


SPECIAL ISSUE ARTICLE

The view from outer space: Science fiction and political fantasy in the Cold War United States

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Abstract

The articulations of science and politics in the Cold War in the United States are well studied in histories of American political culture. However, these histories are often given focus and coherence via concepts and understandings taken from political realism and sociological institutionalism, thereby underestimating the transformations in the very idea of political reality that helped form the Cold War era in the United States. This paper launches an investigation of the relationship between speculative fiction and scientific and political discourse during that era to explore how the political culture of the United States came to be structured not only by a certain imagination but also by a particular set of fantasies. Building on the history of war-gaming at the RAND Corporation, the author conducts a close reading of a RAND Corporation report turned popular science publication. This suggests that, during the Cold War, a new standpoint from which to view the political world – the view from outer space – began to organize how the American political project for the globe represented its own modernity to itself. This view, drawn from science fiction but made real in its ethos and its political consequences, projected an understanding of “mankind” as but an infant in the early stages of what would become its interstellar destiny. A baleful consequence of this view was its tendency to free political actors and intellectuals from the urgent problem, identified acutely by Hannah Arendt in her essay “Man’s Conquest of Space,” of creating a world in common on earth.

Keywords: esthetic sociology; RAND Corporation; political imagination; Isaac Asimov; space exploration

The view from outer space: Science fiction and political fantasy in the Cold War United States¹

“Where an ordinary man saw a subway tunnel, [Herman] Kahn saw a subway *and* a dormitory for post[thermonuclear]war survivors. While an ordinary

¹The author thanks Riley Fay for research assistance, the editors and two anonymous reviewers for constructive criticism, and Michael Weinman, James Mahoney, Joel Isaac, Julia Adams, Philip Gorski, Dmitry Kurakin, Olya Feldberg and the participants in the Comparative Research Workshop in the Sociology Department at Yale University for comments on and suggestions for different iterations of this paper.

woman saw the medical miracles of chest x-rays and penicillin, Kahn saw the march of progress *and* proof that post[thermonuclear]war survivors would do just fine.” (Ghamari-Tabrizi 2005: 95)

“Note the following – signifiers always eat into the signified.”

Jacques Lacan, 19 March 1958 (Lacan, 2017: 280)

Introduction

A series of stories about reason and unreason circulate through scholars’ understandings of the United States during the Cold War, and this paper is another one. But, for better or for worse, it takes a different approach to answering the question “what was the Cold War?” than several prominent subgenres of Cold War history focused on the United States and most of the papers in this special issue. In place of a convoluted conflict and complicity between politics and science, it suggests a story of constitutive fantasies that inflect both politics and science. In place of a struggle between strategic calculation and mutual understanding, it suggests a story of wild speculation becoming mundane and even authoritative argument on television, in classified briefings, and in publicly available research reports. And, in place of projects for development and the misguided optimism and cynical manipulation of newly minted American academic hegemony, it suggests a story of desire for gleaming spaceships and new cities. To overstate for clarity: Among certain intellectuals and at certain points of contact between civil society and the state, the Cold War United States saw the sneaky triumph of a new fantasy of the (a)political: the view from outer space.

The view from outer space introduced a new dimension to how the self-consciously modern US represented itself to itself, a dimension distinct from struggles over the view of the United States from somewhere on earth (e.g., New York, Moscow, or Dakar; “rural” or “urban”), from a certain social position (e.g., bourgeois or proletarian, Black or white, man or woman), from God’s eye (omniscience) or from nowhere (objectivity). These other viewpoints were not removed from the political scene, but they were layered over by a new projection. The view from outer space had the aspirational ethos of the spacewalk and promised a frictionless reaching for the stars, but it made love of the world as it existed difficult. The felt imperatives of the view from outer space reconfigured the trials and tribulations of ambitious men launching ambitious programs with global consequences; indeed, operating via fantasy, the view from outer space transformed the understanding of these political ambitions from global into *planetary*. The complexity of the term planetary, connoting both an ethics of the environment and imperial ambition, has stirred up great discussion in our own time. But here I trace one version of planetary vision to the fantasies of the Cold War United States. This vision will require us not only to take the ambiguously defined genre of science fiction “seriously” (as scholars have been doing for nearly a century), but also to consider how that genre, in its supposed estrangement, became part of the very sinews of the American political world.

Cold War science, Cold War fantasy

I build upon and criticize accounts of Cold War reason and unreason, interest, and instrumentation that make up the historical study of the moment in the history of American science and politics known as the early Cold War (between the end of World War II and the mid-1960s). A certain prominent trend within these histories suggests that interest-based or institutionally practical logics are what ultimately made American Cold War political culture what it was. This format of explanation posits the Cold War as an intensification of certain longstanding themes in modernity's instrumentalization of the world (Collins 2006), and thus renders the world according to a left-Weberian *realpolitik*. Thereby, the explanatory ideal type is a rationalization of politics and society as well as a technologization of life; underneath the pushes and pulls of culture, knowledge, and politics, scholars find interests or at least an institution and a set of technological improvements that work more or less well.

This way of interpreting the Cold War has the undoubted benefit that it relieves the investigator of the worry that he is carrying Cold War fantasies within himself. But the cost is that it internalizes the projections of modernity that the Cold Warriors themselves sometimes sought to offer the world as the undoubted superiority and modernity of American political and economic organization, which, for all of its terrible mistakes, misguided ideas, and pernicious exploitations, nonetheless made – in this narrative – a certain amount of sense. This is the epistemic risk of sensible histories of the Cold War, according to which the version of modernity that inhabited American politics during the Cold War shares with other moderns, tending to other political problems in other valleys, the quality of being reasonable and realistic. To be sure, the political realists and sociologists of institutional incentives recognize that American policymakers and power players of the time operated in a world both complex and precarious. But I doubt the Cold War can be understood “realistically” in this sense of the term.

In contrast to these realistic narratives, some of which I will examine below, Anders Stephanson wonders in “Cold War Degree Zero” whether the Cold War was the period wherein “classical realism” as a way of thinking and doing American domestic politics and especially foreign policy, “passes to the *margins* of the mainstream” (2012: 29). His argument, which has many affinities with my own, is that the most notable aspect of the Cold War United States was the retreat and near removal of the modern European imagination of the world as a series of conflicts between great powers with discernable interests. *Realpolitik*, qua format of thought, was overcome and profaned as un-American, making way for an understanding of the United States as “salvationist agent” to set in. This “Cold War orthodoxy” became “enormously effective” (Stephanson 2012: 29). The Cold War in the United States, Stephanson's magnificent essay makes clear, was not only an American political project with massive and global consequences. It was a restructuring of the semantic field upon which Americans conducted political projects. As such, the Cold War demands a certain hermeneutic sensitivity about the very inflection of the social by the imagination, and – in my view – fantasy. It is not just that the Cold War was historically specific in that it produced different cultural artifacts; it is that the culture of its politics was imbued with a new fantasy-formation.

I approach this fantasy-formation indirectly by examining a seemingly apolitical document issued by a characteristically politico-military institution of knowledge production, the RAND Corporation. My reading of this document suggests that it is quite impossible to use the standard schema of powers and interests bequeathed to us by nineteenth-century political economists to interpret what the Cold War was and how it went. Rather, it appears instead that actions and their interpretations in the Cold War, and even the apportioning of political projects into rational and irrational during the Cold War, took as regulative a certain, relatively new, format of speculation and fantasy.

But let us look more closely at some of the more reasonable, well-articulated, and well-evidenced, yet in my view insufficient, stories of the Cold War, to which I will contrast the cultural-sociological investigations of this paper.

(a) *The politics of apolitical knowledge*

One clear finding about the massive expansion of higher education and scientific research in the period after World War II in the United States is that the project of Cold War knowledge was insistent on its apoliticism, its freedom from dreaded “state ideology,” and yet skillfully political in its intricate dance with the patronage of the US federal government. This political apoliticism is a master code of the Cold War in the United States – operating behind and through the discourse of free markets, the promotion of liberal ideas through illiberal means, and elite ambitions for the American century. This code helped to organize an expansion of research capacity across the natural sciences, social sciences, and humanities that was stunning in its wealth, energy, and generative capacity, but it was always also slightly paradoxical. For example, American geneticists sought to show in an entirely disinterested fashion that Lysenko’s genetics was scientifically specious, claiming to have “condemned Lysenko but not the Soviet Union” – only to have their claims covered quite differently by the science writer at the *New York Times* (Wolfe 2013). Meanwhile, the intertwining of national defense demands and quantum electronics produced not only the dependence of research on the dollar commitments of the federal government but also and simultaneously the imagination of scientific research as pure and a good in itself (Forman 1987). The philosophy of science, for its part, was transformed in the Cold War by “political pressures that were common throughout civic as well as intellectual life,” leading logical empiricism to “shed its cultural and social engagements” (Reisch 2005: 6) and assume the “apolitical, technical, and professional form” (Reisch 2005: 21) of the 1950s and 1960s. The point of exemplary works in this subgenre is, at least in part, that the triumph of the *story* of the free world was itself the crucial cultural-political project of the Cold War era, and that it worked to organize research in new ways (Cohen-Cole 2013; Gordin 2016; Kaiser and McCray 2016).

(b) *Reason and rationality*

A second story examines the Cold War in the United States as a twist in the longer story of reason, Enlightenment, and science. During the Cold War, a format of algorithmic rule-following was elevated in the mind of elites and to some degree

the mass public as *being itself (the pinnacle of) reason*. This turn of events was deeply implicated in several of the moments that most define Americans' memory and understanding of the Cold War (e.g., the Cuban Missile Crisis, the new geopolitical strategy of containment, etc.). This is in distinct contrast to the longer, 500-year arc of modernity, wherein men and women of science have associated calculation, especially rote calculations that could be done by machine, with the unthinking. In this longer story, the job of calculating was first given to badly paid workers (and especially women), and then to machines themselves, always with the expectation that this work supplemented or served thinking, reasoning, or understanding (Daston 2022). Yet during the Cold War, in the United States, a small set of men in southern California and their associates across the country managed, drawing on a more recent history of calculating machines both real and imagined, to overturn the understanding that calculation served thinking. Instead, they identified reason, understanding, and even thinking itself with the algorithmic decision rules in calculating machines, prisoner's dilemmas, and strategic games (Belleto 2011; Erickson 2015), such that "operations research, game theory, strategic deterrence, linear programming, decision theory, and the experimental social sciences all seemed to be converging on similar problems with similar tools and standards for what constituted a satisfactory solution. All seemed to be part of the same project" (Erickson et al. 2013: 21).

(c) *Cold War social science*

And then there were the social scientists themselves. Nils Gilman's history of modernization theory has shown with aplomb how Talcott Parsons led the Department of Social Relations (SocRel) at Harvard to an articulation of American society in theoretical and purportedly universal terms that could be projected around the world – both as an analytic with which to study recently decolonized places and as political philosophy for how to reorganize them via power both hard and soft. Thereby, an expectation that the world would converge on American ways of living was written into abstract social theory (Gilman 2007). Via Parsons and modernization theory, the vast ambitions of Western philosophies of history, which for a brief moment seemed to have been doomed by the Second World War, were saved, not by neo-Hegelian political philosophers (that would come at the end of the 1980s, with Fukuyama), but by a few groups of sociologists, anthropologists, social psychologists, and political scientists engaged in what they are always doing and still do: showing they understand the world better than economists.

The dispute with the economists (e.g., between Parsons and Walter Rostow) was over *how* and *why* the "world was converging from a panoply of traditional lifeways onto a single and universal modernity" (Gilman 2007: 101). Via SocRel, American elites studying at Harvard could learn that not only was modernity graspable in terms of pattern variables but also that the project of social science had finally come to a self-understanding *as a science*. And, conveniently, "[i]f modernity meant attaining the value structure of the contemporary United States, then we can understand how the pattern variables, on the one hand, helped to sanction projects of social reform in the postcolonial regions, while on the other hand, dictated a policy of social conservatism at home" (Gilman 2007: 89).

(d) Beyond the reasonable

And yet they are all so reasonable, these stories of Cold War power and prestige in the United States. In all of these exemplary texts, people react to incentives, institutions do not only ground action but have a function, politics concerns exchange, and globally interconnected systems drive politics. But I have my doubts that such reasonable realism in the study of society and politics can grasp the Cold War. Where is the interpretation of the collective madness that was Cold War military competition? How did discretion persist in the political system, despite attempts to make it more algorithmic? And how did mood and tendency, trope and metaphor, flow across different spaces, inflecting different projects and different problems with something identifiable as an American Cold War worldview and ethos?

The focused granularity of these institutional histories can make it difficult to grasp the fantasies that crisscrossed institutional spaces, including the fantasy that American civilization was a salvific project, backed by weapons cathected in new ways and with new dreams and nightmares projected onto them. My point is not only that claims to rationality should not be taken at face value, but moreover that I wish to investigate if these claims were operating as part of some larger narrative understanding, some larger mythological structure, which requires interpretation at the level of fantasy.²

Speculation and esthetics in the making of the Cold War in the USA

The thesis that Cold War political culture was specifically and excessively speculative in its veering away from the nineteenth-century world of political realism, and that this excess inflected both politics and science, has been articulated by Stephanson (2012), Ghamari-Tabrizi (2005, 2012), Puckett (2020), and Lemov (2010).

Ghamari-Tabrizi has taken as her subject Herman Kahn, a product of RAND in the 1950s who founded the Hudson Institute in the 1960s. Kahn, the author of *On Thermonuclear War*, would, after Stanley Kubrick's 1964 film was released, forever be nicknamed "the real Dr. Strangelove." But Ghamari-Tabrizi's historical insights concern, crucially, not this later association but rather the world that created its possibility, namely the invention of war-gaming at RAND in the 1950s. Her insight is that what was at stake in Southern California was not just a reconfiguration of reason, understanding, and calculation, but a project both esthetic and maximally politically projective; a "Cold War Avant-Garde," which remade, via fantasy, the American political imagination.

²Gilman's classic book contains an interesting clue in this regard. He writes the history of the Athens Center for Ekistics where for 15 years the scholars gathered around Constantinos A. Doxiadis produced "a series of studies, culminating in Doxiadis's own master synthesis, entitled *Ecumenopolis: The Inevitable City of the Future*," which foretold the "climax community of humanity" around 2100, with a population of 20 billion occupying "a single interlaced system of cities, farms, and parks controlled by a utilitarian, rationalizing technocracy" (Gilman 2007: 203). It is clear that this work of modernization theory was a stunning mix of social science theory, technological ambition, and speculative fiction, with remarkable similarities to both Isaac Asimov's *Foundation* trilogy and Ursula K. LeGuin's *The Left Hand of Darkness*.

The civilian defense intellectuals at RAND sought to replace the intuitions and experiences of the military brass with scientific expertise (Bessner 2018). This effort helped to create a space, speculative and yet thinking of itself as resolutely scientific, in which Herman Kahn could become a figure of great importance and a fount of imagination. Kahn had “no qualms about moving between reality and unreality, fact and fiction” (Ghamari-Tabrizi 2005: 75), and it would be this adroitness that would horrify and fascinate the American public. Though Kahn sought to contain his avid readership of science fiction, separating it from his scenario-gaming, the overall social space of war-gaming at RAND quickly arrived at an impossible contradiction which Ghamari-Tabrizi adroitly calls the “Cold War Fantastic.”

The fundamental premise of the RAND war games project was that, because war would be entirely different after the creation of the atomic bomb, military experience, intuition, and habit were illegitimate; only the best minds, with the best science, could be relied upon to “game out” the next war, and run simulations that would prepare the US military for it. Yet, as will already be obvious to the reader, the war-gamers had no data to go on. Scientists without an object of study, they argued passionately about how much detail should go into the scenarios they were constructing, and about what kind of assumptions about the politics, economics, and social structures of the USA and the USSR could be quantified. They insisted the science of strategy had to replace the military know-how of the Joint Chiefs of Staff. Yet that science was, by their own admission, based on a narrative frame that was strictly speculative, leading one of them to explain that “[d]esigning a war game is more akin to writing an historical novel than proving an algebraic theorem” (Ghamari-Tabrizi 2005: 165). Thus, RAND produced a *genre of imagination*:

To enter into the spirit of the cold war avant-garde, you must imagine the moods and hopes driving the simulationists. Imagine founts of zeal for electronic computers, ambitions for a view from simulation’s balcony, for an overview of the social, economic, military, and political totality. Imagine their exultation in the speedy dynamism of American ingenuity. (Ghamari-Tabrizi 2005: 150)

The science that was to overturn traditional military authority once and for all was closer to Asimov’s *Foundation* and the war-game-inspired role-playing game *Dungeons and Dragons* (debuted in 1974) than it was to whatever was going on in the Jet Propulsion Laboratory. Thus, Ghamari-Tabrizi (2005) shows how the speculative and the imaginary intertwined with the scientific such that the ambition of each fueled the ambition of the other; tropes and narratives structured by the simultaneously imaginable and “unimaginable” (nuclear holocaust) begin to organize thinking across a broad range of human activity.

If Ghamari-Tabrizi is focused on the fantastic and the avant-garde, Rebecca Lemov is interested in the science fictional in particular. In “‘Hypothetical Machines’: The Science Fiction Dreams of Cold War Social Science,” she examines Robert K. Merton’s work on interviewing technique and the development of focus groups. These were, she shows, inflected by a fantasy that Merton mused about when considering how the social scientific interview might learn from modernist fiction’s stream-of-consciousness writing. Merton posited that “in place of literary

craft, we can conceive a technological contrivance – and introspectometer, so to say – which would record, in accurate and intimate detail, all that the individual perceives as he takes part in social interaction or is exposed to various situations . . . It would provide, in other words, *a motion picture of the individual's stream of experience as he is engaged in the situation*" (Lemov 2010: 407). In a very Cold War moment, Merton then admitted that "such an instrument would make for a collective nightmare if it were used for anything but disinterested inquiry is evident, just as it is evident that it would be a powerful instrument for discovering new truths about human behavior" (Lemov 2010: 407).

What Lemov is ultimately able to show is that this fantasy instrument operated in Merton's methodological discourses as a kind of regulative ideal, a yardstick against which the developments in craft of interviewing could be measured. The further inference I seek to make is that it was this regulative positioning of a certain speculative tendency that operated in a new way in the Cold War. It is not that devices for "discerning the thoughts of others" had not been dreamed of before, but the particular "way that Merton conjured it up, and the way researchers' actual inventions mimicked its working, that were remarkable" (Lemov 2010: 411).

Certainly, Lemov's focus on the science fictional as Merton's specific route to speculation draws much support from science fiction studies itself.³ But I seek here not a sociology of science fiction qua literary genre, but something perhaps closer to an esthetic sociology of the political for the period of the Cold War, which is in some important way science fictional. The object of interpretation, then, is the crisscrossing discourses and understandings that make up US political culture and legitimate public knowledge, in its messy intricacies and plurality. And this is a less familiar matter because the issue is not the concrete, measurable proliferation of novels and short stories of a certain kind or genre, but rather the question of how science fiction, as a manifestation of fantasy (always plural, contested, and, taken as a whole, undoubtedly contradictory and unwieldy, requiring its own scholarly discipline with its own subdisciplines) crept into the supposedly more reasonable formats of discourse that concern historians of politics, knowledge, and the politics of knowledge.⁴

More concretely, what all of this literature suggests is that there was something operating at RAND Corporation that was more than the pursuit of pure strategy in ever more rational forms, and more than ideological cover for American military might and political realism. This "more" is the central focus of Kent Puckett's

³The expansion of science fiction from the pulp magazine to vast American readership, via the explosion of mass-market paperbacks in the postwar era, is seen by the field as a crucial aspect of the Cold War literary landscape. There is agreement that "science fiction is widely considered a narrative genre that reveals much about [the Cold War] era," and that "science fiction's growing ideological importance during the Cold War is indisputable" (Medovoi 2000: 514; from the many volumes that address the issue, see especially Seed 2013).

⁴This paper is not a study of the Cold War beyond the United States, but it bears mentioning here that the Soviet "new man" appears, in all of its contradictions and complex politics, and with history and utopia arrayed against each other, in the golden age of Soviet science fiction (Gomel 2004). The critics of Soviet science fiction appear to be on to something in the history of Russian and Soviet modernities not unlike what I seek here for the United States. But their timeline may be different; indeed it appears likely that the *prewar* Bolshevik world was suffused with the interlacing of science, science fiction, and politics that I am tracing to the postwar United States here (Smith 2014).

remarkable paper “RAND Narratology” (2020), where he shows that, as Kahn and others at RAND tried to make the “unthinkable thinkable” and thereby to strategize thermonuclear war, they had to make it narratable. Puckett recognizes that at the heart of this was not *realpolitik* as a kind modern mindset about power, but rather a need to “satisfy aims or, better, *desires* that are finally as narrative or even as esthetic as they are tactical or strategic” (Puckett 2020: 49). Puckett is compelled by the evidence in RAND’s archives to the conclusion that “because the choice between MAD and NUTS was, in the end, practically meaningless, we have to understand the hard-fought and in some sense ongoing conflict between them as at least partly motivated by something other than RAND’s vaunted rationality . . . a desire to maintain some bare minimum of the narratable not because narratability has a rational or tactical value but rather because the unalloyed nihilism of the alternative was so terrible” (Puckett 2020: 49).

I want to find out where these narratives came from and what they were like. Theoretically, the goal is to enhance an understanding of institutional change and political conflict in the Cold War United States by interpreting these changes as occurring on a landscape of meaning (Reed 2011) and investigating that landscape. It turns out the landscape has a lot of spaceships in it.

I hypothesize that the Cold War was the era in which the view from outer space, and to some degree the ethos of high modern science fiction, became part of American political fantasy. As a result, certain core tensions and dynamics of modern American society, and that society’s representation of its own modernity to itself (for example, the relationship between science and politics, the rise of the social, the “animal spirits” of the capitalist economy) were rendered *via science fiction* in their circulating cultural interpretations. In the Cold War United States, politics became, in fantasy though not in fact, in part though not in whole, interstellar. Sputnik did not constitute the outer limit of the fearful American imagination, but the inner belt; it was the solid object from which thousands of more ephemeral thoughts launched themselves into an expanding universe of speculation and terror, authority and ambition, salvation and nihilism.

Science fiction tropes in a RAND engineering report turned popular non-fiction book

To map this possibility and trace the extent of its reach, one would need to construct a quantitative study of texts in different zones of activity and track their use of science fiction references (not difficult), tropes (much more subtle), and narrative forms (extremely difficult, given the interplay of sci-fi and other genres at an elemental level). Particularly when it comes to a tropology and narratology of science fiction in non-fictional discourse, the problems of context and interpretation loom especially large. What I attempt, as a first step towards a larger study, is a close reading of a single text. To do this, I deliberately chose a text – *Planets for Man*, by Stephen H. Dole and Isaac Asimov – that is at a meeting point between scientific ambition and didactic publicity, hoping that it would reveal, as much as a single text can, the intertextuality of the staid and public rendering of a forward-looking scientific civilization, on the one hand, and the avid pursuit of the speculative and

the adamantly sci-fi that operates therein, on the other. The Dole-Asimov text is, furthermore, a text from RAND that is not, on the face of it, “political.” This allows me to ask how the same location of knowledge production could produce *Planets for Man* and also the more notorious contributions of RAND to American discourse in the form of civil defense and military strategy (and especially military strategy for what would become the Vietnam War). In other words, *Planets for Man* is not ostensibly *about* the Cold War in the sense of bipolar imperial conflict, military buildup, capitalism and communism, or thermonuclear strategy, thus making its Cold War specificity as a text more revealing. Examined in this way, the text suggests new answers to the following questions: (1) What made Herman Kahn possible as a public figure in the Cold War United States? (2) How did war-gaming, and more broadly game theory, become so convincing that it could organize serious and consequential thinking about international relations? (3) How did a certain kind of apoliticism inform the manifestly political projects of the “free world?” These are Cold War questions, taken from the historiography of the period. My hypothesis is that they have, at least in part, science fictional answers.

In preparation for study of the text, and based upon the literature discussed above, I developed the following heuristics for reading:

- Note when and how the text engages in speculation about the human future.
- Examine how authors situate their claims vis-a-vis exciting imaginative conclusions.
- Note authors’ own attempts to separate themselves from, or apologize for their indulgences in, “science fiction.”
- Examine how the science fictional elements operate via the other elements of the text, and how these relations in the text indicate certain tendencies that might be significant to track in political culture writ large.
- Examine if and how didactic moments in the text, especially when readers are instructed on human nature or the destiny of mankind, articulate cognitive estrangement (Suvin 1979), or science fiction as the theology of the modern age (Russ 1975).

Planets for man: Overview

Planets for Man by Stephen H. Dole and Isaac Asimov was a nonfiction book published by Random House in 1964. On its title page, the reader is notified that the text is “based on the RAND Corporation Research Study, Habitable Planets for Man, by Stephen H. Dole” (Dole 1963; Dole and Asimov 1964). Dole, the head of the engineering division of RAND, had made a series of calculations about when and how planets might be suitable for human colonization. The Random House text, however, is co-authored by Dole and Isaac Asimov. Examining the research report and the book together, one finds they are remarkably similar. The “popular” version of the text published by Random House remains a sort of engineer’s manual; one immediately suspects that the most important aspect of bringing Asimov onto the project was, in fact, putting his name on the cover. For, in 1964, Isaac Asimov was at the height of his influence. In the year previous, he had been named a fellow

of the American Academy of Arts and Sciences, and in 1964 his “Nightfall” was voted by the Science Fiction Writers of America as the greatest science fiction short story of all time. In 1966, the first three books of Asimov’s *Foundation* series would win the Hugo Award for the best science fiction series of all time. This was also a time of great productivity for Asimov in the field of popular science writing, as evidenced by the publication of *The Genetic Code* (1962), *The Human Body: Its Structure and Operation* (1963), *The Human Brain: Its Capacities and Functions* (1963), *An Easy Introduction to the Slide Rule* (1965), *The Intelligent Man’s Guide to Science* (1965), *The Universe: From Flat Earth to Quasar* (1966), *The Neutrino* (1966), and the magnum opus of popularization for the age of physics, the three-volume *Understanding Physics* (1966).

Both the RAND-report version of the text and the Random House book start out with a simple exercise in perspective, wherein the reader is asked to imagine an intelligent being on a planet circling the star system Alpha Centauri, whose view of the constellation Cassiopeia would be augmented by the brightness of a sixth star – namely the sun around which the earth orbits. This common trope of science fiction, which de-centers the earth-reader, softens the landing of the many, many calculations that follow.

The first irruption of science fiction into the body of the text occurs through the mildly existential introduction about the fate of man and the dawning of the age of starlight. The authors then shift into engineering mode, which amounts to textbook-style sections on astronomy, chemistry, and physics that support Dole’s calculations. Here, irruptions build over time, creating a background mood of “reaching for the stars.” Then, in the conclusion to the text, this background comes to the fore in a stunningly fantastical way. The text pictures the existing world of the early 1960s as the grasping infancy of an insufficient civilization, on the one hand, and as an exciting time wherein the usual material obstacles and traditional limits to “mankind” will soon be overcome.

Planets for man: A close reading

Planets for Man handles with ease unknowns and seeming impossibilities. The authors’ faith in the ability of modern civilization to overcome technological and physical obstacles is a constant presence. Leading readers through “indirect reasoning” when direct evidence is missing (Dole and Asimov 1964: 8), *Planets for Man* uses the pronoun we (implying “we the people of scientific civilization”) to speculate confidently. This is articulated through the frequently stated or implied belief that even the near future will be radically different from the present with regard to space travel. For example, on page 5, the authors ask, “Why bother with all this speculation and wonder?” Their answer is framed in terms of the fate of “Mankind” (Dole and Asimov 1964: 6), which, as a species, is compared to a baby that “has not yet learned to creep.” This analogy means, however, that exploration of the galaxy is as inevitable as aging: “Our first faltering steps will take us to the moon . . .” The story, then, is that because “we are barely started on our upward climb as self-aware and knowledge-seeking creatures,” (Dole and Asimov 1964: 6) and, given the “rapid and accelerating strides” of recent years, “it does not seem

outlandishly optimistic to suppose that practical methods for leaping the interstellar gulfs will be developed in the not-too-distant future” (Dole and Asimov 1964: 7).

The darker motivation for curiosity then comes in, namely that “one planetary catastrophe could completely destroy us.” On the other hand, the authors argue, “if the human race were living on a number of planets scattered around the Galaxy, its immortality would be assured.” “What’s more,” they assert “the opportunities for variations in culture and in outlooks would be vastly multiplied, and the interactions among the multitude of human subgroupings might vastly accelerate the over-all progress of mankind toward ultimate mastery of the physical universe” (Dole and Asimov 1964: 7).

Planets for Man then launches into a discussion of how to define the subset of “life bearing” planets (on which carbon-based life might be found or would be able to survive in some sense) that can be termed “habitable” for humans. A habitable planet is “one on which large numbers of people can live comfortably and enjoyably, without needing unreasonable protection from the natural environment and without dependence on materials brought in from other planets.” (Dole and Asimov 1964: 12) And this without having to be radically “remodeled.”

From there Dole and Asimov begin their reasoning, dividing it into:

1. “Description of environmental conditions required to make a planet habitable,”
2. Working out what “astronomical circumstances” will produce these conditions, and finally
3. Estimating the probabilities that such planets will be found “nearby.”

In this and other lists given in the text, the “just-the-facts-ma’am” genre of writing prevails, and has a kind of austere feel, one recognizable from the modernist esthetics of early 1960s furniture. The authors start in on their calculations in a compelling “common sense” way – namely, with the weather. They discuss temperature, amount of light on a planet, etc., but always keep the feel of the text oriented “to the stars.” Experiments at the Mayo Clinic with regard to what happens to humans under stronger gravitational fields than those imposed by earth are referenced. Amusingly, among all of these dense calculations about g-forces, the everyday concerns of postwar middle-class American life creep in:

It is true that many people who are 25 to 50 per cent overweight (and who therefore experience, after a fashion, the equivalent of 1.25 or 1.50 g) live normal lives and manage to accomplish as much as, or more than, many people whose weights conform more closely to the standards for their heights and ages. On the other hand, it is also generally true that physical activity is more exhausting to people who are carrying an excessive burden of fat, and it is better, on the whole, from the standpoint of both health and performance, that they not do so. (Dole and Asimov 1964: 23)

The text also shows an inclination to use extreme examples – e.g., miners in the mountains of Chile (Dole and Asimov 1964: 26) – to work out its upper and lower

limits of what is tolerable for humans, e.g., of air pressure, oxygen content of the atmosphere, and so on.

Crucially, however, after having covered light, water, etc., and made a series of calculations about what kind of atmosphere would be required for habitability, the first fully engineering-oriented chapter of the book ends with a short section – merely 3 pages – called “Other Requirements.” Though written in the same matter-of-fact tone, it is here that science fiction not only irrupts into, but in fact for a short span overwhelms, the text. The nonchalance with which it does so is itself of interest. The reader is notified that *other life forms* must be present for a planet to be habitable; there must be “indigenous plant life.” The reader is thus induced to skip right through the question of life elsewhere in the universe, and to presume that *of course* it exists. Then, the reader is told that native plant life on a different planet will be different than earthly plant life in its “chemical substructures,” and that for this reason, these plants “might not be edible or palatable to man.” So, earth plants will have to be introduced, which we earthlings were probably going to do anyway, since “people are likely to prefer and thrive best on familiar foods” (Dole and Asimov 1964: 38).

Reading the text today, one wonders at the problems of growing corn on a distant planet. But in 1964, there was no time to consider this, since the text moves quickly on to “unfriendly intelligent beings,” explaining that “another requirement [for a habitable planet] is that there must be an absence of unfriendly intelligent beings in prior possession. Man, presumably, can always cope with non-intelligent life forms, however formidable” (Dole and Asimov 1964: 38).

This short passage involves a double signification. On the one hand, these sentences have a historical referent – to the European settlement of the Americas, and the question of the friendly or unfriendly “savage.” Yet at the same time, the very signification of the (memory of the) frontier is *resignified* in a world of the future, in which a technologically excellent and supercharged “human race” will leave the earth behind. It is in this way that the settlement process is repressed, in a certain sense of that word. An ersatz distinction between intelligent and non-intelligent life is introduced, and then never fully explicated, and it is assumed, in a single breath, that aliens are out there; the authors move quickly to consider wind velocities and dust levels; the sci-fi horror of the alien from another planet is converted into boring meteorology. The projects of the whizbang future guarantee that the past (and its violence) may be safely set aside.

Finally, the nuclear threat reappears, albeit indirectly, in a discussion of “radioactivity or ionizing radiation in the atmosphere.” Here we return to earthly scientific authority in the institutional sense, as the Atomic Energy Commission is cited. These three pages of sci-fi fantasy are brought to a conclusion via reference to “meteorite-infall rate,” “an excessive degree of vulcanism,” “earthquakes,” and “electric activity (lightning).” (It bears mentioning that this whole passage is, with a few edits for clarity and wording, present in both the Dole and Asimov versions of the text and the Dole-authored original engineering report.)

Readers of *Planets for Man* would have been well-prepared by midcentury mainstream American science fiction to imagine these other planets and their mundane meteorological problems combined with hostile alien creatures. Each “other requirement” listed by Dole and Asimov may be easily matched to a science

fiction short story, *Twilight Zone* episode, or paperback novel from the period. For example, Robert Sheckley's story "The Wind is Rising," published under the pseudonym Finn O'Donnevan in *Galaxy Science Fiction* in 1957, involves an encounter with aliens on a planet with wind velocities that are intolerable to humans and their imported technologies. Radioactivity was even more central; it's impossible to imagine sci-fi horror in American television and cinema in the 1950s and 1960s without it.

The next chapter of *Planets for Man*, on the "Properties of Planets" begins with a discussion of "General Planetology." In this passage, the highly modern philosophy of science is operative, as a covering-law understanding of science is the mode of expression for interstellar ambition: "From this point of view, then, the planets of the Solar system might be regarded not as unique specimens but as members of large families of such objects, in which the relationships between the definable physical characteristics would be found to follow certain general laws of nature. It is only because we have so few to study that these relationships have not become perfectly obvious" (Dole and Asimov 1964: 44).

From there the text moves to an increasingly dense discussion of planetary physics and astronomy, slogging through various quibbles of terminology (for example, "It is difficult to decide, then, at what level of smallness a body is not a small planet but merely a large meteoroid") and extended consideration of the solar system. This part of the text is ponderous. It has the feel of a high school science teacher prone to digression based on curiosity. Adding to this feel is the way in which the science being offered is not really that advanced, and it is (with Asimov's help, or at least, the help of his imprimatur) plainly explained.

But note that in pursuing matters this way, the authors render earth as just one planet among millions. Indeed, they are at pains to make clear that "our" solar system features as a subject of inquiry, *only* because its planets happen to be close by to where humans happen to live now. Throughout, the goal is anti-uniqueness, anti-singular. For example: "Still, what we have with the material on hand is an example of the manner in which planetary properties follow regular rules so that planets need not be considered as unique, unrelated specimens" (Dole and Asimov 1964: 55).

In the next chapter, the austere pursuit of facts about planets continues, but it is overlaid by a 13-stage account of how a "certain amount of time must elapse before a newly formed planet can have surface conditions suitable for life" (Dole and Asimov 1964: 102). This claims to be a general theory, but its legibility is dependent upon the reader's familiarity with the long-term (on the order of a billion years) geology of earth, abstracted to a story about "earth-like" planets. The calculations about this "evolution" of planets get pretty fuzzy, but the authors conclude that "it is probably safe to say that a planet must have existed for 2 or 3 billion years, under fairly steady conditions of solar radiation, before it has matured enough to be habitable" (Dole and Asimov 1964: 106). Many more aspects of planets, and their stars, are then covered at great length.

All of this leads to the "Big Predictions" of chapter 5, where a series of 10 probabilities are asked for, so as to "estimate the number of such bodies [habitable planets] in our own Galaxy" (Dole and Asimov 194: 140). These are listed as propositions, affirming the logical-empiricist aspect of the RAND epistemology (e.g., an estimate is made of "the probability that the planet's rate of rotation is

neither too fast nor too slow – that is, with a length of day between 3 hours and 96 hours”). Again, the authors attest to uncertainty, but move past it via tremendous confidence in the progress of science to come. Then, for each of the 10 propositions, a few paragraphs of verbal reasoning leads to an estimate of probability. The authors then address the possibility of life on another planet.

It is here that again the authors enter science fictional speculation, as they explain that “the tissues of alien life even if not poisonous, may be indigestible or simply foul-tasting” (Dole and Asimov 1964: 165-66). This will be resolved by the fact that “space colonists, then, will certainly be prepared to seed an otherwise habitable planet with the plant life, soil bacteria, pollinating insects, and so on, of the Earth . . .” Meanwhile, however, they assure the reader that “the probability that native *intelligent* life will be present on a given planet may be quite low” (Dole and Asimov 1964: 166). The only caution here is given by the very same optimism about human life that suffuses the entire text: “On the other hand, once an intelligent species has evolved on a planet, there is a good chance that it will quickly spread to other unoccupied habitable planets in its region of space, *as the human race may well do within the span of not too many generations*” (Dole and Asimov 1964: 167; emphasis added). Thus the authors conclude that the probability that “life (very likely non-intelligent)” will appear “on planets having the correct combination of astronomical conditions” to be 1.0.

The probabilities assigned are multiplied in the proper way (allowing for variation in spectral classes of star), and a calculation is made that “there are, roughly, 600 million habitable planets in our Galaxy” (Dole and Asimov 1964: 171). They, therefore, expect to find *50 habitable planets* within 100 light years of earth, something they describe as “a rather pleasant prospect” (Dole and Asimov 1964: 172).

The authors then move to fact-telling about “the nearest candidates,” namely fourteen stars that are “our nearest neighbors” and have “a probability of possessing a habitable planet of over 0.01” (Dole and Asimov 1964: 175). Even here, however, there is an irruption of the alien, both figurative and literal. We are informed that two of these stars were “listened to” just four years before publication – specifically “radio waves with a wave-length of 21 centimeters” – so as to possibly detect alien intelligent life. Unfortunately (?) “no signals were detected.” And so it is with some sadness that the authors then admit that “the probability that a given habitable planet will be inhabited by intelligent beings at a sufficiently advanced stage of technology . . . must be quite low” (Dole and Asimov 1964: 179). After this consideration of aliens, we continue on to other stars, finishing with a chart listing their distance from “us” and the probability that they are circled by a habitable planet. This leads to the following conclusion:

The combined probability of the existence of at least one habitable planet in the whole volume of space out to a distance of 22 light years from the Sun is about 0.43 . . . *Once we learn to make our way among the stars*, we will undoubtedly be prepared to go much farther than 22 light years, and out in the rest of the Galaxy, 600 million habitable planets (by our estimate) await us. (Dole and Asimov 1964: 185, emphasis added)

This might, in and of itself, be taken as a rather bold and science-fictional conclusion for this engineering report. But it is not, in fact, the conclusion. There is then a brief chapter on “Star Hopping,” which considers the difficulty of detecting habitability from great distances. (“Generally speaking, then, we will not be able to explore the stars cheaply by taking a quick look from a distance” [Dole and Asimov 1964: 196]). Here too, science fiction makes an appearance, via a passage that looks rather eerily like Gene Roddenberry’s *Star Trek* prime directive about how to approach a planet with “intelligent creatures.” The report insists that “disruptive effects on the local population produced by encountering a vastly different cultural system” are to be avoided.

One wonders where the RAND document is to be found that makes a similar argument about the actual intelligent life living in South Vietnam.

The issue of achieving interstellar flight is, then, finally attended to. The obstacles are, it is admitted, rather tremendous. But then we get a full-throated accounting of the exponential potential of “man,” and, *especially*, modernity: “But if one has confidence in man’s ability to learn – a confidence justified by looking back at the accelerating pace of technical progress over the past 400 years – then one may be optimistic about the future feasibility of flights over interstellar distances” (Dole and Asimov 1964: 198).

And, on this note of overconfidence, the book makes a turn.

The conclusion of planets for man

Discussion of travel near the speed of light leads the authors into a discussion of “Kinds of Habitable Planets.” This discussion quickly departs from engineering, physics, and calculation, and instead engages in speculation about *what it will be like to live in various places in the galaxy*. The authors speculate about a variety of experiences.

- living on a planet with a satellite planet, thus making for unusual cycles of light and dark and “nights dominated by the presence of an extremely large and luminous ‘moon’” (Dole and Asimov 1964: 203).
- living on twin planets, which might make it difficult for any “egocentric philosophy of the Universe” to develop among the humans who live there, and might instead heighten “technological progress.”
- living on a planet with two suns (recall Asimov’s *Nightfall* had just been named the greatest science fiction story ever).
- living on an “oceanic planet.”

The list could go on. I interpret this section of *Planets for Man* as mirroring a series of premises for midcentury science fiction stories, especially given the persona of the second author of the text.

After considering experience in this way, the authors engage in a series of pseudo-biological speculations, which harbor ambitions for *the making of a new man*. This begins with a declarative paragraph that is one sentence long: “And if new habitable planets offer new kinds of environments for man, man may well respond by developing new varieties of himself” (Dole and Asimov 1964: 209).

What follows is a breezy account of the evolution of the human subject. This starts with a list of peoples on earth – notoriously, those that would have been coded as unmodern – as evidence for how human collectives are molded by their environments: “Eskimos,” “Australian aborigines,” “pygmies of Africa,” and “Indians of the high Andes.” The authors explain that they are all different because of their different environments; “colonizers of other planets will encounter even more varied environmental conditions than those existing on the Earth’s surface.” Dole and Asimov then ask the reader to imagine a scenario where an interstellar trip arrives safely but is then cut off from the “rest of humanity.” (The lost colony narrative is another standard story from midcentury sci-fi.)

Who is this “new man?” First and foremost, it appears, he is someone who will be attracted to new women. The authors ask the reader to imagine how standards of attractiveness would change, if the gravity on the planet was 1.5g, and this is followed by a series of slightly funny, and very superficial, musings on, for example, how high jump competitions and other such Olympic events would be different on a different planet.

But lest we think that this is all fun and games, we are then told with utter seriousness the following: “If isolation is continued for a long enough period of time . . . enough genetic changes would accumulate so that the isolated population would no longer be able to interbreed with the population of the Earth when the members of the two planets again made contact. *In short, new human species could result from interstellar travel*” (Dole and Asimov 1964: 211–12). After all of the practiced apoliticism of the Cold War, the debunkings of Lysenko, the fears of totalitarianism focused on Eurasia, and the robust anti-communism of American political and military culture, there he is again: “the new man” – mirroring in no small way the “new man” of socialist or communist science fiction. RAND Corporation will not leave the creation of a new mankind to the Soviets; one does not need specifically state socialist sci-fi, it turns out, to fantasize about the reconstruction of the human species.

In the following section, I will attend to the easygoing, even cheerful, way in which this conclusion is reached. But for now, it remains to finish our reading of *Planets of Man*. Two aspects of the text remain – a section titled “Appreciation of the Earth,” which uses the previous calculations about other planets as a jumping-off point for thinking about how human life might be different if the earth were positioned differently, had different features, and so on. This includes some strange stuff. (What if there were no seasons on earth? Would the brain evolve less rapidly [Dole and Asimov 1964: 218]?) But the section ends with a cliché that belongs not so much to science fiction as to an earnest magazine editorial: “And at the present time, since the Earth is as yet the only home we have, we would do well to conserve its treasures and to use its resources intelligently” (Dole and Asimov 1964: 222).

There is, finally, an appended conclusion, on “Space Flight and Human Destiny.” Here the authors articulate, first, the standard “population bomb” fears of the 1960s and admit that “emigration” via space flight will not solve the problem of population growth. Second, they discuss “another form of evolution,” ending the book with the following lines.

Each stage in the progress of man as he starhops into new unexplored regions of the Galaxy will be accompanied by an important kind of distillation process. Always, those volunteering for the next expedition into the unknown will tend to be adventurous, self-reliant, inquisitive, courageous, and hardy pioneers, while those selected to go will be chosen on the basis of good health, high professional competence, emotional stability, reliability of judgment, and so on. In the main, these characteristics will be passed on to their descendants, so that a kind of selection process will take place, with those at the frontier of the wave through the Galaxy always representing some of the best qualities of mankind, and leavening all mankind with those qualities. (Dole and Asimov 1964: 225)

Here, with “hardy pioneers,” and “those at the frontier of the wave,” we have the double signification of frontier and outer space again; the Rough Riders have made it to space, but they are not pictured as Theodore Roosevelt once projected them to the American public. These pioneers have been liberated from the baby steps of an earlier mankind. Their spaceships are clean and their political conflicts minimal.

Planets for man: Interpretation and discussion

The text by Dole and Asimov may be said to exemplify three larger themes or discursive elements in both its content and style.

The first is a calm, confident techno-optimism. The expectations for technological advancement are not only high. They are also delivered without either overwrought enthusiasm or politically charged verve. Furthermore, throughout the text, Dole and Asimov repeatedly claim that social and cultural (even existential) problems will be solved via advances in technology – from the nuclear threat to the self-concept of human beings to the social need for hard-working, initiative-taking subjects. Cultural variation will flourish, but without conflict. There are no culture wars in space, and the subtext of *Planets for Man* suggests that the reason for this lack of conflict is the sheer expansiveness of interplanetary colonization as achieved by star-hopping technology. There will be enough planets to go around. This optimism is delivered with a calm that is remarkable in its contrast to the techno-optimist manifesto of our own time (Andreessen 2023). There is no need, in this text at least, for Dole and Asimov to worry about governments and markets, ascription versus achievement, or the multivalence of the very word “colonization.” Modernity is assured, not anxious. From outer space, one can fantasize a modernity without all of its attendant problems.⁵

It is worth noting that this blithe techno-optimism, so frequent at RAND during this time, and so evident in *Planets for Man*, was what *alienated* certain intellectuals and politicians from RAND’s ethos and projects. For these dissenters (among them Dwight D. Eisenhower), the RAND war-gaming and scenario-planning approach to the conflict with the USSR was misguided in its reliance on techno-optimist fantasy. For them, by 1958 it “had become clear that a political, not a technocratic solution,

⁵Thanks are due to Joel Isaac for suggesting this phrasing of my argument.

was the only way to manage the cold war,” and by 1963 the head of the lab that had developed ICBMs for the US military stated publicly that when it came to the conflict with the USSR, “there is absolutely no solution to be found within the areas of science and technology” (Ghamari-Tabrizi 2005: 193). The discourse of *Planets for Man* is both an example of the techno-optimism that such people were dissenting from but also of the flights of fantasy that allowed techno-optimism to sustain itself as a discursive tendency. For the text has not only techno-optimism about the future of “mankind” but also operatic scope in narrating that future.

The second theme of *Planets of Man*, then, is its adroit combination of two subgenres of American science fiction from the Cold War period: the space opera and the extraterrestrial frontier adventure. The first subgenre allows the *minimization* of contemporary worries and conflicts. For, the space opera makes the drama of mankind interplanetary in scale, dwarfing any politics here and now. It is this genre shift that allows the authors of *Planets for Man* to suggest that the solution to the threat of nuclear annihilation is to have human colonies on many different planets (the implication being that if one such planet destroys itself through nuclear holocaust, the human race will continue nonetheless). The second subgenre – taming the frontier in space – acts as a counterweight to the first. The text is a space opera about mankind, and its expansive melodrama of “his” development renders contemporary earthly problems small. But the melodrama is brought down to (non)earth. The authors reflect on weather, what people like to eat, and norms of attractiveness. These everyday concerns are given zing by the frontier genre of adventure and exploration. The science fiction of such exploration, especially in its short story form in the 1950s, often had tidbits that served to make the strange relatable and, often, funny: a relatable narrator with “everyman” desires for satisfying food and good-looking women and, perhaps, “everyman” problems with wife, children, and boss. In such stories, the frontiersman encounters alien flora and fauna, only to find his way to the campfire satisfactions that operate in the American western. And so, via space opera and frontier story, the anti-politics of techno-optimism receives narrative support.

Finally, the third theme of *Planets for Man* is the speciesism of its discourse of “mankind.” Hannah Arendt, in articulating her understanding of politics as deriving from the two fundamental human qualities of natality and plurality, wrote in 1958 that “Not mankind, but men, inhabit the earth.” *Planets for Man* suggests very strongly that her fears about political culture encouraging the opposite view were well-placed, for it is a discourse about mankind, much to the detriment of any engagement with the actual humans alive at the time. The textual technique by which this happens is significant. Dole and Asimov minimize actually existing humans via their discussion of *speciation*. Precisely insofar as the expansion to other planets will change the human race itself, the current conflicts of humans – even very high-status ones running powerful states and empires – are provincialized. As mankind goes into space, the human drama becomes less dependent on the decisions, flaws, and passions of current humans; and this lessening of dependence is *biologically* assured. Via evolution, the technological brilliance of “man” becomes “the new man” (no revolution required).

If we consider these three themes together – techno-optimism, space opera/frontier adventure, and speciation – we begin to understand where the *feel* of this

text comes from. Dole and Asimov solve a series of urgent yet eternal existential problems with a few simple calculations. They do so with profound confidence and (what is presented as) an earnest lack of self-awareness. The text makes a series of claims and promises, each of which would be, on its own, stunning: (1) a surefire method for ensuring the continuation of the human race in the face of nuclear holocaust, (2) an assured solution to the problem of whether there is life elsewhere in the universe, (3) the development of a new human species that cannot “mate” with current humans, and (4) an explanation that star-hopping is in the near future. Yet, despite these dramatic and hyperambitious proposals, the text is somehow mundane, full of reportage, and boringly “normal.” Reading the text, I asked myself sarcastically: Is anything possible, besides finding alien plant life that is tasty? Why are all the possible dangers, problems, and transformations brought by technological advances to be regarded with the same earnest fun and optimism as high-jump competitions under conditions of low gravity? These are questions I would like to ask about the Cold War fantastic writ large.

Conclusion: The view from outer space as political culture

Just months before the publication of *Planets for Man* by Random House, Hannah Arendt published “Man’s Conquest of Space” in *The American Scholar*. The essay concludes with three concerns. First, that the “conquest” of space will contribute to the reduction of human life to biological processes, as looking down from space will encourage humans to study themselves “with the same methods we use to study the behavior of rats.” Second, having left the earth, “all our pride in what we can do will disappear into some kind of mutation of the human race” (Arendt 1963: 540). Finally, Arendt notes that space travel is an *extreme* instantiation of the way in which modernity’s technological accomplishments take as their ongoing premise and precondition the disjunction between scientific knowledge and everyday experience. And so, she ends with dramatic pessimism, wondering whether space travel will help create a world in which “speech and everyday language would indeed be no longer a meaningful utterance that transcends behavior even if it only expresses it” (Arendt 1963: 540).

Arendt’s worries map rather eerily onto Dole and Asimov’s overconfidence. For her, the aspiration to consilience exemplified by RAND represents an unfortunate triumph of behaviorialism. For her, the further evolution of the species on other planets would decimate our sense of the value of human life and our commitment to collective achievements. And finally, she fears that technological triumph will lead to a loss of meaning, insofar as modernity’s science does not require translation to create its “gadgets.”

Arendt’s essay is nuanced; I do not propose to reduce it to a summary of its concluding words or propose a full reading here. Nonetheless, the mapping of Arendt to Asimov and Dole (with inverted evaluation) suggests that what worried Arendt about the “conquest of space” was just that aspect of Cold War political culture that Dole and Asimov took for granted and helped to advance. Arendt, Dole, and Asimov were operating in and on a political culture that uses the tropes of science fiction to comprehend society, politics, and modernity, and which looks

down on earth and around at other planets, solar systems, and galaxies, from outer space.

The view from outer space begins by centering “mankind.” In doing so, it makes a cosmopolitan promise, “for all mankind,” unified in its reach for the stars rather than divided into competing nation-states and empires. But this picture of mankind is baby-like. Only in his maturity will this “mankind” become *significant* as he stretches across the galaxy. Furthermore, if “mankind” is a growing baby, then actual alive persons are understood on the terms of behavioralism and as exemplary (or not) of the possibilities and limitations of the species. Furthermore, the maturation of mankind, viewed from outer space, contains the distinct possibility of the “end of man” as we know him. In Dole and Asimov, this end is an entirely natural process, the result of biological evolution that will produce superior beings with superior minds.

Arendt was less sanguine about biologically or historically determined destinies for mankind as prominent features of the modern political imagination. But, even without reference to her most well-known book, the reasons for Arendtian skepticism about the cosmopolitan promise of the view from outer space can be clearly articulated. Until there are actual human *communities* living on other planets and in outer space, the view from outer space will have the distinct quality of *being a view ascribed by humans who live in a particular place and in a particular way on earth to a place where no one lives*. (The few humans who do live in space confirm this, in so far as the mini-communities that form on the International Space Station are always defined, in their public understanding, in terms of the nation-state of origin of each astronaut, and the material architecture of the station itself retains a binary Cold War logic.)

That outer space is a place where no one lives entails that, when articulated as a perspective, it is done so without a ground in any demands or any judgments about better and worse ways to conduct a human life or build a human community on earth. The blasé optimism of Dole and Asimov is precisely the source of worry for Arendt. If, on earth, communities are prone to distort other communities’ ways of life when they are judging their own as superior, then, the problem with viewing these conflicts from outer space is not distortion but radical diminution, and thereby loss of significance. In *Planets for Man*, the imagined future of galaxy-spanning mankind reduces all current political concerns to the squabbles of infants. This is nowhere more evident than in the ersatz way in which the human sciences appear for Dole and Asimov. There is no thinking, in the text, about conflict over law-making, education, childcare, division of labor, religion, race, gender, or class. In a certain sense, this is not surprising; this is an engineering report, and one can apply to it the same criteria for the pursuit of generalized knowledge as were applied to the people who split the atom and left for others to decide what to do with the knowledge. In another sense, however, it is very strange. Asimov’s and Dole’s book *does* assert that the colonization of other planets by humans will lead to proliferation of “human cultures” and a certain (easy) pluralism of appreciation of these cultures. This rendering of human cultures is then manifest in their suggestions that, with more planets colonized, Olympic competitions (e.g., the high jump) and standards of attractiveness (for “sturdy” short people on high-g planets) will be even more varied in space than they are on earth. In *Planets for Man*, in other words, the

human future substitutes a plurality of ersatz “cultures” (that is, cultures that are not thought of as containing traditions, or as requiring deep commitments from individuals) for anything like “politics.”

It would be straightforward to ascribe Arendt’s worries to her recognizably Weimar pessimism, and Dole’s and Asimov’s frictionless future to a recognizably American expectation of moral progress that transcends any particular era. But I suspect that there is something much more specific going on in the Cold War United States – the layering over of a new discourse. The fantasies that sustained the view from outer space had, in the case of the American political imagination, a specific effect: the construction of a world in common on earth was reduced in significance since there were so many planets awaiting our imminent arrival.

Today, the view of the earth from space is multiple in its signification. “Planet earth” has connotations concerning de-racialization and environmental politics that are quite orthogonal or even opposed to the view from outer space in the Cold War United States as I have parsed it here (Gilroy 2000). Nor does the geopolitical conflict between the US and the USSR cast a shadow over American science fiction that is as long as it once was. A planetary imagination is urgently needed in the 21st century, one less inflected with the anxieties, ambitions, and fantasies of the Cold War United States. But to pursue such an imagination, we would do well to understand that political cultures channel both interest and fantasy, and to examine how, in the era of the Cold War, American political culture articulated itself through the fantasies of a star-hopping mankind, ready to colonize any planet, as long as he remembered to pack his cheeseburgers.

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