

# Critical Zones and Thought Exhibitions

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## **Abstract**

This paper discusses the notion of ‘thought exhibition’ proposed by the late Bruno Latour and Peter Weibel at ZKM | Center for Art and Media (Karlsruhe, Germany) and some of its most central approaches to imagining new relationships to the world we inhabit. The analysis particularly considers the last of the exhibitions developed by Weibel and Latour under this curatorial concept, *Critical Zones: Observatories for Earthly Politics* (2020–22), the conceptual preparation of which the author took part in.

*Critical Zones* utilized the spatio-aesthetic capacities of an exhibition to test, in the mode of an embodied thought experiment, a relational understanding of the world inhabited and shaped by interdependent lifeforms—a world that only artificially, through Western hegemonic thought and actions, can be separated into somewhat detached spheres of ‘nature’ and ‘culture’, where inhabitants of the latter demote the former to resources to be extracted.

This paper discusses the spatio-aesthetic experimentation enabled by the exhibition to challenge such dichotomous separations. It investigates the curatorial concept by focusing on two central works: *CZO Space* (2020) by Alexandra Arènes & Soheil Hajmirbaba and *Flash Point (Timekeeper)* (2018) by Sarah Sze. As ‘cosmograms’ (John Tresch, Bruno Latour), both works describe a relationship to a world that is not one of coherence and dominance but that respects its particularities and assemblages.

## **Keywords**

Critical zone, compositionism, cosmogram, cosmology, exhibition, museum, curation, thought exhibition, thought experiment, nature-culture dualism.

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# Introduction

'The globe is something viewed from the outside, from a Galilean point of view. The critical zone is a view from the inside. Our show is about this contrast.'<sup>1</sup> – With this triangulation, Bruno Latour located our endeavour on 22 January 2018, the first day of our first seminar week, followed by six further weeks over the course of two years. Dubbed by Latour as the 'Critical Zones Study Group', and co-organised by the author, the seminar took place at the Karlsruhe University of Arts and Design in Germany, the sister institution of the ZKM Centre for Art and Media. Our motivation was to conceptually prepare the exhibition *Critical Zones: Observatories for Earthly Politics* at ZKM (23 May 2020 – 9 January 2022), curated by Latour with Peter Weibel, Martin Guinand, and Bettina Korintenberg<sup>2</sup>. Together with students and researchers, we tried to triangulate a 'new place to land' (in Latour's words) – to imagine a new relationship to the world we inhabit – as the ground of global capitalism continues to disintegrate under the pressure of the Anthropocene. In an exhibition context, this means finding new forms of representation – visually, spatially, performatively, interactively, etc. – that conceive of this world as made up of entangled lifeforms and fragile processes sustaining life.

In this paper, I want to carve out some of the concepts that were, in my retrospective analysis, most useful for the study group and for some of the exhibition's participating artists in approaching such a triangulation: *cosmopolitics*, *compositionism*, and *cosmogram*. My aim is to, first, reconstruct the epistemological framework proposed by Latour, in which the questions discussed in the exhibition *Critical Zones* were raised. This framework suggests alternatives to conceiving of the world we inhabit as separated domains of nature and culture – an artificial dualism or demarcation established and powerfully fostered by the European Modernity tradition. This 'great bifurcation' (A. N. Whitehead) had enormous consequences for hegemonic Western epistemes and, thus, the planet we inhabit, as it established the myth of a 'nature' domain that can be exploited from a somewhat separable sphere of 'culture', where humans reside in a position of control, seemingly untouched by the effects of their interference. This cosmology of human exceptionalism lies, in part, at the root of the large-scale anthropogenic perturbations and disruptions of the Anthropocene, from which its name-giver can now no longer hide.

Based on these epistemological considerations, the further aim of this paper is to exemplify how such a framework was investigated in *Critical Zones* – an exhibition conceived as a thought experiment where such themes could be spatio-aesthetically examined – a 'thought exhibition', to use a term coined by Latour and Weibel, at the time director of ZKM. This investigation took on many forms within the complex exhibition setup, but I argue that two artworks were essential in investigating and providing representations for alternatives to the nature–culture dualism: *CZO Space* (2020–2022) by the landscape architects and design researchers Alexandra Arènes and Soheil Hajmirbaba, and *Flash Point (Timekeeper)* (2018) by the visual artist Sarah Sze. Both works are extensive installations made up of complex elements that create spaces through which the visitor can move to explore – from various spatial and conceptual perspectives – a notion of engagement with the entanglements making up the world they inhabit. I argue that, in this mode of spatio-aesthetic experimentation, separations fostered by the nature–culture dualism can be effectively

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<sup>1</sup> Bruno Latour, Critical Zones Study Group, Karlsruhe University of Arts and Design, January 22, 2018; noted by the author.

<sup>2</sup> The exhibition eventually opened on May 22, 2020 (online first, under pandemic lockdown conditions) and continued, after some extensions, until January 9, 2022. It constituted the fourth iteration in a series of exhibitions realized by Latour and Peter Weibel, in cooperation with varying co-curators, at ZKM. It was preceded by 'Iconoclasm: Beyond the Image Wars in Science, Religion and Art' (2002), 'Making Things Public: Atmospheres of Democracy' (2005), and 'Reset Modernity!' (2016). 'Critical Zones' should turn out to be the last exhibition by Latour and Weibel at the internationally renowned research museum in Karlsruhe. Bruno Latour passed away on October 9, 2022, Peter Weibel on March 23, 2023. This paper is dedicated to their memory.

questioned, while representations of alternative ways to structure the world – as complex interrelations of many lifeforms, human and non-human, and the critical processes they produce and depend on – can be explored.

## Inside the Critical Zone

But first, I would like to return to the opening quote, on the inside and outside point of view, and, with it, to some of the exhibition project's basic concepts: Latour put forward his notion of 'the globe' in two, albeit intertwined, ways – a cosmological (or epistemological) and a spatial (or proxemic) one. Galileo Galilei's and other early modern discoveries initiated a rupture in cosmology, catapulting the human from the centre of the cosmos into a spinning orbit around Earth's star, one of countless in the universe. Despite this displacement, anthropocentrism was re-incorporated into the modern cosmos by the juxtaposition of the world in spheres of nature and culture (Latour, 2018). It implies an outside position from which the so-called natural world can be observed from a distance. According to Latour, the image of the globe – i.e., the famous Blue Marble photograph by NASA – represents such a remote point of view: a view that is, at the same time, removed from involvement or responsibility<sup>3</sup>.

An alternative is offered by the concept of the 'critical zone'. Taken from Earth System Science, it refers to the Earth's 'thin biofilm' – down into the soil until the bedrock and up into the canopy and lower atmosphere – where life subsists (Oncken et al., 2022). It is a dynamic field *sui generis*, where the effects of 'heterogeneous agencies mixed together in wildly different combinations' (Latour, 2014, p. 4) create their own living conditions – for example, plants' photosynthesis of carbon to oxygen as a condition for other lifeforms that, in turn, enable the existence of plants. Such interrelations cannot be organized as somewhat separated, monolithic blocks. As Latour (2014, p. 4) has pointed out, 'the notion of the critical zone is much less paralyzing for politics than that of the Anthropocene', as it avoids introducing yet another hegemonic universalism – be it the nature-culture distinction or the *Anthropos* prevalent within a somewhat new geological era. Instead, the *interdependencies* at play within the critical zone propose a conceptual space of relational political action for humans and non-humans to *compose* a common world.

Notions of interdependence and relationality are recurring *topoi* in discourses on posthumanism, new materialism, and the environmental humanities. They are already present in Gregory Bateson's 1972 work *Steps to an Ecology of Mind*. Criticizing Western dualisms as an epistemic condition for the exploitation of nature, Bateson emphasized the interconnectedness of all living beings. He also touched on the notion of an 'impossible outside' (to which I will return): 'We are not outside the ecology for which we plan – we are always and inevitably part of it' (Bateson, 1987, p. 510). Here it should be noted that, in contrast to Bateson's strong concept of interconnectedness, the critical zone is not to be conflated with holistic concepts of, as Latour (2014, p. 5) pointed out, a 'unified system [...] where everything is connected'. This would suggest yet another universalism. Rather, the relations remain always incomplete and fragile.

The notion of fragility is, in fact, paramount for characterizing the critical zone. Its interconnected compartments are highly reactive to changes in the biogeochemical processes and the interactions they generate and depend on. These systems usually react to such changes in an autopoietic sense of adaptation

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Latour repeatedly made this point, from different angles, during the Critical Zones Study Group sessions as well as in his performance lecture format 'Inside' (Ait-Touati & Latour, 2022).

and self-maintenance. However, as those changes become more rigorous and turn into disruptions, the fragile and reactive critical zone is weakened and starts to spin out of balance. The fragility of the critical zone becomes more and more apparent with the accelerating anthropogenic perturbations since at least the 20<sup>th</sup> century<sup>4</sup>. Thus, when intervening in the critical zone – be it accidental through pollution or in an intentional manner to mitigate the effects of climate change – one should remind oneself, again with Bateson, that we are indeed not outside the ecology for which we plan. Every intervention in these fragile relations needs to be very careful, as the unintended effects of mitigating measures such as climate engineering (Buck, 2019) are difficult to foresee and control, but historically well documented (Kolbert, 2021).

To briefly return to the notion of 'system': while the notion of the critical zone in Earth System Science is closely related to the concept of 'Gaia' proposed by the geochemist James Lovelock and the microbiologist Lynn Margulis, Latour went to great lengths to avoid the universalist notion that comes from Gaia theory's roots in cybernetics and its Greek mythological eponym, associating a unified system comparable to a single entity (Latour, 2017; Clarke, 2020).

Universalisms like unified systems or the nature–culture dualism suggest, according to Latour, 'the hidden presence of an engineer at work who has devised the whole as a system of which we see only the parts' (Latour, 2014, p. 5). Similarly to Donna Haraway's (1988, p. 581) critique of 'the god trick of seeing everything from nowhere', Latour (2020, p. 14) framed this position of total overview as a controlling gaze, structuring Earth as 'unified, continuous, and homogeneous'. Such an 'external' position implies a relationship of maximum distance, both spatially and ethically: when there is a sphere to dwell in (culture) that can be separated from the catastrophes we inflict on our planet (nature) and human responsibility – then what is there to worry about? The notion of the critical zone, instead, 'breaks down the cartographical view of planet Earth. [...] Gone is the idea of a disinterested distant gaze' (Latour, 2020a, p. 14). If we do not live on the globe of modernity but *inside* the critical zone, which we generate together with others, every harm inflicted is self-inflicted.

## The Pluriverse of Cosmopolitics

Influential for Latour's adaptation of the critical zone has been, I believe, his appropriation of another concept: Isabelle Stengers's 'cosmopolitics'. It is best explained by differentiating it from the notion of 'cosmopolitanism' (in the sense of Kant). The cosmopolitan accepts different perspectives of human beings on a common world and assumes that these differences can be worked out (Papastergiadis, 2023). Problematic with this position, following Latour and Stengers, is the assumption that there is *one* common world – a cosmos – *already in place*, ready to be uncovered: a somewhat *a priori* existing world that is implicitly accepted and on which only the cultural perspectives differ. Such a 'transcendent world' becomes conflated with 'a reference for judgments or operations of disqualification or annexation' (Stengers, 2010, p. 24), a somewhat 'objective' world of Western epistemology. This sets up a Eurocentric cosmological hegemony to which all other worldviews must align themselves.

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Depends on who you ask when looking for a starting date of when anthropogenic perturbations became a planetary rupturing phenomenon: 1450, with the rise of capitalism (Jason W. Moore); 1492, with the rise of near-global colonialism (Donna Haraway); 1610, with the colonialization of (and the genocides in) the Americas (Adele E. Clarke); or the contesting dates of the Anthropocene somewhere between the Industrial Revolution and the first Atomic Bomb fallouts (Clarke & Haraway, 2018).

The notion of *cosmopolitics*, in contrast, denies such universality. While the modernist globe assigns all its inhabitants to ‘their rightful and predetermined places’ (Latour, 2004b, p. 461), cosmopolitics presumes a pluriverse of different worlds, made up by a multiplicity of actors, ‘including all the vast numbers of nonhuman entities making humans act’ (Latour, 2004b, p. 454). Such a common world is not given; it is the *result* of an assembly of things that come together due to a specific matter of concern (Latour, 2004c). This coming together of divergent worlds, and the negotiations that occur, constitutes the ‘politics’ in ‘cosmopolitics’ – understood with Latour as ‘the building of the cosmos in which everyone lives, the progressive composition of the common world’ (Latour, 2004a, p. 53).



**FIGURE 1** Installation view of Alexandra Arènes' and Soheil Hajmirebaba's 'CZO Space (2020–22)' as seen from the entrance to the exhibition 'Critical Zones – Observatories for Earthly Politics', ZKM Karlsruhe, 2020–22. Photo ©: ZKM Karlsruhe, Photo: Tobias Wootton.

## Composing a Thought Exhibition

‘(T)he progressive composition of the common world’ – or ‘compositionism’ – is an important concept for Latour’s curatorial approach<sup>5</sup>. It is connected to the notion of cosmopolitanism in its approach to moving beyond universalist epistemes of how the world ought to be constructed. Compositionism is a call ‘to compose the common world from disjointed pieces instead of taking for granted that the unity, continuity, agreement is already there’ (Latour, 2010, p. 485). A key text elaborating this concept is ‘An Attempt at a

‘Compositionist Manifesto’’, which Latour dedicated to ‘D.H.’. The nod to Haraway makes sense, as she, in her book *Staying with the Trouble*, developed the etymologies of ‘compost’ to describe the quasi-symbiotic generating of a common world: ‘Critters – human and not – become-with each other, compose and decompose each other, in every scale and register of time and stuff in sympoietic tangling [...]’ (Haraway, 2016, p. 97) Compositionism becomes an essentially collaborative interspecies approach to composing the elements of the world as they appear and ever change, trying to avoid getting stuck in premade static categories and their anthropocentric hierarchies.

Taking compositionism as a starting point to grasp Latour’s and his co-curators’ curatorial approach makes it explicable why the exhibition *Critical Zones* appears as a heterogeneous assemblage of scientific instruments, participatory practices (like workshops and field trips), architectural models, diagrams, written visitor guide booklets aptly titled ‘Critical Zones Fieldbook’<sup>6</sup>, and, of course, artworks. The exhibition becomes an *experimental space* for how to approach ‘wicked problems’ such as climate change; it becomes a ‘scale model to test ideas that are much too vast to be treated head on’ (Latour, 2020a, p. 18). This is where the notion of ‘thought exhibition’ comes in: The thought *experiment* is a useful tool in science to test a hypothesis related to an object too complex, too remote, or too impractical to treat directly. As Latour and Weibel (2007, p. 94) have pointed out reflecting on two of their previous jointly curated exhibitions at ZKM, ‘Iconoclash’ (2002) and ‘Making Things Public’ (2005): ‘In an exhibition, the usual constraints of time, space and realism are suspended. This means that it is an ideal medium for experimentation.’ Of course, this is only partly valid, as museums are *dispositifs* of power and incorporate hegemonic histories. But although a thought exhibition remains limited to its space – an institution, in our case located in Central Europe – and time, the post-colonial ‘here’ of late capitalism, it can still function as ‘a simulated space’ (Latour & Weibel, 2007, p. 104) to test how new representations and practices can be developed, composed, and perceived by visitors and exhibition collaborators. And by doing so, new places to land can be explored.

Before approaching the last of the three concepts, ‘cosmogram’, I want to highlight one such representation that occupied a central position – spatially as well as conceptually – within the exhibition.

## Critical Zone Observatory Space

To turn the ZKM exhibition space into a site of experimentation – literally, in this case, representing a scientific experimental system – has been the motivation for ‘CZO Space’ (2020–22), an extensive design and architectural research installation developed by Arènes, Hajmirbaba, and many collaborators<sup>7</sup>. The installation occupied the first section of the exhibition space (the ground floor of one of the ZKM atrium halls) and was conceived as a spatial ‘scale model [...] to show a watershed inside a museum’ (Arènes, 2020). It represented the watershed of the Strengbach valley in the French Vosges mountains through the

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<sup>6</sup> The booklet was available to the visitors in German and English language and provided extensive information on the conceptual and curatorial approach as well as to each exhibit and the layout of the exhibition. A PDF of the English version can be accessed here: [https://zkm.de/media/file/en/cz\\_fieldbook\\_digital\\_en.pdf](https://zkm.de/media/file/en/cz_fieldbook_digital_en.pdf).

<sup>7</sup> The installation is based on expansive research conducted by Arènes and Hajmirbaba in collaboration with the CZO scientists Paul Floury, Jérôme Gaillardet, Jacques Hinderer, Sylvain Pasquet, Marie-Claire Pierret, and other scientists from the French network of critical zone observatories (OZCAR). Besides the cooperation with the curators, the exhibition design facilitators (i.e., Matthias Gommel), and the technical staff at ZKM, the realization of the installation’s multimedia elements involved Sonia Levy (film, animation), Frédérique Vivet (film), Juliette Hamon Damourette (animation), Patrick Franke (sound/field recordings), Grégoire Lorieux (sound/composition), Axelle Grégoire (maps), Renaud Hauray (handcraft models). For a complete list of credits see the project website [http://s-o-c.fr/index.php/zkm\\_czos/](http://s-o-c.fr/index.php/zkm_czos/).



scientific instruments of its local ‘Critical Zone Observatory’ (or: CZO), which is operated by the School and Observatory of Earth Sciences at the University of Strasbourg. CZOs collect data on the responsive processes constituting the critical zone: on the atmosphere, hydrosphere, biosphere, the soil, and the rocks. These ‘field laboratories’ employ multidisciplinary teams of scientists to track changes in the critical zone, usually not conceivable without scientific instruments, over longer periods of time. CZOs are located in specific landscapes that represent similar conditions all over the planet – in the case of the Strengbach observatory, a mid-altitude forest watershed – but which also differ and are specific to their given characteristics.



**FIGURE 2** Installation view of Alexandra Arènes’ and Soheil Hajmirbaba’s ‘CZO Space (2020–22) on the first floor of the exhibition ‘Critical Zones – Observatories for Earthly Politics’, ZKM Karlsruhe, 2020–22 (Photo by Tobias Wootton. ©: ZKM Karlsruhe).

The installation ‘CZO Space’ combined a scale model of the watershed with various instruments that were installed in the exhibition space in positions and on ‘altitudes’ that would, as a model, correspond with the valley’s topography, some of which were linked with instruments and data collected in the field. The work included diagrammatic maps, video images, and sound installations. ‘CZO Space’ proposed to visitors a new gaze on a landscape: a representation not in a pictorial form, but composed of interrelating and responsive processes, perceived from a perspective *immersed in* the space. Its motivation was ‘to develop a dialogue that fosters ways of becoming sensitive to the movements of the earth’ (Arènes, 2022, p. 338).

In this paper, I cannot discuss all the sections of the complex installation, but I would like to highlight at least one, the ‘Beech Trees Station’: Subtitled as ‘cosmic beings’ and represented by wooden scaffoldings positioned in different spots in the exhibition space, this section signified parts of the Strengbach observatory’s rainwater collection system. Tree canopies – demarcating the upper levels of the critical zone – absorb various molecules within the atmosphere, so that rain passing through the trees and shedding as excess water onto the ground carries, down from the canopies, biochemical elements by both rain and tree, with a composition quite different from rain falling on open fields. The water is collected in wooden

gutters set up under the trees by CZO scientists to extract samples to be analyzed in a laboratory. Since trees here serve as enriching and distributing devices and thus become part of the scientific infrastructure to detect, e.g., intensity levels of acid rain, Arènes (2022, p. 210) states: 'As the trees are monitored, the forest becomes a *sensitive infrastructure*.' Such an infrastructure goes beyond a technological – and human – experimental setup and includes plants, water, and landscape structures. Trees become part of the complex observation of the critical zone compartments and are, as such, conceptualized as critical agents within the observation infrastructure.

The sensitive infrastructures of the Strengbach valley CZO make visible, or observable, the landscape structures of this specific part of the critical zone. As a visitor to the exhibition, one could discover the abstract models of the tree sensors through the water-collecting devices and read about their function within the complex infrastructure of the CZO, while being immersed in the spatial model of a landscape as seen through the eyes and instruments of Earth System Science. In this *phenomenotechnical* (Gaston Bachelard) perspective on new ways of representing the world surrounding an observer – a perspective where human, non-human, biogeochemical, and technological agencies intertwine – 'the (notion of) Critical Zone extends the scope and the scale of what can be seen in landscapes' (Arènes, 2021, p. 146). To follow Arènes (2022, p. 223) further, it ultimately 'transforms the understanding of landscape, which is not a passive background, but which itself records, feels and provides the scientists with information on the variations in the atmosphere.' In such a perspective, the planet we, as humans, inhabit, along with many other lifeforms, is not pre-structured by any anthropocentric order, but generates its critical zone as manifold entanglements where heterogeneous elements are continuously composed and decomposed. This allows for many different – cosmopolitical – approaches on how a common world can be structured and made sense of.



**FIGURE 3** Installation view of Sarah Sze's 'Flash Point (Timekeeper)' (2018) on the upper floor of the exhibition 'Critical Zones – Observatories for Earthly Politics', ZKM Karlsruhe, 2020–22 (Photo by Tobias Wootton. ©: ZKM Karlsruhe).



# Cosmograms beyond Illustrations

Such complex spatio-aesthetic representations of the critical zone, like 'CZO Space', where the visitor finds themselves surrounded by various visualizations and sonifications, by instruments and observatory processes, propose radically different alternatives to the distant Blue Marble seen from outer space. They are aesthetic means for questioning traditional concepts of the world by identifying their biases and, ultimately, proposing alternatives. As Latour (2020, p. 19) puts it: 'Changes in cosmology cannot be registered without changes in representation.' This is where the notion of 'cosmogram' comes in. The concept has been developed by the art and science historian John Tresch – and used by Latour in sometimes diverging ways (Latour, 2004a; 2004b)<sup>8</sup>. For Tresch, the concept describes representations – objects, architectural forms, practices – that bring an abstract cosmology into the aesthetically and operationally concrete. An example from Judeo-Christian mythology that Tresch mentions is the Tabernacle of Moses: It describes the godly regime as a spatial formation where all elements are put in significant interrelation. Despite this dogmatic example, cosmograms are not necessarily static. They may provide 'the basis for new interpretations and action: social relations, relations with other cultures, [...] with animals, plants.' And thus, enable a 'redescription, in [...] future tense: not the world as it is but the world as it could be' (Tresch, 2005, p. 69).

An important cosmogram for 'Critical Zones' has been Sarah Sze's installation 'Flash Point (Timekeeper)', a 2018 iteration of her 'Timekeeper' series. These works are built from found objects and images mounted on fragile scaffoldings and scattered on the floor, illuminated by projections mapped onto small screens or spinning along the walls beyond. It is difficult to say where 'beyond the installation' is, as the scattered and projected elements make its boundaries blurry. Sze's more recent 'Timekeeper' iterations are explicitly influenced by Latour's notion of the critical zone, as she has pointed out, comparing them to representations of 'the world as a very thin, very fragile membrane of life' (Sze, 2020, p. 200). During an artist talk on the occasion of her 2020 solo exhibition at the Fondation Cartier in Paris, Latour (2020c) pointed out the experience of being spatially de- and recentred by her installations: 'Visitors are asked to subvert his or her idea of what the Earth is like.' With *Timekeeper*, the notions of *cosmopolitics*, *compositionism*, and *cosmogram* merge: 'This is how viewers can escape the dichotomy between seeing inside-out or outside-in [...]. They become 'composers of space', in their own right.' (Latour, 2020b, p. 2). In fact, such uncertainty, from a visitor's perspective, of differentiating the inside from the outside contributes to the 'function' of 'Flash Point (Timekeeper)' as a cosmogram. Although I want to use the term 'function' carefully here. As Martin Guinard (2022) put it in his obituary on Latour: 'Criticisms understandably arise when philosophers curate exhibitions and use artworks merely to illustrate ideas. But in fact, we took a very different approach, which was to imagine an encounter between artists' works and his ideas, each of which followed different trajectories.' In an interview I conducted with Arènes and Hajmirbaba, they described their process of developing 'CZO Space' as a complex collaboration with scientists, artists, exhibition facilitators – and, of course, Latour. Hajmirbaba (2023) put it beautifully: 'If we were like a balloon, he was like a weight. Working with Bruno was like... how to say it... he nourished himself with what we did. [...] Like an anthropologist... And we were nourishing our proposal with what Bruno showed us. But not just Bruno. It was [...] also reading Anna Tsing, the patchiness, the connectivity...' We don't have the time to go into Tsing's (and Haraway's) notion of *patchiness*, which frames our view on the *planetary* Anthropocene as necessary, partial, situated, and always incomplete (Tsing et al., 2019). But the influence of this concept on their work is in fact something Arènes and Hajmirbaba share with Sarah Sze<sup>9</sup>.

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8 I am indebted to Isak Winkel Holm for pointing me to these discrepancies.

9 I am indebted to Bettina Korintenberg for pointing out to me its importance for 'Flash Point (Timekeeper)'.

## Conclusions: Composers of Space

The notion of thought exhibition is directly connected to an epistemic potential of artworks and artistic practices that goes beyond simple illustrations, beyond 'a boring demonstration of some a priori ideas' (Latour & Weibel, 2007, p. 105). In this sense, these works and practices become part of a spatio-aesthetic experimental system where not only new ideas can be tested, but where visitors may also develop their own questions and alternative cosmopolitical approaches. Of course, this does run the risk of the visitor being overwhelmed by both the complexity of the things presented and the difficulty of the issues raised. As in the case of other 'expanded' curatorial practices and theories in recent years (Rogoff & von Bismarck, 2012; Voorhies, 2022), such an epistemically rich conception of a 'research exhibition' assumes an active visitor with a developed curiosity and strong agency – which, despite all its merits in addressing the complexities of our world, runs the risk of somewhat 'losing' those visitors with a more contemplative or less intellectually involved approach.

The concept of the thought exhibition, however, still offers a valuable approach to investigating complex questions that relate to essentially spatial configurations, their perception, and representation – i.e., how a common world can be conceived and how positions of involvement, instead of analytical distance, can be occupied. The notions of *cosmopolitics*, *compositionism*, and *cosmogram* can here serve as a framework for artistic and design approaches to grasp the manifold perspectives on the world we inhabit, their continuous questioning and reworking, and the temporary representations they afford.

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