



Advancing into Spaces of Possibility: How the Fridays for Future Movement Intertwines Future-Making Practices with the Creation of Educational Formats

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Abstract

The article explores the question of how political and pedagogical programs are intertwined in the process of designing a sustainable future, using the climate change protest movement Fridays for Future (FFF) as an empirical example. Particular attention is paid to the German Public Climate Schools, a collection of educational courses offered by FFF. The FFF movement emphasizes science and education and has created postdigital spaces for climate education. The article outlines the connection between education and the future, describes FFF and its approach to designing a sustainable future, explores the educational spaces developed by the movement via an analysis of some of the movement's Twitter (now rebranding as 'X') feeds and web site, and provides a basis for further reflection and exploration. It is argued that the FFF movement represents a contemporary form of political future practice that is focused on creating a livable and shapeable future within a postdigital context.

Keywords Educational future · Political education · Storytelling · Public Climate School · Fridays for Future · Postdigital climate change protest movement

This article attempts to explore the intertwined character of a vision for the future and an educational angle which, in our view, manifests distinctly and innovatively in the protest practices of the 'Fridays for Future' (FFF) climate change protest movement. We perceive heightened currency in this matter of what it means to stake a claim to a future and to conceive of it as a space of opportunities for design and agency. This aspiration, to shape a future that is as yet unknown, lies at the heart of educational

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Fig. 1 A protestor in the October 2021 Fridays For Future Climate Strike. © Jochen Eckel for Imago 2021. Reproduced with photographer's permission



theory and practice. Accordingly, we will explore the interrelationships between the sociopolitical and the educational within today's climate change protest movements, pursuing the factors which might reveal these protests as both educational and future-making endeavors and the centrality of the postdigital to this approach to future-designing activism.

Writing from a German perspective, we wish to take as a starting point for our considerations the slogan *Mehr Zukunft wagen* which appeared on a protest placard at one of the protests that took place in Germany during the Global Climate Strike in October 2021 (Fig. 1). The slogan is an allusion to the political credo with which Willy Brandt, one of West Germany's best-known chancellors, took office at the end of the 1960s: '*Mehr Demokratie wagen*,' which a word-for-word translation would render as 'dare (or daring — it could be either an infinitive or an imperative in this construction) more democracy'.¹ The slogan spoke to an emergent liberalization in the wake of the student protests of 1968 and, crucially, heralded a shift in East–West German relations as one of the strands ultimately culminating in the epoch-making events of 1989/1990, in which some observers perceived the 'end of history' (Fukuyama 1989). In a brief moment in Western European history, questions about the system and the future seemed to have become obsolete. Today, however, in the context of societal and scholarly discourse that postulates an 'Anthropocene' age (see, for example, Danowski and de Castro 2016), we no longer find the continuation of history called into question, but rather continuation per se — we find ourselves in doubt as to whether a future remains possible, and what actions we need to create such possibility.

The placard in Fig. 1 uses the iconography of a traffic light to call to the current German government — a three-way coalition known as the 'traffic light' for the signature colors of its constitutive parties — and possibly to reference the symbolism of progress versus stasis. The slogan expresses a much broader demand: that policy decisions happening today, particularly those around sustainability, take due account of the

¹ The slogan's wording, once translated, is reminiscent of Greta Thunberg's famous exclamation 'How dare you?' during her speech at the UN Climate Summit in 2019, with 'dare' used as an admonition to the adults accused of reckless disregard for upcoming generations' future. *Mehr Zukunft wagen* rhetorically transforms daring from a shocking instance of disrespect into a positively charged act of audacity on the part of the generations disadvantaged by those preceding them.

future. Simultaneously, the motif of futurelessness highlights the problematic character of a politics that, notwithstanding its extensive deployment of rhetoric centering around innovation and design, effectively amounts to ‘frenetic stasis’ (cf. Harrasser 2022: 144), as the experience of a present extended into the timeless infinite. By contrast, the current political protests are about the desire for a venture (a ‘to-come’), about the demand to give space to visions, that are also associated with the risk of failure. The youth of the individuals constituting FFF resists the institutionalized prioritization of the present, symbolically representing the question as to the whereabouts of ‘the future’ and explicitly positing its arguments in a generational frame, arguing that the adults currently in power are denying the adults to come the possibility of a future in which they can live well and unfold agency.

Our contribution to this special issue will proceed from this centrality of the *future* in contemporary youth climate movements, of its possibility and of its designability, in exploring the intertwinement of political and educational objectives in the process of its design. The FFF movement will serve as an exemplar, in this context, of a contemporary form of ‘doing’ future in political activism and specifically through education.

FFF operates both in physical public spaces and in the digital space, distinct from other political protest movements in its strong emphasis on science and through its creation of formats for education on climate issues. After outlining the significant connection between education and the future, particularly with regard to design thinking (1), we will describe the approach taken by FFF to designing a sustainable future (2) and the educational spaces the movement has created and evolved (3). Our concluding thoughts (4) will highlight potential avenues for further research and reflection.

How Education Creates Frameworks for the Design of Futures

The idea of designing the future has been at the core of educational theories and practices since the advent of modernity. The notion that the future is amenable to our influence is foundational, indeed constitutive, to ideas of change, of the rupture and transcendence of obsolescent norms and power relations, that are rooted in education and pedagogy. Without an initial premise of an inherently open-ended future, it would be impossible to conceive or formulate ideas of educational transformation and of the challenge to the status quo that must necessarily precede it.

The Future in Education

We commence by conceding that the German-language educational discourse in which we are located has yet to explicitly address this constitutive significance of the future and its designing (cf. Wimmer 2014: 117). This said, the relationship between the future and pedagogy did enter this discourse at two distinct points in recent history. The first of these was the end of the Cold War era, with the collapse of the bloc states in Eastern Europe and the associated debate on utopian visions of the future (cf. Oelkers 1990; Schmidt and Wrana 2022). The second

arose around the turn of the millennium, with a critique of ‘the future’ as a project of neoliberal fantasies centering on omni-doability and self-optimization, followed by a search for ways of reconceptualizing the open-endedness inherent to the future (cf. Wimmer 2003; Bracht and Keiner 2001; Koch et al. 1997).

Recent years have seen an incipient concern with the educational significance of the future in the context of ongoing global processes of transformation such as digitalization and crises such as climate change. The current uncertainty surrounding the future and the viability of its place as a repository for optimistic designs has occasioned a re-examination of the basis for, and legitimacy of, conceiving of educational processes as amenable to change (Behrens et al. 2022; Bünger et al. 2022; Tesar et al. 2021). This reconsideration entails systematic engagement with the future-centeredness that is peculiar to education and that is called to reconcile the possible and the impossible (cf. Wimmer 2014; Sanders 2021). At this time, the field is further wrestling with the matter of whether educational theories and practices are capable of establishing and occupying an independent radius of action, eschewing both technological fantasies that assume everything is doable and romantic promises of salvation.

Research to date, both within and beyond the German-language discourse, has defined the relationship between education and the future in various ways. Keri Facer (2019) identifies three distinct types into which conceptions of this relationship fall.

1. Optimization: this approach views the future as a projected model of continuous and ongoing improvement, usually conceptualized as a cybernetic spiral, with pedagogical planning and calculation incorporated into this modeling (Ricken 2021; Schenk and Karcher 2018). It often occurs in combination with ideas of risk prevention that have close links to the second type of conception, colonization, with its impulse toward control.
2. Colonization: a notion of the future as a *tabula rasa* for any apparently desirable future into which the relevant discourse seeks to channel upcoming generations.
3. Contingency: this centers on a perception of the future as uncertain and consequently frightening, which confers upon education a responsibility to ‘ward off dangers’ or ‘act as a talisman’ against these presumed perils (Facer 2019: 5).

We propose to add a fourth type of conception to this classification, one which the three existing, more instrumental types cannot accommodate due to its fundamental concern with the constitutivity of education in relation to the future. This fourth perspective is our point of departure and the theoretical position from which we argue in this article. In this perspective we conceptualize future as a ‘possibility to come’.

We note that, in Facer’s classification, ‘future’ often appears as a temporal concept used to describe a time that lies ahead of us and is yet to occur. To this extent, the three conceptions outlined above represent a linear understanding of time as passing chronologically, endowing the future with the status of a rationale informing and directing human planning and design activities. In our view, this chronological point of view does not do justice to a specific aspect of educational

processes in their complexity. We argue that multiple temporal trajectories are simultaneously present in education.

In this light, we advance an understanding of education as a space of possibility which relates what is thinkable to reality, while being, in itself, neither ‘real’ nor ‘fictitious’ (see, for example, Schäfer 2011). Educational objectives such as autonomy or independent thought therefore remain of the future, evading a pinning down as an assured reality in the making; neither, however, are they purely non-real. Theirs is a paradoxical mode of possibility (cf. Schenk 2013); this possibility they embody is in the present and the future at one and the same time; they are, to use a Derridean term, *to come*.

The presence-despite-absence of such possibility creates a cleft in the current educational situation, positing another, non-present yet present, counterpart to the here and now (cf. Wimmer 2014). The German word *versprechen* points to this paradox (see Schäfer 2011): it means ‘to promise’ but, as a reflexive verb [*sich versprechen*], it also means ‘to misspeak.’ The Latin etymology of the English verb, stemming from ‘to send forth,’ also helps us here. When we promise something, we connect to a point in the future, but we also have an effect on the present moment, because promising is a performative utterance (Austin 1975). The fulfillment of the promise remains uncertain, yet the act of the promise unfolds an impact in the present moment.

Particularly in the tradition of German philosophy of education, these insights bear close links to the concept of *Bildung*, rendered commonly as ‘education,’ yet carrying the sense of transcending what is existent now, including current norms of living, thinking, and being. *Bildung* espouses, historically and in terms of its foundational theories, a concept of the future as open-ended and not subject — or at least not entirely — to the determining influence of the present. This idea forges a constitutive connection between education and politics, and more specifically between *Bildung* and democracy. The emergence and existence of difference, core moments in educational processes regarded as *Bildung*, likewise form the ethical nucleus of democratic polity, characterized by its allowing others to be other, that is, different from the self (cf. Bünger 2013).

Nevertheless, ideals such as autonomy and *Bildung* are never attainable absolutely, and themselves are intertwined with existing power relations. Autonomy provides an illustrative example in this regard, being both prized in pedagogy and simultaneously a demand made by late modern societies to the subject in the interest of securing their functionality (see, for example, Bröckling 2015). To this extent, it is impossible to definitively ascertain whether an individual is genuinely autonomous or in fact conforming to this social demand.

The conception of individual development with which the idea of *Bildung* is often overlaid further risks narrowing the vista, excluding the view of the socio-political framework within which thinking about education and implementing the results of this thinking are always situated. In other words, the possibility of becoming different that is inherent to the future finds itself framed and remodeled by ideas of individual sovereignty and neoliberal governmental techniques (ibid.). Awareness of this permits us to perceive the power relations underlying individualization (Foucault 1982). The observation and critique of an instrumental conception of the future and its conditions, which centers around optimization and the prevention of

perceived potential harm, can find fruitful supplementation in our noting how these ideas of controlling the future themselves remain subject to the influence of rationalities of progress that global crises are currently challenging or undermining.

This argued meeting of possibility and the potential loss of possibility in the educational space raises profound questions around the notion of a designable future, as well as explaining the close interconnection between education and design, which is essentially a venture of realizing the not-yet-possible.

Issues of Design in Education

The considerations we will now set out on the relationship between education and the endeavor of designing the future center on two sets of questions. First, we might ask what conceptual framework we can employ for comprehending the issues that face us today and how we can describe these issues in a way that opens up opportunities to influence the social and educational processes of the future. Second, we are called to identify appropriate responses to these issues. In light of our present, and with a view to a future whose character or indeed viability appears uncertain, a reassessment of the remit pertaining to education and specifically to pedagogy appears apposite and exigent.

The long tradition of critique around pedagogy's appropriation of technological ideas about the extent of its possibilities for action reveals a thin line between fantasies of the unboundedly doable and uncertainty around the future itself. A similarly fragile boundary is evident in conventional conceptions of design as providing solutions to existing problems, as can currently be seen in the OECD's educational policy control approaches (OECD 2018). A further facet of the relationship linking education with design emerges in the character of the former per se as a matter and topos of the latter. To quote Abegglen et al. (2023), education is not 'autochthonous (sprung from the earth itself)' (unpag.); utilitarian purposes and aims, from the re-production of existing societies to the support of societal change, have always permeated it. We can similarly frame education as a practice of designing; its orientation toward development and progress endows it with a dimension of engineering that we cannot reduce to its use of techniques and technologies. A closer look at the field of educational design research uncovers such dimensions of engineering, in, to cite an example, Simon's definition of design as a technical rationality (Simon 1973) connected to a positivist epistemology, which has had an evident influence on design-based research (see McKenney and Reeves 2012). This technical rationality is strongly connected to instrumental or solutionist ideas of defining and solving problems and of the optimization of educational practices.

This said, educational discourses have taken a critical view of a notion of design reduced to its technical aspects (see, for example, Schön 1983; Holmberg 2014), a critique significant in our context because the idea of an open-ended future becomes crucial once we incorporate the ideal of *Bildung* into our definition of education.

One voice in this critical discourse, Rowland (1991), notes that, despite the centrality of cybernetic optimization to numerous theories and practices of design, this is not in fact the full purpose of design. Instead, he argues, its task should be to ‘create new futures which are not based in the past’ (Rowland 1991: 23), approaching what is new through the question ‘What if ___?’ rather than ‘If ___ then ___?’ (Rowland 1991: 23). We note a proximity of this critique to speculative methods (most recently Ross 2023), which promise to guide a process of finding new ideas which might provide answers to the question of what counts (or is accountable) as education.

Macgilchrist et al. (2023) take another approach to the problem of an open-ended future, raising the questions of ‘Which designs?’ and ‘Whose futures?’. They argue that design processes are anything but neutral, but rather, conceived in in a broad and ontological sense, are ‘world-making’ sociomaterial arrangements of practices which prefigure the available possibilities for, and limits of, ways of living in the future and the viability of human (but also non-human and more-than-human) others. Designs, notwithstanding their assertion of a universal logic and therefore their pretention to a universal applicability, are always specific (‘which designs?’); their assertion of representation (‘whose futures?’) is questionable (in both senses of the word), and they systematically generate exclusion, shutting down the openness supposedly inherent to the future. In their commentary, Macgilchrist et al. (2023) call for us to find and tell other stories about design from the perspective of those excluded, ‘powerful stories encompassing the locally situated values, worldviews, institutions, structures, and practices by which people want to live’ (ibid, unpag.).

We will, in what follows, make particular reference to the question of ‘whose futures?’, as it appears to us to constitute the arena for young people’s current agitation for sustainable climate policy and, to use Rancière’s term (1998), it is the ‘stage’ on which their political demands intertwine with a pedagogical program of engagement in future-making. The educational activism pursued by the FFF movement will form the focal point of our analysis; our concluding thoughts will return to the call for innovative forms of storytelling as we reflect on the stories of *Bildung* told in this activism.

Designing a Viable Future: How FFF Sets Its Political and Educational Agenda

This section will seek to examine the ways in which the FFF movement proclaims the future as open to creative influence and seeks to exert this influence. FFF has been active globally since 2018 and differs from other movements that address climate policy in its emphasis on educational activities. Initially, FFF centered on young people going ‘on strike’ from school, as demonstrated by the then 15-year-old Greta Thunberg in Sweden. Due in part to the COVID-19 pandemic, the movement’s emphasis has now largely shifted away from this form of protest and toward other practices, such as demonstrations and climate education formats; in Germany, the latter centrally include biannual ‘Public Climate Schools.’ Fig. 2 shows

Fig. 2 Screenshot of a Twitter feed used by the student-led, FFF-affiliated Sustainability Office at Humboldt-Universität (HU) Berlin promoting the Public Climate School held in autumn 2021. ©Nachhaltigkeitsbüro HU Berlin Twitter account (@NachhaltigeHU)



a feed from the social media service Twitter (now in the process of rebranding to ‘X’)² advertising the Public Climate School (PCS) in Berlin in the fall of 2021 (Nachhaltigkeitsbüro HU Berlin 2021),³ using an FFF logo and an image of young protesters holding a banner aloft that reads ‘We are skipping our lessons to teach

² After the acquisition of Twitter by Elon Musk the rebranding process started in July 2023 while we finalized this paper. Due to the uncertainty of this process we refer to the social media service as ‘Twitter’.

³ The tweet was one of the first hits we found using the hashtag #publicclimateschool on Twitter. Research on Twitter accounts is part of the preparatory phase for an ethnographic study of selected local FFF groups, including their digital products.

you one.’ In this way, the activists figure themselves as learners turned teachers, calling to mind the analysis of FFF in Kessler (2019) as a potential reversal or overturning of the conventional intergenerational relationship. In our view, close reading of this image reveals its embodiment of some key aspects of FFF, as follows:

- ‘We’: FFF draws in various respects on its identification as a community, with which individuals can in turn identify.
 - Collectivity: the space of the ‘we’ encompasses the shared concerns moving a range of individuals and alliances to articulate, together, a general political demand for climate justice. It further positions itself in opposition to a ‘you.’
 - Youth: most of those active in FFF are in the 14–19 age group (Wallis and Loy 2021). This said, the numerous parallel movements, such as Students/Parents/Scientists for Future, indicate that the form of protest popularized by FFF is not the exclusive preserve of the young; Indeed, FFF’s efforts to mobilize people seek explicitly to address broad sections of society (Rucht and Rink 2020).
 - Invocation of generational identity: this observation on youth notwithstanding, its centrality is strategically essential to the movement’s central demands, as the source and driving force of FFF’s political and moral appeal to the concern of societies for ensuring future generations have viable living conditions. The ‘we’ that is the subject or agent of the activism referenced here thus shows itself as the generation that represents and lays claim to the future. The theory of pedagogy considers ‘generation’ a condensate of definitions of political and educational remits (for example, in Arendt 1961).
- ‘Are skipping our lessons’: the reference here is to FFF’s initially central protest format, stemming from the poster reading *Skolstrejk för klimatet* that accompanied Thunberg outside the Swedish parliament in 2018. This wording contains an ambivalent critique of school as a formal educational institution, which both figures the knowledge imparted at school as subordinate to the more urgent concern for the climate and highlights — in the term ‘skipping’ — the risk and potentially unfamiliar rebellion these young people are engaging in, driven by this concern to the transgression of boundaries previously adhered to.
- ‘To teach you [a lesson]’: this polysemic phrase plays on the literal meaning of teaching a lesson, as in educating — in this case via the formats FFF has brought into being (such as the PCS) —, alongside the idiom ‘to teach someone a lesson’, that is, to punish them or take revenge on them for an actual or perceived misdeed. From their initial protest onward, FFF’s core objective has been to disrupt the fixation with the present determining political decision-makers’ actions and to demand from them the active acceptance of responsibility for the future. Centrally, FFF engages with scientific findings on climate change and calls for climate policy to be responsive to them.
- ‘You’: this appears as the Other in opposition to the subject/agent ‘we’, the adults — speaking generationally — whose actions the ‘we’ deems reckless and irresponsible and who take the position of the humbled and punished, those being ‘taught a lesson,’ in an implied reversal of power.

Our exploration of FFF's educational activism draws our attention to the theoretical issue of the connection between generational identity and the future in its consideration of how current climate change protest movements conceive of 'the future' and the critiques of conventional educational settings and political dispensations implied in these conceptions.⁴ For our current context, relating to the practical intertwinement of education, as a space of possibility, and endeavors to design the future, we wish to go beyond this aspect of FFF's concern with the future and point out two further important facets of the movement's work, each of them a manifestation of a political motif concerned with marking a difference from current political practices and pointing to a future-related practice that diverges from that pursued hitherto. The first of these references the contribution to the effectiveness of climate change activism's political articulations and practices made by digital and social media, which have provided a platform for international networking and created a digital space of public protest (cf. Terren and Soler-i-Martí 2021; Sorce and Dumitrica 2021). This transformation of political practices is embedded in broader processes of cultural transformation taking place in digital and postdigital societies (cf., for example, Stalder 2018), which are opening up to young people new opportunities to engage with knowledge in a manner that cuts across ingrained logics of formal/informal education (cf. Gröschner and Jergus 2023; Grunert 2022). FFF innovatively transforms both digital spaces and structures of protest and networking into political arenas, moving beyond formal educational spaces and giving rise to new forms of participation and protest that renegotiate the relationship between young people and politics.

The second facet relates to the practical level on which the climate protests transcend conventional political arenas by engaging collective concerns in articulating its political demand for a comprehensively livable future. FFF actively pursues alliances with campaigners on other political issues, via solidarity activities, for example, in the context of the war on Ukraine and strikes by various groups of workers in Germany. In so doing, it ruptures the individualized rationality that predominates in recent sustainability policy. We can term this rationality a consumer-centered 'green governmentality' (Soneryd and Ugglå 2015) since it closely related to neoliberal governmental techniques which neglect the structural dimensions of climate issues and depoliticize the issue of policies for and in the future. In alignment with this rupture of individualized rationality are FFF's observable attempts to avoid individualization in its concrete political practices, seeking, for example, to counter the movement's reduction to a single leading figure and to undermine media coverage of prominent activists such as Greta Thunberg.

The section that follows, alongside remarking upon a similar tendency to resist an individualizing perspective on climate change policy in FFF's educational formats and practices, will set out a comprehensive analysis of how these educational spaces encompass intertwined notions of *Bildung* and the future.

⁴ In this context, we note the attribution of responsibility and moral value to actions and inaction which FFF's political agenda advances and which it translates into an educational remit for bringing about comprehensive change in personal and public lifestyles.

Fig. 3 Tweet announcing the commencement of the Public Climate School for fall 2021. © Students for Future Halle Twitter account (@sffhalle)



The Pedagogy of FFF: A Protest Movement Incorporating Postdigital Spaces of *Bildung*

It may not appear immediately evident that FFF espouses a formal or structured ‘pedagogy.’ Rather than attempting to prove its existence, we seek here to explore the empirical example FFF provides of educational practices centered on the future and situated within, and drawing its specific form from, a postdigital context. We perceive this specific form most illustratively in the Public Climate School (PCS) format referenced above, consisting in one-week series of events around climate education held at universities and schools and run by members of FFF.⁵

‘Zooming in’ on the screenshot in Fig. 3, once again from a Twitter account linked to the movement, enables us to witness the process of an educational concept, such as *Bildung*, taking the form of political demands and, through these, political power. The tweet, from a German chapter of the FFF-affiliated Students for Future (Students for Future Halle/Saale 2021), includes an image from a series of digital stickers available for download from the German PCS website and is clearly intended for use as promotional material. It is noteworthy that, of eight available

⁵ See <http://studentsforfuture.info>. Accessed 12 September 2023.

stickers, the PCS campaign selected one invoking the concept of *Bildung* in the context of protest⁶; it is this choice that prompted our close reading of the image and its symbolism.

The Visual ‘Design’ of *Bildung*

The central element of the image’s protest scene is a banner declaring that *Bildung* is ‘important’ (*wichtig*) in the vision of the ‘revolution’ to come. In its conventionally received meaning, ‘revolution’ signifies a radical departure from the present, representing the antithesis of historical continuity and the status quo, and constitutes the ultimate objective of fundamental change. Christoph Menke (2018: 76) offers a contrasting view, asserting that revolution does not equate to the future, but rather that revolutions are intertwined with the present as they unfold in the process of change that they bring about. The issue of present and future aspects in fundamental changes such as revolution is considered as well by Eva von Redeckers (2020) argument of living for the revolution while Donatella di Cesare (2021) discusses the difference between revolt and revolution regarding their relation to history and present.

The prominent and vibrant design of the word *Bildung* on the banner references the rainbow imagery that is a feature of other protest movements, notably LGBTI. Drawing in a range of different positions and demands (cf. Jergus 2014), this association establishes a connection to the broader call for respect for diversity and to optimism around the possibility of transformative change.⁷ The implication arising from this association is one of an intertwinement between *Bildung* and the exhortation to embracing a range of divergent perspectives. Echoing the conventional conception of *Bildung* in modernity, with its sociopolitical moment of transcending what is and addressing the possibility of a general education of the Humboldtian type, the entangled evocation of *Bildung* that arises from this image is endowed with a universal quality; the centrality of a protest event to the image’s design draws on associations of the capacity to overcome extant power relations and norms, and in so doing imbues *Bildung* with a sense of promise (see Austin 1975). The comic-style graphics play with the relationship between reality and possibility, highlighting the potential for change and transformation rather than simply representing reality as it is; this diverges from the tweet we analyzed above, and other tweets produced by various Students for Future groups, which use photographs to assert representational accuracy.

The promise of *Bildung* may appear unfulfilled in one key aspect of the image’s visual representation; the protesters depicted, particularly those fully visible in the image, are predominantly white, male and adult, a depiction contrasting with the findings of research indicating that over 50% of FFF demonstrators are female (Sommer et al. 2020). It is similarly notable that the figures in skirts are behind the banner, as opposed to leading the demonstration, and not visible fully to the

⁶ For the stickers, see <https://i0.wp.com/publicclimateschool.de/wp-content/uploads/2022/10/Stickerbogen-PCS-Nov-22.png?ssl=1>

⁷ The rainbow was also a central symbol of the peace movement, as in the *Pace* flag, and is also part of Greenpeace’s iconography. Unlike the rainbow used since 1979 as the international symbol of the LGBTI movement, the peace rainbow has only six colors, as does that used in Fig. 3.

viewer in their completeness. This less inclusive image design highlights the risk of inadvertently perpetuating social inequality. Among the stickers on the website, another, similarly referencing *Bildung*, contrasts with the sticker used here due to the diversity its image incorporates (people in wheelchairs, parents with children, people of color). The non-use of this sticker in the tweet — given the fact that diversity remains the not-norm and its presence in an image therefore implies its focality to that image's content — might suggest an emphatic centrality for *Bildung* in the tweet's message.

Finally, Fig. 3 shows how the call for *Bildung* might spill over into the streets, transcending the boundaries of institutionally organized educational spaces. At the same time, this call carries an inherent ambivalence toward established institutions, an attitude of neither affirmation nor denunciation. The PCS as announced in the tweet is still a 'school' despite all critique of and distancing from the established school system (originally in the 'skipping' of lessons with which the movement commenced).

This illustration thus illuminates three motifs of FFF's educational agenda that deserve a closer observation: first, an optimistic and affirmative approach to education, or, in this context, *Bildung*, which values it as possessing a creative power for transformation and, in line with modern European Enlightenment thinking, inclusive qualities. The second motif is a future-focusedness that contrasts with and opposes political stagnation, conceptualizes the future as a space of possibility for alternative paths, and emphasizes people's potential to design it. Third, we note the movement's creation and proclamation of educational spaces that correspond to their established counterparts while simultaneously transcending them. The section that now follows will draw on these three motifs as a frame for the specific analysis of communications around the PCS.

Public Climate Schools: An Alternative Educational Agenda?

The PCS, one of FFF's principal practices of activism in Germany, have run biannually since 2019, taking place at specific locations in spring and nationwide in fall, and seeking to attract a broad audience. Students for Future Germany, affiliated with FFF, describes the PCS in a manner that articulates their objective and reflects the motifs of educational optimism, capacity to influence the future, and alternative educational spaces we have outlined above:

The Public Climate School (PCS) is a program of digital education events coordinated by students from the Fridays For Future movement and co-created by a variety of academics, experts, students, and teachers. Its aim is to promote awareness and education around the crucial importance of the climate emergency to a sustainable and livable future on earth, and to make climate education accessible to everyone (www.publicclimateschool.de).⁸

⁸ All quotations from the Students for Future Germany/PCS website, materials, and 'concept paper' are in German. We have translated them for this article.

Key elements within this provision of free-of-charge knowledge on climate change are digital formats such as livestreams, part of the ‘Climate TV’ edutainment⁹ segment on the PCS’ website, and a video archive maintained by the German Students for Future group and hosted on YouTube. PCS also encompass ‘programs’ specially designed for schools and universities, including hybrid live lessons and online workshops. The PCS’ approach is reminiscent, in various respects, of that taken by professional service providers, with regular evaluation, an academic pilot study and a ‘concept paper’ around developing these event series further (cf. Students for Future Germany 2022). Having previously explored Twitter communications issued by FFF and their visual semiology, we will now identify traces of the FFF agenda’s three motifs, as set out above, in this ‘concept paper’ (a term we will retain for practical reasons).

Optimism Around Education

The ‘concept paper’ articulates the assumption that education can play a crucial role in addressing social issues. The term *Bildung*, used in this context, references the scientific analyses of climate change as rational and therefore educational, and is inclusive in definition, occurring alongside an assertion of the vital nature of its accessibility to all. The call to action ‘Unite behind the science’, which appears as a hashtag in the ‘concept paper’ (10), likewise evokes a sense of universality. The paper further reveals an understanding of *Bildung* as aiming toward a combination of knowledge about the workings of climate change and practical skills for action. The paper largely avoids addressing individuals as individuals; the primary focal points of the climate education it conceptualizes as the starting point of change (‘change begins with education’) are educational institutions such as schools and universities (5). This said, the association made between *Bildung* and competencies for action introduces an element of individual responsibility. In addition to this, the paper also references individualized psychological concepts such as ‘self-efficacy,’ identifying them as one of the PCS’ objectives. It does not make reference to other educational concepts such as care (cf. Scherrer 2022) or a more relational understanding of *Bildung*.

The Openness of the Future to Creative Design

The ‘concept paper’ does not explicitly include the word ‘future’; what lies before us, however, appears as an imminent threat, using terms such as ‘crisis’ and ‘greatest challenges [for all people] of the present period of time’ (5). In the context of reports on student participation in the PCS, the paper cites one student describing their motivation for attending the events as the ‘utopia of a world with climate justice’ (9). In other words, the FFF agenda, mediated here via the PCS concept, figures the future as amenable to creative, active influence, an entity situated between the polar opposites of crisis and utopia, and made accessible via education, or, more

⁹ Notwithstanding the increasing proliferation of edutainment formats, fueled by the advent of the post-digital, researchers have paid this phenomenon relatively little attention to date, although it is a significant medium of civic education (cf. Gröschner and Jergus 2023; Eis 2016).

specifically, *Bildung*. The paper relates a vision of overcoming climate injustice through education and emphasizes education's role in crisis management: '[An education adequate to the demands of the future; the German phrase used here is *zukunftsfähige Bildung*] is the prerequisite for [our] ability to continue to act and not fall into lethargy' (1). This framing of *Bildung* as a tool for taking concrete action for and toward the future recalls the conventional solution-oriented rhetoric occurring in design thinking and education policy. The paper dissents from these more mainstream views in its critique of how established educational institutions conceive of education, defining *Bildung* is not simply a prerequisite for a future, but also *zukunftsfähig*, literally 'future-capable,' that is, having the capacity to meet the exigencies of a future figured as a challenge or threat.

An Alternative Educational Space

The 'concept paper' repeatedly criticizes the traditional educational institutions of schools and universities for their inability to adequately address the problems facing the world in the future and contribute to their solution. Among the inadequacies the paper denounces is the lack of a curricular response to climate change and the absence of appropriate change which would bring these institutions' methods of communicating knowledge up to date. A critique of established educational institutions was inherent to the event that gave birth to FFF, Greta Thunberg's 'school strike' and the global strike action that arose from it, which research considers unprecedented to date in terms of young people's collective political articulation of their climate policy demands (cf. Rucht and Rink 2020). We note how this critique oscillates between a fundamental affirmation of pedagogy and the rejection of its recent institutionalized forms of expression. In so doing, the disquiet thus articulated with established education serves as an important point of reference for the self-empowerment of FFF actors via an independent educational agenda and its embodied forms, seeking to create educational spaces that simultaneously draw on conventional formats by which knowledge is imparted and distance themselves from them. The movement's thoroughly educational impetus, with an optimism derived from Enlightenment values, drives its engagement with representatives of educational institutions such as schools and universities. While aiming to modernize educational institutions from within, FFF uses their facilities to conduct the face-to-face parts of the PCS' events. The apparent aim of the PCS is therefore to transfer the deinstitutionalized educational space they have opened up back into the established institutions in order to renew them in the spirit of a comprehensive '*Bildungstransformation*' [educational transformation]. FFF's educational agenda thus has the dual foci of pedagogy and education policy.

The practices of designing the future we have identified in our close reading of communications around the PCS demonstrate the FFF movement's affirmation of approaches to future-making that engage with education — doubtlessly within the frame cast by its own educated bourgeois habitus, as conditioned by its milieu (cf. Sommer et al. 2020) — and that aim toward practical action for shaping the future. In this way, FFF address both political and the educational facets of change, accessing productive future-making practices as opposed to a narrower design approach

driven by technical conceptions. This notwithstanding, it is also evident that the PCS embody an understanding of education that remains highly conventional and instrumental in character, reminiscent of design ideas in the rationality they apply to the process of identifying and tackling the problem. While the Anthropocene is not a ‘problem’ in the sense that it could be solved, the PCS conceive of it as precisely such, casting it as a problem hopefully amenable to an educational, or pedagogical, solution, by which they translate political problems into pedagogical tasks in a way frequently observable throughout the course of Western European modernity (cf. Tröhler 2020). In some of its aspects, then, the future as a space of possibility retains distinctly conventional contours.

Concluding Thoughts: Which Stories? Whose Futures?

To conclude this article, we will leave the specific example of the climate change protest movement, drawing back to gain the more general view that we will need for work yet to take place on the intertwinement linking education and processes of designing the future. Our key interest in this context is in the narratives and descriptive frameworks that affect our understanding of the future and of its potential for transformation; alongside their impact on our perceptions of current events as ‘problems’ and ‘issues,’ yet determine and structure spaces of possibility for future developments — they are the means by which we remain open, receptive and, to use another term of Derrida’s, hospitable to what is to come. In other words, the categorical and conceptual means we use determine and open up the spaces of possibility we have; they can even mark them out like algorithms. It is the impossibilities, however, that may be of greater significance in this regard (Wimmer 2014). At this point, we wish to revisit the proposal put forward by Macgilchrist et al. (2023) to use storytelling for exploring the future’s potential openness to our creative action and to examine the ways in which stories frame our conception of the future. Numerous authors have acknowledged the ethico-political dimension of stories and their property of being the means by which we create worlds (as opposed to simply representing them). Haraway (2016: 12) asserts that ‘it matters what stories we tell to tell other stories with,’ a view that regards storytelling as a form of in(ter)vention and a practice of ‘worlding’ or world-making. Similarly, Facer (2019) observes that.

[m]aking, telling, listening to and reading stories in [or about] education, then, is not trivial, rather, it is a deadly serious business of identifying and articulating ideas of the future and engaging with the rich complexities of the present (Facer 2019: 12).

In a recent work on didactical representations of the Anthropocene in education, Ole Hilbrich (2022), drawing on Hannah Arendt’s philosophy, argues for a political function of storytelling, proceeding from the premise that narratives have the capacity to disrupt the current hegemony of technical and scientific language by highlighting matters that these discourses overlook or exclude. Hilbrich additionally reminds us that narratives situate the narrating subject within a specific context, emphasizing

their unique perspective on the world (Hilbrich 2022: 146; Weißpflug 2018). These thoughts direct our attention once more to the affirmative approach to science and its discourse that we witness in the PCS; we should not note this without acknowledging the contentious and power-laden character of scientific knowledge, the production of which is not a neutral or objective endeavor, but rather a socially constructed practice that both challenges and reinforces prevailing realities and norms.

The act of designing futures necessarily involves reflecting on temporal designs and temporal rationalities. We can consider the political and pedagogical actions of the climate movement as chronopolitical interventions (Schmidt et al. 2022) in their call for the accordance of value to the future. The optimistic outlook on the future that finds expression in the PCS might appear as a ‘cruel optimism’ (Berlant 2011) in light of the heightened urgency surrounding crisis situations, of which the climate emergency is doubtless one. We note a potential springboard for further research in this contradiction. If discussions around educational design encompass the pursuit of alternative narratives, the quest for such narratives must entail the exploration of non-simultaneous and heterochronous accounts.

We consider the analysis set out in this article to indicate a need to re-evaluate the design of pedagogy itself. FFF accompanies its call for effective climate change policy with critical scrutiny of pedagogical practices and with its own educational initiatives. If we regard ‘design’ as a practice of worlding, educational design in this context entails worlding with/within/against education, on two levels: first, directed toward the concept of the future itself and of its capacity to come into being; in other words, worlding that explores the design-ability of the future posited as a crucial concern by FFF. Second, worlding toward the emergence of alternative futures that take the part of future generations facing survival on a damaged planet. The risk here is that the affinity of science-backed education on climate change with Enlightenment discourses may render invisible the essentially bourgeois frame in which these political and educational practices take place and which may not leave appropriate space for a process of becoming-other and thus for the emergence of the future. In this regard, too, we look forward (in both senses of the phrase) to further research and analysis addressing the exigent matter, raised in the climate change protests of FFF and others, of spaces of possibility for a livable future on earth.¹⁰

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