and above all, citizens—and more specifically, citizens of a technologized world. As Reinhold Martin notes, "We are speaking, during the atomic age and the space race, of the scaleless reinscription of the human into a technoscientific milieu that described the universe as a 'system of systems.' . . . It was a humanity that presupposed technological mediation, then—a humanity that came *after* technology, not before it."[68]

I do not wish to deny the complexity of these ideological entanglements; rather, they speak to the survival of an artistic program within and alongside the ideological drift of the American midcentury. Blakinger speaks of "conversion," a logic by which Kepes maintained his faith in the power of art to change the ideologies of the institutions with which he collaborated and to convert them to his utopian aims over time.[69] It is worth noting that Blakinger himself is not utopian about the efficacy of this strategy; as he concludes, "[Kepes] hoped—naively, romantically, and also admirably—to change this culture through collaboration alone."[70] But Schuldenfrei corroborates this impulse across the design profession at midcentury, documenting the New Bauhaus's attempt at "a planned segue from its wartime work to preparations for the postwar period. . . . 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."[71] Here as well we may see a desire to work within the system, to "[use] 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," even as this ultimately means adopting the concerns of a state invested in nation-building.[72] What both of these scholars find in midcentury design is an aesthetic and utopian program—one located within Blakinger's "naively, romantically, and also admirably"—that nevertheless depends on hegemonic structures for both economic survival and cultural reach. If in what follows I focus more on the utopian goals than the ideological counterforces, it is because I am interested in what artists thought was possible with the raw materials of their various mediums. I do not wish to overlook their complicity in the dominant currents of midcentury hegemony, but I do wish to dwell more on the projective aims of their experiments, the "naive, romantic, and also admirable" dreams to which these designers felt they could eventually "convert" the United States' most powerful entities.

We can find the same tension in UPA's position, especially as the studio transitions from explicitly political messaging—the aforementioned *Brotherhood of Man,* the 1944 pro-FDR campaign film *Hell-Bent for Election*—to the consumer market of theatrical entertainment films. But as in Blakinger's assessment of Kepes and Schuldenfrei's assessment of Moholy-Nagy, I find in UPA's postwar output a utopian, democratic goal that piggybacks on its entanglements with market capitalism and Cold War culture. So in a way, this midcentury modernism *is* part of high modernism's entrée into the burgeoning consumerism of the 1940s and 1950s, but it injects an unusual strain of perceptual thought into this environment. This is neither to deny nor to erase complexity; it is rather that, as Nieland argues: "Reckoning with the terrain of modernist cultural production at midcentury thus requires keener attention to the implication of the sensorium in debates about how screen cultures and their institutional sites abet forms of governmentality, and about the sensation of democracy itself in the designed environments of postwar life. . . . This would invite us to think of sensation itself as a scene of cultural, and beyond that, political administration, and to look to midcentury design as something beyond the mere aestheticization of the commodity's bold midcentury futures, or the superstructure of capitalism's globally extensive postwar markets."[73] This "something beyond" leaves open many possibilities, including the refashioning of vision outlined above. This book is the story of that vision as it was expressed and modeled across the arts, both fine and applied, in postwar America, and particularly as it was expressed and modeled in modern animation.

This is not to deny UPA's more explicitly political entanglements. Beyond its sponsored work for the US government, the modernism it partakes in was, in its Bauhaus origins, a political as well as an aesthetic project. There is a long history of abstract form as political gesture, both in Europe—such as Russian Constructivism—and in America—such as the American Artists School in New York—and as an animation studio involved in the dissemination of New Bauhaus design theory in the United States, the progressive label stuck. Avowed progressive and unionist Hubley himself, the studio's creative director, was a key victim of the Hollywood blacklist. His career at UPA ended in 1952 when he resisted interrogation by the House Un-American Activities Committee, and he founded his independent studio Storyboard, where much of his most remembered work was produced with his wife Faith in 1953 as a front to enable him to keep working (and, as Faith reveals, make good money doing it).[74] As a response to a labor strike at Disney, UPA was from its very inception a political entity, caught up in debates of labor, power, and national identity. However, while there is much to be said about UPA by way of interrogating global power dynamics through the arts, I also believe that an aesthetic approach to this studio, and to the historical moment in which it flourished, yields its own important results. By tracing the traffic of a particular style across the arts, and by using UPA as a focal point to do so, we can observe the development of a postwar design ethos that, yes, was necessarily political as all art is, but that also dramatically shifted notions of vision and perception in America during the period. To tell this history through the lens of visual studies helps us capture a set of utopian dreams that spread across mediums, and it enables us to understand more clearly animation's conscription into design as a larger field of artistic production.

In this sense, the "all-overness" of midcentury modern design, and the impulse on the part of designers to extend it beyond its traditional boundaries and into all aspects of life, allows for a blurring of the line between design and animation. Throughout this book, I speak of cartoons *as* design, as a cinematic exhibition of modern design principles at a mass level. This is not to reduce the UPA-style cartoon to a member of design's entourage, but rather to highlight the ways in which design subtended the experience of the postwar world and popular representations of it. It is not that design *took over* animation; it is that animation *became* design by virtue of its shared investment in the design principles circulating through the reach of Kepes, Moholy-Nagy, and the New Bauhaus. This book charts this merger between the modern cartoon and design in art, architecture, and graphic design, all in the shared investment in a rhetorical, pedagogical modernism that could teach new ways of seeing.