

# Introduction

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In 1999 Stanford University Libraries acquired the enormous archive of R. Buckminster Fuller (1895–1983), one of the most interesting American characters of the twentieth century. Fuller was a self-styled renaissance man whose “profession” proved impossible to summarize according to conventional terms. Fuller himself preferred the phrase “comprehensive anticipatory design scientist,” defining for himself a role that was both distributed and nonspecialized. He considered his life to be a cosmic experiment to test whether a single individual could make a difference to the world at large. In his 1982 manuscript entitled “Guinea Pig B,” Fuller called himself “a living case history of a thoroughly documented, half-century, search-and-research project designed to discover what, if anything, an unknown, moneyless individual . . . might be able to do effectively on behalf of all humanity that could not be accomplished by great nations, great religions or private enterprise.”<sup>1</sup>

In his archive, Fuller left behind tens of thousands of letters and papers, thousands of hours of video and audio recordings, numerous manuscripts, and hundreds of models and blueprints to document his prolific eighty-eight-year experiment aboard “Spaceship Earth.”<sup>2</sup> Yet in spite of, or perhaps because of, all this information, there remains a great deal about R. Buckminster Fuller, his work, and his place in history that we have yet to make sense of.

Although several biographies and countless articles have been written about Fuller, both during and after his lifetime, his work has often suffered from lopsided treatment. Some have lauded him as a planetary prophet whose design science work foretold sustainable architecture and nanotechnology; others have dismissed him as a “delirious technician” with a talent for linguistic obfuscation.<sup>3</sup> Between adulation and disdain must lie a balanced picture of Fuller’s life and his work. What were the true contributions of his unusual and varied career to science, art, architecture, and society at large? How can we come to a better critical understanding of Fuller’s motivations, and how can we use history’s distance to assess the significance of his work to the twentieth

century and beyond? Our first and best source of information in tackling these questions is the Fuller archive itself; indeed, it was in order to celebrate the archive and its new home at Stanford University that this volume was originally conceived. Thus, we begin with an article that looks at the historical development of the archive, to gain insights into how and why Fuller built this amazing collection over the course of his life.

It is difficult if not impossible to separate R. Buckminster Fuller's work from his personality or, some might say, his persona, and herein lies part of the difficulty in assessing Fuller objectively.<sup>4</sup> His early forays into architecture and design were motivated almost entirely by personal concerns—concerns that would only later mature into a homegrown set of “design science” ethics. His idiosyncratic inventions—ranging from a superefficient car, which crashed horribly on its public unveiling at the 1933 World's Fair, to a low-cost circular house on a mast that could be air-lifted by helicopter, to a proposed dome over Manhattan that would shield the city from snow—have lingered outside historical discourse and been treated almost indulgently as the brainchildren of an eccentric mind. Yet it is important to remember that Fuller's plans, though they bear the hallmarks of his colorful thinking, were responses to contemporary needs for transportation and affordable housing, and Fuller was not the only thinker to propose radical solutions to these problems.<sup>5</sup>

*New Views on R. Buckminster Fuller* draws on the personal papers, correspondence, and original manuscripts in the Fuller archive to recreate the milieu, both internal and external, that Fuller experienced at different points in time and to look at how his work addressed these circumstances. Indeed, the *work* that we are referring to here is not necessarily limited to architectural artifacts. Actually, Fuller's major contribution to society as a whole may have been ideological, the artifacts serving only to illustrate a continuous discourse that unfolded across his lifetime. Fuller had the unparalleled ability to captivate an audience, to spark the public imagination, and to inspire people to believe that, hitched to the engine of technology, humanity could progress toward a brighter future. Considering the thousands of lectures that he gave around the world, particularly from the late 1960s onward, “Bucky” touched many more lives as a charismatic speaker and public intellectual than as the architect of low-cost housing. He gave some two thousand lectures around the world to packed audience halls, yet only one of his Dymaxion homes was ever built and inhabited. It was through the medium of his performances that low-cost housing and transport became an imminent, if not tangible, reality.

As we mine the Fuller archive to locate the origins of his ideas, what emerges is a complex picture of a man whose long career straddled the entire

twentieth century and whose mind-set reflected both the transcendentalist traditions passed down by his revered great aunt Margaret Fuller (1810–50) and the global awareness that characterizes our own times.<sup>6</sup> To shed light on Fuller's mind-set when he began his career in earnest, Barry Katz takes us back to 1927, the year when, according to Fuller's own account, he experienced a great epiphany and resolved to dedicate the rest of his life to the betterment of humanity. Katz recreates a nuanced version of that year, which witnessed not only enormous creativity and self-invention but also the beginnings of a lifelong quest to bridge mechanical ideas with social realities. Howard P. Segal posits that Fuller may have been America's last genuine utopian, a man who was motivated by a vision of how technology could help humankind to realize a more perfect world and who tried to bridge the gap between a dream and reality by laying substantive plans for the Dymaxion houses and cars that would facilitate and complete that utopia.

The Dymaxion inventions of Fuller's utopia were never realized beyond the prototype stage, and countless other design projects, from the mechanical jellyfish to the Fog-Gun shower, never made it to production. However, as Joachim Krausse points out, Fuller's models were important not only as ends in themselves but as a means to further develop his novel ideas and to present them to the public. Krausse examines the complementary relationship between thinking and building in Fuller's work, beginning with the Lightful Houses project of 1928. Through a continuous back-and-forth between thought and development, the Lightful project evolved into the 4D house, which in turn would be renamed the *Dymaxion* house. This unique way of working allowed Fuller to model, crystallize, and further develop his thoughts over the course of his career.

Fuller was fond of the word *precession*, which he defined as “the effect of one moving system upon another.”<sup>7</sup> Precession can be thought of as the tangential, even unpredictable, effects of one system's encountering another. Fuller liked to think of himself as a body in motion, influencing, if only ever so slightly, the orbits of those whose paths he crossed and being influenced by them in turn. One way to look at Fuller is to assess the indirect or “precessional” effects of his work. This is in many ways more fruitful and interesting than launching into a critique of Fuller's designed objects, many of which remain frozen in theory as unrealized patents.

As a tireless teacher and lecturer, Fuller encouraged lateral thinking and inspired others to pioneer new developments. Because he moved across a myriad of fields, traces of Fuller are found in the most unlikely places. Fuller's work on geodesic structures is found in the seams of soccer balls and the struts of

children's jungle gyms, and his dome for Expo 67 still overlooks the Montreal skyline. His design science work sometimes presaged other discoveries, notably the structure of the carbon-60 molecule, or "buckyball," in chemistry by several decades.

Just as Fuller affected others, he was also affected by them. While Fuller's structures have often been assumed to be the futuristic creations of a visionary mind, his ideas were in fact neither ahistorical nor wholly without precedent. His own work and thinking drew both on past traditions and the work of his contemporaries. Several authors place Fuller's work in context by showing how it related to the larger spheres of history. Claude Lichtenstein investigates how Fuller's Dymaxion house answers to a particularly American vision of the home as described decades earlier by the Beecher sisters in *The American Woman's Home*. David Nye's article discusses the concept of energy and how it is manifest in Fuller's designs across the years, from the service core at the center of his Dymaxion house to his proposals for worldwide energy grids that would share electricity around the world. Jonathan Massey discusses Fuller's unique aesthetic, born of his concerns with geometry, time, space, and economy, relating it especially to Claude Bragdon's earlier ideas of projective ornament. Maria Gough investigates the question of attribution, suggesting that although Fuller's architectural ideas as exhibited at New York's Museum of Modern Art in 1959 added new grist to the modern architectural discourse, he may have left some unpaid debts among his former students, many of whom, according to Gough, "were not always properly credited for their often fundamental role in his design innovations."

Fred Turner and Felicity D. Scott revisit the 1960s and 1970s, when Fuller experienced a surge of popularity with the counterculture. Turner recounts how, in an ironic twist of history, the technocratic septuagenarian who had once built shelters for the U.S. military became an unlikely ally in the young people's struggle for a less-bureaucratic world. Fuller helped to restore their faith in technology by indicating how small-scale technologies could help them realize their dreams of social change. Likewise, Scott shows us how Fuller's World Game and his domes provided hope and inspiration for so many disenchanting youth, though it ultimately failed to solve the political and social realities that were the real source of their discontent.

Fuller's life and work continue to generate more questions than answers. Thus, it is fitting that we end by pondering Reinhold Martin's suggestion in "Fuller's Futures": was Fuller a postmodernist? Within his lifetime Fuller suggested an entirely new relationship between human beings and the universe, where local concerns give way to universal frames of reference; yet, as happens

when wandering in an infinitely self-similar fractal, we risk losing our bearings completely in this new reality.

With its seemingly endless boxes and files, the R. Buckminster Fuller archive puts us in a dilemma so characteristic of the postmodern information age: we find ourselves awash in superhuman amounts of information but must use human means to navigate and make sense of it. As we dive into a vast archive that has been all but forgotten for decades, this volume marks the beginning of that journey.