Cosmos-Politanism: Transhumanist Visions of Global Order from the First World War to the Digital Age

Duncan Bell and Apolline Taillandier

Inspired by developments in artificial intelligence, space engineering, and genetics, discussion of post-human visions of the future is now widespread, especially in the tech world. This reflective essay analyses various ideological configurations of "transhumanism," a body of thought centred on the pursuit of radical human improvement through technoscientific intervention. It focuses on the political values and world-making projects transhumanists have advocated since the early twentieth century. We argue that transhumanism constitutes a significant strand of international political thought: transhumanists have articulated extraordinarily ambitious visions of global order. Through analysing the work of key transhumanists from the interwar era to the present, we show that assorted socialist and liberal iterations have aimed to overcome the irrationality of a state-centric international order, with projects ranging from Marxist accounts of a world state to anarcho-capitalist visions of market order through to dreams of space colonization. Analysing transhumanist world-making visions helps to clarify the political ideas underlying current techno-utopian projects and debates about existential risks to humanity.

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> Man has only been man for about a million years, and his future may be very much longer. The perfected men and women who are to come will probably regard us as quaint prehistoric monkeys, dignified by a mere spark of humanity.
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> —Olaf Stapledon (1932, 163)

> We live at a rare evolutionary turning point, yet our attitudes and ideologies have not caught up… There is no philosophy, no ideology, no social or political system to define and guide our emerging situation in the world and in the Universe.
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> —UpWingers (c.1980)

Transhumanists aim to use technologies such as genetic engineering, nanotechnology, neuro-pharmacology, and artificial intelligence (AI), to radically augment humanity. Their overarching goal, as the philosopher Nick Bostrom states, is to become "post-human" beings possessing "vastly greater capacities than present human beings have" (2005b, 4). This is a new version of an old dream. Fantasies of human improvement can be found across time and cultures. They were discussed by assorted Enlightenment thinkers, including Condorcet, Diderot, and Godwin, and they gripped utopian visionaries throughout the nineteenth century (Le Dévédec 2018). But it was only in the wake of Darwin, and especially with the early twentieth century fusion of natural selection and Mendelian genetics, that these futurist

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visions were furnished with scientific authority and assumed their modern transhumanist form. For the first time, it was argued, humanity had the potential to wrest control of evolution and shape its own destiny. Transhumanism has been a staple of scientific extrapolation, philosophical speculation, and science fiction ever since.

Transhumanism has assumed many shapes over the past century, and it has waxed and waned in prominence. The last three decades have seen major changes in its public profile, funding, and claims to intellectual legitimacy. Philosophers working at leading universities, above all Oxford, have helped to furnish transhumanism with scholarly credibility, while some of the most ambitious transhumanist projects are now backed by powerful figures in Silicon Valley, with billionaire tech-entrepreneurs—including Elon Musk, Jeff Bezos, and Peter Thiel—promoting human augmentation and space colonisation (Thiel 2011; Rubenstein 2021; Vance 2015). The effort to create "artificial general intelligence," another long-standing transhumanist ambition, is now pursued by leading AI companies such as OpenAI and DeepMind, its feasibility endorsed by prominent computer scientists (Hinton 2023). Once confined to the wilder shores of scientific speculation, anti-aging therapies, brain uploading technologies, sentient machines, and crewed space missions to Mars and beyond today receive unprecedented financial support and public attention, dramatically increasing the political significance of transhumanism. This is only likely to deepen in the coming decades.

In this article, we argue that transhumanism should be seen as a highly ambitious body of political thought, one that seeks the fundamental transformation of self and world. Scholars have noted the historical significance and growing popularity of transhumanism, with studies spanning disciplines ranging from theology to the sociology of science. Yet political scientists have rarely broached the subject.[1] Philosophers and political theorists have drawn attention to some of its normative implications: Francis Fukuyama (2002, 2004) declared transhumanism "the world's most dangerous idea" and a fundamental threat to liberal democracy; Jürgen Habermas (2003) argued that cloning and genetic engineering would jeopardize equality and autonomy; and Michael Sandel (2004) contended that they would undermine the moral virtues of disinterestedness and temperance (see also Levin 2021). Defenders of "human engineering," often drawing on utilitarian reasoning, insist that it is essential for increasing future human welfare (Harris 2010; Buchanan 2011; Agar 2014). Sociologists and anthropologists have investigated how transhumanism is embedded in popular sociotechnical imaginaries and national techno-futurist cultures (Hurlbut and Tirosh-Samuelson 2016; Bernstein 2019), as well as exploring its theological dimensions (Geraci 2010; Tirosh-Samuelson 2012). Literary scholars have traced how transhumanism has shaped utopian visions of the future and informed assorted literary projects (Linett 2023; Pilsch 2017). Post-humanist feminist theorists and science studies scholars have critiqued transhumanism, with Katherine Hayles (1999) and Rosi Braidotti (2013) maintaining that it is grounded in unwarranted claims about universalism and anthropocentrism, and that it reproduces a pernicious liberal politics centred on selfish individualism and property ownership.[2]

We explore some of the most prominent political visions articulated by transhumanists, focusing in particular on their accounts of global order. Most notable transhumanists have grappled explicitly with global politics—questions of war and peace, sovereignty and nationalism, international organization and capitalism, as well as neo-Malthusian anxieties about population levels and eugenic projects for racial improvement. They have endorsed hopes of overcoming a state-centred system through new regional or global institutions, including a world state, or alternatively, through radically decentralised forms of global governance that would build on existing states and capitalist structures. Since the interwar period, transhumanist thinking on these subjects has reflected and engaged prevailing visions of world order, even as it assigned technoscience the central role in adjusting or transcending existing norms and institutions. Rather than a homogenous or free-standing ideology, we argue that transhumanism is best understood as an ideological constellation that modifies and reconstitutes political traditions by reformulating core concepts such as freedom, equality, democracy, and the state. It is characterised by both significant intellectual and political diversity—including disagreements over the potential of biotechnology to dissolve or reinforce cultural and political hierarchies—and a range of shared themes. We concentrate on three commonalities. First, most transhumanists articulate a distinctive account of social and political change, emphasizing the primacy of human nature over institutions or norms. Transhumanists, that is, contend that reengineering human biology, rather than designing better institutions or developing new principles of justice or forms of democratic governance, is the principal way to achieve (post)human flourishing. Second, socialist and liberal transhumanists share a form of vanguardism, granting a vital role to scientific or economic elites in identifying and pursuing humanity's future priorities. Third, transhumanists endorse moral and political cosmopolitanism, assigning normative priority to (post)humanity over the claims of nations and states. They often combine this with a commitment to reforming the organizing principles of international order. But most transhumanists extend the scope of conventional cosmopolitanism by propounding what we term *cosmos-politanism*—a form of cosmopolitanism that seeks to expand the dominion of (post)humanity into outer space.

In most scholarship on transhumanism, as well as the writings of many of its contemporary advocates,

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transhumanism is described as a post-1945 phenomenon shaped by the experience of totalitarianism and nourished by scientific developments such as cybernetics and AI (Hughes 2004, 155-184; Bostrom 2005a; Sorgner 2020). In contrast, we start our account of transhumanist political thought in the wake of the First World War. Disillusioned with nineteenth century visions of civilizational progress, a group of interwar socialist futurists formulated many of the technoscientific ambitions that continue to animate contemporary transhumanism. While the ambition to increase human longevity and capacities through biological enhancement was shared by eugenicists of various stripes, transhumanists specifically tied them to grand visions of humanity's cosmic destiny, partly to be realised through space exploration. Dominated at first by socialist thinkers, transhumanism was recast into various forms of liberalism during and after the Cold War.[3]

We trace key inflection points within transhumanism from the interwar years to the early twenty-first century, by outlining the views of influential thinkers in Britain and the United States.[4] This allows us to emphasize individual conceptual innovations and to locate the evolving political commitments and technoscientific visions of transhumanists in broader intellectual context. Each of the following three sections is centred on a pair of high-profile transhumanist thinkers. In the first section we focus on two polymathic scientists—J.B.S. Haldane and J.D. Bernal—in interwar Britain. Haldane was a pioneering geneticist and one of the most famous public intellectuals of the day, while Bernal was an eminent crystallographer and a leading Marxist thinker (Werskey 1978, 2007). Advocating a hugely ambitious fusion of biological science and socialist politics, they argued that the abolition of capitalism was a necessary step on the road to human transformation. Their work was foundational for modern transhumanism. The second section turns to Cold War transhumanism, concentrating on Julian Huxley, a British biologist, public intellectual, and international bureaucrat who served as the inaugural Director-General of UNESCO (Allen 1992; Bashford 2022) and popularised the term transhumanism in the 1950s, and Fereidoun M. Esfandiary—who renamed himself FM-2030—an Iranian-American athlete, philosopher, and futurologist often praised by later transhumanists for pioneering "core transhumanist ideas" in the 1960s (More 1995; Martin 2000; Sorgner 2020). Both Huxley and Esfandiary sought to accommodate human hierarchy and plurality within narratives of global integration and species transformation, but while Huxley was a committed liberal internationalist, Esfandiary envisioned world unification primarily through the development of powerful computer networks, rendering state governments and international organizations obsolete. Huxley and Esfandiary's writings shed light on how liberal and technocratic visions of transhumanism supplanted socialist cosmos-politics, and how the archetypal figure of the visionary morphed from the educated public scientist to the futurology consultant. The final section turns to the post-Cold War world by examining the work of Max More and Nick Bostrom, two of the most influential transhumanist thinkers of the last thirty years.[5] We discuss how the dominant liberal variants of transhumanism are divided between a libertarian ("extropian") rejection of state sovereignty, and an alternative that advocates global technology governance through a fusion of state and market regulation.[6] We analyse published writings by each of these thinkers, alongside UNESCO's digitised material, Esfandiary's papers, and digital archives of the *Extropians* online mailing list.

We highlight three main shifts between interwar and postwar transhumanism. The first is a transfer in its ideological centre of gravity from socialism to liberalism. Socialist transhumanism, which emerged in progressive debates about technoscience during the 1920s, is characterised by the central role it assigns technoscientific enhancement in dissolving or remaking capitalism. Available in both Marxist and non-Marxist strands, it charts a technological route to an augmented egalitarian future. Liberal transhumanism, the dominant position today, covers a broad spectrum ranging from social democratic liberalism to neoliberalism and libertarianism, but its adherents share a commitment to the primacy of individual liberty and capitalist political economy.[7] The second shift saw the principal geographical centre of transhumanism move from Britain to the United States, reflecting the pronounced change in the balance of political, economic, and scientific power between the two countries during the mid-century years. The third shift concerns the specific technologies identified by transhumanists as essential for augmenting, and finally overcoming, humanity. While the interwar (largely British) transhumanists focused on the biological sciences, and especially eugenics and genetic engineering, since the early Cold War computing and AI have joined them as key sites for transhumanist projections and cosmos-political ambitions. Through tracing the development of transhumanist ideas across the twentieth and early twenty-first century, we show how the most prominent entrepreneurial and engineering dreams of technoscientific change have come to be expressed in popular languages of liberal world-making.

Interwar Socialist Transhumanism

Modern Anglo-American transhumanism was born of a war and two revolutions. For many contemporaries, the catastrophe of the First World War demonstrated the transformative power of science, the limits of human reason, and the dangers of nationalism. It created a desire for global reform to avoid a more destructive conflict, from the League of Nations through regional federations, to visions of world government (Mazower 2012, ch. 4-6; Ashworth 2015). Haldane and Bernal shared this longing

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for radical change in political values and institutions, and looked to the Soviet Union—the product of the first revolution—for a model of scientific social organisation committed to overcoming capitalism, imperialism, and inter-state competition. The second revolution was an intellectual one: Darwinism. The initial impact of Darwin's work was uneven and fiercely contested, but by the interwar years most professional scientists agreed on the pivotal importance of natural selection (Bowler 2009, ch. 6-8). The "modern synthesis" of evolutionary theory and genetics, in which Haldane and Huxley played an important role, provided futurists with an authoritative scientific framework to discuss the biological augmentation of humanity. The 1920s were awash with projects for improving the species (Bowler 2017, 184–203). Bertrand Russell, a prominent critic of the technoscientific utopianism propounded by Bernal and Haldane, mused that "nature, even human nature, will cease more and more to be an absolute datum; more and more it will become what scientific manipulation has made of it" (1933, 95). This was fertile ground for transhumanism to flourish.

Haldane and Bernal were part of the same intellectual milieu. Born into a prosperous middle-class family, Haldane returned from the war committed to socialism. During the 1920s he helped establish the mathematical foundations of genetics and became a prominent advocate of eugenics. In *Daedalus, or, The Future of Science* (1924), a highly influential prospectus of future technoscientific innovations, Haldane contended that humanity should seek to control evolution and that the biologist, the "most romantic figure on earth at the present day," alone possessed the capacity to remake life (Haldane 1995, 45; see also Saunders 2019; Subramanian 2020). His younger Cambridge colleague, Bernal, established himself as a ground-breaking crystallographer during the 1920s (Hodgkin 1980; Brown 2005). Unlike Haldane, Bernal was an early Marxist convert, his futurism shaped by an idiosyncratic fusion of Marx and Freud. In 1929, he published *The World, the Flesh, and the Devil*, which Arthur C. Clarke later proclaimed "the most brilliant attempt at scientific prediction ever made" (Clarke 1999, 410).

Their futurist visions also had much in common. Haldane and Bernal argued that new biological knowledge would allow scientists to control evolution and that the survival of humanity depended on the application of scientific reason to society. Both advocated a mixture of eugenics and genetic engineering. Traditionally, Haldane wrote, the "problem of politics" had been "to find institutions suitable to it," but in the future, "it may be possible by selective breeding to change character as quickly as institutions" (Haldane 1995, 43). This was the key to their understanding of politics: modern biological science promised to remould human nature, thus removing a once fundamental constraint on political possibility. They combined extrapolative forecasts looking a century ahead, with extraordinary far future speculations encompassing millions of years. Both thought the political stars were aligned, with Haldane (1995, 25) arguing that governments of different stripes all now recognised the importance of scientific research and scientifically informed public policy, and Bernal asserting that scientific planning was widely endorsed, either "through rationalized capitalism," or, better still, through Soviet centralised command (2017, 71). They argued that bioengineering would enhance intelligence and longevity, that disease would be eradicated by medical advances, and that synthetic foods would abolish hunger. New forms of energy, especially solar and wind power, would replace fossil fuels. In the deep future, scientists would create post-human beings who would colonise the solar system.

Drastic changes in human biology would solve two of the main concerns about demography animating interwar thinkers: eugenic fears about genetic quality, and Malthusian fears about population quantity (Freeden 1979; Kevles 1986; Paul 1998; Bashford 2014; Mayhew 2014, 156–82). Haldane was critical of mainstream eugenicists, who he thought wielded obsolete biological arguments to naturalise socioeconomic and racial inequality (Haldane 1932, 109; 1938; Kevles 1986, 164–75). Rather than rejecting eugenics, he assigned it a limited though important function: "to prevent the inevitably inefficient one per cent of the population from being born, and to encourage the breeding of persons of exceptional ability where that ability is known to be hereditary" (1932, 24). Eugenics was only one way to prevent humanity from going "the way of the dodo and the kiwi" (1932, 145). Changes in the biology of human reproduction would have a far greater impact, with profound implications for gender and family relations. His most radical suggestion was that in decades to come embryos would be grown outside women's wombs—a process called "ectogenesis" (1995, 41). The technologically enhanced reproduction of eugenically selected "superior" men and women would over time raise the overall intelligence of humanity, producing a smaller, more capable global population (Haldane 1995, 42). Although he did not identify which peoples or societies should be prioritised, Haldane suggested that improvement would occur first in the Euro-American world through coordination by a powerful supranational organization, such as the League of Nations (1995, 40-41). While accepting much of Haldane's demographic speculation, Bernal reached the opposite conclusion: future industrial production and technoscientific developments would support a much larger population with higher living standards (Bernal 2017, 14, 85). In both cases, technoscience offered peace and plenty. The ghost of Malthus could be banished forever. A socialist utopia beckoned.

This was not enough for Bernal, who outlined one of the most audacious technoscientific visions of the twentieth century. He envisioned the future "mechanization" of

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humanity (Bernal 2017), a process that would unfold in two main stages. First, following Haldane's prognostications, life would begin in an "ectogenetic factory," and the resulting humans would live for between 60 and 120 years in a "larval" state, unmodified and unmechanised, occupying their time "in dancing, poetry and lovemaking." In the second, "chrysalis" stage, a suite of "new sensory and motor mechanisms" would be grafted onto the organism, before the remaining organs were replaced with artificial modular parts. The resulting entity would be "a completely effective, mentally-directed mechanism" (Bernal 2017, 36, 37). The replacement of organic bodies would realise the inner essence of evolution but also the ultimate overcoming of politics. Eventually, Bernal's "transformable human being" would produce a "more fundamental" ontological break: individual brains would be connected electrically, facilitating the "more perfect and economic transference of thought which would be necessary in the cooperative thinking of the future." As permanent links were established, the "multiple individual"—a distributed being constituted by numerous minds—would be near-immortal, replenished by new additions without losing "continuity of the self" (Bernal 2017, 42, 43). In this ultimate technoscientific expression of Marxist futurism, the atomised individual of liberal capitalism would be absorbed within—though not annihilated by—a collective being dedicated to pursuing higher common purposes.[8]

Bernal and Haldane only touched briefly on questions of empire. Like many interwar progressive thinkers, Haldane was clear about the evils of imperialism as a system of capitalist exploitation, ambivalent about the value of empire as a form of post-sovereign political organization—a step on the road to further global integration—and thoroughly conflicted about the British Empire, which he read alternately as embodying the pathologies of imperialism and as avoiding them (Haldane 1927, 223).[9] "I am interested," he wrote, "in the movements toward larger economic units, such as the British Empire and the European federation, though I hope that these two movements are not mutually exclusive" (1932, 229). While Haldane became more critical of the British empire after he converted to Marxism in the 1930s, his ambivalence remained. His views on race were equally ambiguous. He consistently attacked mainstream eugenicists and Nazi "racial science" for encouraging vicious bigotry, but he never denied the existence of significant physiological or mental differences between peoples, and he hoped that science might eventually solve the methodological difficulties of disaggregating environmental and genetic causes. His writings reiterated long-standing imperial-racial tropes, such as the supposed superiority of the Māori to indigenous Australian peoples (Haldane 1938, 1940; Schaffer 2005).

Both men were convinced that the destiny of humanity lay in the stars. In a remarkable 1927 essay, "The Last Judgment," Haldane charted the history of the species from the perspective of its descendants living on Venus 40 million years in the future (Haldane 1927; Adams 2000). By the year Five Million, the utopian goals sketched in *Daedalus* had been realized: humans lived for three thousand years, illness and pain had been eliminated, and life was dedicated to friendship, music, and art. As the climate and geological stability of earth was threatened by the pursuit of new energy sources, most humans remained complacent, though a small minority began to explore space, eventually reaching Venus. This caused the bifurcation of humanity into distinct species—an argument that influenced Bernal and ran through subsequent transhumanism (e.g., Rees 2018, 150–64; Deudney 2020). Similar to Bernal's Borg-mind, the Venusian-humans were a telepathically connected "super-organism with no possible limits to its progress" (Haldane 1927, 296), and they did not "regard the individual as an end in itself" (304). Bernal concurred with Haldane that people would soon seek to "conquer space" (2017, 14), and he proposed "permanent spatial colonies" in hollowed-out asteroids. Eventually, most people would migrate into space, allowing earth to "revert to a very much more natural state." Like Haldane, Bernal argued that bodies and minds would be redesigned to allow inter-planetary travel. Space colonisation also offered a solution to the "splitting of the human race," avoiding the (otherwise likely) domination or genocide of unmodified humans by the enhanced (Bernal 2017, 26, 60, 79). Eventually, earth might "be transformed into a human zoo, a zoo so intelligently managed that its inhabitants are not aware that they are there merely for the purposes of observation and experiment" (Bernal 2017, 79–80). Daniel Deudney aptly characterises this relationship as "benign zookeeper overlordship" (2020, 204).

Haldane and Bernal thought that scientific progress demanded radical change in norms and values. Haldane declared science a universal acid—"no beliefs, no values, no institutions are safe"—and argued that humanity had to "adjust its morality to its powers" if it were to survive and thrive (Haldane 1995, 48). He warned that Europe and North America were governed by the remnants of a "medieval code" designed originally for small agricultural societies ruled by priests and aristocrats (1927, 214). Modern industry and science rendered this system obsolete, necessitating its "replacement by something which will differ from it as completely as it differed from savagery" (1932, 55). Haldane's arguments about the necessity for, and possible directions of, radical change were informed by an historical sociological account of the shifting relationship between scientific knowledge, values, and political institutions.

The ideal solution to the emerging gap between technoscientific progress and morality was a technocratic world government. Like many moderate socialists, Haldane initially welcomed the League of Nations as a sign of a "widespread and organized desire" for "human

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organisation on a planetary scale" while pointing out the difficulty of realising a world state in a system structured by sovereignty, nationalism, and imperialism (1995, 47; 1932, 225). But new conditions meant that socio-political transformation was essential. Once "a flame upon the altar," nationalism had turned into "a world-devouring conflagration" (1995, 48) because of the unprecedented destructive capacity of modern weaponry. Both cause and cure, technoscience offered an answer. Haldane speculated that in a century or so, biologists would be able to bio-engineer human emotions and imaginative capacities (1995, 43), replacing the regressive passions with a universalist commitment to both post-humanity and cosmopolitan integration. Bernal, meanwhile, warned that if the "emotional reactions" and irrationality of the unmodified masses were not overcome through extensive scientific education, progress towards "mechanical civilization" would be derailed. This was yet another reason to place hope in the Soviet model. Following the example of the "new nations," such as the United States, China, and the Soviet Union, he argued that an "aristocracy of scientific intelligence" would emerge and lead humanity into the new age (Bernal 2017, 59, 73). Ultimately, a global technocracy would turn existing states and empires into remnants of an archaic past.

Haldane and Bernal exerted a huge influence on later futurists.[10] In their extraordinary manifestos, written before the invention of the digital computer or jet flight, we find cosmos-politan visions that pervade much subsequent transhumanist thought. While their socialist politics proved less popular among Cold War transhumanists, many of their geopolitical concerns, institutional plans, and technological visions endured, even as they were yoked to liberal world-making projects. Eugenic ideas about improvement, questions about over-population and space colonisation, the focus on rationality as both cause of human political failure and site of emancipation, and an emphasis on planetary integration as a necessary step on the road to post-humanity: all were to remain core aspects of transhumanism in the coming decades.

Cold War Re-Orderings

Born in England, and trained as a biologist, Huxley was an eclectic writer who found a large audience on both sides of the Atlantic—he spent much of his post-war career in the United States. A well-known eugenicist and birth control advocate, he was one of the leading scientific commentators of the century (Waters and Van Helden 1992; Bashford 2013; 2022). Huxley shared many of Haldane and Bernal's views on eugenics, but he rejected socialist planning and the Soviet instrumentalization of science (Huxley 1949). The inaugural Director-General of UNESCO between 1946 and 1948, he advocated what he termed "transhumanism" or "evolutionary humanism"—the "new belief" that "the human species can, if it wishes, transcend itself—not just sporadically … but in its entirety, as humanity." The process, involving cultural unification as well as biological improvement, would demonstrate both "the uniqueness of man" and its desire for unity (1959, 17).

Like Haldane and Bernal, Huxley was a vocal proponent of "reform" eugenics and a critic of Nazi "race science" (Huxley and Haddon 1939; Allen 1992). Modern genetics provided him with a scientific basis for rejecting nationalism. He argued that competition between states had dysgenic effects: "as eugenicists … we must aim at the abandonment of the idea of national sovereign states, and the subordination of national disputes to international organization and supernational power" (Huxley 1936, 27). At the same time, he was less willing to rule out the biological reality of race than some contemporaries—the UNESCO Statement on Race, which rejected the notion, was released shortly after he left his position (Schaffer 2008, 32–48, 120–27). A fierce neo-Malthusian, Huxley advocated population control as a necessary complement to eugenic policies (Bashford 2013, 159; 2022, ch. 9). In the 1950s, claiming that overpopulation was "the problem of our age"—one far more threatening than the atomic bomb (Huxley 1959, 212)—he proposed to spread birth control methods from the "advanced countries" to those "in a different stage of the population cycle," such as India (1959, 168, 199).

Alongside genetic improvement, Huxley deemed intercultural exchange necessary for establishing international peace. In *UNESCO, Its Purpose and Philosophy*, a controversial essay released in 1947, he proposed to hasten "the emergence of a single world culture" through combining education, social science, and mass media communication (Huxley 1946, 61). He insisted that "the fact that humanity is organized into separate nation-states obviously constitutes the major precondition to war" and that eliminating cultural and scientific barriers between East and West was necessary to "prevent the separateness of nations from increasing" (UNESCO 1946, 9). Organizations like UNESCO and international scientific collaborations would bridge the gap between Western capitalist and Eastern Marxist dogmas and "lay the foundations on which world political unity can later be built" (13). Huxley's views on eugenics and demography reflected popular ideas about political and cultural hierarchies that did away with explicitly racial ordering, and his blend of imperialist and progressive views had roots in mid-century liberal internationalism: he acknowledged cultural diversity but did not question global hierarchies, nor the legitimacy of the British colonial system (Sluga 2010; 2013, 104–40; Westad 2005). In 1938, he signed a statement by the London-based Federal Union advocating a world democratic federation under British leadership (Rosenboim 2017, 100–129). Later, he advised the British government to prioritize the interests of the colonized and avoid "racialist" vocabulary (Schaffer 2008, 93). Both his

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eugenic views and his efforts to promote cultural exchange were filled with essentialising claims about cultural difference, for instance distinguishing the genetic quality of "ethnic groups now in the barbaric stage of culture, such as the Bantu" with those in contemporary Britain (Huxley 1936, 17), or calling for intervention to civilize "backward areas": those areas, which included some cities in Britain and the United States where "the inhabitants live a life deprived alike of natural beauty and of art," offered a laboratory for scientists to study the interaction between environmental and genetic factors (Huxley 1946, 51).

In contrast with Haldane and Bernal's socialist futurism, Huxley's internationalism was liberal and anti-communist. His transhumanism was less utopian, more individualistic, and more hierarchical. He fiercely opposed the Soviet revolutionary idea of "world science," defending instead a liberal model of science as a progressive, disinterested, "international activity of free workers whose prime interest it is to discover new truth and new facts" (Huxley 1949, viii, 40). He also thought it unlikely that a post-national world would emerge, noting that the effect of "unifying ideas … never wholly offsets the opportunities for conflict provided by the existence of separate sovereign political units" (Huxley 1946, 13). He was more concerned with the possibility of reconciling "the human individual" and "mankind" on a spiritual level (1964, 114) through science and education than with overcoming class struggles and individual bodily limits.

Unusually for a transhumanist, he was sceptical about space expansion, claiming that "the planet which [Man] inhabits is limited, and adventures to other planets or other stars are possibilities for the remote future only" (Huxley 1948, 573). As such, he did not endorse cosmopolitanism. In *Evolution: The Modern Synthesis*, he also ruled out the separation of the species into distinct "radiating lines," while nevertheless envisioning increased control over human emotions, enhanced intelligence, and the development of "altruistic instincts" through Haldanean ectogenesis (1948, 573). Elsewhere, he insisted that there were insurmountable barriers to what humanity could biologically achieve (1948, 576), and in his foreword to Teilhard de Chardin's popular *Phenomenon of Man*, he noted that "the banal fact of the earth's roundness" was necessary to unify humanity spiritually, rather than dilute it in an unbounded cosmos ([1951] 1961, 17). Before Hannah Arendt famously cautioned that space conquest might destroy the "stature of man" (Arendt 1969, 274), Huxley insisted that humanity's future was tied to planet earth.

Fereidoun Esfandiary was a less prominent public figure than Huxley, though a key influence on later transhumanists (More 1995; Bostrom 2005a, 11). Born in 1930 in Brussels and educated in Jerusalem, he emigrated to the United States in 1948, worked briefly as a diplomat, taught "futuristics" at the New School and UCLA, and wrote novels and essays describing how humanity would morph into an immortal post-terrestrial species. Esfandiary's transhumanism reflected a different hope to that of Huxley. He envisioned a future unbound by biological and terrestrial constraints, and the final irrelevance of the neo-Malthusian and ecological anxieties that had shaped the previous decade. Solar energy would bring "an age of limitless abundance" (Bennetts 1979), expanding individual and planetary welfare without curbing energy consumption. Between 1976 and 1987, he coordinated the UpWingers, a small New-York-based futurology group that advocated the evolution of humanity beyond biology and planetary confinement. The UpWingers longed for a post-ideological future powered by a "visionary new thrust beyond Right and Left-wing, beyond conservative and conventional radical" (UpWingers, ca. 1980, box 16, folder 3). Their utopianism was less conventional than most libertarian views of a boundless world, and more radical than most futurology claims about long-rang genetic planning (Feinberg 1969) in proposing that computer and space technologies would burst all existing ideologies as well as the limits of space and time.

Unlike Huxley, Esfandiary was a committed cosmopolitan who embraced the promises of the space age to realise "orbital societies" freed from human suffering, government bureaucracies, and resource limitations (1981). His main essays—*Optimism One* (1970) and *UpWingers: A Futurist Manifesto* (1973)—anticipated the "cosmic upheaval" of humanity, the complete emancipation from its earth habitat, and further advances in medicine, genetic engineering, and bio-conservation techniques such as cryonics that would eventually make it immortal. He thought that space travel and increasing levels of global communication made "the concept of the *nation* … obsolete," and he welcomed regional common markets and international organisations for espousing a new globalist spirit (1970, 180, emphasis in original; 1973, 93) that would help to dissolve the old political order. Although he did not use the term, Esfandiary advocated a global eugenic programme of planned procreation: he recommended that a UN-sponsored World Child Center —staffed by geneticists, demographers, and environmentalists—collect and then select stem cells to help "decrease the quantity and increase the quality of newborn life" (1973, 42). Worldwide "cybernation," the automation of political, economic, and scientific activities through decentralised computer networks, would turn direct democracy into a universal reality (1973, 81–85), rendering all political institutions superfluous.[11] "[W]e are no longer content to simply strive for increasing democracy or government by the proletariat," they contended in one of the group's brochures, "we want instant universal participation that will do away with the very institution of government" (UpWingers 1976, box 16; folder 1; 1970, 250). The task of organisations such as UNESCO and International Planned Parenthood was to help free the world from

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archaic social and political structures, such as the family, the nation, and state sovereignty.

Esfandiary, like Haldane, Bernal, and Huxley, saw in the decline of human suffering and conflict an index of progress. His political vision blended anti-imperialism with libertarian and countercultural elements. Although Esfandiary and the UpWingers' call for a new radicalism to overcome the limitations of socialism and liberalism echoed the most influential libertarian thinkers of the time (e.g., Rothbard 1973), they endorsed a more idiosyncratic view. Esfandiary did not call himself a libertarian, and he found capitalists and socialists equally "doctrinaire" (1973, 82) in their attachment to work and rejection of the emancipatory power of automation. Libertarian readers were enthused by *Optimism One*'s complete rejection of traditional government and projections of scarcity (Tuccille 1970, 167). As one lamented, however, in *UpWingers* "the statist premises [had] finally taken their toll," with Esfandiary suggesting that cybernation could eventually overcome capitalism a clear manifestation of his "outdated socialist economic views" (Danks 1974). For Esfandiary, future technology also made privacy, property ownership, and individual rights obsolete. He vilified the "primitive" notion that reproductive decisions should be left to individuals (1973, 42), and advocated an anti-essentialist definition of humans as "no longer biostatic" but already "transhumans"—fluid, open-ended entities able to explore "transsexual transracial transphysical" shapes and identities (1973, 37, 132; 1974, 298). Contrary to Haldane and Huxley, who insisted that reproductive control need not challenge the traditional family, Esfandiary welcomed the dissolution of what he saw as a key institution in the reproduction of chauvinism and sexism, and the future development of artificial wombs that would free women from childbearing (1973, 45). His critique of traditional social norms and thematization of the fluidity of the self appealed to an eclectic range of readers. This included the psychologist Timothy Leary who explained, quoting *UpWingers*, that psychedelic experiments prefigured humanity's immortal and "interspecies" future (Leary et al. 1977, ch. 16; McCray 2016).

Esfandiary's anti-imperialism was ambiguous. Although he opposed formal colonialism, he was concerned by the critique of Western scientific rationality, and he saw the technological pessimism of the American and European intellectual elite as a perverse form of domination. Techno-criticism was orientalism in new clothes, in effect romanticizing poverty and denying non-Western peoples the right to seek technological development: "consciously or unconsciously many Westerners do not want the Old World to change … they want the East to remain cross-legged and contemplative—what they call spiritual—while they go about vigorously developing better existences for themselves" (1970, 20). At the same time as he endorsed Western-centric narratives of progress, Esfandiary observed pointedly that New York and the Middle East were equally "backward" (Esfandiary 1970, 183; 1989, 9) regarding the next breakthrough in space or life extension technologies. Ultimately, humanity's cosmic upheaval would occur on two fronts. The first was the remaking of space: Esfandiary claimed that space colonisation was inevitable, but he also praised efforts sponsored by the UN Environmental Agency to model and monitor the earth, arguing that future "supercomputers" would be able to predict and prevent broader climatic changes. He once called for a UNEA-led program "to study and plan extensive geological changes and global gardening to transform the entire planet from the brutal jungle it has been to a friendly beautiful paradise" (1973, 126). The second front was the overcoming of time through the abolition of mortality. Here again, computers would help to fuse human and machine: implanted in the body and brain, microcomputers would store information, expand communication between individuals, and blur the boundary between the one and the many—here his vision echoed Bernal's group mind—eventually contributing to the further improvement of human biology. In its insistence that true revolution was ultimately to be found in remaking the self, Esfandiary's transhumanism reflected a broader shrinkage of the world-making ambitions of futurology: the main way to transform the world was by exploring oneself (Andersson 2018, 184-212; McCray 2012).

Central to Huxley's vision was "the potential One World of all the races, nations, classes and individuals" and "the narrower … community of the nation in relation to this larger and more lasting whole" (Huxley 1959, 124). He did not contest the dominance of "advanced nations" or existing empires, and he was confident that supranational institutions shaped by European elite culture would suffice to cultivate pacifist values globally. Esfandiary's ambition to build a new progressive "self-image" for humanity located the most profound changes in nonconformist lifestyles and individual bodily change, blurring the boundary between the private and the political while indexing the reduction of earlier globalist ambitions to purely technological means—a variant of what Waqar Zaidi has termed "techno-globalism" (2021, 245–247). More explicitly than previous transhumanists, he claimed that "technology is creating its own ideologies," and he was confident that space would provide room for social experimentation absent coercive institutions such as hospitals, prisons, or governments (1970, 28; 1981). His cosmos-politianism also differed from Bernal's fusion of individual bodies and minds in its disregard for class struggle, although he shared the conviction that resource limitations were at the root of human conflict. For Esfandiary, global integration was not a uniform or paternalistic form

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of tutelage but a complex of interconnected emancipatory processes taking individual bodily liberation as their starting point. In outer space, all kinds of personal aspirations could be realised without reproducing political logics unfit for a post-human, post-terrestrial world.

The transhumanism of both Huxley and Esfandiary thus departed significantly from that of the interwar socialists. Like Haldane and Bernal, they saw nationalism as irrational and unscientific, worried about uncontrolled population growth, and rejected traditional views of the self in favour of a more fluid account of the interactions between individual identity and culture. But they reached different political conclusions, prioritizing scientific education and inter-cultural communication over concrete integration through the creation of federal institutions. Neither Huxley nor Esfandiary dreamt of a world state: cosmos-politics would be led by cosmopolitan elites within intergovernmental bodies. While Huxley largely agreed with Haldane's claim that biologists were the new visionaries, Esfandiary emphasised the extraordinary possibilities of computation. Both endorsed a technological vanguardism that remains central in transhumanist thought.

Post-Cold War Transhumanisms

Transhumanists espoused and expanded post-Cold War predictions about globalization. Like many contemporaries, they rejoiced in the victory of liberal capitalism and saw one of its most significant manifestations in the rise of the digital—the term denoting both a new post-historical era and a realm whose elusive materiality seemed to sound the death knell of the physical world (Turner 2006). Digital communication also changed the social contours of transhumanism, connecting young academics, lone enthusiasts, and transhumanist organisations across the United States and Europe through electronic mailing lists and newsgroups. Ideologically, transhumanism continued to be dominated by variants of liberalism. A libertarian strand, often called "extropianism," was theorised during the late 1980s and 1990s by Max O'Connor (later renamed Max More), a British philosopher and cryonics advocate. In 1988 More and Tom W. Bell, then students at the University of Southern California, started a magazine called *Extropy*, founded the Extropy Institute, and helped maintain an email-list called *Extropians*, soon a popular platform for transhumanists across the West. In 1998, a group of *Extropians* including Nick Bostrom, a Swedish philosopher then at the LSE, co-founded the World Transhumanist Association (WTA), in part with the aim of opening up transhumanism to a wider variety of political perspectives (Bostrom 1998). Between 2005 and 2024, Bostrom was Director of the Future of Humanity Institute (FHI) at Oxford, a key hub connecting scholarly work on the ethics of human enhancement and of philanthropy, which attracted extensive funding from the tech world. Both men have played a major role in shaping recent liberal visions of transhumanism.

The extropians played a significant role in bringing together transhumanists who had been organising around more specific issues such as space exploration, cryonics, or nanotechnology (Regis 1990; O'Connell 2017; Bour 2022). More and Bell defined extropianism as a fusion of transhumanism and libertarian ideas, with More's writings often discussing the philosophical views behind transhumanism and formalising "extropian principles" (O'Connor and Bell 1988; More 1990b, 1992). He drew on Nietzsche, Hayek, and Ayn Rand, and like other libertarian futurists, such as nanotechnologist Eric Drexler, he described the free market as the most efficient social coordination mechanism (Miller and Drexler 1988; More 1991b). But he went further than conventional libertarians in criticising all formal political organisations, including libertarian parties. Extropianism was primarily "a micro-politics, a politics of individual behaviour" (More 1990a, 27). Echoing Rand's "objectivist" philosophy, he thought that economic success reflected moral superiority and that concern for equality or justice did not warrant interference with individual rights (More 1991a; see also Plus 1993). Other elements in Rand's thought needed to be updated: ultimately, all natural, moral, or religious limits to the "endless extropic process of individualization and self-transformation" were illegitimate (1991b, 29). Extropians should "break out of the human chrysalis" and realise Nietzsche's Übermensch (1999). As humans were "gradually emerging from their tribal roots, questioning racism, sexism, and other forms of irrational behaviour," transhumanists would "encourage this trend and prepare the way for new species branching off from *homo sapiens*" (1991b, 28), embracing prospects of a future evolution that would be rational, pacifist, and emancipated from tradition. Pushing Esfandiary's libertarianism further, it eliminated the need for all social institutions except the market.

The extropian project, like Esfandiary's UpWing vision, fully embraced cosmos-politanism: a post-national world would materialise beyond the jurisdiction of states, in cyberspace, international waters, or outer space (Bell 1991a; More 1991b; Szabo 1994). Although some extropians advocated a "minarchist" state—restricted to minimal monetary and policing functions—most embraced its full anarcho-capitalist subversion—the privatization of national defence, police, and money leading to a complete dissolution of existing state institutions, with private contracts ensuring individual property rights (Bell 1991b; Krieger 1993). Often seen as the way to an anarcho-capitalist future, space colonisation would facilitate social experimentation, expanding an American tradition of pushing new frontiers (O'Connor 1988, 11). Citing Robert Nozick's *Anarchy, State and Utopia* (1974),

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More argued that while Earth was likely to remain "statist," an "interplanetary and, later, interstellar civilization" would "provide a far superior 'framework for utopia' than exists at the bottom of our gravity well" (1991b, 28). Space settlements, however, may remain out of reach for the foreseeable future. Tom W. Bell—often writing under the name Tom Morrow—described how in the meantime an entity he called Extropia could develop into a large-scale social experiment by settling in "the last free place on Earth," the "*res nullius*" of the international seas (Bell 1991a, 37). "Extropia will not be a State," he insisted, but "a society based on real consent," and he explained how Extropia-like communities would then join forces in a loosely-organized alliance of independent sovereign communities embracing free-trade zones and offshore banking (1991a, 36)—prefiguring what others later called "sea-steading" (Gramlich 1999) and what Quinn Slobodian (2023) terms "micro-ordering zones." While Haldane and Bernal saw dismantling capitalism and the state system as essential and Huxley and Esfandiary sought world unification through intergovernmental cooperation and cultural exchange, the extropians scorned all governmental and nongovernmental institutions, claiming that rationality would emerge spontaneously once state coercion was eliminated. The prevailing global order could be subverted from above—in outer space—or from below—through individual experimentation with pharmaceuticals, sea-steading, or the spread of transhumanist "memes" across unregulated digital spaces (Henson and Lucas 1991). With extropianism, the space of cosmos-politics fragmented to include the interstices between sovereign powers on earth.

More regarded extropianism as the continuation of a libertarian futurist tradition that included FM-2030 but also science fiction writer Robert Anton Wilson and futurist Timothy Leary, both of whom "clearly had read FM's works and been ignited by them" (1995, 28). Other transhumanists rejected libertarianism. Aiming to "bring transhumanism to academic respectability," members of the WTA, including Nick Bostrom, insisted that transhumanism was compatible with a broad range of political views (Bostrom 1998, Bostrom and alii 1999) and had ideological affinities with the liberal left (Hughes 2004; 2009), finding more in common between their professed creed and "secular humanist thinking" than with the "Californian spirit" of extropianism (Bostrom 2003b, 494; 2005a, 11; Hughes 2012). In 2004, Bostrom co-founded the Institute for Ethics and Emerging Technologies, a think tank to promote a broadly liberal democratic form of transhumanism. A year later, he became director of FHI, set up at Oxford as part of the newly founded James Martin School. The institute hosted a research programme in "human enhancement ethics" (Savulescu and Bostrom 2009) advocating chemical or genetic intervention to increase physical, cognitive, or moral capacities, and it was instrumental in bringing utilitarian and welfarist considerations into transhumanism. "In the realm of reproduction," Bostrom claimed, "there are grounds for thinking that the libertarian approach is less appropriate … than it is in other areas" (Bostrom 2003b, 500). Undirected biological evolution was immoral because it caused enormous suffering, and it was unlikely that the "invisible hand" would preserve valuable but non-competitive activities such as leisure and play (Bostrom 2004, 6). "Directed evolution," by contrast, meant that individuals should be free to improve their cognitive and physical capacities or select the genetic features of their progeny through available techniques, but enhancements considered beneficial should be subsidized by the state and harmful ones outlawed by strict regulation (Bostrom 2002, 21–22; 2003b, 502). This meant the rejection of both libertarian laissez-faire and socialist eugenic planning. Ultimately, the imperative to change humanity was moral rather than political: drawing on arguments from population ethics, Bostrom and his colleagues argued that current humans had special obligations to bring about the descendants with the highest moral capacity, be they biological post-humans or machines (2003b, 496; 2003a; 2014, 173).[12]

While Bostrom's defense of cognitive enhancement was in line with a more general transhumanist commitment to biological improvement, his effort to craft concrete policy proposals was a significant departure from both Esfandiary's erosion of political leadership through cybernation and More's unconditional rejection of the state. Contrary to most earlier transhumanists, he wrote frequently that states and other international actors should coordinate to avoid "existential risks" such as those caused by the development of autonomous, human-level, or general AI systems (Bostrom 2002; 2013; Bostrom and Cirkovic 2011; Schuster and Woods 2021; Davidson 2022). At the same time, he insisted on the need to limit sovereignty in such cases, maintaining that "whatever moral prohibition there normally is against violating national sovereignty is overridden … by the necessity to prevent the destruction of humankind" (2002, 18).[13] The argument for existential risk mitigation recast familiar tropes of human annihilation through science in the language of bounded rationality and evolutionary biology: "species-destroying scenarios" involving future AI or nanotechnology, unlike wars or natural disasters, offered no chance to learn from trial and error (Bostrom and alii 1999; Torres 2023). In the absence of "evolved biological and cultural coping methods," only international cooperation could stop the proliferation of dangerous technologies (2002, 17). Existential risks also pointed to the limits of free market regulation: mitigation strategies were unlikely to create market value in the present, even when they could help ensure long-term human survival. In areas where a democratic consensus could be achieved and simple

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market solutions were expected to fail, such as global security, reducing existential risk meant both increasing individual and collective wisdom (through methods ranging from forecasting to cognitive and genetic engineering) and escaping the irrationality of the world system by bringing both markets and states under global nongovernmental oversight.

Bostrom, like most transhumanists, embraced globalization as a sign of humanity's progress: pursuing new forms of global coordination to reach a "sustainable trajectory" of technological development merely continued a "long-term historic trend toward increasing scope of political integration—from hunter-gatherer bands to chiefdoms, city states, nation states, and now multinational organizations, regional alliances, various international governance structures, and other aspects of globalization" (Bostrom 2013, 26, 27). But contra the socialists and libertarians, he did not aim for the abolition of capitalism or the dissolution of state sovereignty. Instead, the route to global security and eventual utopia was through a combination of "superintelligence," a form of superior rationality that could be achieved either through the simulation of human minds on digital substrates—a scenario famously developed by the roboticist Hans Moravec (1988)—or through advanced AI engineering (Bostrom 2002, 19; see also Shanahan 2015), and global coordination between sovereign states and corporate actors. In his 2014 bestseller *Superintelligence*, he emphasised that the uncontrolled development of human-level, general, and eventually superintelligent AI capabilities could threaten both the basic conditions for survival and the plurality of human values—what advocates of "AI safety" term the "value alignment problem" (Russell 2019)—and he described how the harvesting of astrophysical resources, "uniform regulation" through international law, and efficient surveillance, could ensure cooperation in a multipolar world (2014, 180-184). In a further stage, a future AI system could develop into a "single decision-making entity at the highest level"—something he called a "singleton" (2005c). Although the singleton could function as a "global superintelligent Leviathan" with the power to enforce international treaties, it was different to a world state (although it could assume the shape of one), in part because it would be created by post-humans with "greater competence" than humans currently possess and who could design it in a way "that would serve the interests of all the parties that have a say in its construction" (2014, 182). A perfectly cognizant, omnipotent rational agent capable of aggregating and coordinating all present and future human values, the singleton was one of the possible forms that "capacity for strong global governance" could take—it promised to reduce "world vulnerability" in an irrational, unstable, and competitive "semi-anarchic" international order (Bostrom, 2019, 457, 465).

Bostrom and fellow FHI researchers looked to AI as a way to solve the longstanding liberal conundrum between universal fairness, the stability of social institutions, and value pluralism. The prospect of superintelligence did not render existing policy frameworks and ideologies irrelevant. Instead, it prompted an inquiry into the "special circumstances" of a future world with AI (Bostrom, Dafoe, and Flynn 2020, 296). Drastic technological changes were likely to leave economic elites and powerful states better-off, and "to the extent that one disvalues… concentrating or permuting shifts in the allocation of wealth and power," one should "regard continuity as a desideratum" (Bostrom, Dafoe, and Flynn 2020, 302). In the meantime, existing institutions could be modified to enable quick changes to multinational treaties under exceptional circumstances and ensure "that the right experts are selected, listened to, and understood" (2020, 309). These claims were part of a complex argument about the multiple possible interactions between future AI, existing governance mechanisms, and global inequalities, yet they shed light on the authors' liberal commitments and the conservative implications of their ideas.[14] Preserving current balances of power could increase the likelihood of a stable technological transition, following which the benefits of superintelligence could be shared equitably through appropriate redistributive mechanisms (2020, 300-301). Securing humanity's potential for cornucopia meant avoiding a catastrophe that would block its future development, tying its collective capacity to evolve beyond the human species to the avoidance of extremely unfair outcomes.

Public discussions of Bostrom's work, such as in recent debates on "effective altruism" and "longtermism", highlight the unprecedented financial support directed at contemporary transhumanism (Gebru and Torres 2024). Philosophers and investors advocating evidence-based philanthropy have drawn on Bostrom's work to argue that future AI development could maximise the expected welfare of future beings (organic or digital) millions of years in the future, and therefore that mitigating existential risk should be a major focus of philanthropic action (Karnofsky 2016; MacAskill 2022; Ord 2020)—leading to more than $300 million investment in AI safety since 2015 (Open Philanthropy 2023) and partly infusing broader policy debates on how to best avert global AI risks (Frontier AI Taskforce 2023; Roberts et al. 2023). In Bostrom's extreme scenarios of future AI development, revolutionary change was confined to technologies, themselves to be tamed by strengthening existing governance structures or incorporating safety measures in their design. This version of the post-human future entails reproducing, rather than remaking, the organizing principles of the current international order, shrinking post-human cosmos-politics into the world of today.

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The writings of More and Bostrom reiterate several long-standing themes in transhumanism. Both sought to escape the irrationality of politics through biological change and population management, and they shared Esfandiary's ideal of world integration as technological coordination, calling for the pursuit of expert knowledge in areas ranging from bioethics to artificial intelligence. They also proffered some novel arguments. Bostrom's transhumanism departed significantly from the socialism of Haldane and Bernal in his lack of concern for a post-capitalist future or the dissolution of existing state institutions. Suggesting that a highly centralized artificial entity could solve global coordination problems and eventually maximize (post) human welfare, Bostrom's vision of a singleton suggested a form of technocratic internationalism—what libertarian transhumanists have criticised as the ultimate expression of "AI vanguardism" (Goertzel 2015)—reconciling liberal transhumanism's longstanding disregard for deep institutional reform with the ambitions of socialist and progressive transhumanism to elevate the species in its entirety. The superintelligence future brought the post-human back into the present, channelling world ordering ambitions through the rule of an enlightened, benevolent—and eventually nonhuman—elite.

Conclusion

Given its current popularity among tech entrepreneurs, the rapid development of technologies once regarded as fantastical, and deepening global competition in AI and space projects, transhumanism is only likely to grow in significance in the decades ahead. Political scientists have much to add to analyzing it, from pinpointing its role in the history of political thought and critiquing its multifarious claims about democracy, justice, and freedom, through exploring the political naivete that runs through much transhumanist speculation, to examining the production of expertise and the role of philanthropic and corporate networks that help to propagate it, and comparing the forms it assumes in different countries and regions around the world.

We have argued that transhumanism is a hugely ambitious and plastic set of ideas, shaped by technoscientific visions that intersect with, modify, and ultimately aim to transcend assorted traditions of political thought. Focusing on socialism and liberalism, we explained how, from the interwar years onwards, predictions and hopes about life beyond human biology and the terrestrial habitat were nurtured by scientific innovations in population genetics, space engineering, and AI, as well as by prominent debates over global order. Transhumanism has entailed a sweeping commitment to world-ordering projects, some continuous with existing socialist or liberal internationalisms, others entailing the radical recasting of existing ideologies, institutions, or hierarchies. They have engaged with a wide variety of institutional innovations and political visions, including the League of Nations and the UN, through to projects for a socialist world state or the libertarian reform of global capitalism.

We have identified three features uniting socialist and liberal variants of transhumanism. First, transhumanists, of whatever stripe, aim to create an enhanced form of rationality by reengineering human biology and directing evolution. All argue that such rationality, whether individual or collective and whether defined in relation to continued scientific progress, freedom of choice, or moral capacity, is necessary to ensure human survival and its flourishing. For many socialist and liberal transhumanists, this would provide technoscientific grounds for the centralised management of global population and resources. For libertarians, it would be exercised primarily by individuals, encouraging co-operative behaviour rather than competition and suppressing the need for political institutions. Second, underlying the transhumanist ambition to rationalise the world is a vanguardist account of social and political change. Transhumanists typically view nations and states as secondary sites of political identity or obligation, to be tamed or overcome through a combination of biological engineering and the creation of international organisations, a world federation or state, or an efficient global market. In doing so, they consistently assign a key role to enlightened scientific elites or advanced computer systems in both remaking the world and paving the way to posthumanity.

Third, we have shown how transhumanist cosmos-politan visions draw on, engage with, and depart from existing political ideologies. Haldane and Bernal's accounts of biological transformation were shaped by their socialist critique of capitalism and their hopes that new supranational bodies, as well as progressive eugenic programs, could dissipate the spectre of Malthus and the horrors of the trenches. Aiming to transcend both capitalism and the sovereign state, they yearned for global (and later cosmic) integration and the development of new forms of life. Huxley was a committed universalist, yet his project of cultural unification was a deeply Eurocentric form of liberal internationalism that emphasized scientific planning under the leadership of the British Empire, the UN, or Western scientists. Rather than dissolving the existing order, he hoped to deepen global moral and cultural unification. Libertarian transhumanism, which flourished in the latter part of the Cold War and remains popular in Silicon Valley, rejected the emphasis on states and supranational institutions and viewed the unrestrained market as the necessary basis for post-human development. As Esfandiary and More envisioned them, outer space societies would be based on free choice rather than coercion. World reordering here was principally a project about the self, cosmos-politanism resulting less in institutional reform than in experiments in personal transformation by future-minded individuals. While suggesting

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a return to the idea of world government or a strong form of supranational regulation, Bostrom's notion of the singleton departs from the egalitarian ambitions of socialist transhumanism, seeking instead to strengthen existing global policy mechanisms around norms of value pluralism and fairness.

Although this article has focused mainly on the political visions of transhumanist thinkers, we conclude with the observation that in most instances, their *ultimate aim*—their long-term goal—has been to create a world (or worlds) in which politics as we know it would no longer exist. Operating on extended timescales stretching millions or even billions of years into the future, they dream of engineering forms of intelligence that would render conflict obsolete, eliminating the scarcity of resources that motivates political contestation, or, in the most radical visions of all, sublating human individuality into forms of collective intelligence or a superior posthuman species. The futures they conjure up are ones in which politics would be consigned to the past, a grim memory of an earlier age of human immaturity.

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Notes

1 A partial exception is work exploring the politics of space expansion (e.g., Deudney 2020; Utrata 2024).

2 The theoretical and historical relationship between transhumanism and posthumanism is vexed, not least because the terms are used in various ways in different scholarly debates. For discussion, see Hayles 2011; Sharon 2014; Simon 2019; Sorgner 2020, 31–56; Taillandier 2021c.

3 On continuities in transhumanism, see Bell (2025); for a detailed account on the postwar period see Taillandier (2021a).

4 We are not suggesting that transhumanism is confined to Britain and the United States. For examples of transhumanist traditions and networks outside the anglosphere, see, for example Bernstein (2019) on Russia and Dorthe (2019) on France.

5 We recognise that there have been (and are) many other notable transhumanist actors. It is also important to note that all the writers in our corpus are men—this reflects the male-dominated character of transhumanism (though there are a handful of prominent women transhumanists, e.g., Vita-More (2011); Rothblatt (2011)). For additional examples in the contemporary era, see Pearce (1995); Fuller and Lipinska (2014); Hughes (2004).

6 We make no claims to exhaustiveness, and nor are we suggesting that in each of the time periods, these were the only perspectives available. There are two main rationales behind our corpus selection. First, we selected authors that allow us to trace some of the conceptual variety within Anglo-American transhumanism. Second, we included writers who scholars usually take to have played a major role in the intellectual development and trajectory of transhumanism. On Haldane, Bernal, and Huxley see Tirosh-Samuelson (2012); Bashford (2013); Dunér (2024). On recent efforts to construct a canon of transhumanist thought, Esfandiary is routinely listed as a key figure (Bostrom 2005a, More 2013) and credited with being one of the first people to use transhumanism in its contemporary sense (Hughes 2004, 161). More and Bostrom are two of the most influential recent transhumanists (Hottois 2017; O'Connell, 2017; Damour and Doat 2018; Taillandier 2021a, 2021b).

7 On the ideological malleability of liberalism, see Freeden (2005); Bell (2014); Plehwe, Slobodian, and Mirowski (2020).

8 The most ambitious socialist transhumanist vision of the interwar years can be found in the extraordinary work of British philosopher and novelist Olaf Stapledon (e.g., 1930; 1932). He drew heavily on the speculative ideas of Bernal and Haldane, to imagine the future development of multiple (post) human species across the solar system and over vast time spans.

9 H.G. Wells, a significant influence on Haldane and Bernal, was similarly ambivalent about empire (Bell 2018). On Wells and transhumanism, see Linett (2025, forth).

10 To give one example, transhumanist sociologist James Hughes refers to transhumanists as "descendants of Haldane" (Hughes 2004, 57).

11 For a broader discussion of cybernation in the context of 1960s narratives about automation, see Bassett and Roberts (2019).

12 For discussion of population ethics and a historicization of arguments about future obligations, see Forrester (2019, 172–203).

13 For an important antecedent acknowledged by Bostrom, see Drexler (1986).

14 Scholars have discussed various aspects of the politics of existential risk. Topics addressed include: disregard for structural change (Srinivasan 2015), contribution to broader racial imaginaries (Ali 2019), the erasure of genocidal and colonial violence (Schuster and Woods 2021), and the neutralisation of climate anxieties (Davidson 2022).

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