Apocalyptica
No 2 / 2022
DOI: 10.17885/heiup.apoc.2022.2.24754

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From Techno-Hope to Vertigo-Trip: an Airpocalypse seen from an Island

Abstract: One of the smallest islands of the Azorean archipelago, Santa Maria, located in the middle of the Atlantic Ocean, has been particularly noticed following the relatively recent news of the construction of a European Space Agency facility with the capacity to launch minisatellites from 2023 onwards. In this context, to imagine that 'we can be astronauts' launching from Santa Maria's spaceport directs to the main purpose of this article: to engage with infrastructural space exploration materiality as an object of concern; through the lens of the techno-hope concept, here conceived as a successful apparatus behind the desire for a Spaceship Island. To reflect on Santa Maria as an example of a 'shortened vision,' what the overview suggests is that the political-technical imaginary envisaged for the island disguises the absence of a project for the actual inhabiting realm, thus, for life in the 'terrestrial' reality. Therefore, this article aspires to be an invitation for 'being-in.' In this direction, an apocalyptic scenario or, as an alternative, a vertigo-trip possibility, might come in the aftermath of the achievement of the techno-hope political tool. Essentially, the techno-hope apparatus might emerge as an eventual revelation, evidencing the loss of terrestrial coordinates, or rather, an utter detachment from the ground. In other words, this is an incitement to think beyond the end of the world seen from an island.

Keywords: Techno-hope, spaceport, island, vertigo-trip, airpocalypse.

Introduction: Escaping the Monstrous

> [I]n the face of the globalization wars and technological departures that lent the twentieth century its character, being-in means this: inhabiting the monstrous. Kant taught that the question humans ask to assure

> themselves of their place on the world should be: 'What can we hope for?' After the un-groundings of the twentieth century, we know that the question should rather be: 'Where are we when we are in the monstrous?' (Sloterdijk 2011, 630)

More than fifty years ago, the Earthrise photograph and its subsequent multiplications seemed to substantiate 'the whole' as a political category. The totality of the planet captured in a picture sustained an 'external' perspective to such an extent that the ones who live now "are forced to project their hometown as a point perceived from the outside" (Sloterdijk 2008, 38). The intense space exploration carried out during the latter half of the twentieth century appears to have made a robust return over the last years, in a context within which the views from the outside seem to drive 'our' imagination. This reverie, however, might be a contradiction to what happens on the ground, thus, inside. As Peter Sloterdijk (2011) questions, where are we when we are inside? The concrete horror and the actual materialities presuppose a different point of view: being-in means therefore being in the muddy realities of life on the ground. In other words, by analyzing a concrete, contemporary example, what the following argumentation suggests is that this sublime overview 'loses sight' of the terrestrial actuality.

Santa Maria Island, located in the middle of the Atlantic Ocean, has been particularly noticed following the relatively recent news of the construction of a European Space Agency facility with the capacity to launch minisatellites from 2023 onwards. In geographical terms, this island is doubly remote: in relation to the Portuguese mainland, and within the archipelago itself. Remoteness, as Owe Ronström (2021, 272) argues, is "a part of the logic that organizes the world in terms of power and control." In this sense, the island's remoteness is presented as beneficial for the current political vision attributed to it: it is remote, therefore suited for a spaceport. To reflect on Santa Maria as an example of a 'shortened vision,' this article argues that the political-technical imaginary envisaged for the island disguises the absence of a project for the actual inhabiting realm, thus, for life in the monstrosity.

The purpose is to engage with infrastructural space exploration materiality as an object of concern, through the lens of the techno-hope concept: here conceived as a successful apparatus behind the desire for a Spaceship Island, which will be developed later in this text. The space-aspiration for the southernmost island of the Azorean archipelago reveals "the contingency-generating, boundary-dissolving, yet often imperceptible ways in which human-technical systems continually reorder

existence and are in turn reordered" (Allenby and Sarewitz 2011, 159). In this direction, Santa Maria is envisaged as the next Spaceship Island. Within this foresight, one of the goals is to "increase the visibility of the Region as an Atlantic platform for space-related activities" (Regional Government of the Azores 2022, 6). For the necessary disruption with its insular limits, Santa Maria seems to be conceived as a potential full "technoscape," drawing upon an Arjun Appadurai's (1996, 34) formulation, in which "[technology] moves at high speeds across various kinds of previously impervious boundaries."

Along this line of reasoning, and as this article intends to further develop, an apocalyptic scenario or, as an alternative, a vertigo-trip eventuality, might come in the aftermath of the achievement of the techno-hope political tool. In this direction, it seems useful to bring in Rania Ghosn and El Hadi Jazairy's (2014) concept, "airpocalypse," in involving the loss of terrestrial coordinates, or an utter detachment from the ground.

In this context, the eagerness to evade the monstrous rises through its intertwinement with the hopeful pledge that 'we can be astronauts' departing from Santa Maria Island.[1] Let us consider a particular moment during a conference held online, on the 21st of April 2021, when Ricardo Conde, the current President of the Portugal Space, was questioned by a member of the audience about the impacts of the space infrastructures in the Azores:[2] part of the answer was "our main objective is to look as a whole," "the Azores is a key-point of interest"[3] (Climate Science from Space Conference 2021). Despite having the Azorean flag displayed at the back of the room, the answer was directed into a pure global issue, manifesting, it is argued here, the techno-hope within a (geo)political frame: through the emphasis of the 'interconnectedness of everything,' the holistic perspective as the goal, since "we are addressing what we call a Digital Planet" (Climate Science from Space Conference 2021). Indeed, when we look at the whole, we forget the parts, and the techno-hopeful narrative arguably produces definitive technological and technocratic solutions, subject to be applicable anywhere. To put it differently, looking at the whole might be an attempt to escape being-in, or to escape the monstrous.

Archipelagic Geographies of Hope

As Slavoj Žižek aptly put it, myths and illusions are the innermost constituent of society, thus mystifications are part of the State's structure

1 Even if the expression 'we can be astronauts' was not specifically pronounced during *The Strategy of the Azores for Space* conference, this article considers that it resumes the incitement underlined throughout the speakers' interventions.

2 The question was: "how do you see the contribution of the Portuguese infrastructures being created in our Azores islands to mitigate the impact on climate change and environmental disruptions?" (Climate Science from Space Conference 2021).

3 The other part of the answer was: "we cannot look only to infrastructures that are creating an impact, this is an overall synergies and critical mass of knowledges, infrastructures, to act all together on that" (Climate Science from Space Conference 2021).

(Backdoor Broadcasting Company 2015). In this light, "islands form a paradigmatic battleground between scientific method and mythological narrative" (Samuel 2016, 92), and, for the purpose of this chapter, the Azorean islands are considered a contemporary example of such disputes. Indeed, "in the archipelagic system, each island presents the opportunity to dream about the next one" (MAP Office 2016, 65), and the 'island allure' (Grydehøj 2017, 10) is now aimed at Santa Maria.

The 'geographies of hope' (Anderson 2006) require territories of mediation, and this article considers that the islands perfectly fill those imaginaries of conciliation: between land, sea, and space. The confluence of terrestrial, maritime, and aerial condensed in those portions of 'identifiable' land—in fact, one can point to them on a map, even if "islands 'are the rule and not the exception'" (Daou and Pérez-Ramos 2016, 7)—conducts to "the idea that islands are things that we can point to *in* preformatted space" as "an artifact of our anthropocentrically scaled worlds and projects relating to islands. We want to land on them" (Morton 2016, 75). Moreover, the Azorean archipelago has been subject to contemporary multi-layered negotiations, insofar as its geographies and materialities give rise to new ambitious forms of territorial control: the bordering operation is, thus, extending from the terrestrial and maritime domains to the outer space realm.[4] Accordingly, the archipelago composed of nine islands is, today, profoundly 'wet' and 'moist,' considering the current sites of dispute or 'gray zones,' as formulated by Alison Mountz (2013, 830), which are the current ambitioned configurations for the production and operation of geopolitical power.

In this sense, the archipelagic geographies of hope deal with "the political geography of non-terrestrial spaces and territories that are increasingly important as resource prospecting moves further offshore, poleward, and even off-planet" (Stratford 2018, 15), and under which the Regional Government of the Azores characterize the required technological operations as unproblematic, or rather favorable: "[the installation of a spaceport] is intended to attract relevant industry actors in this sector, with positive impacts for the regional economy" (Regional Government of the Azores 2022, 14). In the aftermath of the current planetary acknowledgment of climate change, an 'elite'—meaning individuals or organizations that can influence and can take part in major political decisions—orientates its objectives and investments far-flung from the doomed Earth. Contemplating the Blue Marble from above is already turning into an experience available to the wealthy, and that experience should not be shared with 'others,' the ones who are condemned to stay on the ground,

4 See "the need to 'search for new opportunities in the Atlantic'" manifested in the scope of the international conference titled *All-Atlantic 2021* (Lusa 2021a).

as the ambition for "the possibility of framing [the spaceport] in activities the so-called 'space tourism'" (Regional Government of the Azores 2022, 14) seems to reveal.

Nevertheless, as a shared imaginary, the archipelagic geographies of hope 'save us' from a perpetual 'being-in' scenario, insofar as they enable the evasion from our condemned terrestrial 'reality.' Let us observe fig. 1: even if "Bernal's cosmic spheres were not hermetically sealed, and his interest in the future was not limited to closed, totalistic scenarios either" (Scharmen 2021, 44), these where "giant spheres that could reproduce themselves, filling the space in the Solar System with environments in which humans could live comfortably" (Scharmen 2021, 43); in that sense, it also might represent an evasion from earthly conditions.

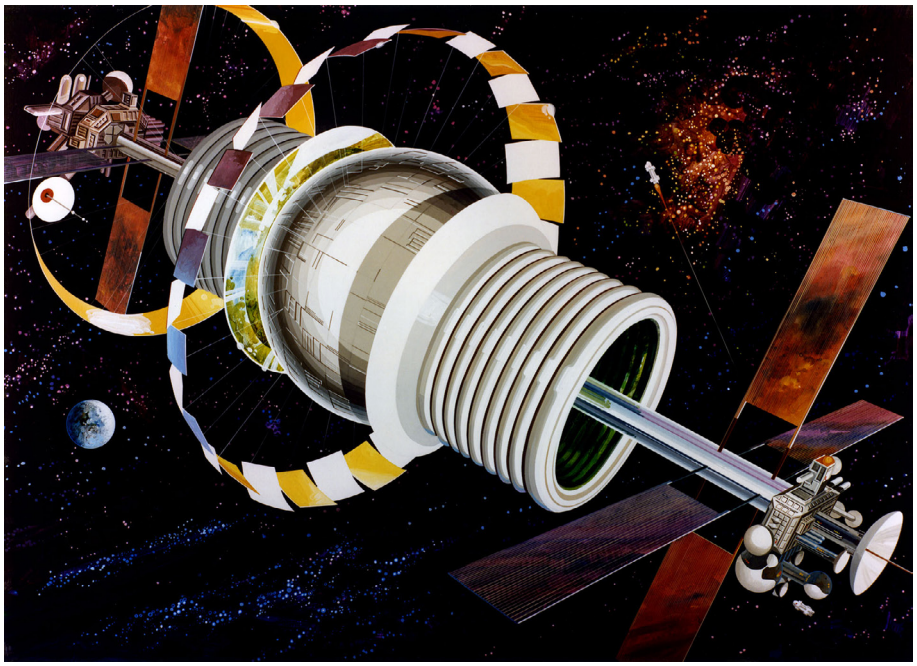

Figure 1. Rick Guidice, *External View of a Bernal Sphere,* (1979) (credit: NASA. Public domain in the United States)

The promise of transcendence out of this planet starts in said locations, where the Earth can be accessed from above, engaging with it within a contemplative dimension; and the spaceport in Santa Maria Island seems to be among the next moves of the relentless demonstration of progress.

Santa Maria, a Spaceship Island

Over the past decade, several technological projects have been installed on Santa Maria Island, such as the Atlantic Network of Geodynamic and Space Stations (RAEGE). At the beginning of 2019, the Portuguese Government approved the creation of the Portuguese Space Agency, headquartered on the Azorean Island. The first launches of small satellites were expected to happen in the middle of 2021, however the two consortiums competing for the construction of the spaceport were excluded. Given this scenario, "the industry is ready, but the lack of a spaceport holds back growth" (*Jornal Económico Especial* 2021). The spaceport is, thus, referred to as inevitable for progress. Subsequently, the Regional Government of the Azores proceeded on reviewing the conditions for the construction and exploration of the infrastructure, also considering the contextualization of the space mission program in the recent Recovery and Resilience Plan for Portugal (Morais 2021). Despite these recent impasses, the small island has been referred to as "a hub," and "a technological axis" (Regional Government of the Azores 2021). Not long ago, in April 2022, a new tender for the construction of the spaceport was launched (Lusa 2022a), following the work on the adaptation of "the documents under the terms and in accordance with the recommendations issued by the court, after hearing various consultants and with the support of an external legal office" (Regional Secretary for Culture, Science and Digital Transition 2022). This news proceeds a series of juridic disputes among the Regional Government of the Azores and the Government of the Portuguese Republic, manifested by the former Minister of Science, Technology and Higher Education, Manuel Heitor, who went even further saying that there was "incompetence" on the part of the Regional Government of the Azores to move forward with the space port of Santa Maria (Lusa 2021b). More recently, however, the Regional Government stated that the purpose of the spaceport is "to be effectively an asset to the island of Santa Maria in particular, and to the Azores in general, taking into consideration all factors, including technical, environmental, and economic, among others. We are not prisoners of anyone's agendas"[5] (Regional Secretary for Culture, Science and Digital Transition 2022). Here it is then, the muddiness of life on the ground, the concreteness of reality once the sublime overview starts to turn into tangible matters. The monstrous, in a Sloterdijkian sense, starts to be exposed through these tensions, when the techno-hope apparatus loses consistency and evolves into a precipitous premonition.

5 Meaning that the Regional Government is not subjugated to the Portuguese Government in this specific domain.

The technological-hopeful operation comprises the construction of infrastructure, which is the 'ground' for planetary geopolitics and within which governance issues frequently overlap the materiality subject and its related effects. However, as Julie Michelle Klinger (2019a, 11) claims, "on Earth, the environmental geopolitics of outer space are inseparable from questions of environmental justice." The Santa Maria Island's remoteness is essential for the installation of infrastructures unavoidably characterized as necessarily securitized, possibly dangerous, and likely to produce environmental material consequences (Klinger 2019a). Indeed, as Ronström (2021, 285) claims, "remoteness is a fragile and volatile quality."

This case can perhaps be inscribed within a "logic of the contemporary space race—a race that fundamentally entails the transformation of nascent spaces into environmental sacrifice zones" (Desai 2019, 42). In effect, the spaceport is not an abstract 'point' within a network of connections, but, rather, such infrastructure encompasses "material and political sediment dynamics" (Sanjuán 2019, 126). The island's technical infrastructure extends beyond the 'borderless' domain of space exploration, upon which the new territorial claim of ownership is being built. The pursuit of spatial control stresses political-technological solutions, and the technologies comprised in this operation are powerful enough to re-mediate the territorial condition. In this light, the technologies of the visible converge to this earthly infrastructure, as an imaginary Spaceship Island; which appears as extensible, promising, and sufficiently secluded to engender the most technological and hopeful scenarios.

Furthermore, even if "[we] are all astronauts," as Buckminster Fuller (1969, 56) affirmed, it seems that the desire to reach outer space domains avoids undertaking the return path: the operation which involves rising above our terrestrial level is far more attractive if it is stopped once it reaches orbital domains. In other words, it seems to be far less appealing to think about 'the way back to the ground;' and for this activity to be accomplished in such 'incomplete' terms, the present reasoning understands that the techno-hope instrument is paramount in the maintenance of collective imaginaries—or rather, concerns—at higher altitudes. In essence, between the space exploration ambition and the island as 'the' platform, the heavy and 'real' infrastructure seems overlooked. Therefore, considering that "the distinction between infrastructure and sociality is fluid and pragmatic rather than definitive" (Simone, n.d.), its entanglements deserve further analysis. Fundamentally, for the techno-hope mechanism to achieve its purpose, 'one pretends to not see it;' the technical structure is removed from the center as a matter of concern, and the hypothetical scenarios gain prominence, instead. The success of this

oblivion, as conceptualized here, is attributed to the techno-hope apparatus.

Techno-hope, a Performative Apparatus

In 1966, Cedric Price asked "[t]echnology is the answer, but what was the question?" Framing Price's provocation in this case, techno-hope is conceived as a political tool that succeeds precisely on this oblivion of what motivated the use of technology in the first place. Even if "nothing is more human than technology" (Colomina and Wigley 2018, 132), technological perseverance alone could not guarantee consciousness about the operations to be carried out. There is, it seems, a hopeful discursive structure behind it, thus constituting the techno-hope instrument, where "the mighty realm of *possibility*" (Bloch 1954, 202) is played out.

The 'techno-hope' expression is inspired from the 'techno-optimism' term, as Julie Michelle Klinger explores (2019b, 34); however, it differs in its meaning: it is intended to be more determinant in the prospect of an actual change. In this light, it seems necessary to draw upon Ben Anderson's (2006, 747) reasoning, which defends that "becoming hopeful is therefore different from becoming optimistic. It involves a more attuned ability to affect and be affected by a processual world because it is called forth from the disruptions that coax space-times of change into being within that world." In the same way as Klinger (2019a) proposed, the suggestion is to disassemble the hopeful dimension to disclose the potential conflicts, therefore, "attuning how hope takes place" (Anderson 2006, 748).

On the 11th and 12th of November 2021, the Government of the Autonomous Region of the Azores publicly announced *The Strategy of the Azores for Space*, that ran online. In the opening speech, the former Regional Secretary for Culture, Science and Digital Transition, Susete Amaro, asserted that the space strategy "will seek for new ways to develop and to create value," and added: "one thing we are sure of, technology will continue on its evolutionary path" (Regional Government of the Azores 2021). This first intervention, as others did, referred to the 'Portuguese maritime discoveries' in a laudatory manner to point out that "Portugal is a country of dreamers, who aspire to reach further," and that "space is in our aspiration" (Regional Government of the Azores 2021). In this regard, the event seemed guided by a praising discourse when recalling the circumstances of more than five hundred years ago, allowing a historical revisionism of colonialism as glorious considering space aspirations. In other words, the uncritical acceptance of the past, or rather, its enhancement, render the

current aspirations for the island automatically acceptable. Such validation leans on this tautological speech, in which there is an implicit double invitation: to forget all the actions and repercussions, and to focus on the promise for eagerness.

In the same line of hopeful narrative, consider a text by Filipe Alves, the Director of the *Jornal Económico* newspaper, who stated that "the Discoveries of the 21st century take place in space and Portugal has all the conditions to take part in this race" (*Jornal Económico Especial* 2021). This statement integrated a special publication dedicated to the aerospace industry, whose cover highlighted the subtitle "Future commissioned to Santa Maria" (*Jornal Económico Especial* 2021). Effectively, it seems that the techno-hope is revealed in this not-yet eventuality, and according to Erich Fromm's (1968, chap. 2) thesis, "there is no sense in hoping for that which already exists or for that which cannot be;" which means that "if there is a real possibility, there can be hope" (Fromm 1968, chap. 7); see fig. 2, in which Copernicus is depicted around his work instruments, while looking above, seemingly in a vulnerable position: one might add that it probably represents the moment when he confronted his faith with his renowned and, at that time, revolutionary Heliocentric Theory. In this sense, hope appears strongly present in Matejko's painting since it suggests a there-is-a-real-possibility instant.

Figure 2. Jan Matejko, *Astronomer Copernicus, or Conversations with God*, (1872) (credit: Wikimedia Commons, Public Domain)

Returning to *The Strategy of the Azores for Space* conference, the commonality or shared hope was tenacious, as this statement attests: "Portugal Space wants to reduce the spaces between us, for the benefit of all," since the goal is to "make the space our space, in a shared dream" (Regional Government of the Azores 2021). Terms such as dream, future, challenges, development, technology, ambition, evolution, progress, and space democratization, were definitely recurrent terms, as well as evidence for the fostering of a concerted hope. In addition, one dimension inherent to 'hope' is the one of 'faith,' and in accordance with Fromm's (1968, chap. 3) assertion "hope can have no base except in faith," and both "are by their very nature moving in the direction of transcending the status quo, individually and socially" (Fromm 1968, chap. 4). A demonstration of this element of faith was performed by the former Regional Secretary for the Sea, Science and Technology of the Azores Regional Governement, Gui Menezes, when stating that: "we believe that the future of our Region is also in Space" (Portugal Space 2030 2018, 12). Moreover, and paradoxically, if hope might exceed the status quo—in the sense of relocating the individual and, above all, the collective imaginary from the current situation—it also enables the preservation of the status quo, namely the one referring to some political institutions and individuals. When both Governments of the Portuguese Republic and the Region of the Azores engage in such events, they direct the attention towards the future, which can also serve to draw attention away from the present, from 'being-in' in its actuality. Therefore, given that "hope is a decisive element in any attempt to bring about social change in the direction of greater aliveness, awareness, and reason" (Fromm 1968, chap. 1), the techno-hope vocabulary cultivates hopefulness.

Concomitantly, the expression 'climate change' was a persistent one throughout *The Strategy of the Azores for Space*, which was seemingly unavoidable as the 26th UN Climate Change Conference of the Parties (COP26) occurred at the same time in Glasgow. Additionally, the 'space debris' issue was periodically emphasized as foreseen, since spatial debris is an issue of genuine concern; considering that "within the sea areas, over a hundred million pieces of debris circulate, ranging from the size of a grain of sand to decommissioned satellites" (Klinger 2019a, 19). Even if the orbital congestion and potential territorial consequences are acknowledged today, the countries involved in this contemporary race do not want to 'miss the opportunity,' or instead, not 'take action' quickly enough. An example of the urgency to act might be found in a recent interview, where Conde declared that the Santa Maria spaceport "must happen next year," and added, "I see no other possibility" (Neves 2022). It is

disappointing that the interviewer did not question the nature behind the assertiveness of Conde's statements, however, I would suggest, here, to cross-examine it with another declaration, that the "ideal moment to position Santa Maria as a privileged place" (Rodrigues 2022) has arrived: the latter was voiced by Bárbara Chaves, the Mayor of Vila do Porto in Santa Maria Island, some months ago. Chaves requested "that all possible contacts be made with the Portuguese State and the European Union," given that there is presently "another window of opportunity," which consists in "a new legislative package, presented by the European Commission, which aims to reinforce the European Union's satellite connectivity system and, at the same time, reinforce Europe's action with regard to the management of space traffic" (Rodrigues 2022). As of 13th of December 2022, "the Government of the Azores ensures that [the] spaceport in Santa Maria will advance in 2023" (Lusa 2022b). The urgency to take advantage of the present context seems evident, and for Miguel Gonçalves, national coordinator of the Planetary Society, "whoever wins the race, wins everyone's attention, and gets to build a space station" (*Jornal Económico Especial* 2021).

Nevertheless, in the rush to make it into the contest, the 'real' impacts concerning the satellite launch operations, just as all the infrastructural apparatus to carry out those strategies, were not a focal point during the conference held over a year ago. Luís Santos, the former Coordinator of the Azores Space Mission Structure, brought up the theme in an abbreviated way, saying that "the implementation plan will have an environmental strategy" (Regional Government of the Azores 2021). Indeed, the *Azores Strategy for Space* (*ASS*) document asserts, in an abstract manner, the importance of "[s]afeguarding land and sea areas of the Azores and their environment" (Regional Government of the Azores 2022, 9).

These strategies developed by the Regional Government, along with the Portuguese State, and several institutions and corporations, demonstrate "how to be political affectively" (Anderson 2006, 748) and, in this sense, 'hope' intertwined with 'technology' withdraws the ideology behind it. Simultaneously, in a paradoxical way, it is filled with ideology, in the sense that the techno-hope apparatus seems to correspond to what Žižek (1994, 15) defined as an ideological phenomenon: "the elusive network of implicit, quasi-'spontaneous' presuppositions and attitudes that form an irreducible moment of the reproduction of 'non-ideological'" practices. In this light, techno-hope seems discernible and profoundly performative in the latest discourses and events: a kind of continuous jubilation, indestructible; it does not rest on a particular individual, it is instead a collective cultivated 'hope,' wherein the collective is determining "what can be

hoped for" (Anderson 2006, 746). Nonetheless, this cultivation is being done within and for a particular sphere: the governmental, institutional, and entrepreneurial one. The promises carried out by this specific type of 'hope' are contingent on the results of the materiality itself: jobs, better life, tourism etc. According to the techno-hope mechanism of discourse, the beyond disrupts actuality, and progress is "transcending without transcendence" (Bloch 1954, 210).

The techno-hope instrument forces the recognition of "technical landscapes of control," an expression transferred from Anssi Paasi's (2009, 226) theory: that these landscapes are gradually realized as distant from the territory *itself*. To put it simply, even if 'hope' alone seems to call for emotive sensations, its association with technological events is nothing but pragmatic. To succeed, the techno-hope instrument seeks for environments other than land; in this case, the extraterrestrial realm. Within the discourse which aspires for an "electronic atmosphere" (Sloterdijk 2008, 21), in which "the field of extended urbanization is pushed upwards into the earth's atmosphere through a thickening web of orbiting satellites and space junk" (Brenner 2014, 198), the infrastructures for such an endeavor are often disregarded. The physicality, materiality, weight, and volume needed to conduct the satellite launch fades away. The 'hope' surpasses the infrastructure 'reality,' insofar as the latter becomes immaterial. Suddenly, it becomes irrelevant, and it is precisely this entire virtualization of the operation that reveals the accomplishment of techno-hope as a political tool.

Furthermore, in the space exploration field, technological production sustains the drive for power and technologies seem to automate, to some extent, the act of decision. It appears that we are going towards a 'ubiquity of solutions' wherein the answers can be scaled-up, or borrowing Paul Virilio's (2013, 7) theory, "a kind of *résumé du monde* obtained by ubiquity." The techno-hope instrument is therefore a pivotal tool in this specialization amplified under the supreme authority of 'development.'

In addition, and returning to Price's provocation, it may be convenient to introduce one of Braden Allenby and Daniel Sarewitz's (2011, v) convictions: "technology is neither the answer nor the question, it's just the condition;" see fig. 3, where *The March of Intellect* depicted the future, with irony and exacerbation, loaded with technology as *the* answer.

In this operation dominated by a technological inscribed hope, state, region, government, companies, corporations, and institutions are implicated on a territorial arrangement, attested by the assertion that: "*The Strategy of the Azores for Space* will unite the nine islands, in a common exercise of improvement of our territory, our knowledge and of our

Figure 3. The March of Intellect, "Lord how this world improves as we grow older," William Heath, (1828) (credit: Wikimedia Commons, image licensed under the Creative Commons Attribution 4.0 International)

capacities towards a new development for the Azores" (Regional Government of the Azores 2021). Techno-hope entails an ambition for progress, and it has a territorial reflection on such improvement aspirations. As Neil Brenner and Stuart Elden (2009, 369) wrote, "the very concept of 'development' has come to be widely understood in territorial terms" and it is visible under contemporary capitalism. The essence of the hopeful operation might be resumed by drawing attention to what Isabelle Stengers stressed:

> we can also say that once it is a matter of what one calls 'development' or 'growth,' the injunction is above all to not pay attention. Growth is a matter of what presides over everything else, including—we are ordered to think—the possibility of compensating for all the damage that is its price. (Stengers 2015, 61)

It is suggested that the previous outline of some of the techno-hope manifestations—its discourses and policies—demonstrate, eventually, that this instrument's goal rests more on an Island Escape project than on a Spaceship Island.

The Island Escape, or the Vertical Standpoint

David Noble (1997, chap. 9) wrote: "what today we call space used to be known as heaven. From its earliest expressions, the enchantment of spaceflight was fundamentally tied to the other-worldly prospect of heavenly ascent." Within the same line of reasoning, "flight also resonated with the deepest impulses and symbols of religious and particularly Christian mythology—nothing less than Christ's ascension" (ibid). This divine dimension, the vertical one—or rather, *the* 'dimension of power,' using Michel Foucault's expression stressed out by Elden (2013, 36)—"gives a whole set of challenges about how you might think about a landscape and how you might construct power relations around those questions." Moreover, "while this vertical domain is conceived as a layering of spheres and flight paths, it is also a site of capital accumulation, filled with metallic hardware, synthetic materials, and toxic waste" (Parks 2013, 419–420). In recognition of the ambition for transcendence, "the nuances of our inescapably anthropocentric perspective must be appropriately critiqued," therefore "the ethical implications" must be addressed (Armstrong 2019, 149).

In fact, vertical geopolitics (Graham 2018) is in motion, and "actual operations of geopolitics" "are mediated through technological arrangements" (Klinger 2019a, 15). All the arrangements seem to be progress, movement, and hope. Under the techno-hope instrument, the dawn envisioned for the island emerges as a resurrection. This resurgence, transferring an expression elaborated by Fromm (1968, chap. 6), "is not the creation of *another reality* after the reality of *this* life, but the transformation of *this* reality in the direction of greater aliveness." Among the expected benefits to be achieved through the investment in the space sector, there is the "capture and retention of skilled labor[6] in the territory, with direct benefits for the Azorean economy, contributing to the establishment of skills and population in the archipelago" (Regional Government of the Azores 2022, 9). In this light, techno-hope emerges as a new means of escape from a 'fallen island.'

Furthermore, Conde wrote the following: "this is the one [life] I know, that I share with billions of other beings in a dependency in perfect balance, which, being fragile and already unbalanced, forces us to look outside ourselves, outside from here, as if this space we occupied was no longer enough, or because there's not that much hope here anymore" (Conde n.d.). In other words, if 'here,' in the terrestrial, hope is disappearing, one might actually 'find it' somewhere else: through techno-hope, these outside realms reconstitute the promise for a 'perfect balance.'

6 This refers to jobs that require higher education degrees, namely aerospace engineering.

Nevertheless, as Marta Peirano puts it, "the fantasy of dropping this planet that we already wasted and jumping to Planet B—also make us very vulnerable to opportunistic enterprises" (Bauer and Janša 2022, 16). The base infrastructure is set to be located on an island, however the aspiration is to depart from there, to reach other environments. What is left on the ground is the material 'reality' of such infrastructure, the islanders, and the island itself.

Via this reasoning, the techno-hope apparatus as a political instrument generates distance from the territories upon which it performs. Within these politics of hope, the island rapidly loses its territorial importance and, as such, becomes instead 'a position': a 'mere' location to point to on a map during conversations about global strategies and politics. A stain to be seen from above, within a flat political discourse. The techno-hope instrument appears to have this ability to shrink materialities, humans, and non-humans to a useless dimension. If "becoming hopeful embody[s] a 'radical refusal to reckon possibilities'" (Marcel 1965, 86, as cited in Anderson 2006, 742), in this case, the technology associated with the embodiment of desire obscures its potential material impacts.

The aim for transcendence; the aim to reach higher levels within the gravity game, conceals what happens on the ground. If the spaceport is not formalized, the island itself risks 'the fall,' just like the rebel angels depicted in fig. 4; similarly, the island and islanders might be driven into a pandemonium state if the envisioned order is not followed.

In other words, the fascination with the 'figure' of the island does not allow enough space for a significant scrutiny of the technical scenarios to be conducted, which withdraws the importance of the island's geomorphology, to put it simply, the island *as such*. What is missing, this article argues, is precisely to analyze Santa Maria Island "in its own terms" (Baldacchino 2004; Dawson and Pugh 2021).

In *The Techno-human Condition*, Allenby and Sarewitz (2011, 10) remarked that "as Stewart Brand put it in his first *Whole Earth Catalog* (1968), 'We are as gods and might as well get good at it'." In the progression of their theory, they continued the reflection: "We are as gods? No, for we have created the power but not the mind" (2011, 11), until they achieved a sort of conclusion: "We are, it turns out, in neither God's nor Darwin's hands, but in our own" (2011: 19). Indeed, "machinery and transcendentalism 'agree well'" (Ralph Waldo Emerson as cited in Noble 1997, chap. 7). Consequently, divine grace seems to be replaced by technological operations, resulting in digital views towards the Earth. Thus, the vertical standpoint prevails over the island itself—it seems that, ultimately, what was intended through 'techno-hope' was an Island Escape.

Figure 4. *Très Riches Heures du duc de Berry.* Folio 64, verso: The Fall of the Rebel Angels, Limbourg brothers, c. 1411–1416 (credit: Wikimedia Commons, Public Domain)

Vertigo-trip, Towards an Airpocalypse

> How can we respond to Sloterdijk's demand that we make air conditions explicit? Is it possible to see the future as dark, and darkening further, thus rejecting the false hope offered by positivist science and desperate economic fixes but without collapsing into despair? (Ghosn and Jazairy 2014, 146)

Let us imagine the aftermath of the techno-hope endeavor. Here *we are*, in a small island, in the middle of the ocean, where jobs were promised, an

economic improvement envisioned, tourism envisaged; as well as social benefits. But where did the extent of such promises go? What about the territorial and environmental unaccounted risks? In this pledge sequel, what are the labor dependencies? How to account for the non-human in this mesh of hope? Fundamentally, as Slavoj Žižek (2011) recurrently puts it, 'what about the morning after?'

This article attempts to argue that techno-hope is based on belief and technology. Basically, the belief that technology *will do it* is driven by the apocalyptic conviction that technology *must do it* to save us from oblivion. The prospect of the Spaceship Island is filled with ideas tempered by the perception of a technology that can save 'us.' The accomplishment of techno-hope premises a sort of 'zero point;' in the sense that it might give rise to an apocalyptic event. It does not have to appear as 'the end of the world' to be, in fact, complicit with it. Through the lens of this example, 'the end' perhaps comes as almost unnoticed, almost 'silenced.'

To achieve the "airpocalypse" (Ghosn and Jazairy 2014), it seems to be necessary that a disruption between the techno-hope impulse and the vertigo-trip breakthrough take place. This threshold foreshadows the future: between dream and despair, this hinge marks a potential deviation in the collective imaginary. It is a shared hypothesis which might reverse the modality of the concerted vision, from a confident mode to one of desperation. In this light, if "war is the technique of disruption par excellence," Hui (2019, n.p.) asks, "[t]oday, could global competition over the development of artificial intelligence and space technology become the new condition of such a war?" (Hui 2019). In this view, it appears that technology becomes "at the same time eschatology" (Noble 1997, chap. 2).

Indeed, the apocalypse here suggested might principally consist in "the moment of disorientation—a loss of direction" (Hui 2019). Furthermore, "such a disorientation can be seen as a desirable and necessary deterritorialization of contemporary capitalism, which facilitates accumulation beyond temporal and spatial constraints" (Hui 2019). The dual operation of abstraction and exploitation of the atmospheric space goes in tandem with the exploitation of the terrestrial and marine realm. Ultimately, Santa Maria Island seems to be part of a territorial synchronization process, in which the 'world' is animated through science and technology. However, transferring once again Yuk Hui's theory into this reasoning, "it also draws the world into the global time-axis which, animated by humanism, is moving towards an apocalyptic end" (Hui 2019).

The insular condition reveals itself as an inescapable one. It begins on the ground, where the operation is being built. And it strengthens and continues as a 'mission,' and as a 'collective imperative.' In this case, sustained

in the Portuguese history, as it was underlined several times during one of the conferences referred to: "we, Portuguese, are explorers" (Regional Government of the Azores 2021). The assignment becomes vigorously entrenched through a repetitive mantra, 'we are destined to explore.' The reiteration of the task easily loses sight of its basis; of the ground. Indeed, similar to aircraft and flying, space exploration offers a "radical rupture" "against a ground-level society" (Graham 2018, 52). On the one hand, the historical revisionism of colonialism, mediated by techno-hope, obscures causes and consequences, as if a steamroller was reducing the past and the present into a single two-dimensional layer, unquestionable and irrelevant: what stands out is the 'higher,' perhaps 'divine' mandate that must have been behind the 'deeds;' on the other hand, the only mission of the obfuscation of the present condition seems to be to set our eyes on the future. The confluence of these maneuvers emerges in the pursuit of an unrestricted action, as Conde's exposition illustrates: "[w]e need to colonize other worlds, but we carry the fragilities of our species" (Conde n.d.).

Basically, the techno-hope vulnerabilities seem extremely linked to an apocalyptic finality. Apocalypse derives from the Greek term *apokálypsis*, meaning 'revealing' or 'uncovering,' as the name of the "Book of Revelation," also known as the "Apocalypse of St. John," denotes David Noble (1997). When referring to the apocalyptic nature of hyperobjects, Timothy Morton (2013, 144) wrote that "they do not catapult us into a beyond. Rather they fix us more firmly to the spot, which is no longer an embeddedness in a world" (Morton 2013, 144). In the scope of this text, this is precisely what this eventual airpocalypse is: the disclosure of the tangible outcomes of the techno-hope apparatus. In this sense, it does not emerge as a disappearance or transcendentalism, rather it is the depletion of the conditions that appeased an earthly existence. A possible revelation, in this context, might put into question the fundaments of the process that leads to that same exposure. The loss of coordinates, in a Sloterdijkian (2008) fashion, might be perceived here as what happens when 'revealing' or 'uncovering' takes place: the population and the island appear as being withdrawn from the center of the operation. In essence, this potential transition—from hope to frustration—is what is suggested as evidence of a potential airpocalypse.

The Angel of History, see fig. 5, as famously interpreted by Walter Benjamin, looks at the past, even though the impetuous force of progress drives him into the future. Perhaps one might recall this metaphor to imagine alternative prospects of an airpocalypse, or rather, "we can also imagine a bifurcation of the future, which instead of moving towards the apocalypse, diverges from it and multiplies" (Hui 2019).

Figure 5. Paul Klee, *Angelus Novus*, (1920) (credit: Wikimedia Commons, Public Domain)

In the face of this potential vertiginous perspective, the entanglement between hope and apocalypse seems to involve a productive reflection. Between the 'not-yet' and its actual accomplishment, there might be a collective imaginary whose essence could radically shift. The focus should be on what is now emerging. The possibility of this spaceport and attached operations to be conducted might unfold into several scenarios, which entail future structures and new beginnings. New earthly cosmologies are needed, as Hui (2019) advocates. More particularly, this anticipated airpocalypse might give way to the search for new cosmologies of islandness. In other words, this is an incitement to think beyond the end of the world seen from an island.

To put it simply, under the techno-hope terms, the materialization of the space mission seems to be left behind. The politics of hope, in this context, remain in the upper spectrum, looking and measuring the Earth from above. The undeniable importance of such activities might be accompanied with a landing on the ground; which is, in fact, what Bruno Latour (2017) urges us to do. Let us, then, land on the island.

Conclusion: Back on the Ground

Since the end of the twentieth century and during all the twenty-first century, projects aspiring for space exploration, regulation and possession are part of the so-called global agenda. The archipelagic geographies of hope envision and summon the 'future,' and Santa Maria Island seems to be the next epicenter, where a new commencement is promised.

The pursuit of a planetary monitorization, its calculation, surveillance, and manipulation encompass the grasp of the Earth-object; of its totality. However, in this process of targeting the global, the singular dimension emerges as (almost) insignificant, or in other words, the goal to track what happens in our 'near' environment exceeds the importance of the earthly ground. Timothy Morton's (2013) thesis on the impossibility of a holism of any sort might prove useful for such an argument. Considering that the "*world* is an aesthetic effect based on a blurriness and aesthetic distance" (Morton 2013, 104), and that the 'world' concept "is by no means doing what it should to help ecological criticism" (Morton 2013, 106), the attention to localized ecosystems could potentially be one of the responses. If the Global Agenda Council on Space Security (2015) uses as one of their mottos 'bringing space down to Earth,' one probably might add: 'and looking upon what happens on the terrestrial ground.' In doing this, "infinity stops being abstract and starts to become very precise" (Morton 2013, 79).

The aim of this article was to articulate the techno-hope concept and the potential of an airpocalypse, in the light of the project for the construction and exploration of Santa Maria's spaceport. One of the outcomes of this exploration is the acknowledgment of a technological-hopeful instrument implicit in the discourses and policies of governmental institutions. In addition, the prospect of an apocalyptic scenario seems to unfold an "eco-colonial gaze" (Grydehøj 2017, 10), a sort of contemporary colonial ecology, which departs from an island in the middle of the Atlantic Ocean. This overlap might enable us to anticipate the scenarios, or at least some consequences, of the fusion of political power with techno-hope in the Azores. In this exercise, critical questions about who will benefit from space exploration projects, should they proceed, remain.

If "hopefulness, therefore, exemplifies a disposition that provides a dynamic imperative *to action* in that it enables bodies *to go on*" (Anderson 2006, 744), techno-hope urges to this progress to keep going. Within this contingency, the 'business-as-usual' arrangement often stands out and, consequently, limits both discussion and public consultation to a narrow space. The techno-hope apparatus seems to be simultaneously originated and directed to the same entities and individuals, justifying

itself through a narrative repetition: it combines progress, future, jobs, better life, evolution, and growth, all under the same 'dome.' To a certain extent, it appears as a circular tale, operating within the same sphere. In this hopefulness roundabout, this article suggests that there is a rift between the governmental/corporate domain, and the territoriality-to-be, expressed in the lack of concern for the materiality of the operations to come—and the techno-hope instrument—which is behind the accomplishment of this division.

The importance of satellite technology within contemporary life is undeniable, however, this progress envisaged under a techno-hope and an apocalyptic frame should be subject to a territorial and societal analysis; otherwise, the needs of the Azorean people will likely turn out to be unaccounted for and therefore neglected. In recognition of the political and strategic role of space exploration speculative scenarios, one might add that this archipelago will probably continue to be subject to new or simply adapted normative instruments, contingent to global politics. Regarding space policy specifically, it is essential to highlight that legislation and regulation are still in the process of being formulated; insofar "the regulatory framework is yet to be completed" (*Jornal Económico Especial* 2021); therefore, this article recognizes the political urgency in approaching the Azorean space strategy.

In fact, there is no such thing as 'virtual,' since it is also material, territorial, and societal; there is no such thing as a digital cloud, nor immaterial control. Through techno-hope, public and private companies construct the oblivion of these interdependencies. When the acknowledgment of this interconnection emerges, the prospect of the situation suddenly might not look so ideal. The material reality of such operations simply seems to vanish—or, at least, is relegated—to the sidelines. In the end, techno-hope could potentially translate into a loss of islandness, or a loss of coordinates; which might reveal itself as an apocalyptic consequence.

To conclude, what the overview suggests is that the crucial standpoint demands an alignment in accordance with Appadurai's (1996, 7) reasoning: "[t]he imagination is today a staging ground for action, and not only for escape." The contemporary hopeful manifestations appear as capable of volatilizing substantial matters, volumes, weights, and impacts. In essence, it seems to be 'techno-hope' over 'infrastructure,' eventually reaching an 'airpocalypse.' Fundamentally, the hope for modernization obfuscates the terrestrial ground from which such an operation is to be conducted, and the Island Escape leaves behind the island itself.

Acknowledgments

This research was funded by the Portuguese Foundation for Science and Technology (FCT-MCTES) through national and European funds (European Social Fund), under the scope of the Ph.D. Grant 2020.05223.BD. Thanks are due to Dr. Jenny Stümer and Michael Dunn, as well as to the two anonymous reviewers.

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