

## **We the Living: There is absolutely nothing wrong with the species-level perspective on space settlement**

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**Abstract.** Recent debates about human space activities in general, and space colonization and settlement in particular, have been accompanied by a panoply of rhetorical maneuvers and language games. An egregious example is repeated stigmatizing of space advocates and enthusiasts for using the first-person plural “we” to denote the scientific reality of humankind as a species. Here I show that this is not just a rhetorical strategy, but encapsulates a wider malady: a retreat from the universal, cosmopolitan, inclusive, humanist ideals of the Enlightenment and in more extreme versions, retreat from scientific realism and evolutionary worldview as well. Space advocates should not cede any linguistic or ethical grounds to skeptics deploying this rhetorical ploy, since it carries no cognitive or argumentative weight.

**Keywords:** existential risk – space settlement – human spaceflight – NewSpace – space skepticism – rhetoric – postmodernism

### **1. Introduction: space skepticism and the first-person plural**

Near the end of his seminal *Outline of History*, Herbert George Wells turned his attention toward the future (Wells 1922, p. 1096):



*[I]t would be an unending exploration upon the edge of experience. Hitherto man has been living in a slum, amidst quarrels, revenges, vanities, shames and taints, hot desires and urgent appetites. He has scarcely tasted sweet air yet and the great freedoms of the world that science has enlarged for him.*

These words are so dramatic, so timely and actual, just as if they were penned yesterday afternoon. They perfectly capture the entire attitude of anti-future ideation, not just opponents of human spaceflight and space settlement, but the wider cowardly malaise of fearing and rejecting the enlightened vision of the future, the preference for trembling inside a puny nutshell. Why would anybody sane choose “quarrels, revenges, vanities, shames and taints, hot desires and urgent appetites” over at least a potentially utopian future? While it is a puzzle for psychologists to resolve, this is a very real emergent phenomenon we are witnessing. As the NewSpace movement is getting momentum, so does contemporary space skepticism.

Space skeptical books are awarded big writing grants by foundations committed specifically to promotion and popularization of *science* and the *science book prizes* are awarded to works excoriating space advocates and enthusiasts – while all along science seems to be the least of their concern.<sup>1</sup> Many of the most respected magazines, both online and off-line are devoting much space (no pun intended!) to skeptics, often those of the most radical and ideological kind. Especially in the last couple of years, roughly since 2020 and after the Covid-19 pandemic, the tone of skepticism has become particularly histrionic, shrill and even hysterical. We shall see several examples of this later. Space advocates would do good to stop (mostly) ignoring this phenomenon and face it head on.

In this paper, I wish to analyze and debunk a major skeptical conceit, namely frequent stigmatizing the usage of the first-person plural to denote “humanity” or “our species” or “Homo sapiens” in speaking about space futures. Closely related to this is another favorite skeptical peeve, namely even if the talk about humanity is allowed, an allegedly deep question is often posed in the form of *which humanity are you talking about?* or some version thereof. A related reaction, often encountered when the argument from existential risks and human survival<sup>2</sup> is brought about, is *which humanity will space settlement save?* There is a lot of confusion, as well as blatant hypocrisy, virtue

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<sup>1</sup> Becker (2025), pp. 291-2; <https://royalsociety.org/news/2024/10/science-book-prize-winner-2024/>, last accessed January 2, 2024.

<sup>2</sup> Such arguments are invoked by, for instance, Ehrlicke (1981); Wohlforth and Hendrix (2016); Green (2019); Ćirković (2019); Zubrin (2019); Gottlieb (2019, 2022); Popoviciu (2023).

signalling and moral posturing related to these issues – and it is highly desirable to disperse all the hot air constituting much of space skepticism.<sup>3</sup>

Consider some bizarre examples. On one side, we have Mary-Jane Rubinstein “problematizing” the Apollo-era phrase *for all mankind* in her 2022 book *Astrotopia*: “In the minds of folks like Disney and von Braun, it carries that dubious species-level freight, implying that the same creature who began in caves, invented tools, and harnessed wind, steam, and electricity is now making its next evolutionary leap from the rocks to the stars.”<sup>4</sup> The “dubious species-level freight” is somewhat clumsy as a metaphor, reminiscent as it is of massive cargo ships and rusty steel containers, but it does capture the radical skepticism present among some cultural actors regarding reference to *humanity as a biological species*. As noticed by many contemporary observers, there is a kind of biology-skepticism or even biology-phobia in contemporary culture as well, which is not quite unrelated to some of the types of space skepticism.<sup>5</sup> Is it the “same creature” or not? Is the author here doubting biological unity of human species over space and time?

On the level of our physical and biological foundations, humanity is a single species (old-fashioned ideas about human polygenesis, or multiple origination of modern humans, have been decisively rejected by Darwin’s *Descent of Man* and all subsequent science).<sup>6</sup> So, at least on the level of physical and biological reality, there is no multiple “humanities” between which one could choose whom to save or not. Unfortunately, physical and biological realities often mean very little to academic space skeptics – which is testified by the fact that neither Rubinstein nor her cohorts ever bother to *explain* why are they circumventing this physical and biological reality.

Thus, John Traphagan asks in the very title of his article “[w]hich humanity would space colonization save?”<sup>7</sup> Konrad Szocik asks, after considering the possibility of cosmic colonies as refuges: “A refuge for whom?”<sup>8</sup> Wouldn’t it be more natural and

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<sup>3</sup> Some of the points of the present section have been published in a condensed form in Ćirković (2023) in response to a provocative paper by Konrad Szocik (2023).

<sup>4</sup> Rubinstein (2022), p. 97.

<sup>5</sup> E.g., Gross and Levitt (1994); Sagan (1995); Koertge (1998); Shermer (2008); Kuntz (2012); Miller (2019); Saad (2020); Hansson (2020).

<sup>6</sup> Highly ironically, the idea of multiple human origins and multiple human species is now (rightly) considered racist; multiplicity of humanities is, therefore, essentially racist idea imposed as a topic by people who consider themselves solid – if not zealous – antiracists. Not the first time that space skeptics deploy the “rules for thee not for me” demagoguery.

<sup>7</sup> Traphagan (2019).

<sup>8</sup> Szocik (2023), p. 2.

even ethical to ask “Does it work as a refuge?” first, and debate about the relevant population and its make-up later? Would the same question be asked about a lifeboat in a shipwreck: “A lifeboat for whom?” Lucianne Walkowicz similarly appears somewhat tone-deaf when dealing with a *metaphor*: “What would it actually look like to backup humanity? Who’s humanity? Who’s included in the backup?”<sup>9</sup> One can hardly ask such a deeply demagogic question as “Who’s humanity?” without revealing one’s own antihumanism; imagine how nonsensical would the same question sound to Erasmus or Alberti or Bacon or Voltaire or even Kant. And the related rhetorical figure of “just asking questions” manifests itself in some criticisms of the existential risk studies: “We often hear that the ‘end of the world’ is approaching – but whose world, exactly, is expected to end?” as if a supervolcano or a deadly pathogen or nuclear winter will care for race, sex, sexual preferences or ideological posturing.<sup>10</sup>

The closely related phenomenon is direct rejection of using the first-person plural for humanity, as when Sir Martin Rees calls out the “pretentious rhetoric where the word ‘we’ is used to denote the whole of humanity.”<sup>11</sup> Two astrobiologists, Jason Wright and Michael Oman-Reagan, in criticizing the 1975 formulation of Fermi’s Paradox by Michael Hart, proclaim that “[t]his word choice evokes the colonial expansion of European powers around the world, and in particular uses ‘we’ to refer to the explorers and the colonizers of Earth, but not the explored or the colonized.”<sup>12</sup> The cosmopolitan and ultimately *inclusive* usage of the pronoun “we” thus becomes problematic in the eyes of the very same people who tend to otherwise extoll the virtues (real or imagined) of *inclusion*. As we shall see, playing this kind of language games is the philosophical equivalent of shooting one’s own foot: ultimately, the main victim is going to be inclusiveness itself.

## 2. The skeptics’ double standard

On the face of it, the hand-wringing about using the first-person plural is perhaps the most obvious double standard ever. When Ophelia says that “We know what *we* are, but know not what *we* may be” (*Hamlet*, Act 4, Scene 5; emphasis added), I doubt that even Lord Rees will complain about Shakespeare’s “pretentious rhetoric” although it is

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<sup>9</sup> Quote in Becker (2025), p. 245.

<sup>10</sup> Mitchell and Chaudhury (2020), p. 309. Notice, also, the rhetorical deployment of “exactly” here: pretending to perform a serious scientific or philosophical analysis.

<sup>11</sup> Rees (2018), p. 147.

<sup>12</sup> Wright and Oman-Reagan (2018), p. 179.

obvious that the *triple* (!) “we” denotes all of humanity. If it were any different, if she referred to some particular group like “women” or the “Danish people” or “aristocrats” or “privileged white heterosexual women” or “victims of family violence” or even “birthing people”, Shakespeare’s message would not have been a thousandth as powerful as it is, would it? When the same universalism is deployed by, for instance, John Milton (“I shall detain you no longer in the demonstration of what we should not do”) or Ursula Le Guin (“we read books to find out who we are” – double) or the *Quran* (“Indeed, we belong to Allāh, and indeed to Him we will return.” – double) or Einstein (“We cannot solve our problems with the same thinking we used when we created them” – triple!) or Plato (“We do not act rightly because we are excellent, in fact we achieve excellence by acting rightly.” – another triple) or T. S. Eliot (“We are the hollow men // We are the stuffed men // ... // We whisper together”), there is literally *zero criticism and zero inquiries* as to whether these distinguished sources – and literally thousands of others, throughout the history of human thought – are in fact entitled to convey their message with the “dubious species-level freight”.

There is no Wright and Oman-Reagan in sight to explain to us that Ophelia was referring to the Nordic feudal aristocracy oppressing peons and not to, say, Mauretanian or Bulgarian serfs in her monologue; no Prof. Traphagan to preach how Ursula Le Guin was talking as a “privileged” rich white woman of intellectual background from Portland, Oregon, and could not reasonably represent interests of *illiterate* hicks of West Virginia or the Balkans or Papua Barat. “We read books” does sound awfully exclusive and elitist in this era, doesn’t it? Better not to go into interpretation of the *Quran* or Plato or Eliot. To add another example close to the heart of all scholars of the humanities, one does not need a special exegetic apparatus to decode whom the great literary critic Lionel Trilling had in mind when he wrote:<sup>13</sup>

*We live, understandably enough, with the sense of urgency; our clock, like Baudelaire’s has had the hands removed and bears the legend ‘it is later than you think’. But with us it is always a little too late for mind, yet never too late for honest stupidity...*

Trilling has had his basket of critics in his lifetime, often quite rabid, and yet to their credit none have stooped so low as to question his usage of the first-person plural. Well, it certainly is easier to take on softer targets like space enthusiasts than it would be to criticise Shakespeare, or Milton, or Le Guin, or the *Quran* or Plato or Einstein or Trilling,

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<sup>13</sup> Quoted in Kirsch (2011), pp. 16-7.

isn't it? All animals are equal but some animals are more equal than others, aren't they? Screaming hypocrisy hides the noise of skeletons dancing in skeptics' own closets.

The textual evidence that space skeptics do not live to their own standards abound. An award-winning recent anti-space book asks in the very subtitle *Can We Settle Space, Should We Settle Space, and Have We Really Thought this Through?*<sup>14</sup> What is the reference class for these triple reiterated, Shakespearian first-person plural pronouns? The Weinersmiths' household? The US citizens? The English-speaking citizens of the world? Adults? Married couples? Passionate fishermen? Fans of Taylor Swift? Or perhaps, at least in theory, all thinking humans? Oh, the humanity!

The reminiscence of the *Hindenburg* disaster naturally returns one to Rubinstein's *Astrotopia* which in the very preface asks "How might *we* approach outer space without bringing our most destructive tendencies along with *us*? And might *we* find ways to heal our ravaged Earth in the process?"<sup>15</sup> Who is the "we" here, exactly? And it took her no more than three pages of the main text to state that "[w]hen *we* teach our kids to love planets and stars and interstellar blackness, *we* teach them to love infinity, expansiveness, and not-quite-knowing."<sup>16</sup> A beautiful sentiment I have no qualm with – neither would, I presume, any space enthusiast – but again begging the question: who is the "we" here? Since third time is the charm, consider the following quote from Rubinstein's book:<sup>17</sup>

*By turning to Indigenous philosophies, more-than-human worldviews, religious ecologies, and Afrofuturist visions of extraterrestrial justice, we can begin to imagine communities of genuine equality, peace, and freedom based on respect and even reverence for both living and nonliving beings.*

Before jumping to a lesson which includes Jupiter and a cow, let me emphasize that this way of deploying the "pretentious rhetoric where the word 'we' is used to denote the whole of humanity" is completely normative among space skeptics of all major types. How else could one interpret Adam Becker's decisive "We aren't leaving Earth"?<sup>18</sup> Who is the "we", bubba? California-based postmodernist ideologues or the whole of humanity? In a similar vein, once highly renowned *Scientific American* concludes that

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<sup>14</sup> Weinersmith and Weinersmith (2023).

<sup>15</sup> Rubinstein (2022), p. xi; emphasis added.

<sup>16</sup> *Ibid.*, p. 3; emphasis added.

<sup>17</sup> *Ibid.*, p. 8; emphasis added.

<sup>18</sup> Becker (2025), p. 284.

“We’ll Never Live in Space,” without ever pausing to explicate the “dubious species-level freight” inherent in their usage of the first-person plural pronoun.<sup>19</sup>

Notice that this rhetoric is not deployed in cases of widely accepted benefits and spin-offs of space programs. To the best of my knowledge, nobody has ever asked the question “Who will benefit from WD-40?” or “Whom will lasik eye surgery help see?” Even if someone did ask such questions, it was clearly not taken seriously. Notice that this cannot be entirely explained by inherently *universal* nature of these spin-offs: while lasik surgery has gotten cheaper over the years, it still may be quite expensive and out-of-reach to many, especially in poorer countries. And yet, no loud noise about “elitism” is associated with WD-40 or lasik or hundreds of other wonderful spin-offs – in contrast to *immensely larger* benefits of, for example, building a permanent Mars settlement.<sup>20</sup>

### 3. The strategy of division

There is a serious literature in philosophy, linguistics and psycholinguistics dealing with the semantics of “we” or the cognitive role of “we-thoughts” – but what we (no pun intended!) are dealing with here has no relation to it and there are no indications that the space skeptics are aware of that literature.<sup>21</sup> Sadly enough, it seems to be a simpler game here: to create division where none has previously existed and to shore up support for the skeptical side by cheaply insinuating that space enthusiasts are in favor of “elitism” (negatively construed) or discrimination of some kind.

A good example of this feature is the suggestion of Wright and Oman-Reagan that the usage of “we” refers to the “explorers and the colonizers of Earth, but not the explored or the colonized.” Notice first that the division implies historical naivete, since as it has been established by historians and archeologists in the cases such as the classical Greek, Inuit and Polynesian migrations, those categories are not disjoint: the same people in different circumstances and in different times were *both* the colonizers and the colonized.<sup>22</sup> The distinction between “explorers” and “explored” is even more spurious, since exploration is best characterized as an individual trait, like the musical or artistic talent, which makes no sense to ascribe to a wide group. Introducing the “explored” as

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<sup>19</sup> Scoles (2023). Let me notice in passing that Ms. Scoles refused to answer my queries on the provenance of this title (private email to the author of June 17, 2025).

<sup>20</sup> Benefits have been listed in an already massive literature; see, for instance, Hickman (2010); Wohlforth and Hendrix (2016); Zubrin (2019, 2024); Popoviciu (2023) and references therein.

<sup>21</sup> See e.g., O’Brien (2007); Smith (2018); Higgins (2021).

<sup>22</sup> Diamond (2005); d’Andrea et al. (2011); Irad (2013); Couper (2020).

a group opens up a whole bunch of new questions and problems we cannot really delve into here; enough to mention that it may as well lead us into Rubinstein's land of venerating dead lunar rocks and "ancient pantheistic mysticism".<sup>23</sup>

The Smallpox Eradication Program (SEP) has managed, in a brief span of years, 1966-1979, to stop the most deadly disease in human history which has destroyed entire civilizations and ravaged continents since the Stone Age. Consider the "pretentious rhetoric" used by Dr. Donald A. Henderson, the chief eradicator, when he wrote: "We are only beginning to realize the potential of public health and to explore new horizons in research, understanding, and application."<sup>24</sup> Who is the we used here? An uncharitable reading would be that it applies to a small circle of epidemiologists and other physicians involved in public health issues. A reasonable, open-minded and noble reading would clearly be that "we" applies to the whole of humanity. In contrast, malicious, closed-minded, totalitarian, morally debased and utterly paranoid reading would be that Henderson speaks for privileged white patriarchal males or some such nonsense.<sup>25</sup>

The same analogy applies to the rest of the skeptical discourse on the subject. Imagine the very situation in which, after Henderson – or anyone else involved in SEP – explicated the rationale and methodology for the project and concluded, say, "in this manner humanity could be saved from smallpox", a Traphagan-like critic stands up and asks "But, Doctor Henderson, *which* humanity would eradication of smallpox save?" Hard to imagine, isn't it? And even harder to interpret as anything other than sheer nonsense and/or malevolence toward the speaker. Henderson and other *doers of deeds*, people who actually risked both their careers and often their very lives for the eminently humanist projects, would have likely found the question incomprehensible. Only in the current age of fashionable cynicism, advancing corruption within Western academia and the military-industrial-TikTok-OnlyFans complex could such a question pretend to be meaningful and even sophisticated.



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<sup>23</sup> Of course, one could take a page from the Weinersmiths' book – after quoting Rubinstein one feels obliged to clarify that *this is a metaphor*, not an incitement to vandalize books – and insist that it is not *legally* appropriate to speak for all humanity without obtaining a valid authorization from the United Nations or some other global forum. This legalistic argument fails as well, but it is beyond the scope of the present study.

<sup>24</sup> Henderson (2013), p. 38.

<sup>25</sup> Mitchell and Chaudhury (2020) again serves as an egregious example of the latter reading.

The malaise cuts deep. Consider the following passage from a programmatic paper of several distinguished space philosophers led by James Johnson-Schwartz:<sup>26</sup>

*Space settlement is sometimes described as being beneficial to the human species as a whole, but it is not obvious why this would be the case. After all, the direct beneficiaries of a space settlement would seem to be specific individuals: the settlers and their descendants. Were a global tragedy to completely destroy terrestrial civilization, none who stayed on Earth would survive to enjoy the continuation of the human species. Perhaps, subjectively, their deaths would be easier ones, safe in the knowledge that the species (along with whatever value inheres in humanity simply existing) will persist despite the demise of terrestrial civilization. But the result would still be human suffering and death on an unprecedented scale.*

Imagine for a moment similar things to be said about smallpox eradication. “Smallpox eradication is sometimes described as being beneficial to the human species as a whole, but it is not obvious why this would be the case. After all, the *direct* beneficiaries of smallpox eradication would seem to be specific individuals: those infected by the disease, their families and their descendants.” Sounds immoral and stupid, doesn’t it? The last natural outbreak of smallpox in the United States occurred in 1949; imagine a journalist or a philosopher or an anthropologist or a cultural critic writing in, say, Chicago in the 1970s to the effect that *it is not obvious why some would claim the ongoing eradication effort as beneficial to the human species as a whole*. After all, the eradication was going on in places like Somalia, West Bengal, Botswana, Nepal or East Pakistan (now Bangladesh) – why would the “other humanity” which got rid of the ancient scourge decades or even centuries ago care? The implication would be that a person in Chicago has no compelling reason to support – morally *and* materially – the eradication of smallpox in West Bengal. Nobody would seriously talk about SEP in this way; even its contemporary critics and opponents, like René Dubos and Marcolino Candau, who based their skepticism on practical and logistic aspects of the project, did not stoop to doubting its universal beneficence. Notice in passing how temporal symmetry can be applied to this argument. What Schwartz et al. call “human suffering and death on an unprecedented scale” and ascribe to a potential *future* has, in the smallpox case, already happened in the *past*.

A critic may complain here that smallpox being a contagious disease, there has always been a chance, even if small, of the pathogen spreading from West Bengal to Chicago, so the support for eradication on the other side of the world would be somewhat rational. One could counter this in several ways: for instance, there may also be a small chance –

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<sup>26</sup> Schwartz et al. (2021), pp. 141-2; emphasis in the original. Prof. Johnson-Schwartz's earlier works have been published under the name Schwartz.

perhaps greater than the one of a smallpox outbreak in Chicago – that any given individual will have a chance of living in a space colony. Notice that skeptics do not criticize any particular procedure for selecting future Martian colonists – their criticism is directed toward the enterprise itself on the basis of their *assumed* – completely arbitrarily and without any evidence – procedure. Alternatively, we may not necessarily speak about the total extermination of life on Earth: it is enough to have a sufficiently large disaster causing collapse of human civilization and return of the survivors to, say, hunter-gatherer lifestyle. Wouldn't then the existence of an advanced space colony be beneficial to all survivors on Earth?

Yet, due to the ubiquitous anti-space hypocrisy, this is an unremarkable, almost normative thing to say about space settlement, the project which could lead to the future so grand, so expansive and so full of potential for human flourishing that all other conceivable human projects pale in comparison. Nobody raises their eyebrows when it is insinuated that the space project is somehow not humanistic enough. Parochialism which is shunned *in any other context* (healthcare, law, human rights, environmental protection, climate change, etc.) is not only allowed, but advanced as a kind of “argument” in discussions about space.

#### 4. Moral asymmetry and intangible benefits

This deserves to be unpacked some more. The question

**Which humanity would space colonization save?** (+)

cannot, on purely logical grounds, be very different from the (nearly) symmetrical question:

**Which humanity would an existential cataclysm destroy?** (–)

Obviously, a number of auxiliary semantic assumptions are made here, e.g., that *to destroy* is an antonym of *to save* (it is not, strictly speaking; Merriam-Webster suggests *to jeopardize* or *to endanger* as the preferred antonyms, although they are both too weak for our present purpose) or that both salvation and destruction are understood in sufficiently realistic terms. Once we accept those assumptions, the (+) and (–) questions become logically complementary, covering the entire space of possibilities.

However, read them once more carefully. There is something both trivial *and* ethically disturbing about the question (–). The notion of an existential cataclysm is such that an obvious – hence trivial – answer to (–) is necessarily *all of humanity*. Now, human

languages are not the best vehicles to convey truths about global catastrophic risks, since our species has had so little experience with the latter thus far; even those marginal experiences we *did* have at the low-severity tail, like the Toba supereruption, were recognised only *much* later and have not so far influenced the language.

Observe: if the question (–) is both trivial to answer and ethically disturbing, *the same must apply to the question (+)*! This is what Traphagan, Rubinstein and their fellow skeptics who are disturbed by the “dubious species-level perspective” fail to notice. Unless, like some postmodernist space skeptics, we reject the precepts of logic for “higher purposes”. To repeat, on the level of biological reality, there is no multiple “humanities” among which one could choose whom to save or not. Even if one believes in some culturological construal of “multiple humanities,” mixing metaphors and literal scientific reality, one is morally obliged to consider question (–) first, as the logical prerequisite for the existence of *any* cultural space.

Such a construal means that we should interpret the question (+) in the sense of, for instance, “which of multiple human cultures would space colonization save?” or even “which socially constructed version of humanity would space colonization save?” Such an interpretation raises more questions than it answers. Notably, it begs the obvious question: why is it not perfectly legitimate to limit oneself to the discussion of species survival as a biological concept *prior to* debating cultural issues? “Prior to” here has both chronological and causal meaning. After all, existence in the biological sense is both logically and chronologically prior to the emergence of culture – at least if we are not extreme antirealists. Should we be still enthralled to the postmodernist rejection of modern biology as just another “power narrative”? Also, it is easy to construct a (–) version of the same question; it is enough to ask about the *cultural* consequences of an extinction-level event. While we cannot go into those complex issues of optimal cultural strategies for space settlement here – that would require a book-length treatment – one could just direct the reader to some of the existing studies in that emerging field.<sup>27</sup>

Elsewhere, I have tried to make the case that space settlement will be, almost by definition, the greatest *cultural* shift not only in the history of our species, but in the entire evolution of life on Earth since it originated about 4 billion years ago.<sup>28</sup> Consider all other cultural shifts ever, the epoch-making transitions like the invention of fire or

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<sup>27</sup> E.g., Dick (2000, 2003); Collins and Autino (2010); Last (2017); Scharmen (2019). Fred Scharmen’s lavishly produced book in particular is an excellent example of how fruitful interaction between space and artistic/wider cultural concerns.

<sup>28</sup> Ćirković (2019, 2022, 2023).

the wheel or alphabet or agriculture or the origin of philosophy in ancient Greece or the Renaissance or the Enlightenment or the Industrial Revolution or the rise of the personal computer. When someone says – and it need not be in an academic or scholarly context at all – that *we* invented the wheel or the printing press, it would be stupid (and *obviously so*) to ask who is the “we” there; it would be both stupid and malevolent to imply that there is an underlying agenda in using the first-person plural.

Scottish philosopher Tony Milligan has made an important distinction between those who regard space as a *normal domain* and those who view it as a *special domain* (Milligan 2023). Most space advocates regard space as a normal domain: a natural extension of Earth’s atmosphere, just as spaceflight is a natural extension of aerial flight. Converse is true for space skeptics. If XYZ thinks that space is the special domain in Milligan’s terms and that we should use different locutions or even different pronouns (!) when discussing space – the onus of demonstrating that it is indeed so lies on XYZ’s shoulders. So far, apart from rhetorical maneuvering, no space skeptic has provided such demonstration or justification.

A somewhat more sophisticated form of the same concern is Szocik’s question which I shall render here as *who will benefit from space settlement?* In contrast to Szocik, Johnson-Schwartz et al. and many other space skeptics, I have argued that this question also makes as much or as little sense as the analogous questions which contemporaries could have asked at some earlier epochs:

- cca. 3500 BC: who will benefit from that new-fangled wheel contraption?
- cca. 350 BC: who will benefit from Aristotle’s writing the *Prior Analytics*?
- 1436 CE: who will benefit from the completion of the Duomo in Florence?
- 1776 CE: who will benefit from founding the Bolshoi Ballet company?
- 1889 CE: who will benefit from van Gogh painting the *Starry Night*?
- 1905 CE: who will benefit from Einstein’s special relativity?
- 1949 CE: who will benefit from Jorge Luis Borges’s *El Aleph* collection of short stories and essays?

The most extreme space skeptics would have us believe that nobody who does not personally participate in space settlement will not benefit from it. At very best, they mumble something about “spin-offs”. While spin-offs like memory-foam cushions or lasik surgery or (especially!) WD-40 certainly are wonderful things, using them as a rationale for a grand future in space sounds a bit like justifying the art of van Eyck, Botticelli or Vermeer by the historical fact that they introduced new colour pigments in

their paintings. Surely there is more to the intrinsic value of their work, eh? And there is *so much more* in the space settlement case.

Moreover, spin-offs are perfectly irrelevant for the major point. Even illiterate people have benefitted from the inventions of alphabet and the printing press. Even people who never rode a car have benefitted from the invention of the wheel. Even those who were never in Florence have benefitted from Brunelleschi's magnificent dome. Even those who never travelled more than a few miles from their birthplace have benefitted from Magellan's magnificent circumnavigation of the globe. This is so trivial point that I feel embarrassed having to mention it in the first place. All humans – and this could, but need not, be said from the biological species perspective – do benefit from Aristotle's foundation of logic or from *Mona Lisa* or *The Starry Night* or *El Aleph* or the Bolshoi Ballet. The latter example is particularly instructive, since there are people who directly participate in the creation of Bolshoi Ballet's cultural products: dancers, as well as administrative, technical and managerial staff, altogether perhaps 500-1000 human beings. Are they *the sole beneficiaries* of the entire project of the Bolshoi Ballet with its most impressive quarter-of-a-millennium long history? Most certainly not. I may have absolute zero chances of ever *actively participating* in any ballet production – and I am 100% happy to enjoy it vicariously.<sup>29</sup>

Why would we think differently about, for instance, the Moon, Mars or Titan human missions and eventually settlement? (Of course, one could conclude that such vicarious enjoying of *The Starry Night* or the Bolshoi Ballet constitutes *aesthetic* or *spiritual spin-offs*, if one wishes. Labeling is of minor importance, as usual. What is certain is that it provides wide and important benefits without direct participation. And it is ridiculous to argue that the great cosmic projects could not create ever larger aesthetic and spiritual benefits.)

And if one *does* think differently, it is up to the skeptic to justify such different treatment. Just as it is up to proponents of the bizarre metaphysico-political theses about “different people living in different worlds”<sup>30</sup> to prove them, perhaps by

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<sup>29</sup> Obviously, it would be utterly preposterous – and here a usage of much stronger words would be completely warranted – to argue or *complain* that this is because the Bolshoi or any other ballet company *discriminates* against me or people like me (= extremely clumsy people) or that they *exclude* or “*Other*” me or any such verbal nonsense. Only a truly mentally deranged person could think that it is *unjust* that she is *excluded* from the Bolshoi Ballet for having no moving grace or talent for ballet.

<sup>30</sup> Mitchell and Chaudhury (2020).

appealing to the multiverse concept (although it is doubtful that they are aware of the debates on the concept of the multiverse in fundamental physics and cosmology).

## 5. Conclusion: unwarranted, divisive and antihuman rhetoric

In summary, there is no reason to avoid deploying “pretentious rhetoric” of the cosmopolitan and biological *we* in the debates about space futures of humanity, nor should we allow ourselves to get frightened by postmodernist language games along the malignant line of the “dubious species-level freight”.

Species-level perspective is not only entirely defensible when issues of such generality and (literally!) cosmic importance are concerned, it in fact has no credible or adequate alternative. As much as it would be morally suspect, to say the least, to insist on ethnic, cultural, sexual or ideological divisions among both eradicators and victims of smallpox (and then to sniff some nefarious underlying agenda thereof), it is morally suspect to do the same for space settlement, an even grander humanistic project. Therefore, one should decisively reject patent and immoral nonsense of the kind promoted by Marcie Bianco and her ilk: “The patriarchal race to colonize Mars is just another example of male entitlement.”<sup>31</sup>

On the contrary, it is a high time to re-asses and affirm the unique value of the species-level perspective; this is one of the several areas in which there is a large room for constructive engagement of the space expansionist with both broadly understood ecological and classical humanist perspectives. The species-level perspective is inclusive and affirming of “expanding the moral circle.” The species-level perspective is the true expression of our increased astronomical, physical, biological and neuroscientific view of the unity of nature, the unity of terrestrial biosphere (or Gaia, if you wish) and the unity of human species – as well as the underlying unity of science which reveals all that. Finally, the species-level perspective is an expression of the Enlightenment values of cosmopolitanism and universal rationalism and it should be strongly supported not only by space advocates and enthusiasts, but by any person holding reason and morality in their heart of hearts.

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<sup>31</sup> <https://www.nbcnews.com/think/opinion/patriarchal-race-colonize-mars-just-another-example-male-entitlement-ncna849681>, last accessed November 4, 2025.

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