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## The European Green Deal as a Moonshot – Caring for a Climate-Neutral Yet Prospering Continent?

Vincent Gengnagel & Katharina Zimmermann \*

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**Abstract:** »Europas ‚Mann-auf-dem-Mond-Moment‘? Zur Legitimierung des Green Deal zwischen Wachstums- und Wohlfahrtsversprechen«. In this paper, we argue that the European Green Deal (EGD) represents a focal point for the fate of the European Union: Will the EGD highlight the EU’s critical flaws and stir social conflict, or will it revitalize the European project with a “new green spirit,” renewing the legitimacy of European market economy? Taking the EU Commission’s claim that the EGD should become “Europe’s man-on-the-moon-moment” at its word, we discuss the parallels and differences between the US 1960’s space mission and the European “green mission.” By analyzing cultural infrastructures of the two monumental governmental projects, the article unpacks three underlying themes that the moonshot metaphor alludes to regarding the EGD’s societal legitimacy: 1) the contextualization of the Green Deal as a hegemonic ambition in a new “race” for the leading development of a green growth economy; 2) the evocation of capitalistic welfare that is imagined as a European Dream, just like the moon landing was closely related to and revitalized imaginaries of an American manifest destiny; and 3) the attempt to de-antagonize EGD-critical social forces. Speaking “truth to power,” social protest can become a source of legitimacy itself for liberal governmentality, like antagonists of the US space race were – in the eye of the public – converted into believers of the American Dream.

**Keywords:** European Green Deal, social legitimacy, social movements, mission economy, EU governance, eco-social transformation, moonshot, history of governance.

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## 1. Introduction

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The European Green Deal arrived with flourish and fanfare at a critical moment in European history. It was December 2019, the end of a long and eventful year for climate activists. After 12 months of *Fridays for Future* protests, tense political debates on worldwide climate change, and a much-discussed but ultimately relatively toothless climate summit in Madrid, the European Commission (EC) presented its plans for a “European Green Deal” (EGD). The new policy strategy

aims to transform the EU into a fair and prosperous society, with [...] no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use. (EC 2019a, 2)

And then came the COVID-19 crisis. Suddenly, funds previously earmarked for the EGD with its socially acceptable restructuring of non-regenerative sectors, were discussed to absorb the various urgencies of the pandemic – and then brought together in an integrated financial package (Eckert 2021). Highlighting the pressing need to strengthen the ties of solidarity that can “giv[e] political shape and definition to Europe’s future” (Habermas 2020, 2), this led to the EU’s “largest stimulus package ever,” with €1.8 trillion to “help rebuild a post-COVID-19 Europe. It will be a greener, more digital and more resilient Europe” (EC 2020; see also Lenz 2021). In 2022, these goals have become even more closely linked to the geopolitical implications of fossil energy consumption after Russia invaded the Ukraine.

Already before the current return to a cold-war-constellation, the EU recognized the historic potential of a green transformation. “It is ambitious, it is designed to be just, and it is made in Europe for Europe to lead the way to climate neutrality in 2050,” said Ursula von der Leyen (2019), head of the EC at the launch of the EGD, highlighting the lofty goals of the project:

Europe has always given its best when it has worked together, as a Union. We give our best when we are bold and aim high. With the European Green Deal we are aiming high. Europeans are calling on us to drive the change. Now it is up to us, to answer their call.

Marrying environmental sustainability and financial gain in a benevolent vision of climate-neutral prosperity, the EGD was presented by European leaders as a historic leap forward. In the words of von der Leyen, the Green Deal has the potential to become “Europe’s man-on-the-moon moment” (Euronews 2019). At first glance, the “moonshot” metaphor points plainly to the higher calling of a monumental undertaking by government and society. This was how John F. Kennedy described the moon landing in 1961, claiming that “no single space project in this period will be more impressive to mankind, or more important for the long-range exploration of space.”

On closer look, however, a more nuanced vision of governmental ambition emerges from the remarks of Kennedy and von der Leyen. At the heart of both the 1960's US-American space mission and the 2020's European green mission, we would argue, lay a quest for legitimization – the societal backing needed to mobilize cultural infrastructures (McNamara 2015) for large geopolitical and economic projects.

This paper offers a reflexive historical-sociological analysis of the “moonshot” and its conflicting cultural characteristics, which help to reconsider the current challenges of European infrastructures of legitimacy. In stating that the EGD has to “answer their call,” von der Leyen (2019) imagines a European citizenry whose sense of urgency in the face of the climate catastrophe is lending itself to the EU's initiative. By focusing on the legitimating cultural dimensions of the EGD, the paper seeks to unravel facets of the EU green transition ambitions which necessarily remain below the surface in analyses of the EGD's policy and governance dimension (Bongardt and Torres 2022; Eckert 2021) and of “green governmentality” in general (see Stephan, Rothe, and Methmann 2013, 61). Conceptually, the EGD can be understood as an attempt to revitalize the European project both in terms of the Green Deal being purposefully modelled after the moonshot's “mission economy” and in terms of understanding governmental projects that aim at “making history” as deeply embedded in the cultural and socio-political dynamics of their time.

The structure of the paper is as follows: As we will argue in the next chapter, historic moments (and the governmental programs they aggrandize) rely on popular support; their analysis, thus, requires a broad understanding of legitimacy. The broader terrain of a socio-culturally successful moonshot thus includes cultural imaginaries and social movements that play a pivotal role in stabilizing the precarious infrastructure of grand governmental projects. In turn, contesting voices gain public weight and governmental attention, making them prone to attempts of “discursive domestication” (chapter 2). In the following chapters, we address, first, the contextualization of the Green Deal as a hegemonic ambition that promises unimpeded green growth (chapter 3). Second, we illustrate the uniquely continental claim that emerges from this global competition: just as the moon landing evoked imaginaries of the “American Dream,” so does the EGD evoke the uniquely European take on capitalistic welfare and collective solidarity that feed into the “European Dream” (chapter 4). Third, we show the double rationale behind the climate goals. Von der Leyen does not only proclaim the EU's determination to achieve an ambitious program, but also the Commission's belief in its own ability to legitimately govern by reinvigorating the EU's socio-political standing vis-à-vis antagonized social forces: The governmental promise to deliver on adequate goals has to be maintained while popular, but unruly citizens – like Martin Luther King Jr. or Greta Thunberg – speak truth to power (chapter 5).

In the face of failed constitutional referenda, the finance and debt crisis, a broad trend of re-nationalization among EU member-states, Brexit, and the underlying legitimacy deficit (e.g., Kratochvíl and Sychra 2019; Wigger 2019), it is clear that the EU project requires any legitimation it can mobilize. Below, we discuss relevant imaginaries and ideological promises, and look at how the stand of opposing social forces during the 1960's moonshot and today's green mission crops up in governmental and public discourse. This is instructive – not only because it alludes to von der Leyen's own ambitions, but also because it provides us with a blueprint for a successful construction of a legitimate infrastructure. A careful look at the US initiative to put a man on the moon can help us formulate a range of questions that the debate over the EGD's potential for "success" will have to face.

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## 2. Infrastructures of Legitimacy

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To conceptualize how a governmental project such as the EGD is motivated, we look into how the EC directly draws on Kennedy's mission economy. In a second step, this is complemented by taking into account how these governmental articulations are embedded in a broader cultural infrastructure that depends on a sense of legitimate governmentality and popular support for a common goal. Because of this relational element, any monumental initiative that is stylized as a historic mission and related to broad cultural imaginaries is prone to being challenged by social movements that voice protest by linking countering agendas to the proclaimed common goals. What does it mean to face such contestation – and what does it mean to "harness the drive for change" (Mazzucato 2019, 3)? When taking a constructivist perspective on infrastructures of legitimacy, the "moonshots" become subject to hegemonic struggles with contingent outcomes. Drawing on Weber ([1921, 1922] 1978), McNamara (2015), and Laclau and Mouffe (1985), the steps involved motivate the methodological approach and structure the following chapters: articulation of a hegemonic ambition (2.1), revitalization of a myth (2.2), and finally the articulation of demands that oppose governmental power but can lead to both critical contestation of and discursive domestication by liberal governmentality (2.3).

### 2.1 Hegemonic Ambition – "We Must Harness This Drive for Change"

At first glance, von der Leyen's usage of the moonshot metaphor in presenting the EGD appears to draw on Mariana Mazzucato's (2021) "mission economy." The US-Italian economist maintains that

‘moonshot’ thinking is about setting targets that are ambitious but also inspirational, [...] about imagining a better future and organizing public and private investments to achieve that future. This, in the end, is what got a man on the moon and back. (ibid., 6-7)

Having worked with NASA, ESA, and Pope Francis, Mazzucato (ibid., xiii–xiv) provides the EC with a concept for *Governing Missions in the European Union* (Mazzucato 2019). Her report on *Mission-Oriented Research and Innovation in the European Union* (2018) repeatedly refers to the US moon landing mission as a role model for a “European mission” and is accompanied by an encompassing in-depth case study of the Apollo program that outlines several key lessons for the EU (Arrilucea 2018). These highlight, for instance, that “personal commitment and activism, scientific and technological ability, economic prosperity, and public mood made the Apollo Mission possible,” and point out advances in governance strategies as “an important outgrowth of the Apollo project” (all quotes ibid., 34). Finally, the case study quotes from *Mission Control: The Unsung Heroes of Apollo* (ibid.), pointing out the mission economy’s exceptionalism as a “pride of belonging” of the over 400,000 directly involved Americans: “we were greater than the sum of our parts. We became capable of doing what in most cases, would be considered impossible. We were better than we ever expected to be.”

While “personal commitment and activism” as well as “public mood” may be needed to reach the moon, Mazzucato’s Research and Innovation (R&I) report ultimately emphasizes to need to successfully manage conflicting expectations and align them with a universal goal that is clearly “greater than the sum of its parts.” As a successful mission economy is characterized by synergy, shared beliefs, and common causes, she sees citizen movements as crucial elements, from the labor movement to today’s “growing green movement – including the youngest school children – bringing the climate emergency right to the top of public priorities. We must harness this drive for change across different parts of our population to allow R&I across Europe to tackle the greatest challenges of our time” (Mazzucato 2019, 3).

## 2.2 Ecological Modernization – Revitalization of a Myth

To understand what this “harnessing” contains, we depart from a Weberian concept of legitimacy to the construction of European institutions (Lepsius 2017, 55). From this perspective, it is clear that the European Green Deal will not only be measured by its functional capability to deliver on its ecological modernization goals, but also by the extent to which it involves and inspires societal stakeholders. In other words, to implement the EGD, the EU Commission needs “input” and “throughput legitimacy” (Schmidt 2013). The EGD thus not only entails a policy and governance perspective – the main focus of the R&I reports – but also helps construct a cohesive societal framework and

universal ambition associated with the EU's normative power (Manners 2002, 253).

Explicitly targeting public mood and societal dynamics, the EU's green mission signifies a break with previous more technocratic governance strategies. McNamara (2015, 59) describes how the EU, "somewhat stealthily," was "able to establish itself as a banal, boring, technocratic entity with seemingly few claims on the passions and emotions of political life" with a "cultural infrastructure [...] built on the incremental accumulation of small, everyday and seemingly insignificant symbols and practices." Now, with the EGD designed as a mission that seeks to harness the ecological and social conscience to gain traction as a political project, the EU explicitly turns to the passions and emotions of its citizens (on a revitalisation of green modernisation through digitalisation in the EU, see Lenz 2022). By this, the newest EU strategy aims to inscribe itself more deeply into a cultural infrastructure that rests on "social imaginaries" as "common understandings that enable us to carry out the collective practices that make up our social life" (Taylor 2004, 23). These collective practices draw on sets of beliefs that relate to moral visions beyond professional politics – religious salvation, nationalism, humanitarian responsibilities, or other ideological duties that deeply influence citizens' acceptance of governmental projects. In that sense, the latter require the legitimisation of society's moral authorities, including from social movements, just as Weber described the role of religion in his reflection on "domesticating the subjects in things great and little" (Weber [1921, 1922] 1978, 1176). Hence, in order to "harness" the "drive for change" (Mazzucato 2019, 3), "processes will be engaged to build a cultural infrastructure to support, or not, the new political authority, and legitimate, or not, its rule" (McNamara 2015, 30).

In this Weberian sense, the legitimacy of EU integration is neither derived directly from a formal democratic constitution nor from the functional efficacy of the governance it exerts. Rather, for discursive institutionalism, it rests on common myths that mobilize narrative identities and foster engagement. While it has been shown how NGOs affirm myths of a green and social Europe (Lynggaard 2017, 9f.), dissenting voices are crucial to analyze the fundamental legitimating appeal of a plurality of narrative identities (Manners and Murray 2016, 199). Moving from Weber to Laclau and Mouffe (1985), the identification with a collective cause is always open to contestation. This is particularly true for the liberal governmentality of the EU. As Marchart (2012a, 166, o.t.) has pointed out, the EU governs through a plurality of universal ideas that cannot be easily reconciled or are even mutually exclusive, such as Christianity, reason, free movement of capital, and, we may add now, climate-neutrality. Hegemonic articulations, however, have them appear as elements of a common "European identity construction," binding them to an "imaginary horizon of universality" (ibid.).

To maintain a universal imaginary, governmental discourse has to be robust enough to deal with inherent contradictions and remain open enough to allow for a reintegration of opposing subjects and their demands that scandalize that universal goals are not met. At least, their counter-narratives have to be brought to order in public. In the following, social protest is observed as the discursive articulation of “demands” – conceptualized as the “minimal unit of analysis” which can resonate to different degrees with the contested order (cf. Marchart 2012b, 231). For our purpose of tracing contestation and legitimacy in moonshot discourse, it suffices to say that overriding a subversive demand and reintegrating it into the imaginary of a legitimate governmental rule is what Laclau calls a successful “hegemonic articulation” (Laclau and Mouffe 1985, xviii). Depending on the discursive outcome, a domesticated protest may even reinforce the symbolic order it set out to delegitimize. Especially in times of crisis, the act of demanding something from the government itself becomes

extremely vulnerable [...] to political discourses that promise to restore coherence first by offering themselves as myths – concrete readings of the otherwise unintelligible crisis – and later by offering themselves as imaginaries – horizons of intelligibility. (Smith 1998, 77f.)

Therefore, the evocation of mythical callings and the re-construction of cultural imaginaries as a binding element is a crucial aspect of European governance. From a neo-gramscian perspective, the EGD initiative thus fundamentally aims at representing a common cause while having to account for contesting demands. At first glance, the latter are out of the government’s control and threaten to rupture the common perception of its legitimacy (Laclau and Mouffe 1985, 154f, 169-71). While this points towards a delegitimization of governing powers, the contesting voices can be also appeased and their sense of just governance can be “harnessed.” By inviting them to *speaking truth to power* in discursively controlled spaces such as representative publics, they are both given voice and discursively domesticated in so far as a public sense of just governance can be restored by appealing to a common cause and shared beliefs.

Like previous EU strategies, which extended the EU’s normative reach to all of humankind (Manners 2002, 243), today’s normative and legitimating knowledge production ultimately makes Europe responsible for the overall planetary ecosystem. Narrating *The Myth of a Green Europe* (Lenschow and Sprungk 2010) that benefits “the people and the planet” (von der Leyen 2019), the EGD seeks to unite all Europeans behind a universal goal. As a liberal and pluralistic governmentality, it does not censor contradictions and does not require to directly sanction those who oppose the EGD as an inconsequential or even inherently contradictory ecological modernization project (e.g., Ossewaarde and Ossewaarde-Lowtoo 2020) that does neither consider a transformative post-growth society nor an authoritarian control of climate change



mitigation (Adloff and Neckel 2019). Given such ecosocial and ecosocialist contestations, the project has ambitious goals regarding expectation management and requires new infrastructures for legitimacy. Winning over the “public mood” goes far beyond the technocratic governance that has dominated prior EU strategies, which might play into von der Leyen seeking to draw lessons from the 1960’s original moonshot, that famously gave the US its “New Frontier.”<sup>1</sup>

While EU policy discourse focuses on learning from the Apollo project in terms of “understanding the management of complex structures for the successful completion of different political and technological tasks” (Arrilucea 2018, 34), a constructivist look at the cultural infrastructures that underlay the success of the original moon mission can give us important insight into the EGD’s societal embeddedness. Will the EU’s green mission increase public trust in EU institutions and revitalize the European project – or will it create a climate of distrust and political failure?

### 2.3 Critical Contestation and Discursive Domestication

As a hegemonic narrative, the original moonlanding’s mission economy had to be a legitimate governmental project not only in the eyes of the political establishment. For the moonshot to “make history,” a universal sense on unanimous legitimacy had to be discursively maintained even in the face of open political contestation. The famous case of Reverend Abernathy’s sit-in at Cape Kennedy (today: Cape Canaveral) before the launch of NASA’s mission to the moon in 1969 shows just how effective the strategic invocation of an ideologically charged dream was for discursively “domesticating” (Weber [1921, 1922] 1978, 1176) widely respected elements of societal opposition. Abernathy – President of the Southern Christian Leadership Conference (SCLC) and successor to Martin Luther King Jr., who had been shot the year before – had gone to Cape Kennedy “to demonstrate in a symbolic way, the tragic and inexcusable gulf between America’s technological abilities and our social injustice” (PBS 2019). In stark contrast to the Apollo rocket that awaited its

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<sup>1</sup> “New Frontier” was John F. Kennedy’s political slogan which he raised in his presidential elections’ acceptance speech (Kennedy 1960), evoking the mythical “Significance of the Frontier in American History” (Turner 1893). “American social development has been continually beginning over again on the frontier. This perennial rebirth, this fluidity of American life, this expansion westward with its new opportunities, [...] furnish the forces dominating American character” (ibid.). Pushing this mythical American frontier of the Great West into outer space and tying it to (unfulfilled) promises of the 1930’s New Deal, John F. Kennedy proclaimed “We stand today on the edge of a New Frontier [...] Beyond that frontier are the uncharted areas of science and space, unsolved problems of peace and war, unconquered pockets of ignorance and prejudice, unanswered questions of poverty and surplus” (John F. Kennedy 1960). As we show below, the EGD entails a (potentially similar) symbolic expansion of the European “mythical” welfare ambition of caring for workers and human rights to now caring for the entire planet.

launch, the protestors had come on foot with cart wagons towed by mules. Meeting with Abernathy amidst signs reading “eat first and rocket later” and “moonshots breed malnutrition,” NASA administrator Thomas O. Paine expressed his sympathy: “If it were possible for us [...] to not push the button and solve the problems with which you are concerned,” he told the reverend, “believe me, we would not push the button” (PBS 2019).

While the rocket could not feed the poor or house the homeless, it could restore faith in US power to do so. Pointing to the synergetic promise that drove the US to invest in the space race, Paine asked the protestors to believe in the redeeming qualities of technological progress: “We would like to see you hitch your wagons to our rocket, and to tell the American People that the NASA program is an indication of what this country can do” (ibid.).

Reverend Abernathy’s response was one of ambiguous agreement. Accepting the offer of 10 tickets to witness the launch from the VIP section, he is often (but highly selectively, see chapter 5) quoted as stating his hope that “our brave, courageous heroes [may] think about us tomorrow and pray for us as we will be praying for them” (PBS 2019; see also Maher 2019, 51).

A similar case can be made for the EGD. Not only does the environmental moonshot have to resonate positively with “public mood” (Arrilucea 2018, 34), but it also has to appease significant parts of social movements that contest the EGD’s “myth of green growth [...] marked by technological solutionism” (Ossewaarde and Ossewaarde-Lowtoo 2020, 4). In this sense, von der Leyen’s metaphor also expresses the hope that one day, a charismatic figure like Greta Thunberg will cast aside placards that demand “System change not climate change!,” instead supporting a European agenda of green growth. But the success of “hitching” the passionate arguments of social protesters to the symbolism of a moonshot is not a given; it depends on many conditions.

To consider how the erection of such “infrastructures of legitimacy” operates, we revisit articulations that make use of the precarious relationship between protest and policy – that have the potential to challenge governmental projects, but that are also taken up on and reinterpreted as further justifications of government. For unravelling the infrastructure of legitimacy in both the space race and the green race, we focus on expressions and symbols of legitimacy in public expressions of key actors (see Table 2). Our analysis includes documents produced by politicians and activists in the US (between 1962 and 1973) and the EU (from 2017 onwards). For the US, the governmental sources are mainly speeches and campaign material by John F. Kennedy. For the EU case, they reflect both the EU’s supranational and intergovernmental nature: speeches and other material by Ursula von der Leyen, Frank Timmermans, and Jean-Claude Juncker as (then) “heads of government” are complemented by speeches and tweets by Emanuel Macron, acting as a prominent member of the European Council (at the Conference of the Future of Europe) or while presenting himself in national campaigns as a “leader of Europe.”

Looking at contestation articulated in governmental hearings and at events related to the respective missions, we focus on demands by Martin Luther King Jr. and other members of the Social Justice Movement, and speeches and press material by Greta Thunberg, Fridays for Future, and Extinction Rebellion.

Table 1 conceptually sketches out how both the original moonshot and the EGD as governmental grand projects are set up to deal with political challenges and to restore a promise of good governance. To do so, hegemonic ambitions are articulated that aim at revitalizing a commonly shared societal telos. The gap between universal grand ambition and the particular policies are then met with contestation, as opposing voices protest and point out the contradictory nature of the proclaimed universal goals. On the one hand, such politization scandalizes the grand project as inadequate. On the other hand, liberal politicians try to manifest its adequacy by granting partial access to arenas of power and by appealing to the unruly subjects' own sense of justice. While the hegemonic history of Kennedy's initiative has mostly been written, revisiting three elements of its narration of geopolitical and economic power (chapter 3), societal telos (chapter 4), and liberal integration of contestation (chapter 5) provides a series of instructive questions for the EGDs success or failure as a hegemonic narrative of history-in-the-making.

**Table 1** Contested Infrastructures of Legitimacy: Conceptual Similarities

	HEGEMONIC AMBITION (3)	REVITALIZATION AS... (4)	CONTESTATION BY... (5)	DOMESTICATION THROUGH... (5)
USA	Space race: "a new frontier" for unimpeded fossilist growth	American Dream: "Because we can!"	Civil rights movement: "Moonshots breed malnutrition!"	Religion and endeavor: "Hitch your wagons to our rockets!"
EU	Green race: a "climate-neutral economy" for "sustainable growth"	European Dream: "Because we care!"	Ecological movement: "System change not climate change!"	Care and concern for the planet: "Europe developed a universal climate conscience!"

### 3. "We Mean to Lead" – The Space Race as Peak Fossilist Growth

In 1962, *Life Magazine* published a two-page colored advertisement by *Humble Oil*. "Each day Humble supplies enough *energy* to melt 7 million tons of glacier!" it proudly proclaimed (Fig. 1). The company had been acutely aware of its impact on atmospheric carbon-dioxide levels and its effects on global warming ever since in-house scientists had conducted a study in 1957. At the time, however, these findings just made for good advertising and were not perceived by the public as a matter of concern until the 1980s (Rich 2018, 4).

**Figure 1** “Two Page Color Humble Oil & Refining Company as with Photo of Taku Glacier, Alaska”



Source: *Life Magazine*, February 2, 1962.

Advertising to “put a tiger in your tank” (Russell 2013, 44), *Humble Oil* stood for the optimistic and growth-oriented fossilist futurism of the post-war period, in which “[g]rowth was no longer just the implicit trajectory of the capitalist economy but became the explicit telos” (Folkers 2021, 229). With the burning of fuels seen as an innocent and most heroic act, the volume in which the ad appeared had a cover story on NASA. The story, which portrayed astronaut John Glenn – decorated veteran of WWII and the Korean war, holder of military aviation records and the first American to orbit the earth in 1962 – was entitled “The making of a brave man” (Fig. 2). In the context of post-war geo-politics, Glenn personified the United States’ industrial and military prowess. These were different times, with melting icebergs seen as an indicator of economic capability. As part of this idealistic ethos, the race for the fastest jet or the strongest rocket was unambiguously fossilist.

**Figure 2** “The Making of a Brave Man”



Source: *Life Magazine*, February 2, 1962.

Before the world wars, icebergs had entered public consciousness only as obstacles within the coal- and diesel-fueled race for industrial and military hegemony of that time. In 1912, the seemingly unsinkable *Titanic* became a symbol for technological hubris and entered popular culture as a modern version of the mythical ambition of domination over nature (Howells 2012, 145-7). In an arms race that lasted from the 19th until well into the 20th century, countries vied to set naval speed records as a way to highlight the prowess of their military industries and to underline their claim to global hegemony (Kludas 2000). By 1952, the US had “won” that race, but attention already lay with aerial speed records in the 1950s, which quickly became a space race so technologically advanced that only the two post-war superpowers could maintain a military-industrial complex capable of competing in it. Again, the mythical aspect of the race was as much against nature as it was for hegemonic power – the global power of intercontinental ballistic missiles. Arguably, this symbolic projection of fossilist power peaked with the moon landing.

With the race for technological hegemony having taken to the air, the public lost interest in Atlantic icebergs. They would only return to the spotlight much later, long after the oil crisis had established the idea of globally finite energy resources (Suckert and Ergen 2022, in this volume), and after the first public debates on global environmental issues had tainted that unwavering

post-war optimism with an awareness of “the limits to growth” that have accompanied energy talk since the 1970s (Meadows et al., 1972). Today, fossilism might still be at the core of economic dependencies, but it is no longer synonymous with progress and innovative developments. Accordingly, melting icebergs are today understood as indicators of man-made global warming (Broecker 1994, 424). Adding to this, there is a growing broad understanding that this visible symptom is itself only the metaphorical tip of the iceberg for a plethora of interrelated “planetary boundaries” (Lade et al. 2020).

While the awareness of climate change marks a significant difference between the run-up to the 1960s moon landing and today’s green race towards climate-neutrality, both present the “moonshot” as a monumental task with existential consequences. They offer strategies to project economic and technological hegemony in a global “race” against competing global powers that aim to modernize the economy and stimulate growth in advanced technologies, and that require considerable political intervention.

Before the Soviets sent humanity’s first satellite into orbit, which put space exploration on the map of the geopolitical Cold War arms race, public interest had been almost non-existent (McQuaid 2007, 378). The moon mission required serious propagandistic efforts to make it “clear to us all, as did the Sputnik in 1957, the impact of this adventure [...] for a great new American enterprise – time for this nation to take a clearly leading role in space achievement” (Kennedy 1961).

By linking technological, scientific, and economic factors with a rhetoric of the government’s wartime efforts – at a moment when WWII and Korea were still fresh in American minds, but tarnished by the “perfect failure” of the Bay of Pigs invasion in 1961 (Higgins 1989) – the race to the moon was tied to the very existence of the nation and the “free world” itself. Kennedy reflected on the United States’ rise to global power when he proudly described how his “country rode the first waves of the industrial revolutions, the first waves of modern invention, and the first wave of nuclear power.” For the coming space age, however, riding alongside others was no longer an option. Not only did the US

mean to be a part of it – we mean to lead it. For the eyes of the world now look into space, to the Moon and to the planets beyond, and we have vowed that we shall not see it governed by a hostile flag of conquest, but by a banner of freedom and peace. [...] Yet the vows of this nation can only be fulfilled if we in this nation are first and, therefore, we intend to be first.

Here, the civil space mission represents an inevitable confrontation of hostile powers, as the faith of mankind itself hinges on the United States “becoming the world’s leading space-faring nation.” More than the “growth of our science and education” and the creation of “a great number of new companies, and tens of thousands of new jobs” – goals that could have been tackled by other governmental investment programs – Kennedy’s public pitch for the

Apollo program stressed his country's existential need to attain superiority and to win the proclaimed space race:

We set sail on this new sea [...] for the progress of all people. For [if] space science will become a force for good or ill depends on man, and only if the United States occupies a position of pre-eminence can we help decide whether this new ocean will be a sea of peace or a new terrifying theatre of war.

In today's mission to reach climate-neutrality, we find similar appeals that link that goal to the idea of a "green race," framed as a race against time. Where earlier races had to conquer planetary boundaries in a promethean quest to extract as much energy from nature as possible, today we define the climate-neutrality "record" in relation to the point in time when our Icarian wings start to burn.<sup>2</sup>

However, a political "race" is one between competing governmental entities. When Timmermans spoke at the Irish Climate Summit in 2021, he shared his "sense of urgency. Our collective need to act [...] comes down to everyone, in their own corners" (Timmermans 2021). As it did for Kennedy's conquest of the space age, this feeling of urgency drives a need to "get there first" – be it in terms of comparative cost advantage, geopolitical energy security, or moral superiority. Just as Biden promised to "put America back in the business of leading the world on climate change" (Dec. 19, 2020), Macron vowed to turn France into the "first great nation to exit gas, oil and coal" (Reuters 2022). Extending this to the EU, von der Leyen declared that the "whole continent has to be mobilised" (von der Leyen 2019). Whether an eco-social challenge in which everyone has "their own corner" or a call to mobilize the "whole continent," this urgent situation surpasses ecology concerns. Economic and geopolitical security are also at stake:

This is not just about doing the right thing for the environment. This is not just about renewing our economy. This is also a highly geopolitical issue. If we don't fix this at the global level and at the European level, there is no doubt on my mind that our children will be fighting wars over water and over food. (Timmermans 2021)

Ultimately, the EGD is tied to matters of war and peace. Just as Kennedy tied the success of the civil space mission to the hope that the Cold War would remain cold, Europe's current geopolitical challenges accentuate the urgency of the EGD goals. As Macron stated at the closing ceremony of the *Conference on the Future of Europe*,

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<sup>2</sup> The EU's envisioned timeline for climate change would put this burning point sometime in the future, as time frames such as the EGD's aim for zero-emission by 2050, the seemingly moderate 1.5 degree-Celsius goal, and the EC's reluctance to address degrowth measures suggest (Ossewaarde and Ossewaarde-Lowtoot 2020, 6, 12).

The war in Ukraine and our wish to end our dependence on Russia's fossil fuels means that we must be even more ambitious [...] to make our continent an ecological power which achieves carbon neutrality. (Macron 2022a)

Here again, a competitive drive to lead the race for climate neutrality betrays an aspiration for Europe to gain global leadership and appeals to European exceptionalism. Remarkably, representatives of Europe tie this vision to an imagined ability to decouple the growth paradigm from increasing exploitation of planetary resources. Timmermans asks

Why is Europe leading this? I think we are leading this because over the last twenty years, we [...] have proven, in fact, that there is a possibility to grow your economy and at the same time reduce your emissions. (Timmermans 2021)

The bold claims to reduce emissions without degrowth are problematic for green growth discourse in general (Ossewaarde and Ossewaarde-Lowtoot 2020). However, what is striking here is how Timmermans evokes Europe as a political and cultural entity with an eco-capitalist calling. Not unlike Kennedy's appeals to America's manifest destiny, French President Macron boldly maintains that

Europe is the place where, in Paris, in 2015, a universal climate conscience was developed. It is the continent which, with the goal of carbon neutrality in 2050, first set the most ambitious goals of the planet. (Macron 2022b)

Clearly, the EGD must carry these ambitions of sovereignty and pioneering global power: "The aim is to restore, together, a Europe that is a power of the future, [...] not depending on the choices of the other great powers" (ibid.) Both the "space race" and the "green race" turn a civilian and scientific point of interest – landing on the moon, reaching climate neutrality – into a matter of humanity's own survivability. Underpinning both contests are imaginaries of war and a vision of lost independence if these goals cannot be met.

In formulating a race, geopolitical and cultural infrastructures have to be reinforced by a commitment to an ultimately global challenge. By giving space exploration and ecological transformation war-detering status, political leaders place them squarely within the sovereign responsibility of governments. This also asks unruly citizens to acquiesce to governmental control that can overcome this challenge, with imaginaries of war-time levels of mobilization. Against the backdrop of WWII and the Korean war, Kennedy was well aware of the populism to be sparked by an external threat and the internal cohesion to be gained from a patriotic rally to push for a "New Frontier" (Kennedy 1960). In a similar way, EGD discourse uses a similar us-versus-them approach to create a specifically European *enjeux* (Favell 2010, 189). In the East, we read, the threat of authoritarian regimes keeps "us" dependent on fossil energy and cheap industrial production, while in the West lies an America that represents all the wins of previous fossilist races. Pointily attacking the Trumpian US, Macron's vow to "Make the Planet Great Again"



(Figure 3) can be seen as a genuinely European move to reclaim a position of global responsibility in the name of green transformation.

**Figure 3** “Make Our Planet Great Again”



Source: Tweet by Emanuel Macron, 02.06.2017.

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#### 4. “Because We Can,” “Because We Care” – Revitalizing a Dream

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As the first man on the moon, Neil Armstrong embodied the American Dream. Born on an Ohio farm in 1930, the former Boy Scout and US Navy aviator in the Korean War came to personify his country’s victory in the space race. Fueled by invocations of collective effort and technological utopism, this victory had been put into the public imaginary by Kennedy in his 1961 congressional address:

First, I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the Earth. No single space project in this period will be more

impressive to mankind [...]; and none will be so difficult or expensive to accomplish. But in a very real sense, it will not be one man going to the moon – if we make this judgment affirmatively, it will be an entire nation. For all of us must work to put him there. (Kennedy 1961)

Thus, the geo-political ambitions of the space race were accompanied by an appeal to cultural values and national striving, in a narrative that linked the ideas of effort, merit, success, and technological superiority. In a famous speech at Rice University in Texas in September 1962, Kennedy highlighted the urge to prove US national superiority:

Many years ago the great British explorer George Mallory, who was to die on Mount Everest, was asked why did he want to climb it. He said, “Because it is there.” Well, space is there, and we’re going to climb it.

Thus, space conquest came to epitomize the greatness of the American Dream, making it a matter of “because we can” – an imaginary that is still in place, spanning slogans from “Yes we can” to “Make America Great Again” (Obama 2008; Reagan 1980; Trump, *passim*). This vision of individual vigor, momentum, and victory is strongly dependent on a cultural infrastructure of “making it happen,” which is why the technological utopism of the 1960s was not limited to spaceships and lunar rovers, but also included mass media and leisure products.

American exceptionalism managed to link a rather abstract finish line – the moon landing – to citizens’ everyday consumerist practices. Ursula von der Leyen (2019) clearly referenced this feat in her moonshot speech, which also invoked the “old” American Dream of technological innovation and entrepreneurial spirit – reviving it with green consumption. Maintaining that the “European Green Deal is not only about emissions,” but about “boosting innovation,” “quality food,” and “modern mobility,” she envisions the creation of “new businesses and markets all across Europe,” which “are already turning the green transition into green opportunities and business opportunities. ‘Made in Europe’ batteries for electric cars are finally becoming reality.” “Making” the EGD “happen” requires a collective effort, the efforts of Europeans who unite for the common goal of climate neutrality. One hears an echo of Kennedy’s (1961) “all of us must work to put him there” in the insistence of Frans Timmermans, Vice President of the EU Commission and Commissioner for Climate Action, of “our collective need to act” (Timmermans 2021). If the European Deal is to succeed, he hints, “we” must not be divided:

Every individual, every citizen has a role to play in this. The good news is that if we all commit to that transformation, we can come out successfully. The bad news is, if we are divided, if we’re not convinced, [...] we will not be able to limit the rise of the global temperature to below 2 degrees. (ibid.)

Here, the EGD serves as a vehicle for the cultural construction of a European Dream that will unite Europeans in times of crises, as the American Dream did the American people – an intention that also manifests in the EU

commission's analysis of the Apollo mission, which we noted above (Arilucea 2018). It is not by chance, therefore, that the "NextGenerationEU" plan, which merges financial and programmatic elements of the EGD with plans for member states' economic recovery from the pandemic – is presented as a tool with which to realize the European Dream (Figure 4).

**Figure 4** “The European Dream. Let's Make It Real”



This is NextGenerationEU. This is more than a recovery plan. It is a once in a lifetime chance to emerge stronger from the pandemic, transform our economies, create opportunities and jobs for the Europe where we want to live. We have everything to make this happen.

We have the vision, we have the plan, and we have agreed to invest 750 billion euro together.

**It is now time to get to work, to make Europe greener, more digital and more resilient.**

Source: Next Generation EU-Website, EC 2021.

However, there is more to the European Green Deal than a Fordist utopia of technology and meritocracy: “It is up to us to leave no one behind. And we know that it is doable. We are determined to succeed for the sake of this planet and life on it” (von der Leyen 2019). For the EU Commission, the EGD shows not only that “we can,” but also that “we care.” Combining an overriding planetary responsibility with social solidarity, this caring dimension adds a genuinely welfare statist ambition to the cultural infrastructure of the green moonshot. To be clear, the 1960’s American space race also had a universalizing theme (“all of humanity”) that transcended particularistic US geo-strategic and economic benefits. However, calls for collective displays of national competitiveness rarely evoked that side of the project. In contrast, the EGD’s ambitions to reach net zero emissions are closely tied discursively to the “old continent’s” infrastructures of welfare and solidarity:

The transition will bring better and healthier jobs. It will bring cleaner and less polluted cities. It will bring a higher quality of life for Europeans. But this transition will also need time, support and solidarity. (ibid.)

Even if the EGD is clearly not a 20th century redistributive welfare project, the discursive invocations of a genuine European Dream built on collectivity and social inclusion (Rifkin 2004) are obvious. Caring for people and the planet is presented as an inherent dimension of economic growth:

The European Green Deal is our new growth strategy. And this time, it is a growth strategy that is not consuming – but it is a new growth strategy that is more giving back than it takes away. It is a growth strategy that is more caring. (von der Leyen 2019)

Such a caring capitalism approach closely aligns with the “old” European welfare state tradition and the “new spirit” (Boltanski and Chiapello 2005) of activation and social investment which has sought to align social protection with economic growth by merging conditionalized redistributive social protection and individual responsibility (Bernhard 2010; Canihac and Laruffa 2021). Just as the American Dream promised that everyone can make it from rags to riches (personified by white male Americans like Glenn and Armstrong), the EGD promises to achieve climate neutrality without reducing economic growth or living standards. This presents the fiscal burden placed on European societies as one that is both economically worthwhile and socially legitimate, which is why von der Leyen (2019) portrays the EGD as “not only about emissions. It is about boosting innovation and will create new businesses and markets all across Europe.” Aware of the financial strains implied in a zero-emission economy, she emphasizes that

Some say the cost of this transformation is too high. Well, let us never forget what the cost of non-action would be. It is rising by the year. River flooding costs our citizens over EUR 5 billion annually. Every year our economy is losing almost EUR 10 billion due to droughts [...]. And this is only the beginning.

While the EGD aims at avoiding these future financial (and, as Timmermans [2021] pointed out, military) costs, its budgetary dimensions are staggering in comparison to those of previous EU strategies. According to the 2020 EC, meeting the 2030 goals will require an annual budget of €260 billion – and the 2050 goals are expected to be even more expensive.<sup>3</sup>

Even when adjusted for inflation and considering the different setup of the respective federal budget structures, the costs of the original moon landing still pale in comparison with the green deal. When the NASA budget peaked for the fiscal year 1966 (at 4.31% of federal budget, or \$47 billion in 2020 constant dollars), Lyndon B. Johnson said on January 25, 1965,

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<sup>3</sup> For reference, the total EU expenditure in 2020 was ca. €168 billion (of which 21%, i.e., ca. 35 billion were supposed to tackle climate change, EC 2019b).

we have built up momentum and are concentrating on our highest priority goals. Therefore, we will no longer need to increase space outlays by huge sums each year in order to meet our present objectives. (US Government 1965, 18f.)

With the technology for their man-on-the-moon-moment having already been sufficiently developed, NASA funding fell back to under 0.5% of the federal budget – it was halved until 1970. The R&D budget estimate for 1974 simply read “the planned objectives of the Apollo program have been accomplished. FY 1974 funding is not required” (United States Congress 1973, 696). As US citizens had mostly united behind the Apollo program (and behind their TVs), American capitalism had publicly “won” an important Cold War victory. The massive amounts of financial and infrastructural resources were no longer necessary and “proved unsustainable” (ibid.).

By contrast, the climate goals of 2030 and 2050 are not one-off feats to be accomplished: they must be achieved sustainably. The question is: How credible is the European Dream, and can it be proven victorious in a mediated “green race”? Is climate-neutrality financially sustainable for the EU (or, phrased differently, is the EU implementation of the EGD ecologically sustainable?) The former has societal, the latter has physical boundaries. As we discuss in the remainder of this article, how governmental discourse portrays the path to achieving “moonshot” goals hinges on the strategic inclusion and exclusion of contesting social forces.

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## 5. From “How dare you!” to “Dare a Sustainable Europe” – Governmental “Token Attention” for Social Movements

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While Kennedy’s moonshot faced considerable budgetary concerns and a lack of interest by the majority of citizens (McQuaid 2007), the Apollo program also encountered outright opposition by those who sought governmental action in social policy matters like health, housing, and racial inequality. These political demands spanned the whole spectrum of dissidence, from radical anti-establishment, anti-capitalist thinkers to members of the black liberation movement to Christian advocates of desegregation. Voiced by the latter, a critique of the moonshot could make its way into governmental attention. In December 1966, for instance, Martin Luther King Jr. was invited to speak in front of a Senate Subcommittee on Executive Reorganization (US Congress Senate Committee on Government Operations 1967). His wording was stark:

The new era of abundance finds us not only with proliferating ghettos, but it finds us enmeshed in confused commitments and distorted values [...] Are

we more concerned with the size, power, and wealth of our society, or with creating a more just society? (ibid., 2967f.)

Decrying the “destruction of hope, after the raising of expectations,” King (ibid., 2968) called out the unfulfilled promises of the American Dream. As the “values of the marketplace” and their “theme of ‘efficiency’ overwhelms the need for equity,” Americans “rely on the unseen hand of economic growth to do the task of social justice” (ibid., 2969). Not only did King juxtapose the living conditions in segregated ghettos with affluent Americans “enjoying their new gadgets in the crisp homes of suburbia” (ibid.); he also pointed out how governmental strategy was prioritizing the public image of powerful “gadgets” over helping the powerless, which could be achieved by developing social policies to end food insecurity, unemployment, and the housing crisis:

In contrast, the exploration of space engages not only our enthusiasm but our patriotism. Developing it as a global race, we have intensified its inherent drama and brought its adventure into every living room, nursery, shop and office [...] There is a striking absurdity in committing billions to reach the moon where no people live, and from which none presently can benefit, while the densely populated slums are allocated minuscule appropriations [...] we will set a man on the moon and with an adequate telescope he will be able to see the slums on earth with their intensified congestion, decay, and turbulence. On what scale is this a program of progress? (ibid. 2970)

Martin Luther King Jr. (ibid., 2968) was well aware of the risk of symbol politics when he asked members of the Senate in 1966 to “give priority to the disinherited” by reallocating federal funding and broadening welfare redistribution – instead of relying on “token attention.” He stated

Our income record is acceptable only if we wish to tolerate a society in which the richest fifth of the population is 10 times as rich as the poorest fifth, and in which the average Negro earns half as much as his white counterpart.

Despite crucial successes in the fight against racism and sexism since the 1960s, history showed that the space race could be discursively “won” while maintaining such an unequal society. According to Pew Research Center (2020), “the black-white income gap has held steady since 1970” and the median wealth of the upper 20% of US families is no longer at all comparable to the lowest 20%, which went from zero in the 1990s to net negative in our century. In other words, even as the US has come to tolerate an inequality that Martin Luther King Jr. deemed dystopian, his iconic “I still have a dream” speech has been successfully included in a narrative of meritocratic belonging that makes up the American Dream – an inclusion that tends to omit any criticism of exploitative capitalism and to “neglect the revolutionary nature of Dr. King’s legacy” (Jones 2012, 341, cf. 347).

In this regard, one of the most important political successes of the moon landing already took place the day before the launch of the Apollo 11 mission,

which was to bring the US its man-on-the-moon-moment. As already outlined (2.3), on July 15, 1969, the opposition between the technoscientific goal of the moonshot and the political agenda of civil rights and social justice came to a head, when Rev. Ralph Abernathy (as King's successor), tried to scandalize how "America has reached out to the stars but has not reached out to her starving poor" (United Press International 1969). This opposition – 2-4% of the yearly federal budgets from 1964–1969 on white ex-boy-scouts flying to the moon versus combating food insecurity and racial disparities (see Fig. 5) – was put forward as a problematization of inherently contradictory goals. Instead, after a sit-in with NASA administration, the public statements spoke of complementary governmental goals, hinting that the former would instill a general belief in governmental programs that would somehow also help tackle the latter. As depicted in chapter two, Paine and Abernathy found common ground in Christian and patriotic values, agreeing to pray for both astronauts and the inner-city poor.

As if to respond to Martin Luther King Jr.'s invective against the "distorted values" that prioritized the moonshot over malnutrition, NASA had carefully integrated a Christian missionary element in their Apollo program – most notably when the Apollo 8 crew shot the iconic earthrise photo and delivered a sermon by quoting the Genesis to around 500 million listeners on Christmas eve 1968 (Maher 2019, 186) half a year earlier. In contrast to signs accusingly stating "America your mind is in orbit," Reverend Abernathy told the VIPs that "this is really holy ground," with many journalists omitting how he added "but it will be even more holy once we feed the hungry and care for the sick and provide for those who do not have homes" (after Maher 2019, 51). It certainly did not help that he admitted after launch that "[f]or that particular moment and second, I really forgot that we have so many hungry people in the United States of America."

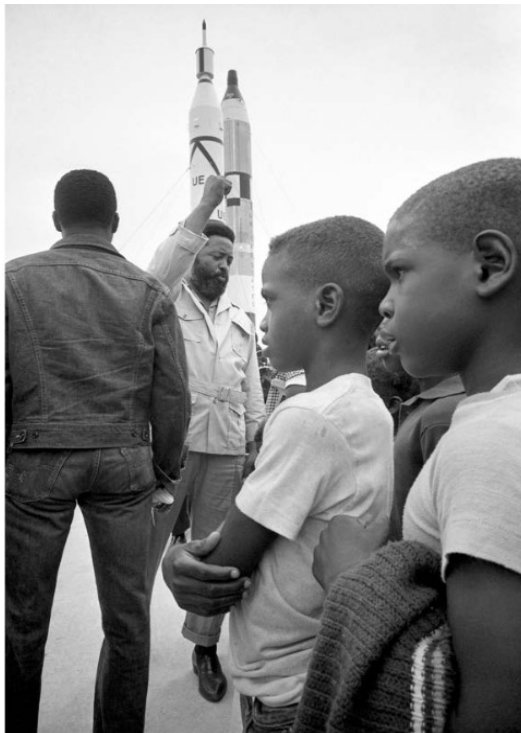
**Figure 5** Rev. Abernathy at Kennedy Space Center, July 15, 1969



Source: Niller 2021.

There are at least three major elements at play here: De-antagonization, conversion into believers of the American Dream, or, at least in the public eye, discursive domestication. The conversation between Paine and Reverend Abernathy not only dissolved the mutual exclusivity of their stances – one bent on high-end technoscience, the other on social justice. Symbolically, Abernathy was presented as a convert to a belief in their common American future, based on shared Christian morals and Protestant deservingness. As part of a common cause, the anti-establishment elements (see Fig. 6) could be downplayed, and the defiance of protesting rockets with mule carts tamed down or easily ignored – a fact that Nixon’s office gratefully acknowledged while continuing to oppress the political movement (Maher 2019, 51). Or, as *Chariots for Apollo* of NASA’s official history series put it laconically in 1979 (Brooks, Grimwood, and Swenson [1979] 2012, 338): “One, leading a poor people’s protest march against the expense of sending man to the moon, was so awed that he forgot for a moment what he came to talk about.”

**Figure 6** SCLC leader Hosea Williams shows Black Power fist at Kennedy Space Center



Source: Maher 2019, 53.



When one of the icons of the current ecological movement, Greta Thunberg, gave her famous “How dare you” speech at the UN climate action summit on September 24, 2019, in which she explicitly accused politicians of having “stolen my dreams and my childhood with your empty words,” she not only mourned the collapse of global ecosystems and the destruction of an unfulfilled dream of a sustainable future; she explicitly diagnosed the reason for their failure: “All you can talk about is money and fairy tales of eternal economic growth.” In speaking truth to power, Thunberg’s similarities with Martin Luther King Jr. are also obvious in her refusal to believe that her adversaries are “evil,” and her decision to opt for moral appeal and information over militant action. Still, when speaking at the “Civil Society rEUnaissance forum” after leading the Seventh Climate March in Brussels in 2019 (February 21), she gave EU politicians little to be proud of, accusing them of cheating with carbon budget to remain competitive:

You cheat when you can [...] We need to start living within the planetary boundaries, focus on equity and take a few steps back, for the sake of all living species. [...] Because if we fail to do so [...], all that will remain of our political leaders’ legacy will be the greatest failure of human history. And they will be remembered as the greatest villains of all time.

Despite the explicit anti-growth statements that accompany her calls for “equity and climate justice,” her popularity still presents an opportunity “to harness this drive for change” (in Mazzucato’s words) to the legitimacy of EU governmental R&D agenda-setting; after all, both villainy and heroic legacies seem to be on the table in the current “green race.” Regardless of the factual antagonism between her requests and the political goals of “green growth,” Thunberg is thus a sought-after guest at EU civil society events and other such occasions, which bear slogans such as “rEUnaissance: Dare a sustainable Europe” (Fig. 7). Jean-Claude Juncker notes that he is “glad to see that young people are taking to the streets in Europe” and shakes hands with Greta Thunberg (Fig. 8).

**Figure 7** Greta Thunberg and Luca Jahier (President of the European Economic and Social Committee) at the EU Civil Society Event “rEUnaissance,” 21.02.2019, before EU Parliament elections in May 2019



**Figure 8** President Juncker and Greta Thunberg



Source: Tweet by the EC, 21.02.2019.

As with Reverent Abernathy’s half-quotes, which were taken out of context for governmental publicity, “harnessing” the movement’s drive is not so much a matter of receiving input on social and ecological problems, as it is of

discursive domestication. For that, the movement's strong degrowth agenda is defocused and a common moral ground is emphasized:

I have to thank the Friday's for Future movement, that is the spark that got things going. They convinced their parents and their parents started talking to each other etc. That's how we got to the European Green Deal (Timmermans 2021)

While we know that climate change is underway, it is still unclear how today's disenchanted militancy in ecosocial movements and the dynamics of domestication will develop. As Extinction Rebellion activists (2020) put it in December 2020, the "Paris Agreement was ambitious though insufficient," with "Greenhouse gas emissions [...] at a level that is far too high for us to 'dream' of potential meeting the objectives." Refusing to "dream," they instead "decided to burn down the Paris Agreement to watch empty promises go up in smoke, matched only by the cynicism of our leaders."

When Thunberg was invited to the European Parliament's (EP) environment committee on Wednesday 4 March 2020, MEP Pascal Confin remarked that her role was "to sound the alarm" with the "energy of the youth," while it was the politicians' role to find "just solutions" that would be "credible" for both science and economy (Euronews 2020; o.t.). Opening the floor, he first acknowledged that "you have met hundreds of political leaders who have made a photo with you and said that what you are saying is formidable but then changed absolutely nothing," before disciplining her with remarkable honesty:

But don't fool yourself, Greta Thunberg – today, you are in front of a commission on the environment that is at the forefront of the fight for the climate. You are not at the White House with Donald Trump, you are not in Australia with a climate-sceptic premier minister, you are not with a Bolsonaro in Brazil. You are in the Europe that makes the Green Deal. And I think it is very important to have [...] energy of youth, but to have a positive energy. (ibid.)

In her speech, Thunberg then went on to comment on the EGD's plan for carbon neutrality. The requested positivity is remarkably absent:

This makes no sense at all [...] When the EU presents this climate law and net-zero by 2050, you indirectly admit surrender, that you are giving up [...] on the Paris agreement, [...] pretending that you can be a climate leader and still go on building and subsidizing new fossil fuel infrastructure [...] Your distant targets will mean nothing [...] This climate law is surrender. (ibid.)

After her series of invectives against "empty words" – echoing more the Extinction Rebellion's frustrated burning of the Paris Agreement than a genuine hope of strapping the eco-social movements calls for social equity, global responsibility, and degrowth to the EGD's moonshot – her finale about European potential to be a "real leader" rings somewhat hollow. Whether or not that is a problem not only ecologically and socially, but also politically for the

moonshot-qualities of the EGD remains to be seen. It may depend on how the photos of her protests are historicized, and in what function they will become part of the EU's cultural infrastructure.

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## 6. Conclusion

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In light of today's climate crisis, the EU is currently being challenged to formulate, implement, and legitimize its agenda in ways that integrate ecological conflicts. Ultimately, the European Green Deal represents a focal point for the general question of the fate of the European Union: Will the EGD highlight the EU's critical flaws, or will it revitalize the European project, breathing into it a "new green spirit"? As with the "new spirit of capitalism" observed by Boltanski and Chiapello (2005) as emerging from the 1960s' social and artistic critique, the urgency of the ecological question might stir social conflict, but it might also lead to reformation, modernization, and a renewed sense of legitimacy of the European market economy.

In this article, we have traced the discursive construction of a European Dream, mobilized to support Europe's position in a global green race. Driven by our interest in the cultural infrastructures invoked through this discourse, we favored a reflexive analysis of metaphorical storytelling in historical context, drawing on Weber, McNamara, and Laclau. Adding a constructivist perspective to the emerging literature on EGD implementation and corresponding policy analyses (Bongardt and Torres 2022; Eckert 2021; Samper, Schockling, and Islar 2021), we investigated the visions for and contestations of the EGD and showed that pondering the cultural infrastructures (rooted in the American Dream) of the 1960s space race can shed light on the legitimating aspects of the EU's current growth strategy. Becoming the first continent to achieve climate-neutrality can only compare to sending the first man on the moon if policies align with a public sentiment that actually sees climate-neutral prosperity as an extraordinary goal worth the historical and collective effort. However, while the ambitious language of the EU's "symbolic commitment" (Baker 2007) invokes a universal goal – uniting Europe for the sake of humanity and even the planet itself – it also mobilizes an imaginary of green growth, economic superiority, and geopolitical independence.

Discussing parallels and differences to the US Apollo program, we outlined three facets of the social legitimacy of the European Green Deal's governmental "mission": a) a hegemonic ambition of growth in a geopolitical race towards net-zero carbon emissions (chapter 3); b) the appeal to a European Dream that cares about the people and the planet, revitalizing an imaginary of solidarity (chapter 4); and c) the domestication of antagonized social forces whose demands contradict the mission economy's goals or point out their contradictory nature (chapter 5).

A) The ecological challenge of reaching net-zero emissions with the EGD is framed as a race against time – just as the Apollo mission was framed as a race to conquer space. Expressions of temporal urgency back up the hegemonic ambition to mobilize the whole continent for a matter of war and peace, as achieving the EGD goals is made not primarily an issue of environmental protection, but also one of geopolitical energy security, global leadership, and economic superiority (cf. Symons and Friederich 2022, in this volume). Informed by concepts such as the “moonshot economy” (Mazzucato 2021) and the integration of its vocabulary into EU policy, grand-scale governmental investments into climate neutrality are framed as growth-driving factors leading to a “renewal of capitalism” (ibid.). Even though scientific expertise often highlights the need to reduce emissions while simultaneously turning away from economic growth, the EGD still relies explicitly on the further stimulation of growth and conceptualizes the eco-social challenge as a challenge to be met with green capitalism. Just as the American space race served to fuel the US post-war fossil growth model, so too is the EGD expected to push forward a European green growth model – a green race that the US, China, and Japan have indeed joined, at least symbolically.

However, while the space race could be declared as won when the American flag was raised on the moon, it is still open for debate what circumstances would mark victory for the green race. Would reaching net-zero emissions as the first continent suffice – even if this is achieved by outsourcing “dirty” production to other world regions? How about the successful capping of global warming to less than two (or three?) degrees? Or convincing the Global South that its “right to development” must be subordinated to the (European) sustainability paradigm? As others have shown (Miller, Buxton, and Akkerman 2021), the relationship between planetary protection and economic growth is characterized by massively conflicting goals and inconsistencies.

B) In addition to a cultural infrastructure that deploys a language of existential necessity and the promise of unprecedented success to rally the European people behind a green race, we can observe a strong appeal to cultural values in EGD communication. The American space mission built its telos on an imaginary of growth and technological progress that would allow each American, if not to actually land on the moon, then to at least participate in the collective progress represented by the moon landing and the chance to make their fortune. The European mission shares the telos of growth with the space mission, but it still needs to convince Europeans that a net zero society is an achievable goal within an eco-capitalist agenda. Imagining Europe as the cradle of the welfare state and the place where a universal climate conscience was born (Macron 2022b), a “European green dream” seems possible “because we care.”

Despite these evocations of a welfare state heritage, the EGD echoes Roosevelt’s New Deal in name only. Instead of labeling its agenda as a “Green New

Deal” with all its Keynesian and social democratic implications (as proposed by various advocates, e.g., Green New Deal for Europe [GNDE] 2022; Pettifor 2019; Klein 2020), the EU explicitly links the EGD to Kennedy’s “mission economy” – and with good reason. Although the New Deal successfully made the “US government – and at a general level, the ‘state’ – matter more” (Patel 2016, 5), this happened in the context of World War II, establishing the US as a booming industrial superpower which “gave the state new legitimacy, also to expand its welfare functions” (ibid., 168). By the 1960s, however, “even the staunchest New Dealer had to adapt to the postwar political environment, with many converting to Cold War liberalism” (ibid., 288). As a tentative analogy: the climate in which the EGD has been conceived draws less on a Keynesian welfare-centered but more on a productive-centered social policy approach (Bernhard 2010; Canihac and Laruffa 2021), whose interventionist elements fit Kennedy’s mission economy much more easily.

As the EGD continues to develop, therefore, it will be important to observe how societal expectations of a socially just transition can be aligned with the EU’s market-based social policy instruments like social investment, activation, and social resilience. Will the EU’s “Green Dealers” succeed in maintaining the image of a caring Europe in the face of the pushed-back and drowned migrants at Europe’s external borders (Miller, Buxton, and Akkerman 2021), or in light of “authoritarian neoliberalism” (Wigger 2019, 354)? Whether it will prove societally legitimate to combine a European, caring green dream with the imperative to subordinate social and environmental policy to economic growth also depends on how those social forces that do not (yet) believe in the European dream are addressed.

C) It is this question of domestication of antagonized social forces that we address in comparing the moonshot scenarios of 1960’s America and today’s Europe. The Apollo program experienced massive criticism from a heterogeneous mix that spanned everything from radical system-critical and anti-capitalist black liberation forces to Christian advocates of desegregation. As we have shown, the cultural infrastructures of the US space mission were able to de-antagonize parts of these critiques, either by converting them into believers of the American Dream or at least by discursively reigning them in. Instances of this discursive domestication of more moderate elements – reminiscent of the 1960’s protesters who got handed VIP tickets to watch the missile launch – can also be observed today, for instance when Jean-Claude Juncker invites Greta Thunberg and thanks her for her engagement. Even though she clearly distances herself from the EU politicians, relentlessly maintains her sharp criticism of European politics, and calls the European Green Deal a “surrender,” by having Greta Thunberg in high gloss on EU brochures and tweets, the “public mood” of all those worried parents and grandparents who accompany their (grand)children to Friday For Future marches is nevertheless incorporated into the EGD’s imaginary – while keeping

fundamentally system-critical eco-socialist alternatives at arms-length (Engel-Di Mauro 2021; Machin 2019).

However, only time can tell how societal contestation will develop in the upcoming years. While currently a well-known German climate activist, Luisa Neubauer, only dares to refer ironically to the book *How to blow up a pipeline* (Malm 2021), militant contestations to green growth programs could rise up as climatic turbulences worsen, with governmental repression against the climate movement increasing. Will parts of the movement then follow the achievement of the European net zero goals by accepting VIP tickets on stage, while others watch this event from prison, where they serve their sentence for militant actions?

With the war in Ukraine, the imaginary of a European Green Deal with the universal goal to care for the planet by becoming a net zero society has once again come under pressure. Energy (and food) security are becoming ever more pressing issues and seem to replace the EGD's broader climate protection aspirations and normative claims. In this context, nuclear power and gas are now discussed as strategically necessary or even environmentally friendly energy sources. While the outcome of this shift is still unclear, the ambition to tie old and new geopolitics to the EU's moonshot goals by continuously evoking the imaginary of a European Dream is obvious from von der Leyen's (July 4, 2022) keynote speech at the Ukraine Recovery Conference in Lugano. "The dream of a new Ukraine brings us here today," she noted, "not only free, democratic, European. But also fair, green, prosperous." In the face of war, unlike the space race's brief period of civil technological optimism between Korea and Vietnam, maintaining an imaginary of an eco-capitalist Europe might increasingly require that Europe reinforce its borders and militarize its foreign policy. It may be that the era of peace in Europe is over not only in regards to the invasion of Ukraine, but also in terms of a consensus over future climate mitigation vis-à-vis the failing Paris goals.

**Table 2** Material (Speeches, Social Media, Policy and Press Documents)

Author	Title	Source
Speeches		
Kennedy, John F. 1960	"Democratic National Convention Acceptance Address – The New Frontier."	Delivered July 15, 1960, in Memorial Coliseum, Los Angeles. <a href="https://www.americanrhetoric.com/speeches/jfk1960dnc.htm">https://www.americanrhetoric.com/speeches/jfk1960dnc.htm</a> (Accessed October 29, 2022).
Kennedy, John F. 1961	"Address to joint session of Congress May 25, 1961."	Filmed May 25, 1961, in the House of Representatives chamber, Washington, D.C. John F. Kennedy Presidential Library and Museum. <a href="https://www.jfklibrary.org/learn/about-jfk/historic-speeches/address-to-joint-session-of-congress-may-25-1961">https://www.jfklibrary.org/learn/about-jfk/historic-speeches/address-to-joint-session-of-congress-may-25-1961</a> (Accessed August 16, 2022).

Kennedy, John F. 1962	“We chose to go to the moon.”	In ‘We chose to go to the Moon’: Read JFK’s Moon speech in full by Piers Bizony. Science Focus, July 5, 2019. <a href="https://www.sciencefocus.com/space/we-choose-to-go-to-the-moon-read-jfks-moon-speech-in-full/">https://www.sciencefocus.com/space/we-choose-to-go-to-the-moon-read-jfks-moon-speech-in-full/</a> (Accessed August 16, 2022).
Macron, Emmanuel. 2022a	“Speech by Emmanuel Macron at the closing ceremony of the Conference on the Future of Europe.”	French Presidency of the Council of the European Union, May 10, 2022. <a href="https://presidence-francaise.consilium.europa.eu/en/news/speech-by-emmanuel-macron-at-the-closing-ceremony-of-the-conference-on-the-future-of-europe/">https://presidence-francaise.consilium.europa.eu/en/news/speech-by-emmanuel-macron-at-the-closing-ceremony-of-the-conference-on-the-future-of-europe/</a> (Accessed August 16, 2022).
Macron, Emmanuel. 2022b	“French President Emmanuel Macron’s Speech at the European Parliament – Strasbourg, 19 January 2022.”	French Presidency of the Council of the European Union, January 19, 2022. <a href="https://presidence-francaise.consilium.europa.eu/en/news/french-president-emmanuel-macron-s-speech-at-the-european-parliament-strasbourg-19-january-2022/">https://presidence-francaise.consilium.europa.eu/en/news/french-president-emmanuel-macron-s-speech-at-the-european-parliament-strasbourg-19-january-2022/</a> (Accessed August 16, 2022).
Obama, Barack. 2008	“Obama’s Victory Speech.”	BBC News, November 5, 2008. <a href="http://news.bbc.co.uk/2/hi/americas/us_elections_2008/7710038.stm">http://news.bbc.co.uk/2/hi/americas/us_elections_2008/7710038.stm</a> (Accessed August 16, 2022).
Thunberg, Greta. 2019	“Greta Thunberg’s full address to EU politicians in Brussels.”	Euractiv, February 21, 2019. <a href="https://www.euractiv.com/section/climate-environment/video/watch-greta-thunbergs-full-address-to-eu-politicians-in-brussels/">https://www.euractiv.com/section/climate-environment/video/watch-greta-thunbergs-full-address-to-eu-politicians-in-brussels/</a> (Accessed August 16, 2022).
Thunberg, Greta. 2019	“Greta Thunberg’s Speech At The U.N. Climate Action Summit.”	NPR, September 24, 2019. <a href="https://www.npr.org/2019/09/23/763452863/transcript-greta-thunbergs-speech-at-the-u-n-climate-action-summit?t=1657107324521">https://www.npr.org/2019/09/23/763452863/transcript-greta-thunbergs-speech-at-the-u-n-climate-action-summit?t=1657107324521</a> (Accessed August 16, 2022)
Timmermans, Frans. 2021	“Frans Timmermans’ statement at the Irish Climate Summit 2021.”	European Commission, April 30, 2021. <a href="https://ec.europa.eu/commission/commissioners/2019-2024/timmermans/announcements/frans-timmermans-statement-irish-climate-summit-2021_en">https://ec.europa.eu/commission/commissioners/2019-2024/timmermans/announcements/frans-timmermans-statement-irish-climate-summit-2021_en</a> (Accessed August 16, 2022).
Von der Leyen, Ursula. 2019	“Speech by President von der Leyen in the Plenary of the European Parliament at the debate on the European Green Deal.”	European Commission, December 11, 2019. <a href="https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_19_6751">https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_19_6751</a> (Accessed August 16, 2022).
<b>Social Media</b>		
Biden, Joe (@JoeBiden). 2020	“On day one, my administration will rejoin the Paris Agreement and put America back in the business of leading the world on climate change.”	Twitter, Dezember 19, 2020. <a href="https://twitter.com/joebiden/status/1340427943051284480">https://twitter.com/joebiden/status/1340427943051284480</a>



European Commission (EC) (@EU_Commission). 2019	“President Juncker and Greta Thunberg.”	Twitter, February 21, 2019. <a href="https://twitter.com/eu_commission/status/1098579996283686913">https://twitter.com/eu_commission/status/1098579996283686913</a>
Extinction Rebellion Europe (@XREurope). 2020	“This is not a drill. It’s an emergency.”	Facebook, Dezember 13, 2020. <a href="https://fb.watch/ebZK63dVxB/">https://fb.watch/ebZK63dVxB/</a>
Von der Leyen, Ursula (@vonderleyen)	“The dream of a new Ukraine brings us here today.”	Twitter, July 4, 2022. <a href="https://twitter.com/vonderleyen/status/1543932778814836736">https://twitter.com/vonderleyen/status/1543932778814836736</a> .
Macron, Emmanuel (@EmmanuelMacron). 2017	“Make our planet great again.”	Twitter, June 2. 2017. <a href="https://twitter.com/emmanuelmacron/status/870407981044834304">https://twitter.com/emmanuelmacron/status/870407981044834304</a>
<b>Press documents</b>		
Euronews. 2019	“Green Deal ‘man on the Moon Moment’ for Europe.”	December 11, 2019. <a href="https://www.euronews.com/my-europe/2019/12/11/green-deal-man-on-the-moon-moment-for-europe">https://www.euronews.com/my-europe/2019/12/11/green-deal-man-on-the-moon-moment-for-europe</a> (Accessed August 16, 2022).
Euronews. 2020	“Greta Thunberg says EU law to tackle climate change is ‘surrender.’”	March 5, 2020. <a href="https://www.euronews.com/my-europe/2020/03/04/greta-thunberg-in-brussels-as-eu-unveils-green-deal-plan-for-carbon-neutrality">https://www.euronews.com/my-europe/2020/03/04/greta-thunberg-in-brussels-as-eu-unveils-green-deal-plan-for-carbon-neutrality</a> (Accessed August 16, 2022).
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Analyzing Infrastructures in the Anthropocene.

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Contributions

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Spaceship or Stewardship: Imaginaries of Sustainability in the Information Age.

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Infrastructural Futures in the Ecological Emergency: Gray, Green, and Revolutionary.

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Social Transformation through Prefiguration? A Multi-Political Approach of Prefiguring Alternative Infrastructures.

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Participatory Organizations as Infrastructures of Sustainability? The Case of Energy Cooperatives and Their Ways for Increasing Influence.

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