Shaping futures:
Exploring climate-social utopias through arts-based approaches in Linz

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Abstract

The climate crisis presents profound social and ecological challenges. Utopias, as idealised visions of a better world, offer frameworks that inspire societal change and collective action. Recently, there has been growing hope that arts-based approaches can foster transformative change, transcending conventional scientific methods by connecting with human emotions, experiences, and identities. In relation to that we ask how climate-social utopias are expressed through arts-based approaches, and what role they play in action research. Understanding these dynamics is relevant for discovering new ways to generate empowerment and fostering proactive climate action through the integration of artistic processes. Drawing on utopias, methodologies of action research, and arts-based approaches, we assess the potential of climate-social utopias. We evaluated artistic outcomes—a stop-motion video, a sculpture, and a picture— of the workshop "Möglichkeitsräume – Klimasoziale Zukunfts-Werk-Stadt Linz" on their impact in conveying climate-social utopia. Additionally, post-workshop interviews were analysed to determine changes in utopian concepts and the influence on self-empowerment. We have identified the potential of participatory, arts-based approaches to raise awareness of climate-related challenges and promote collective action strategies. The incorporation of creative forms of expression into scientific research can facilitate the development of novel approaches and personal empowerment. This can encourage the transformation of negative emotions into positive outlooks towards a climate-social future and enhance collective action.

Keywords: arts-based approaches, utopia, climate crisis, transdisciplinarity, action research

1 Introduction

The ongoing climate crisis poses an unprecedented challenge to humanity and the planet. The decade from 2011 to 2020 was the warmest on record, culminating in 2023, the hottest year ever documented (WMO, 2023). The current climate change phenomenon is unprecedented in terms of its scale and intensity, and it is driven by high levels of greenhouse gases in the atmosphere. This is resulting in extreme weather events, such as hurricanes, wildfires, droughts, and floods, which in turn are causing significant disruptions in global economies and impacting especially vulnerable communities (UNFCCC, 2021). Immediate action is therefore key to mitigate these impacts and prevent further temperature increases, as highlighted by recent findings from international organisations (United Nations, 2023; World Meteorological Organization, 2023).

In this context, the concept of utopias – idealised visions of a better world – offers a useful way to imagine and work toward sustainable, climate-resilient societies. Historically, utopian thinking has often been seen as unrealistic and impossible. But given the current ecological and social crises, it has gained new importance as a way to inspire creative and practical solutions (Levitas, 2013). Utopias provide a space for imagining new possibilities for living together in harmony and justice. One effective way to explore these utopian ideas is through arts-based approaches. Art has the unique ability to go beyond traditional scientific methods, connecting with human emotions, experiences, and identities. By integrating artistic processes into research, we can engage communities more deeply, empower individuals, and communicate complex ideas more effectively (Sargent, 2010). This approach forms the foundation of our study.

As part of the course "Climate Scholar Activism" at the University of Natural Resources and Life Sciences (BOKU) Vienna, we aim to examine this approach in greater depth by analysing the data and outcomes of the workshop "Möglichkeitsräume – Klimasoziale Zukunfts-Werk-Stadt Linz", which is part of the project "Climate Social Linz" funded by the Climate Fund of the City of Linz. The research question driving this investigation is: "How are climate-social utopias expressed through arts-based approaches? What role do they play in action research?" This question was formulated during a post-workshop seminar, where the workshop itself served as both a resource and an object of analysis.

The main focus of the analysis is on the artistic outcomes and their role in communicating climate-social utopias and empowering participants. Three artworks were created during the workshop: a stop-motion video, a sculpture and a picture. Post-workshop interviews with workshop leaders

and participants were analysed to understand personal and shared utopian concepts, changes in these ideas during the workshop, and its impact on participants. The analysis also examined participants' experiences with arts-based methodologies and the effectiveness of these approaches in initiating transformative processes. The analysis revealed that art-based approaches effectively convey complex climate-social concepts and also cultivate a sense of empowerment and community among participants. By transforming abstract utopian visions into concrete artistic expressions, these methods encourage participants to engage more deeply with climate issues and inspire them to take actionable steps towards a sustainable future. Our findings demonstrate that integrating artistic processes into climate activism significantly bridges the gap between scientific knowledge and public engagement, ultimately promoting collective resilience and proactive climate action.

Our paper consists of a theoretical part in which we give an overview of the underlying principles and concepts of utopias (Section 2), action research & arts-based approaches (Section 3), followed by the applied methods (Section 4). In Section 5, we present a detailed analysis of the artistic works created during the workshop, as well as insights from the conducted interviews. Finally, the findings are summarised and the significance and impact of the art-based approaches in the context of climate-social activism are reflected upon. The objective of this work is to demonstrate how participatory and art-based approaches can be employed to enhance awareness of climate and social challenges and facilitate the development of collective action strategies.

2 Utopias

Striving for a sustainable, just or climate-social future requires visionary thinking (Langergaard & Eschweiler, 2022). Yet, under decades of neoliberal hegemony, attempts to imagine and formulate a better and more liveable future have often been discredited as something utopian, hence unachievable and unrealistic, resulting in an "unlearning" of our capacity to envision an alternative or better future (Aigner et al., 2021). However, the importance of visions and thinking in alternative futures has been recognized early on. The first "Zukunftswerkstätten" (future creating workshops) emerged in the 1960s and 1970s, in the political climate of rising societal and environmental disruptions, mainly thanks to the work of Robert Jungk and Norbert Müllert, who developed the idea of connecting utopian thinking with democratic participation and civil

action through participatory approaches (Müllert, 2009). Ever since, ecological and social crises have increased, and a variety of solutions and alternatives to the current capitalist state have evolved, ranging from modern socialism to de- or postgrowth approaches (Robbins, 2020).

In contemporary discourse, particularly in the context of the climate crisis, utopias offer a diverse range of solutions that fit different circumstances and needs. The idea is not to design a flawless society but to explore innovative solutions and alternative models that can significantly enhance human well-being and ecological sustainability. Utopias can provoke new ideas, empower communities, and disrupt existing spatial and institutional pathways (Koning & van Dijk, 2021). Climate-social utopias therefore represent a subset of utopian thought that specifically addresses the ecological and social dimensions of the climate crisis. These utopias envision societies where human activities are harmoniously integrated in the natural environment, promoting sustainability, resilience, and social justice. The theoretical foundations of climate-social utopias are often inter- and transdisciplinary, intersecting social as well as environmental studies and non-academic fields. By revealing the possibilities beyond the status quo, utopias play a crucial role in inspiring social imagination and fostering critical social thought, which are indispensable for the progress and evolution of society (Zuk, 2020).

One of the most significant contributions of utopian thinking is its ability to inspire transformative change. Utopias constitute a vision of a future that is distinctly different from the present, challenging existing paradigms and encouraging creative thinking. This visionary aspect is crucial in addressing the climate crisis, which requires fundamental shifts in how societies function.

The urgency of the ecological and social crisis requires scholars and researchers to broaden their scientific horizons and forge alliances with other disciplines and civil groups, including activists and artists. This collaborative approach emphasises co-learning, where both practitioners and researchers benefit from each other's knowledge and experience (Egmose et al. 2020). To bridge the gap between imaginative thinking of utopias and actionable insights, arts-based approaches can be used to explore and realise these visions. These methods make abstract utopian concepts tangible and relatable, inspiring critical reflection and collective action toward sustainable futures (Bentz et al. 2022).

3 Action research & arts-based approaches

Action research and arts-based approaches are both innovative methodologies and provide unique approaches to the exploration of complex cases and offer highly participatory and reflective perspectives on different matters. The engagement of participants fosters deeper understanding of sophisticated social issues (Baum et al., 2022; Muhr, 2020). In the case of the project climate-social Linz, a mixed methods approach was conducted including both of the methodologies. This chapter elaborates further their conceptions, outlines their uniqueness and provides theoretical background to the project foundation.

Action research is not a standardised methodology but rather a transdisciplinary collection of participatory approaches that integrate research and action to address specific problems. It aims for a collaborative fusion of researchers coming from academic research institutions as well as non-academic staff working in the same field. The term "action research", originating from the work of Kurt Lewin in the 1940s, emphasises collaborative inquiry, reflection, and iterative problem-solving but goes ideologically way back to Marxist ideas. Lewin's original philosophy had its foundation in the overlapping of subject and object in the action space. That implicated partly a shift in the process, making the researchers powerful actors in their own field of research. Getting at the same time intensively and constantly observed and evaluated by those being researched balances out a certain power structure (Halder, 2022). The centre of action research consists of the participatory approach that includes researchers themselves in a highly reflective manner rather than plain descriptive analysis. This reflective process is directly linked to taking action in the research project itself, influenced and embedded in a historical, cultural and local context with regard to social relationships (Baum et al., 2006). But even though action research consists of quite a diverse field of approaches, there are central methodological elements that can be found in every single one of them. Especially noteworthy are the so-called Lewin's cycles for action and reflection, critical learning- and (self-) reflection processes, as well as collective and participatory methods that are adapted to a specific context. These principles are the result of an almost 80 years lasting development of Lewin's ideas being put into practice, for example with workers in northern Italy and by supporting indigenous activists in South America. In its Marxist

tradition, action research aims for the liberation of people from their (neocolonial) oppression in order to change the world in their interest (Halder, 2022).

Arts-based approaches are defined as methodologies and practices that integrate artistic processes and practices into various fields such as education, research and therapy. Therefore, various forms of art such as visual arts, music drama, dance and creative writing can be used as tools for expression and communication of complex matters. They provide methodologies to facilitate deeper understanding of complex human experiences and to foster creativity paired with engagement (Muhr, 2020). Although science and arts indisputably apply different logics and certainly often pursue different goals, they share certain characteristics such as the thrive for innovation. Looking at the disciplines rather as complementary partners instead of rival and mutually exclusive methodologies offers a unique toolset to explore complex fields of research embedded in a social context. There are a few approaches in science that incorporate artistic components. Arts-based research allows "to transcend the cognitive mind and tap into human faculties such as emotions, (embodied) experiences and identities" and aims specifically for the incorporation of different forms of knowledge including the field of 'artistic knowledge' (Muhr, 2020, p.251). It strives for a holistic view on certain matters, but further does not always claim to be representative but rather as a contribution to an ongoing discussion, especially in highly sensitive fields of research (Krauss et al., 2022).

As further elaborated in this chapter, action research and arts-based methods share a certain innovative approach and rely on a highly reflective and adaptive process to explore complex socio-ecological structures. Combining action research with arts-based approaches can enhance participation, creativity, and impact. This integration allows a more holistic and nuanced exploration of research questions, fostering deeper understanding of thematic areas and allowing participatory approaches with highly relevant but non-academic experts to be integrated into the research context. It offers a unique transformative potential for research. By fostering collaboration, creativity, and reflexivity, these methodologies can address complex issues in innovative ways. Integrating these approaches can lead to richer, more impactful research outcomes, empowering participants and enhancing the relevance of the findings.

Looking at the case of climate-social Linz, that covers a certainly highly sensitive topic and touches upon human-nature connectedness, the application of an arts-based approach is useful, providing new insights into non-verbal components and expressions through mediums and processes that go beyond words (Muhr, 2020). As arts-based approaches are partly working with emotions regarding a certain topic, it includes a distinct entry strategy into it. By uncovering the individual emotional connection towards a subject area, these approaches can further lead to philosophical reflections going beyond the individual, but rather the societal level of how to deal collectively, in this case, with a futuristic vision of a climate-social Linz (Muhr 2020).

4 Methods

Based on the assumption that the increasingly evident social and ecological crises are interconnected and can only be tackled together, the project 'Klimasoziales Linz' was launched in 2023. It is an applied research project by the BOKU University, which is carried out in cooperation with ATTAC OÖ, University of Art and Design Linz, Volkshilfe OÖ, BRG Hamerling and other civil society and scientific actors in Linz and Vienna. It is financed via resources from the city's climate fund and running from June 2023 until May 2025. The link between the two crises is addressed in various workshops with civil society groups such as children, activists and people affected by poverty and made visible and tangible through a variety of artistic interventions. As part of this long-term project, a two-day workshop called "Möglichkeitsräume – Klimasoziale Zukunfts-Werk-Stadt Linz" provided a forum for exploring potential future scenarios and creating powerful images of a climate-social city. The objective of the workshop was to develop visions of a sustainable future and to identify novel, creative methods for effectively communicating these visions and utilising them in activism. It was explicitly designed for individuals not academically working in research but are rather dedicated to a sustainable future and are interested in becoming involved in its advancement from a civil, open-minded perspective. The participants developed their ideas for a climate-social Linz in 2050 by attending interactive sessions and visualising these through three artistic forms, namely a stop-motion video, one sculpture and an AI-supported picture. It was conducted on 12th and 13th April at the Cardijn Haus Linz.

In the aftermath of the workshop, we - 18 students of the course 'climate scholar activism' - carried out in-depth interviews with three leaders and three participants of the workshop. The findings contribute to answering the question whether and how these innovative research and activism approaches can contribute to enhancing empowerment, self-efficacy and the development of new

visions by civil society in order to tackle the climate crisis. Originating from the field of social sciences, in-depth interviews qualified for this cause and were well applicable to the workshop's arts-based approach. Due to its semi-structuredness, the interview mode was free enough to allow a narrative and free-flowing form and at the same time being structured enough to code it in a standardised and comparable manner for each interview (Knott et al. 2022). We split into groups, each covering the analysis of one produced artwork of the workshop (stop-motion video, sculpture, AI-supported picture). Analytical guidance advice was therefore drawn from literature prepared in seminar sessions (see Schmidt & Wiesse, 2020; Takeda, 2019). In a collaborative writing session, a consent form was formulated in order to cover legal concerns. A second group wrote a guideline interview for the workshop leaders, the third one for the participants of the workshop. The interviews were carried out online via the platform 'zoom'. After conducting and transcribing and in some cases translating the interviews from German into English, we agreed on a deductive code set for the six interviews. Six main categories (utopia, empowerment, arts-based approaches, medium, evaluation of the workshop research and art) with further sub-codes were agreed on. Access to the platform/program 'atlas.ti', a computer-based data analysis software for qualitative research, was provided in order to code the interviews according to the guidelines that were previously agreed on. After analysing the outcomes, we started working on implementing the outcomes into a draft paper including the theoretical background that built the basis for this paper. In the following text, the interviews are referred to/cited as seen in table 1:

Table 1: List of interviewees regarding their role and artwork produced

Produced Artwork	Role	Referred to as Interview
Stop-motion video	Workshop leader Workshop participant	No. 1 No. 2
Sculpture	Workshop leader Workshop participant	No. 3 No. 4
AI-supported picture	Workshop leader Workshop participant	No. 5 No. 6

Each workshop leader brought unique expertise in an arts-based approach, working as researchers in the university context and as artists. The participants were non-professionals, interested in climate-social utopias and living in, or near the city of Linz. The writing process of this paper was accompanied by weekly seminar sessions that followed a theoretical part building

up a fundamental knowledge on the topic of action research besides other subjects. In the process, peer reviewing was applied in order to finalise the paper.

5 Activist workshop on climate-social Linz

During the Workshop "Klimasoziales Linz "three different artworks were created, all based on the topic of utopias. The workshop had three main focuses: life and living together, work in industries, and mobility. In total, three groups of two to three participants each created three different works of art under the guidance of a workshop leader. The first artwork is a stop-motion video with the title "The emancipation of water", the second artwork is a sculpture that represents a utopia about climate-social habitation, the third artwork is a mixed-media collage on canvas with the central topic of mobility in a utopian Linz. All artworks were displayed on 21st June at an exhibition called "Klimasoziales Linz" in the public library "Wissensturm" in Linz. The following section contains an analysis of the various artworks and the role that the process of their production had on the utopian thinking and empowerment of the participants.

5.1 Stop-motion video

5.1.1 Artwork

The artwork is a MOV file that contains a stop-motion video named "The emancipation of Water". The central topic refers to the idea of public commons and freedom in society, which is symbolised by the journey of water from a bathtub into the open world. First and foremost, the message of the artwork is not directly visible to the viewer, as it is masked behind abstract messages and symbols. By paying attention to the topic and the explanations at the end of the video, the meaning of the film is made more accessible to the attentive viewer.

The stop-motion Video is a type of video technique that generates the illusion of movement by adding different pictures, photos in this case, that are juxtaposed to one another. The different pictures show scenes constructed out of everyday material, like a sink with water, a blue bag with plastic foil that symbolises water and paper cut in the form of fishes. It is a mix of real-world elements, like plants and water, and artificial placeholders that substitute elements which were not available. Overall, the artwork tells a story in which one feels connected to the water and its desire for freedom, which ends in joy after the water has fulfilled its dreams.

Table 2: Description and analysis of the stop-motion video

Scene	Description	Screenshot	Text	Analysis
Scene 1	The first scene shows a sink representing a bathtub with (real) water (caged).	Screenshot: 00:00:05 Timeframe scene: 00:00:01 - 00:00:11 	"*Heute war wieder einmal Samstag und das Wasser war traurig, weil es einsam und eingesperrt war. Öfters kamen zwar einige Menschen zu ihm zu Besuch, die keine Badewanne besaßen, um sich in seiner Gesellschaft zu entspannen. Dadurch war es weniger einsam, aber es blieb doch eingesperrt.*"	The water flows from the tab into the bathtub, represented by a sink. Afterwards, a hand is working on the drainage, trying to open it. The text refers to the water as a conscious subject with emotions. The water is in a bathtub that is shared within a community and appreciates the social aspect as positive. While the loneliness gets buffered through this, the sadness coming from the fact that the water is caged is overweighting. This scene tackles the topics of wanted but not already achieved emancipation and liberation as well as the tendency of a western society to control and form anything, even an element fluid like water
Scene 2	The sink aka bathtub is opened, and the water is "unleashed". The Second scene shows an Ikea bag, representing a pool, the water is represented with plastic foil. Paper fish and more water are added as the video continues.	Screenshot: 00:00:38 Timeframe scene: 00:00:11 - 00:01:02 	"*Dasselbe erlebte das Wasser in den privaten Swimmingpools. Dort war es zwar im Freien und hatte Gesellschaft von ein paar Goldfischen. Dafür musste es immer wieder Chlor schlucken, weil die Menschen glaubten, das würde ihm und ihnen helfen, gesund zu bleiben.*"	The sink aka the bathtub is opened, and the water is "unleashed". While reaching a new stage of freedom in being outside, the text also suggests the distinction between private and public property by placing the water in a private swimming pool. The water then starts to get in contact with elements from a natural environment (fishes) which is still influenced by humans through chloride. The text criticises in the last sentences the artification of nature as a social construct that separates society and nature in the belief this would be healthy.

Scene 3	As a transition to the next scene, the material that symbolises water and fish are gradually removed and put in a stone corner.	Screenshot: 00:01:14 Timeframe scene: 00:01:02 - 00:01:17 	"*Eines Tages, nach vielen langen Diskussionen, beschlossen die Menschen, dem Wasser seine Freiheit zu schenken und damit auch ihre Freiheit zurückzuholen." Mit all seinen Lebewesen wurde dem Wasser der Weg in ein offenes Gelände gebahnt…*	The water is set free into a public space that is not owned by anybody. There is an increasing number of fishes that refer to water as a source of life not only for humans and their society but for nature as a whole. This implies also a critique of privatisation as a restriction for life in general seen by the emotions of the water as individual but also on the thriving of fishes as symbols for natural processes. On an emotional basis, this is a turning point as the viewer starts to feel that a goal is reached, and freedom is achieved.
Scene 4	…ending up in a pond, where the water (again, real water) and the (paper) fish can live peacefully in freedom and alignment with nature.	Screenshot: 00:01:24 Timeframe scene: 00:01:17 - 00:01:33 	…"*wo es von nun an gemeinsam mit allen zufrieden lebte.*"	In this scene the water is finally freed, in the video symbolised with real water in a pond without elements that induce a specific shape to the water. This scene is for external viewers probably the most memorable by making the distinction between water kept in artificial structures by humans and water in common spaces clear.

Both workshop leader and participant shared their experiences in engaging with the stop-motion video technique. The leader, as a person very experienced in media practice, used the technique as a tool to show the participants a way to create media content with little effort and without a lot of material and technical equipment to become visible (Interview 1). The participants appreciated that the method makes it easier to share the content and leaves plenty of room for personal expression. Nevertheless, they pointed out that the technical barriers for technically inexperienced people should not be underestimated. For them the creative performance to translate the story's content into a video was thereby at the centre of attention (Interview 2).

5.1.2 Utopia

Utopias were a central theme in the workshop, serving as a crucial tool for imagining a better life. The workshop leader emphasised the value of embracing utopian thinking without being confined by a narrow, realistic perspective. This approach is especially valuable for adults, enabling them to explore new possibilities, *"push boundaries"* and encourage imaginative thinking (Interview 1). The workshop highlighted the concept of water emancipation, reimagining water not as a threat, such as in floods, but as a harmonious element that enhances life for humans and the Earth. When talking about climate-social visions, the workshop facilitator saw it as activism rooted in art and as a way to add to scientific facts while also giving a feeling of togetherness. Since utopias are positive and set in the future, it also forces the people creating these to believe in a future at all and gives them motivation to fight for it (Interview 1).

The participant's experience mirrored the workshop leader's observations. They expressed that discussing utopias in a group alleviated feelings of isolation and alienation. The participant said they felt *"reassured that I'm not completely alone"* (Interview 2). They found comfort and ease in sharing their visions with like-minded individuals who *"were on the same wavelength"*, fostering a strong sense of community (Interview 2). The participant highlighted the workshop's role in providing a space for shared exploration of utopias and being *"less lonely with it"* (Interview 2). They believed that discussing utopias collectively could unite people with different worldviews, emphasising the unifying power of shared positive visions for the future. They articulated their utopia of dismantling capitalism in favour of a community-oriented economy, using local food markets as an example of achievable utopian elements already existing in some contexts. (Interview 2).

5.1.3 Empowerment

The facilitator emphasised the significance of the workshop and video-making in fostering participants' empowerment. Despite technical issues during filming and time constraints towards the end, past feedback and personal observations confirmed that empowerment of the participants was the most valuable aspect for the facilitator. One participant, initially sceptical, found it challenging to engage at first. However, as the video project progressed, this participant became increasingly proactive, taking control of the camera, contributing ideas, and actively shaping the story. The facilitator found it immensely impactful to witness this transformation, considering it the most valuable outcome of the workshop (Interview 1).

From a young age, the facilitator recognized art as a powerful means for self-expression and witnessed how it enabled children to voice what mattered to them. Their experience of leading workshops since the age of 15 reinforced this belief, when consistently observing the visible empowerment of participants. They described it as *"the process being art itself"* (Interview 1). This experience has continued to inspire and motivate them to use art as a tool for empowerment in their work. The experienced artist chose the method of stop-motion video to empower participants and open up possibilities for creativity (Interview 1).

For the interviewed workshop participant their personal engagement was particularly empowering, to see that their experiences and viewpoints were validated and appreciated. "*It is good…. to be able to bring in one's own perspective"*, they said (Interview 2). Participating in the workshop with likeminded people fostered a sense of hopeful community, which motivated them to take further action as they felt "*hopeful"* and "r*eassured*" (Interview 2) to speak up even in less supportive environments. The participant repeatedly emphasised how experiencing the workshop strengthened hope and motivation, enabling a more positive outlook on the future. In addition, reflecting on being a role model themself for others, the participant noted positively that even small actions can make someone, a person being looked up to.

5.1.4 Arts-based approach

The workshop leader has a strong connection to art and sees stop-motion video as a way to create something without needing much knowledge or material. *"It's supposed to be fast; it should work with the available material, everyone should be able to do it, easily, available and most people want to be seen, but not in person, in the video"* (Interview1). What was also important to

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them was that the process and outcome of the video were both equal in value. Participants have to dissect what they want to say and might gain different insights during the process of the video creation. The final video is therefore not the only thing they can take from the experience (Interview 1).

The medium stop-motion film was engaging for the participant, partly due to their prior exposure through their son. This familiarity, combined with the new learning opportunities it presented, served as a motivating factor. They appreciated the ease of distributing the film and saw it as an effective way to spread messages and utopian ideas. However, the participant expressed some hesitation about using the medium in the future as being "*not so technically skilled*" (Interview 2). Despite this, in the participant's view, stop motion is an appropriate method for engaging younger audiences and has significant potential for working with utopias effectively (Interview 2).

In the interview, the workshop leader's deep connection to creating art was evident. When asked about art as a method of scientific research, they favoured using creativity to enhance the connection with scientific work. They emphasised that creating art involves both hands and mind working in unison. While they also value the writing process, they believe that engaging fully with language requires the integration of body and mind (Interview 1).

For the participant, this method opened up new ways of thinking and they found the playful approach highly motivating. They appreciated spaces like this, which allow for social engagement on the topic while incorporating culture and the arts. The stop motion film, used as a research method, proved to be a simple tool requiring minimal resources and making it an accessible option and it is "*…super that this kind of access (to research) exists…*" (Interview 2). Both the workshop leader and the participant highlighted how art, particularly through stop-motion film, facilitated a deeper engagement with the subject matter, using creativity with scientific exploration in an accessible and motivating manner.

5.1.5 Evaluation of the workshop

For the workshop leader, conducting these types of workshops was a well-established practice. Their main takeaway was the empowerment the participants experienced and how different the outcome and process is when doing a workshop with adults instead of children. They also believed it would be beneficial to do this kind of workshop in schools to really make a difference (Interview 1). Similar to that, the whole workshop with the creation of the video and the group

work was a type of activism for the workshop leader, and she addresses how much she values peaceful activism. Even when doing workshops with children or with her own family, she views creativity and art as essential tools for practising activism in everyday life (Interview 1).

According to the participant, the workshop was a significant step in addressing fears, motivated its participants and instilled energy and hope in a shared space. The workshop itself was perceived as well-organised by the participant. The small group size and it being an open-end approach was beneficial to the process. The atmosphere was described as *"friendly and cheerful"* (Interview 2) which contributed to the participant feeling safe, actively engaging in the workshop and being unafraid of saying something wrong.

According to the participant, analogue methods like painting are easier done, as they are without the potential of technical difficulties. However, films can be disseminated more easily, whereas seeing the sculpture or painting in person can be very moving. The participant believes that different arts-based methods suit different people. Even though the participants felt very connected to each other during the workshop, unfortunately the contact was not maintained after the workshop (Interview 2).

An important takeaway for the participant was the realisation that it is good to speak up and that little changes matter. They appreciated seeing that there are other people who genuinely want to do good in the world: "*That's the message, just get out there and don't have to believe that everyone is mean to me and all everyone wants is highways*" (Interview 2).

5.2 Sculpture

5.2.1 Artwork

Figure 1: Sculpture "The turtle project" developed by activists participating in the workshop. Source: Marianne Lechner.

The artwork can be categorised and was referred to in the interview as sculpture, installation or architecture. For a better understanding in the text, we will stick to the word sculpture. It represents a story about a climate-social utopia that the participants developed during the workshop. The story is about a concrete building that is being transformed over time to a multi-usable green architecture. Through the storyline it includes the realities of a mother and a daughter and their perspective of how their environment changed around them during the years (Interview 4). The fundament of the sculpture is made out of pieces of wood which are arranged in a triangular position. Colourful sheets of paper and tree branches are glued onto the wood structures. A white plastic net ribbon connects the structure. On the floor plants in pots are arranged and blue paper

pieces in the form of lakes are found. Everywhere, excerpts from the story that was the foundation of the artwork are written on small colourful papers and attached so you can read bits of the storyline while looking at the artwork. The whole installation is placed on a mat/carpet which has a pattern of greyish squares like a pixelated picture.

The choice of which medium to use as expression of the climate-social utopias, as well as the utopias themselves was emerging during the creational process. The organiser intended to leave space, both physically and creatively, for the participants by providing them with raw materials they could work with and three hours of time to work on the art project. During the workshop, the participants naturally gravitated towards the medium, a sculpture, as they attempted to create something (Interview 3). The participant felt that three hours were too little time to achieve what they had envisioned and that the lack of time led to a deviation from the initial idea and visions the participants wanted to realise. In addition to the time constraint, the concrete realisation of their idea was said to be difficult to implement in a handcrafted manner with the available resources (Interview 4). These factors, even though being framed as constraints from the participant, still led to a very dynamic and fruitful process of building the sculpture, as the concept of the utopia influenced the materials chosen and the materials available again had an influence on the ideas. This process was very lively described by the participant: "And throughout the process of building this statue [..] we ended up adjusting that quite a bit to where it was. Yeah. And that happened in the process of building it. Because we were like, okay, that's the materials we have. What do we do with them? What could we, ahm, what could we make? [..] and how could we express this?" (Interview 4).

Despite all difficulties, the participant as well as the workshop leader expressed appreciation for the sculpture at the end (Interview 4). More broadly, they argue that art is an excellent means of communicating ideas, stepping somewhat off the beaten path to allow more room for reflection, both for the observer and the creator. The implementation of various media offering different means of communication was, therefore, highly appreciated by the participant.

5.2.2 Utopia

In the workshop the participants had the opportunity to collaboratively engage with the topic of utopias. Participants brought their own ideas and experiences, learning from one another and engaging openly in discussions and creative exercises. These interactions culminated in the collaborative creation of a sculpture, symbolising their collective vision of a utopian society.

Engaging with the topic of utopia was a novel experience for the workshop participant, who described themself as more realistically minded, often critically questioning the applicability of utopias. This scepticism created tension in her engagement with the topic. However, she found it interesting to hear the ideas of other participants, reflect on them, and evaluate their feasibility. Imagining utopias proved useful as it can help create movement. Approaching problems solely from a technical standpoint might not always lead to progress, whereas setting high goals through utopian thinking opens up a realm of possibilities, making the process intriguing.

The workshop enabled participants to discuss the term utopia and find out what it means to them. In the Interview the workshop participant described their personal approach to the term: "*Like Utopia is not necessarily grounded in perfect realism, even if you establish a perfect system in the world, people are still people.*" (Interview 4) Also, for engaging with utopias, it could help to set aside scepticism, allowing for all thoughts and ideas regardless of their feasibility. "[...] *what could the world look like if it was climate-social and equitable?*" (Interview 4) In the workshop, participants envisioned utopias within the realms of education, jobs, and the establishment of sustainable city ecosystems that integrate humans and nature. They discussed what jobs or education maintaining such ecosystems would look like, emphasising biology, ecosystems, social justice, and equity. From the participants point of view, utopias are crucial regarding how climate change is perceived: "*I do think they're important, because it's really, really easy to just get stuck in climate despair*" (Interview 4). Engaging with diverse ideas about climate change helps to avoid hopelessness, which is counterproductive. From a psychological perspective, discussing and researching utopias is beneficial; setting higher goals than may be achievable can increase motivation, even if not all are reached.

The workshop leader, having previously engaged with the topic of utopia, focused on exploring how people can alter their behaviour and what is necessary for transformation in the context of climate change. By envisioning multiple possible futures, participants imagined what a climate-social town might look like, how we could live together, and the importance of discussing possibilities to raise awareness. The workshop leader noted that it was fun to discuss desires and witness how much people value harmonious social lives (Interview 3).

Positive storytelling about the future is very helpful, as utopias unite different worldviews and values. Rethinking storytelling is essential: instead of heroic tales and stereotypes, one should consider futures in a respectful and innovative way. Learning from those with a positive view of human history, rather than a pessimistic one, can be more inspiring and less paralysing.

Discussing people's desires for their futures revealed that many participants have good visions and believe in the inherent goodness of people. Referring to the author Bruno Latour, the workshop leader pointed out that it is not revolutions that change things but rather the process of designing new solutions. Design is an effective way to initiate transformations, encouraging us to rethink economic systems beyond neoliberalism. By unlearning neo-capitalistic thinking and embracing more undisciplined approaches, one can experiment with new ways and narratives for social innovation (Interview 3).

5.2.3 Empowerment

Artistic methods can play a significant role in the work of activists by providing creative ways to convey messages and engage with non-scientific audiences. For the workshop leader, arts-based approaches such as storytelling and visualising utopias are crucial tools that can help activists enhance their communication skills and convey their ideas in diverse ways. They emphasise that storytelling is genuinely human, and since people enjoy listening to stories, "*[…] stories are a big thing*" (Interview 3). The ability "*[…] to produce pictures in the heads of people*" (Interview 3) is powerful, making it a potentially empowering tool for activists. They talk about how "*[…] this was also one initial thought, that we would like to empower people with this workshop […]*" (Interview 3), and thus designed the workshop with this idea in mind. In essence, artistic methods empower activists to resonate with audiences and effectively convey their concerns and messages.

Envisioning utopias, developing positive climate visions, and discussing them can be personally empowering for activists. This illustrates the participants' perspective after the workshop. They see the actions that were carried out in the workshop not only as a starting point for striving towards the developed ideals but also as a way to adopt a realistic but still hopeful perspective, understanding that the path towards the utopias and the utopias itself do not have to be perfect. A perspective of: "*Okay, this is where we want to get at and like these are the things that we should work towards to make the world a better place, even if we don't end up in perfect harmony.*" (Interview 4). This helps in gaining an empowering perspective that is realistic and at the same time avoids overly high expectations of oneself, the group, or society. "*And it did help in so far that I started considering it more as a goal post, [less as] […] a 'This is the absolute perfect thing that we want to consider', and more like the beginnings of an action plan.*" (Interview 4). Imagining utopias and cultivating positive climate visions can be empowering for activists, as it directs their focus towards the process of taking action rather than fixating on a perfect outcome.

At the same time, creating and taking space and time for "*desires*" (Interview 3) for the future and being "*greedy*" (Interview 4) about them being fulfilled was an important aspect for both the participant and the workshop leader. The workshop leader mentioned that the workshop process was "*a lot of talking about desires*" (Interview 3). And the topic reappeared in the interview with the participant: they talked about how the workshop sparked a greediness for a climate-social future in them in contrast to dark predictions and the usually more negative way to look at the future as a climate activist that mostly causes fear and the sense of powerlessness. Imagining a climate social future and the creative process of creating a sculpture made them "*Maybe be a little bit more quote-unquote greedy of what I actually want for our future and our situation, and whatever.*" (Interview 4). Defining what they want was a personally empowering moment for them. And they enjoyed allowing themselves to think, "*Yeah, that I can be a little bit greedy with what I want in terms of climate social justice. And that being realistic and down to earth is not necessarily always helpful."* (Interview 4). This means that restricting the imagination of what is desired can mean depriving oneself of what one actually wants, and therefore be weakening and disempowering. In contrast to that it can empower individuals to allow themselves to have desires for the future and to be greedy for their fulfilment.

From the perspective of the workshop leader, another empowering aspect of utopian thinking is redirecting creative potential away from capitalist and profit-driven mechanisms towards a narrative that corresponds to a more just and ecological society. "*We should use our capabilities to think about new stories, new desires that could emerge regarding social innovation.*" (Interview 3) "*[…] but not to provoke more capitalism or to support companies to earn more money.*" (Interview 3). They view utopian thinking as a possibility to challenge capitalist ideologies, encouraging alternative narratives for social innovation.

The workshop reshaped the participants' perspectives on utopias in a positive way. According to interview 4 the participant remarked "*So yeah, I think it did change my view on Utopia a little bit."* and expressed that *"it had a lasting, positive effect.*" (Interview 4) on them. They described that the workshop helped them consider more options that could be possible in the future (Interview 4). After the workshop the participant describes being more hopeful about the future: "*I feel a little bit more positive about the situation than I did before.*" (Interview 4). They also felt empowered in the sense that they are not alone in striving for societal transformation. "*I think my like most important takeaway for myself was just kind of a reassurance the people are trying*" (Interview 4).

Both the workshop participant and the workshop leader were happy with the outcome of the workshop. The workshop leader described that the participants of the workshop were proud and enthusiastic about what they made and respectful with each other (Interview 3). In conclusion, the workshop not only influenced participants' perspectives on utopias positively but also empowered them personally and as activists by providing them with new communication skills. It created space for their desires and greediness for the future and aligned their creative capacities towards a social and ecological Utopia. It also fostered a sense of pride, enthusiasm, and mutual respect among them. Therefore, the workshop leader's goal of empowering the participants was achieved.

5.2.4 Arts-based approaches

The overall goal of the workshop leader was to use design and design fiction as a method to discuss possible futures, desires for the future and approach questions such as "*What if we have a climate-social town?", "How would we live in this time?", "What would a family look like?*" (Interview 3). According to the workshop leader, the benefits of arts-based approaches lie in their ability to make abstract ideas haptical, bringing them into the room as real objects and making them discussable and tangible on a different level. In their opinion, people better understand certain issues by touching and creating something and can enable them to take part in a discussion they previously could not. This matches well with the conception of the participant, as they also pointed out the importance of art in research as a catalyst for exploring different visions and questioning reality. For them, being able to create something brought them out of their usual mind-set (Interview 4). They also said that science communication becomes far more interesting through the different media of art and that "*...the problem with a lot of science communication is that it's boring*" (Interview 4).

Regarding the process of the workshop within the sculpture group, the workshop leader was surprised that this method of materialising visions was new to the participants, they also witnessed the participants enjoying the playfulness of it. Their intention of integrating people in design fiction processes via opening up a free and creative space was welcomed by the participants and culminated in the decision about creating a sculpture, which was a dynamic process coming from the group. With the process evolving, the participants' view of utopias changed, too. In their opinion the process was also shaped by the differences between people that were used to the utopian thinking and others that were a bit sceptical but interested (Interview 4). The participant

described the creative process, as well as the story behind the sculpture, in detail with vivid memories.

In retrospect the workshop leader was amazed by the whole workshop in regard to the mostly social, harmonious desires of the participants, as well as by the working process of other participant workshop groups. They described an ease with which they thought about water as an entity and shot a video from the water's perspective. They also talked a lot about the accompanying discussions, which touched on topics like posthumanism and the post-human perspective. At the same time, they realised that thinking about possibilities without judging them was a challenge for the participants and could be a hindering aspect for this kind of creative work. At the end they were happy about the positive feedback for the workshop.

5.2.5 Evaluation of the workshop

Interestingly, the workshop was evaluated a bit differently from the workshop leader and the participant. General impressions on the workflow and the outcome were the same between them, their opinions diverged a bit concerning the process of the creation itself.

Firstly, the participant stated that the workshop was "enjoyable" (Interview 4) and that it helped them to think of positively connoted visions of transformation instead of always thinking of the worst. For them, the workshop also went by really fast which indicates that they probably engaged in the process a lot (Interview 4). They also mentioned climate-social utopias as a way to motivate people to start engaging and advocating for their own future. This matches well with the responses of the workshop leader, who was very pleased with how everything went and stated that some participants also talked to them after the workshop to confirm their impression. They also highlighted the enthusiasm participants were able to keep during both of the workshop days and their impressive visions of a climate-social Linz.

Secondly, struggles with the realisation of the original ideas were mentioned. It was mentioned several times by the participant that every group member had very different ways of thinking and therefore different perspectives on how a climate-social Linz could look like: "*It was like, okay, this is maybe a bit too, too Utopian for my more realistic minded brain, I'd say, where I was like, okay, that sounds nice but where is, where's the doable things? That was a little bit of a tension I had with myself*" (Interview 4). These discrepancies sometimes led to discussions and group members who raised their voices the most also influenced the outcome more through realising

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their visions. In Addition to that, struggles with turning the visions into an installation were voiced, which led to a very fluid development of the climate-social utopias as well. Regarding both issues, the participant put an emphasis on the need of more time in order to have a good co-creational process throughout working on the art project. This could have given people who are less extroverted more opportunity to engage. Furthermore, more and different materials to work with were suggested by the participant.

5.3 AI-supported Picture

5.3.1 Artwork

Figure 2: AI-supported Picture developed by activists participating in the workshop.

The artwork is a mixed-media collage on canvas with the central topic of mobility in a utopian Linz. In the centre, there is an AI generated photograph of people cycling in a lush, green environment. The image is surrounded by various other smaller AI generated images, including different mobility options, pathways and vertical greenery on houses. There are also handwritten notes and captions, one of which mentions "August" as a protagonist, who enjoys incentives for a sustainable lifestyle and "Freudvoll frei," suggesting a joyful and free experience. Grass, dandelion and other natural elements are physically attached to the collage, adding a three-dimensional aspect. The placement of the plants enhances the organic feel of the piece. The collage also includes small decorative items like cherries and a flower. Overall, the artwork

conveys a message of enjoying an easy-flowing, sustainable life outdoors in a community, where urban living is harmoniously integrated into nature.

The artwork envisions a utopian Linz that is car-free, featuring extensive bike lanes and a lively atmosphere filled with rickshaws and bici-buses, promoting joyful and eco-friendly mobility. A 16-year-old named August exemplifies this vision with his "bici-bus" service, transporting children to school and earning points or miles that can be exchanged for travel upgrades, such as Interrail tickets. This initiative not only enhances mobility but also strengthens community bonds and minimises the ecological footprint by promoting the use of bicycles. In this utopia, commuting is a pleasurable activity. People travel by bike, and workplaces are conveniently located close to homes, fostering community connections and sustainability. August's contributions are symbolising how individual actions can lead to significant environmental and social benefits, ultimately contributing to a greener future. The artwork expresses empowerment by depicting a utopia with specific attributes that connect to greener incentives. Through images and written words on "climate miles," the system is shown to empower individuals by rewarding sustainable actions. The main character's relaxed lifestyle, surrounded by greenery and leisure time, serves as an inspiration to others. The role of AI in the creation of the artwork is also noteworthy. It translates thoughts into pictures but still requires the human touch to refine and filter these visions. The picture tells a story through visual art and research, showing that utopia is not just an ideal but a narrative we can create together.

Both workshop leader and participant shared their experiences with creating artwork using AI tools. The leader used various AI tools to create images, accommodating participants' different aesthetic preferences and skill levels by allowing work on both phones and computers. They focused on producing a few well-thought-out images rather than many (Interview 5). However, participants noted that the AI-generated images required adaptation. They engaged in hands-on work, combining useful elements with other materials and exploring different backgrounds, frames, and sizes. This process fostered creativity and innovation, emphasising the importance of integrating AI outputs with other creative methods and making the workshop dynamic and engaging (Interview 6).

5.3.2 Utopia

Both the workshop leader and the participant stressed the importance of having some form of personal utopia for their life. The workshop leader of the AI-picture group shared their previous

experience in working with utopias. They expressed that people could find it very difficult to form and formulate positive visions for the future. For themselves, they see utopias as essential to cultivate hope, a sense of possibility and energy for working towards a better future (Interview 5). Similarly to the workshop leader, the participant clearly expressed their belief that having a positive vision or utopia would be beneficial for everyone. They themselves had already come in contact with and been influenced by utopias from other people and strived to form one of their own but had not had a concrete vision. The ideas they expressed centred around their immediate environment, specifically on sustainable mobility options in their living area, and around coming back to a community mindset. They experience internalising utopias of others as strengthening, supportive and connecting with others who think similarly (Interview 6).

The development of a shared utopia in the workshop was made tangible in a facilitated process of joining individual perspectives into a common piece of art. The workshop leader put emphasis on the process of bringing together fragments and ideas of all participants on a vision of the city of Linz. Through a process of writing personal ideas on post-its and bringing them all together on a banner, participants were able to create a shared utopia of Linz. The workshop leader specifically mentions shared visions on bike mobility, construction of sustainable buildings and how new building materials will change the smell of the city (Interview 5). According to the participant, a turn away from capitalism was among the first thoughts in the picture group. The idea developed later centred around mobility and shared urban spaces, using a character and a day in their life as an example. For the group, a possible future scenario in a climate-social utopia is counter movements from people disapproving of the changes society has gone through. They envisioned self-help groups for these people to come to terms with the new reality (Interview 6). Concerning the creation of the picture, the workshop leader described the process of using AI as generative for the visioning process, as it often gave pictures that weren't exactly what the group had wanted, which opened up new viewpoints. Furthermore, through the process of bringing abstract ideas of utopia into the physical form of an artwork, the individual ideas converged more and more into a shared utopia of the whole group (Interview 5).

5.3.3 Empowerment

The workshop leader emphasised how the process of participants sharing their ideas and bringing them together was fun and diverse and can therefore be interpreted as empowering for the workshop leader: "*… different points, views, concepts and emotions come together. It's also, it*

was a really beautiful moment, and we were like imagining what Linz could be in the future and it was really fun" (Interview 5). Additionally, even though they had expected the picture to look different, it was empowering to see how the influence of different actors can open one's mind to accept and be happy with a different outcome, as everyone was happy with the final image. *"It* [the workshop] *opens new ways of thinking or a new possibility of a project and it was really fun, it was really nice*" (Interview 5). The use of AI to visualise the image was also mentioned as interesting, including "*crazy stuff that is impossible for us*" (Interview 5) and being able to create images quickly offers new ways of expressing creativity.

Similarly, the workshop was perceived as empowering by the participant. They used words like *"energising, enthusiastic and the feeling of joy"* (Interview 6). Furthermore, they pointed out that working with others was particularly inspiring and therefore empowering: "*My faith is greatly influenced by the workshop, knowing that others think and feel similarly and that you're not alone. This group feeling is incredibly valuable.*" (Interview 6). It even helped the participant to take action in real life by selling their car, they said: "*The workshop was a crucial motivational element among many that helped me to act*" (Interview 6). They also liked the impact of the empowerment they experienced on others outside the workshop: "*Watching the reactions to my decision to live without a car is fascinating and shows the impact of living differently*" (Interview 6). The participant stated that a sense of possibilities different from what currently dominates society was reinforced by action research and the arts-based approach, and empowered others to take part in such a workshop: "*I think this is something that should reach a wider audience*" (Interview 6).

5.3.4 Arts-based approach

The workshop leader highlighted varying levels of ease among participants when integrating the arts-based approach. Generally, participants found it easy to adapt, especially in team settings. The workshop leader observed, "*They have all different ideas, and they were able to just put them together*" (Interview 5). This comment reflects the collective ease in adopting the method, aided by the collaborative nature of the activity. The workshop leader also found the process straightforward, as they "*produced together with them the image that reflected their collective utopia*" (Interview 5). From the participants' perspective, the arts-based method was approachable and encouraged engagement. One participant remarked on how art facilitated effortless expression and combination of ideas: "*They worked in teams... and they could see their*

thoughts materialise through art" (Interview 6). This suggests that the method's ability to translate abstract ideas into tangible forms contributed to a smooth and engaging workshop experience.

The workshop leader shared insights from their previous experiences with arts-based methods. They mentioned, "*I've been involved in a few artistic endeavours that had a similar approach*," (Interview 5) which helped them guide participants effectively and integrate arts seamlessly into the workshop. This familiarity likely enabled the workshop leader to anticipate challenges and ensure a smooth process. Conversely, the participant had less experience with such approaches. Reflecting on their first-time engagement, they said, "*This was actually my first time doing something like this, and it was quite eye-opening*" (Interview 6). This fresh perspective added a sense of novelty and curiosity to the workshop. Despite initial unfamiliarity, the participant adapted well and found the method enriching and accessible.

The workshop participant also expressed how their perception of art-based approaches evolved throughout the workshop; from being sceptical and unsure why this might be beneficial to the process to being convinced that expressing utopias through the body by creating art is highly supportive for internalising them and coming into action (Interview 6). Similarly, the workshop leader expressed their opinion that art and art-based projects play an important role in bringing societal discourses into tangible, physical form. In their perception, the City of Linz has been changing in the last years through an increase in and a lively scene of art and culture, which is partly also dealing with climate change (Interview 5).

The workshop leader emphasised how the arts-based approach expanded conventional thinking boundaries. They noted, *"Art-based projects can envision and communicate utopian ideas in ways words alone cannot"* (Interview 5), highlighting art's transformative power in extending imagination and conceptualization within the workshop. The participant agreed, stating, *"Using art allowed us to think outside the box and put our thoughts into something tangible"* (Interview 6). This approach of materialising ideas through art enabled innovative exploration and expression of utopian visions, enhancing the creative process and fostering deeper engagement with the workshop's themes.

For the workshop leader, the arts-based approach was essential in developing utopian ideas during the workshop. They remarked, *"Art helps to bring utopias to life, making them more real and accessible to everyone involved"* (Interview 5). This approach allowed participants to visualise possible futures and manifest their dreams visually, making the concept of utopia more relatable

and achievable. The participant found that creating art significantly contributed to understanding and developing utopias. They observed, *"Creating art as part of the workshop made the idea of a climate utopia more concrete and less abstract"* (Interview 6). The tangible aspect of art helped anchor utopian visions in a more physical and relatable context, crucial for discussing and shaping future possibilities for the city of Linz.

5.3.5 Evaluation of the workshop

According to the workshop leader, the workshop went smoothly with no major problems or malfunctions. Communication and talking in groups were the starting point of the project and was a good way to start debriefing and make choices for the latter art-making process. After the discussion phase, the participants were given a range of materials to work from, and they chose artificial intelligence (AI) as a catalyser. The use of AI is a way to quickly envision things, but it was also used with parsimony due to emissions of CO_2 linked to the computing process (Interview 5).

The participant thought that the communication phase was exciting, even though they wished there were bigger groups. They achieved to approach utopia concretely and in detail. They emphasise the positive role freedom has played in the process. And as they were encouraged to evolve from their starting point, they could *"sharpen their sense of possibility"* (Interview 6). Nevertheless, they think the workshop could benefit from being longer and have more initial input about the current state of the world (Interview 6).

The workshop leader's comments reveal a dynamic and positive interaction among participants and between the participants and the leader. The process was highly collaborative, with the leader working closely with participants to create a final image that reflected their vision. Interactive activities, such as using a large banner and post-its to capture and visualise thoughts, were integral to the workshop. This method allowed participants to step back, reflect on each other's ideas, and see how different concepts came together. The workshop leader noted the openness and creativity of the participants, who were inspired by the workshop environment to generate a wealth of ideas and visions for the future (Interview 5).

Despite starting as strangers, the participants quickly embraced the collaborative nature of the workshop, finding excitement in expressing ideas together. Early brainstorming sessions revealed a shared vision and common ground, which helped create a sense of unity and mutual

understanding. The participant highlighted the harmonious and energetic nature of the workshop leaders, Christina Plank and Marianne Lechner, whose positivity significantly contributed to the workshop's atmosphere. This leadership style was essential in creating a supportive and engaging environment. This interaction added richness to the project, highlighting the value of collective effort over individual work. The participant recognized that collaboration brought more depth and new dimensions to the project than working alone could have achieved. The diverse experiences and perspectives of the group contributed to a more comprehensive and multifaceted outcome (Interview 6).

6 Conclusion

Immediate action to address the worsening impact of the multiple crises society is currently facing is of utmost importance. At the core of the matter stands the exacerbating climate crisis and the numerous socio-economic consequences that accompany it. In order to implement innovative solutions, utopian thinking can provide a framework for envisioning and striving towards a sustainable societal transformation. This paves the way for a future that is both resilient and equitable. Furthermore, the incorporation of creative forms of expression, such as art, into scientific research can facilitate the development of novel approaches. The analysis of the workshop "Möglichkeitsräume – Klimasoziale Zukunfts-Werk-Stadt," has demonstrated the significant potential of expressing climate-social utopias through arts-based approaches in action research. The workshop participants collaboratively created a stop-motion video, a sculpture, and an AI-supported picture to communicate their collective visions for the future.

These three arts-based approaches were found to be effective in their ability to bring the collective utopias to life by expanding conventional thinking boundaries and translating abstract and complex ideas into something tangible and concrete. Firstly, the stop-motion video portrays water as a conscious entity that seeks to emancipate itself from human influence, offering a critical reflection on the relationship between humanity and the natural world. Secondly, the sculpture addresses the themes of housing, living, and lifestyle, depicted as a concrete building that, over time, undergoes a transformation into a multi-use green architecture. This transformation aims to demonstrate how living conditions may evolve over time. Lastly, the mixed-media collage, which employs the use of AI-generated images to visualise a common utopia, is centred on the themes of eco-friendly mobility, urban greening and the strengthening of community bonds.

Through the interviews it became evident that the collective creative process had a positive effect on the participants, resulting in a sense of empowerment. The process of working together, sharing ideas and realising them contributed to the individuals feeling more confident in their abilities to advocate for sustainable change. Moreover, the practice of envisioning utopias fostered creativity and enabled participants to consider alternative futures and challenge the current status quo. Additionally, the collaborative environment fostered a sense of belonging as well as new shared hope and motivation for the future, which encouraged participants to transform their fears into a positive outlook and to set ambitious goals for a climate-social Linz. Consequently, the workshop demonstrated the pivotal role of imaginative thinking and collective action in addressing the climate crisis. Utilising arts-based methodologies in action research has shown potential to enhance engagement, communication, and empowerment in climate action.

A further examination of the potential changes observed in the participants' daily lives and activism over time could provide valuable insights into the long-term impact and efficacy of the methodologies employed in the workshop. In addition, an evaluation of the findings from the other workshops conducted as part of the research project could be employed to assess their replicability and the adaptability of the methods to different groups. One benefit of additional research would be to determine the extent to which utopias and arts-based approaches can individually and collectively facilitate the unification of diverse social groups and values, thereby providing a foundation for discussion and collaborative endeavour on a path to sustainable transformation.

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