

# Fuller's Technological Utopianism is No Utopia

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*Yes, surely! and if others can see it as I have seen it, it may be called a vision rather than a dream.<sup>1</sup>*

—William Morris

## BUCKY FULLER AND BELLAMY

*Let us, too, at least give ourselves a chance to vote to commit ourselves earnestly for the Design Science Decade approach to attaining Utopia. This moment of realization that it must be Utopia or Oblivion coincides exactly with the discovery by man that for the first time in history Utopia is, at least, physically possible of human attainment.<sup>2</sup>*

—Buckminster Fuller

Inventor-architect Buckminster Fuller (1895–1983) proposed technological puritanism as the pathway to imminent utopia. Realization of this better world depends upon harnessing the remarkable productive capacity of a highly developed military-industrial complex, especially its aptitude for doing *more-with-less*. According to Fuller, the immense military build-up during the quarter century between 1945–1970 powered a technological advance, which had an unanticipated benefit to civilian life: a flood of consumer gadgets entering homes. These events, he imagined, promised a universally high standard of living that would assure world population survival. Ultimately, Fuller's proposal lacks a socio-political dimension: he believed that utopia *will* arrive as soon as industrial capacity shifts from arms development and manufacture to a focused preoccupation with the bio-technical conditions of planetary existence. He also argued that this shift alone, through what he called "design science revolution," would bring about the conditions he longed for. Fuller stressed that beyond managing lives free of want maximization of abundance would render all politics irrelevant. According to him, technological utopia would assure survival of the human species and its planetary home through what he called *ephemeralization*: doing more with less. Thus, Fuller's utopia is technological rather than social: he imagined that technology alone could alter conditions for the better. Beyond this, his social program is reductive and vague.

The weakest link in Fuller's program is the absence of some articulated method for shifting human interest away from military build-

up toward maximizing abundance in the service of human comfort and survival. He must have believed that rationality would somehow win out over human passions, and that human beings would inevitably choose *his* world for a life without war and politics. There is, though, no suggestion of how these fundamental transformations are to occur. Instead, Fuller posits them as self-evident benefits of unintended ephemeralization, which is a product of the very industry he hoped to replace. Yet, because the design-science of military build-up makes possible abundance and a standard of living unimaginable prior to the 20th century, all of life ought to be modeled on its accomplishments. Developments associated with Aerospace technology, particularly the Russian-American space race, are among the most beneficial of these accomplishments. This is why Fuller proposed that dwellings should be air delivered by bombs that would plant them in the earth. Furthermore, these housing units would be self-contained and self-sustaining, in much the same way that airplanes and space capsules are.

In short, Fuller's program for "Utopia or Oblivion" is a proposal of economic efficiency that science and design threads through every aspect of human existence. His utopia is a state built upon maximization of a technological capacity for ephemeralization. In this utopian setting, it is possible to satisfy all desires, except for war and politics, which, in any event, abundance renders immediately obsolete. If Utopia is not achievable, oblivion is certain to be the outcome: a world of politics and military build-up *must* be self-annihilating.

Fuller's two possibilities, either survival through abundance, or annihilation as a result of political conflict, do sometimes seem to be the only options available to the human race. After all, for much of the period after the Second World War, the human race lived in daily fear that one or the other of the superpowers would obliterate the planet. It is also true that military competition between the superpowers made necessary a military build-up that ultimately bankrupted the Soviet Union, resulting in the fall of its political system. In the USA, this military build-up facilitated establishment of a war-like mentality that privileges economy and efficiency above all other values. Amongst its consequences have been development of a remarkable federal highway system, a dwindling of cities, and a rejection of ideas concerning social welfare. Now that nuclear annihilation no longer seems imminent, maximization of

abundance has become the only goal of almost all nations—regardless of the radical transformations this imposes on every day existence.

Faith in production overvalues the quantitative (scientific and industrial) while it undervalues the qualitative (social and emotional). So, in a sense, Fuller is correct: with the threat of oblivion abated, most humans appear happy enough to either exist in, or work toward, a utopia of affluence promising convenience. There may be nothing wrong with this; after all, the liberal dream has long been that self-interest and acquisitive desire would become a prophylactic against armed conflict and self-destruction. Passion and visions of a whole may be dangerous, but the coolness of scientists and the problem-solving competence of managers or industrial designers, portrayed as universal ideals of existence, guarantee only a smallness of conception and a blandness of result that negates the social in favor of the technical.

In sum, Fuller's utopia is a prognosis, not a utopia, which it shares with technological utopianism generally. It is a kind of futurology grounded so firmly in the present that what he envisioned was a version of existing reality extended into the future. As a glorification of a nearly verifiable potential already held within present reality, Fuller's utopia proposes little genuine change. This is a major shortcoming of technological utopianism: what it envisions will usually come to pass as a matter of course, but with no great overall benefit for individual or social life. Frampton recognizes this limitation when he argues that Fuller "could not bring himself to acknowledge that architecture and planning must, of necessity, address themselves to the class struggle."<sup>3</sup> This incapacity is also understandable in less doctrinaire, but nonetheless related terms, as a fundamental blindness to the social and emotional (rational and irrational) dimension of human being. It is a position that harbors the belief that optimization is capable of bringing about contentment. As a paean to optimized technology, Fuller's technological utopianism is far less critical of what *is* than the utopian potential explored in this paper.

## BELLAMY AND MORRIS

Technological utopianism has a long tradition, especially in the USA where an ethos of progress is nearly interchangeable with earlier notions about perfectibility. During the 19th century, notions of possibility became inextricably entangled with desires for ever expanding material progress, a conflation encouraged in large part by the industrial revolution and Westward expansion. The stories of this positivist dream include technological utopias. One of the most popular of these stories was Edward Bellamy's (1850-1898) *Looking Backward* (1888), which is in many ways a precursor of Fuller's ideas.

As a well-known representative of technological utopianism, Bellamy's *Looking Backwards* provides an opportunity to elaborate on how such utopias are fundamentally different from the notion of utopia discussed in this paper. Additionally, their shared genre links Fuller to Bellamy across time. Similarly, a contemporary of

Bellamy's, William Morris (1834-1896), illustrates a contrasting vision of utopia in his *News From Nowhere* (1890), which is nearer in spirit to this study.

Bellamy's book, with its dream of optimized technology and an industrial army of productive economic units, predates Fuller's vision of the liberating potential of *design science*, as much as it apparently underpins it. Bellamy's book and Fuller's beliefs, summarized in his essay "Utopia or Oblivion" (1964), share a similar faith in *progress*—human potential to *manage* resources and gain *total* control of the universe. Morris's utopia is suspicious of progress and the mechanization of life.

Morris argued against Bellamy's belief that *organized* work of any kind is liberation. For Morris it is not the *quantity* of work (production) that is crucial but rather the *quality* (character) of the experience of labor that is most significant. Disalienated labor, such as Morris calls for, demands a social context made up of its practice, as well as by the setting of and for this; work under these conditions is not so much optimized as humane. Whatever its limitations, *News from Nowhere*, proposed by its author as a corrective to Bellamy's *Looking Backward*, articulates a call for a human realm made out of engaged experience and interdependency based on a more complex social foundation than work (or productivity) alone can provide.

A crucial difference between Morris's thinking and Bellamy's, and between Fuller's and the kind of utopias discussed later, exists between how *centralization* and *decentralization* are treated. Centralizing perspectives envision utopia as immanent, as a potential that could shortly be brought into being by some calculated effort. This type of thinking characterizes Bellamy's writing—not to mention Marx's and Engels', whose project, far more than Bellamy's, is grounded in a combination of political action and optimized industrialization. Bellamy recognizes utopic promise in technology alone, much as Fuller does. What *all* these projects share is a vision of a world where conflict is at a minimum and unmet need is nonexistent, thus it is the character of the result that distinguishes them.

Marx and Engels in common with Bellamy believed that centralization is key for realization of utopia, whereas Morris (and Ruskin) saw decentralization as necessary for restoration of a good (disalienated) society.<sup>4</sup> Fuller views centralization as inevitable because for him the universe is finite—and thus controllable. Mastery of nature and world unification are inevitable. A spreading energy grid is, for Fuller, both example and catalyst of this. Because the sources of electricity are linked globally, industrialization and with it the *good life* will follow; recognition of this by *world citizens* will ultimately render politicians and individual nations obsolete. With the disappearance of both war will cease—all as a benefit of globalized industrial production. Such a view of immanent reality, although updated by Fuller, is akin to the world presented by Bellamy in *Looking Backward*. Morris's difficulties with Bellamy's book are argued in the following:

*The only safe way of reading a Utopia is to consider it as the expression of the temperament of its author. So looked at, Mr.*

*Bellamy's Utopia must still be called very interesting as it is constructed with due economical knowledge, and with much adroitness, and of course his temperament is that of many thousands of people. This temperament may be called the unmixed modern one, unhistoric and unartistic.*<sup>5</sup>

Morris draws attention to three points: 1. Bellamy's based his utopia on an extension of present technique (economics); 2. As such, what Bellamy proposed was conformity to status-quo brought to an extreme; and 3. Because of the first two, Bellamy's utopia emphasizes progress to the exclusion of tradition and imagination. A fourth point, the first Morris makes, warns against reading utopia's apart from their authors. Although this limits the universality of such expression, it also hints at a crucial emotional dimension often lost when a utopia is looked at as a *game plan*. Morris's warning is applicable to utopias generally, including his own. It is the first three points, though, which are most important for distinguishing characteristics that illuminate the limitations of Bellamy and Fuller's technological utopias.

Bellamy believed that his project was a viable blueprint for a better life. His utopia requires extreme centralization that makes the nation "the sole producer of all sorts of commodities." Much like Fuller, centralization would continue to expand until an "eventual unification of the world as one nation" is complete. This would have "economic advantages over the present system of autonomous nations," as a natural result of management efficiency. This nation, and the world-nation to follow, will be led by "the general-in-chief, who is the President," who gained his position by passing through all the grades of "the industrial army;" a body responsible for the production of all goods in a manner akin to Fuller's vision of *doing infinitely more-with-less*. Bellamy argued that his utopia would be "a paradise of order, equity, and felicity." Its inhabitants would be docile workers trained for the jobs they could best perform.<sup>6</sup> Morris, though, derived little comfort from Bellamy's statement that, "*Looking Backward* was written in the belief that the Golden Age lies before us, not behind us, and isn't far away."<sup>7</sup> Morris writes:

*In short, a machine-life is the best which Mr. Bellamy can imagine for us on all sides: it is not to be wondered at then that his only idea of making labor tolerable is to decrease the amount of it by means of fresh and ever fresh developments of machinery. . . . I believe that the ideal of the future does not point to the lessening of men's energy by the reduction of labour to a minimum, but rather the reduction of pain in labour to a minimum.*<sup>8</sup>

By making a sharp distinction between quantity of labor and the character of labor, Morris positions *quality* of experience as the central concern of utopia. Bellamy's and, by extension, Fuller's unwillingness to address this issue, beyond prognostication of optimized survival as a result of world resource management and human effort in work, calls attention to the exclusively technological, rather than social, dimension of their thinking.

As it was for Gropius during the early days of the Bauhaus, architecture was (and could become again) a model for disalienated social experience. Because of this, architecture has the potential to embody numerous characteristics in common with *good societies*. It

shelters the other arts and life while it makes a place for them. Art and life form architecture, and it informs them. And architecture is a result of communal effort. Morris articulates this unified conception of architecture, art, and society in the following:

*A work of architecture is a harmonious co-operative work of art, inclusive of all the serious arts . . . Now, these works of art are man's expression of the value of life, and also the production of them makes his life of value: and since they can only be produced by the general goodwill and help of the public, their continuous production, or the existence of the true Art of Architecture, betokens a society which, whatever elements of change it may bear within it, may be called stable, since it is founded on the happy exercise of the energies of the most useful part of its population.*<sup>9</sup>

As optimistic as he was when he began working, once Morris acknowledged the failure of art and craft to bring about social change, he came to believe that realization of a good society could only come about after violent revolution. The disappointing fact that the high quality of his firm's crafts effectively priced them out of reach by all but the rich fed this conviction. In *News from Nowhere*, Morris depicts a newly re-unified society that rises out of the ashes of the old one—brought down by revolution. In the book he describes a utopia that responds to the instability of the latter half of the nineteenth century by proposing a future society rooted in an apparently more stable past—the medieval. When he wrote *News From Nowhere*, Morris saw terrible misery all around him arising side by side with the factory system, the development of sham needs for an excess of poor quality goods, and the final destruction of craft's traditional role by industrialization. Throughout, he argued that a radical transformation of existing conditions must occur before society can again become a ground of renewal for labor, art, and craft.

## TECHNOLOGICAL UTOPIAS ARE NOT SOCIAL UTOPIAS

Morris's disillusionment and subsequent radicalization paralleled his coming within the orbit of Marx's influence. His earlier belief that a joy of labor in craft production could, on its own, disalienate society at large transformed into a conviction that exemplary works of art can only arise out of a stable society. And a return of the stability necessary for exemplary art and life to emerge is only possible through a violent overthrow of conditions that encourage instability by overvaluing progress. Morris's forward-looking stance from a radically conservative position in the past is a utopian paradox that he presents and Northrop Fry sorted out:

*It looks as though it were the distinctive social function of the creative mind to move in the opposite direction from the politico-economic one. This means that he [William Morris as a Creative mind] may have to face the charge of being reactionary, but cultural developments in time, as in space, seem to go in opposition to the political and economic currents. The creative tendency is toward the prerevolutionary, back to a time when, so to speak, Socrates and Jesus are still alive, when ideas are still*

*disturbing and unpredictable and when society is less vainglorious about the solidity of its structure and the permanence of its historical situation.*<sup>10</sup>

Frye's objective is to establish *return to a time of potential in order to go forward* as a general theme of reform. By doing this, he prepares a frame for examining Morris's reform project as a particular development of this theme. In short, reformers project their thought back to a time when potential wholeness could be wrought from uncertain conditions. By doing so, they gain a position from where they can see a *truly* reformed future. For Morris, this time resides with the medieval:

*Morris's 'medievalism' has precisely this quality about it of moving backward from the present to a vantage point at which the real future can be more clearly seen. I have noticed from my study of the Bible how these backward-moving pastoral myths seem to be the other side of a genuinely prophetic vision, looking beyond the captivities of Egypt and Babylon to a recovery of long lost innocence. The fact that the innocence may not have been lost but simply never possessed does not impair the validity of the vision: in fact it strengthens it.*<sup>11</sup>

Recapture of conditions long lost that never *actually* existed may, according to Frye, be the most distinctive characteristic that distinguishes utopias with a *thick* social dimension from technological utopias with their tendency toward schematic extension of present conditions and emphasis on economic and technological potential. If the first express hope by situating desire for the future as the recovery of a lost past, the second attempt to supersede the present by following it to what appears its most extreme and logical end. Frank E. Manuel makes a very specific distinction between Utopian thought and other types of projects. His definition is neither too restrictive nor does it impose a checklist of quantifiable determinants for recognizing utopias, what it does do, though, is make it quite clear that what Bellamy and Fuller envision is *not* utopia:

*The utopia should perhaps be distinguished from the religious millennium because it comes to pass not as an act of grace, but through human will and effort. But neither specific reforms of a limited nature nor mere prognostications of the invention of new technological gadgetry need be admitted. Calendar reform as such would not qualify as utopian; but calendar reform that pretended to effect a basic transformation of the human condition might be.*<sup>12</sup>

Morris models a utopian temperament of the kind argued for in this paper. But my objective in the preceding is not so much to propose Morris as the prototype of utopian thinking, rather, he provides a

framework for thinking about the role of utopian imagination in the invention of architecture, which he embodied and Manuel describes above.

A paradox of Morris's utopia—and of utopias generally—is that they propose radical changes that would overturn existing conditions if they came about; at the same moment, utopias envision a time of calm when individuals will no longer be alienated from one another, their cities, the earth, or their labors. The apparently radical objective of utopia—overthrow and transformation of the present—actually veils a much more conservative, in the sense of traditional, interpretation of social conditions—a quality shared as much by Marx as by Morris, but not by Bellamy or Fuller.

## NOTES

<sup>1</sup>William Morris, "News From Nowhere" (1890), in *News from Nowhere and Other Writings* (London: Penguin, 1993), 239

<sup>2</sup>Buckminster Fuller, "Utopia or Oblivion" (1964?), in *Utopia or Oblivion: the Prospects for Humanity* (New York: Bantam Books, 1969) 292

<sup>3</sup>Kenneth Frampton, *Modern Architecture: A Critical History*, 3rd. ed. (London: Thames and Hudson, 1992), 191

<sup>4</sup>The writings I am considering here include John Ruskin "The Nature of Gothic" (1853), "Unto This Last" (1862), in *Unto This Last and Other Writings*, in ed. Clive Wilmer (London: Penguin, 1985), 77-109, 161-228. William Morris, "News From Nowhere" (1890), "The Lesser Arts" (1882), "Gothic Architecture" (1893), "Review of Looking Backward" (1889), "Preface to Nature of Gothic" (1892), "Foreword to Utopia" (1893) in *News From Nowhere and Other Writings*, ed. Clive Wilmer, (London: Penguin, 1993), 43-228, 233-254, 331-348, 353-358, 367-369, 373-375. Edward Bellamy, *Looking Backward* (1888), ed. Cecilia Tichi, London, Penguin, 1986. Karl Marx and Friedrich Engels, *The Communist Manifesto* (1888), trans. S. Moore (New York: Washington Square Press, 1964), "Socialism: Utopian and Scientific" (1892), trans. E. Aveling, "Critique of the Gotha Program" (1875), in *Marx & Engels: Basic Writings on Politics and Philosophy*, ed. Lewis S. Feuer (New York: Doubleday, 1959), 68-111, 112-132.

<sup>5</sup>William Morris, "Review of Looking Backward" (1889), in *News From Nowhere and Other Writings*, ed. Clive Wilmer (London: Penguin, 1993) 354

<sup>6</sup>Edward Bellamy, *Looking Backward* (1888), ed. Cecelia Tichi (London: Penguin, 1985), 83, 117, 144

<sup>7</sup>*Ibid.* 234

<sup>8</sup>William Morris, "Review of Looking Backward" (1889), in *News From Nowhere and Other Writings*, ed. Clive Wilmer (London: Penguin, 1993) 357

<sup>9</sup>*Ibid.*, "Gothic Architecture" (1889), 331

<sup>10</sup>Northrop Frye, "The Meeting of Past and Future in William Morris" (1982), in *Myth and Metaphor*, ed. R. D. Denham (Charlottesville: University Press of Virginia, (1991) 1990), 337-338

<sup>11</sup>*Ibid.*, 337-338

<sup>12</sup>Frank E. Manuel, "Toward a Psychological history of Utopias in *Utopias and Utopian Thought* (Boston, MA: Houghton Mifflin Co) p. 70