

**Expanding artistic-pedagogic mark-making: thinking
creatively with reusable 3D surfaces**

Kevin Boardman
MA (by Research) 2023

Expanding artistic-pedagogic mark-making: thinking creatively with reusable 3D surfaces

Kevin Boardman

A thesis submitted in fulfilment of the requirements of Manchester Metropolitan University for
the degree of Master of Arts (by Research)

Department of Art and Performance, Manchester School of Art
Manchester Metropolitan University, UK

2023

Abstract

This practice-as-research concerns the flow of idea exploration and active participation in relation to chalkboards and whiteboards. It considers how reusable mark-making surfaces might be reclaimed and repurposed as spaces for radical thought and action, in contrast to their former conventional use in business and educational institutions. The research is situated within the field of contemporary art, intersecting with design and arts pedagogy. Art-thinking and making methods and new speculation combine to form alternative pathways in collective and individual thinking. The study aims to reinvent reusable media in new formats and spaces, by experimenting with sculpture, installation, performative workshops, and drawing.

A genealogy of reusable mark-making surfaces, relating to artistic, business, and educational activity and spatial design, reveals their productive qualities including idea generation, communication, and participation. However, the reusable board has also been documented as a site of conflict, rigid hierarchy, and unequal ownership, whilst the media 'form' has seen very little change during its history, usually appearing as a 2D panel. By examining these conditions for the flow of ideas and participation, the research arrives at an alternative proposition to transform the reusable surface into 3D forms, to open the possibility of breaking away from the normative flat surface.

Using art-thinking and Heideggerian praxical knowledge, a methodology is formed to combine previous practice, interdisciplinary sources, and metacognition to progress from critique into practice. A toolkit of methods, including sculpture, workshop facilitation, drawing and conversation, enables an evolution of the reusable surface whilst opening new routes to active participation, mind-mapping, and idea generation. The resulting artworks are applied in pedagogic and engagement events, and together propose a new method for individual and collective ideation and problem solving.

Acknowledgements

I would like to thank my supervisors Dr. Dave Griffiths, Dr. Brigitte Jurack and Dr. Rachelle Viader Knowles for their insight and encouragement. I would also like to thank Dr. Cesar Cornejo for his input at the beginning of the project.

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Chapter 1: Introduction

1.1 Timeline of this Research Route

This MA by Research is a creative practice comprising of studio practice, exhibitions and workshops and written commentary under the guidance of a supervisor team during 2022-2023, and which resolves this submitted portfolio and thesis.

Reflection on previous practice using surfaces such as whiteboards and paper required deeper and broader examination, therefore my thinking shifted into questioning into how ideas are generated using whiteboards. Therefore, in the early stages of this project, I formed a 'pilot' phase to establish the needed methods and key aims. It was through this phase where I made and used whiteboards and chalkboards interchangeably and created three-dimensional forms which challenged the traditional two-dimensional panel and hinted at an alternative (Figure 1). I will refer to these new versions as 'reusable mark-making surfaces' for the duration of the thesis unless it is necessary to be explicit.



Figure 1: Reusable mark-making yoga ball and floor used by several participants to form ideas and new ways of making during the pop-up space workshop (Boardman, 2022)

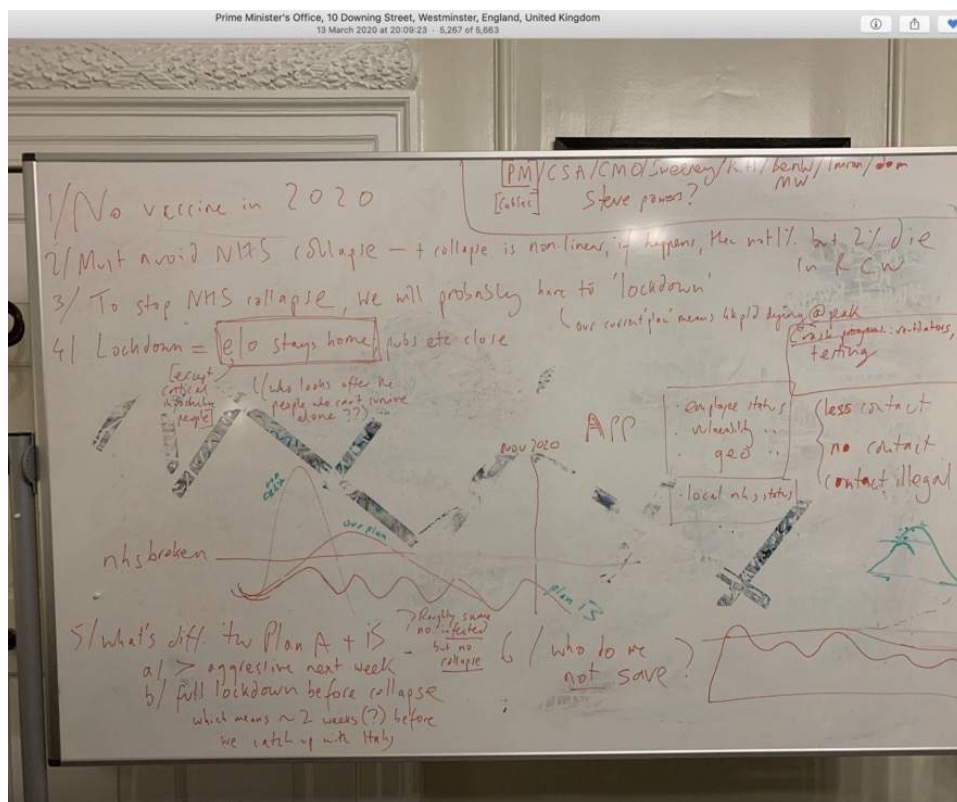
The second stage led to implementing the three-dimensional reusable surfaces and my established methods using an art thinking methodology (Jacobs, 2018) and Heideggerian praxical knowledge (Bolt, 2004). Focused on intuition and insights, this curiosity led to a series of participatory workshops. This began in a pop-up space where the resolved reusable surfaces from the pilot phase were taken into a participatory setting with little rules. After this, I exhibited refinements including the reusable mark making yoga ball and clothing to generate new ways of interactions and outputs. To expand on the investigation, I delivered workshops, including myself to have an active role during the creative process. The reusable surfaces were used in response to problems, reflection, and speculative thinking. Firstly, with PhD participants to reflect on their projects and to establish new links and ideas for future developments to their projects. Finally, the last workshop brought together imaginative thinking and creative interventions by speculating 'how do we live on Mars?'. In small groups, participants from an Art Foundation course used reusable mark-making surfaces to ideate, collaborate and produce artistic outcomes. Alongside the participatory workshop, a studio practice was formed. The studio practice was able to bring to life the art thinking methodology to experiment broadly by creating new scenarios, and problems and reflect deeply to create reusable mark-making surfaces into 3D forms and to develop participatory interactions.

1.2 Research Inquiry

My experiments as an artist using mark making surfaces since 2017 have sampled various experimentation to explore alternatives for ideation and collaborative making. It was through this opened ended approach that the ephemeral quality grounded my curiosity. This section explains my research question, terminology, context for the practice and why chalkboards and whiteboards were chosen.

The artworks resulting from this research were concerned with opening new routes to active participation, mind mapping, and idea generation. A source which reignited my practice and gained momentum for this research was a tweeted image of a whiteboard by political strategist Dominic Cummings, showing some of the UK government's early planning for lockdown in May 2021 (Figure 2). Concerning the severity at the time this was produced, I began to question how the people in the room engaged with the ideation process. I see and relate to the intensity, speed and fluid

thinking regarding to the production of ideas, and how the whiteboard has been used to process thoughts to communicate to others. However, the image suggests a consistent handwriting style. Therefore, a question emerges, how many people were active in the input and decision-making? Did this create a dynamic of audience and performer? Thoughts which also influenced my thinking were hierarchal structures, ownership, and the physical interactions during the ideation phase. Regarding the relationship between the audience and performer, art historian Claire Bishop discusses the relationship between the audience and performer in participatory or socially engaged art, arguing that the distinction between the performer and the audience is often blurred in participatory art, as the audience is encouraged to become an active participant in the creation of the artwork (Bishop, 2012).



To combine the image's aesthetics and participatory art, this active participation of the audience and performer in the Dominic Cummings whiteboard concerned my thinking about how blurred the modes of communication can be. Intended or unintended, to some active participants, this may have been explorative and encouraged open dialogue and input, in particular, to whoever was writing (or drawing) on the whiteboard; however, to other active participants, participants may have experienced a closed discourse, including not writing on the whiteboard or being over talked or silent consequently feeling like the 'audience' despite being present. Relating to my previous body of work, I wanted to speculate if the whiteboard could be used differently for ideation and active participation.

Looking into the origins of the whiteboard constraints were set, I understood the links a whiteboard in relation to other reusable surfaces such as tabula rasa, slate, and *Etch-a-Sketch* (a mechanical drawing toy *with a built-in erasing system*). However, framing this research to explore ideation and active participation meant I would limit to the chalkboard and whiteboard and use the term *reusable mark-making surface*.

To aid my practice, contextual sources including artistic, business, and educational environments were explored. I wanted to understand how and why artists have used reusable mark-making surfaces in participatory situations and identify alternative uses. Aside from the Cummings whiteboard, I cited several sources of artists, business leaders and politicians using reusable mark-making surfaces to unpack leadership and visual communication techniques but also identifying moments of conflict and power in participation and ideation situations. Lastly, I examined reusable mark-making surfaces in a spatial context, looking into the objects aesthetic I wanted to see to the evolution of the surface, particularly focusing on form, scale and how its situated in a space for interaction and creative output.

To summarise this inquiry: the hypothesis suggests how reusable mark-making surfaces might be reclaimed and repurposed into three-dimensional surfaces as objects and spaces for radical thought and action in the hope of active participation and new modes of ideation. This research seeks to speculate alternative propositions to transform the reusable surface into three-dimensional forms, to open the possibility of breaking away from the normative flat

surface. I also ask how the research process might produce a new method for individual and collective ideation and problem-solving.

1.3 Research Aims and Objectives

My research aimed to explore ideation and active participation through creating reusable mark-making surfaces into 3D forms, with the intent to create a variety of objects to test this. Two other aims were to achieve alternative outputs and interventions, particularly focusing on the artistic. Finally, to create methods which allow participants to be active and comfortable during ideation and problem-solving situations.

To achieve this, my objectives were to conduct experimental studio practice, and deliver participatory exhibitions and workshops. Through this I tested and cemented the necessary research methods for individual and collaborative artworks. My methods focused on how the three-dimensional or the spatial reusable mark-making surface can provoke a different kind of ideation, including in the collaborative and the individual sense. In this exegesis I detail how these artistic methods evolve the reusable surface to open new routes to active participation, mind mapping, and idea generation in the attempt for exploratory and open discourse. Critical thinking was underpinned through using art-thinking methodology and Heideggerian praxical knowledge to implement and evolve my methods throughout this research. I wanted to reject the conventional design-thinking process (where a tried and tested formula is implemented) and instead formulate an evolving set of methods which interchanged and combined to use intuition, previous knowledge, and the experiential as key drivers. To support the written commentary, different fieldwork data was collected. The conclusion had other fieldwork data to broaden the research aims by using conversation methods to develop the reusable surface and to receive feedback as evidence. This method was used in studio practice, workshop, and exhibition artworks. Workshops also used questionnaires to understand further the reusable surfaces ideation qualities and the 3D qualities which lead to active participation. To understand the engagement, I used photography to further highlight my findings. Methodology and methods are further expanded and discussed in chapter 3.

By applying these methods, I produced artworks that required controlled activities to facilitate problem-solving and speculation. Other artworks were explored through an open-ended

approach to produce drawings, mind maps, sculptures, and playful interventions. Chapter 3 presents the outcomes of the artworks and participatory events, which together tried to evolve the reusable mark-making surface to unpack its potentials and limitations and lead to a conclusion of suitable forms that can be used as an alternative to the norm.

1.4 Thesis Structure

Chapter Two: Outlines how artists, business leaders, politicians use whiteboards and chalkboard to generate ideas by using participatory methods. Through artworks and documented situations, I examine how participation spans from didactic approaches to collaboration. This leads to aesthetic observations where the whiteboards and chalkboards are discussed through a spatial lens to understand further the reusable mark-making surface potentials and limitations and how dynamics may lead to didactic or collaborative approaches. A Summary identify the whiteboard and chalkboards surface has been limited mainly to a flat surface.

Chapter Three: Outlines the chosen methodology and methods to aid this enquiry into addressing the gap. I follow on in the next section to discuss why I chose to adopt a Heideggerian praxical knowledge approach (Bolt, 2004), using my previous practice as important reference points. I discuss the application of an art-thinking methodology instead of a design thinking methodology, using the domain dominant strategies set out by Jessica Jacobs (Jacobs, 2018), alongside examples of my previous work which adopted this methodology. Next section I discuss my motivation for drawing as a method, using Dean Kenning's diagrammatic work as a vital reference point. The following section, I provide written commentary on how I sampled various methods with the intention to define the final methods. I sampled methods through creating a pilot phase, comprising of various artistic experiments which resulted to a participatory exhibition. This led to set of new reusable mark making surfaces which broke away from the conventional 2D panel into 3D forms. In the final section I conclude the established methods for the rest of this research. Using fabrication, workshop facilitation, conversation and drawing as methods, I discuss how they will be used interchangeably throughout the research and highlight their potential operating under an art-thinking framework.

Chapter Four: Portfolio and Practice. The section reflects on the practice developed through studio practice, trails, and workshops in the attempt to reinvent the reusable surface. This chapter is split into 2 main parts, the first part provides key insights of the artistic trials. Sub-sections go into detail including physical participation, mind mapping, the evolution of the reusable mark making surface and finally the key objects from the research. The second section discusses the methods in greater detail showing workshops and studio experiments to support the key insights in the previous section.

Chapter Five: Conclusion: Offers a summary of findings across studio experimentation, workshops, and feedback, compared to the questions, and aims that initiated the study, and recognises limitations that were encountered in the methods. The chapter then discusses further research directions in which the reusable mark making surface can be taken.

Chapter 2: Source Review

This chapter aims to explore and provide a contemporary overview of how people use chalkboards and whiteboards as a reusable mark-making surface. This will also unpack the aesthetics of the ordinary whiteboard and chalkboard to understand how and why they are used. The focus will be to understand what methods they deploy for idea generation and participation purposes and speculate on new aesthetics in reusable mark-making surfaces.

2.1 Didactic behaviour - The road to conflict is paved with good intentions

This section discusses an artist, a business magnate and a politician who have used whiteboards or chalkboards as part of their practice and used for positive intentions such as participatory purposes, leadership duties and communication aids. A negative side emerges where didactic behaviour takes over participation, power struggles take over leadership, and control takes over communication. A mix of explanatory and exploratory communication methods takes place, with some intending to open discourse while others intending/unintending to do the opposite. I will unpack how the reusable mark-making surface has become the centre of this.

I begin with Joseph Beuys who throughout his career used chalkboards as a vital part of his artistic practice. This medium allowed Beuys to form new and often complex concepts and be able to communicate to an audience. A notable example would be in *Das Kapital Raum* (Figure 3) in which Beuys was interested in creating his own new concept of capital which he developed in relation to Karl Marx. In an attempt to challenge viewers to consider the social and economic implications of capitalism and to express how art is a form of creative power, he used objects such as a piano, ladder, film projector and chalkboards. Because of the complexity of these ideas both for the artist to exemplify the idea and for the audience to understand, I see the importance the chalkboard brings to this work. The reusable quality can encourage a fast process of building and recording thoughts in addition to aid the digression of one subject to another to build a complex idea. This is also similar to the communication aspect; the

exhibition highlights the accumulation of thoughts and ideas by placing the chalkboards in a loose arrangement on the wall. Therefore, bringing up a greater emphasis on the explanatory mode of communication to help achieve an understanding for the audience and to connect with his thought process.



Following on, Beuys extends his communication skills through exploratory modes using the chalkboard by implementing participatory performances. In *Information Action*, Tate Gallery 1972, Beuys presented a lecture and discussion as part of his contribution to a group show, *Seven Exhibitions*, Tate Gallery. London: The Gallery, 1972. Discussing human creative capital and direct democracy, his ideas were formed on chalkboards and engaged the audience to debate and discuss. Again, these chalkboards became vital to ignite the artistic process but also to provoke intervention for others. Art historian Jonah Westerman stresses the importance of the chalkboard: “The blackboards were not innocent bystanders: far from functioning as mere receptacles of ideas or energies, they anchored and specified a relation between artist, audience, and artwork. Such social relations, moreover, were the performance’s primary area of concern; interrogating their configuration leads to what is arguably the still-beating heart of the work.” (Westerman, n.d.) The chalkboard is a surface that provides an invitational quality

that can be applied in a variety of ways. For the artist it's an invitation for thought making and recording whilst collaboratively it promotes an opportunity to support the existing ideas from the artist or radically challenge the discussion along with the drawing and writing on the reusable mark-making surface.

Despite the chalkboards encouraging participation, limitations were beginning to become noticeable, including participants roles and altercations. During *Art into Society – Society into Art: Seven German Artists, Institute of Contemporary Arts 1974*, Joseph Beuys has an encounter with artist Paul Neagu which highlights how chalkboards can also facilitate unpleasant interactions:

“Excuse me but can I interrupt you?” Beuys replied: ‘Yes please say.’ So I started to say something to him that was very damaging. ‘Joseph Beuys, you have been standing here with your stick in order to demonstrate something. I don’t understand why you have to do that? You are standing on your boards after you have fixed them with a spray and then throw them on the ground to make a big bang. Is this a show or lecture or both of them?’ To which Beuys replied: ‘It is both: it is my show.’ [I said:] ‘What you are saying here, do you think that you are the only one who knows how the world is to progress or how the individual situates themselves within the context of a society or what that should mean in terms of how a society is run according to a methodology?’” (Galliver, 2019)

This encounter has the chalkboard at the centre. Beuys's strategy using the chalkboard exposes both participatory and didactic potential but also the encounter highlights a dark undertone showing signs of conflict, ownership, and ego. Evidence such as Beuys standing with a stick to communicate his ideas, holding the chalk, standing next to the boards, and stating comments that it is his show whilst having a show which is intended for participation links to chalkboards promise and limitations. These negative signs may shape the aesthetics of the performance and turn it from an intended open discourse to a more closed discourse. The promise for the participants to input and build on ideas is limited by the prevention

and/or reluctance to mark-make on the chalkboards, resulting in few or even one type of handwriting. As a result, this incident suggests active participation can exist but Beuys deploying didactic methods forms, whether it was intended or unintended a hierarchal mode of active participation, consequently the ideation and production of thought tilts towards a controlled and tense environment. Therefore, using a mark-making surface for participation can prevail but methods deployed by artists, facilitators or teachers can impact the dynamics.

Steve Jobs was a prominent user of the whiteboard, and just like Beuys who experienced awkward moments of ownership, similar moments occurred with Jobs. Although Beuys encouraged participation, Jobs' stance on ownership to use the whiteboard was far more transparent. This is exemplified when computer scientist Alvy Ray Smith had an altercation with Jobs in a meeting room with the whiteboard becoming the focal point of the argument. In a interview Alvy reflected on this incident saying:

“I stood up, marched past him and wrote on the whiteboard”. “You can't do that!” Jobs shouted. “What?” responded Smith, “I can't write on your whiteboard?” At that point Jobs Stormed out.” (Smith, 2012)

As seen with other examples which offers a collaborative possibility, this instead regulates the people in the room with clearly defined roles. Consequently, there may be a lack of interchangeability within these roles which suggest the creation and decision making when using the whiteboards may have tilt towards a hierarchal slant. Being able to hold the pen and form a mark to some may be powerful, and to others intimidating.

Katie Porter is an American politician, who gained notice for her pointed questioning of officials during congressional hearings, using whiteboard as a visual aid to implement an effective explanatory style of communication. The whiteboard enables to sharpen the focus of the questioning with the aim taking answers and getting to the root of the issue. Using the whiteboard Porter questioned the CEO of Abbvie about the increase of Drug prices, stock buybacks and dividends by presenting the answers through a performative a visual diagram (Figure 4) (Forbes, 2021). Also, in another example Porter questioned a former Celgene CEO

Mark Alles, over the connection between the significant price hike for Revlimid and his personal bonus by writing key facts and figures on the portable whiteboard throughout the questioning (Figure 5) (Guardian, 2020). For Porter, this performative pitch is facilitated by the whiteboard. The whiteboard enables Porter to maintain control throughout the questioning, the active change of writing facts and figures is performative but also helps situational power and appealing to logic and emotion. Therefore, keeping the audience, the interviewer, and the interviewee on track with questioning.



Figure 4: Rep. Katie Porter (D-CA) questions the CEO of Abbvie, a pharmaceutical company about the massive amounts of money spent on stock buybacks and dividends while increas

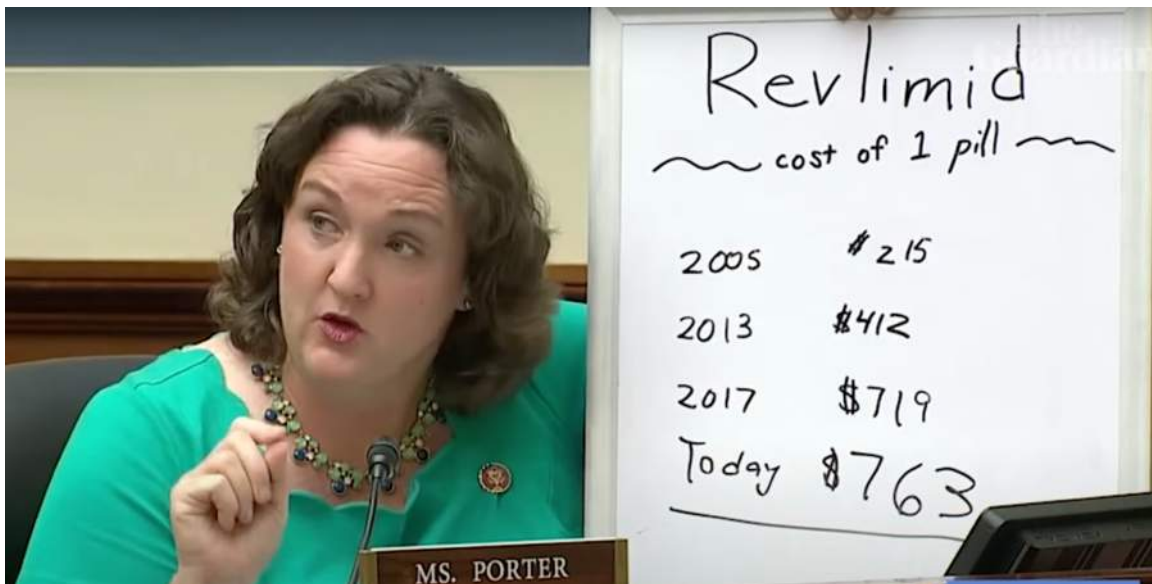


Figure 1. Representative House member uses whiteboard to question former colleague CEO Mark Alles over the connection between the significant price hike for Revlimid - a common cancer drug - and his personal bonus (*Guardian*, 2020).

Through this medium, people have become whiteboard or chalkboard practitioners or performers. The reusable mark-making surface allows the practitioners to equip themselves with an array of advantages such as presenting a case using both logic and numbers to communicate with the audience, persuasion play, stating physical territory and ownership and using the whiteboard to direct a conversation by getting the audience to focus visually. These examples also suggest a tension between didactic and collective ideation, whereby rigid dynamics emerge, and the input of generating ideas becomes unequal. The unequal ideation input is further contributed by the consistent pen holders, resulting in individual and consistent handwriting/mark-making aesthetics and additional prompts. These examples also suggest a tension between didactic and collective ideation whereby rigid dynamics emerge, and the input of generating ideas becomes unequal. The reusable mark-making surface engages with participants, often organised as active and non-active. I take these examples to inform my practice and see if an alternative reusable mark-making surface is viable to enable active participation, horizontal dynamics, and new modes of ideation.

2.2 Artistic and participatory deployment

In this section, I investigate two artists whose work involving whiteboards and chalkboards creates works with collaborative and participatory outcomes. I will unpack how artistic deployment and additional resources have led to alternative uses of the ordinary whiteboard and chalkboard, which shifts communication into exploratory modes, and open discourse is encouraged by the artists.

Artist Nikolaus Gansterer explores the links between drawing, thinking and action, using the chalkboard as one of his mediums to explore this. The artist has implemented an instructional and diagrammatic process to chalkboards which consequently stimulates a reactive effect from the audience even if the artist is not present. This is prevalent with the work *Objects Yet To Become* (Figure 6). Gansterer creates objects containing drawings and text as instructions to encourage the audience to participate. This participation is to respond to the instructions to form a variety of performative actions.

The use of the chalkboard deeply rooted from school environments may have an influence on the audience and persuade them to follow the instructions, which may be one of the factors in selecting chalkboards over other surfaces such as canvas or paper. The combination of drawing and text used in this work merges the text as a speculative and imaginative source of communication whilst the drawing acting as diagrams provides an objective representation to place these ideas into action. Environments like schools prior to the whiteboard being introduced, used diagrams and text in non-artistic modes to convey a similar purpose with diagrams helping to communicate and cement ideas, therefore the artist may be using the contextual links of the chalkboard from school environment to encourage participation and communicate effectively.

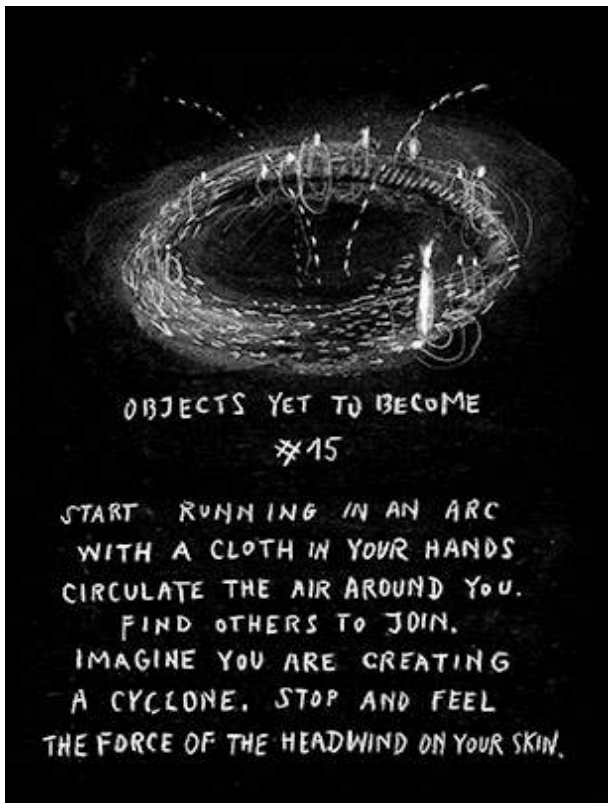


Figure 6: Ol



k. Gansterer creates drawin

and text as instructions to encourage audience to respond. (Gansterer, 2017)

Like Beuys, Gansterer uses the chalkboard as a medium for visual and performative communication, and like Beuys to form concepts. He uses the chalkboard as an agency to generate ideas and collaborate. The work *Project Makers* exemplifies this with live drawing sessions, with the intention to make tangible the process of thinking, drafting and projecting of a new project live on stage (Figure 7). The chalkboard is used to facilitate different modes of thinking and operate under different stages of the creative process. There are stages which highlight moments of new and fresh beginnings to stages which highlight the complexity of developing and refining the initial stages of idea development into something tangible. The idea development is enhanced with strategic and diagramming methods by using the chalkboard's surface 'invitational quality' to incorporate other resources to accommodate the ideation process. In this regard, the surface as a reusable mark-making surface features an 'invitational quality' which seems to be shared through artistic and non-artistic activities whereby participation can be an option. Furthermore, chalkboards and whiteboard have seen additional resources in non-artistic contexts such as in office and school environments to use

post-it notes and projectors for participatory, communication and ideation purposes. Gansterer has extended this by using these and other additional resources to invite and create artistic outcomes.

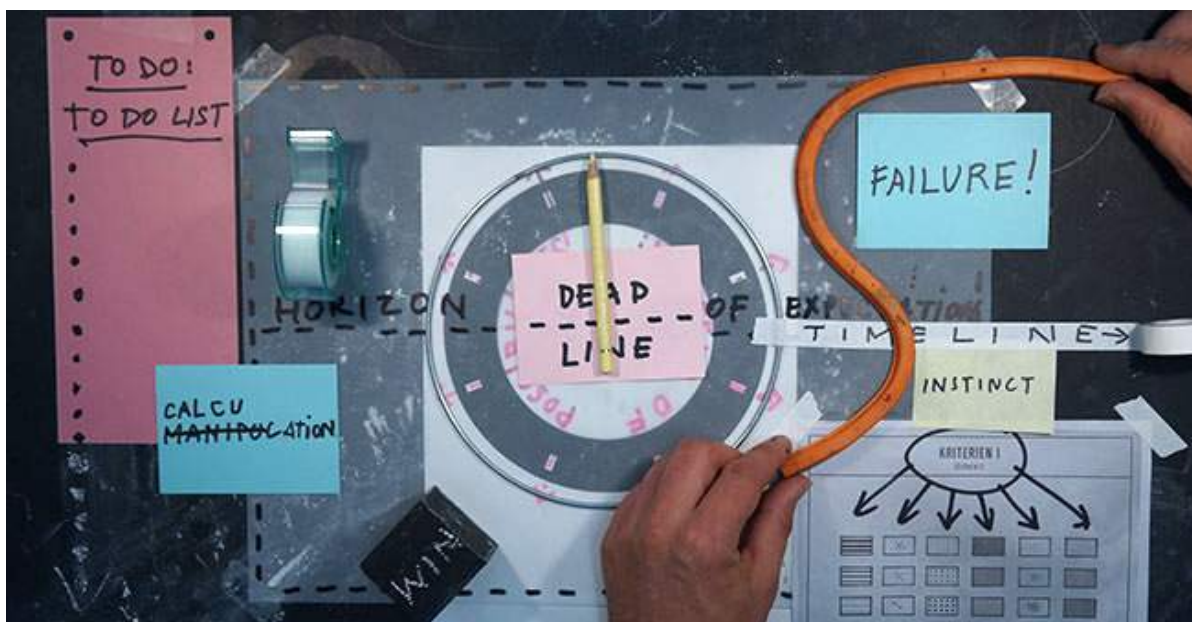


Figure 7: Excerpts from project video clip *Szenen des Entwerfens*, 2015 - (Gansterer, 2015)

Gansterer has used the chalkboard to expand drawing into ways which combine notation, choreography, and performance highlighted in his work *About the impossibility of objective perception of reality per se* in which he researches in how far a drawing can become tool of communication, a score, and again an instruction for taking action (Figure 8). The chalkboard's quality to erase drawings and move on to new thoughts provides a performative aspect and enables the viewer to follow the process with the artist. This creates a narrative to the drawing but also clearly defines who is the performer and who is the audience.

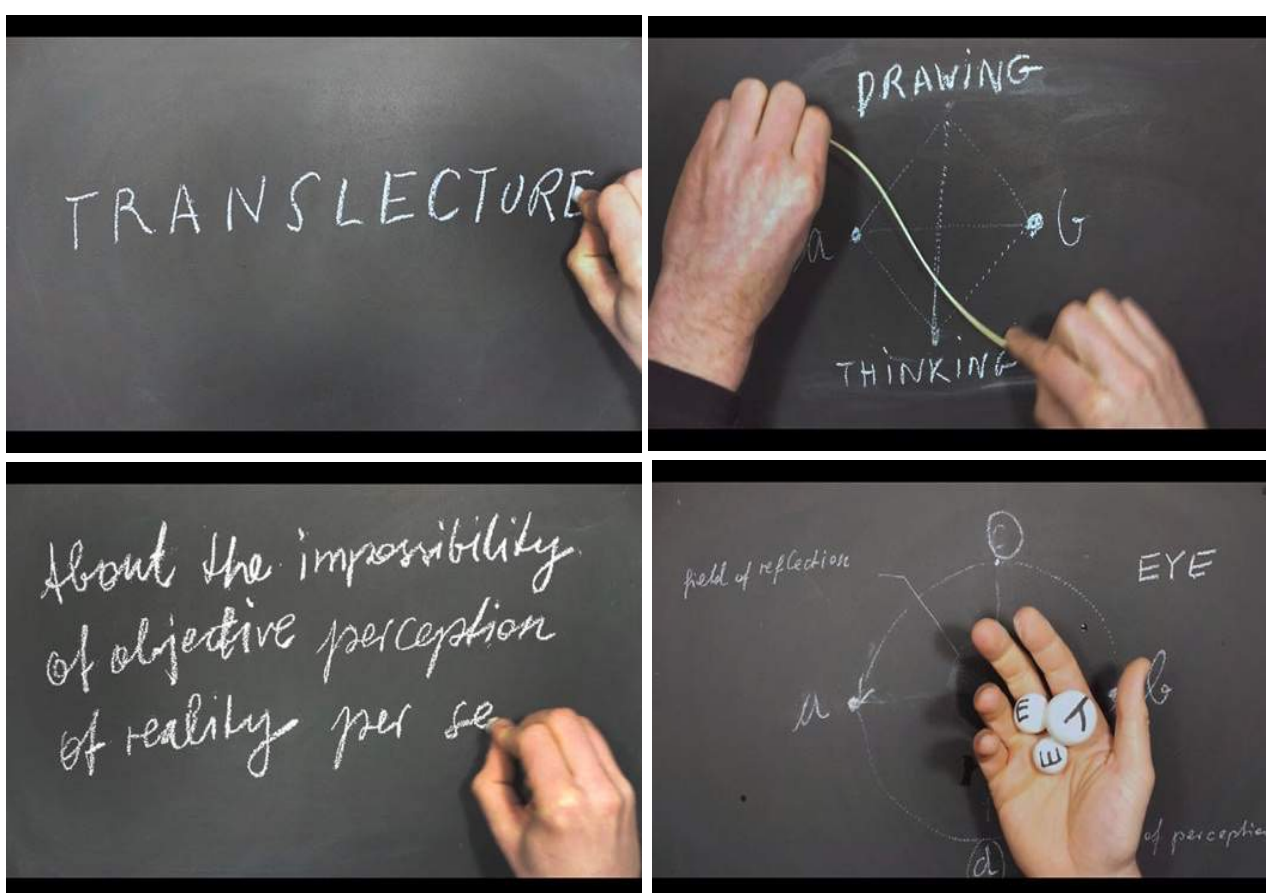


Figure 8: In *Translecture / Sequence 1 (About the impossibility of objective perception of reality per se)*, 2014, (Gansterer, 2014)

Artists have used chalkboards and whiteboards to quickly process thoughts and facilitate various modes of thinking. It is this that promotes dialogue through performer and audience and raises questions to the ownership of ideas with performative actions which directly or indirectly state the ownership of ideas (mostly attributed to Beuys). Artists have evolved methods and adding additional resources creating new approaches to using the whiteboard and chalkboard. In particular, drawing and diagramming in artistic ways have been beneficial in moving away from the explanatory modes of communication, such as presentations and didactic teaching, into explorative ways for ideation and reflection and have been used to open up discourse within participation, including allowing participants to respond in interpretative ways rather than following rigid commands. An interchangeability in roles and hierarchal dynamics are formed, allowing projects to manifest from ideas and reflective practices to stimulate discussion. However, the examples have highlighted the two-dimensional flat surface has been consistent, in the next section I will unpack the two-dimensional surface further.

2.3 Spaces and objects: confined to the two-dimensional surface

This section aims to explore the impact of spatial contexts have on the reusable mark-making surfaces, looking at spatial layouts and object aesthetics, I question if the architecture has any influence on people dynamics and provide additional understanding to the examples discussed in previous sections.

In the previous section the performative aspect has been discussed referring to how people use reusable mark-making surfaces create roles of audience and performer, I would like to continue this theme. The layout of schools and offices shows signs to how the usability of these reusable surfaces creates roles of audience and performer and highlight how this object is one the dominant features within the space. (Figure 10) shows a consistent theme that consists of a formulaic layout of people ready to learn, who are opposite to the reusable surfaces and to the performer. By formulating a space this way, the reusable surfaces are far enough away from the audience to not actively intervene unless instructed but close enough to observe and follow the performance, cementing rigid roles in audience and performer. This also suggests the performer

who is holding the pen or chalk is an expert or holds some form of knowledge for the audience to digest. The size of the reusable surface can also impact the roles of people to whether they are active or passive, from the examples supplied so far, the reusable surfaces have ranged in scale from handheld to human scale. (Figure 11) highlights the potential to expand larger allowing greater space to explore and offering the opportunity for several people to operate simultaneously. The expansion allows more performers and gives the impression of a large screen from a theatre or cinema, but because this screen is flat, this limits manoeuvrability if working simultaneously on the same surface. The solution in this example was to increase the height and introduce ladders but this would have its limitations such as speed and energy for the people involved. (Figure 10)(Figure 11) illustrate how the flat surface effectively communicates ideas to the audience with a degree of clarity. These examples suggest why Beuys, Jobs, and Porter in Chapter 2.1 influenced/used the flat surface for communicational methods that tilt towards an explanatory mode, including presentational or didactic teaching, which can have consequences for closed or one-way discourse.

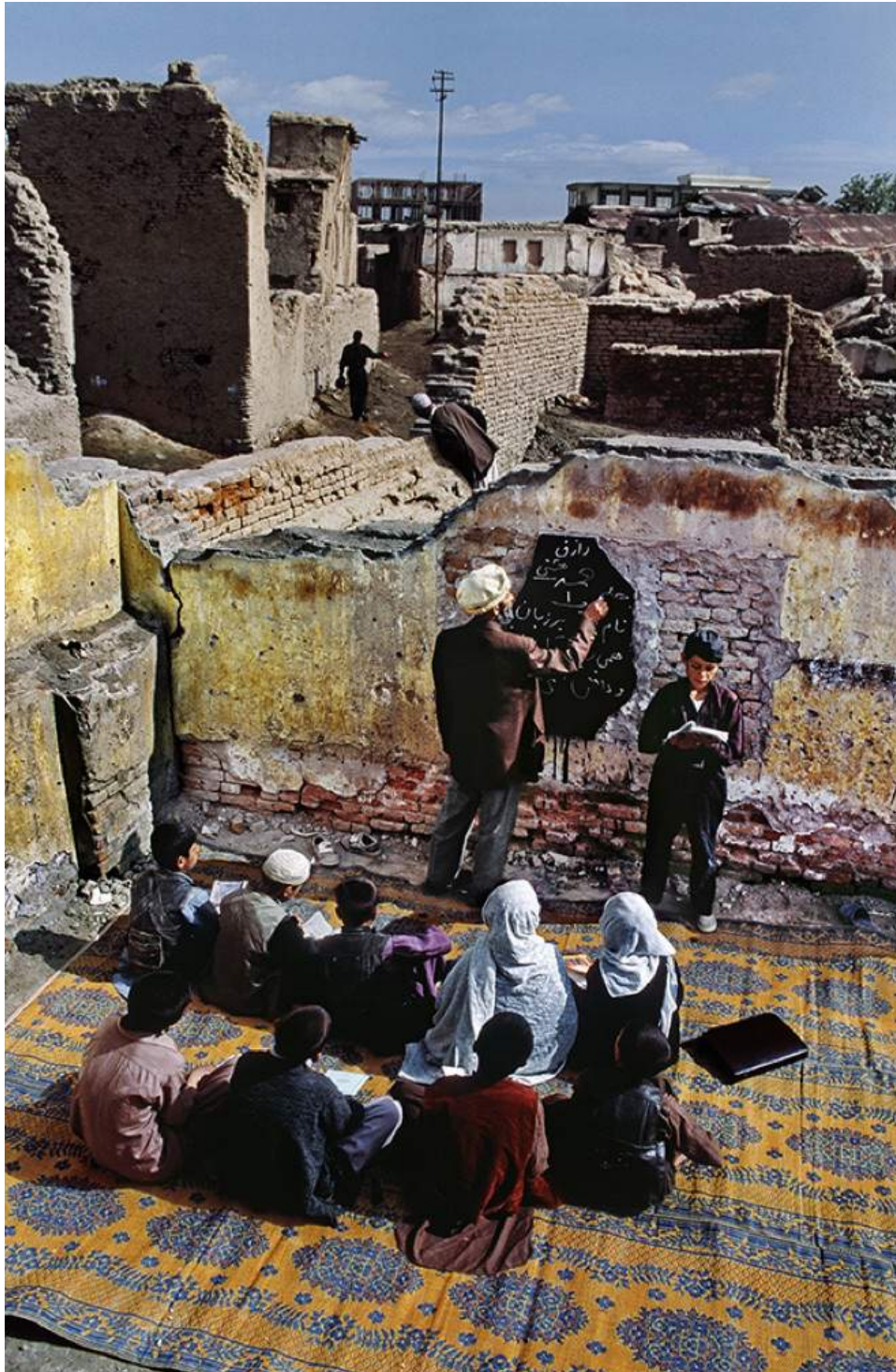


Figure 10: Kabul school, Afghanistan 2002, photo by Steve McCurry.

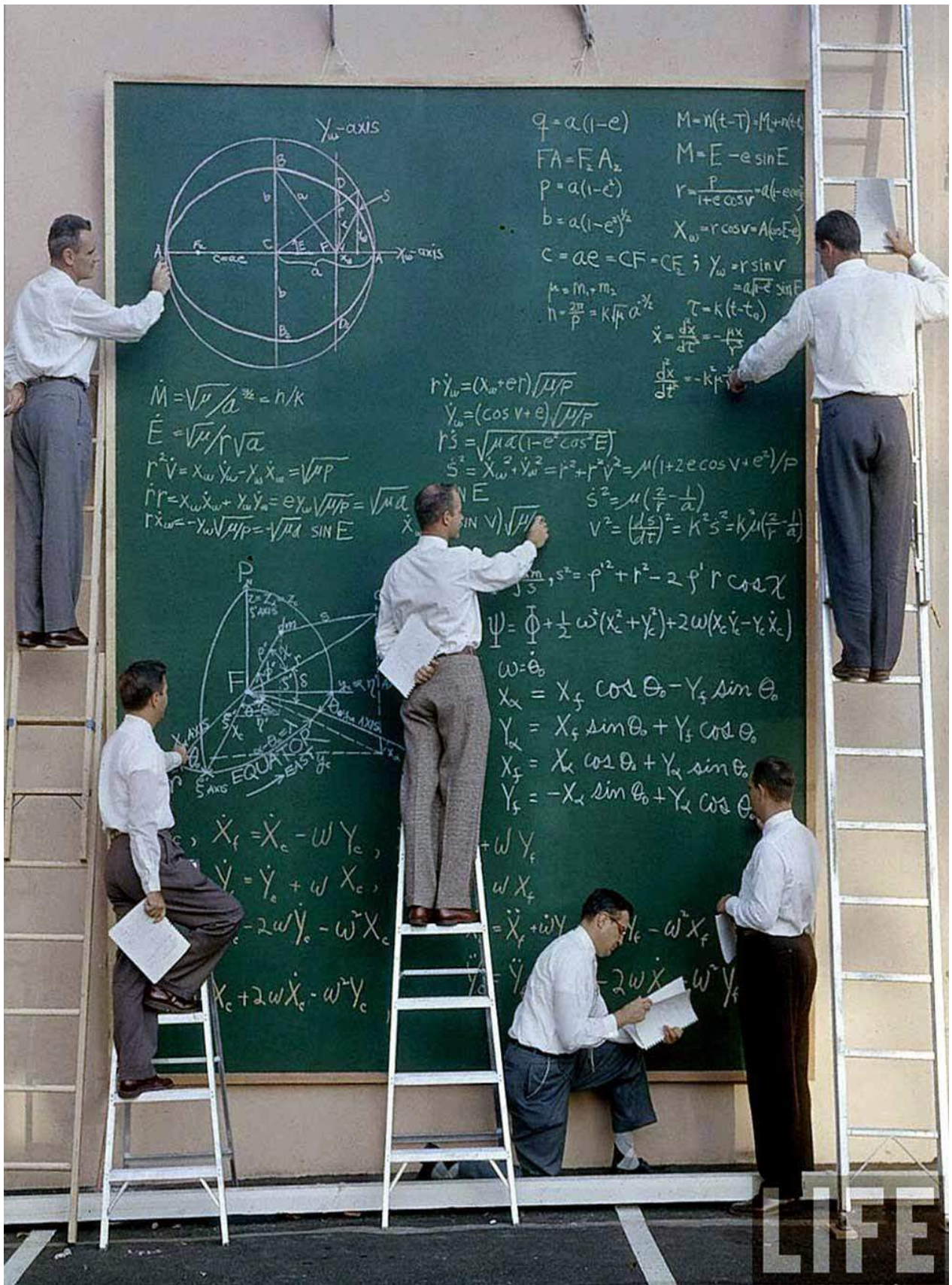


Figure 11: Six unidentified scientists use ladders and a large chalkboard to work out equations for satellite orbits at Systems Labs, California, 1957 (Eyerman, 1957)

In the previous section, the variety of scale was discussed however as much of the 20th and 21st century has seen the reusable surface mostly confined to a screen like rectangular frame. We can use the evidence of the previous examples that show rectangular and flat surfaces mostly pinned to a wall or mobile boards with wheels, with slight adjustments in usability and aesthetics such as Katie Porter holding the board or Gansterer removing the board from the wall to the table. Little advancement has been made regarding form instead technological developments for digital use have been considered which may have impacted the consistency in form and shape. However, Mathieu Lehanneur produces a concave whiteboard in the project LaboBrain (Lehanneur, n.d.) The *LaboBrain* is a workplace that serves as a space for bringing together a creative team for meetings, vision quests and brainstorming sessions. The concave screen may centre the participants to remain active as its inward qualities provide an immersive experience, also the suggestion of one chair implies the concave scene may be suitable for deep reflective thinking (Figure 12).



Figure 12: Labobrain, Cultural Center Office (Lehanneur, n.d.)

2.4 Summary

Having surveyed chalkboard and whiteboard practice they are united by their invitational quality, wipeability, attention grabbing, improvisational, idea generation, spatial versatility, and mind mapping. However, it is also united through negative aspects including conflict, rigid hierarchy, and unequal ownership. From a formal perspective, the reusable mark-making surface has seen little change and still operating via flat planar shapes which influence collaborative dynamics such as accessibility to actively engage with the surface. The flat surface also influences the formation of people, with many of these surfaces acting as static objects pinned to a wall, whilst the mobile versions propose potential for spatial versatility are either difficult to move or too small to fulfil participatory activities and often lead to further didactic situations.

The source review has compiled examples of people using whiteboards and chalkboards in contexts including business and education. Also, artists have taken their creative methods to extend participatory engagement. Communication methods have varied through intended and unintended purposes, including drawing (also mind mapping) and prompts becoming influential in performance and outcome and shaping how discourse can be open, collaborative, or closed. As mentioned, the whiteboards and chalkboards have stayed similar regarding the flat 2D panel. Imagine if these practitioners, in the artistic and non-artistic sense used the three-dimensional reusable mark-making surfaces I made during this research?

Would Steve Jobs complain about one of his co-workers writing on a reusable mark-making space? He may have no choice and potentially give up the ownership. How about using three-dimensional reusable mark-making surfaces such as a sphere, clothing, or everyday objects? Would Steve Jobs continue his behaviour and take the sphere or clothing out of the room or cover the objects to prevent other from inputting? The dynamics for ideation and active participation may evolve into new modes of creative production. Breaking away from the traditional 2D panel may shift from the presentational communication style to explorative open-ended use and provoke various modes of thought to ease the tension of didactic and collective ideation. Beuys could still inform an audience on his complex thoughts whilst others may be able to have an input whilst listening. If Katie Porter used a sphere to converse with others, will they be able to map out knowledge to gain a deeper understanding of the chosen topic? Or even have a collection of reusable mark-making surfaces to help strengthen her

argument to the audience? Could three-dimensional reusable mark-making surfaces input additional resources to expand on the diagrammatic methods for artistic conversation and action, used by Mers and Gansterer. All of these are sculptural and performative factors that can inform an original set of studio methods which I'm going to tell you about in Chapter 3.

Chapter 3: Methodology and Methods

3.1 Introduction

This chapter outlines the methodology and methods, using an artistic framework which combines conceptual, fieldwork and studio processes. A methodology comprised of art thinking will be used throughout this project which has been influenced by the writing of Jessica Jacobs (Jacobs, 2018) and alongside Martin Heidegger's take on handleability and praxical knowledge (Bolt, 2004). This methodology provides the framework to sample a variety of tests, trails and methods which enabled the project to cement the needed methods to consider the gap in knowledge.

To follow on from the summary in the source review, the gap identified was the 'form' of the reusable mark-making surface still limited to a flat two-dimensional panel surface. It is through this where I want to explore alternative three-dimensional 'forms' of the reusable surface both in individual and collaborative situations to capture what modes of thinking and making emerge. Referring to the source review, key words emerge including facilitation, communication, drawing, idea generation, and knowledge sharing. These key words carve out a relationship that highlights people's dealings with ideas, tools, and materials of production. Because of this, working with Martin Heidegger's notion of "handleability" and "praxical knowledge" provide the support of the framework for this methodology.

3.2 Why handleability and praxical knowledge?

Using Heidegger's approach, this enquiry can begin from a practice (practical standpoint) instead of theory. By doing this I can create a 'pilot' phase and build on previous tacit knowledge to shape the needed methods for this practice-based research. Barbara Bolt suggests working with Heidegger's notion of handleability opens a field of an "art of practice" from the bottom up, rather than from the top down. This approach enables to follow on from

practice rather than prescribing it. Therefore, opening the possibility for grounding and theorising a very different relation between people, materials, and tools in artistic practice (Bolt, 2004). It is through this where further tacit knowledge and praxical knowledge can be formed, later in the chapter I will discuss my previous practice prior to this research which will provide the starting point for the pilot phase. Heidegger's term poesis, meaning, the activity in which a person brings something into being that did not exist before (Heidegger, 1977) was also used as influence to explore the three-dimensional in an attempt to reveal new insights. In the next paragraph I will attach an art-thinking approach to this methodology.

3.3 Art thinking and why not design thinking?

The next two paragraphs will outline the reasons for placing this enquiry into a contemporary arts context using Art thinking as one of parts to form this methodology. Jessica Jacobs take on Art Thinking suggests this approach has a domain-dominant emphasis in certain cognitive strategies and mindsets. They include:

- Cognitive Strategies
- Metacognition
- Use of resource banks
- Prolonged research
- Problem-creation
- Use of constraints and generators
- Conversation with the work
- Delaying closure
- Reflection and evaluation of thematic coherence (Jacobs, 2018).

These cognitive strategies established a framework to implement the methods to enable a studio and participatory practice. Rather than solving a problem, I wanted to speculate to reveal new questions and possibilities. Consequently, an Art thinking approach was the appropriate choice instead of a Design Thinking framework. "Design thinking" is planned, structured, and tried and tested, and packages problem-solving methodologies that are common across domains into a framework that is easy to understand and apply (Jacobs, 2018). Although Design thinking principles were adopted because of the crossover to Art Thinking, such as iteration, the

rejection of a planned process model enabled to incorporate of other factors, such as intuition and previous practice experience, to form a creative process that was fluid and does not operate in a linear or cyclic way.

Art thinking strategies such as problem creation, prolonged research, and resource banks enabled my methods to function in a fluid process. Before this project, I experimented with whiteboards using some of the strategies to begin operating in an expansive mode of working. As shown in (Figure 13)(Figure 14), experiments led to several interventions and various methods, which began by deploying intuitive and playful actions and later evolved into new situations, objects, and spaces. I sampled in a participatory context speculation through conversation and drawings and building imaginative scenarios (problem creation), continuous experimentation (prolonged research) and bringing in additional knowledge from previous projects in these experiments (resource banks). For the work to evolve, metacognition was a strategy used. Metacognition refers to monitoring one's cognitive processes and influences while focusing on a specific task (Kitchener, 1983). Through this strategy, the creative process can be monitored with an artistic mindset to shape methods with the openness to evolve rather than implementing a template of design thinking methods.

I have formed some tacit knowledge from previous encounters with the whiteboard. Through experiential learning, insights emerged that question its alignment to the source review, including how other artists have used and considered the reusable mark-making surface. Insights include repurposing form, hierarchal structures, alternative uses, and drawing. In the next section I will consider my motivation to use drawing as a method.



(Boardman, 2018)



Figure 13: The case for improvised production, myself using whiteboard as a table (Boardman, 2018)

3.4 The motivation for drawing

The following section outlines the motivation for using drawing as a method within its own right and incorporating it into other methods. It is a useful way to work with the reusable mark-making surface in expansive ways for ideation and participation, using Dean Kenning's diagrammatic drawings as a reference point.

Using drawing as a method for this research enquiry stems from my previous practice. In the previous section (Figure 13)(Figure 14), my practice showed how the whiteboard was repurposed into a table. Drawing enhanced various interventions and generated some success with participation. Furthermore, signs of explorative communication were present, including the accumulation of note-taking, mind-mapping, and cartoon drawings in collaborative approaches from myself and others. An additional influence to implement drawing is from the source review, drawing had a solid impact on ideation and how communication is conveyed. As highlighted in the source review, certain practitioners used the reusable mark-making surface and drawing as a didactic approach, whilst others approached this in a more explorative approach whereby discourse opens up such as Mers, and the potential of new ways to ideate emerges through mind-mapping and sketching and note making. It is through these various drawing approaches for the intent to explore that I will use Dean Kenning as a reference point.

Kenning's drawing approach provides a platform to open discourse, consider collaboration, and move away from didacticism. In his work *Thinking Through Art: The Social Body Mind Map* (Kenning, 2014), he discusses and implements a workshop-based diagrammatic tool for art students where drawing becomes a process for idea generation and integral to reflecting on their practice and beginning to create new possibilities. In his live drawing lecture *Diagramming Politics* (Kenning, 2017), Kenning uses diagrammatic drawings to explore political theories, identity, and representation. More on the didactic side, this approach encourages the audience to engage in a dialogue with the artist to question and propose new thoughts, using diagrams in an exploratory mode of communication. His drawing approach allows one to think through drawing and offers visual representation, which is helpful in individual and participatory settings. Furthermore, his drawing approach can accompany additional creative methods, such as workshop facilitation, mind-mapping and presentation. With these multiple reference points,

drawing will enable further experimentation with other methods to open up alternative routes into ideation and participation.

3.5 Forming the methods within the pilot phase

Despite the previous experience, the early stages of this practice-based research needed a pilot phase comprising artistic experiments to cement the foundational methods and aims (Figure 15). Another reason was to have an opportunity to apply new modes of experimentation, elaborating further on Heidegger's notion of handleability to provide a more substantial knowledge base and attempt to break away from similarities to previous work and avoid repetition. Repetition was evident at the beginning of the studio practice, which saw similarities to previous works, such as repurposing the whiteboard as a table. Therefore, using the pilot phase was a critical pathway to shape this research. In this section I will provide an overview of the various artistic experiments I produced during the pilot phase. These experiments were comprised under the following themes, Drawing, participatory and interaction, sculpture and exhibiting. I will expand further below.



Figure 15: Pilot Phase Reflection, mind-mapping the research journey (Boardman, 2023).

Drawing : Primarily working individually, drawing was implemented to understand the reusable surface's potential and mark-making tools' potential. Outcomes varied from the experiential to the aesthetic. This led to working in different colours to create large-scale decorative works and digital developments, but also deconstructing pens to generate new approaches to drawing.

Participatory and Interactive : Using the whiteboard both in the traditional sense, such as pinned to a wall, and later transformed into alternative three-dimensional forms and layouts, I began to implement participatory exercises. This included having discussion groups, art lessons, instructional drawing and building a theoretical framework, including the *World Café Method* (Brown, 2005).

Sculpture : I altered the existing whiteboard into new forms. Referring to the source review highlighted little change in the overall form of the whiteboard and chalkboard. This reference point led to a sculptural investigation whereby existing whiteboards were deconstructed, studied, and readapted into new forms whilst maintaining their reusable quality. Additional experiments took everyday objects and three-dimensional forms to create new reusable mark-making surfaces by painting with a specialist whiteboard and chalkboard paint and applying existing whiteboard materials onto other objects.

Exhibition : The later stages of the pilot phase led to an exhibition focusing on participation and drawing. Developments from studio experimentation were displayed to an artistic audience with the intention of engagement to gain more profound knowledge on participation engagement and feedback from the conversation.

3.6 Summary of experimentation

This section reflects on the critical moments during the pilot phase. Through experimentation and working in alignment with the source review, the pilot phase has confirmed that an Art thinking methodology is a suitable route whilst also shaping the methods and aims to continue research.

Working in this way, as opposed to a design thinking methodology, provided an expansive approach to the project. The experiment was not just limited to the whiteboard. Experiments did begin with simple adjustments such as a table conversion; however, playful and intuitive interventions within the studio, such as deconstruction (Figure 16). Other interventions led to failed outcomes, such as painting, decorative drawing, and digital manipulations (Figure 17). Several experiments saw the rejection of the original object leading to the repurposing of new objects. Expanding the whiteboards form and layout was influenced by the source review; however, intuition and speculation provided the opportunity to create new scenarios as well as

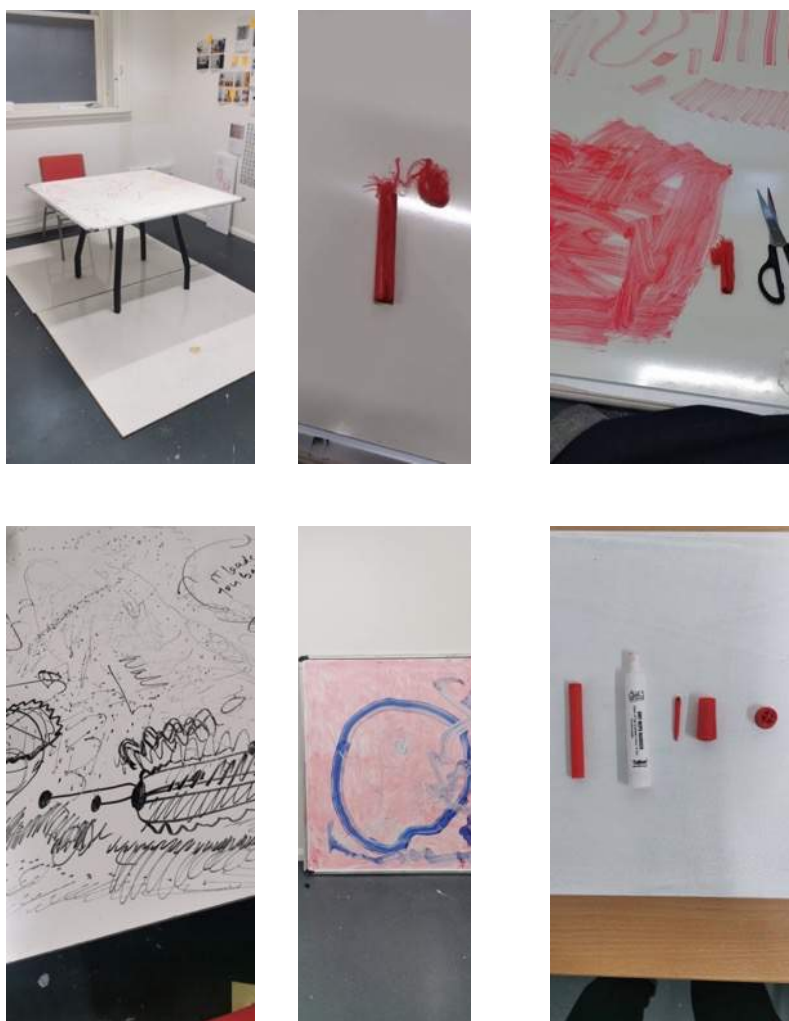
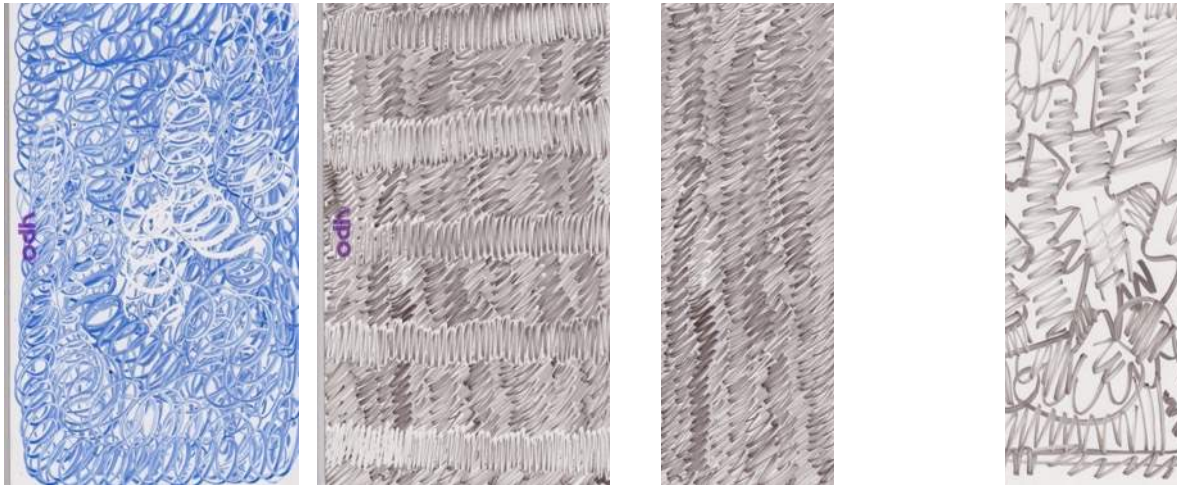


Figure 16: Whiteboard experiments including drawing and pen explorations. (Boardman, 2022)

test different uses and interactions. Therefore, principles from Art thinking became valid guide points for implementing methods such as drawing, sculpture and workshop facilitation.



It was also through this expansive approach that alternative versions of the whiteboard were considered and realised, subsequently providing a breakthrough. Examples included a Yoga ball, canvas, milk carton and a frying pan; all adapted through a specialist whiteboard paint. Introducing participatory exercises within the studio led to drawing on the reusable mark-making surfaces for experimentation,

The breakthrough emerged when exhibiting these alternative whiteboards as participatory, providing the audience with pens to draw on (Figure 19)(Figure 19). The audience primarily engaged with the whiteboard yoga ball, generating individual and collective interventions. Drawing and writing were some of the interventions; however, unexpected engagements occurred, such as rolling and throwing the ball and several people drawing on the surface simultaneously. Its spherical surface is accessible to varied viewpoints, therefore, allowing the invitation for participants to engage collaboratively. Collaborative acts were also conveyed through conversation whilst using these whiteboards as prompts. A further insight was that the alternative whiteboards were treated as mobile objects; this portability poses new thoughts regarding collaboration. The alternative whiteboards transformed into three-dimensional forms begin to show potential for a new pathway, with artistic production at the core. Therefore,

continuing to experiment with objects and sculptural forms through making and using was integral to the research.

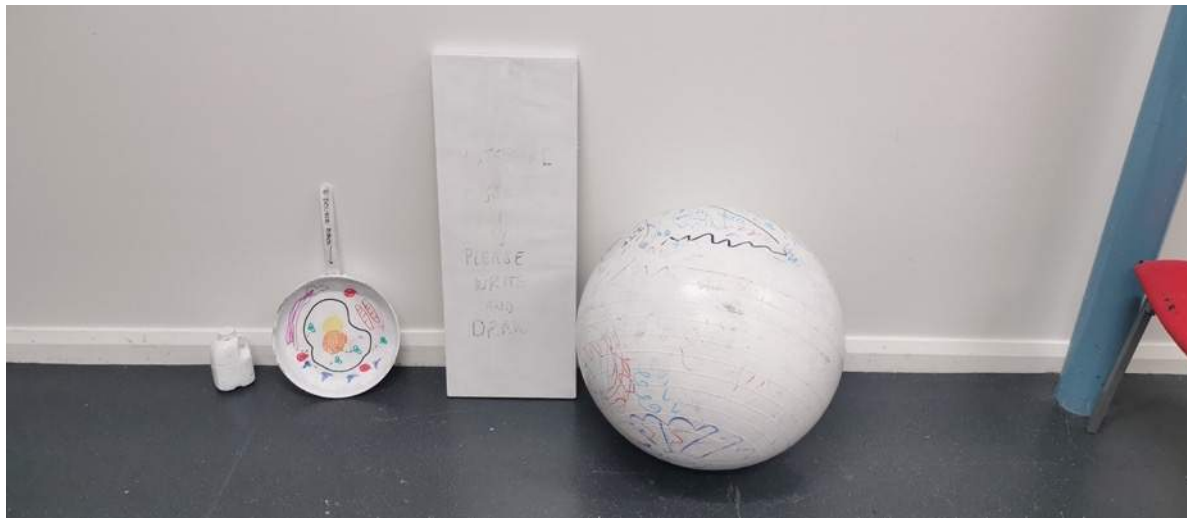


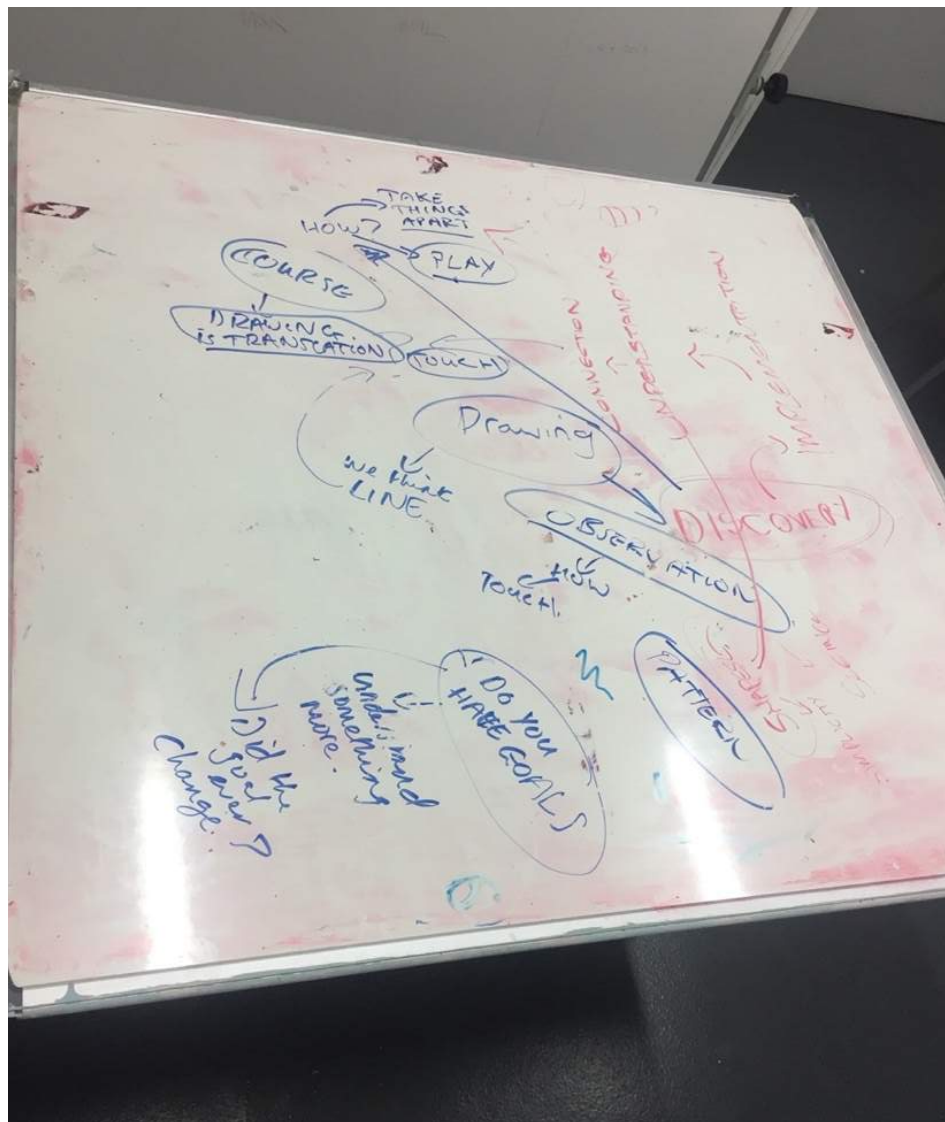
Figure 18: Whiteboard Objects made during the pilot phase including milk carton, frying pan, canvas, and yoga ball. (Boardman, 2022)



Experimenting with whiteboard surface was dominant through the pilot. However, chalkboards and whiteboards are used for the remaining research, working interchangeably, and using the term reusable mark-making surfaces to continue this research.

The role of the studio was vital to the pilot phase; it was a testing ground for making and using three-dimensional reusable mark-making surfaces and creating participatory exercises. Used to

sample experiments quickly, the studio space also, abstractly, and literally, enabled the reusable mark-making surface to become a part of artistic reflection. This is evident through the trials of participatory exercises, supervisor sessions and art-making. The studio evolved into a reusable mark-making space whereby the sections of the floor, table and walls are repurposed to facilitate conversation, drawing and writing (Fig.20). Working with the whiteboard in this way accomplished two things: ideating and reflecting, whereby mind mapping and conversation were being used frequently. The reusable mark-making surfaces evolved into a surface for collaborative intervention including drawing exercises and inserting discussion topics, usually informal.



g.20 Studio experimentation converting whiteboard into a table (Boardman, 2022)

The pilot phase took observations and critiques from the source review (see chapter 2). It imposed a practice-based arts methodology to suggest that transforming reusable surfaces into three-dimensional forms can spark possibilities for alternative outcomes and interactions. The phase also confirmed the needed methods to conduct this research further. The question to guide research is as follows:

What impact do the changes of the reusable mark-making surface from a traditional flat screen surface into three-dimensional forms provide for participation and ideation?

With the aim to explore ideation and active participation through creating three-dimensional reusable mark-making surfaces, the next chapter will discuss the chosen methods to undertake this project.

3.7 Formed methods: No End Point

This section describes the practical artistic elements of producing reusable mark-making surfaces. Combining studio explorations, workshops and participatory exhibitions, the project operated under several different environments, inviting participants to generate varied artistic outcomes. Using **fabrication**, **workshop facilitation**, **conversation** and **drawing** as methods, they operate in a non-linear fashion. Drawing was used to combine with other methods. Fieldwork and studio findings are opened through individual and collaborative interventions to generate artistic outcomes in drawing, sculpture and performance combined with questionnaires and conversations. In addition, a further finding will be the evolution of the reusable surface concerning form and how this influences artistic production. Reflection was continuous, using the studio and the reusable mark-making surfaces to facilitate mind mapping to build a research base. These methods do not operate in a specific order; the studio pilot highlighted how these methods work interchangeably and continuously.

Fabrication: Fabrication techniques include sewing, pattern cutting, papier mache, and painting to make new and repurpose existing objects into reusable surfaces. Fabrication techniques are varied, with outcomes depending on workshops and studio activities. For example, some outcomes use intuition, praxical knowledge and feelings stemming from studio exploration,

while other outcomes will be considered based on the intended workshops and participant feedback. Fabrication enabled to break away from the traditional concept of a whiteboard and chalkboard; examples in the pilot showing ready-made objects transformed through painting have continued with further ready-made objects repurposed and new outcomes made such as aprons, spheres, footballs and jackets. The work Konstantin Grcic, *New Normals* exhibition that confronts viewers with new ideas and perspectives (Grcic, 2022) and *101 Japanese useless Japanese Inventions*, which show alternative uses and outputs to propose radical and humorous intervention (Kawakami, 1995) provided valuable reference points.

Workshop and Participation: Workshops and participatory exhibitions were used as testing grounds to generate scenarios and encourage a collaborative emphasis resulting in artistic outcomes. Placing in different spatial environments, including empty retail shops, white cube exhibitions, seminars and art studio spaces, I could test new versions of the reusable mark-making surface to explore ideation and active participation and use these sessions to contribute to reusable mark-making surfaces evolution. Allowing the reusable surfaces to evolve also offered an opportunity for the workshops to do the same. Initially, workshops lacked structure and specific aims for participants, meaning free-flowing experimentation and the hope for unexpected insights. A pedagogical emphasis on creating scenarios, problems, and topics for participants to respond to was deployed to enable a structured workshop with aims participants could understand and follow. Examples from Bruce Edelstein's Teaching Children/third-grade project where collaboration and painting combined for creative expression (Edelstein, 2021) and Design research studio Extrapolation Factory explores participatory methods for prototyping, experiencing and impacting future scenarios to solve and discuss topics and problems (Woebken & Montgomery, 2015) highlight how a simple topic or problem as a starting point can lead to creative and radical outcomes. Therefore, my role as an artist is to implement reusable surfaces to create spaces and scenarios and facilitate workshop delivery, in order to examine if transforming into three-dimensional forms can contribute to ideation and collaborative action in new ways.

Conversation: Conversation was used as a method to generate further output and insight. Unlike the pilot phase, which mainly used drawing to understand engagement, A conversational method was combined with drawing to reveal insights into ideation and participation. It was

used throughout all stages of the creative process, particularly in workshops and 1 to 1 session, to enable drawing, mind mapping and creative thought. The conversational method was also used as a feedback tool to develop fabrication and workshop delivery and to contribute to the findings. Additional feedback to cement findings is through questionnaires and written comments to combine with findings from an artistic sense.

Studio: The studio was a space to combine drawing, fabrication, workshop, and conversation to imagine, prototype, deploy and evaluate. Early stages led to an emphasis on making, leading to new three-dimensional reusable surfaces. Speculative and conceptual thinking enabled the reusable mark-making surface to be visualised into new scenarios and uses; this turned into further practical experimentation. Similarities to avant-garde architecture and design collective Superstudio used speculative and visionary thinking to offer an alternative through its photo collages and designs, opening new possibilities for what architecture and urban planning could be (Superstudio, 2018). Instead of collage, the studio space was converted to a reusable mark-making space to consider spatial contexts and further possibilities. Strategies from art thinking like problem creation are practiced in the studio then taken further into further fabrication and workshops. Furthermore, the studio space explored fabrication to an expanded sense by building a reusable mark-making studio to encourage testing and realise new versions in 3D. Drawing was used for experimentation purposes, to understand the potential, reflect and document primarily through mind mapping to assess the research journey.

Chapter 4: Practice and Portfolio

The research journey which started from several objects with the hint of a contribution to ideation and active participation. The practice developed through studio practice, trials and workshops in the attempt to reinvent the reusable surface. This led to a practice that opens the possibility for ideation, deep thinking and active participation using a variety of three-dimensional mark making surfaces as separate entities, collection of objects and spatial intervention.

4.1 Reusable Mark-Making Surfaces Collection

The next page shows the collection of reusable mark-making surfaces that were made and used for this project (Figure 21)(Figure 22). Some were objects repurposed to form a reusable mark-making surface; others were objects and sculptures designed and made.

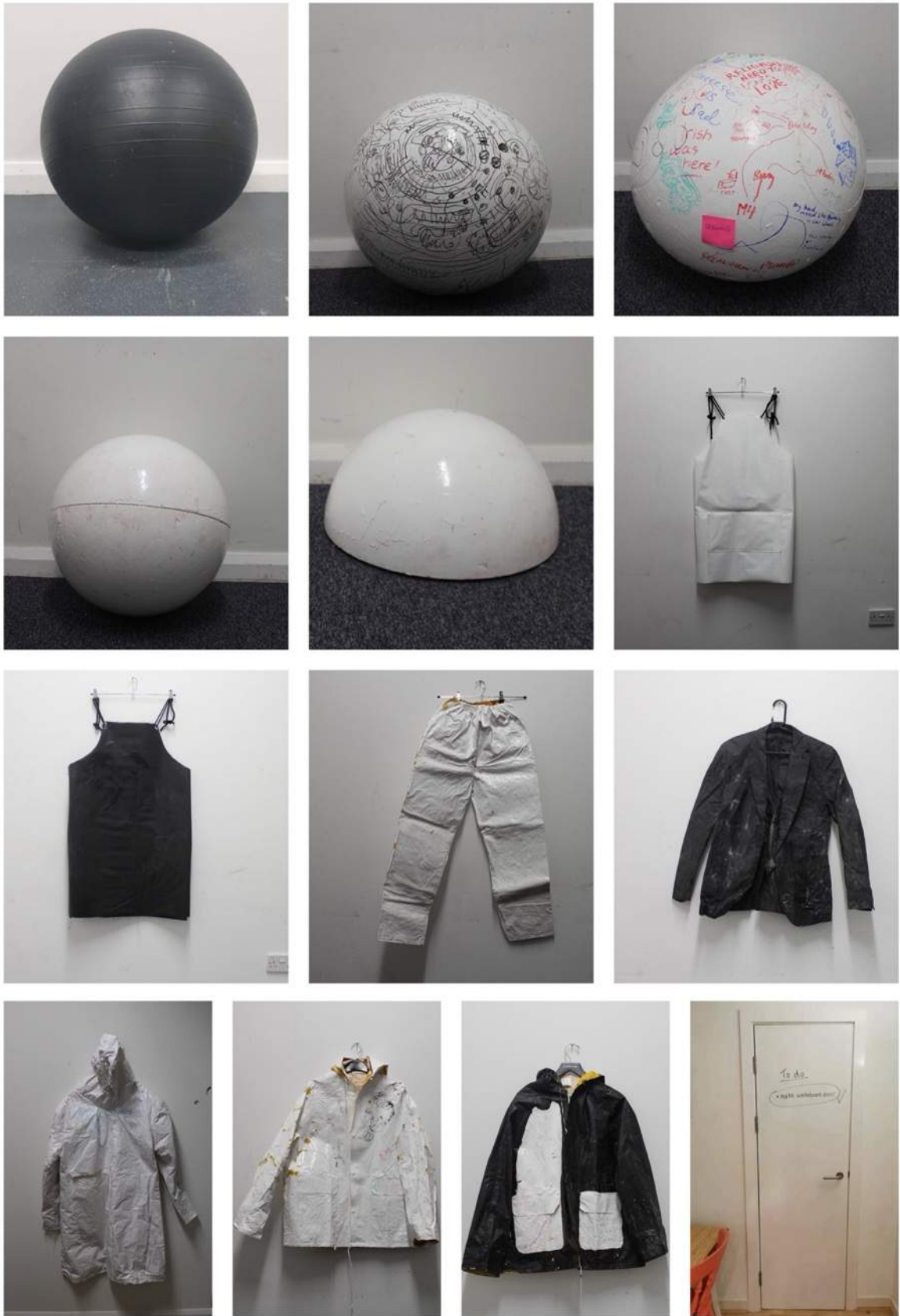
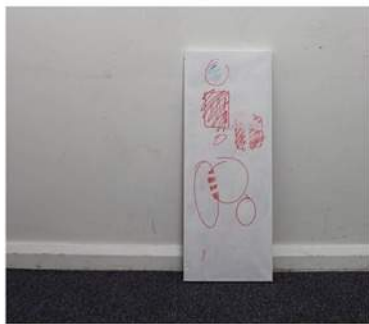
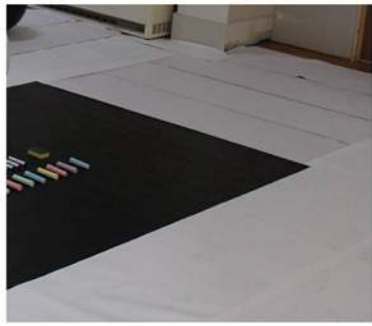


Figure 21: Reusable mark making surface objects made throughout this research

(Boardman. 2022 - 2023)



4.2 Participation becomes a physical thing, not just an intellectual

Participation was physical throughout all the experiments and workshops undertaken in this enquiry. This section will discuss how 3D surfaces encouraged a greater variety of physical actions, contributing to playful encounters and outcomes. Unlike the traditional flat surface of a whiteboard and chalkboard, the three-dimensional surfaces went beyond the usual actions a participant would generally do associated with a traditional whiteboard or chalkboard. Usual actions of active participation would be to stand in front or aside or walk away and observe from a distance leading to a more observational role in participation. The 3D surface involved encounters which led to active participation through actions such as wearing, carrying, holding, throwing, and sitting. A key example was in the Art Foundation workshop, whereby participants used several objects, mostly spherical objects to throw and catch each other, leading to mark making from various participants (Fig.23). Other examples saw the clothing as a reusable surface



Fig.23 Participants using sphere to develop thoughts, responding to how do we live on Mars
(Priestley Art Foundation Students & Boardman, 2023)



Fig.24 Participants using Apron to speculate and imagine clothing on Mars (*Priestley Art Foundation Students & Boardman, 2023*)

participants gather around to draw and write leading to mobile interactions (Fig.24).

The movement of participants expands drawing into a physical activity. From a collaborative perspective it builds ideas but also forms trust with participants. The clothing highlighted the shared ownership within experiments. Participants welcomed the opportunity to change the wearer. This also links to actively participating, ranging on a scale from 1 to 5 (1 being not very and 5 being very), Participants were asked: How comfortable did you feel sharing ideas with the rest of the group? 30% said 4, and 60% said 5. Two further questions were, 'Before the session, how comfortable did you feel participating in group work?' 30% said 4, and 40% said 5. This question was asked again after the session; 30% said 4, and 70% said 5. This suggests that the

reusable mark-making surfaces provide a comfortable and engaging environment to participate in.

The three-dimensional qualities suggested in the previous section, such as mobility and its various forms of engagement and handling, saw the reusable surface as useful for playful and artistic intervention. Some interventions were intended for speculative and visual thinking purposes; studio experiments led me to create intuitive and imaginative responses where I assembled a collection of reusable mark-making surfaces for drawing; an example included drawing a new city, using the objects form as a foundation to draw on (Fig.25). Other interventions saw a playful dynamic, with participants forming games, using jackets to draw dart boards on the back of the clothing for other participants to throw pens, or providing alternative narratives to repurposed objects by drawing visual stories (Fig.26). The three-dimensional reusable mark-making surfaces provoked a breakaway from traditional use. Interactions were mostly playful and questioned the hierarchal dynamics by introducing games and imagination. The activities in all the workshops saw no tension or conflict between participants; instead, participants saw intervention as an opportunity for shared ownership of the reusable mark-making surface.

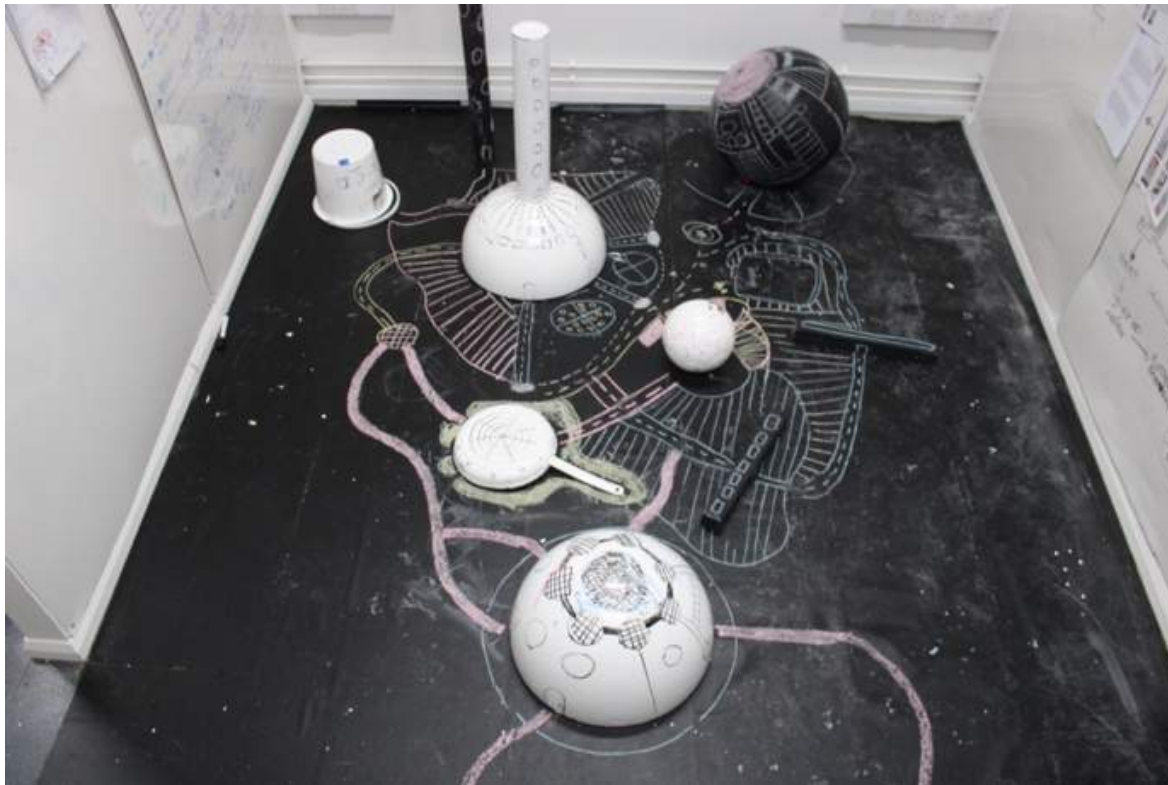


Fig.26 Imaginative outcome from workshop with PhD students at Manchester Metropolitan University (PhD Participant & Boardman, 2022)



Students & Boardman, 2023)

advantageous practice for ideation and developing ideas during controlled and structured environments. However, three-dimensional mind mapping still existed in less structured and controlled environments. In the Air Gallery Exhibition (where the objects had little or no instructions for the audience), drawings still manifested outcomes of mapping. A key example was a participant's bus journey, who later explained the experience to others. Participants responded by conversation and adding further mark-making to the surfaces (Fig.29). These



g.29 Collection of drawings and interventions from audience at Air Gallery Exhibition. (Boardman, 2022)

examples add to the idea of play but highlight that mind mapping can evolve from the individual and reflective thinking into the invitational for others to edit or share.

Individually focused, the 3D objects can still offer an alternative approach to mind mapping. I used mind mapping in the studio for reflection, however, I did not consider other participants using the objects for individual making and thinking. After the workshop with PhD students, a participant requested taking the chalkboard yoga ball home for their use (Fig.30). Below are comments made by the participant whilst working with this object in their own time.

“Using a three-dimensional, round object, rather than a flat surface, as a tool for brainstorming and making sense of my ideas, has proven really useful, and completely different to what I expected. The fact that I am using something that I can move in the space, hold, turn around, makes me feel as if the thoughts actually transfer onto a different platform, and I can then physically manage them and move them around, change the order, look at them. While they are in my head, I feel like I have way less control of them, and using something like a flat whiteboard on a vertical wall offers a more limited ability to see how the thoughts can interact with each other and change in relation to one another. A round object allows for non-linear processes and connections; I can choose to see one side of it, but not another, but at the same time all the elements I put on it are visually connected. There isn't a hierarchical relation among the different parts - either from top to bottom or from left to right, but rather they all contribute at the same level to the process I'm trying to develop. The tool of the yoga ball has been particularly useful, in this sense, to understand relations among elements of a project, or a thought. In the example in the pictures accompanying this, I used the yoga ball to write down words connected to the characteristic I see in my practice, as part of an exercise to identify its core values. The way in which I was able to make sense of the different elements felt very easy, and it had not been the same in the past, when I had tried to do so on flat surfaces.” (Participant, 2023)



The three-dimensional surface breaks away from the linear, encouraging lateral thinking. In addition, multiple objects can create further information gathering and allow new connections and thoughts to manifest and evolve throughout the thinking process.

4.4 The surfaces evolution

In this section, I will discuss how the reusable objects and spaces evolved and the critical moments which influenced this. The studio practice led to continued experimental interventions of the reusable mark-making surface; a turning point was transforming the studio into a reusable surface space, leading to making new objects, new activities and using different materials (Fig.31) As the project evolved, the entire space was covered as a reusable mark-making surface to act as an idea space to explore new possibilities; examples included developing clothing as a reusable surface which originated from a jacket using various fabrication methods into an apron to allow a greater access for participation because of the flexibility in fit for the wearer (Fig.32).

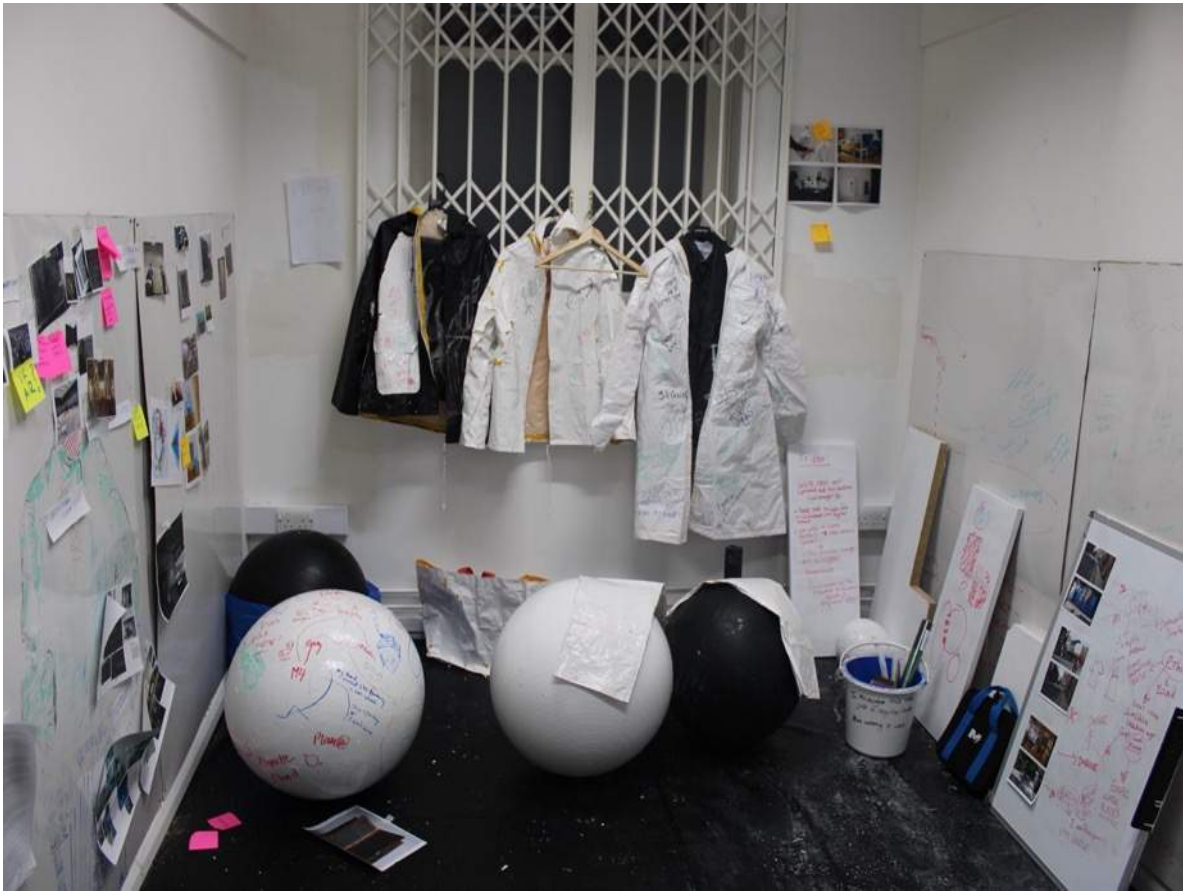


Fig.32 Studio Space acting as a reusable mark-making surface. (Boardman, 2022)

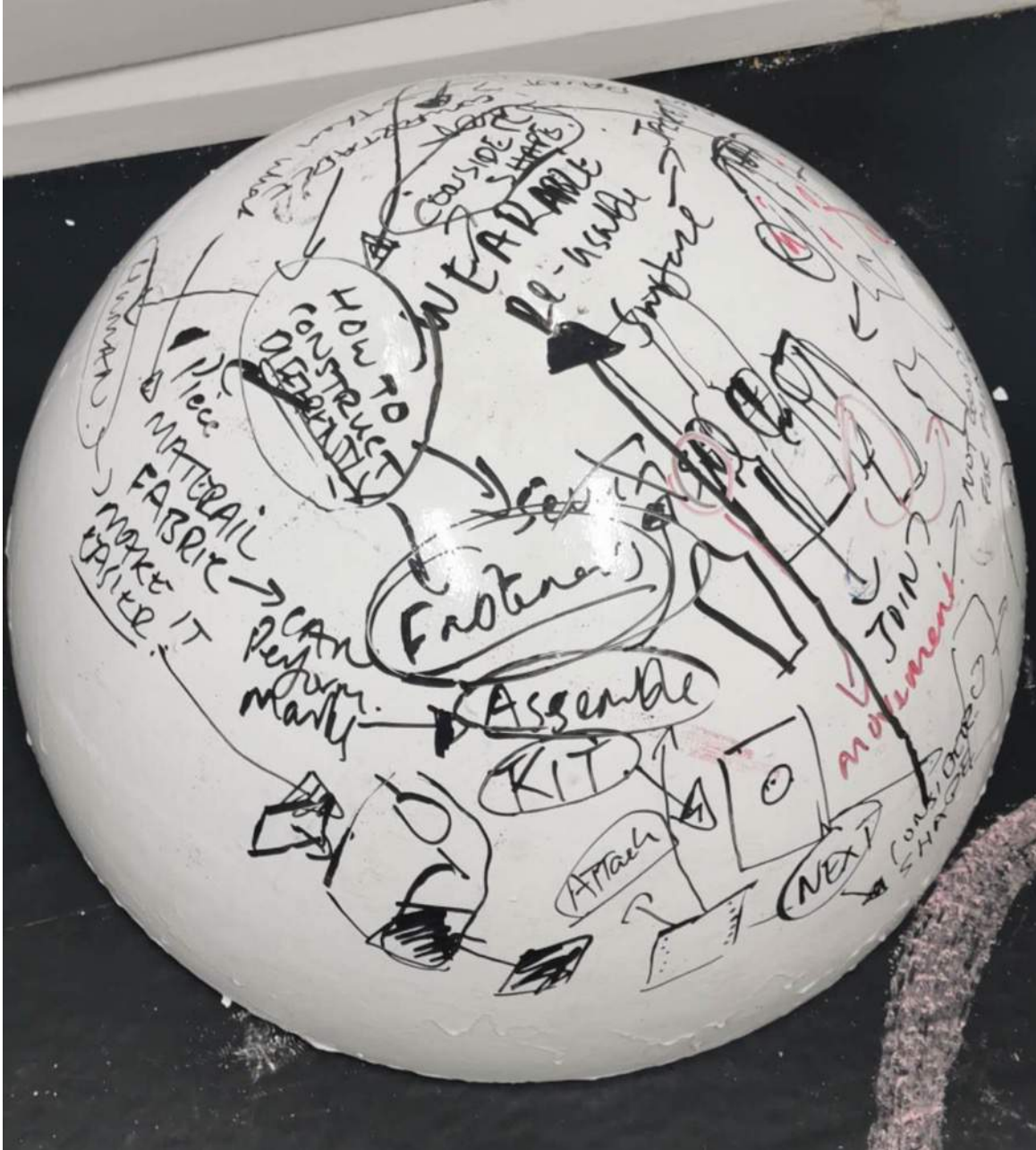
The reusable mark-making space enabled to scale up for the ideation process and support design development to design new objects to a 1:1 scale making the creative process immersive. The three-dimensional qualities saw additional resources such as images and post-it

notes, and previous reusable mark-making surfaces to surround one's thinking to aid this process. Moving away from the functional, the reusable mark-making space amplified imaginative thinking. Sticking to the art thinking methodology I used the studio space to imagine possible scenarios and create new problems. Several experiments were created using the reusable mark-making spaces and objects by imagining new cities (Fig.33), playing with sculpture, and drawing. Imagining a new world, a new space or a new thought, the potential for imaginative thinking was tactile because of the spatial and three-dimensional addition and it supported non-linear mode of thinking.



designing a city (Boardman, 2022).

The reusable mark-making space was valuable for reflection. The previous section discussed other participants taking reusable mark-making surfaces home for alternative thinking approaches. However, for the artist the studio space provided unpremeditated artistic outcomes. These outcomes were three-dimensional mind mapping, used interchangeably; three-dimensional mind mapping was suitable for reflection and creation. Below are images highlighting the alternatives to using the studio space rather than the traditional flat surface (Fig.34, Fig.35, Fig.36). Working in this way provided ideation and reflection in an expanded mode whilst the consistent experimentation developed praxical knowledge and formed new pathways to ideate.







36 3D mind mapping to reflect on workshops and experiments, using additional resources such as images and post-it notes to aid this process. (Boardman, 2023)

4.5 Key Objects

This section will discuss the key objects that relate to the enquiry. These key objects form a collection that can be used interchangeably, usually for drawing, conversation and writing for participatory purposes that aim and achieve active participation or for individual purposes suitable for deep thinking, lateral thinking, and reflection.

The spherical form converted into a three-dimensional surface has been the turning point in breaking away from the flat surface. The form has adopted relatable objects into reusable surfaces, including yoga balls, football, polystyrene semi-sphere, and paper Mache spheres. All are converted into mark-making objects with different surfaces and aesthetics, meaning different starting points emerge once participants interact. With its ribbed lines, the Yoga ball makes way for writing and note-making, and its yoga influence contributed to conversational methods creating calming atmospheres. Papier mache was introduced as a fabrication technique to form other spheres, intending to create a smooth surface and carve its identity. It gave a further breakaway from the original flat surface into something original whereby participants saw a smooth, three-dimensional surface for drawing, ideation, and play. Concerning the question and aims, the sphere had the most application for active participation and generating ideas. Drawing can be expansive and collaborative; its surface roundness is open to anyone depending on where they are situated, promoting invitation. While its mobile quality initiated play and speed, with methods such as mind-mapping becoming effective for individual and group work.

Clothing made from vinyl with similar attributes to the sphere and achieved the aims of this project. Clothing was imaginative, but its most important quality was its playfulness. As mentioned earlier, this was effective in making participants feel comfortable in group work but also effective in facilitation situations. A facilitator can wear the clothing but is not responsible for the mark-making. Instead, other participants create the mark-making; by doing this, a new dynamic is formed in ideation and tilting away from authoritative uses of the mark-making surfaces. Various versions of clothing were produced during this research; the apron delivered the best results for ideation and active participation, I believe, because of its accessibility for any participant to wear.

The smaller objects provided additional findings, which still sat with the participatory and ideation aims. These objects, including a chopping board, football, and frying pan, allowed participants the opportunity within the group work to think more individually and helped participants to stay active during workshop activities. Usually, less vocal or outgoing participants were interested in using small objects to contribute ideas. The smaller objects still show their original characteristics despite being repurposed into reusable mark-making surfaces; these original characteristics influenced opportunities for participants to work with

humour creating playful outcomes and providing a helpful introduction for participants to engage.

4.6 The unexpected outcome

The accumulated collection of objects can be used as a kit (Fig.37). The objects selected include a sphere (which can be split into two semi-spheres), an apron, and a chopping board. These were chosen because of their aesthetic characteristics to provide multiple options for participants to engage in collective or individual tasks. As an example, but not limited to, the sphere can be used as a separate object for collective thinking and initial stages of ideation, using methods such as drawing and mind mapping. The apron can provide playful interventions and work in multiple formats including wearing and disassembling to convert as a floor, table, or wall. The chopping board can provide the opportunity for less outgoing individuals. Multiple objects also can prevent and limit didactic behaviours; in participatory work, the range of reusable mark-making surface provides diverse options for participations to contribute. As a collection they also provide the opportunity to extend drawing into further improvisation, examples in the *art foundation workshop* saw participation acting out scenarios with several objects.



4.7 Experiments

Below is further detail about the workshops and studio experiments including findings from questionnaires, feedback, and imagery to document the practice.

Pop-up Space:

- Participants: 20
- Age range: 18 – 30 (with 1 participant aged 75)
- Location: Deansgate, Manchester
- Date: 4 July – 28 July 2022 (3 weeks)
- Objects used - Chalkboard and whiteboard yoga ball, Chalkboard blazer and shirt, , football, chalkboard tubes, whiteboard table, chalkboard floor
- I was active in the space everyday

For a month, a pop-up retail space was set up to act as a studio and invite participants (and open to visitors and passers-by) to engage with the reusable mark-making surface objects. Developing from the pilot phase, I introduced chalkboard objects to work alongside the whiteboard to build a space for participants to generate diverse, active engagement. During this time, various encounters emerged, including drawing workshops and 1 to 1 conversations. At the end of every day, the mark-making was removed to ensure a blank space was available for the following day. For most days, this was a space for open-ended engagement; some participants (mostly passers-by) left several marks, and others stayed to draw and discuss varied topics, mostly everyday casual conversation. For several days I led workshops centred around drawing with limited instructions. In response and feedback to these engagements, new objects and developments were made by experimenting with new forms of new materials.

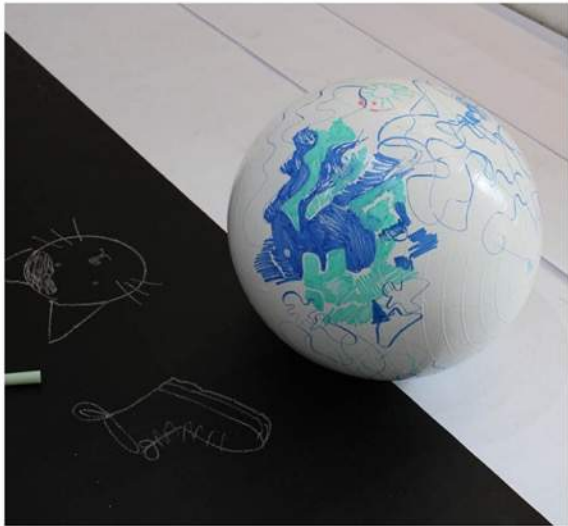
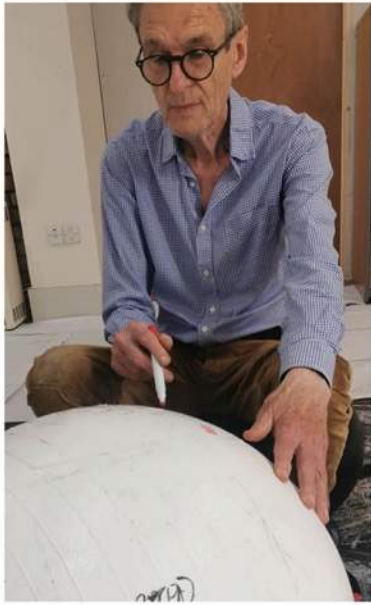
Feedback from a participant:

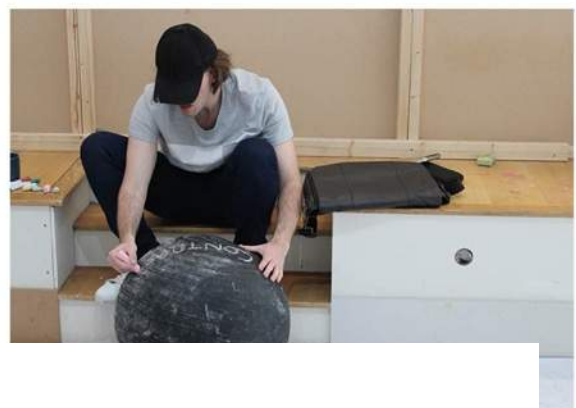
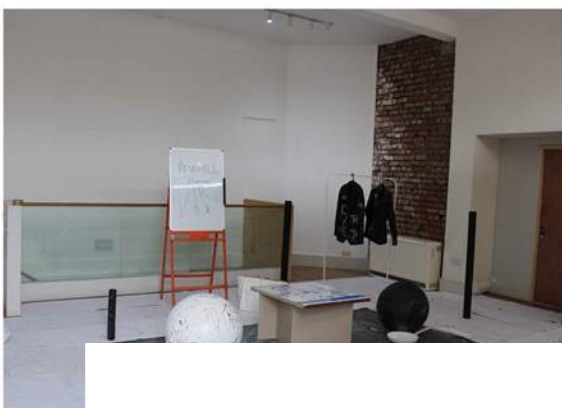
“Being a part of a blank space where you could see other people’s thought patterns dotted around you in their own way of working, plus messy smudges where people had erased their previous thoughts, was a unique and exciting setting to kickstart your own ideas. With Kevin using questions as prompts to make your little patch of blank space less intimidating, I was inspired to flip the process around and turn the

questioning onto him so that his thoughts could be mapped out alongside his visitors.” (Participant, 2022)

Key Findings

- Developing new objects such as clothing and spheres based on participation and aesthetics outcomes (drawings/writing/doodles).
- Signs of playful interventions and drawings
- Creating a new space
- Objects (especially the yoga ball) became very useful to stimulate conversation.
- Roles in facilitation were easy to switch from one participant to another.





⇒ A selection of images showing the different activities and outcomes (Boardman, 2

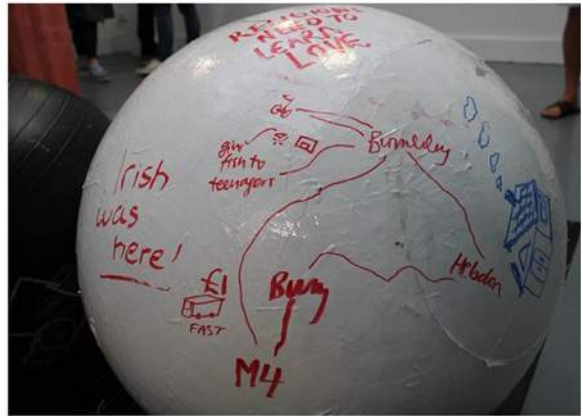
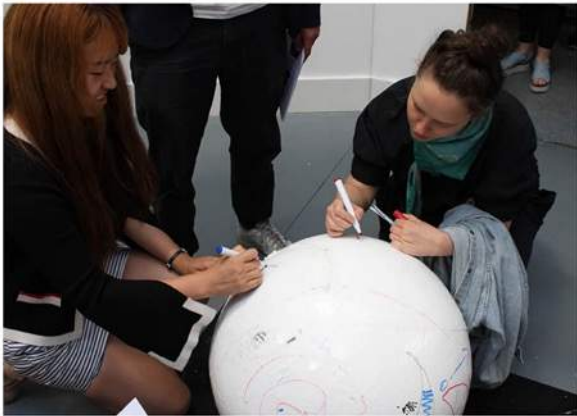
Air Gallery, Open Exhibition

- Participants: 10 (invited) Visitor footfall was over 50.
- Location: Altrincham, Manchester
- Date: 29 July – 10 September (5 weeks)
- Objects used: Chalkboard and whiteboard yoga ball, whiteboard and chalkboard jackets, chalkboard floor.
- I was active in the space once a week.

Following on from the Pop-up shop, I exhibited several objects at Air Gallery, providing pen and chalk for the audience to draw and write. At the end of every week, mark-making was removed to ensure a blank space was available for the following week. Participants were invited to engage with the reusable mark-making surfaces for the open evening to discuss their day. This was a start to ignite conversation and drawing, resulting in open-ended engagement, including visitors. The remaining days allowed visitors to draw and engage with the reusable mark-making surfaces. Information was displayed next to the art to provide an overview for visitors.

Key Findings

- Mind-mapping used by audience to communicate thoughts and their previous experiences such as a map of a bus journey.
- Participants frequently exchanged objects with each other for idea generation and communication.
- Playful acts and alternative interventions emerged such as using jacket as a dart board, with the pens acting as the darts.
- Feedback from gallery suggested visitors responded and influenced by previous visitors' markings when adding new content.



PhD Workshop - Reflecting on research journey

- Participants: 12
- Location: Manchester Metropolitan University
- Date: 17 November 2022
- Length of workshop: 2 hours
- Objects used: Chalkboard yoga ball, Whiteboard semi sphere, Frying Pan, Apron, football, chalkboard tubes.
- I was active in the space and led the session.

Summary

I led a seminar at Manchester Metropolitan University with a brief introduction to the practice, followed by a workshop that uses these reusable mark-making objects as tools for participants to work collaboratively (and playfully) to reflect on their own PhD journey.

Workshop Structure

- Brief introduction to project, show objects and state the objective of the workshop.
- Split groups into 4, each group having a different topic to respond to. Objects will also split in these 4 groups.
- Once comfortable, participants and objects can move freely in different groups to cross pollinate thoughts, ideas, and actions.

Key Findings

- Drawing led to a calming atmosphere, participants became comfortable to discuss and share.
- Several objects were more appropriate for individual thinking (smaller objects) whilst others naturally led to collaborative making (sphere and clothing).
- One participant requested to take the chalkboard sphere away for personal thinking. Participant informed me this object encouraged lateral thinking.
- The whiteboard clothing led to each participant to be active during the creative process, either drawing, wearing or vocally engaging.
- The role of speculation and improvisation was evident. Participants could imagine new functions, identities, and narratives of the reusable mark-making objects by drawing and handling the objects.

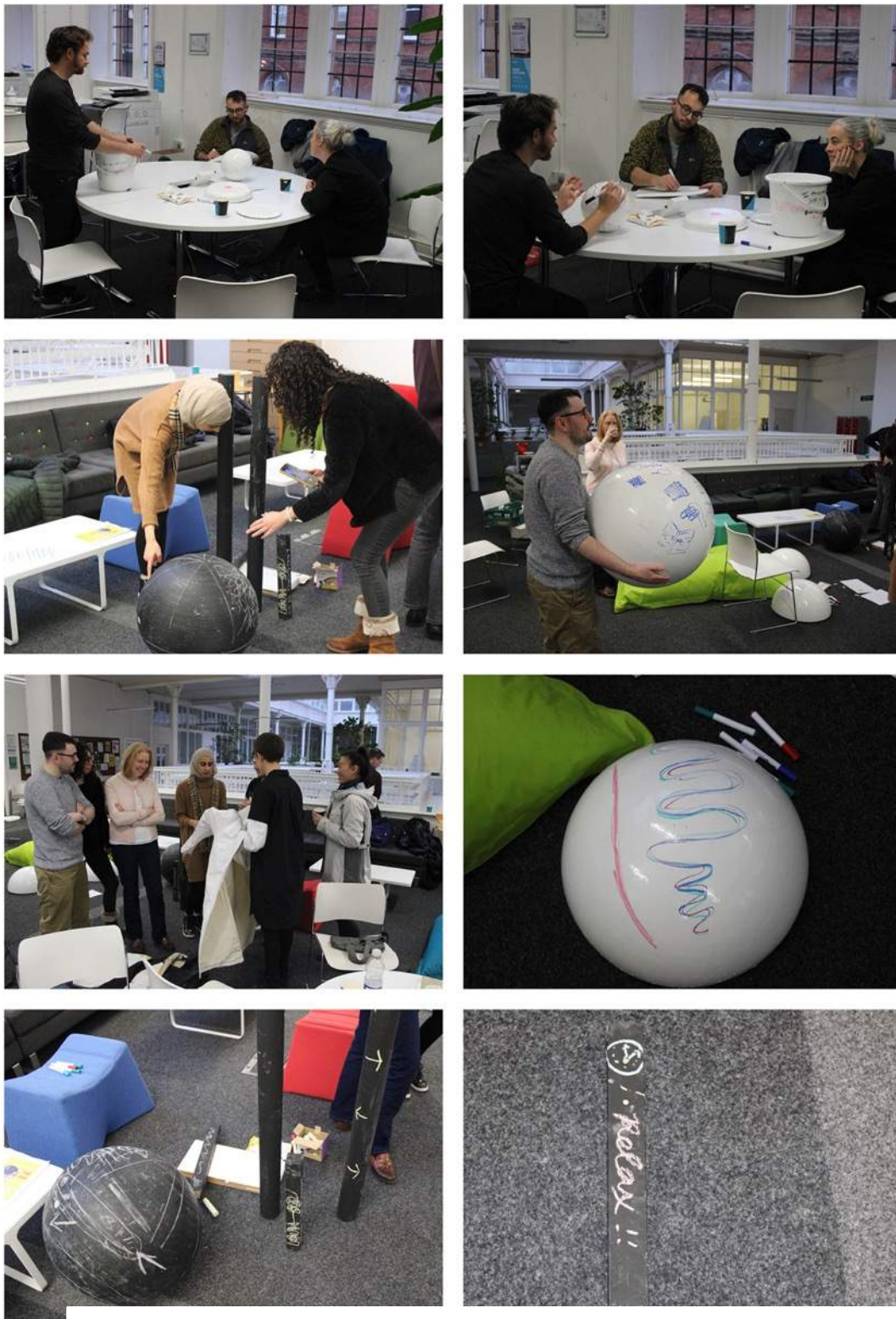


Fig.41 Outcomes and interactions from PhD participations in a workshop.

(Boardman, 2022)



Figure 12: Experiences and interactions from the participants in a netshop.

(Boardman, 2022)

Workshop – Art Foundation, How do we live on Mars

- Participants – 3 groups of 6
- Location – Priestley College (Warrington)
- Date – 8 February 2023
- Workshop Length – 1 hour
- Objects used - Chalkboard yoga ball, Whiteboard semi sphere, Frying Pan, Apron, floor, football.

Aim

I led and facilitated a workshop to 3 groups of 6, to discuss how can we live on Mars. Operating in a more structured and topic-based workshop, participants were able to use these reusable mark-making objects to create outcomes including drawing, ideas and performative responses. Each group did not mention the workshop activity to other groups until the next day.

Workshop structure

- Ice breaker: Simple drawing exercise using apron. Participants to try on aprons and draw on each other.
- Introduction to workshop: Introduce the topic, then inform through a series of activities using these surfaces participants will create a collective artistic outcome.
- Discussion/mind mapping: As a group, begin discussing the topic. Introduce questions related to the topic to broaden the enquiry. Encouraging participants to use the surface to write/draw thoughts down.

- Facilitated drawing: After discussion period use the notes to begin drawing. If participants are stuck at this moment, introduce some cues and instructions to get things moving along.
- Independent making and thinking: Participants will use the objects and the space to develop responses to topic.
- Refer to beginning: Use aprons again, this time related to the topic.

Summary of each group

Group 1

Mostly Fine art students, on arrival, looked nervous. The icebreaker session was introduced as a playful starter to ease participants' nerves. Participants became relaxed during this activity; then, the topic was introduced. Conversation between the group quickly emerged, with each participant sharing thoughts and writing/drawing on the reusable surfaces. Participants were open to removing the obvious constraints of living on Mars. The conversation was in-depth, and participants shared speculative thoughts, problems, and solutions. My role was to be active in the group; each participant had a pen/chalk leading to initial ideas. These ideas were formed into categories and were written on the floor as prompts for further discussion and development into drawing, they included Governance, Prison, Guinness Mars Records, Education, Growing plants and crops, Cats, Houses, currency, and Communism.

Some people were more vocal than others. However, the quieter participants were still active by sharing ideas in other ways, such as drawing/writing on surfaces for others to view throughout this exercise. This allowed me, as a facilitator, to keep on track for participation. The conversation developed into drawing, using reusable mark-making objects as surfaces to illustrate ideas. Participants moved about the space to add to others' ideas. The space now had documentation of thoughts and ideas to use as a springboard for the Apron. This time the task was more defined compared to the icebreaker. The task was to draw on the Apron to imagine the clothing on Mars. All participants were active during this activity through drawing, conversation and referring to thoughts from existing exercises in the workshop.

One participant used a whiteboard sphere to doodle rather than implement concrete ideas; others used these doodles to act as transport links and 'stations'. The three-dimensional quality of the reusable mark-making surface inspired others because the participant was rotating the sphere, revealing new ideas to others without intending to. This group was the most open with various creative outcomes, including mind mapping, concept visualisation, conversation, diversity of societal issues, and drawing.

Group 2

Similar start, but what seemed to be immediately clear was that conversation was far more energetic than the previous group. Therefore, most of the ideas from the initial stage were through conversation. The icebreaker led to drawings on the apron which were trivial; however, this was important for participants to get used to the reusable mark-making objects.

Several members were more active than others which paved the way for the reusable surfaces to integrate collective thinking and ideation. The conversation led to note-making by everyone. Several participants were highly vocal, and others were not as vocal; this was useful to observe. The smaller reusable mark-making objects helped less-vocal participants to engage.

Following on, ideas and questions started to develop, and these included – who should go? Name five people you want to take? Fertility, Education, Growing plants and crops, Cats, Houses, currency, Communism, labour, eyeliner (should eyeliner be the currency), Research centres and a supermarket.

Developments of the reusable mark-making surface emerged, such as participants passing objects to generate thoughts and establish reference points. A key moment was a participant using the sphere to map and sketch out planning; this led to further refinement of the ideas. Participants began to become more physical by walking in the space and throwing and passing the ball to each other to contribute to the mark-making. During the final stage, the group was confident working with the reusable mark-making surfaces, so I asked for two people to wear aprons, and the task was to design clothing for Mars. Here participants developed the scenario

by having an everyday outfit and an outfit suitable for the underground (this idea stemmed from the sphere). Participants drew on both and referred to their existing ideas from the workshop.

Group 3

4 participants in this group. On arrival, some participants did not arrive on time and seemed disinterested. The icebreaker exercise was an invaluable way to build trust with participants and for them to consider creative possibilities. The outcome in the icebreaker was predictable but playful. Once I mentioned the topic and objectives, I received a degree of pushback. Participants (significantly the vocal ones) thought literally about the topic, eg. 'it is impossible to live on mars', unlike the previous two groups who embraced speculative possibility even at the beginning of the workshop.

I could have explained this topic or highlighted potential examples through conversation, but I used the reusable surfaces to encourage idea generation. Writing and drawing on a few objects, such as How do we live? And what can we bring from Earth? My role working with this group was more active as facilitator. At times, participants started to react by drawing and then forming an in-depth conversation.

Another difference with this group was that the conversation was more of a battleground of opinions and viewpoints, such as the discussion of prison, punishment, and money on Mars; Therefore, the space and objects contained ideas that had a diverse and conflicting set of opinions. Despite the conflicting opinions, this stimulated further conversation, drawing and physical interactions and led to collaborative making.

Introducing the apron back was a helpful transition to maintain active participation. Participants used ideas from the workshop and their own interests to draw on the apron, leading to a more sophisticated outcome than the previous one.

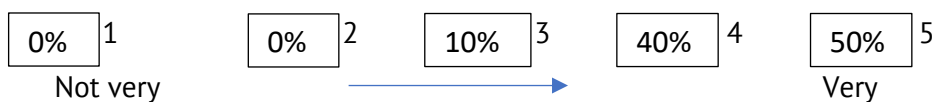
This group was the most difficult to deliver the workshop. The group thought too literally when briefed on the task, and it was through improvisation with the reusable mark-making surfaces and facilitation skills that helped the group collaborate.

Key Findings

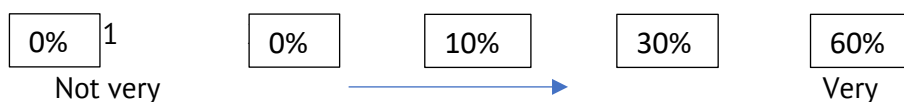
- From questionnaire all participations felt more comfortable or same to participation after engaging in workshop
- Ranging from 1-5 (1 being not very and 5 being very) 40% chose 4 and 50% chose 5 to the question 'Did this workshop encourage you to generate ideas compared to working alone?' This suggests the reusable mark-making surfaces aids collaboration.
- Feedback from participants shown the objects helped display thought process.
- Outcomes were varied and different in each group despite same topic.
- Mind mapping was a creative a physical approach to ideation and bringing participants together.

Reusable Surface Questionnaire

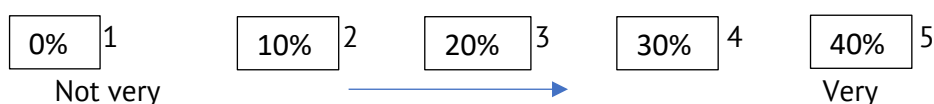
1. Did this workshop encourage you to generate ideas compared to working alone?



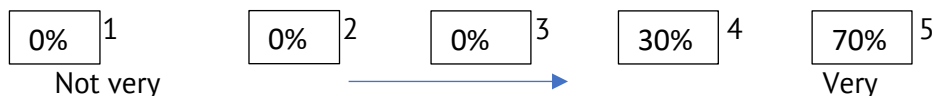
2. How comfortable did you feel sharing ideas to the rest of the group?



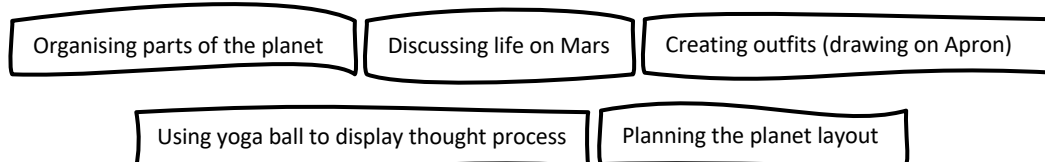
3. Before the session, how comfortable did you feel participating in group work?



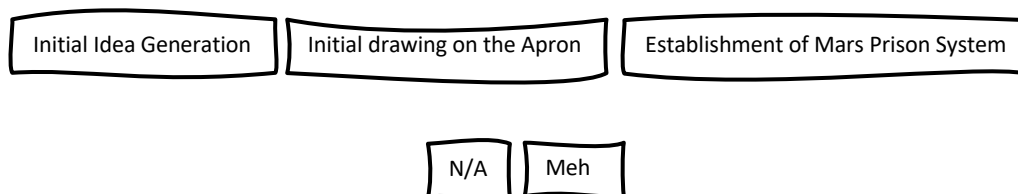
4. After session, how comfortable did you feel participating in group work?



5. Which part of the session was your favourite?



6. Which part of the session was your least favourite?



Course leader feedback from the *art foundation workshop*:

"The project was incredibly well organised and the resources and space within which the workshop took place what exciting and created a level of curiosity for the 3 participating groups. The 3 groups felt fully engaged by the artist prompts and at the same time felt at ease in order to carry out the creative tasks.

Each group felt they gained valuable experience from the process that they felt could be embedded into their own creative thinking and any potential situation that may arise during their interviews for HE. 2 students in particular said it had prepared them well for the upcoming face to face interviews at Goldsmiths for BA(hons) Fine Art.

This group of students have had limited opportunities during their formative years (due to covid) to engage in face to face creative environments and the project created a real Buzz across the art foundation Course in general.

The 3 participating groups varied in their skill and ability to operate in terms of conceptual and Critical thinking.

The notion of running the same workshop with 3 different sets of art foundation pathway students was really appealing to the course tutors.

The timing of the project being just before the start of their Final major was also extremely valuable in term of curriculum and impact. The process and activities where spoken about

highly by all students and in particular Group 1 found the process extremely refreshing and of significant value to their studio practice and possibilities in conversation collaborative thinking and creative mapping.

The way in which students were able to express themselves through both discussions, drawing and writing with the installation space was highly appropriate for this level of art and design course.

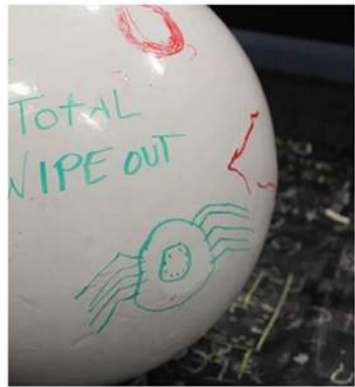
The workshop x 3 and the day was a huge success and a lot of theoretical and practical planning had been invested in the day and an extremely valuable experience was provided for all who were engaged.

The impact is evident in student work operating at a higher level of conceptual thinking and within the flow of their notebooks and creative diagrams for Final Major Project.

An extremely successful event that had a great deal of educational impact on creative thinking and collaborative processes.” (Course Leader, 2023)

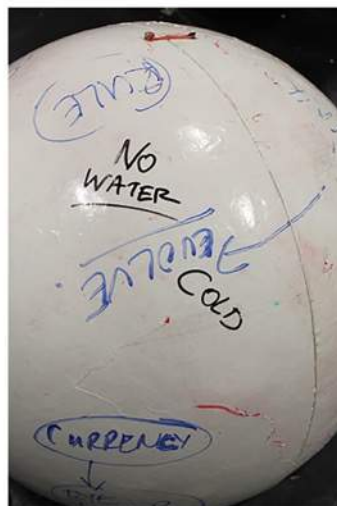
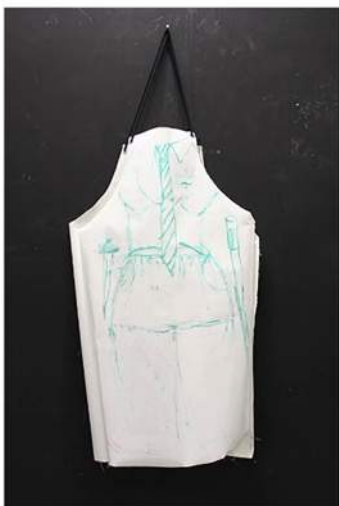
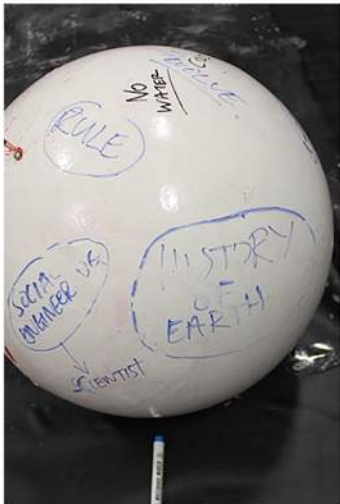


FIGURE 1. Group 1 using the reusable mark making surfaces (Fitzsney All 10th Grade Students & Boardman, 2023)





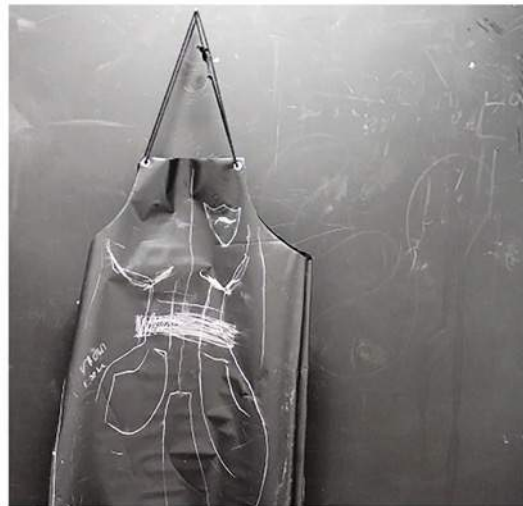
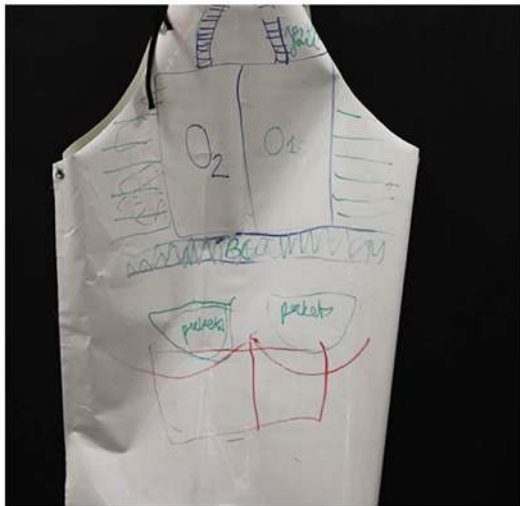
(Priestley Art Foundation Students & Boardman, 2023)



(Priestley Art Foundation Students & Boardman, 2023)



Fig.47 Group 3 using the reusable mark making surfaces
(Priestley Art Foundation Students & Boardman, 2023)



Students & Boardman, 2023)

Chapter 5: Conclusion

This practice-as-research focuses on the flow of idea exploration and active participation on chalkboards and whiteboards. It aimed to explore if transforming the flat two-dimensional surface into new three-dimensional mark-making surfaces can encourage ideation and active participation and to see if this allows an alternative pathway to produce ideas to emerge. A secondary aim was the creative process that supported the development of this practice, as an artist to focus on intuitive actions and practical knowledge, leading to a continuously evolving set of methods and rejecting a conventional design-thinking process. The key objectives were to create new versions of the reusable mark-making surfaces in the form of spaces and objects to use in creative and participatory situations including workshops, studio practice and exhibitions.

This research has established that the 3D reusable mark-making surface can stimulate alternative ideation and active participation. Unintended, an art kit has been established to combine or use as separate sculptures for ideation and other creative activities. This art kit is not exclusive to a facilitator but can be accommodating; instead, it is aimed towards the whole group where it can be used in collective and individual purposes focusing on expansive modes to ideate, problem-solve and reflect.

Other findings suggested that the engagements to the three-dimensional marking surface led to alternatives compared to the flat surface. 3D mind mapping encouraged lateral thinking, and specific objects used their aesthetic characteristics to aid and enhance visual thinking. In addition, active participation was made clear through studio practice and workshops. The break away into 3D surfaces also broke away from the conventional office and school setting, with activities and interactions associated with physical engagements and playful interventions. This suggests that ideation and imagination is enhanced through physical interactions and may influence group work to become more cooperative and show less signs of rigid hierarchal structures and didactic behaviour. In addition, the outcomes within the workshop and other participatory sessions showed strong signs of exploratory communication, including the varied

drawing methods, e.g. mind-mapping, cartoon drawing, games and writing. The variety of input from participants suggests that participants could share ideas and thoughts and develop healthy discussions and artistic outcomes. Drawing became a method to enhance an explorative approach and form an open and positive discourse.

This project aimed to understand the reusable surface from a participatory perspective, however, I used reusable mark-making surfaces to generate my outcomes through reflection and intuitive drawing. Working in the studio, the 3D surfaces provided an opportunity to map three-dimensional thinking, imagine and continue to consider new three-dimensional sculptures.

Placing the reusable mark-making surface in educational and art environments brought limitations. Most of the time, I was active in some way, including as a facilitator and participant. This research did not unpack how the three-dimensional mark-making surfaces would act in environments where I am absent. Providing the art kit to an office, for example, would be able to test active participation and alternative pathways to ideate further. Additional thoughts would be to provide multiple 'Art Kits' to idea based and educational environments or investigate other 3D forms and create larger forms and spaces. A huge Whiteboard ball is my initial thought.

In conclusion, this study has shed light on how a 3D reusable mark-making surface instead of the conventional flat screen surface can contribute to active participation and encourage various routes for ideation. It is important to acknowledge the limitations of this research and the avenues it opens for further exploration. Future studies could delve deeper into the intricacies of form and space of the reusable mark-making surface, spatial context, and drawing methods.

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Appendix 1

Participant Information Sheet

Expanding artistic-pedagogic mark-making: thinking creatively with reusable 3D surfaces

1. Invitation to research

I would like to invite you to take part in a drawing workshop to test out alternative whiteboards and chalkboards. My name is Kevin Boardman and I am Masters student at Manchester Metropolitan University and principal investigator of this research. This is a self-funded research within the department of art & performances at the Manchester school of art. The research project is investigating how ideas are explored and generated using whiteboards and Chalkboards, how collaboration is formed and how these new objects are used and interpreted. The project will use these newly made objects and spaces made from whiteboards and chalkboards to form as an encounter, a method of artistic thinking and action.

2. Why have I been invited?

The total number of participants that this research is targeting will be around? persons. For the Art workshops and questionnaire the research will target around? participants, spread out over a series of workshops.

- The participants in this research will be between 18-30 years old.
- There will be a mix of man and woman
- There is a preference for participants who work/study in creative sectors e.g. art design

Research shows that whiteboards and chalkboards have often stayed the same in regards the shape and placement such as its rectangular frame and its fixing to a wall or attached to a mobile frame located in a school or office. Because of this continued design, the collaborations and activities has remained similar and often leads towards a hierarchal slant. It is for this reason why I have decided to select educational settings.

3. Do I have to take part?

It is up to you to decide. We will describe the study and go through the information sheet, which we will give to you. We will then ask you to sign a consent form to show you agreed to take part. You are free to withdraw at any time, without giving a reason.

4. What will I be asked to do?

If you choose to take part in this research, you will be asked to take part in a workshop. After this workshop you will be asked to fill in a questionnaire to answers some questions and reflect on the workshop. In the workshop you will be involved in a range of drawing activities and idea generation activities, this can include different aspects, from discussing design ideas to creating a product yourself with parts given from the principal investigator. The workshop will last 1 to

1,5 hours plus 10/15 minutes to fill in the survey. The workshops outcomes will be photographed. You will be asked to take part in one of the workshops so if you want to participate it will take up a maximum of 1 hour and 45 minutes.

5. Are there any risks if I participate?

There are no risks anticipated in the workshops.

6. Are there any advantages if I participate?

There isn't a reward available for these workshops, taking part in the workshops will be fully voluntarily. You will hopefully be learning new methods related to drawing, idea generation and repurposing through various collaborative ways.

7. What will happen with the data I provide?

When you agree to participate in this research, we will collect from you personally-identifiable information.

The Manchester Metropolitan University ('the University') is the Data Controller in respect of this research and any personal data that you provide as a research participant.

The University is registered with the Information Commissioner's Office (ICO), and manages personal data in accordance with the General Data Protection Regulation (GDPR) and the University's Data Protection Policy.

We collect personal data as part of this research (such as name, telephone numbers or age). As a public authority acting in the public interest we rely upon the 'public task' lawful basis. When we collect special category data (such as medical information or ethnicity) we rely upon the research and archiving purposes in the public interest lawful basis.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained.

We will not share your personal data collected in this form with any third parties.

If your data is shared this will be under the terms of a Research Collaboration Agreement which defines use, and agrees confidentiality and information security provisions. It is the University's policy to only publish anonymised data unless you have given your explicit written consent to be identified in the research. The University never sells personal data to third parties.

We will only retain your personal data for as long as is necessary to achieve the research purpose. All data will be safe stored on an external hard drive, every folder and document will be password protected and 3 months after the research finishes all the personal data will be deleted. If you want to know more about this please get in contact with the principal investigator.

For further information about use of your personal data and your data protection rights please see the University's Data Protection Pages (<https://www2.mmu.ac.uk/data-protection/>).

What will happen to the results of the research study?

At the end of the study a report and a portfolio will be created to show all the findings and outcomes.

Who has reviewed this research project?

This research has been reviewed by my supervision team, Dave Griffiths and Brigitte Jurack.

Who do I contact if I have concerns about this study or I wish to complain?

If you have any general questions about the project, please contact the principal investigator:

- Kevin Boardman
kevin.boardman2@stu.mmu.ac.uk
07934023565

If you have any questions or concerns about the project, you can also contact the principal supervisor:

- Dave Griffiths
dave.griffiths@mmu.ac.uk
Coordinator, MA by Research in Art
Department of Art & Performance, Manchester School of Art, UK
+44 (0)7731831233

Or you can contact the Faculty ethics for any other complains or concerns emailing to:

- Email contact: artsandhumanitiesethics@mmu.ac.uk

If you have any concerns regarding the personal data collected from you, our Data Protection Officer can be contacted using the legal@mmu.ac.uk e-mail address, by calling 0161 247 3331 or in writing to: Data Protection Officer, Legal Services, All Saints Building, Manchester Metropolitan University, Manchester, M15 6BH. You also have a right to lodge a complaint in respect of the processing of your personal data with the Information Commissioner's Office as the supervisory authority. Please see: <https://ico.org.uk/global/contact-us/>

THANK YOU FOR CONSIDERING PARTICIPATING IN THIS PROJECT



Manchester Metropolitan University

Consent Form

Date
Name
Course
Department
Building
Manchester Metropolitan University
Tel:

Name of Researcher:

Participant Identification Code for this project:

Please tick the box

I confirm that I have read and understood the information sheet dated ... for the above project and have had the opportunity to ask questions about the interview procedure.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason to the named researcher.

I understand that my responses will be sound recorded and used for analysis for this research project.

I give/do not give permission for my interview recording to be archived as part research project, making it available to future researchers.

I understand that my responses will remain anonymous.

I agree to take part in the above research project.

I understand that at my request a transcript of my interview can be made available to me.

Name of Participant Date Signature

Researcher Date Signature

To be signed and dated in presence of the participant

Once this has been signed, you will receive a copy of your signed and dated consent form and information sheet by post.

Reusable Surface Questionnaire

1. Did this workshop encourage you to generate ideas compared to working alone?

1 2 3 4 5

Not very



Very

2. How comfortable did you feel sharing ideas to the rest of the group?

1 2 3 4 5

Not very



Very

3. Before the session, how comfortable did you feel participating in group work?

1 2 3 4 5

Not very



Very

4. After session, how comfortable did you feel participating in group work?

1 2 3 4 5

Not very



Very

5. Which part of the session was your favourite?

6. Which part of the session was your least favourite?

Additional comments and Feedback Below and Next Page

If you have any general questions about the project, please contact the principal investigator:

- Kevin Boardman
kevin.boardman2@stu.mmu.ac.uk
07934023565

If you have any concerns regarding the personal data collected from you, our Data Protection Officer can be contacted using the legal@mmu.ac.uk e-mail address, by calling 0161 247 3331 or in writing to: Data Protection Officer, Legal Services, All Saints Building, Manchester Metropolitan University, Manchester, M15 6BH. You also have a right to lodge a complaint in respect of the processing of your personal data with the Information Commissioner's Office as the supervisory authority. Please see: <https://ico.org.uk/global/contact-us/>

THANK YOU FOR CONSIDERING PARTICIPATING IN THIS PROJECT

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