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# A BRIEF GUIDE FOR QUALITATIVE DATA ANALYSIS ON LARGE DATA FILES

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## Abstract

At the start of my PhD research, I found myself at an ambiguous position in which I had the possibility to easily attain hundreds of interviews from my study population. This posed challenges regarding the ways in which a qualitative data analysis on this magnitude of data can be performed. To make this feasible, I had to develop an approach that questions traditional notions of qualitative analysis such as theoretical saturation, coding rigor and theoretical emergence. Hence, I went against the grain of what many qualitative scholars do and developed a social scientific approach of qualitative data files that I deem feasible, manageable and end up in publications with a reasonable quality. This contribution intends to help scholars that find themselves in a similar situation at the start of their research careers.

Keywords: Qualitative research, Grounded theory, large data files, Focused comparisons

There is a limitation of 4000 words.

## 1 INTRODUCTION

During my PhD, I had the opportunity to work with a rather large dataset of hundreds in-depth interviews with single parents by virtue of a collaboration with bachelor students at our University who were learning qualitative research methods. This opportunity was challenging and educational in many ways. It was challenging since the magnitude the research project caused several challenges but also challenging since working with those large datasets contrasts highly with the more prevalent small qualitative research samples that are more often seen in the realm of grounded theory (1). It was also an educational experience as well for students, because they were actively involved in scientific research but also for me as a social scientist for finding solutions for many challenges that came up during the process (2).

The situation in which I found myself, was rather rare. The small sample size of qualitative studies usually serves to allow a very rigorous and deep analysis to develop a theoretical understanding of social phenomena after reaching theoretical saturation (3,4). In contrast, I was able to prepare a very large set of narratives and stories with the same aim: develop a deep understanding about the phenomenon of single parenthood in Flanders, which was the topic of my PhD (3). Having this many interviews proved to be a burden as well as a treasure. Whereas it seemingly proved infeasible to handle all the data with the same rigor and depth as a researcher can do with smaller datasets, it also opened up many narratives that would have not find its way to our analysis when we worked with a more classic, small dataset. Behind the practice, there lies a question about theoretical capitalism as well (4). Within this contribution, I will describe how we prepared the data collection and conducted our analysis. This may help future researchers in a similar situation as I found myself in to conduct tackle the challenges that come up along the way. To conclude, I will discuss theoretical capitalism in this approach and raise some ideas how to credit students for their involvement more in future.

## 2 DATA COLLECTION AND DATA PREPARATION

It is important to stress that we did collect the data in two waves and hence, we ended up with two research samples. A first sample, which we name the primary data collection, resembles traditional grounded theory data collections in which a researcher takes full ownership of data collection, analysis and theory construction. This implies that I, as a first author, was responsible for creating an interview lead, enhancing it throughout the process and assess how the interviews and narratives of interviewees worked. Thereafter, we prepared what we called, the elaborative research population with student interviewers. This study population was reached in a close collaboration with the educational team of the qualitative research course at the university of Antwerp.

First, the collection of interviews for the primary data collection implied a deep plunge in the research field, as Charmaz (2) names it. Collecting interviews and entering the social worlds of the study population by yourself as a researcher is quintessential to grow an understanding of the topic at hand. This idea refers to Goffman's notion of "going native" as well (5, 6). This *deep plunge* allowed me to figure out narrative pathways allowing me to construct a semi-structured interview lead in which these precontemplated possible side narratives held a place on their own. Hence, the formatted interview lead for students was a tested questionnaire based on different possible interpretations of several questions to make it accessible for most students respondents.

Second, the semi-structured interview lead contained grouped questions per theme. This allowed us to instruct the students to pre-code the data on a themed basis and later merge all interviews in a large data file. Since all students used the same labels for the open coding procedure, the merging process in our CAQDAS software packet <sup>1</sup>. Hence, interviews were thematically coded using a pre-formed coding structure (this is what Saldaña would call structural coding (8)).

Third we collected background characteristics of each respondent (allowing focused comparisons at a later point in the analysis). There are various methods to collect these characteristics but in our case, we used a two-page drop-off questionnaire with mainly closed questions. To integrate these in CAQDAS, we used a data classification. Here, one can choose either to create a new data classification and add data within the program or to import an external data classification (e.g., via a spreadsheet). Additionally, interviews need to be coded with data to which the data of the data classification is attached. This way, the data from the interviews and the data from the drop off (with the background characteristics) can be used at a later point to make comparisons. Data can be created while importing the interview data but can also be created by converting interview files to data (immediately coding the latter with these data).

## 3 DATA ANALYSIS

After the collection of data in a structured manner, we had to find way to analyze the dataset. Very few literature discusses the ways how we should deal with large sets of secondary data and most research, and the literature that exist usually concludes a full-stretched data analysis is unfeasible or a technique of subsampling should be used (9). In contrast, we aimed to find a midway between coding all interviews in its entirety and dividing the large sample in meaningless subsamples on an ambiguous basis. Here the case classification using background characteristics came into play.

Theory building based on the coding principles of Grounded Theory took place in the primary research sample (10). Because of the scope of this article, we will not delve deeper into the traditional practice of Grounded Theory building. We did, however, start by using inductive coding practices that fit with what Saldaña (8) calls first cycle coding. This is important to stress since we also used this coding process to tweak the questionnaires to the colloquial meaning of complex

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<sup>1</sup> We used NVIVO for this research

concepts. This was also part of the earlier mentioned deep plunge in the data. After deriving a primary empirical theory, the secondary sample was used to elaborate and refine this theory.

Based on Charmaz (11) notion of theoretical sampling and the basic notion of constant comparison, we name this process of refining and elaborating theory “Focused comparison”. Due to the availability of an elaborative sample, extra sampling is unnecessary given that the interesting data on theoretical assumptions can be selected through coding queries. To do so, the classification sheets and the structural coding are combined. Coding queries are requests of coded data to the CAQDAS that are integrated in some of the available CAQDAS features. In our data, we used the background characteristics to focus on particular theoretically interesting data that would in other data be collected through theoretical coding. Hence, coding queries are to be used in two ways: (a) the deepening of the understanding in specific groups in the population and (b) the deepening of the understanding of certain topics. By using the formerly developed classification sheets, specific subgroups in the sample can be addressed for theoretical and/or analytical reasons.

Therefore, we used the secondary data set as a means to retrieve interesting narratives that we did not find in our initial dataset. These narratives questioned our theoretical model and allowed us to improve our Grounded Theory. Doing so, we iterated the query until we did not find any new modifications of our theory and did not find any theoretical motivations to install a new query on a specific subgroup that could challenge our developed theoretical understanding.

#### **4 QUALITY CONTROL**

Working with large qualitative datasets raises two important concerns regarding research quality: (i) theoretical saturation becomes difficult to define given the preset large scale data collection and (ii) when secondary interviewers (in this case students) are used, some sorts of quality control should be undertaken. In our studies, we came up with several solutions.

First, it has to be stressed that a large number of interviews does not automatically imply theoretical saturation. Therefore, we used a respondent debriefing as a final touchstone for theory validation. Whereas constant comparison entails reaching theoretical saturation when no new data challenges the constructed theory, focused comparison aims at a point in which no new triangulations can be performed via queries based on theoretical considerations. Hence, the emergent quality of the Grounded Theory can be put to question because researchers might be blinded to alterations of the Grounded Theory that are not theoretically induced. Data that challenge the constructed theory can be hidden in the larger population.

A respondent debriefing can be used as a solution for this problem (this can be referred to as member checking in the jargon of Charmaz (12)). An event in which respondents are gathered to present and discuss the findings can have two different outcomes. A first possible outcome entails an overall confirmation of the result with possibly a few suggestions to refine the results better to fit individual narratives that arise from the respondents. Hence, theoretical saturation can be reached because no crucial new information overthrowing the theory comes from the respondent debriefing. A second possible outcome, however, entails questions and criticisms that overthrow the constructed theory, which means that narratives have been overlooked and researchers should step back to the drawing board. In these data, the input from the respondent debriefings can be used to conduct new focused comparisons that are, in this data, not theoretically induced but induced by the respondent debriefings. Researchers should be weary, however that only a small proportion of interviewees might turn up to the event and hence, measures to increase participation might be needed up front.

Second, using secondary interviewers can provoke difficulties regarding quality since these interviewers might perform low quality interviews. Therefore, we chose to use a combination of ex ante and ex post quality measures. Prior to the data collection, students that participated in the

research project were trained to interview in a curricular course on qualitative research methods in which they were evaluated on the quality of their contribution. Furthermore an extracurricular workshop on interviewing was organized. As researchers, we also believe that being involved in research is also inspiring and motivating for students as such. After the data collection, some measures were undertaken to “clean” the dataset from false data (e.g. fake interviews). A sample of the student’s interviewees were called to confirm their interviews and identities. Students also had to capture their interview on video. Students who didn’t send in their video’s or who sent short video’s or video’s with a bad quality were controlled extra. Third, the closed coding of the students was compared and students whose interviews were inadequately coded were removed from the elaborative sample. Finally, all the respondents were invited to a respondent check to engage with the study’s result.

## 5 WRITING UP RESEARCH

Writing up research with this many interviews proved difficult as well. My experience showed that there are several things that have to be reported in a method section. With the help of many reviewer comments’ I came to a format that is comprehensible for readers. I address the structure I use with the intend to help researchers that find themselves in a similar situation. A fleshed out version of such a method section can be consulted in one of my PhD papers (13-15).

In early write ups of the study, I used to refer to the traditional Grounded Theory mechanisms in data analysis, but this was often criticized by reviewers since our approach deviates from the common ways of doing qualitative research. As one reviewer one time mentioned correctly: “the authors pose an invalid claim of doing Grounded Theory research, while they actually only use techniques of this methodological practice”. While we never wanted to claim to do something entirely different than Grounded Theory, it became clear that some aspects of our study should be described in a more transparent way.

To do so, we ensured to clarify multiple aspects of our methodology: sampling, profile of the respondents, recruitment, interview content, quality control, data preparation and analysis. To start, we described our sampling approach. Here we introduced our sampling approach as novel in qualitative research. Hence, we only described our sampling as innovative, while the rest of the methodology entailed ways to work with this data. In our case, we chose to describe these samples as two distinct (yet subsequent) data collections since they were also used as such. A second section, the profile of the respondents, is used to meet the expectations of multiple researchers to have a quantitative description of the dataset. Here we described the background characteristics of our two samples separately regarding theoretical relevant dimensions for the research question (e.g. gender, SES, age...). In some cases we added a table if deemed necessary by reviewers or the editor but this was highly journal-dependent. In a third section, we described the way we reached out to the respondents. Hence, this was the place where we could mention the requirements students had to deal with and the definition we gave to a single parent. We also situated the timing of our data collection since this can also have an impact on the content of the interviews (e.g. the impact of the current pandemic). Fifth, we situated the content of the interview by a description of the interview lead, the construction of the interview lead and the context in which the interviews took place. As an example, in my research project, all interviews were recorded and took place in a chosen location by the interviewee. How this takes place may, after all, also affect what is said in an interview. Fifth, we also addressed quality control (in essence what we describe in this paper as well). Some reviewers were suspicious about the quality of student interviews and therefore, a detailed description of the quality control was needed. A sixth aspect regards data preparation. It is not always clear for reviewers how hundreds of student interviews eventually become a manageable data file. To clarify this, this section was used to introduce the classification sheet with background characteristics and the use of structured coding. Finally, if this is all described clearly, a last section of the methodology



section can introduce our use of focused comparisons and the respondent debriefing in the analysis-section.

## **6 CONTEMPLATING THEORETICAL CAPITALISM**

Whereas the actions described in the current paper (structuring, analyzing and writing) made an analysis feasible and eventual research papers publishable in respectable journals, one major critique remained unaddressed. Our approach on qualitative analysis (and especially Grounded Theory research), went against the grain of what many readers of qualitative analysis expect. On one hand, this is unexpected since researchers need to find solutions to make an analysis feasible. This is described in this contribution to help out researchers in the future that might find themselves in similar situation. On the other hand, the use of student interviewers comes dangerously close to something the discoverers of Grounded Theory despised: Theoretical Capitalism (4).

In its origin, Glaser and Strauss eyed cynically to the realm of social scientific research. They described a world of theoretical capitalists who aimed to establish theories about this social realm while a mass proletariat of testers would flesh out the empirical basis to support these theories (16). Concurring with Merton's critique on these 'Grand Theories', Grounded Theory aimed to construct theories of the middle range and made it possible for any social scientist, renowned or in the beginning of their career to theorize about a social phenomenon (17, 18).

Whereas we did not use student interviews to develop grand theories, researchers need to be sensible about the role secondary interviewers play in theory building. During my PhD, I gained much value from a fruitful collaboration with student interviewers who were committed to collecting really good interviews and added much value because they altered my researcher's positionality by their different identities, relation to respondents and the variety of interviewees they had access to. Despite their input, it is impossible to add each student as a co-author but when we neglect their input it would come close to using a proletariat of observants.

Therefore, I believe it is important to be sensitive about the role secondary interviewers play in a qualitative research project on this scale. With small groups of secondary interviewers, co-authorship can be negotiable or even desirable (e.g. Ms thesis students, interviewers accessing high-risk or difficult reachable populations) while large groups of secondary interviewers can be approached differently. In my case, I aimed to educate student-interviewers to develop the competencies to be involved in own qualitative research, I gave them insight in my analysis process and I invited them to the respondent debriefing. Doing so, I hoped to develop some kind of reciprocity in the way we performed research and avoided the most harsh claims of theoretical capitalism.

## **7 CONCLUDING REMARKS**

In this short contribution I reflected on my academic journey in which I made use of student interviews and collected a larger than usual qualitative study sample of hundreds of interviews. I was challenged by the nature of qualitative research and had to address these challenges adequately to end up with empirical studies that were publishable. Doing so, we were aware that there is a risk of theoretical capitalism in this approach but we believe that this approach entails many gains for all parties. In times in which much qualitative data (e.g. bureaucratic reports, administrative data etc.) becomes more and more accessible, it can be one of the missions of qualitative research to analyze this kind of data in systematic way. Therefore, the lessons we learned during my PhD, can be helpful for anyone in a similar situation.

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## TREMBLING WITH LITERATURE, ART AND SCIENCE IN QUALITATIVE INQUIRY

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### Abstract

Using arts-based research methods in social inquiry can be a challenge for young researchers who have been trained to focus on conventional humanist paradigms. What if we want to stay with the trouble (1) instead of reducing complexity? How do we navigate unfamiliar and arts-based research where all kinds of outcomes are possible? The research project *gelbersessel* is the attempt to tremble with the world (2) by focusing on the entanglements of literature, art and science. New and unexpected fields of research appear when we don't aim to collect and analyze data but make art and communicate with the world first. In this paper we explore how creative work, friendship and trust shape the endeavors of doing arts-based research in a conventional humanist academic environment.

Keywords: arts-based research, literature, friendship.

*You know you got me in your pocket.*

*You and me always forever. (3)*

The research project *gelbersessel* didn't start like „let's do a research project about the entanglement of literature, art and science“. Also it's not just a research project but a podcast, an Instagram page, online exhibitions, poems, photographs, short stories, laughter, arguments, tears of joy and anger and most of all: friendship. The academic knowledge we produced as of February 2022 is just one aspect of a story about two girls, who met in class back in 2017. We feel like this is a good opportunity to map out and tell that story, as it is a significant part of the (research) assemblage of *gelbersessel* (4). With this paper we are inspired by narrative inquiry, fiction-based research, poetic inquiry (5) and autofiction (6) as well as our love for stories and each other. Along the way you will find accounts of our respective research findings about the entanglement of literature, art and science. But you will also find a brief story of everything that lead to the moment of you reading this.

Time. We all know about and create our life around it, but what does it actually mean? Sometimes it passes by so fast, that by the time you're able to comprehend its speed it's already back to its usual pace. Sometimes time feels like an eternity, increasing the desire to be the master of it. All in all, time feels like a mystery that we delude ourselves in believing that we are the ones controlling it. But there is more to it. If you're lucky enough once in a while time stops. These tiny little moments where everything fits together: a moment where you're at the exact place at the exact time you're supposed to be. One of these moments was when she looked over at me. Radiant and full of love, with her eyes full of honesty, wildness and dedication.

Whenever Taylor Swift is playing on Spotify I think of her. She sent me the Folklore album last summer and I hated it. She was shocked. But since then I kind of became friends with the sappy sounds of lovesick Taylor and to be honest – her songs remind me of her. And that's nice. I knew we were going

to be friends since the day I first saw her Doc Martens. She walked into class (we were in our final year of the Bachelor's program) and I immediately noticed that she didn't give a fuck. Not about our classmates, the topics of the class or being there in general. Later I realized that she is in fact a very passionate and interested person but to say that she is sassy and has a fierce resting bitch face would be an understatement. I *had* to become friends with her.

I could say that I was surprised to find out that this exact person is going to be one of my best friends along this way – but the truth is – I was not.

A few weeks later we had to divide up into groups and I pretended like I had a valid reason to be in her group – in truth I just wanted to get to know her. And god am I happy that I did. At the end of school, we sat in front of our university, smoking and talking about our futures. I didn't want to continue studying pedagogy and she didn't either. Fast forward three months and we're sitting in class together again. By then I had given her a pink bobble pen as a sign of my affection and she really loved it. We were becoming friends, like really good ones.

It's kind of funny how similar two people can be while also being completely different. It clicks on every level, but it's not a friendship that ever feels monotone. The spirit and energy of the other person becomes almost addictive, fuels parts of your soul you didn't even know existed.

Around Christmas I was thinking about cutting my hair really short. She loved that idea. At new year's I did it and I was so excited to see her again after winter break. So the day had come and I was walking into class, knowing that it would be the first time she sees me with my short hair. I was late, as usual, and class had already started. I opened the door and stood in front of thirty people staring at me. Me with my new hair. There were twenty-nine blank faces and then there was one that radiated pure warmth. Obviously, nobody else knew, that I had just cut my hair and frankly, I didn't care. Because she just looked at me like I was the most beautiful person on earth. And as I walked up to the seat next to her, I thought to myself "You really only need one person in a room to root for you and your whole heart fills with love and confidence immediately". I have so many memories, where she made me feel this way later but this is the first one that I can recall.

She told me right away that she loved reading and I never really saw her ride the train without a book in her hand. Except for that one time when we drank two bottles of wine at my house and went out to party and could barely sit up straight on the subway. That was also the night two young girls on the elevator told us that we looked cool and we took pictures of her on an outdoor jungle jim. Those pictures are pure chaos, but I love that memory. She would come to class with a book and the next week, it would already be different one. I honestly don't know of anyone else who can read that fast. After a while I asked her for a book recommendation for my dad. He's a book lover as well and since I knew, that she liked crime novels, I thought I could surprise my dad with a good book. The book that she recommended me became one of my favorite crime novels. So then she and I had a new topic to talk about, namely the Jenny Aaron book series. If I wanted to be cheesy I would say, that that's where our book journey started. And who am I kidding – I'm cheesy af. That's where it started. It was just before summer break 2020 when I suggested we read all of the books from the short list of the International Booker Prize. It would be a challenge because there were some not so interesting sounding books on that list (to be nice). Yes, *Tyll* by Daniel Kehlmann, I'm talking about you. She started reading *The Discomfort of Evening*, a book that could benefit from a content note, and I started reading *Memory Police*, which was ok but not great. Then we switched. We had so much fun talking about all the books that she joked that we should do a Podcast. Sure, yeah. I hate podcasts. I am not coming across great here hating Taylor Swift and podcasts... but we kept talking about it and I realized that it could actually be a cool thing. But what if we tried to make it into an internship and ask our favorite teacher to supervise it? Now she didn't take me seriously at first but when I wrote the proposal, sent it to Cornelia and received her answer (YES), we SCREAMED. Let's go. Wait, what exactly are we even doing? One thing we knew for sure: it was going to be amazing.

We gladly entered a completely new level of dedication and trust with each other. To artistically create means to put yourself out there and leave a piece of yourself behind and share it with the world. It can be a series of letters or combined strokes of paint, it always derives from the feelings, thoughts and expressions deep inside you. Nothing could ever be more personal, more fragile, more powerful. A hot summer day is what I see, we were sitting next to the water, her being utterly prepared as much as possible, wearing a pink jumpsuit while I was watching her, always in awe of her drive and thinking process. It was not much of a decision to say yes to all of this and I wouldn't want to miss any of the memories to come with the creation of *gelbersessel*.

Liesmi, meaning "read me" in German, was her suggestion for the name of our Podcast. Mine was "Ösi Leserats" meaning "Austrian Reading Rats". It makes more sense in German. Even though it was a great suggestion, she denied it right away and since Liesmi was already taken on Instagram, we went to her summerhouse to brainstorm about the name of our collective<sup>2</sup>. We couldn't think of anything so we just smoked two packs of ciggies and ate her self-made granola. Then all of a sudden she said: *gelber Sessel* ("yellow chair" in German). I was like: "What?" She pointed her finger in front of her and there it was – a yellow chair. I yelled "THIS IS AMAZING!" So without even truly understanding new materialism yet (haha like we understand it now?) we let ourselves be inspired by the material world and set the tone for our creative work. The excitement didn't last long because we still had to figure out, what exactly it was, that we wanted to do.

Entangled by the shared passion for literature, art and science, we decided to create a platform where all these things can co-exist and grow together. In theory this may sound like an overall harmonic concept, but let me tell you: It was not. It demanded more of the both of us than we could ever imagine. I still see us, debating about certain literary works and how they made us feel. What we learnt. What we hated. What we loved. I can remember all the things I felt along the way, the easy-going moments and the ones we really had to fight for. To be friends is one thing, but to work and create a scientific and creative project in the Online Realm was a whole other level. Prosecuted by miscommunication, frustration, stress and what felt like constant failures – these were not only challenges for our scientific interests, but also the friendship we built.

The first big fight happened a few days before launching our first podcast episode and Instagram post about *Memory Police* by Yoko Ogawa. We decided to center the conversation around (the loss of) memory. Her aesthetic is very clear and modern while I don't mind insane colors or blurred images. We agreed to share the content design and production for Instagram but in practice we were both unhappy with our inharmonic styles. It started with aggressive text messages. *Well I did a calligraphy course. Yeah? Well I study art.* Then yelling on the phone. *I'll talk to you when you've calmed down. I AM FUCKING CALM.* Eventually, tears and some distance. This was in November, just a few days after the terrorist attack in the Viennese city center. I was actually at the gym at the time of the shooting and had to run home. Everybody was so scared that night and the days after. It was also the beginning of the second nationwide lockdown. We were both on the edge but didn't realize it at the time and blamed each other for being stressed. We eventually apologized and the arguments dissolved because from that time on we actively decided to listen more and ego less. *Inspired by Memory Inspired by Discomfort Inspired by Magical Realism Inspired by Invisibility Inspired by Relationships Inspired by Happiness Inspired by Writing Inspired by Nature Inspired by Women Inspired by Books.*

It was my task to transcribe the episodes. During the transcription process I noticed that the written text didn't represent my memory of recording the episodes or listening to the final podcast. Reading our conversations opened up a completely new narrative of what had happened between us. Sweet moments came across bitchy and some questions seemed pushy which made me doubt my sense of self. Which version of me was the *correct* one? Reading Phillip Vannini's book *Non-Representational Methodologies Re-Envisioning Research* helped me to make sense of what I was experiencing. What felt like dissonance was actually non-representationalism (7). In conventional humanist qualitative

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<sup>2</sup> that's what we called ourselves at first, today we might say something like creative-friend-research-art-literature-assemblage.

research, transcripts were supposed to represent past events but mine didn't. Maybe that was because I was finally becoming a performer instead of always "writing *about* performance" (8). I ended up writing my master's thesis on transcripts in social inquiry from a new materialist, non-representational and arts-based research perspective. The idea of situations being rhizomic (9) resonated with me as it allowed our podcasting to continue affecting the research assemblage (4). What I loved about this new materialist and non-representationalist approach was that there was no point at which the transcripts or the podcasts had to be finished for a next stage of the research to start. They were complete and incomplete at the same time, just like her and me.

Her and me. With the intention to build up my master's thesis around this project I quickly had to accept that a distanced view as a researcher was not a realistic approach for me anymore. I was in it. In every single aspect. Embodying a superior perspective like a lighthouse keeper looking over the sea was not compatible with my desire to move towards the visual aspects of our project. How fascinating is it, that right there, the words written by somebody else, maybe also a long time ago, find their way into a creative outcome? I've learnt during my path at university that there are strict rules about what to do and who to be when it comes scientific research. Be distanced. Be neutral. Do this. Not that. But here I am, sharing my passion for literature and how it makes me feel with one of my best friends, creating a platform where the literary themes we talk about in our own podcast and Instagram transfer into these artworks with artists from all around the world. How do you scientifically explain that, my dear reader? As the both of us would easily identify as creative souls it was no doubt from the beginning on that we would also love to transform our thoughts on literature into artworks. I still remember how we were sitting in my garden house, freezing winter, with no heater, reading to each other the short stories we wrote around *Memory Police* by Yoko Ogawa. They were so different, yet so mesmerizing. I wanted more. This was probably one of the main reasons why I wanted to focus on the affective processes between literature and art, because I was experiencing it since we decided to create *gelbersessel*. It was less about what we created but rather the moments sharing with each other what we felt during the reading process in such a vulnerable way. *gelbersessel* gifted me the entanglement into a process that didn't stop at the last page of a book but much more started right there. It was the ongoing conversations until late night with my beloved colleague about post-structural theoretical frameworks, thoughts around the acknowledgment of non-human entities and the wish to not generate objective knowledge. All that taught me that science can be more than I've learnt before. It was her, with her knowledge, wise spirit and passion that brought me to the path to cross traditional boundaries and look for a new, differentiated research paradigm that acknowledges affective processes. I wanted to contribute to a discourse that appreciates the material in digital contexts, especially when it comes to show how diverse literary themes can be identified with in creative settings. I felt lost. I had no idea if my interest could ever manifest into a thesis. But yet again, after all the ups and downs of this project she was here. I was sitting at a café, waiting for her (as usual), feeling tingly at the top of my fingers to ask her for her opinion regarding my approach. As she arrived, a fresh breeze of warmth in my heart as always, I babbled her down with my thoughts. And she listened. She was the one encouraging me to stay on my path and follow my gut. She loved it and at this exact moment I loved her even more, because there was no single inch of doubt in her voice that I couldn't manage this rather unusual road. I kept going and submitted my exposé. As researchers we tend to interpret and regard objects like books, photographs or artworks from a superior and distanced perspective, which blocks the possibility to recognize the importance and the contribution these take in shaping the world we're living in (10). The analyzing principles of Gries (10) offered a new tool to work around visual components and their rhetoric within a new materialist paradigm. My focus on the visual components of *gelbersessel* focused on the importance of entities of all kind (whether human or non-human) and their ever changing relations to one another. This approach offers the chance to be open for perspectives that we may not primarily take into account when doing social inquiry.

Writing my thesis wasn't always easy because we fought again and since *gelbersessel* was the starting point of my thesis I thought about her a lot. The second big fight was more complicated. I think it was about trust and about figuring out how good friends we were. Were we all in? Could we talk honestly

and openly about our feelings and needs? Again a lot of yelling over the phone, tears and distance. But this time I was sure that this would be the end of our friendship. The pressure of creating content for *gelbersessel*, writing my thesis and maintaining a good friendship with her was too much. There were weeks where we talked every day but only about business related things. What book? What content? What design? What online exhibition? What theory? I didn't even know what she was binge watching anymore. That's how bad it got at times. She ended up doing an episode by herself because I needed a break. We cried on the phone *maybe we should quit gelbersessel*. Thankfully she is a fucking pushy person because she forced us to talk. *gelbersessel* had become part of us and we had to resolve our issues in order to stay friends and keep working on our research.

Things calmed down and we found joy in working together again. We did our last podcast episode and were instantly excited to develop new formats. Now I feel seen and heard while also getting to know myself in dimensions I haven't experienced before. And even though the work with transcripts within social inquiry is not a field of research that is related to art, podcasting, Instagram and friendship on the first glance, my work wouldn't exist without any of them.

After all this time, if you ask me how we made it work, I would only need one word: trust. From the moment I first saw her in this random class at university, when we were tipsy during those summer days dreaming about our future literary salon, when we fought harder than I could have ever imagined (like seriously, it was Hollywood-style), when we were both exhausted from this project and yet loved it at the same time – I always trusted her wholeheartedly. Tell me, would you have thought that the love for an object with a series of letters on several pages of paper can have the power to lead to all of that?

This is not your casual short paper, but guess what? We are also not your casual book club.

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## ROOMS OF POSSIBILITIES: MAKING SPACES FOR POSTHUMANIST (UN)DOINGS

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### Abstract

What does it mean and what does it do to be a community in the post-digital era? In a Dream Team session at the 2022 European Conference of Qualitative Inquiry we challenged digital capitalism, including digital labour and production, in academia by re-imagining and enacting a new approach to communing during a conference session that accounts for bio-digital becoming in/with/through rooms, both physical, virtual, and imaginative. As online, virtual ways of working are becoming normalized in academia, we argue that new meaningful and ethical ways of inquiring, living, writing, collaborating, and growing with/in/through bio-digital-material spaces must be developed to respond to the changing relationship between human and more-than-human others in the academia. Through a process of ‘quilting together’ with comments, images and connections in our online conference space, we paid attention to the role of bodies, objects, sounds and materials, the ways we encounter and entangle, across and between our physical and online ‘rooms’. By wandering and wondering between rooms, using all of our senses in physical movement, we diffracted, expanded, (re)experienced what is possible, what is valuable and what is often unseen or unheard in our bio-digital-material ways of working.

Keywords: post-digital, posthumanism, new materialism, academia, communing, quilting.

### Becoming with/in/through the digital in academia

The Dream Team session format at the 2022 European Conference of Qualitative Inquiry created an opportunity for us to think about what it means to be a community in the post-digital era (Jandrić et al, 2019). Thinking with/in the Miro board environment, helped us to trouble and re-imagine the possibilities of coming together in/around/with the digital and virtual, specifically in academia. In the session, we set out to account for the conditions of our bio-digital presence (Jandrić and McLaren, 2019), that is the coming together of the material and virtual worlds, its possibilities as well as limitations, in order to challenge digital capitalism and power-relations, and instead engage in processes of communing that are contextually meaningful, ethical, and affirmative. Braidotti (2019) writes “being worthy of the present is not intended in a passive and acquiescent manner, but rather in an active mode, as a way of coming to terms with the present, in order to intervene in it and transform it”. We therefore took up the challenge outlined by Jandrić and McLaren (2019) to respond to the continuous reinvention of the human and the digital and develop a new language of inquiry that accounts for this changing relationship.

Thinking with Massey’s (2006) conceptualization of place, the physical and virtual rooms in which we work and meet, ‘as events, as happenings, as moments that will be again dispersed’ (ibid.46) we



explore what it means and how it feels to cross the boundaries of our rooms, both physical and virtual . How do objects, languages, bodies, sounds and feeling come to matter in our physical and virtual places? How does the blurring of boundaries, the coming together of the virtual and the material, within our rooms co-produces new possibilities for working, inquiring, and living differently in academia? Massey's (2005) understanding of place therefore provides a helpful provocation and opening to new ways of attending to bio-digital spaces as she argues that space "is never finished; it is never closed" moreover it is "constituted through interactions, from the immensity of the global to the intimately tiny" (ibid.9). Through our session we explored how bio-digital-material spaces, that are situated and time dependent, are in a constant state of change and intra-action with us and our work. As such, they allow us to inquire about what we are not only ceasing to be but also what we are becoming in the post-digital, post-covid, post-truth, and post-humanist times. Together with the participants we wandered through, inhabited, became attuned to, re-imagined and re-constructed both existing and new rooms by engaging in a series of creative writing and making activities. In doing so we developed in-the-moment collaborative creative engagements of bio-digital-material inquiry as spaces for posthumanist (un)doings.

## Gathering together

*Our Open University Posthumanist Collective 'gathers together'<sup>3</sup> in our bio-digital-material rooms  
from across the UK.*

*We wait in the virtual space of a Miro board beaming with expectation and patience.*

*The start time passes.*

*But it is only us and one of the conference organisers. One other person leaves the room.*

*We feel alone, vulnerable, exposed, unsure and yet we start.*

*We take risk.*

*We open up to (im)possibilities to emerge.*

*We write ourselves into the quilt, we become with each other's contributions.*

*Slowly, more people join in, embellishing, layering, temporally marking our quilt with their presence.*

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<sup>3</sup> The Latin etymology of the word collective, Oxford Languages



Figure 1: 2022 ECQI Dream Team session n.8: Miro Board.

## Quilting as communing

The metaphor of quilting in qualitative research is not new (Clark, 2019; Koelsch, 2012; Denzin and Lincoln, 2011; Flannery, 2001; Deleuze and Guattari, 1987). Denzin and Lincoln (2011, p.6) compare qualitative research to bricolage, which similarly to quilting, is a performative sequence of connecting individual parts into a whole that speaks to the blurring or transgressing of boundaries as well as to particular relationality, the making, thinking and becoming together. Quilting is traditionally a collective activity where quiltmakers meet to quilt together, exchange stories, rework old quilts and weave shared threads (Flannery, 2001, p. 632). Quilting is a process of becoming with/through stories, text, images, histories, shapes, threads, quilters across space and time. It is therefore not only a powerful metaphor but also a practice entangled and entangling with past, present, and future in a non-linear dimension. We draw on Deleuze and Guattari's (1987) thinking with the history of quilting, and the 'crazy' patchwork specifically, which they conceptualize as a nomadic textile that does not follow a rigid design and instead it is heterogenous, unbounded, and additive space. Such a quilt is made from, often-found or left-over, pieces of fabric of different sizes, shapes and colours, from old clothes or old quilts, that are brought and stitched together to create something new.

In this sense, our quilting is an enactment of a collective gathering, in which gathering is a practice of connecting and creating relations of obligation and care with people, places, and objects (Clark 2019). Our quilting is an exploration of theories-place-quilting-writing-making through/in/with our bodies as a non-linear composition of stories, ideas, words and images acting together in unpredictable yet productive ways (Clark, 2019, p.121). Engaging and thinking with bell hooks (2009), the practice of bio-digital quilting developed here is more than an activity of craft and leisure, it is the making of communities of affective and caring relations defined by practice of care and of respect for others and indebted to the quilting artistry of poor and working-class women and mothers, such as those of black women from the American South (Toliver, 2021). Conceptualising bio-digital-material being and becoming in virtual spaces through quilting then not only offers relational, more-than-human, other ways of working that challenges normative practices, it also enlivens and engages the coming together of people, physical and digital rooms as a creative bio-digital-material inquiry.

## Paying attention to our bio-digital-material spaces

As a Collective, our experiences of working / writing / researching / collaborating have shifted dramatically over the last two years of the Covid-19 pandemic. Despite meeting regularly, we have never met in person. Yet we feel we know each other. We have been with each other, inquiring, supporting, listening, discussing, caring, solely through the medium of virtual meetings. We see each others' rooms (or sometimes cars, cafes, or offices) in the backgrounds of our meetings. We enter into each other's spaces. We often discuss our 'lived' experiences, our families, our communities, our feelings of achievements, loss, guilt, stress, creativity. And yet there are constant tensions between where we are as individuals and where 'we' are as a group when we are together; the strange feeling of looking away from the screen (Where are you looking? What are you seeing that we are not?), the interruptions of a house in full swing (the shadowy presence of children or dogs, the sudden disappearing to answer a door somewhere else), or the flatness of vocal sound as we use our headphone mics (where acoustic sounds are missing). Paying attention to our individual and collective space has become important allowing us to (re)connect *with* ourselves *with* our physical spaces *with* our working practices. We therefore created a similar space of attentionality (Springgay and Truman 2017) at the start of our session, to (re)connect *with* ourselves and the virtual space of the session, weaving the two with sounds, silences, words, hesitations, images, and absences on our Miro board quilt.

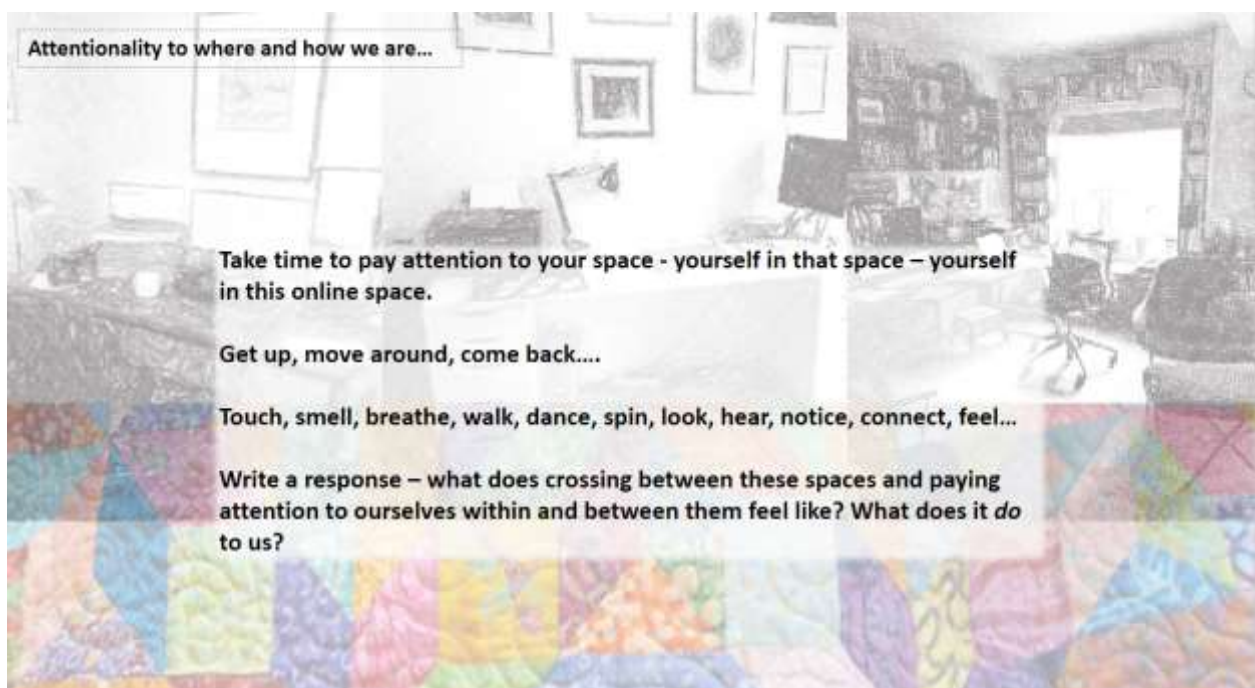


Figure 2: 2022 ECQI Dream Team session: Practising Attentionality.

## Touching, smelling, breathing at the ECQI Dream Team session

*It is difficult to look away from the laptop, to focus your eyes on something other than the bright screen That constantly demands your attention*

*I see nothing but the screen. I hear some cars in a distance.*

*It is even more difficult to stand. I am meant to be seated to work. Where would I go?*

*I roll my chair back and stretch. My room is so small. One step. Two steps. And back.*

*I touch my books. I love the way they smell. I breathe their scent in.*

*I feel my desk, my chair. It feels reassuring, it grounds me in the here and now.*

*Touching, smelling, breathing my books in the post-digital present brings attention to my body and its bio-digital-material becomings.*

## Donata's Room: Bodies in rooms

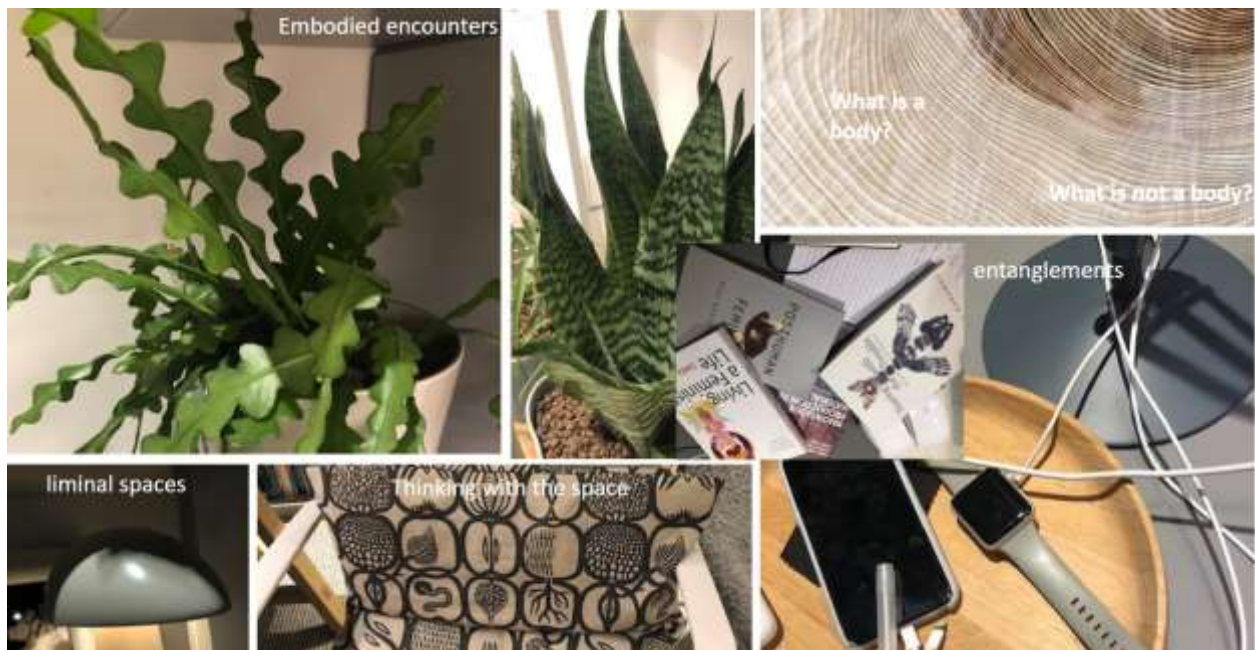


Figure 3: 2022 ECQI Dream Team session: Bodies in Rooms provocation.

During the Dream Team Session I invited participants to look at my room and to diffract with it. I suggested that we all start noticing objects-bodies-artefacts-plants-pets-human-and other-than-human-beings in our rooms, adding contributions to our digital quilt as a form of greeting, acknowledgment, and opening up to their presence.

*The room you see in the picture above is my study, it is my comfort zone where I feel secure, protected, belonging. It is both a physical and metaphorical space where I can think-create-do-be-imagine-dream. A space I designed with care-love-affection-passion-respect. Respect for the objects and plants which are surrounding me, which have been given to me on special occasions, or objects that I choose to be with me and which contribute to generating ideas-emotions-thoughts-experiences. This room is full of bodies beside me. I am not alone. I carefully choose every single object who keeps me company in my thinking-doing-researching-reflecting-being. This room has greatly contributed to shaping my thinking*

*and my being in and outside academia. My room-me-outside-me is full of myself, yet it is not me. It is an enclosed physical space with walls and boundaries, yet it is a room of possibilities. A space open to new ideas to emerge. A space where my multiple selves can coexist, where they belong to each other, where I can breathe.*

*I am grateful to this room for having sustained me through difficult times, for having provided a containment, a nest, a space to be, a space where digital encounters have taken shape outside the physical boundaries of these walls, besides the many objects which are surrounding me. It is a shared space, shared with the many colleagues who have inhabited this room with me in the last months while a new dimension of bio-digital education is emerging. A space full of voices-bodies-sounds-words-noises-me-not-me. A space where new encounters were/are possible. A room of possibilities.*

*The plants surrounding me occupy a special position in my room-assemblage, they breath, they give me oxygen, they are alive. I nourish them, they nourish me. They are vibrant. I am grateful for their presence, for a bit of nature in my room. My dog is also here, under my desk from time to time, keeping me company. I am grateful to her too. My books are here, surrounding me, pushing me outside my comfort zone, providing new encounters, defining very clearly who I am, where I do belong and what I would like to be. I am grateful to them too. My room is here and elsewhere. I belong here, yet I don't belong here. Sitting at my desk I encounter other rooms-other beings-other belongings. I am grateful to be here, in this space I claim to be mine, now with participants blending into my room.*

I am grateful they have shared spacetimemattering with me during the Dream Team Session on our Miro Board. Reading comments and looking at pictures that have been added to the digital room we co-inhabited, I felt very vulnerable and yet very privileged to be there. The following poem is a diffraction emerging from the bio-digital encounters during the Session. I offer it as a starting point to the quilted poem we are co-creating and stitching together in response to the session:

*I am not alone  
I am generated through encounters  
I care for the human-non-humans  
I encounter  
I am not alone  
I feel belonging  
I care  
Here and now  
I am not alone.*



## Carolyn's Room: Sounds and Silences in Rooms

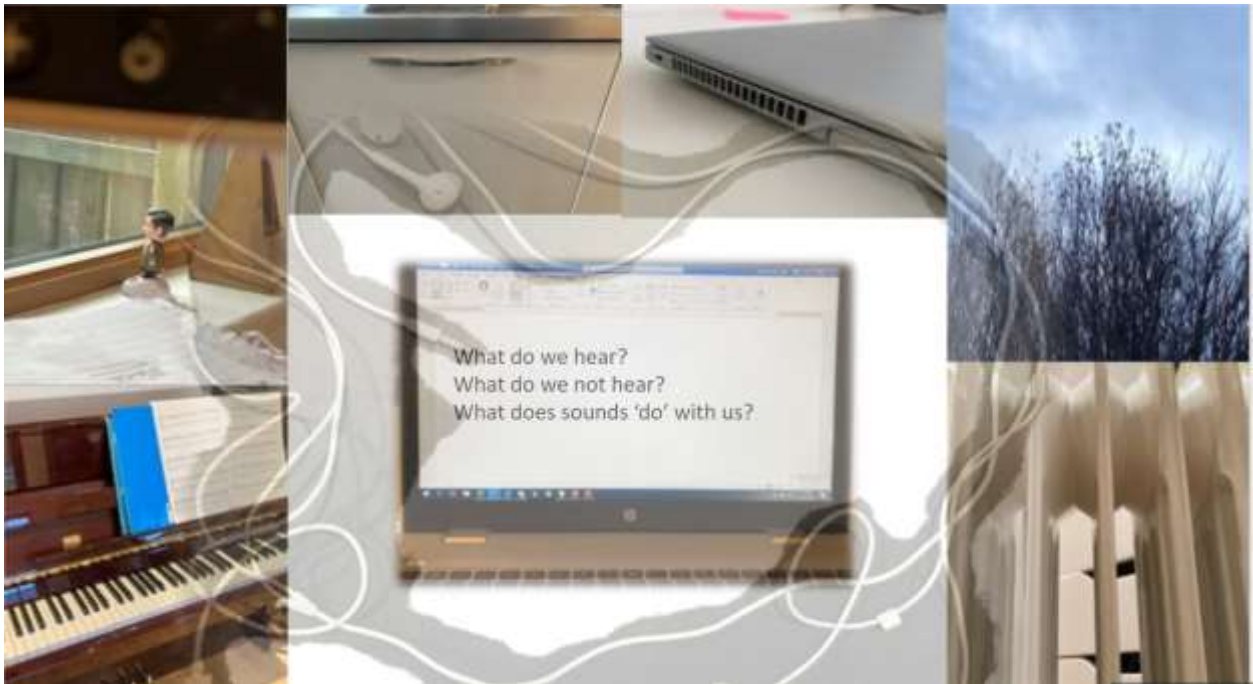


Figure 4: 2022 ECQI Dream Team session: Sounds and Silences provocation.

During the Dream Team session I invited participants to imagine the sounds in my room and to pay attention to the sounds they could hear. We paid attention to sounds they allow themselves to hear, sounds they deliberately block, sounds that interrupt and sounds that are generative of both their working-thinking-researching rooms. We spent time together in my soundworld through a descriptive re-sounding of a working day, and then we spent time re-hearing our own bio-digital-material spaces, writing comments, ideas, suggestions or adding pictures within our shared digital quilted space.

*I'd like to welcome you to my room. In an ideal world I would like you to be here, to hear my room with me but instead I offer you short descriptions of my soundworld across a day. Before I start I would encourage you to take off your headphones and allow the sounds of this session to co-mingle with where you are.*

*So, here is my re-sounding of my soundworld.*

*It's 8.24. I am sat at my laptop with BBC Radio 3 playing a Beethoven Trio. The tapping of the keys as I bash out a few early morning responses to emails juxtaposes...cross rhythms... sometimes bother me, but not today, I am happy to tap across and between...is the music keeping me company or helping me not hear the house? ....DOOR SLAM – my daughter has left for school...Piano arpeggios fill my attention as I stare out of the window as the bus pulls away"*

*Later....*

*My husband, Phill, is teaching his composition PhD student online in the other room - I strain to hear his sound practices as I practice mine...*

*Phill: "you could do it like this [he plays the piano]*

*My meeting: ".....turnaround times for marking to be extended as a covid mitigation.....*

*Phill "Does that bit from the pause need to go somewhere else...*

*My meeting: "...communications to students about the changes....we all need to be alert...*

*The dishwasher BEEPS its conclusion....*

*Phill "where do you see this going next" His chair scrapes backwards.. I imagine him leaning ...*

*Later...*

*I'm cold ...My portable radiator gurgles with warming water in the pipes...more warmth coming....writing... gurgling....writing...listening...listening....not gurgling anymore....writing... I'm cold.*

*Later....*

*Two minutes before the next meeting starts. I let my mind wander...staring...aware of ticking of the solar operated Mr Bean on the window, and then beyond to the birds in the tops of the trees. I hear them in movement. I see, and then hear them, when looking away from my screen. Any yet they are constantly with me....*

*Later.....*

*My laptop's shut. I turn my back on the office....my laptop's whirring continues, Teams messages continue to ping, as the light is switched off and I walk away from the noise...*

*No silence...just distraction through different movement...*

*Feld (2000) states 'social formations are indexed by sonic geographies and sonic histories' (2000, p.175). I wonder, what are the sonic indexes of our new patterns of working? How does sound 'matter' in our working practices? How does the sonic materiality of our working environments interfere generativity in how we act, respond, make, do? Fundamentally, what do we hear, what do we not, and what do our experiences of sound 'do' to us and our working practices?*

*I invite you to pay attention for the next few minutes to your thinking-with sounds, and write sentences, take photos, find images to explore your experiences of sound as part of your practices.*

Paying attention to the intra-actions of sounds in our bio-digital-material spaces pushed outwards from the pictures and descriptive passages of my soundworld, collectively making ideas around sound/ silence / sound memories / sound attentiveness / sound as accompanying / sound as distracting / sound as material discursivity. Exploring the comments and images posted on our digital board, I find that some text and memories of spoken comments 'stick' which form the basis of my initial contribution to our quilted poetry:

*Everyday living...filtered out  
Silences full of sounds  
Of birds, traffic, builders, chitchatting neighbours  
Noticing 'minor sounds', noticing their 'doings'.*

## Petra's Room: Encounters in rooms

### ENCOUNTERS IN ROOMS

#### Belonging (bell hooks)

"Like many of my contemporaries I have yearned to find my place in this world, to have a sense of homecoming, a sense of being wedded to a place. Searching for a place to belong I make a list of what I will need to create a firm ground [...]"

#### Belong (v.)

- To have a place/ kinship
- To be part of/ having an attachment

What does belonging mean in the post-digital world? Where do we start in creating a firm ground? **What do I need to establish my presence and claim the earth?**



Leonora Carrington, *Self-portrait*, sometimes known as *The Inn of the Dawn Horse* (c.1937-8) Oil on canvas, Metropolitan Museum of Art, New York

Figure 5: 2022 ECQI Dream Team session: Encounters in Rooms provocation (Leonora Carrington, *Self-portrait*, ca. 1937-38, Oil on Canvas, Metropolitan Museum of Art, New York).

During the Dream Team Session I welcomed participants into my room by wandering with them through their rooms without an aim but with an attention to affective encounters.

*My room is my kitchen, or my office on a good day. It is a place where I work, zoom with colleagues, cook meals, write homework with my son, and take breaks over coffee with my husband. My room is a room filled with and shaped by encounters. It is where I look out and wave at the neighbour passing by the window in the morning. It is where I shush my dishwasher in the middle of a meeting and hear the nagging of my empty fridge. It is where I feel my body melting into my seat after a long day of videoconferencing. It is a place I feel bound to and a place where my encounter with time differs from the way I encounter time outside of my home, outside of my window.*

*The notion of becoming in and with my room is why I chose the painting titled *Self-portrait* by Leonora Carrington to accompany me during the session. It speaks to me and to my room. My room and Leonora Carrington's room are rooms where boundaries of the inside/outside, real/imagined, human/more-than-human become blurry and as such become spaces for posthumanist (un)doings which are full of tensions as well as possibilities. To me, the coming together of my room, Leonora Carrington's room, and the online newsrooms announcing the passing of the incredible scholar and activist bell hooks surface the issues of belonging, a notion that bell hooks explores in such a rich and layered detail in her book with the same title. In it bell hooks (2009) writes "Like many of my contemporaries I have yearned to find my place in this world, to have a sense of homecoming, a sense of being wedded to a place." She also adds "Searching for a place to belong I make a list of what I will need to create a firm ground" which guides further thinking here. What does belonging mean in the post-digital world? Where do we start in creating a firm ground? What do I need to establish my presence and claim the earth?*

*What does belonging mean to me? I look at the etymology of the word and find that belonging not only means to be part of something, to be attached or owned, it also means to have a place, a community. Belonging does not necessarily merely refers to ownership or the ensnaring hold our rooms sometimes*



*exert over us, it brings forth the kinships, the relations with both human and more-than-human others to the fore. This is what belonging means to me in the post-digital world. Thus in order to start creating a firm ground, I need to poke and prod its settled meanings and territories it defines to break up old ground, incorporate new language and ideas allowing for new movements and possibilities to emerge.*

*I conclude the walk through my room by changing the territory and wandering across and outside of its boundaries towards the participants by leaving them with the following questions: What is it that you need to establish your presence and claim the earth of your bio-digital becoming? How do you create a firm ground? What does belonging mean to you in the post digital world?*

In response to our bio-digital-material exploration of the notion of belonging the following poem is a re-imagination and re-construction of both our existing and new rooms and my first contribution to our quilted poetry exercise in communing:

*I am taking you with me and you are taking me with you  
Though you are not here and I am not there  
Being in a longing for more than oneself  
And holding spaces open  
This is and isn't home*

## **(Re)turning to the unexpected and the unplanned**

*Leading and participating, I grapple with putting this experience into words.*

*The unexpected and unplanned moments, bringing to life the depth of the virtual shared space on the Miro board*

*Within our Room of Possibilities*

*The planned content, provoking and clearly articulated, becoming incidental against the powerful back drop of ambient and incidental happenings*

*#rustling #breathing #coughing #dog #doorbells #scrapping chairs #bird sounds.*

*We collectively shared our spaces*

*Navigating a sense of belonging through quilting our collective bio-digital-material experiences*

*Stitching together individual contributions, which came to matter in the vastness of the virtual.*

## **(Un)doing together**

Our contribution to the online ECQI 2022 conference, theoretically resides in the innovative use of a post-qualitative / speculative method. This is a methodology that attempts to deconstruct the hierarchical, human-centric models through 'rhizomatic' (Deleuze and Guattari, 1987) rather than arborescent, hierarchically-arranged systems, where arborescent thought always places the human subject and human-centred concerns 'above' those of non-human entities. Through our bio-digital-material quilting we use a 'flattened' and open-ended methodological approach that works to say something more about the mutual imbrications of our bio-digital lives. Indeed, this has been a collaborative performative inquiry, where we were forced to re-attune to the midst of conference events that unfolded in 'gathered' vulnerabilities. Facing the prospect of delivering to an audience of two at the start of our session, we stepped into the collective vulnerability and carried on with the presentation, regardless of who entered the virtual room or not. We took a collective venture into the 'not-yet-known', where other unexpected entities contributed to our collective bio-digital becoming.

Forces among #sounds #silences #images #pace of the session, became affective and co-created new possibilities for particular (un)doings to create different collective performative acts.

What made our bio-digital becomings palpable was our collective attuning to the unplanned pauses, the slowness of pace and the prolonged silences throughout the presentation, (un)doing so much of what we previously knew of conferencing practices. The silences that occurred between participants' audio contributions, became powerful components (for reflection, diffraction, attunement, attentionality), in helping to shape our collective sense of belonging amongst the disparate images, words, objects, sounds that filled the physical/virtual space. For example, occasional background sounds, often leaked in from our open microphones, prompting further interrogation and wonderment.

Drawing on personal anecdotes, contributions from those who attended, moments of vulnerability and indiscernibility, emergent relationships and both audio and visual interactions enabled us to attune to our own human centric 'positions', that resided both in our separate physical worlds and our collective bio-digital spaces. In doing so we glimpsed into the flows, materials and bodies, that share in 'bio-digital-material' spaces. We adapted and responded to new ways of 'being' through a collective process of bio-digital-material attuning and communing.

What can be experienced, felt and known, about our bio-digital becomings, when we stop to re-attune to those natural pauses, silences, different tones and pace in our collective, online conversations? What will come to matter, as we move towards increased use of online collaborative spaces? Do we look beyond the visual capacities of innovative software and (re)attune to the rhythms and flows of more-than-human interactions that compete within the same bio-digital space? How is academic work changing through the bio-digital encounters we nourish, care and intra-act with? Can we produce knowledge differently subverting established patterns, hierarchies and territories within and outside academia? Can a *different* and disruptive conference space enable for new meanings to emerge and alternative ways of doing/being/thinking research?

With our quilting of words, images, objects, spaces, virtual and physical belongings we hope we have co-created a room of possibilities where new thinking/doing can emerge within a playful, joyous and subversive space, aiming at challenging established notions of academic neoliberal practices (Fairchild et al, 2022). We believe our quilting poetry stands out as a metaphor for disruptive activism within and outside academia, as a bio-digital space for creating new paths, new threads, new beginnings.

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## LISTENING TO THE 100 LANGUAGES OF CHILDHOOD IN RESEARCH; ECQI DREAM TEAM 2022

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### Abstract

This Dream Team stems from the presenters' research 'with' (rather than 'about') children in different ways. Both Emma Maynard and Catherine Carroll-Meehan have wrestled with complexities of ethical caretaking in children's research participation, and considered how researchers can engage with the richness of children's lived experience through child-centred methods. While children in the contemporary and western world are generally regarded as agentic beings in their own right, their lives are still managed by adults in educational, familial and social settings, and centralising the voices of children remains elusive. While child participation is advocated through school councils and such like, we suggest that this plays into a sampling of children's views for policy and practice agendas, and is less orientated to the lived experiences and perspectives of children to generate child-led ideas and philosophies. This generation of children faces unprecedented social challenges, inheriting the cost of a post-pandemic world in environmental crisis, amid a further mental health crisis and political unrest, and so we suggest that the need to drive forward a best practice agenda for listening to children has never been more urgent.

We approached this Dream team focused on the pivotal values and process which we think determines successful research with children – and by that we mean, engaging children in ways which are meaningful to them, to listen to their authentic voice through creative approaches, and value their agency (Maynard et al, 2020; Meehan, 2016). Thus, we draw on the philosophy of Malaguzzi who advocated a pedagogy of listening to children through their Hundred Languages, that is, the multitude of ways in which children communicate their experience. We ask, how might we use a range of technologies, both online and offline to illicit children's authentic voice, and state a provocation for this session;

*In what ways can we resolve the ethical complexities of researching with children, and how can we use creative and tech based methodologies to listen to children's hundred languages, in order to centralise their lived experience?*

### THE 100 LANGUAGES OF CHILDHOOD

This Dream Team session was inspired by the writings of Loris Magaluzzi, and by the curiosity and prior work of the lead facilitators, Emma Maynard (Maynard et al, 2020; Maynard, Pycroft & Spiers, 2019) and Catherine Carroll-Meehan (Meehan, 2016a, 2016b). Magaluzzi famously expressed the ways in which children communicate their lived experience as though through 100 languages, meaning that their emergent and developed speech, externalising and internalising behaviours, schemas, mood, personality, silence, and noisiness, represents their understanding of their world and willingness to share their nuanced experiences of it, and that their ways of communicating may vary between home and learning settings (Flewitt, 2006), a factor which would also extend to social settings as children mature towards more independent peer environments. So, their ability to

express these languages depends on the environment created around children – that as adults, we must be ready and willing to listen to the multitude of ways in which childhood wisdom will be imparted to us (Arseven, 2014) if we are to hear their languages. While we recognise Magaluzzi's work focused on the 100 languages of early childhood, we developed this Dream Team to consider the diversity of children's communication of their experience from early years to adolescence, and with no particular minimum age, mindful that in research spaces, our efforts to centralise the voices of children and young people must respond to the diversity of their infinite variety of languages if we are to capture the richness of their lived experience.

This diversity is recognised in a number of ways which understand the significance of specific childhood contexts; illness and family functioning (Dunn et al, 2010), culture (Cole et al, 2002) and disability (Brady & Franklin, 2019), and while we were primarily motivated by a wish to conceptualise the 100 languages in a research framework, we recognise the dire consequences of *not* listening to children, as seen in practice failings (Munro, 2011). The United Nations Conventions on the Rights of the Child (1989) upheld the rightful position of children's voices, and overtime, the centrality of the children's voices in in planning and delivering services which meets their needs has become expected practice in education (Brady & Franklin, 2019; Flewitt, 2005), social care (Munro, 2011) and healthcare (Coyne et al, 2014), and yet the efficacy of these approaches is complex and contested (Hampson et al, 2021; Brady & Franklin, 2019).

### **Children as Co-Collaborators**

Our Dream Team was further inspired by our shared belief in children's ability as active capable collaborators, a position which they often have to negotiate, fight for, or defend owing to social structures which routinely place them in inferior positions (Maynard, 2020; Honkanen et al, 2018). However, theories of child development and the Childhood Studies discipline position children as agentic, considering them to be competent social actors and scientists (Powell et al, 2012; Corsaro, 2011). Bruner (1993) for example advocates that children are equally as capable as adults, and that they only lack life experience with which to make sense of experience – thus, it is down to the adult world to facilitate children's agency through scaffolding experience to enable them to realise knowledge and skill, and similarly Vygotsky (1962) viewed children as active co-constructors of knowledge. We acknowledge that this is far from the first time that scholars have considered the centrality of children's voices in research, and authors such as Alderson (2008) have summarised a range of child-led research projects. However, while respecting the strides that have been taken in engaging children's voices, we also reflect that this movement may have a greater profile within the academic and professional world than it does in the lives of individual children and that as noted by Brady & Franklin (2019) and Hampson et al, (2021) the demands of practice environments with competing agendas, and the additional socio cultural profile of children and young people as legal minors, resigns efforts to gain voice as the efforts of dedicated projects rather than a question of mainstream, automatic, daily practice owned by all. Perhaps then, work of this nature should channel developmental and children's rights perspectives, rather than allow social norms which tend to marginalise children's voices, to lead expectations.

Our Dream Team represented a track record of valuing and centralising children's lived experience in research and practice including Maynard et al, (2020), Carroll-Meehan, (2016), Caton & Hackett, (2019), Attard et al, (2022), Day & Doonan, (1998), Day & Heisman, (2010). Emma Maynard's work on co-production methods with children (Maynard et al, 2020) purposefully debunked traditional hierarchies in the research process, involving children aged 10-13 in the research process from question to authorship. In this study, their voices were centralised by virtue of the original question being formed by a statement by one of the participants, Emma's son Oscar, who spontaneously stated "Grown ups don't always get it right", referring to his experience of his final year of primary school. From this point, the adult team acted as facilitators to the children's process through a focus group to identify research questions, child-led interviews, and ultimately a joint adult and child

analysis session. Ethical processes shielded children's names from the data, but, in order to centralise the authentic position of children as co-collaborators, a separate process was established for two child authors, Oscar Maynard and Will Davies to be identified as authors, but to remain anonymous in the representation of data. In gaining consent we first asked the parent's permission to research with their children overall, preceded by a video made by Oscar and Emma where the study was explained; child and parent to child and parent. Once parental consent was obtained, we asked the children for their own consent, and determined this by what we thought children of this age could understand fully. Those factors included where when and how the research would take place, what everyone would have for lunch, and what they could do if they did not want to be involved any more.

To the Maynard et al (2020) research team, this distinction was an important factor in their authentic listening to children, and was manifold with recognising not just their ability to consent, but the limits of it, and how our awareness of this could be used to maximise the authenticity of children's coproduction. Work by Maynard, Sims-Schouten & Pound, which took place in 2021 and which is currently in prep for publication, involved the research team co-producing research with children and young people in an alternative provision school which caters for social, emotional, and behavioural difficulties. Here we noted that teachers remained in the research environment and this was expressed as a requirement of the permission granted to us to research within the school. This gave us cause to reflect that research with children is inherently negotiated in adult spaces in order to make research accessible to them – somehow, adults grant permission for children to be invited into research. Furthermore, the positioning of those determined gatekeepers may make dissent feel more or less viable. A concern we had was that if our young participants did not wish to engage, they would need to negotiate the formal, expectation-driven context of their school in order to dissent. In fact, a few did evoke this by withdrawing from the data collection activity, but staying in the space and finding other ways to communicate with us. This will be discussed fully in a forthcoming publication. This experience of the ethical complexities of maximising voice while protecting anonymity was a key talking point for our Dream Team, and led us to discussions about the minimum age at which children could give their own consent – we reconciled that children can consent for aspects of projects which they can reasonably be expected to fully understand, such as the concrete experiences of where, when and how, the nature of the data collection methods, and their options for dissent and expressing a preferred method. The value, purpose and reach may be beyond the full understanding of some children and young people, however, this does not preclude information giving and scaffolding towards that understanding as part of the process.

As young people reach a certain level of maturity they are no longer at the behest of adult permission-giving, although this is still negotiated and vague in some spaces. In the UK, Gillick, also known as Fraser, Competence applies – a determining assessment of a professional person who assesses whether a child or young person appears to have an adult level of capacity for decisions affecting them, applied to a given scenario, and commonly used in healthcare and legal settings (Maynard, Pycroft & Spiers, 2019). Bringing the notion of Gillick Competence into the research space, and considering who is able to determine this, would be an interesting discussion point within academic circles and a notion that our Dream Team may pursue.

We also note that research taking place in group settings such as co-production steering groups and focus groups, play out in a peer environment in which child and youth priorities of adapting to social norms, are evident. The Maynard et al (2020) study focused more on the process and learning gained by observing children's negotiation of the role and engagement as researchers appeared more nuanced than their directly collected data, which frequently reinforced one another and with behaviours which mirrored classroom behaviour. Despite a purposefully informal location of Emma's home, they automatically sat cross legged on the carpet and put their hands up when wanting to say something, and self-policed those who interrupted or called out. This appeared to us to be a manifestation of children's assimilated social expectations and so while we attempted to debunk adult child hierarchies, those norms were present anyway. Similar experiences were reported by

Sims-Schouten & Hayden (2017), who noted the ways in which social and psychological realities are actively reproduced. Dream Team member Lucy Caton's PhD research also focused on the experiences of children as active co-constructors of meaning, drawing on Deleuzian philosophies to capture children's "lines of flight" and "lines of becoming" p8, Caton & Hackett, (2019), which captured children's decompartmentalised experience as they move rapidly between and within physical and relational spaces.

### **Our Dream Team and Outcomes**

Our Dream Team drew on innovative approaches to understanding children's worlds, and in particular considered the communication of children who remain mute in certain contexts. We considered the place of consent, assent and dissent when children appear content to stay in a given situation, yet remain silent. We questioned how we might use observations of children's behaviour to ascertain affect, positioning "silence as participatory power", drawing on analogies of silent, present protest, and the ways in which children can hold power with either silence or noise. Use of body cams was also debated, prompted by Lucy Caton's research, which excited the Dream Team for its ability to provide a window on children's worlds. Overall we shared an appreciation for approaches which decentralise adult ways of gathering knowledge and understanding, and which centralise children's own mechanisms for learning; play, creativity and exploration being central to children's worlds and to our discussions. Catherine Carroll-Meehan referenced *Laura and the watch*, a series of images in which a preverbal child, Laura, enacts her scientific abilities by hypothesising and testing her theory that a real watch and an image of a watch carry the same properties. This consideration of the young child as scientist redirected the onus onto adults to notice and listen to children's 100 languages, rather than create modes of listening where they are expected to communicate in adult ways. We channelled notions of play, naturally occurring experience and exploration as child-led ways of understanding their lived experience.

We considered the potential for extending these functionalities into research with young people, when "play" concepts and terminologies are replaced, restricted to the online world, and often withheld from adults as young people's own space. Given the focus of the conference we considered the digital modes through which we could capture, and indeed, present, the 100 voices of children and young people, and considered whether this generation's experience of online schooling during Covid might also offer new learning about how the digital environment might enable us to channel new research methodologies.

In taking our Dream Team forward, we have identified a need to represent ways of researching with children where adults immerse themselves in children's worlds. We value the position of the UNCRC, but most typically it appeared to us that even child-centric processes encourage children to communicate in adult forms such as practice orientated meetings and in some research environments. These granted opportunities for children gives them the right to be heard in adult-designated spaces but may overlook the richness of experiences which children themselves may self-select as significant. Such self-selection may therefore become evident through unobtrusive methods such as body cams, and self recorded perspectives from young people. We acknowledge further ethical complexities here, and issues of consent of those around participants needs careful consideration, alongside the extent of consent and ethical parameters where data collection might be roaming. The ways in which children illuminate their understanding is intricate and complex – not something we could conclude in a short conference discussion. But, our Dream Team demonstrated a creative impetus to extend the ways in which we listen to children, and extend beyond the current ways in which research occurs with, rather than about, children. This conversation is to be continued...

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## **WHAT IS THE I WHO WE SPEAK OF? CENTERING AND DECENTERING THE RESEARCHER'S SELF THROUGH POETIC ENGAGEMENTS WITH VULNERABILITY**

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This paper is built around an autobiographical poem about the process of conducting research on young people's views and experiences of sexual harassment during the coronavirus pandemic. The poem is contextualized with a short, reflexive discussion on researcher vulnerability and the necessity of reflexively engaging with it throughout the research process. The paper aims to highlight the constant interplay of difference, shifting alignments and ultimate entwinements between the emerging "I" signifying the positionality of the researcher, and knowledge on the phenomenon of sexual harassment. By discussing how not-becoming-to-know can act as a form of knowing through subjective experience, the paper engages with the contingent nature of the knowing that emerges particularly at exceptional times such as during a pandemic. Through these reflections, the paper aims to (re-)enter into the transformative onto-epistemological power interwoven into critical, affective thinking with and through social and personal embodiment on-the-move in the current post-metoo-moment and its various, fragile and locally shifting incarnations.

Keywords: vulnerability, reflexivity, sexual harassment.

This is a piece of reflection, rather than a methodological paper in a traditional sense. The reflections I partially recite here have evolved in the context of my recent inquiry into sexual and gender-based harassment experienced and made sense of by, and with, young people. I have conducted the collection of research materials for the project under the exceptional times of the coronavirus pandemic, which in many ways created added challenges for addressing the topic and finding participants. The collection of materials, or at least my efforts to do so, mainly took place via social media as well as various youth centers and with the help of NGOs who work with young people in Finland. On many occasions during what were supposed to be periods of active data collection, I found myself feeling deep isolation and a sense of hitting the wall in my aspirations to create data. The gatekeepers I contacted often simply did not have time or other resources to begin a collaboration with me and my project, and the many layers of officials and youth workers separating me and potential participants seemed at times impenetrable. It soon became obvious as well that whereas a handful of young people did respond to my calls and were willing to actively participate in the project, e.g. by being interviewed or/and participating in collaborative workshops I organized, there remained many to whom I or the topic failed to speak. I did ultimately manage to reach out and to collect a fair amount of rich materials, but the process involved felt incredibly heavy in many respects. In sum, on many occasions during the collection of materials I felt there was no one to reach, no one hearing my calls and responding to them, and most crucially, a dense wall separating my endeavors and potential participants.

It is these feelings of desperation and isolation that however allowed me to create "data" out of my affective experiences of encountering, and specifically of being obstructed in encountering, my research phenomenon of sexual and gender-based harassment, and more specifically the associated normativities and various overlapping inequalities that shape the experiences and possibilities to speak around it. Through reflective engagements with these experiences, I started to wonder if the

phenomenon and the power imbalances and the gendered and heterosexualizing systems of force were already present in my research endeavors, presenting themselves through the silence that accompanied my efforts and that was often their result. In a sense, I came to know about the phenomenon through not getting to know it by my faltering efforts to collect materials. This knowing through not-knowing is obviously subjective, partial and situated knowing, as all knowledge is. As certain visions, or forms of knowledge, are blurred, others, and their visceral bite, are sharpened. Moreover, if we wish to attune to the entwined nature of epistemology and ontology in the vein of new materialist approaches that I will soon touch upon, in the case of my project, these experienced forms of knowing cannot be divorced from the effects of the coronavirus situation that unfolded simultaneously, exacerbating my, as I am sure many others', sense of isolation and lack of response – in ways that mobilized the past and its various affective affordances and hauntings. The past, present and future all collapsed together in the creation of sensations filled with aloneness, and this is the onto-epistemological basis from where I started with creating knowledge for my project.

In reflecting on these engagements with what I see as intra-active assemblages of knowledge and its objects, I have drawn inspiration especially from Bronwyn Davies' (e.g. 1, 2, 3, 4) writings that delineate possibilities to engage with perspectives derived from new materialist/affect theorizations in qualitative social science inquiries. These perspectives highlight the interwovenness and the fluid becomings of researchers, the researched phenomena, and the social and material reality that unfolds through our engagements with it, or rather with its multiplicities and their virtual potentialities. The emphasis is thus on the human as well as more-than-human actors' inseparability – including (im)material ones such as conceptualizations, memories, ways of thinking and knowing and all the apparatuses that shape these – and the associated capacity to affect each other and be affected by each other. What is thereby profoundly questioned is the often assumed pre-existing nature of individual human beings and their individualized experience in the world. This idea has been eloquently put by Davies in the following quote (3 p734–735):

A diffractive approach opens an onto-epistemological space of encounter where a researcher's task is not to tell of something that exists independent of the encounter (producing the appearance of truth), but to open up an immanent subjective truth – that which becomes true, ontologically and epistemologically, in the moment of the encounter...we, as researchers, are part of, and encounter, already entangled matter and meanings that affect us and that we affect in an ongoing, always changing set of movements.

In my work, these perspectives have driven me toward attempts to trouble normative notions of researchers in control of the research process. One way of doing this is by highlighting researcher vulnerability, for instance through exposing the difficult experiences invoked in the process of research, resonating with past vulnerabilizing encounters. Another way is to trouble and act against normative forms of writing and reporting research, through which researcher-subjects and assumptions of their invulnerability and distance are created. Third, underpinning way is through an explicit reliance on and the reiteration of the theoretical perspectives such as those mentioned above that work to demolish the foundations for the researcher-subject's emergence as a separate, volitional individual. Writing a vulnerable researcher-self into being through these means is an act of plunging into an unknown and fluid space-time-matter that undermines any notions of in-control-ness. It is terrifying business, to be sure, but needs to be done. It is also liberating and inspiring, in all its open-endedness and possibilities for creative defiance.

Arts-based approaches (5) such as creative writing offer a fruitful path toward actualizing the efforts to decenter the researcher-subject by rendering it vulnerable, and this is what I turned to in my current project as well. Creative autobiographical writing opens valuable possibilities to express and work on

the sensations and the knowing that emerges in research, especially when encountering any dilemmas or when the past and present hurts become activated. I started with this kind of writing to explicitly and implicitly engage with researcher vulnerability and how it has become tangible in my current research process. And yet, when doing so, I was haunted by what appeared to me as remainders of a dilemma in writing and thereby knowing – making knowable, recognizable as one, that is, as an entity in existence and with a past and present – the (im)possible autoethnographical researcher self (6), with the affective experiences and perceptions retrievable to such a self, while simultaneously attempting to erase the permanence and the normatively constituted boundaries of such a self in the vein of new materialist inquiry.

In literature that has shaped possibilities for autoethnography as a means of knowing (e.g. 7, 8), its methodological capacity to disrupt several binaries in research has been frequently highlighted. These binaries include, for instance, researcher-researched, objectivity-subjectivity, process-product, self-others, art-science, and personal-political. Poststructural and especially post-qualitative approaches take these disruptions even further by troubling the foundational stability and knowability of the researcher's self, i.e. the "I" referred to in any reflective pieces of research writing, which, in turn, more or less unavoidably (in my view at least) becomes inscribed into and evoked in autoethnography. From a Deleuzian-Guattarian perspective for instance, the "I/eye" (9) that knows and acts must be troubled and decentered, to interrupt its potentially objectifying gazing activities upon the phenomena artificially severed from its being and acting. How to grapple with this apparent dilemma, then? How to write and unwrite? Davies' (4) thinking on subjects-under-erasure is helpful here, I suggest, in allowing to persist and insist in continuing to trouble instead of seeking consolidation in efforts to solve or divert it. By being reminded of the constitutive, material-discursive power through which subjects emerge both through normative but also non-normative ways, we can start to envision and to practice not being, acting and writing as if subjecthood was a pre-given.

What does, or can, this then mean in relation to my current inquiry into (re-)living (with) sexual and gender-based harassment? Decentering subjects, and the researcher-subject in particular, means taking the interconnectedness and processuality of emergent subjectivities and the experiences that shape them as the starting point. The experiences or the subjectivities, retraced to the life events of the researcher and the participants, are not seen here as accessible in a particular stabilized and distinctive form, or as discoverable in themselves, rather their distinctiveness also emerges in the constant flow of difference and entwined ontological happenings. In enacting analyses, putting different conceptualizations at work, and otherwise interfering with these happenings, researchers enact agential cuts (11) that allow certain elements to stand out, to be inspected (almost) as if having a certain kind of inhabitation and form, momentarily frozen and seized under inspection. And in doing so, we always cut things out, things that remain blurred and hence beyond our reach.

I suggest that what is easily cut out in inquiries into vulnerabilities and experiences that hurt is the researcher and specifically their personalized involvements in the phenomenon studied and thereby becoming known. It is in many ways difficult to merge that what is expected of researcher-subjects on one hand, and the troubled associations commonly attached with experiences that hurt and render one vulnerable, on the other. Many of us (referring here specifically to researchers in less than established positions) seem not to afford doing this, we know that our subject-hood and sustenance within the academia is precarious enough as it is. This is thus risky business, too. And risks may be managed by acts of insulation, whereby subjects are distinguished, established as separate, and thereby their boundaries created and protected (10). Such insulation allows for retaining distance from that which hurts, that which is uncomfortable, and that which is the mark of an "other". This is what I have learned to think with and through especially thanks to my engagements with Sara Ahmed's writings (e.g. 12, 13), especially on the ways our skin insulates and become implicated in relations of othering (12 p91):

The skin functions as a boundary or border, by supposedly holding or containing the subject within a certain contour, keeping the subject inside, and the other outside. But as a border, the skin performs that peculiar destabilizing logic, calling into question the exclusion of the other from the subject and risking the subject's falling into – or becoming – the other.

Bringing these various viewpoints together enables attending to the researcher and participant vulnerabilities – the knowing or unknowing of the latter also being what essentially builds our knowledge on vulnerabilizing phenomena in social sciences – as entwining and already entwined on multiple levels. This inseparability is also linked with the political potential of any critically-minded research such as mine. Different forms and differently located affective knowing co-emerge, resulting in possibilities to see and to sense shared anxiety, shared efforts to grapple with vulnerability, shared grappling with various mechanics of silencing, and the consequent difficulties of making visible and engaging others with the topic – in other words, shared efforts and obstacles in breaking silence and abjection around vulnerabilizing experiences such as those we have come to know as sexual or gender-based harassment.

Could it then be, that the difficulties I experienced when trying to collect materials under Covid – already being situated in a sense of isolation and momentary lack of hope, in addition to being materially obstructed from entering the field – were already also engagements with the phenomena I was interested in, and the ensuing vulnerabilities? Was the silence and how I reacted to it – the way it weighted me down and deepened my sense of isolation – also a characteristic of sexual and gender-based harassment, of the difficulties to speak about it that may remain, despite the recent celebration of the #metoo-movement? Is this what connects me, and my past hurts, with the phenomenon and the experiences of others that I try to reach? And if so, how can I tap into these experiences in creating knowledge on the phenomenon – in ways that particularly allow for a critical take on them. Engaging with such vulnerabilities hurts, and it must hurt in order to mobilize us. Ahmed (13 p65) has provided a deeply moving (to me, tapping into something I already knew about, had felt under and on my skin) account of this:

We might need to attend to bad feelings not in order to overcome them, but to learn by how we are affected by what comes near, which means achieving a different relationship to all our wanted and unwanted feelings as a political as well as life resource [...] Bad feelings are creative responses to histories that are unfinished. They are not the only responses. And we are not finished.

Everything, both patterns with continuity and eruptive, unprecedented happenings such as the coronavirus situation, shape the assemblages in which knowledge is produced, and become actors in it. The situatedness in the exceptionality of coronavirus situation, similar to other pandemics, heightens power imbalances and patterns of inequality. In research processes, this may be manifested in various ways that can be partially untraceable. One way is through deepening the effects of silence on existing, seemingly separate practices of inequality such as sexual and gender-based harassment – also by simply detracting energy from addressing such practices. We are not finished, and the ways of becoming opening up to us are situated. My experiences and possibilities to tap into vulnerability in this research process are, I suggest, inseparable with the coronavirus situation(s) – which thereby came to specifically situate, enable and restrict the knowing through which I am becoming in the current project. Without this particular kind of situatedness, this paper too may have looked quite different, or it most likely would not have been written at all. In sum, it might be the coming-together of various kinds of vulnerabilities, and understanding their interconnectedness, where affectively knowing them best begins.

Thus, the unfolding of the process of collecting materials in my current project can itself be seen as “data” in a sense, as it allows for insight into the phenomenon, and as the researcher “I” constantly evolves with, shapes and gets shaped in the process and in a relationship to the phenomenon, which itself constantly takes shape during the process. Attending to such mutability of all elements, including the researcher “I” that is seen as lacking established boundaries and an essence, allows in this case to consider how what appeared as failures in obtaining data can, perhaps, actually give indirect access to the phenomenon. It can be seen as enabling also a consideration on how those failures can be read as telling of the current (im)possibilities to look into sexual and gender-based harassment and to encourage other people to engage with it – emerging, of course, in context-specific ways that cannot be assumed to stay exactly the same across efforts to engage with the topic.

And yet, the knowing I discuss here is self-centered, and because of this, at constant danger of becoming individual-human-centric. It cannot substitute knowledge co-created, which instead has much higher potential for illuminating the multiplicity and the processuality of voices and experiences. Nevertheless, this lonely knowing and not-knowing can be, and needs to be, seen as socio-materially produced in intra-action with various simultaneous happening and becomings. Furthermore, sometimes, such as during a pandemic, such knowing might be all we have access to. In a sense, the researcher-self is never alone in knowing and not knowing; the assemblages they become as a part of entail elements both (perceived as) human and more-than-human, carried along in researcher-bodies and sensibilities, intra-acting with the knowledge-devices at play as well as the voices and intra-actions from the past – hauntings animated in the processes of creating knowledge through revisitations with them. It is hence haunted knowing (14) that mobilizes remembering and infuses the present with the past, and connects the researcher-experience with the phenomena studied as well as with their (many possible) conceptualizations and ways of approaching them.

The matter and meanings that become graspable through these encounters are therefore of particular kinds, particularized in their constant unfolding. Knowledge created by me through autobiographical engagements with my researcher-sensations will not do justice to difference, and yet it is shaped by its constant unfolding. Its situatedness in my researcher-body-past means that several multiple marginalities will be cut off from its production, as the knowledge becomes tied with the privileges I inhabit as a white, able-bodied cisgendered woman, for instance. The knowledge my experiences have afforded on the workings of gendering and (hetero)sexualizing fields of force are little more than glimpses, weak resonances and signals, whose volume however might become amplified when further voices are thrown into the assemblage. By potentially blurring boundaries between the researcher-I and the “researched” – or rather, by troubling the (re-)enactment of such boundaries – this knowing can nevertheless tap into partially shared potentialities in becomings and the methods of their obstruction – especially if kept on the move by a dedication to not-knowing and the accompanying, humiliating (which need not be considered negatively, indeed should not) uncertainty. And here, I come back to a line written by Valerie Walkerdine, Aina Olsvold and Monica Rudberg (15 p279) that has stuck with me for some time now: “...in our struggle to be the researcher and not the participants, we may find being shown to us, if we care to look, that what precisely links us to them.” In sum, the “I” here need not look further to know vulnerability, and yet it must, to know its other(ed) embodiments.

To conclude and to concretize, here is a poem that I wrote on the basis of these reflections – and on the basis of which these reflections were written out. With this poem, you, the reader, can forge endlessly multiple relations, interpretations, and knowledge – conclusions enabled by the particular situations of encountering it.

What is this I that I speak of  
whenever I write  
when I plan  
research oh so promising  
novel, innovative, timely  
- groundbreaking, even, dare I say?  
how exiting adventures ahead  
Enacted by truly a Western eye  
a neoliberal academic dream child  
product of Western fictions  
one that acts and knows  
- on your behalf, too, no need to think for yourself  
but one that feels, too  
and lives through its acts of research

who writes this I?  
or does it get written?  
or written on?  
or written on behalf of?  
What happens to this I under Covid?  
- nothing happens, that's the thing  
and the eye withers  
standing still, standing by  
waiting  
in a state of near extinction  
almost stopping, breathing  
it does not (intra-)act  
- but look, it moves after all

still thinking, feeling, perceiving  
getting moved  
as the encounters unfold  
encounters, also with nothing  
that leave their imprints all the same  
imprints on the encapsulating, protecting skin of the Researcher

yes, the imprints get heavier, deeper, sharper  
piercing the skin  
the pain, remembrance

i have been here before, already know about the phenomenon  
that is, sexual harassment  
of how it makes you small  
shrinking

shrinking

shrinking

and silent  
no one listening, no one hearing  
- cause who can complain about such small things that happen all the time?  
when elsewhere, people are dying  
there are worse things to talk about, to research  
- and I, I am not vulnerable, am I?

a Rational Researcher, uninvolved – just need to find those who are vulnerable  
and yet so fragile

And what is this I that I speak of now?

This i who owns

these experiences

or who is owned by them

shaped by them

constantly, in flux

who shares these experiences

with many others

and yet the i does not stay the same

constantly moving

liquid

streaming, connecting, merging

and detaching, only to reunite

to rewrite the emerging “i”s

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## **WEAVE LABDAY METHODOLOGY TRANSDISCIPLINARY CAPACITY-BUILDING FOR CULTURAL COMMUNITIES AND HERITAGE INSTITUTIONS**

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### **Abstract**

This paper refers to the Dream Team session hosted in the frame of the European Congress of Qualitative Inquiry - ECQI2022 Conference. It made use of the case study of the EU-funded WEAVE project (2021-2022), to underpin the exploration of an innovative methodological framework for capacity building for Cultural Heritage Institutions to work with cultural communities and with Digital Intangible Heritage. This methodology unfolded through a series of LabDays, which enabled WEAVE to create social, digital and artistic platforms and to set up and maintain various spaces that include vulnerable communities and promote social innovation. This participatory and collaborative approach has allowed for multicultural communities to join forces towards excellence in Cultural Heritage and social transformation. Through its LabDay methodology, WEAVE allows participants to create and explore connections to Europeana and its collections, as well as to other European heritage professionals. The LabDays also allow for the direct, active participation of all participants as an entirely experiential process during which each participant's creative involvement extends to the point that he/she decides. Further, the constant interaction between the participants throughout the whole process has enabled the participation of multicultural communities and individuals to freely express their attitude and cultural values through dance, art and cultural heritage activities. Finally, the methodology allows participants to re-evaluate their personal experiences within an emotionally supportive framework of trust and acts as a self-aware exchange process of knowledge, culture and experience.

Keywords: cultural communities; dance; digital cultural heritage; intangible cultural heritage; tangible cultural heritage; communicative methodology; minority representation; inclusivity; capacity-building.

### **1 INTRODUCTION: THE WEAVE PROJECT<sup>4</sup>**

WEAVE – Widen European Access to cultural communities Via Europeana - is a project co-funded by the Connecting Europe Facility Programme of the EU. It aims to develop a framework to link the tangible and intangible heritage of cultural communities, safeguarding the rich and invaluable Cultural Heritage (CH) that they represent. To support this, the project is collecting thousands high-quality digitised records representing tangible and intangible heritage from various Cultural Heritage

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Institutions (CHIs), associations and archives, for publication and sharing in Europeana.eu, the digital gateway to European cultural collections. Publishing the collections in Europeana is a modern strategy to showcase and value these collections widely, along with a set of engaging editorials and virtual exhibitions published online, in the light of enabling citizens to use the Internet to engage with heritage content and, more largely, with the artistic, creative and educational resources of cultural institutions.

As the selected content is also intended to represent the culture of minoritised communities (such as the Roma community, the Portuguese traditional dance community and the historical dance community in the UK), the project is undertaking several capacity-building activities that will help to develop a closer connection between cultural heritage institutions, minoritised cultural communities and Europeana. This is particularly important to consider as preservation within the CH sector is also faced with making decisions whether to rely on existing preservation techniques or to try to develop new modes of documenting that respond to the current complexities of Intangible Cultural Heritage (ICH) in particular. There are many challenges faced during the digital transformation that CHIs have embarked on, and more so when considering ICH, most notably the fact that a solid methodology for documenting is missing. Capturing and documenting ICH is facilitated by audio-visual technologies, now transformed in the digital era, which is helping to build knowledge of our cultural traditions and the traditions of communities. Additionally, given that CH can be digitally represented in a variety of formats, including video, audio and 3D, WEAVE develops a set of open and reusable tools available to CHIs for the management, annotation and showcasing of such digitised content.

The project work began by looking at the current stage of the digital transformation process of cultural heritage - and institutions more broadly, including the digital transformation of ICH within that.<sup>5</sup> The project is also exploring how cultural communities and organisations look at digital tools and resources to represent and share their CH, by engaging these communities in a series of LabDays and capacity-building events. With a bottom-up, participatory approach, these events enable cultural communities to express their requirements and needs concerning the management of their intangible and tangible heritage, thus becoming themselves a driver for innovation in cultural heritage digital transformation.

This paper presents the framing methodology of the WEAVE LabDays both in theory and in practice, then opens up onto a wider discussion of the collective thinking explored in the ECQI2022 WEAVE Dream Team session which took place online on 3rd February 2022. The Dream Team session itself took the form of a 'LabDay in action', examining the LabDay methodology in terms of capacity-building for digitising ICH and dance and opening a democratic space for collaborative discussion and writing around key themes related to it. These key themes - negotiating the presentness of heritage and the past of history, the tensions between reenactment, reconstruction and 'reimagining' historical dance forms, and how digital technology can aid with building a grammar for disseminating traditional and historical dance forms - are further unpacked here.

## 2 THEORETICAL UNDERPINNING OF THE LABDAY METHODOLOGY

Underpinned by Communicative Methodology (CM)<sup>6</sup>, the WEAVE LabDay methodology enables an open, egalitarian dialogue between researchers and participants; it is a collaboratively-held 'brave space' where all voices are acknowledged and valued, and stakeholders can together reflect on their needs, desires and various forms of participation. The framework has grown from a first iteration of the LabDay methodology used in the CultureMoves Europeana Generic Service project (2018-2020)<sup>7</sup>

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<sup>5</sup> See WEAVE (2021) (1)

<sup>6</sup> Cf. Gómez et al. (2013) (2); Aiello et al. (2013) (3); Flecha and Soler (2014) (4); Puigvert et al. (2012) (5); Gómez, Puigvert and Flecha (2011) (6); Gómez et al. (2019) (7)

<sup>7</sup> <https://www.culturemoves.eu/>

to now enable the communities with whom WEAVE is working to engage with project activities and to select the content and collections to be aggregated to Europeana. As part of the CultureMoves project, the CultureMoves Coventry University team (Rosa Cisneros, Marie-Louise Crawley and Sarah Whatley, the same researchers as the Coventry University WEAVE team) distilled their experience in creating the LabDay methodology and in organising LabDays into a simple set of guidelines that can facilitate others in organising such events. In particular, the CultureMoves LabDay methodology outlines points to consider in designing a LabDay:

Carefully consider your project's proposed stakeholders – highlight the rationale for, and processes of, identifying and involving key stakeholders [...]

Consider your existing networks to identify potential stakeholders within them and connections to further broaden networks and the reach of the LabDay [...]

Take care to ensure an equal balance of gender ratio, demographics etc. Through an inclusion of diverse voices in well-programmed LabDays, the project will gain an increased understanding of the assumptions and limitations and the relationship and intersections between sectors [...]

Conduct a survey of existing research and practice in order to consider how the chosen project seeks to address the gaps in research and how these can be explored through the LabDay [...]

Define the clear purposes of the proposed LabDay – e.g. to engage in in-depth consultation with key stakeholders; to begin to identify the key questions and assumptions that underlie existing and potential collaborations between sectors; to capture the voices of the key stakeholders and offer them an opportunity to learn about the project [...]

Consider the format of the LabDay – might it be a curated panel discussion? A day of more formal presentations or interactive workshops? [...]

Carefully consider the intended audience and participants for the LabDays: the format of the LabDay will necessarily depend on the invited stakeholders and participants and should be curated specifically for them [...]

Consider the reach of the LabDay – is the thinking local? Regional? National? How might this affect the design and programming of the LabDay? Timings / scheduling, etc.? [...]

Define a comprehensive working question set to use as a basis for discussion. Ensure that this is circulated to invited speakers / guest panellists beforehand in good time [...]

In the design of the LabDay, consider any budget restrictions, and specifically when working with independent / self-employed / freelance artists. Take care to carefully consider their needs. How are they to be compensated for their time? Financially (covering travel expenses and for their time) and/or through in-kind support? [...] How might a LabDay be a useful networking opportunity for all involved? [...]

Think of creative and innovative ways to work towards inclusivity of various voices throughout the LabDay [...] Think about how you will document the LabDay and disseminate information explored through it – e.g. documenting through photography and video

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To learn more about the LabDays carried out within the CultureMoves project, you can read CultureMoves (2019) (8) and CultureMoves (2020) (9), both available here: <https://www.culturemoves.eu/#resources>  
See also Cisneros and Crawley (2021) (10)

On the LabDay methodology used in CultureMoves, please also see: <https://www.youtube.com/watch?v=If-yDOUm5cQ>  
and <https://www.youtube.com/watch?v=ZOKDFLgVsII>

(ensuring permissions are in place beforehand), live-tweeting, sharing images / comments via social media, etc.

(CultureMoves 2019 (8): 90-92)

In supporting partners and content providers to plan, manage and curate their WEAVE LabDays, the Coventry University WEAVE team implemented the points raised in the guidelines above to ensure that the LabDays were curated in accordance with the bespoke needs of the cultural communities in question. Further, given the pivot to a predominantly digital environment in the wake of the global COVID-19 pandemic, the majority of the WEAVE LabDays have taken place online. As such, new guidelines to consider can be added to the above methodology: these include further informed consent for recording and dissemination purposes, the use of music and visuals to enter and exit the digital space and consideration of accessibility aspects (e.g. closed captioning, audio description of speakers and visuals etc.). In addition to the above guidelines, the meetings are recorded and then added to the project's YouTube channel and website which allows for wider engagement as people from the global community can access the content and freely share and reuse.

The highly participatory and bottom-up approach of this methodology thus enables cultural communities to themselves become a driver for how their digital heritage is presented and for the design of the WEAVE Toolkit, developing from their bespoke needs concerning the management and promotion of both their intangible and tangible heritage. The LabDay methodology has also enabled WEAVE to create social, digital and artistic platforms and to set up and maintain various spaces that include vulnerable communities and promote social innovation. The participatory and collaborative approach that WEAVE has employed throughout the LabDays has allowed for multicultural communities to join forces towards excellence in CH and social transformation. Through its LabDays, the project allows participants to create and explore connections to Europeana and its collections, as well as to other European heritage professionals. The LabDays also allow for the direct, active participation of all participants as an entirely experiential process during which each participant's creative involvement extends to the point that he/she decides. Further, the constant interaction between the participants throughout the whole process has enabled the participation of multicultural communities and individuals to freely express their attitude and cultural values through dance, art and cultural heritage activities. Finally, the methodology allows participants to re-evaluate their personal experiences within an emotionally supportive framework of trust and acts as a self-aware exchange process of knowledge, culture and experience.<sup>8</sup>

### **3 THE METHODOLOGY IN PRACTICE**

#### **3.1 Dance-focussed LabDays**

More than 300 participants were involved during nine different online WEAVE LabDays that took place between September-December 2021. Within WEAVE, ICH holds an important space to help challenge the notion that dance is an ephemeral art form that lives and dies in the moment. How we document, archive and safeguard dance heritage are important questions within the wider WEAVE project as it is working with underrepresented cultural communities whose ICH (such as dance) content has historically been underrepresented within platforms such as Europeana. Furthermore, the 'fragile' and 'immaterial' aspects of ICH can also tap into layered aspects of more material CH: this layering then allows for a plurality of 'expertise' and encourages intercultural dialogue. The

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<sup>8</sup> For more on the WEAVE LabDay methodology and LabDay activities, see WEAVE (2021) (11) and WEAVE (2022) (12), both available here: <https://weave-culture.eu/resources/>

following section therefore outlines two examples of these LabDays that had a specific focus on dance as ICH<sup>9</sup>: i) the WEAVE PedéXumbo LabDays (November 2021) exploring Portuguese traditional dance, and ii) the WEAVE Early Dance Circle LabDay (December 2021) with the historical dance community in the UK. These two examples were offered as central case studies for exploration during the ECQI 2022 Dream Team session, with participants able to view and comment on video documentation of these LabDays using a collaborative MIRO board.<sup>10</sup>

### 3.1.1 PédeXumbo LabDays

WEAVE Consortium partner PédeXumbo (Portugal)<sup>11</sup> promotes and investigates traditional Portuguese dance and introduces new artistic forms based on the practice of ball and European dances. PédeXumbo also promotes the professionalisation of artists and an increase in the offer in the field of traditional dance in Portugal. PédeXumbo held two WEAVE LabDays in November 2021, one online and one live and each having different audiences, formats and purposes. Both LabDays explored questions regarding the importance of Portuguese folk dance and its connection to identity, as well as of the embodied knowledge transmitted through the teaching and learning of dance and other traditional techniques.

PédeXumbo chose to base its first WEAVE LabDay (15th November 2020) on the *Mastros Tradicionais de Odemira*, a cultural practice in the Portuguese municipality of Odemira.<sup>12</sup> The *mastros* (or poles), currently associated with the Festas de São João, in Portugal, have their origins in the pagan custom of raising the *Mastro de Maio* (the 'Maypole' or May tree), a custom that is still alive today in some parts of Europe, some African countries and South America. Over time, in Portugal, the raising of these poles began to occur in June and to celebrate that month's festivities: a rich popular Catholic symbolism is linked to the procedures involving the raising of the pole and its decorating. Based on this concept of popular *Mastros*, PédeXumbo developed a research project around the practice of dance in party/celebration contexts around the *Mastros*. From country to country, from region to region, from village to village, the pole takes on its own characteristics as well as its contextualization. In the municipality of Odemira, PédeXumbo identified three forms of *mastro* that are still alive today: the *Mastro Santos Populares*, the 'Promise Mast' and the 'Ribbon Dance'. Dance is associated with these three forms. Researched by Leonor Carpinteiro and Marta Guerreiro and directed by Pedro Grenha and Rui Cacilhas, the documentary video *Da Terra ao Céu* (2020)<sup>13</sup> tells the stories of several people that the team met on a trip through the villages of Odemira and who recount their lives and experiences through the practice of *Mastros Tradicionais*. At this juncture, it is relevant to again acknowledge that cultural communities are characterised by both their ICH, their built heritage, and their tangible cultural heritage. The relationship between intangible and tangible CH is key to understanding and gaining insight into the interpretation of that heritage. During the Pedexumbo LabDay, the research team and one of the video's directors discussed the documentary, transmitting knowledge about the practice, the region and the people involved, as well as about dances and other community practices related to the making of the poles. Marta Guerreiro, PédeXumbo's coordinator and a researcher of this practice, also taught the *Dança das Fitas*, a traditional *mastro* dance, and how to make the traditional paper flowers that decorate the *mastros*. Here, the material components are contextual tangible elements that not only stand

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<sup>9</sup> These cultural communities are both examples of underrepresented communities in Europeana. One of the wider aims in WEAVE is to address this underrepresentation of dance content.

<sup>10</sup> MIRO is an online collaborative whiteboard platform that allows for video chat, synchronous presentation, collective mind mapping and media sharing.

<sup>11</sup> <http://pedexumbo.com/>

<sup>12</sup> PédeXumbo began to investigate this practice in 2017, using the *dança das fitas* as a starting-point, which was integrated into the *A Ciência de um Baile de Mastro* project. From this, the *Da Terra ao Céu* project emerged.

<sup>13</sup> <https://vimeo.com/328380190>



alongside the dances but also add a layer of texture to the dances. This practice still has a fundamental role in the community's intergenerational sharing of experiences of the *mastros* celebrations. The LabDay concluded with a conversation about the importance of investigating these practices that will disappear with future generations and therefore about the pressing need to transform this cultural heritage into accessible, documented and digital content, for which Europeana is a major support. PédeXumbo's partnership with the WEAVE project and the opportunity to publish its content on Europeana is a way to broaden the context of this investigation and to disseminate these artistic forms both not only as a means to perpetuate the practices but also to provide inspiration for contemporary art and to contribute to the development of a European identity based on our multiple cultures.



Figure 1: Promotional material for WEAVE LabDay (2021). Credit: PédeXumbo

The second PédeXumbo WEAVE LabDay took place within the wider context of the *Desdobra-te Festival*, which takes place every year in November in the city of Évora (Portugal) where PédeXumbo is headquartered. This LabDay had the aim of promoting the Portuguese *Danças de Porto Mós* (Dances of Porto de Mós). The LabDay was a hybrid event, held in person with live streaming. The strategy to integrate it into one of the association's larger festivals was so that the practice could be transmitted and danced by a greater number of people. The face-to-face workshop format was used to both transmit repertoire and to develop new audiences, allowing theoretical and practical information to be transmitted socially and enabling learning.

The repertoire transmitted during the LabDay is part of recent research involving folklore groups from the Leiria region in central Portugal and which is still not widely known. In this sense, the LabDay was an important and valuable opportunity to transmit this developing knowledge to a wide audience through the very moment of collectively practising these dances together. Dance researcher Marisa Barroso taught participants sixteen of the *Porto de Mós Dances*, accompanied by an album of songs for the dances collected and performed by Portuguese dance and music group Aire<sup>14</sup>, including '*Raspa*', '*Bate do Reinadio*', '*Sapateia da Choutice*' and '*Vira ao contra par e ao par*

<sup>14</sup> Aire is a Portuguese group of musicians and dancers formed by Marisa Barroso to give musical structure to the 'Pilot Project for the Safeguarding of Traditional Portuguese Dances'.

*do Fadinho*'. As such, the LabDay offered participants the opportunity to learn more about a region and its people both through the dances and through the stories that Barroso recounted about each song and dance. PédeXumbo's wider partnership with the WEAVE project and the opportunity to make its content accessible on Europeana support the expansion of the group's main objective: to give participants an opportunity to know and experience traditional dances both in person and digitally. The partnership is also fundamental for allowing PédeXumbo to document and disseminate these practices digitally. Further, the wider dissemination of these practices enabled by digital access can support cross-cultural investigations of other traditional dances worldwide.



Figure 2: Promotional material for WEAVE LabDays (2021). Credit: PédeXumbo

### 3.1.2 Early Dance Circle LabDay

Coventry University, in particular the Centre For Dance Research (C-DaRE), has long standing collaborations with dance archives, dance associations and artists and, as part of the WEAVE project, is facilitating the aggregation of high-quality curated collections from specific dance communities to Europeana. Among those collections is the Early Dance Circle (EDC)<sup>15</sup>, an umbrella organisation based in the UK whose main aim is to promote the enjoyment, performance and study of historical dance in the UK and beyond, from the mediaeval period up to the end of the 20th century. Formed in 1984 and including professional and amateur dance groups, artists and researchers, the EDC aims to make historical dance heritage accessible and has curated and organised many events over the last 35 years. The EDC's ethos is that a knowledge of earlier dance forms helps enrich the cultural life of the UK and Europe by accessing a heritage of international importance that 'belongs to us all', but which has, until recently, been largely forgotten. As part of WEAVE, the EDC is brokering new connections with the historical and early dance community in the UK, and beyond, in order to safeguard and promote this marginalised dance heritage. The EDC will aggregate a curated selection of their content (historical dance videos) to Europeana, shedding new light on historical dance forms that

<sup>15</sup> <https://www.earlydancecircle.co.uk/>



have often been missing from archives. This is especially pertinent given dance's traditional ontology as ICH, especially in (dance) performance's oft-cited ephemerality (Phelan 1993 [13]) and in how dance practice and performance might resist and/or enter the archive (cf. Taylor 2003 [14]; Schneider 2001 [15], 2011 [16]; Lepecki 2010 [17], Brandstetter 2015 [1995] [18], 2016 [19]).

In particular, the work in WEAVE aggregating EDC content to Europeana builds on the existing relationship that Coventry University (C-DaRE) formed with the EDC during the afore-mentioned CultureMoves project. For CultureMoves, as part of the 'Creating a Digital Heritage Community' MOOC (massive open online course)<sup>16</sup> developed in collaboration with the Kaleidoscope<sup>17</sup> project, the EDC - along with Chalemie<sup>18</sup> - worked on a historical dance module examining the relationship between early and baroque dance in heritage settings and digital storytelling (using the CultureMoves digital toolkit, and especially the MotionNotes digital annotation tool which is also being extended as part of the WEAVE digital toolkit). The partnership between Coventry University (C-DaRE) and EDC in WEAVE builds on this exploration of the connections between tangible and intangible CH, considering relationships between dance as ICH, historical landmark settings as tangible CH, and how digital tools can enable deeper interconnections between these forms of CH.

The WEAVE Early Dance LabDay held online on 3rd December 2020 introduced participants to the work of the EDC, offered a sense of the various historical periods and dance forms that their work covers, presented their current online activities and the content they are providing for aggregation to Europeana. The LabDay also revisited the module developed for the MOOC, which provided an introduction to Baroque dance focused on its more formal couple dances, rather than its professional, stage and comedic (more virtuosic) sides, or its rich and various heritage of country dances involving sets of dancers. The LabDay explored how the EDC and the content provided to Europeana is opening up a conversation about the importance of historical dance and music because of its relevance for engagement in historic buildings and other CH sites. The LabDay also offered participants the opportunity to learn more about historical dance and to join a conversation on the ways in which archival material can be reimagined in a contemporary context.

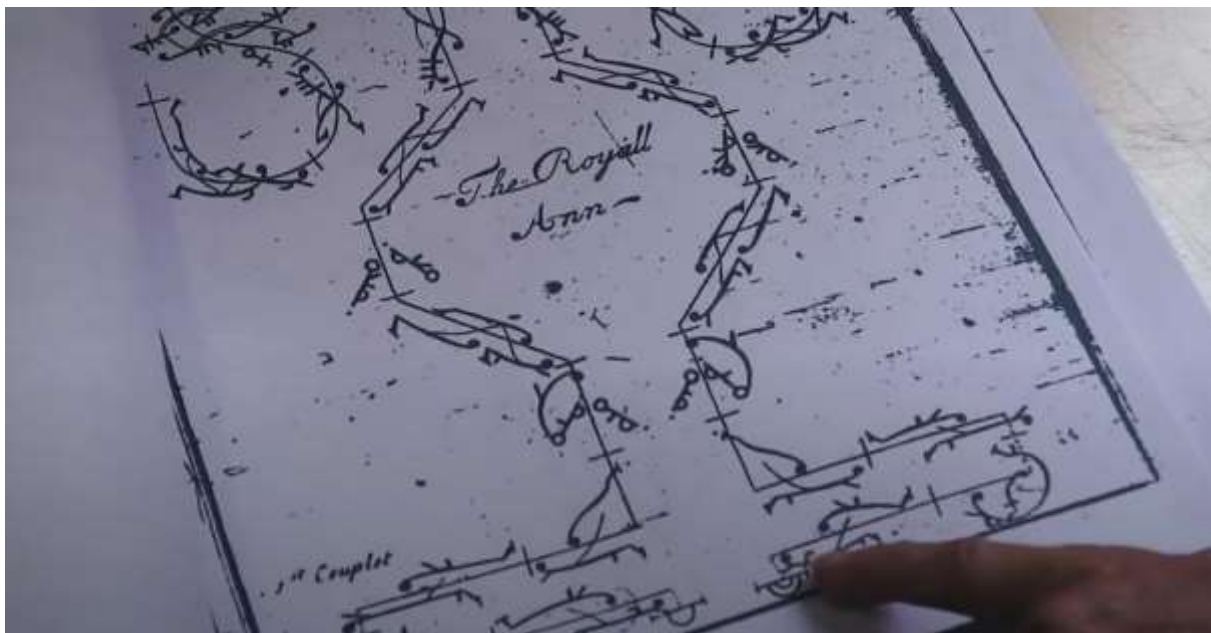


Figure 3: Screenshot from CultureMoves video showing Beauchamp-Feuillet Dance Notation, a form of historical dance notation. Credit: Early Dance Circle

<sup>16</sup> <https://www.mooc-list.com/course/creating-digital-cultural-heritage-community-edx>

<sup>17</sup> <https://pro.europeana.eu/project/fifties-in-europe-kaleidoscope>

<sup>18</sup> <http://www.chalemie.co.uk/>

Discussion during the EDC LabDay focussed on early dance as something of an ‘orphan’ and how the EDC hopes to give early dance an importance within public perception akin to that which early music has, explaining how research is important in raising the profile of early dance, a significant part of the UK’s (and Europe’s) CH. Early dance brings a sense of community to those involved: as the EDC’s website puts it, ‘it belongs to us all’ (Early Dance Circle, 2022 [20]). Further topics of discussion included the importance of dance as ICH in its historical context; especially the ways in which, as the EDC’s Sharon Butler explained, ‘social dances often embody the philosophical ideas, economic assumptions or unspoken attitudes of different eras. This is a major element within early dance, with social and even political implications and its development is linked with European geographical expansion and colonisation.’ Butler made the case for these elements being important to unpack in the contemporary socio-political context, highlighting the EDC’s recent project, ‘The Life and Dances of Ignatius Sancho (c. 1729 – 1780),’<sup>19</sup> which celebrates the life and dances of Ignatius Sancho.<sup>20</sup> The LabDay also explored how the EDC aims to engage the public through animating historical buildings (our tangible CH) with dance and endeavours to encourage a wider social participation in dance. Participants also spoke about the importance of the ways in which engagement with historical dance and building archives of historical dance can be supported by technological underpinnings through working alongside platforms such as Europeana and that with initiatives such as these, for historical dance at least, as the EDC’s Bill Tuck reminded LabDay participants, ‘the past is no longer a foreign country’.



Figure 4 : Screenshot from EDC video, ‘The Life and Dances of Ignatius Sancho’. Credit: Early Dance Circle

### 3.2 Reimagining heritage

During the ECQI 2022 Dream Team session, we offered participants time to watch video recordings documenting the PédeXumbo and Early Dance Circle LabDays as well as a *Dance Research Matters*<sup>21</sup>

<sup>19</sup> See the EDC’s Resources section on their website: <https://www.earlydancecircle.co.uk/resources/> and the video of ‘The Life and Dances of Ignatius Sancho’:

[https://www.youtube.com/watch?v=lOnjOprUWs0&ab\\_channel=EarlyDanceCircle](https://www.youtube.com/watch?v=lOnjOprUWs0&ab_channel=EarlyDanceCircle)

<sup>20</sup> Born a slave, Sancho went on to produce several collections of ballroom dances in the 1760s and 1770s. The EDC’s video includes reconstructions of some of Sancho’s dances by the Hampshire Regency Dancers and the Quadrille Club, together with arrangements of Sancho’s music by Green Ginger. The dances are discussed with: Meryl Thomson of Green Ginger who recently recorded the CD *Dances for a Princess*; Paul Cooper, a specialist in Regency dance and Sally Petchey, author of a recent book talk about the life and dances of Ignatius Sancho: *Dances for a Princess*.

<sup>21</sup> <https://www.youtube.com/watch?v=ZcvOeb7i3IM>

This video was made for the *Dance Research Matters* event hosted in May 2021 by C-DaRE (Centre for Dance Research), Coventry University, in association with the UK’s AHRC (Arts and Humanities Research Council), to act as a catalyst for positive change in the recognition and support of dance research. For further information on the event and wider campaign, see <https://danceresearchmatters.coventry.ac.uk/>

campaign video (2021) and a short dance film, *TRUCE* (2017)<sup>22</sup>. Then, we offered participants several question-prompts for collective discussion in the context of WEAVE’s approach to safeguarding ICH:

- What has emerged for you from watching the films?
- What stood out for you in looking at the case studies?
- When you watch the dance films, can you begin to see the potential of the dancing body as a departure point for opening up broader conversations?
- Have you ever considered embodied methods and approaches to your own research? What emerges from you with these?



Figure 5: WEAVE’s collaborative online Miro board at ECQI 2022 where participants could access LabDay documentation and offer collective thinking and writing around key questions related to the safeguarding of intangible cultural heritage practices

While there was a clear recognition that the LabDays are a way of the traditional and historical dance communities coming together to think collectively about how this heritage might be preserved and to share it more broadly, several interesting questions arose from our discussions. First, we can question the notion of ‘preservation.’ In a classic understanding, we often ‘preserve’ through representation and documentation. However, representation is inherently and inevitably ‘biased’. An alternative way is ‘re-enactment’, which is obviously a more active and participatory way of ‘preserving’ a tradition.<sup>23</sup> In a historical dance context, how does the re-enactment of historical dance influence our understanding of the past and our present relationship with heritage? There

<sup>22</sup> *TRUCE* (2017) performed by Trish Martin, directed by RosaSenCis Film Production Company: <https://vimeo.com/253139648>

<sup>23</sup> However it is important to note that even re-enactment is not the same as communities keeping their traditions alive by actually ‘living’ them. For example, when communities continue a yearly event and/or tradition, this is not ‘re-enactment,’ it is actually living the tradition.

needs to be an acknowledgement that heritage is living; it is not set in stone, fixed for perpetuity, but rather shifts and changes over time. It is not 'just' about the past, but about our present relationship with that past. As such, in considering the safeguarding and transmission of cultural heritage, we might think about dance as a medium rather than dance as a cultural product in itself. Perhaps the focus should be more on the movement as something that needs to be passed onto and transmitted to others, rather than on the history of that movement (which might only be part of the framing you can do to situate dance as intangible evidence and heritage). This links to the question of what we think is more important in sharing knowledge; preserving cultural heritage 'as it is' to inform future generations, or integrating cultural heritage elements from past and present to arrive at new interpretations of the same thing. This requires an openness to 'what it could become' under different conditions and in a different time frame. This essential question may point towards cultural differences in how we tend to deal with the preservation and safeguarding of dance traditions and ICH in general. Western traditions of re-enactment might lean towards the strategy of keeping the past alive through reproduction and restoration. Other cultures might be more interested in keeping the idea alive and reshaping it to provide a better match with contemporary dance traditions. In this particular line of thought, dancers acquire full ownership of the material and have the flexibility to creatively translate dance grammar into an embodied language of their own. In this sense, the cultural heritage reflex is less about preserving the whole 'product' (whole unit) but rather the individual 'grammar' of the dance. This grammar can be transmitted, embodied and refigured in new and creative ways; here, dance is akin to a living language, shifting and evolving over time, a palimpsest of traces of past traditions and forms yet ever developing. As such, moving, dancing bodies become bodies of living heritage<sup>24</sup>. We might think of re-imagining a historical dance form rather than re-enacting it (Crawley 2021 [21]), and yet, perhaps re-enactment is a necessary first step, for can re-imagining ever be possible without re-enacting?

During the WEAVE ECQI2022 Dream Team session, the sharing of the dance film, *TRUCE* (2017), that draws on contemporary and flamenco dance vocabularies, was used as an example to explore elusive questions of authenticity and what 'reimagined' dance vocabularies might look like. An adaptation of choreographer Trish Martin's dance work *Strivings between me and the other world*,<sup>25</sup> this dance film plays with themes of identity and belonging. It explores W.E.B. Du Bois' (1913 [22]) writings of double consciousness and his struggle to synthesise an integrated self out of two conflicting identities; one formed by the individual and the other through a racial lens. Choreographic decisions, coupled with the editing, begin to open up questions about ownership. The film focuses on parts of the body and rarely do we see the whole body in a shot. The decision to focus on the body's extremities is linked to an attempt to offer the viewer a sense of a disjointed dancer struggling to string together a movement phrase. The focus on the limbs is also an attempt to reflect the use of the flamenco hand gestures, and yet this movement is somehow disrupted through no longer being performed in a *traditional* manner and edited with sharp and short cuts. This new contemporary flamenco vocabulary performed to non-flamenco music that emerges in *TRUCE* therefore begins to challenge accepted norms of what flamenco dance grammar should be. As such, *TRUCE* plays with different dance grammars, with the video editing process also determining further shifts and re-interpretations of the dance form.

A further pressing question centres around the ownership of ICH and of widening access to and inclusion within that heritage. The phrase 'this belongs to us all' from the EDC Labday formed a contentious starting-point: this phrase is a strong indicator for distinguishing what is worth preserving as CH, what is not, and for whom, and by whom, it is preserved. Selection is a key aspect of heritage definition. The notion of 'all' is problematic as it constantly changes as constituent communities change. There is also the important question of who is not included in the 'all'. At the

<sup>24</sup> Although now well-trodden in dance scholarship, the 'body as archive' discussions (e.g. Lepecki, 2010 [17]) may be useful to consider in relation to this notion, as may wider debates on dance transmission, reconstruction and reenactment (cf. Main, 2017 [23]).

<sup>25</sup> Original piece developed and performed for the 2014 Flamenko Coventry Festival coordinated by Rosa Cisneros.



EDC LabDay, for example, there was some discussion of the context of (British) Empire in the development of dance traditions - which bodies have been included, which bodies have not - and a clarion call that there should be acknowledgement of these absences and/or appropriations.<sup>26</sup>

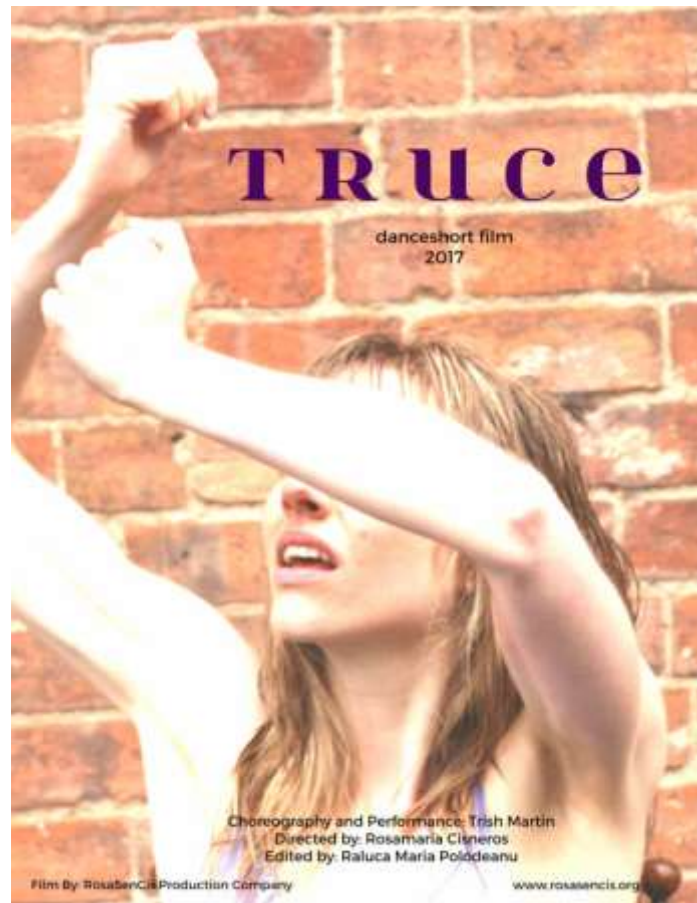


Figure 6: Official poster of the dance short TRUCE (2017) directed by RosaSenCis Film Productions



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<sup>26</sup> Such questions may point to further thinking about inclusive heritage discourse, which has been put in opposition with so-called authorised heritage discourse (cf. Kisić, 2016 [24]). These concerns also fall within the wider current context, particularly in institutional cultural heritage, of 'decolonial' approaches to heritage.



*Figure 7 & 8: Stills from TRUCE (2017) that highlight the film's focus on the limbs and specific body parts*

#### **4 CONCLUSIONS**

This paper has outlined the value of the WEAVE LabDay methodology as a participatory and bottom-up approach that enables cultural communities to take ownership of the safeguarding, dissemination and (re)use of their CH. In presenting the methodology in theory and in practice, offering the examples of the PédeXumbo and Early Dance LabDays focussing on ICH/dance practices, we hope to have demonstrated how the democratic and non-judgemental 'brave space' of the LabDay can be a place for difficult and sensitive questions concerning CH to be raised, to collectively reflect upon challenges in safeguarding marginalised, previously underrepresented and at-risk CH and to work together to think through potential solutions to these challenges. In the particular context of the WEAVE project, the LabDay methodology provides an opening whereby the cultural communities themselves become drivers for innovation in the digital transformation of tangible and intangible CH. The 'LabDay in action' format of the ECQI2022 WEAVE Dream Team session similarly enabled an open space to examine, discuss and reflect upon the WEAVE LabDay methodology in terms of capacity-building for digitising ICH and dance. It raised key themes and questions such as the value of negotiating the presentness of heritage and the past of history, the tensions between reenacting, reconstructing and 'reimagining' historical dance forms, and how digital technology might aid with disseminating traditional and historical dance forms. These bigger questions themselves are situated within current 'decolonial' approaches to heritage within which WEAVE's work can be seen to be operating, especially in how the project is working with previously marginalised communities to take up new physical and digital space in terms of the safeguarding, dissemination and re(use) of their CH, de-centering those dominant, hegemonic narratives that have up until now assumed the centre of heritage discourse.

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# **ANALYSIS OF MULTI-LAYERED ASSESSMENT DESIGN FOR ONLINE ART CLASSES USING GROUNDED THEORY**

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## **Abstract**

How can online education be strengthened in art subjects now that online education is no longer in the distant future? How do art educators develop assessment structures for online and hybrid classes? This research examines the assessment frameworks for online art studio and education classes through our experiences as art educators. We have worked at U.S. universities teaching art education courses for art education majors and non-majors, including elementary education and non-education majors. We have been teaching online or hybrid formats of art education classes since 2007 and 2011, respectively. However, in the midst of the pandemic, we had to switch all of our courses online more seriously. Although some of our courses have returned to an in-person format, we still utilize online and in-person hybrid formats in the design of our classes. Based on our long experience, we offer an assessment framework for online art education classes.

Keywords: online education, learning community, assessment design, grounded theory

## **1 INTRODUCTION**

COVID-19 has affected educators by forcing them to confront difficulties such as the sudden transfer of academic activities to online environments. Although there are advantages to online learning, such as flexibility in learning and an emphasis on mobility, students can experience difficulty and isolation when they participate in online learning activities due to limitations in communication and a lack of opportunities to have a social presence. As art educators, we have taught online-only, face-to-face-only, and online–face-to-face hybrid formats for several years in higher education. Based on our long teaching experiences and updated experiences during the pandemic, this study examines how we designed our courses to foster learning communities using a multi-layered assessment structure. Faced with the challenge of how to enhance students' participation and prevent students from feeling isolated, we found solutions in the learning communities. This study examines our efforts to build learning communities online through two main strategies: (1) creating together and (2) sharing and reviewing together. Besides working together on strategies, we organized our classes so that instructors and peers could evaluate student work in multiple ways. In the following section, we examine prior research on learning communities and assessments for online education classes, including art studio and art education areas.

## **2 LEARNING COMMUNITY AND ASSESSMENT IN ART EDUCATION**

Educators have investigated several strategies for successful online education [1, 2, 3, 4]. In this current study, we concentrate on two areas of online classes: learning communities and assessment design to enhance students' learning.

## **2.1 Learning Community for Students' Learning**

As educators who teach in online and hybrid learning environments, we have confronted situations in which students are loosely connected to their learning and other students. Even though the pandemic may have worsened students' learning effectiveness online, students losing interest and motivation in learning and making connections with others is not rare. With this perspective, we tried to find solutions by building learning communities and creating a systematic assessment format. Lively et al. [5] also observed their students had limited connections to other students and faculty and felt isolation and alienation in online learning environments. To overcome these limitations, they argued the importance of the concept of "experience together" and suggested that students could follow the pace of their online classes by sharing their experiences and working on collaborative projects. The strengths of collaboration in promoting student learning have been discussed in other research [6, 7]. In Thomas et al.'s [7] research, a strong learning community highly impacted students' learning through enhanced learning intentions and better understanding of the content. By having the same inquiry or problems to solve, students can share emotions and the same learning purpose, increasing their learning motivation [8]. Barber's study [9] also supported the impacts of inquiry-based learning through collaboration in online learning. Using digital technologies related to online learning, students experienced, created, developed, and expanded the problems in communities composed of collaborative learning teams.

## **2.2 Assessments in Art Education and Online Learning**

Studies have also discussed strategies for assessment in online learning. The assessments include formative and summative assessments using various tools such as exams, informal feedback, writing assignments, and discussion boards [10, 11]. To increase students' motivation, well-designed assessments are needed in the online interface. Jeong et al. [12] pointed out that formative assessment in online settings could increase students' learning efficiency and teaching. They found that formative assessments influenced students' performance and improved assignments through feedback [12, 13]. Informal assessment also impacts students' learning online. According to Rausch and Crawford [14], informal assessments in discussion boards allowed students to examine the class topics in-depth, enhancing students' content knowledge, and led to cognitive learning development.

Despite the importance of assessments to students' learning, assessments for online art education have been less researched. In the realm of art education, assessing students' artistic works is complicated because of the nature of art. As Cannatella [15] argued, assessment in art is approached differently than other subjects because "it is not obvious how one precisely measures and ranks expression, subject matter, medium handling, rhythm, narrative, form and judgement in art" [p. 324]. In spite of this, studies have discussed various assessment strategies. According to Mattson [16], art assessments could utilize digital tools, such as a digital camera and photo editing tools, in online environments. In terms of assessment format, Davis-Soylu et al. [17] suggested the concept of assessment assemblage. Portfolios in art education classes could collect formative feedback at different stages of art creation, self-assessment, and peer feedback, and allow students to track their progress. Studies have also investigated the use of digital technologies and online-focused evaluation strategies for online learning environments [18, 19]. In this vein, this study seeks to delineate teaching methods and assessment design for online art education.

## **2.3 Research Methodology**

This study examines the online and hybrid formats that we employed in our art education and art studio courses. We have both taught art education classes in the United States and have experienced online course content development, course design, and teaching via various delivery formats including in-person, hybrid, and fully online environments. This study concentrates on art education courses for preservice and in-service art education teachers. Although art education researchers have emphasized that assessments for online art classes can enhance students' knowledge, develop

collaboration and communication skills, and solve problems, limited research exists that examines online art education assessment [1].

To conduct this research, we adopted grounded theory and qualitative content analysis methods to analyze data including students' responses, teaching materials, and our own narratives as instructors. Charmaz [20] has identified grounded theory methods as "consist[ing] of systematic, yet flexible guidelines for collecting and analysing qualitative data to construct theories from data themselves" (p. 1). Thus, through grounded theory methodology, such "unaddressed" circumstances can be described effectively [21]. From spring 2020 to spring 2022, we regularly met via Zoom every other week and collected meeting notes in written form to share our experiences and knowledge on teaching online art education classes. Through an analysis process grounded in the data, we defined categories [22] based on our own collected voices and the students' documented experiences, which allowed us to deliver the details of our teaching phases and course design structures [23, 24].

### **3 OUR STRATEGIES FOR ONLINE CLASSES**

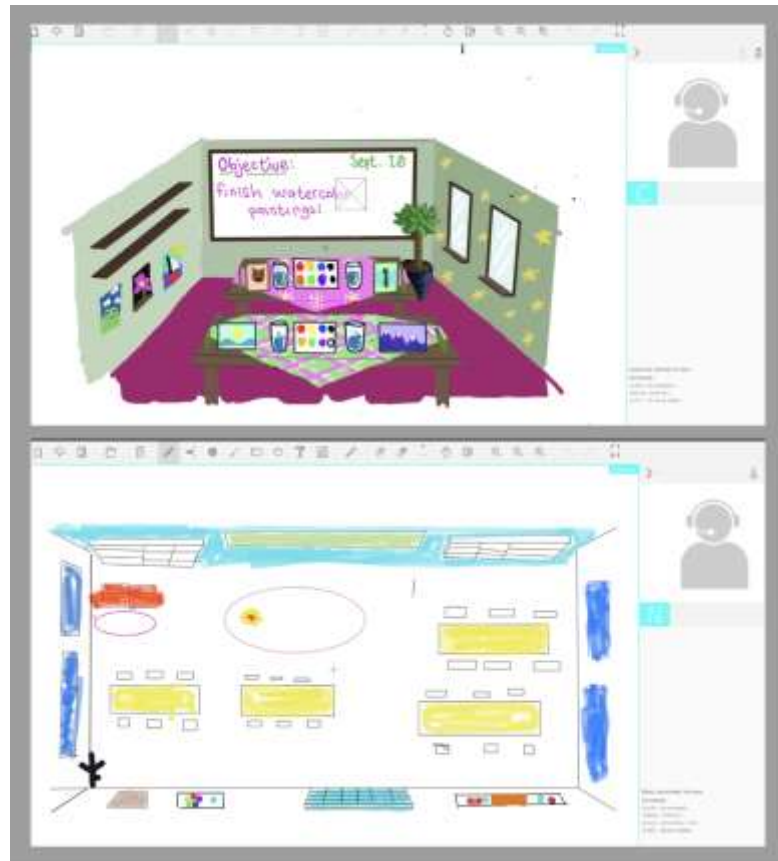
Students who took our online classes stated they could concentrate better in class when they had opportunities to interact and communicate with others. By becoming a member of a learning community in an online setting, the students were able to engage in social interaction and communication that promoted positive emotions. In addition to listening to lectures online and engaging in individual learning activities, students had group projects and discussions in virtual space. By participating in project-based group work, students could access scaffolded learning and support each other as they shared knowledge and integrated what they learned. We categorize our strategies into two areas: creating together and reviewing/sharing together. In the following sections, we share how we designed, created, and reviewed/shared together and how we assessed the students' works.

#### **3.1 Creating Together and Assessments**

Although art studio classes generally focus on individual artistic creation and development, we redesigned our courses to include more collaborative art projects. With regard to collaborative art creation, we suggest the following two painting applications: Draw Chat and Aggie (Fig. 1). We also expanded the realm of collaborative art creation to include researching with online community members. For example, a group of three or four students could develop art projects on a variety of artistic themes, including community-based art, artists, art genres, and culture (Fig. 2).

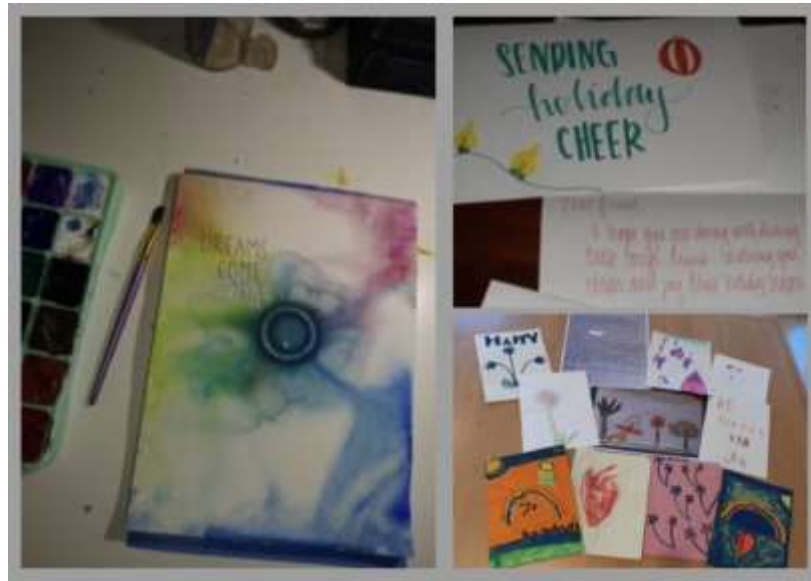
**Figure 1**

*Students' collaborative work using Draw Chat and Aggie. A group of three or four students created a dream art classroom together synchronously and asynchronously. One student created a blank white page and shared the link with the group members. They added details to their dream classroom using their mobile phones, computers, or tablets.*



**Figure 2**

*Students' collaborative project to help the elderly overcome isolation during the pandemic. Students created poster cards, shared them virtually, then sent them to elderly individuals in their communities.*



The students presented several of the steps they took in their works in progress to show how they designed and developed their artworks. In addition to learning about art creation, students shared with others any difficulties they experienced with the creation process, tools, and art methods, discovering solutions together. To evaluate this collaborative art creation, we employed a three-layered assessment structure: (1) small group feedback, (2) whole class feedback, and (3) instructor to group feedback. First, after completing the collaborative creation, each member shared feedback on their co-work artworks with the other members of their group via synchronous group rooms and an asynchronous learning platform. We set up a system through the learning platform that allowed individual groups to use discussion boards and assignments sections to share feedback on each other's processes of creating or to share challenges in art creation. Second, for whole class feedback, students were required to present their art creation process to the entire class to get feedback from other students using the different discussion boards in the learning platform and on Padlet. Each group posted about their collaborative artworks at different stages, allowing the whole class to leave feedback.

Last, at the instructor—group level, we provided students with feedback and evaluated the collaborative art creations. We were able to provide informal assessments by visiting synchronous Zoom breakout rooms, group discussion boards, and Padlet pages. Formal and summative assessments regarding completed artworks were provided after students finished their creations. While the art education classes included different areas of art, assessments were required in various stages.

### **3.2 Reviewing/Sharing Together and Assessment**

Many art educators have adopted synchronous meeting platforms for distance learning. Students in our online art studio courses appreciated sharing and reviewing their work with classmates, which helped them feel a sense of bonding and support from other students and the instructors.

We recognize the synchronous—asynchronous hybrid format as being significantly effective in students' online learning. After submitting images of their artwork and reflection papers, students can provide feedback to others asynchronously (Fig. 3). Instructors can guide the review process by

providing proactive questions, summarizing, and forming a precise rubric for students to review others' artworks in synchronous and asynchronous formats (Fig. 4–6).

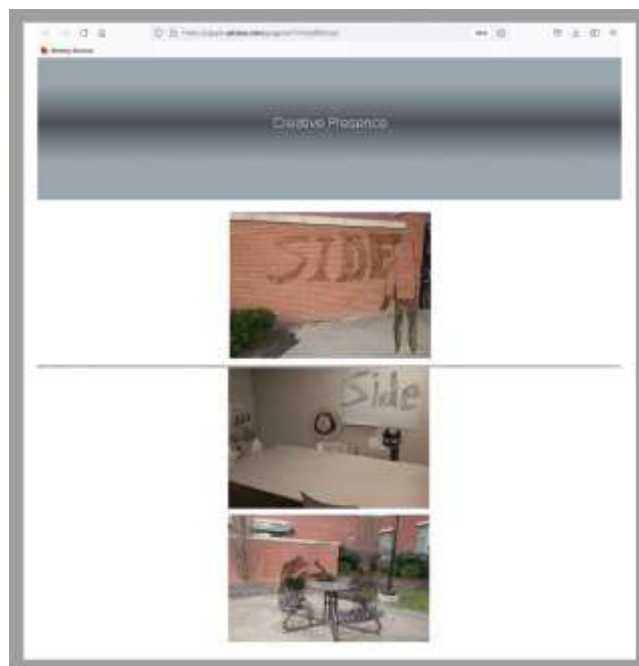
**Figure 3**

Students aesthetically presented their works on their own webpages created with one of the following software programs: Adobe Spark, Wix, Weebly, and Padlet.



**Figure 4**

*Under the theme of "Critically Examining Every Day," students created an art piece about their own everyday life experience and shared it in the form of a web page made using Adobe Spark.*



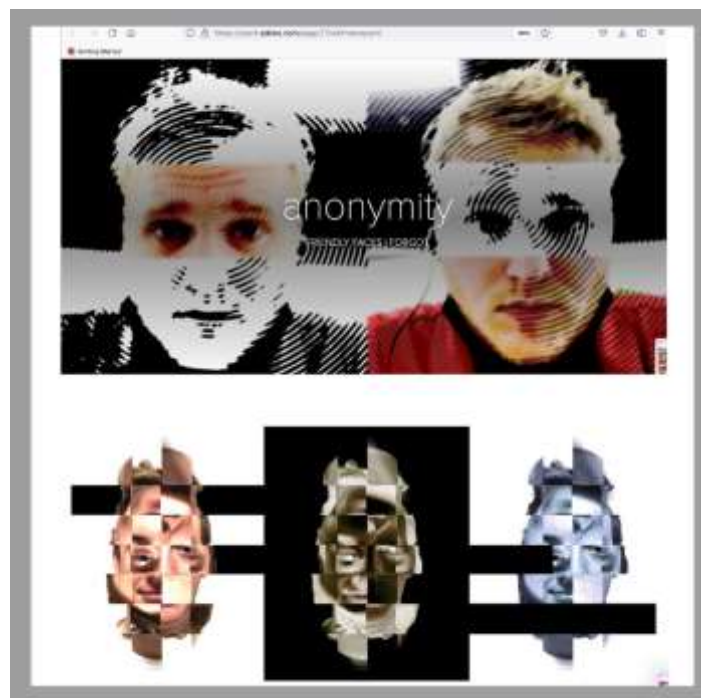
**Figure 5**

Another example of a student webpage creation on the theme “Critically Examining Every Day.”



**Figure 6**

Another example of a student webpage creation on the theme “Critically Examining Every Day.”



The assessments for art creation concentrated on the creative process and completion of the art creation. The assessments for reviewing and sharing were aligned with reflection papers, critiques, and appreciation. We also developed a three-layered assessment structure here: (1) small group feedback, (2) whole class feedback, and (3) instructor feedback and assessment.

For the first assessment layer, we set up a formal and informal small group feedback system. The formal feedback went through the learning platform's system. For example, we could set up the system so that one student would be automatically assigned to three other students' writing assignments. This student could review and assess these students' submitted assignments. Informally, students presented within their small groups and presented their reflection writing and art critiques during gallery talks.

In the whole class assessment layer, students mainly utilized informal feedback. As Fig. 3–6 show, we adopted digital technologies and web page creation tools for students to share and review processes with the whole class. Students had presentation sessions to explain their web pages and websites, and other students were required to give feedback verbally and in written form.

During instructor assessment, we provided feedback on and evaluated students' reviewing and sharing processes at different stages. For example, before holding the final presentation session, we interacted with individual students to informally check and assess their work through formative evaluation methods. Students' presentations were also evaluated in summative ways based on rubrics that were aligned with course objectives. For example, in the course on art education for elementary curriculum, one of the criteria in the rubric was "Art teacher candidates are committed to the design and presentation of rich lessons as demonstrated by a unit of study and presentation that exhibits a developing understanding of content pedagogy."

#### **4 MOVING FORWARD**

A critical aspect of online instruction is to clarify the role of the teacher before conducting class activities. By becoming a facilitator instead of a lecturer, teachers can foster student-centered learning and improve the quality of student engagement. In organizing asynchronous student feedback sessions, we also prepared our students by offering clear guidelines in the course syllabus on using good "netiquette." For example, students were instructed to be professional and careful in their online interactions, focus on one subject per message, and direct comments to fellow students rather than the instructor. On writing feedback comments about their peers' artworks, we guided students to go beyond the "I like it" statement and provide at least several sentences explaining how they responded to the art piece and support their opinion with details. Art teachers can easily implement flipped learning in their class by mixing asynchronous individual activities and synchronous class sessions.

As introduced above, some great instructional technologies are available for use in virtual art teaching and learning. Of course, art teachers are encouraged to focus on teaching, supporting, encouraging, nurturing, and connecting with their students, rather than only drawing on ever-changing technologies. With this approach, students can confidently learn and grow together in virtual art studio classes. Overall, this study considered online art classes to encourage students' engagement through two methods: creating together and reviewing/sharing together. We found that course designs with multi-level structures can help construct active learning communities and effective assessments in online formats. Future research could examine online teaching structures in other education areas to engage students better and meet students' needs. In addition, based on these findings and framework, we encourage other online educators to be inspired in their design of online courses and to develop assessment frames and rubrics.

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# THE STORYMAPPER: EXPLORING A CHAIN OF ENGAGEMENT FOR PARTICIPATORY STORYTELLING AND PLACE MAKING

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## Abstract

The participatory methods used in place making and planning practices in neighborhood development are of longstanding academic interest. The increasing complexity and dynamics of socio-material entanglement have led to the development of several new digital and tangible methods to engage citizens through storytelling techniques, recognizing the link between place attachment, identity and storytelling. Yet, like more traditional participation methods, these interventions raise questions about engagement levels and inclusivity, as they often struggle to set up ongoing engagement or include citizens less eloquent or active in civic life. The StoryMapper project aims to explore a relational public participation approach that breaks with the traditional inform-invite-discuss participatory research cycles. Participants are invited to share visual stories on a digital platform by engaging directly with the physical environment through drawing (“morphing”) on a tangible frame, and expand this engagement to their social network. We investigate how the community dialogue unfolds when such a ‘chain of engagement’ is introduced into a larger participation trajectory in three ways: by continuing the visual storytelling between participants, by circulating a tangible tool or by continuing the dialogue on a digital interactive map. In this presentation we reflect on data collected during a study that engaged citizens in the re-appropriation of their neighborhood church in a village in Belgium. This presentation first explores how this relational approach was plugged into the larger participation process initiated by the municipality, and second reflects on the potential and challenges of combining digital, tangible and social elements in storytelling for place making.

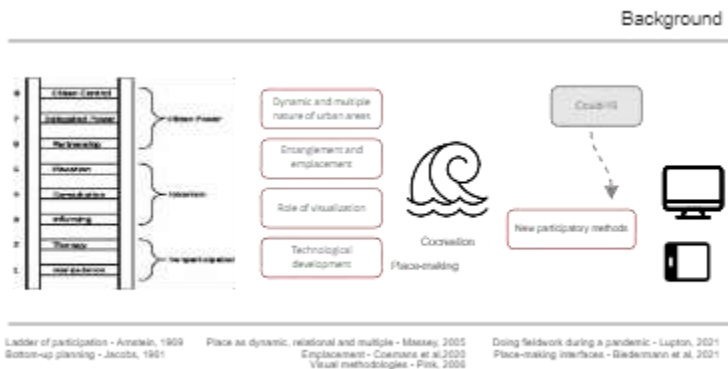
Keywords: participation, storytelling, living map, place making

## 1 INTRODUCTION



This paper reports on an ongoing research collaboration between two PhD researchers from sociology and human-computer interaction respectively, with a shared interest in engaging citizens in urban transformation.

## 2 BACKGROUND



With an estimated 55% of the global population living urban areas with predictions up to 68% for 2050, the quality of our urban fabric has a significant impact, as research shows that there are a range of benefits connected. The importance of involving citizens in the neighborhood transformations has been recognized since the 1960s. Activists, academics and planners have been lobbying to bring citizens to the decision table. Henri Lefebvre's idea of the right to the city was a response to this movement. It suggests that citizens do not only have a right to dwell, appropriate and claim their freedom in the city, but also to participate in the making of the city.

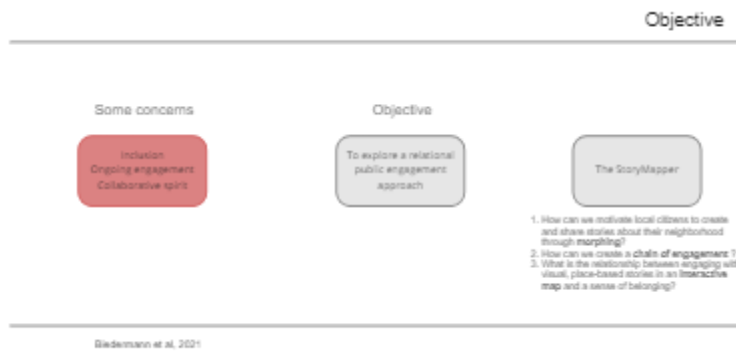
Fundamental work was also done with the bottom up planning of Jane Jacobs in Greenwich village fighting Robert Moses's master development plans (REFERENCE), or the ladder of participation of Sherry Arnstein (1969) that stressed the importance of power in decision making. More recently people as Cardullo and Kitchin, Geekiyana and others have further advocated for community involvement in urban transformation, which have led to a number of more recent approaches – place making, co-creation and co-design. In many urban transformation projects, citizen engagement is more pragmatic and instrumental than transformative (Cardullo, year, additional references). Citizen engagement levels may vary across projects (HIER REF NAAR PARTICIPATIE LADDER). Despite an increase of interest in participatory research approaches local communities are seldom fully included in decision making processes (geekiyana).

Since the (geef periode weer vb. Eighties, nineties....) here is a renewed research and practice interest in participatory approaches, in the form of co-creation, co-design, place making and smart cities. In research on participatory methods a few trends that have influenced how the urban participatory practices and research have evolved. Firstly, the understanding of place has been understood as relational, dynamic and a sight of plurality, recognizing the complex nature of place in participatory research. Secondly the spatial turn and the growing understanding of the social and material environment as entangled resulted in a more central role place takes in research (Coemans). The sensory turn has triggered an increasing interest in sensory perceptions next to the cognitive and verbal, which led to an increase of e.g. arts based and visual methods in various disciplines (Pink). Moreover, technological development has transformed how researchers engage with their participants (Biedermann?). Leg uit waar die technological development uit bestaat om een binding te maken naar de volgende zin.

These factors impact how researchers engage with changing neighborhoods, . complement or provide an alternative for more conventional methods used in participatory research such as workshops, interviews focus groups, etc. These new methods often make use of digital and hybrid methods, computer, social media, tangible interfaces (Biedermann, year). Given the recent pandemic context, digital ways of engaging citizens in research have rapidly gained importance in many disciplines (Lupton).

### 3 METHODS

#### 3.1 Objective



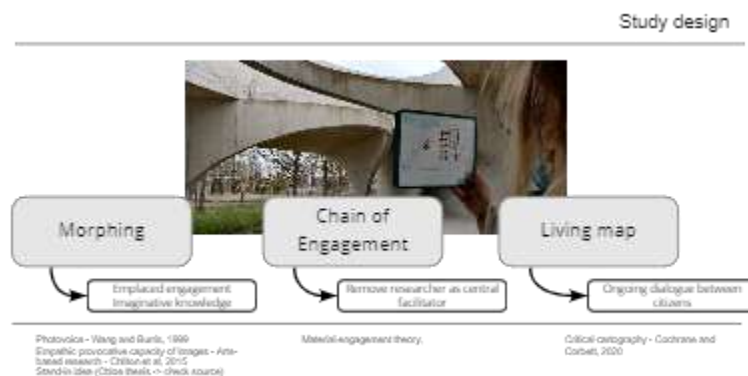
D Virtual and more traditional participatory methods for place-making face similar challenges . A first challenge relates to inclusion in participatory process in the virtual sphere. The fast pace of digitalization has widened the digital divide between whom and whom??? Some groups of citizens do not have stable access to digital media, which excludes them from participating in the digital process. Apart from physical access an Dijk identifies three more consecutive elements that impact on the digital divide; motivation, skills and usage 0.

A second challenge relates to the ongoing effort of engagement. In addition, the lack of an emplaced focus in the digital and remote spheres, complicates the generation of a collaborative.

In an attempt to explore how to tackle these challenges we set up this collaboration to explore a **relational public engagement approach to place making** through the development of a participatory place making tool called *the Storymapper*. *It uilds on concepts such as storytelling, mapping, material engagement theory, visual thinking and arts based research and considers place as something dynamic and relational*. The leadquestions of the project are the following:

1. *How can we activate local citizens to create and share stories about their neighborhood from a multimodality perspective*
2. *How can we reach citizens that normally do not participate in governed consultation rounds ?*
3. *What is the relationship between engaging with visual, place-based stories in an interactive map and a sense of belonging?*

#### 3.2 Study design



### 3.2.1 Activating citizens

To activate different groups of citizens and increase involvement with the process we develop a StoryMapper. The storymapper is a transparent canvas in a frame which allows participants to augment the environment on the frame, triggered by a place-based question. A picture of the frame is then sent to a digital map through a QR code.

The design of the StoryMapper is built up of two main elements:

#### *Morphing*

The idea of morphing is to tell a place-based story by augmenting the environment directly. We do this by drawing or creating a scenario by use of Lego through a see-through frame. Afterwards, participants send in a geo-referenced photo of the frame through a digital application with a few questions.

The idea behind is that by engaging directly with the physical environment the inquiry delves into the multiplicity of place-based meanings among a community while at the same time opening up a critical dialogue, using the principles of critical consciousness of Paulo Freire. Builds on the idea of on one hand creating consciousness and on the other hand that images have the capacity to provoke empathy (ABR).

Open up the dialogue with the environment. By contextualizing, eye for the agency of the place itself + place meaning and sharing of voice through visual means + empowering to reimagine and take up a role in shaping this desirable future. The use of visuals

This builds on principles of arts-based research and photovoice. This direct engagement with the environment

. – material engagement theory + refer to Kirsh thinking with external representation

Once participants made their contribution, participants scan the QR code on the instructions that brings them to a webpage where they can submit their photo. An informed consent checkbox and some additional questions are then part of the process to send in the photo.

#### *Mapping*

The contributions are sent to a digital map which allows to further the discussion online. Through a map on padlet, participants can find the various contributions and leave reactions and comments. Moreover the platform allows participants to contribute beyond the StoryMapper. Building on principles of critical cartography to disrupt the status quo (REFERENCE), through the living format that is both dynamic and in the hands of citizens.

### 3.2.2 Making participation more inclusive

*To secure participation of a broad variety of citizens, we experimented with the idea of creating a 'Chain of engagement'. The central premise is to remove the researcher as a central facilitator of the dialogue. Once participants send in their visual contribution, they hand over the tangible frame within their network. This to spark a dialogue between citizens, with the idea that this could reach beyond the 'usual suspects'. This way we remove the researcher as the central facilitator of the process. The passing of a tangible tool and not just a virtual link, creates this emplaced connection.*

### 3.3 Setting



With a decline in the active practice of religion, many churches have fallen into disuse in Flanders, resulting in changing policy of both the Flemish government and the catholic authorities (REFERENCE BOUWMEESTER OF PARCUM?) and an active effort to consciously reconsider the use and repurpose this extensive heritage. The municipality of Herent undertook the similar task to follow the guidelines to produce a 'church plan' and decide which churches would be kept in use and which would be sold off or reconverted. This case focuses on one of the municipality's churches, the Sint-Laurentius church of Veltem-Beisem which was no longer used for worship. In collaboration with the diocese, the local church authority and the center of expertise for religious and cultural heritage, the municipality started the formal process to withdraw the church from worship and hand over to the municipality for community use. As part of this process, the municipality set up an engagement project to work with the community to collect ideas, create a vision and pilot a community council to govern the community center. Given the cultural sensitivity of the building, the municipality sensed the necessity to run this transformation in a truly participatory way. In a first phase, the trajectory collected ideas through a playful, pandemic proof and emplaced survey: in three wooden see-through mini churches spread throughout the submunicipality, citizens could share their wishes and ideas about the future of the building through a simple form or on an idea board. In a second phase, these ideas were clustered and discussed in various workshops with stakeholders and citizens. These workshops resulted in a set of initial guidelines regarding the use of the building. In the third phase, a pilot council was established among citizens to manage the building during the first months of piloting the building as it was opened up for use by various organizations and stakeholders within the municipality. It was at the level of the initial idea collection that we plugged in the StoryMapper in this project.

A community church can be an iconic symbol in the strong link between place and identity 0. Therefore, the repurposing of this buildings touches upon the strong and varied memories and emotions among citizens. Gerber and colleagues indicate that words might be insufficient to express these inner emotional, cognitive, bodily and spiritual experiences and propose art-based methods to express this preverbal knowledge 0. The StoryMapper makes use of this idea by inviting participants to express their stories in an easy, visual way that connects directly on the environment.

### 3.4 Methodology



We plugged in the StoryMapper research project into the larger participatory trajectory in the first phase of initial idea collection. Therefore we launched two pilots. In the first we launched four frames with the instructions for independent use with the invitation to share ideas about possible functions and uses in and around the church. The second pilot was a 1-day village festival in and around the church, where the inquiry centered around stories of the past. In this proceedings we discuss a few initial observations and reflections on this pilot, specifically on the unfolding of the further dialogue.

### 3.5 Findings

#### 3.5.1 *The dialogue with the environment – the morphing*



Some participants showed a reluctance to draw. When initially handing out the frames, many showed a willingness to share stories verbally but some citizens refused to draw or asked to draw if for them arguing they cannot draw,. In the literature on arts based research, this is a known challenge: the standard idea of 'art' is often based on mimesis, that it is as close to reality as possible and that way aesthetically pleasing. In a second phase we therefor piloted the use of Lego as an alternative, aware of the restraints this puts on the participants.

The contributions showed that some participants used the frame as a white sheet of paper, not making the emplaced connection to the environment. The augmentation is something people are not used to. To address this we made some tweaks into the instructions.



### 3.5.2 The dialogue with others– the chain of engagement



For each pilot, we started with 5 frames and attached an invite to pass it on until a certain date, when it was to be returned at a local shop. With the first pilot, one frame didn't make it back, while we recovered 3 frames that were left behind during the second 1-day pilot. The longest chain we managed to set up was 6 contributions, of which the first two were done in collaboration with a researcher, so 4 passings autonomously. This shows that the idea is still not fully operational: the chain is only as strong as the weakest link: if a participant does not pass the frame, the chain is broken. We are addressing this by starting with multiple frames, select various gatekeepers to start the chain and communicate about the project within their circles, communicate about the project and link it with the larger project and organise a contest.

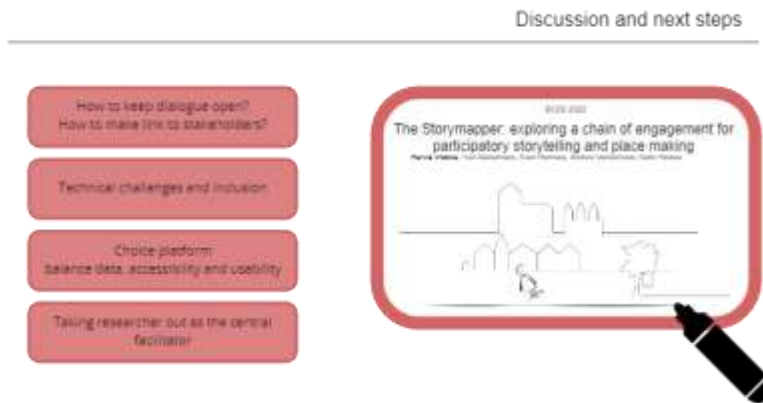
1. Reluctance to pass it on - participants expressed that they could not give the necessary instructions to the next person about the technicalities.

### 3.5.3 The digital dialogue – the living map



The contributions through the webpage are then transferred to the living map (at this pilot stage still by the researchers) For this we used Padlet, an easy digital bulletin boards that allows a cartographic layout. It moreover is very easy to use and does not require a login. Citizens can leave comments and reactions. - *SHOW LINK and the other contributions* We noticed that the dialogue continued beyond the tool itself and the platform was appropriated as citizens pinning other photos to the map. Of the total of 28 contributions, about 6 were not made with the storymapper but were other photos.

### 3.6 Discussion



This brings us to some final points that are still open.

1. Choice of platform → open access, usability, functionality, data. Idea to take researcher out and allow direct input in platform - but then what with the additional data?
2. Technical challenges - sometimes people do not manage to send a photo in through the qapp as we noticed some frames with contributions of which we did not receive a photo.
3. How to keep dialogue open? How to make the link to stakeholders. Next step use the living map.
4. Initial idea of inclusion – do we reach more citizens that normally wouldn't participate? – insufficient data to draw conclusions.

In next project, splitting up the different steps: we would like to further test out the individual elements individually: the morphing as a way to interpret data collected through photovoice in an emplaced and participatory way, collecting stories through a chain of engagement through visual media (photo or video) with a tangible token that is passed around and the living map to continue a dialogue on place-based stories.

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## SUSTAINING LIFE ON EARTH: ARTS-BASED RESPONSES TO THE LIVED EXPERIENCE OF COVID-19

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### Abstract

This paper describes the journey of a group of six international arts-based researchers who convened in 2019 at the ECQI for a Gamechanger event. The goal was to create a transdisciplinary and transglobal group advocating for the visibility, accessibility, and valuation of Arts-Based Research (ABR). The mission was driven by the desire to contribute to the understanding of underlying beyond-words human intersubjective phenomena and resulting collective behaviors that influence our world but elude more traditional research methods. Conceptualized within an historical and contemporary socio-political context of turbulence, oppression, and inequity, the aspiration was that ABR might transcend the usual rhetoric exposing the trauma and toxicity while enhancing empathic, compassionate, and meaningful social discourse essential to creative reformative social justice.

Thus, the Arts-Based Research (ABR) Global Consortium was formed. With the formation of our consortium and the beginning of the COVID-19 pandemic, we decided to begin our first research project "Sustaining Life on Earth: Arts-Based Responses to the Lived Experience of COVID-19", which was initiated in 2020 and completed in 2022. Nineteen individuals volunteered to participate as co-researchers, alongside the six member core team, submitting their arts-based and narrative responses to the project. The core team guiding the project collected and organized the submissions while simultaneously entering into an immersive, iterative, dynamic arts-based and dialogic process with the data and each other. In these immersive processes, we considered *a priori* themes of emotional impact, social framing, and aesthetic power of the art and narrative data as well as opening to emergent themes. Analysis included narrative and sensorial-based coding, responsive art making, collaborative and individual multi-genre memos, and reflections on all submissions. The final result of the project is an arts-based and performative piece using video and interactive gallery venues. The arts-based results of this project captured the sensory, embodied, and emotional experiences of the evolving phases of the pandemic which resonated with the co-researchers and multiple audiences. These phases include initial anxiety and panic; reflection and creativity; and resilience. The results of the project were presented in arts-based form at the ECQI in 2022. In this presentation, we invited attendees on our journey to walk with us through the innovative conceptualization, construction, methodological practices, collaborative and individual reflections, analysis, and final synthesis processes of this project.

## Background

Formed in 2019, the ABR Global Consortium includes a core team of six international scholars and two student research assistants as well as 70+ members from around the world. The goal of the consortium was to create a transdisciplinary and transglobal group advocating for the visibility, accessibility, and valuation of arts-based research (ABR). The philosophy of the ABR Global Consortium is based upon the premise that ABR offers us an entry point into inquiry that transcends typical rhetoric, allowing access to unconscious aesthetic pre-verbal spaces of knowledge which often drive our behavior. As such, ABR philosophies and methods are aligned with and dedicated to the in-depth study of the invisible multi-dimensional phenomena and values essential to understanding the individual and collective human condition, motivations, and behaviors inaccessible through more dominant research traditions (Barone & Eisner, 2012; Eisner, 2008; Leavy, 2020; Gerber, 2022; Gerber et al, 2020; McNiff, 2008). Driven by this philosophy the mission was to contribute to socio-political reformation by enhancing understanding of underlying, beyond-words, human intersubjective phenomena.

The ABR Global Consortium, within about a year of formation, formulated strategic goals and embarked upon its first global research project. The goals included:

- Continue to build ABR Global Consortium of researchers
- Development of a “Good ABR Practice Document”
- Identify global topics and ABR research teams
- Develop working groups to address projects and objectives
- Identify current ABR research projects
- Identify stakeholders and funding sources
- Develop plan for educating stakeholders and consumers
- Develop education and training venues for ABR researchers
- Develop an ABR blog

Aligned with our goals, our first research project, initiated in 2020, was entitled “Sustaining Life on Earth: Arts-Based Responses to the Lived Experience of COVID-19”. The project invited international arts-based research scholars from the membership and beyond to contribute arts-based and narrative responses to two research questions about the lived experience of COVID-19: 1) What is your lived experience of and relationship to the COVID-19 pandemic?; and 2) How would you express, portray, and describe your lived experience during and/or after the COVID-19 pandemic?

## The Project Overview

Our research project, inspired by a confluence of events, motivated the six original founders of the ABR Global Consortium to use our newly formed ABR Consortium to better understand the far reaching and in-depth experiences of the pandemic. After formulating our proposal and receiving approval from the ethics board, we put out an international call to members of our ABR Global Consortium community to join in our investigation. The project was conceptualized as a post-intentional phenomenological arts-based research (ABR) (Deleuze & Guattari, 1987; Vagle & Hofsess, 2016) study that focused on collecting arts-based and narrative responses to the in-depth lived experience of the COVID-19 pandemic from arts-based research scholars in the global community, while employing arts based research approaches to the data analysis and synthesis. Our ABR approach is based upon the premise that invisible and intangible responses to a phenomenon, such as a global pandemic, can only be completely understood by investigating the underlying intersubjective aesthetic aspects of knowledge. Intersubjective aesthetic knowledge includes the

individual and co-created perceptual, sensory, embodied, emotional, and imaginal lived and felt experiences which are only accessible through the language of imagination and the arts (Chilton, Gerber & Scotti, 2015; Eisner, 2008; Gadamer, 2007; Gerber, 2022; Levine, 2005). To emphasize the in-depth phenomenological aesthetic experience we invited co-researchers to include the arts-based response accompanied by a reflective textual translational narrative about creating the arts-based response. This cultivated a rich dialogue between multiple forms of knowing, consciousness, and experiencing.

The ABR approach combined with post-intentional phenomenology is one in which initial broad-based questions about lived experiences are posed followed by and concurrent with the iterative generation of more probative, in-depth data and analysis. Within this tradition, iterative dynamic, and interactive processes of data generation and immersive analysis were situated within and between: the co-researchers, the core team, the co-researcher arts-based and narrative responses, selected audiences, and reflective arts-based and dialogic responses from the core team illuminating new insights and raising new questions. Due to the emergent nature of this method, the study was designed to have two or more phases of data generation and analysis/assemblage depending upon ongoing evaluation of the scope, depth, and saturation of the data assemblages and analyses. In the first phase the core team collected, reviewed, organized, and assembled the formative emergent dialogues within, between and in-between arts-based and narrative responses while simultaneously entering into immersive, iterative, dynamic arts-based, reflective, and dialogic processes with the data and each other. In these immersive processes, we considered *a priori* themes of emotional impact, social framing, and aesthetic power of the art and narrative data as well as opening to emergent themes. The analysis included narrative and sensorial-based coding, responsive art making, and collaborative and individual multi-genre memos and reflections on all submissions. Following this phase, the team engaged in multiple levels of analysis—intentionally listening for, reflecting upon, and attending to the illuminations and emergent new insights that posed new questions. The new questions initiated a new phase requiring the elicitation of more in-depth arts-based data, additional team reflections, and/or consultation with co-researchers. Throughout the multiphasic process the team was simultaneously engaged in ongoing assessment and critical evaluation to determine whether the generated data, when assembled and analyzed, had substantively, authentically, and robustly resonated with the original study questions, co-researchers, and select audiences.

## Procedures

The project posed two broad based phenomenological questions: 1) What is your lived experience of and relationship to the COVID-19 pandemic?; and 2) How would you express, portray, and describe your lived experience during and/or after the COVID-19 pandemic? Nineteen transdisciplinary co-researchers spanning ten countries were recruited and submitted multi-modality arts-based and narrative responses for our research project. We interviewed each co-researcher individually to inform them about the project procedures, answer questions, and determine if they wished to participate. Those wishing to participate were offered a time frame for the creation and submission of their response and provided with a special private Instagram account by which to submit.

The ABR Global Consortium team, individually and collectively, reviewed the arts-based and narrative submissions, initiated a process of data organization, reflective responses, and data analysis. First we organized the arts-based and narrative data by using both *a priori* categories and emergent themes. The *a priori* categories were emotional impact, social framing, and aesthetic power. We then categorically arranged and rearranged the arts-based responses and narrative excerpts identifying new emergent themes along with the *a priori* themes. In the first major category ***finding safety and acceptance*** the following themes emerged: inside/outside (emotional impact and social framing) ; being in and staying at home (emotional impact and social framing); safety and alienation (emotional impact and social framing); relationship stories (emotional impact); leaving home( social framing); anger, frustration, sadness, and guilt (emotional impact and aesthetic power);

and time (emotional impact and social framing). The second category, **adapting**, addressed the amplification of previously existing financial, health and other conditions (social framing); employing creative adaptations (emotional impact); doing good (aesthetic power and social framing); and, realizing we are not alone (emotional impact and social framing). In the third category of **dialectics**, negotiating the **contradictions and paradoxes** of past/present and life and death (emotional impact) were raised; while category four introduced **reflection and contemplation** including mourning losses (emotional impact) and thinking about legacies( social framing). The final and fifth category addressed the **use of the art process** for transformation (emotional impact and aesthetic power), the resolution of tension and conflict(emotional impact and aesthetic power), imagining (aesthetic power), addressing paradox and ambivalence (aesthetic power, emotional impacts and social framing), and, considering visibility and invisibility (emotional impact and aesthetic power). An example of this process is captured in Fig. 1.

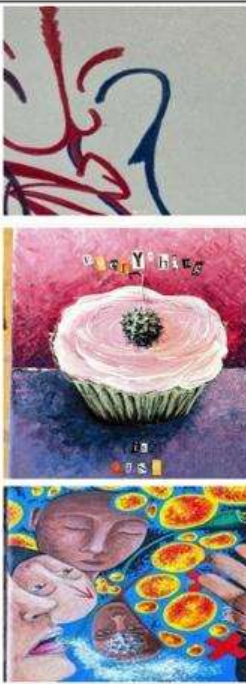
5.2	Tension and Resolution	The transformative resolution of tensions and alienation through arts processes	Emotional Impact Aesthetic Power	NG		<p>New energy emerged and I began to love my warm undisturbed creative space. I felt like I could do anything! (Haire)          What better to capture that lack of real care than a poorly constructed superficial ransom-note-looking message ("everything is fine"), "fun" gumball pink and purple colors, and a sugary sweet treat with a "cherry" on top? As I reflect on this piece of art, I feel it in my gut. It's like one of those sweet gum seed pods plopped into the pit of my stomach to alert me that I need to keep my guard up (Rattigan).</p> <p>I am looking through an old encyclopaedia which my mother won as a prize when she was a child. There is a diagram of lungs with the caption, 'Here comes every breath you breathe'. I cut it out and paste it into my sketch book, next to a drawing I've done of George Floyd.</p> <p>Everything seems to link together          – trees are the lungs of our cities          – a man whose breath is brutally</p>
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Figure 1 Example of initial arts-based and narrative thematic analysis

Following the initial organization and thematic analysis of the arts-based and narrative data, we collaboratively engaged in moving these arts-based and poetic narratives from linear to spatial constructions in order to honor the basic aesthetic epistemic while creating a coherent and powerful multi-dimensional assemblage. During these phases we engaged individually and collectively in narrative and sensorial coding; responsive art making; reflective memoing of art submissions; group discussions with the core team; and, sharing the emerging arts-based and narrative syntheses with co-researchers. Through these phases, we became more attuned to and immersed in variations of the dynamic arts-based and iterative dialogic processes of: reflecting, organizing, discussing, juxtaposing, deconstructing and reconstructing, responding, visualizing, sharing, assembling and synthesizing the multiple forms of arts-based and narrative data. We assembled and reassembled the arts-based and narrative data dialectically through shifting intuitive and critical analytic lenses while juxtaposing the data using criteria such as: meaning making, composition, color, time, and paradox. Through these multiple arts-based assemblages,

experiences, and considerations in dialogue amongst and between the core team and co-researchers, we arrived at a final performative/exhibitive result that included a video and gallery experience.

Central to this multi-phasic dynamic arts-based research practice was our positioning and collaboration as both witnesses of and participants in the co-researcher processes. While we simultaneously navigated our own and others' pandemic experiences, we uncovered related stories revealing social and political themes. As is often the case with ABR, these unanticipated stories surprised and inspired us as we reflected on our emotional and critical experience of the data. This creative phenomenological aspect of the research reaffirmed the importance of the collective and emergent intersubjective discourse as an essential aspect of our ABR practice as we invited the co-researchers to reflect on these emergent, surprising, and meaningful issues. No doubt these issues, related to the inequities, oppression, and power differentials that both underlie and impact the transmission, treatment, and experience of disease require further exposure and investigation.

Throughout this project and process, we felt empowered by and embraced the messiness of arts-based research, immersing ourselves in the art, engaging with co-researchers, and emerging with elegant solutions, both on an individual and a collective level. We were not interested in a reductive conciseness that allows for easy comprehension. The result of this arts-based research process was a synthesis of multi-dimensional sensory, embodied, and emotional arts-based data representing shared collective lived experience of the evolutionary phases during the pandemic. The phases emerged as reported, expressed, portrayed, and discussed by and with co-researchers throughout the process; and included interactive and dynamic experiences of initial anxiety and panic; reflection and creativity; and resilience which are reflected in our arts-based results. The final result of the project is an arts-based and performative piece using video and interactive gallery venues with an aesthetic power that resonated with multiple audiences.

Please visit our performative video and gallery here

[Gallery and Video](#)

## Looking Forward

The ABR Global Consortium is currently evaluating its mission and goals in order to determine how to disseminate the completed research study and identify its revised research agenda. In particular we are exploring creative options for drafting a publication that will accommodate the arts-based and performative nature of our research study data and results from our most recent project reported on here. We also are looking to determine the best way to disseminate the performative results to make is more accessible to the public.

Continuing our mission to advocate for Arts-Based Research as an essential form of investigation to understand the more invisible, unconscious, aesthetic forces that drive human behavior, we plan to develop the good practice document for ABR in progress; and, to identify the next ABR topics and directions most relevant to a world in turmoil. As prophetically stated by Sardar(2009) imagination provides the perspective to envision and understand the "complexities, chaos, and contradictions" (p. 436), of what he called post normal times, while functioning to embrace paradox creating compassionate, inclusive, elegant and radical solutions.



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# SCIENCE AND VISUAL ARTS INTEGRATED CURRICULUM THROUGH VIRTUAL REALITY-MEDIATED STEAM EDUCATION

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## Abstract

How can art and science enhance visual learners' academic achievement and visual literacy? To answer this question, as two higher educators teaching in the United States, we collaborated to develop an integrated curriculum that focuses on visual art and biochemistry through implementation of digital technologies. The purpose of this study is to share our project and encourage adoption of virtual reality (VR) and augmented reality (AR) in integrated curriculum for visual learners by utilizing the qualitative case study method. We share the goals, processes, and results of our projects, and the unique opportunities they provided students to conduct research in a science laboratory class and to gain art and scientific knowledge through VR, AR, and art. We also discuss how our STEAM (science, technology, engineering, the arts, and mathematics) projects leveraged students' learning and examine methods of communication and development for successful collaboration. Based on our rich experiences and thick descriptions, we suggest AR and VR implementations for higher education and K–12 curriculum, and provide creative and innovative implementations of VR and AR for research and teaching.

Keywords: STEAM, VR, AR, integrated curriculum

## 1 INTRODUCTION

Can art and science meet and communicate? The answer is definitely yes. You may ask, if so, how? What “language” do they use, and how is it interpreted? Do they influence each other? You may be an art teacher who is willing to collaborate with scientists and science teachers to bring science into your art classes, but you may have limited information about how to collaborate and what areas in art can be integrated with science.

We have worked as a STEAM (science, technology, engineering, the arts, and mathematics) education team at two universities in the United States, primarily focusing on art, biochemistry, and technology. The first author teaches art education courses for students majoring in art education and education and works as an artist to create science-inspired art. She is fascinated by components of biochemical structures and creates artwork based on three-dimensional (3D) molecular structures. The second author, a biochemistry researcher and science educator, teaches multiple chemistry and biochemistry courses and operates a biochemistry research laboratory. He commonly utilizes computer graphics software and design tools to visualize macromolecules, especially proteins and nucleic acids. Together we have conducted art and science integrated lessons that introduce virtual reality (VR) technology to high school students. In the following sections, we demonstrate our qualitative research methodology and conceptualize how art and science educational methods are linked and how they influence each other.

## 2 DISCUSSION OF INTEGRATED CURRICULUM

Scientists and artists have collaborated in various ways. Studies have reported on the possibilities of intertwining art and science. The following literature review and research design sections discuss the background of art and science integration and qualitative case study methodology.

### 2.1 Intertwining Science and Art

Researchers have indicated that artists can utilize scientific knowledge and scientific creativity to influence their imagination, innovation, and artistic creativity. Scientific knowledge includes technologies and tools that affect artists' conceptualization of their thoughts [1]. Shin and Yoon [2] explained how biological tools, including X-rays, can be used in bio-art. For example, the bio-artists wrote about how to integrate "biotechnology by manipulating genes, cells or organisms in laboratories and introducing them into arts" [p. 189]. Science knowledge has also influenced how art is shown and displayed [3, 2]. Artists who participated in the art-science collaboration in Calvert and Schyfter's [4] research tried to synthesize science knowledge in their artwork and considered science approaches as enjoyable challenges in their art creation.

Likewise, scientists have been inspired by art to solve scientific problems. Rock and Howard [5] explained that crossing boundaries between science and art encourages creativity in scientists and their ability to understand science problems. When the authors faced difficulties of archaeological discoveries in zoology majors, creating art helped them think outside the box to find solutions. They indicated art was a "paradigm shifter" [p. 305]. The process of visualizing scientific functions can inspire scientists in their understanding of objects. For example, expressing protein structures in 3D helped scientists look at the structures differently and gain a better understanding of them [6]. Drawing techniques can also support biological thinking [7].

Beyond one-sided inspiration, projects and studies have been conducted to integrate art and science. The artists and scientists in the residency programs in Wilson et al.'s [8] project experienced innovation in their thinking skills. Intercultural experiences between the artists and scientists were expressed through the artists' final art forms as both groups shared the "culture of experiment" [p. 154]. Wienroth and Goldschmidt's [9] study showed how scientists and artists were inspired by each other through their interaction. Scientists could rethink their work outside the laboratory, and artists could enrich artistic outcomes by using scientific accuracy. The efforts to find areas of "sharing" between art and science have also been researched. Hoffman [6] understood that the process of scientific analysis and artistic abstraction were similar. Both procedures look for ways of simplification and purification. Art and science also have a similar process of conceptualization. Adelman [10] described how terms, such as reproduction and evolution, are shared between the two areas.

In the area of education, Metcalf [11] examined four artists whose artistic expressions contained and delivered physics knowledge. The artists asked viewers to think about the structure and space of physics from a physicists' point of view and experience artistic elements through a visual thinking strategy. Osbourn's [12] study explored a Science, Art, and Writing (SAW) program, which was integrated to expand students' understanding of the world around them. Scientists, artists, and writers collaborated with classroom teachers through the SAW program. Integrating art botany with chemistry has also worked at the elementary level [13]. Through this integration, elementary students participated in botany-based activities (e.g., trip to a botanic garden, planting a tree), chemistry-based activities (e.g., making oil soap, testing acids), and art-based activities (e.g., endemic plants, handmade carpet), and showed better understanding in all three areas. When students experience art and science infusion, they also experience better engagement in learning and have opportunities to envision multiple solutions [14, 15]. Based on the positive impacts of art and science integration, this study examines two integrated lessons for high school students and students

majoring in education. Art–science integration, art skills, and technology that can be utilized in the integration of art and science are also discussed.

## **2.2 Research Methodology: Qualitative Case Study**

In order to examine the integrated curriculum practices, this study is based on a qualitative case study design, one of the qualitative research methodologies. Case studies can deliver the lived experiences and meanings of a context [16]. Merriam [16] identified the characteristics of the case study as "particularistic, descriptive, and heuristic" [p. 43].

Along with thick description, the current case study collected data comprising students' reflections, artworks, and our curriculum design. After collecting these details, we analyzed students' artworks and reflections to identify how they integrated art and science. Finally, we shared our analyses and reexamined the results to achieve a "joint decision" [17: p. 65]. In the next section, we provide detailed information on our integrated curriculum, including setting, procedure, and students' responses.

## **3 SCIENCE, ART, AND VR TECHNOLOGY INTEGRATION CASE**

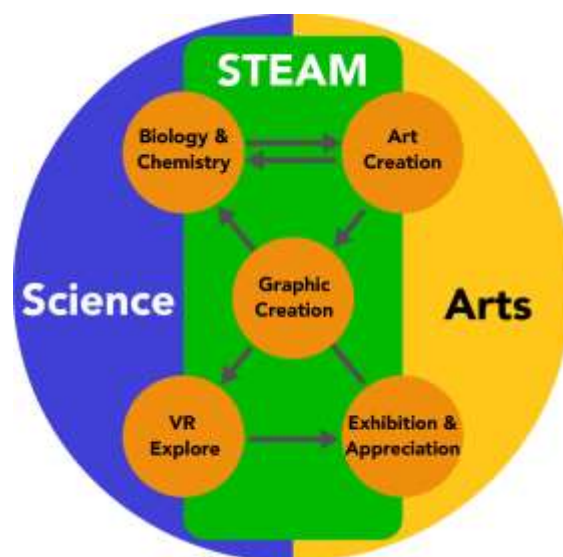
Our research was conducted in the summer of 2019 at a public university located in the southeastern United States. The university developed a one-week summer STEAM educational program for the local community, especially focusing on high school students. Faculty members from a diverse range of arts and science fields, such as visual art, dance, game design, film and theater, neuroscience, natural science, and chemistry collaborated to develop the program. We formed a team to integrate biochemistry and art, and 7 college students majoring in biochemistry and education joined our lesson as peer-mentors to help 30 high school students from local communities.

### **3.1 The Procedure**

The multipart lesson was a total of 4 hours (Fig. 1). At the beginning of the lesson, we introduced to the students the team members, including peer-mentors, and our creative productions in our specialized fields of fine arts and structural biology. Since the first author works as both an artist and an art educator, she introduced herself with artwork, including art-biochemistry integrated works. The second author, a protein biochemist and structural biologist, introduced his scientific discoveries through visual art pieces created using the 3D structures of novel proteins.

**Figure 1**

*The process of the science, art, and VR technology integrated lesson: Students learned scientific knowledge and visual art integration, used graphics tools (computer and VR), and shared reflections with other students.*



After a pre-lecture on basic biochemistry, we explained to the students what would happen if art met science from an artistic perspective. Then, we joined the students and peer-mentors in a free discussion of the potential for artists and scientists to co-work. Finally, we introduced the following different types of art and science integrated artworks:

- Scientists-created art
- Artists created art inspired by science
- Artists and scientist-created collaborative art
- Artistic objects from nature that have aesthetic aspects
- Artistic objects from biochemistry that have aesthetic aspects

After collectively appreciating various types of integrated artworks in each category, we instructed the students to create their own artworks. First, they chose one approach from the integrated artwork categories. Each student was allowed to take a position as an artist, a scientist, or both. Then students shared their artwork and feedback in small groups of 6 or 7. After the small group appreciation, the whole class of 30 students with the 7 peer-mentors held a gallery walk to present and appreciate each other's art. Before going back to the science area, students learned more about the principles of structural biology and 3D protein structures. Specifically, in this discussion section, we covered how proteins are naturally folded into certain 3D structures, why these shapes and structures are thermodynamically stable, and how molecular structures affect their functions. The next step was another arts and science infusion through a technology perspective. First, students examined 3D protein structures through PyMOL, a computational graphic rendering software, which visualized Protein Data Bank (PDB) format coordinates [18], encouraging inquiry-based learning for high school students [19]. The software allowed users to create and redesign the structures using non-professional and non-high-spec personal computers, and it enabled rotation and movement of the PDB coordinates, which helped users better understand the features and functions of molecules [20].

After the graphics session, the images of the students' protein structures were transferred to the VR space. VR can help students visualize complex concepts [21, 22], especially in science [23]. Additionally, immersive experiences through VR tools can positively influence students' learning

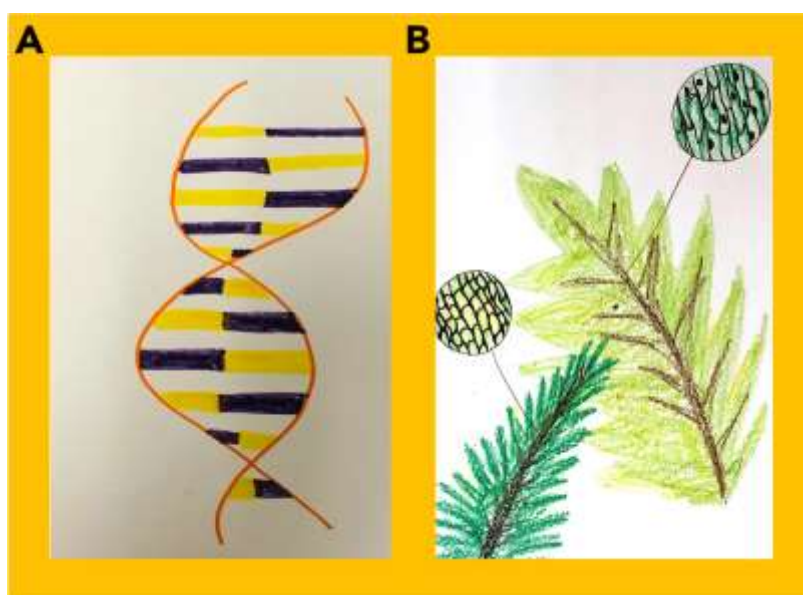
experience [24, 25]. The VR structuring program Nanome provided users with images from numerous angles to obtain a molecular shape in 3D [26]. After examining the protein structure graphically (2D) and virtually (3D), each student printed out their finalized science–art integrated artwork created through PyMOL and wrote a short reflection about their project. Finally, they had another sharing time to display their 2D artworks and 3D aesthetically touched protein structures.

### 3.2 Students' Works and Responses

In this case, the students mainly utilized biochemical knowledge to create their art. This was probably because they had recently taken several chemistry and biology courses in high school. The subjects of their artworks were DNA, molecules, and protein structures; thus their creative expressions conveyed scientific information.

**Figure 2**

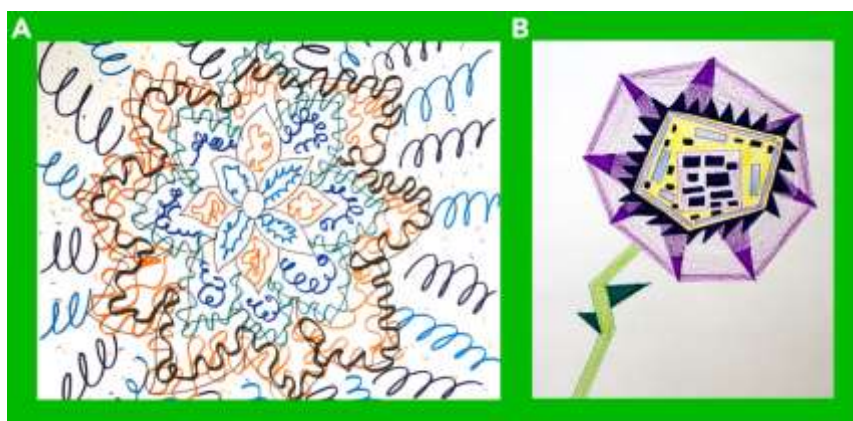
*Students' artworks: These students utilized DNA, molecules, and cell structures to create artworks. The information in these works was scientifically correct.*



In contrast, two students created science-inspired art images (Fig. 3). They did not contain accurate biochemistry information but exhibited free use of color and line with science objects.

**Figure 3**

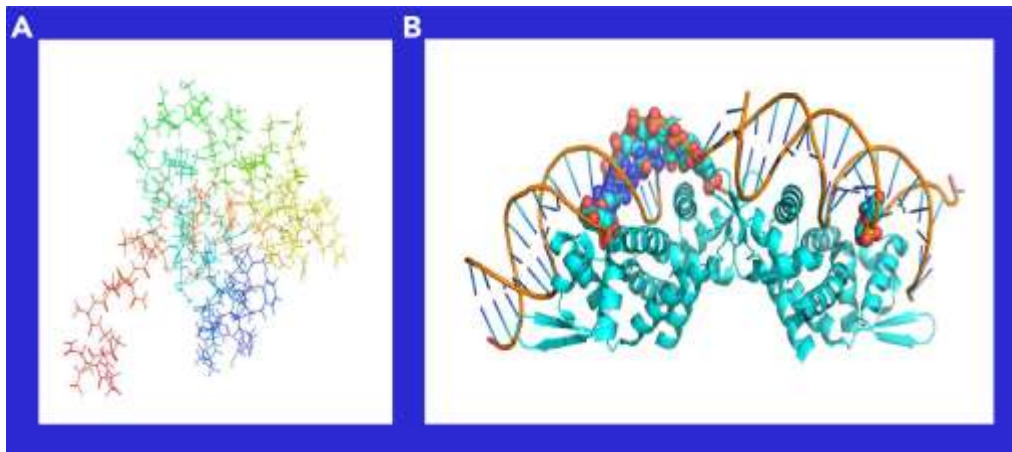
*Students' artworks: These students focused on art principles and aesthetic expressions.*



The results of the art and science integration through PyMOL are described in Fig. 4. As shown, students redesigned existing protein 3D structures to create their own images.

#### Figure 4

*Students' artworks: Students recreated protein structures with artistic touches. For example, students changed colours, angles, and backgrounds.*



In their reflections, students agreed on and acknowledged the positive role of art and VR technology in studying science. In particular, 8 students focused on how viewing art and protein structures via VR enhanced their understanding and stimulated learning. For example, some students noted that the artistic thinking process helped them visually understand science and visualize the complexities of scientific knowledge. Through the artistic works, they were able to better comprehend the 3D structure of proteins and “experienced a realistic science” (Student 1, personal communication, June 27, 2019). Four students focused on the arts and art integration, explaining that art worked “to expand my thinking” (Student 2, personal communication, June 27, 2019) and that “art has more ideas” (Student 3, personal communication, June 27, 2019). Two other students mentioned, “I can use art to integrate anywhere. It is related to everywhere,” (Student 4, personal communication, June 27, 2019) and “VR gave me to have an open-minded attitude to learn” (Student 5, personal communication, June 27, 2019).

The students also experienced and described their feelings of engagement and involvement while learning. Students understood VR as “lively learning” (Student 6, personal communication, November 20, 2019) and as promoting “intensive attention to see details of the content” (Student 7, personal communication, November 20, 2019). In addition, students focused on the potential of artistic expression in integration. One student noted, “I can use my creativity more when I use the art, science, and VR integration” (Student 8, personal communication, November 20, 2019). Another student commented on the joy of redesigning and recreating what they knew in science. In the following section, we discuss our analysis of the students’ art creations and reflections on art and science integration.

### 3.3 Aesthetic Inspiration

In our lesson, students discovered an artistic feature of biochemistry and created novel artworks based on its aesthetic aspects. They used this approach to experience objects that they had not previously considered objects of art. As one student mentioned, “Art and science can be together for getting more fun and creative results” (Student 9, personal communication, November 20, 2019).

Students added artistic touches to the published structures of proteins whether or not they contained accurate scientific knowledge. Additionally, students artistically practiced biochemical

composition by considering science structures as art components while playing with scientific elements and art. For instance, one student explained how she “played” with the science and art. She was “immediately astonished by the different colours and the movement of the molecular particles via VR. It was fun to juggle and play with the colours and molecules” (Student 10, personal communication, November 20, 2019). Another student also described how she was inspired by science: “I was inspired by the complexity in the butterflies natural patterns to create an intricate binary pattern” (Student 7, personal communication, November 20, 2019).

### 3.4 Affecting Ways of Seeing a World

Students experienced the expansion of their perspectives on the world through these sessions, as did we. For example, after completing the first session, one student commented that the integration of art, science, and VR technology “affected what I saw and how I saw” (Student 11, personal communication, June 27, 2019). Another student explained that she could have “open-minded attitudes to learn” and recognized her potential for “creating art related to everything in the world,” including science (Student 12, personal communication, June 27, 2019). These students seemed to have recognized art and science as completely different disciplines before participating in the program. However, through the experience, students found that “science [could be] represented through arts” (Student 9, personal communication, November 20, 2019) and that visualization and thinking through art were important to obtaining a clear and better understanding of the content. In addition, one student noted the integration included activities in which students moved their hands and bodies, which helped to “memorize what I learned and what I did” (Student 13, personal communication, November 20, 2019).

In this study, we examined effective ways to integrate art and science through VR technology as a universal language. Through the integrated lesson, we observed that students were able to obtain a more precise understanding of the science content and to experience active learning in both areas of art and science. Advanced research technologies such as graphic software and VR applications enabled students to visualize science content more intuitively, making it easily digestible. Some students inspired by science found artistic and aesthetic components in the science, which would not have been previously considered an objective in art. In these cases, the students had the opportunity to broaden their recognition of the world. Through this inspiration and the process of adding artistic touches, these students were able to create novel and creative types of artwork that they had never thought of or tried before. As Gates-Stuart et al. [1] wrote, the convergence of art and science can be a “creative catalyst” (p. 452) that affects students’ learning and extends their view of the world.

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## **CITIZENHERITAGE**

### **EMPOWERING COMMUNITIES AND CITIZENS IN HERITAGE RESEARCH**

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### **Abstract**

In this paper, we discuss a methodology for empowering citizens and community representative organisations in participating in science, the various roles and challenges of technology in enabling an inclusive engagement with cultural collections, and the process of heritage reappropriation by communities, which is the research focus of the EU-funded CitizenHeritage project. In particular we will focus on methods for Citizen Science in this regard. The paper results from an interactive Dream Team session in ECQI 2022. It was supported by QANDR, an innovative online tool used in the CitizenHeritage project to administer in real time a set of curated polls, quizzes and Q&A spurring interaction with audiences, as well as by a Miro board session. The paper sketches the main goals of the CitizenHeritage project, and goes on to describe the components of a Citizen Science methodology for the Heritage sector. We pay attention to different phases, including the preparation of the research, the running of the research activity, the analysis of research results, and their publication. In the second part, we present three use cases.

Keywords: citizen science; heritage; digital cultural heritage; user engagement; mixed methods; minority representation; inclusivity; capacity-building.

## **1 INTRODUCTION: THE CITIZENHERITAGE PROJECT<sup>27</sup>**

The CitizenHeritage project will provide Higher Education Institutions with new insights and opportunities to include Citizen Science activities for social purposes into Higher Education Institutions curricula, teaching and learning activities. It will offer them a selection of good practices on how to benefit from the knowledge circulation in and outside academia and how to adopt a more vibrant role in civil society. The digital realm, with the digitisation of vast collections published in open access by heritage institutions, and the growing availability of tools for online engagement and interaction, opens up incredible new possibilities to further stimulate knowledge creation and circulation in cooperation with citizens.

Research in the Civic Epistemologies project indicated that the main motivation to include citizen science in Cultural Heritage research is to enhance user engagement, rather than other possible

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benefits such as reducing staff time (Dobrev a. 2015 [5]; Dobrev a 2016 [6]; Jennings e.a. 2017 [14]). It is important to make a distinction between situations where the citizen is actually the object of study, e.g. when their testimony is exemplary of ways of life, lived experience or intangible heritage that researchers want to describe, and situations where the citizen is expected to contribute to the research activities. The first situation is often the case in oral history.

In fact, the citizen is not really participating in the research, but is rather the object of the research. In such a case, the participants need to be recognized in their dignity, privacy and identity as subjects under observation. Their self-assessment and judgments are recorded and described, but are separate from the assumptions, hypotheses, theses and conclusions of the research. The full responsibility for the latter resides with the researcher.

In contrast, engaging citizens in scientific projects requires participants to be recognized as (co-)authors, establishing agreements to clarify the extent to which citizens recognize themselves in the research goals, hypotheses and conclusions.

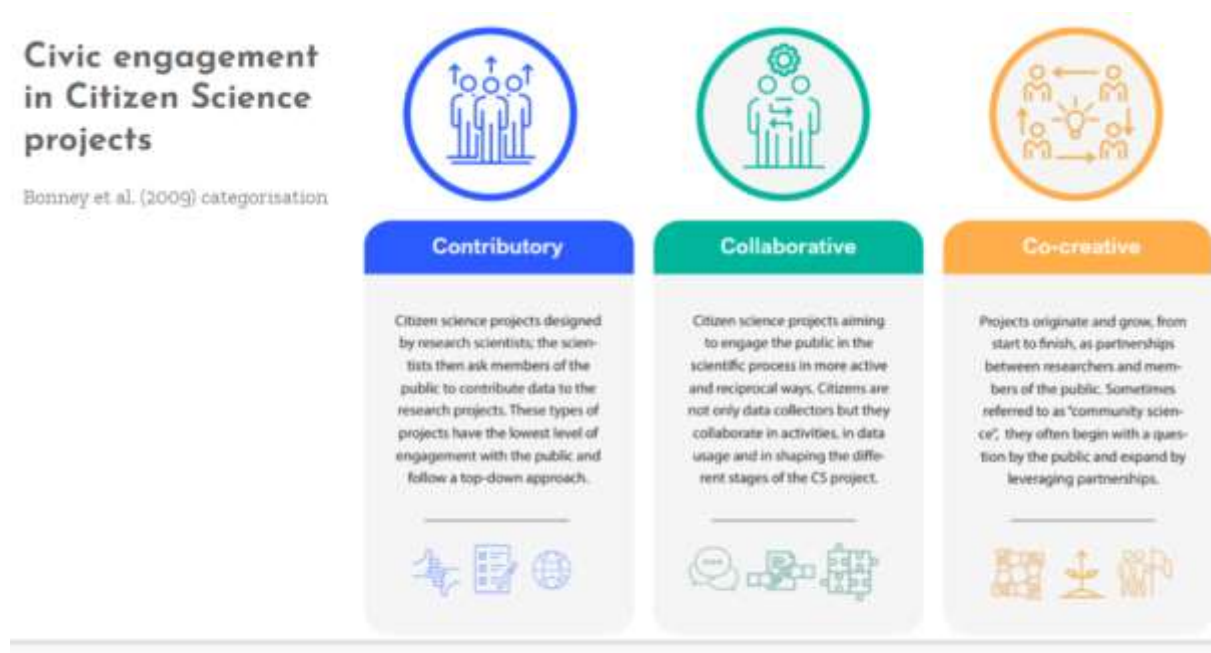


Figure 1 Civic Engagement in Citizen Science projects - (Bonney et al. 2009[3]) - design M. Ziku (Ziku, M. & Zourou, K. 2021 [20]).

Heritage studies is a wide and diversified field, touching upon many different disciplines and methodologies. It can range from theoretical studies on the concept of heritage, its societal definition and legal implementation, to practical studies involving how to collect, preserve and display heritage objects, or the management of heritage institutions. Research can originate in universities and research centres, or at heritage institutions themselves, serving for content-oriented research in disciplines as (art) history, archaeology, ethnography, or other branches of the humanities.

The most obvious link between research activities and heritage institutions is the gathering, preparation and publication of heritage collections data. Both the overview survey made by CitizenHeritage and the report on Crowdsourcing practices produced by the Europeana Common Culture project (Davies 2020 [4]) evidence a limited notion of citizen participation as most methodologies including citizen participation involve crowdsourcing of data, be it in the form of collecting sources, identifying collection objects, making annotations, enhancing metadata, participating in storytelling, and curation or co-creation of exhibitions. So a much deeper

understanding of what Citizen Science can mean to the Heritage sector is needed, in which citizens are taken more seriously. A recent book (Hetland e.a. 2020 [12]) focusses on important aspects of this “participatory turn” and what this entails in terms of democracy, ethics and new epistemics.

In the Erasmus+ project CitizenHeritage, we expand the current practice of data crowdsourcing and empower the participants by developing an environment of joint learning, discovery, creation and experimentation where the citizen participating is aware and in charge of their contribution. We focus on research involving the data gathering for selection, curation, digitization, metadata enrichment, and digital publishing and (re)use of GLAM collections. We also centre our approach on engagement methods at least partly mediated by digital tools. For these activities, we want to identify the necessary steps to be taken to make sure these user engagement efforts can lead to outcomes underpinning publishable scientific research.

While crowdsourcing has grown to be a popular notion among Heritage Institutions (Davies 2020 [4]), there are several issues around this practice when compared with standard scientific approaches. While some studies focus on the science viewpoint and stress the quality aspects (Prats Lopez M. 2017 [16]), one should not forget to take the citizen perspective into account. Several critical studies have outlined nuances differentiating citizen science from crowdsourcing approaches (Shanley e.a. 2019 [17]). Prevalent features include the conferring of more agency and legitimacy to participants within citizen science activities as compared to crowdsourcing ones, and providing participants with more (ethical) means in processes such as decision-making and social action, especially when underrepresented voices (Seltzer & Mahmoudi 2012 [18]) and minoritised communities are involved. In addition, citizen science outcomes are integrated more efficiently to the knowledge commons (OCSDnet 2017 [15]) and comply with the open science principles (Dörler & Heigl 2019 [7], ECSA 2015 [9]), in contrast to crowdsourcing results that may not have an open science orientation or any scientific outcomes in general. Recognising that citizen science, crowdsourcing and other heritage science or humanities-related terms (such as scholarly crowdsourcing or citizen humanities) are actively evolving fields, we argue that one of the convergence points for empowering citizens and consolidating terminological nuances on this basis is to develop a more solid “community awareness”, i.e. sufficient information to the contributors of citizen participation projects.

A study conducted within the CitizenHeritage project (Zourou & Ziku 2022 [21]) showed that not many institutions running crowdsourcing/citizen involvement activities provide clear information to the citizen contributors. The findings are based on an analysis of key indicators from the table compiled within the study gathering 110 related international case studies, in which a surprisingly large number of initiatives provide unclear or complete absence of information on key criteria such as partners involved (particularly higher education institutions), open access policy, data ownership and the extent to which the initiative conducts scientific research.

There is a case to be made, and at least that is the ambition of the CitizenHeritage project, that the validity of contributions provided by citizens in scientific projects depends on the way those citizens have been correctly informed on their role, the status of their contributions, their authorship and consent.

## **2 METHODS AND WORKFLOWS**

A methodology for citizen science projects has been developed by the Cornell Lab of Ornithology, detailing several steps in engaging citizens in research:

**Box 1. Model for developing a citizen science project.**

1. Choose a scientific question.
2. Form a scientist/educator/technologist/evaluator team.
3. Develop, test, and refine protocols, data forms, and educational support materials.
4. Recruit participants.
5. Train participants.
6. Accept, edit, and display data.
7. Analyze and interpret data.
8. Disseminate results.
9. Measure outcomes.

*Figure 2 Model for developing a citizen science project, (Boney et al. 2009 [4])*

However, in CitizenHeritage we think that in Heritage research citizens should also actively be involved in stages 6 and 7, and that the process should be *cyclic*. This is why we propose a slightly adapted procedure. We will look into the preparation of the research activity, running the research activity and publishing the research results. We developed two surveys for the project: a survey to be completed as a researcher, and a second survey to query participants. The templates of these surveys are published on the CitizenHeritage website [[www.citizenheritage.eu](http://www.citizenheritage.eu)].

## **2.1 Preparation of the research**

When preparing a research project involving citizen contributions, great care needs to be taken to conceive and properly describe the expected citizen contributions. One can easily imagine the huge difference between asking members of the general public to identify different kinds of ceramics from interviewing people as key witnesses of past - possibly conflictual - events. To this end, it is essential to correctly describe the role of the gathered evidence and the use that will be made of it. From a scientific point of view, a witness account needs to be traceable to the source, while for contributions such as validating automatic metadata enrichment that might not be necessary.

From the participant's point of view, making a contribution as a witness might be presumed to happen in anonymity and include the possibility to review or even reassess their testimony, while this will normally not be the case in the enrichment example. Publishing clear documentation of the place of the participant's input in the scientific evidence chain is good practice. How much leverage the participant should have on their contribution depends on the proportional size of the contribution, and whether it is weighed as an individual source - as it would be in an interview - or is averaged with other contributions, as would be the case in a survey.

## 1 Selecting participants

While many CH institutions run anonymous surveys with voluntary participation, this might not be sufficient if the gathered data are to be used as scientific evidence. If one wants to make statements about the audience that the participant sample is supposed to represent, one must be able to document and argue for the selection criteria used to identify participants. But from a qualitative researcher's point of view, it is even more important that the right profiles of users are reached.

## 2 Determining the profiles

For this, a good and proven methodology is to develop personae that represent the targeted audiences.

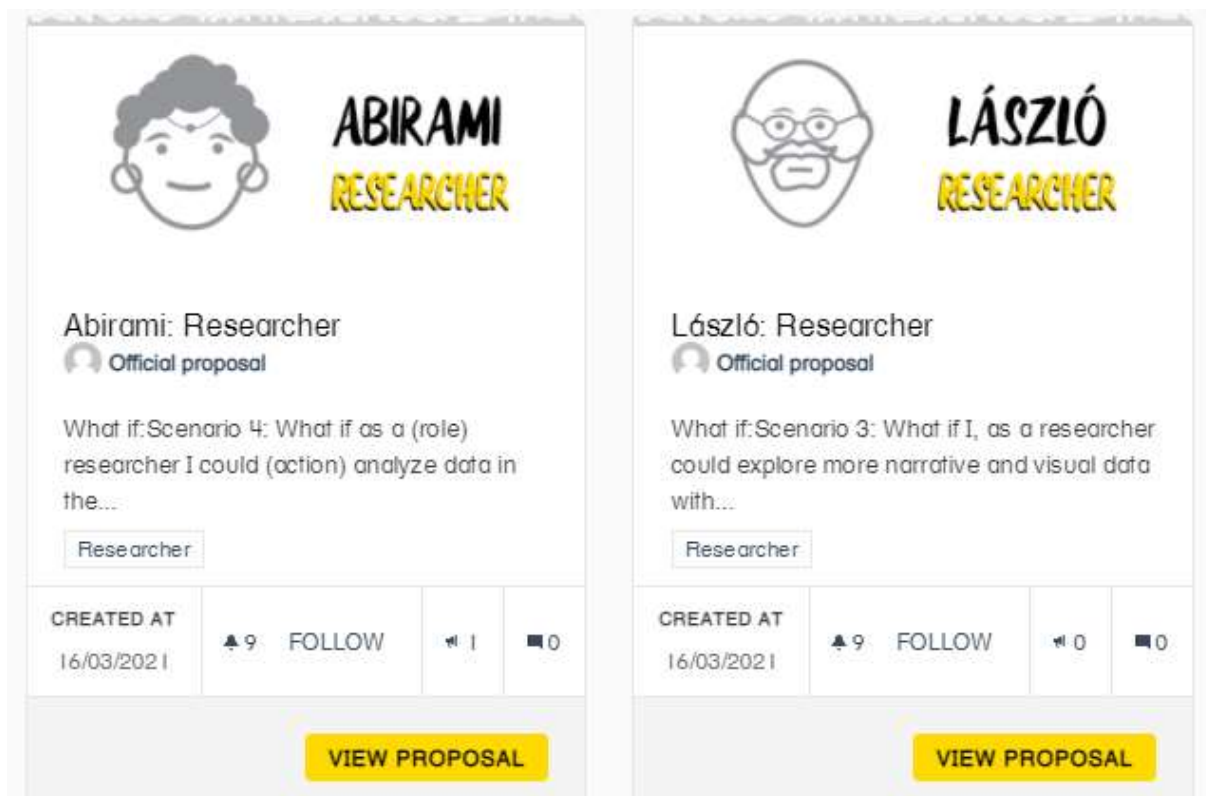


Figure 3 “Designing a Model for Community Participation”, Indices [13]

In the case of heritage projects, participants can be part of the institutional side, in different roles, or part of the audiences - which can be segmented in different ways - or belong to a wider range of stakeholders connected with the heritage at hand in one way or another.

At the institutional side, there are many roles to take into account, ranging from an operational level to a senior management level, each with a different exposure to the respective audiences. We can think about collection managers, curators, catalographers, archivists, museum directors, librarians, metadata experts, digitisation experts etc. So an important step is to identify which of these roles to include in the research.

### 3 *Informing participants*

It is important to clearly inform participants about their role, what is expected from them and how their contribution fits in the grand scheme of things. Researchers should indicate how participants will be kept informed about the scientific results.

There are many ways to do so. Reporting activities on the project or institutional website, through digital mailings, or blog activities can be complemented by physical flyers distributed during related activities. CitizenHeritage will provide a template flyer that can be used.

### 4 *Privacy*

The European GDPR regulation imposes quite stringent measures on how privacy-related information should be treated. This can have an impact on what kind of data can be collected. For specific data, such as race, health, employment etc, specific rules apply and a review by an ethics committee is required. Most Higher Education institutions have such a committee in place, and provide a set of procedures to follow<sup>28</sup>. This means that any interviews or collecting of privacy-related data need to get an approval of an ethics committee. Also, clear provisions need to be made as to how these data will be stored and in what form they will be published.

## 2.2 **Running the research activity**

While research activities may vary (interviews, workshops, panels, surveys, annotation campaigns, hackathons, ...) we want to stress the following attention points: documentation, traceability and replicability. For CitizenHeritage, we will focus on two formats: a co-curation activity and workshop, and an annotation campaign.

### 1 *Documentation*

It is advisable to publish a specific page on your project website which lays out the following aspects:

- Intended audiences, uses, publications and output
- Indication of the role of participants and the author status of these participants, possibly offering opt-in/opt out choices
- Copyright notifications for all content on the website, but also the intended IP status of the activity output
- Privacy regulation conformity

### 2 *Traceability*

As soon as users acquire a (consented) login and personal ID on your project website, make sure their actions are traceable - of course safeguarding privacy - when they add or alter information.

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<sup>28</sup> See e.g. KU Leuven privacy pages: <https://admin.kuleuven.be/privacy/en>, Erasmus Universiteit Rotterdam privacy statement: <https://www.eur.nl/en/disclaimer/privacy-statement>



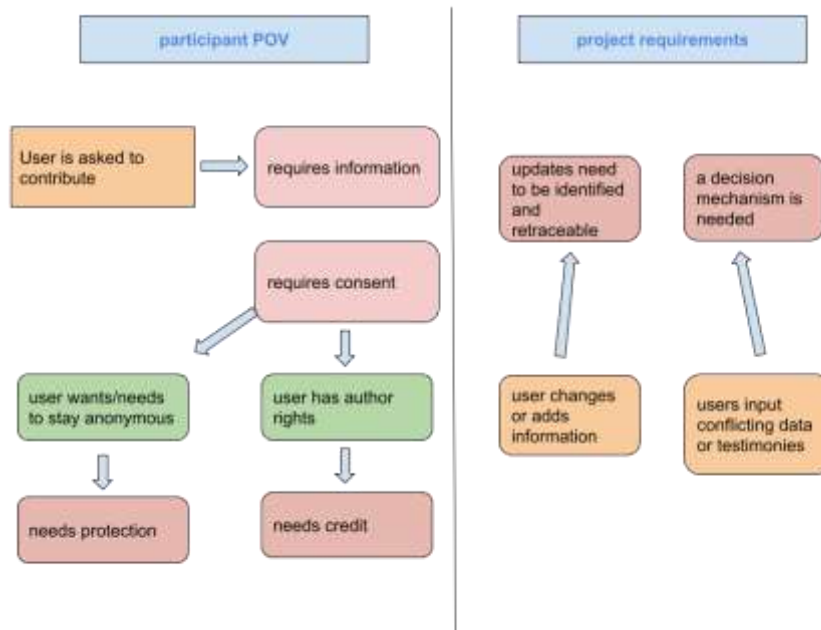


Figure 4 Traceability requirements

### 3 Replicability

A good research setup, whether it is using a quantitative, qualitative or mixed methodology, should be replicable by other researchers, so that research results can be compared and validated. In this sense, it is always a good idea to make a template for your research activity before even deploying it. In the template, you will describe the protocol you followed.

### 4 Participant follow-up

Giving due respect to participant contributions also entails providing follow-up actions, such as a newsletter, updates on the website and direct mailings. In its most elaborate form, building a participatory platform can make sure the relations with the contributors become more sustainable. But the first step is to run an evaluation questionnaire to collect impressions of the participants. CitizenHeritage developed a template for this.

## 3 ANALYSING THE RESULTS

As a part of the Model for Developing a Citizen Science project (Box 1), stage 6 of the research design calls for acceptance, editing and display of data while stage 7 calls for data analysis and interpretation. In a project where participants are encountering visual data and sometimes responding by producing their own visual data, new tools of analysis are required that recognize the sensory dynamics.

In the analysis of visual data, attention must be given to three areas.

#### i 1) The participants' visual reference

Galleries, archives, libraries, and museums (GLAMs) all play a significant role in how the general population experiences visual cultures. Collection managers, curators, cartographers, archivists, museum directors, librarians, metadata experts, digitization experts all have important roles in presenting the citizenry of any social network with visual information. While GLAMs will introduce new and nuanced information, citizens will also have their own visual memories related to their

previously lived experiences that they blend with the added information provided. People's minds are not blank slates. They have a personal library of visual experiences that they bring to any cultural encounter (Freedman, 2003 [10]). GLAMs must recognize and take advantage of these dynamic interactions.

*ii 2) The design of the visual exploration*

The research team can choose forms of visual interaction that the participants may engage in. Not only does this include the visual resources available through the GLAM, but if participants are encouraged to create their own visual response, an artist who is part of the research team can choose artistic materials and contextual resources that facilitate participants' engagement. The materiality of the artistic tools that participants are guided in using contribute to the possible meanings that participants may fashion.

*iii 3) Analysis of visual artwork*

New materiality affirms that visual artworks operate in a tacit level of meaning (Hannes and Siegesmund, in press [11]). Even if participants are not trained artists, nevertheless materials retain their own vibrancy (Bennett, 2010 [1]) that allow artworks to suggest meanings that a participant could not fully articulate in language before or after the artmaking. Therefore, the analysis of a visual work can go beyond what the creator of the work says about it. The work itself has its own voice and the researchers can attempt to unpack these added layers of meaning.

There are two further issues linked to the analysis of images. As artworks individually and collectively may transcend the explanations that their creator gives to them, the works can open dialogue through group critique. As the works resist simple categorization, the exploration of what these visual images struggle to say invites research participants and audiences to consider how visual evidence invites new interpretations. In this regard, it is important for the GLAM to pivot from a transmission model of knowledge to one that embraces the group as a source of generating knowledge. The GLAM does not police knowledge but serves as a critical coach in knowledge development.

Heritage is a source of resonance that gauges the depth and the layers of societal interactions. This transforms knowledge from the recollection of data to a richly embedded emotional response. The artist Joseph Beuys considered such an aesthetic, sensory, engagement as contributing to the building of a new social sculpture (Biesta, 2017 [2]). GLAMs offers the possibility of a more dynamic knowledge circulation outside academia that supports dynamic interaction contributing to a vibrant civil society. With its rich cross-fertilizations of cultures, Europe is now a particularly good place to foster these opportunities.

## **4 PUBLISHING THE RESEARCH RESULTS**

For a cultural heritage institution, keeping track of scientific publications leveraging on their digital collections is beneficial to document their growing value. An option is to impose the database rights to ask that resources are properly referenced in academic papers relying on these collections. Even better is to have structural collaborations with relevant research groups to engage in collection development through research.

When the data from citizen science initiatives get published, participants should be mentioned in due form. Depending on the role participants took, credits may include attributions of co-authorship or co-curatorship. Typical output from citizen heritage projects can be divided into data-enhanced collections on the one hand, and academic papers and publications on the other. In all cases, we recommend the principles of Fair Open Access. This means that results should be made Findable,

Accessible, Interoperable, and Reusable<sup>29</sup>. We will focus here on what this means for the research project data management, according to the “FAIR Guiding Principles for scientific data management and stewardship” (Wilkinson et al. 2016 [19]).

## 5 USE CASES

While research activities in the realm of citizen science can help drive the conceptualisation, development and testing of digital tools towards participation, practices yielding better results in terms of knowledge output and community engagement are often rooted in the use of established tools. As digital literacy is not a given, the interaction modes and interfaces should take into account different user subgroups and operate on a threshold that is achievable through elementary actions and an intuitive approach.

Citizens hesitant to engage in digitally prompted actions cross into the actual activity and contributory phase quickly when tools are easy to install, operate, interpret and share. In the next paragraphs, we share three examples - all web-based but in two cases operated through a computer, in the other via a smartphone - offering exactly that: clear value propositions, organic processes of interaction and contribution, immediate visibility and direct impact.

### 5.1 Use case 1: setting up an annotation campaign with CrowdHeritage

The objective of an online annotation campaign is to mobilise human intelligence in order to enrich the descriptive metadata pertaining to digital cultural heritage collections. In this respect, users are invited to participate in online crowd- or niche-sourcing campaigns and add annotations that add new meaningful information to a CH item in various ways, e.g. by adding descriptive tags, linking with terms from Linked Open Datasets, through image tagging, geotagging etc. Such annotation campaigns can ultimately contribute to stimulating a more participatory approach to cultural heritage and engage various groups of citizens - from experts and culture lovers to students and the general public - in its enrichment and improvement.

In this context, it is important to select the appropriate digital tools that provide the necessary technological means for the task at hand. CrowdHeritage (Eirini e.a. 2021 [8]) is an online platform that can support an end-to-end workflow that exploits the power of human intelligence in order to execute useful tasks in the field of CH. Through its combination of versatile functionalities and user-friendly interfaces, it provides services that cover all steps of the enrichment process, from the design and launch of online annotation campaigns to moderation and publication of the end results. It is also used in the framework of workflows that make use of Artificial Intelligence techniques, where citizens are invited to validate enrichments that have been generated by automatic tools.

CrowdHeritage has been designed to take into account the particularities and requirements set forth by the CH domain without being bound to specific types of heritage. It offers a rich variety of features and customization possibilities that make it applicable in a large variety of use cases and enable any interested party to organise a campaign according to their wishes and needs. At the same time, it can be seamlessly integrated into existing workflows in the CH community, through the mapping to established standards, the interconnection with CH aggregation and presentation platforms such as Europeana, the modular presentation of different types and formats of CH objects, and the support of a rich set of relevant vocabularies.

### 5.2 Use case 2: establishing a rapport and fostering discussion with QANDR

QANDR is an established, commercialised tool developed by Amsterdam-based company Noterik. Having been used by public bodies as well as private companies for several years, it has a proven

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<sup>29</sup> See the “FAIR Guiding Principles for scientific data management and stewardship” (Wilkinson et al. 2016)

track record in a wide variety of contexts, from board meetings with voting procedures to educational activities with students of all ages, company brainstorms, cultural events and co-creative workshops.

QANDR's optimised interface facilitates interaction with user groups by quizzing them on facts, stats, notions and impressions, estimates, value propositions etcetera. It also allows for creating mood boards, collating ideas on a digital whiteboard and prompting key concepts via word clouds. Each of the quiz modes is paired with a distinct interactive mode, including checking a box for the answers to a multiple-choice question, operating a slider to convey a score on a given scale, or dropping a digital dot in a double-axis grid.

The presenter uses a large screen to instantly visualise the individual responses that users submit via smartphone. Being able to see the result of a round of questions on the screen in real-time, is a golden outset for discussion - engaging both those agreeing with the majority, as well as those with different opinions. The immediate and collective output is not only beneficial to the agility of the user interaction and the level of involvement, but also to creative or investigative purposes as the results allow the presenter to build upon gathered insights throughout the session.

A key to the successful use of QANDR and similar discussion-inducing tools is the diligent preparatory work on each session, tuning the content to the occasion, the context, the theme, the objective and the target audience of the activity at hand. Both in the scope of CitizenHeritage and in previous projects involving digital cultural heritage, QANDR was used as a pivot for connecting the different stakeholders involved in events/activities, but also for framing the project background and the thematic scope of the effort, for gathering data with regards to citizen science and crowdsourcing, privacy policy and impact assessment, and for surveying participants about their impressions/experiences before and after the event.

As the interactions leave a digital imprint in the form of a 'recorded session' available afterwards in the QANDR backend archive, organisers can easily leverage upon the outcomes of the interaction by consulting the results. Furthermore, easy export via a.o. PDF allows for quick sharing with colleagues and participants, while the 'duplicate' functionality fosters replicability.

### **5.3 Use case 3: enabling brainstorms with Miro Boards**

A tool that we have increasingly been using in capacity-building workshops and brainstorming sessions is provided by Miro Boards. Miro Boards are virtually endless spaces in which you can arrange contributions. In its most basic form, those are virtual post-it notes, but you can also embed videos, pin documents or presentations to the board, include illustrations, add drawings or make annotations and comments. Typically you will prepare a Miro Board for a specific session, defining regions in which you want the users to contribute. It also provides video chat facilities, which makes it a quite complete environment for virtual brainstorm sessions. Afterwards, the boards can be shared and exported in a variety of formats.

## **6 CONCLUSION**

The CitizenHeritage project aims at assessing the validity of Citizen Science approaches in Cultural Heritage research. In particular, it tries to understand under what conditions the now quite well-established crowdsourcing activities can be stepped up as to really empower citizens as contributors to heritage science. In this paper, which emanated from a Dream Team discussion at ECQI 2022, we give an overview of measures to take at each of the different phases of a research cycle, and highlight three different use cases of specific methods and tools we used.

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# **DIGITAL DIVIDE OR INCLUSIVE FORMAT? EVALUATING THE USE OF AN ONLINE, INTERACTIVE, COLLABORATIVE WHITEBOARD ENVIRONMENT AS A DIGITAL URBAN-LIKE ECOSYSTEM FOR CONGRESSES AT THE EUROPEAN CONGRESS OF QUALITATIVE INQUIRY, EDITION 2022**

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## **Abstract**

Due to lockdowns, travel restrictions, home office and schooling, the worldwide Covid19 pandemic has forced academics to rapidly transition academic networking and learning events such as congresses, conferences and seminar to the online sphere.

This proceeding evaluates the experience of congress delegates participating in an online, digital collaborative whiteboard environment during the European Congress of Qualitative Inquiry (ECQI) 2022. By creating an online urban-like environment using the digital whiteboard software MIRO, we aimed for a more inclusive and engaging platform for digital learning and networking. We set the platform up as an online urban-like ecosystem displaying different areas populated with prerecorded contributions and open templates that served as the frame for collaborative place-making amongst delegates. We present our online congress environment and reflect on aspects of engagement and provide some preliminary insights on the extent to which we succeeded in engaging non-native English speakers, scholars with different levels of seniority and delegates with limited resources. Our assumptions need to be confirmed through comparative study data from regular congresses targeting a similar population.

Keywords: Virtual congress, inclusion, online engagement, Miro.

## **1 BACKGROUND**

The Covid-19 pandemic has impacted many aspects of both our personal and professional life, including the international conference landscape. With social distancing required, academic events were cancelled, postponed or moved to the virtual sphere. This digital uptake of academic events provided both opportunities and limitations to the academic community. Opportunities include the lower financial and time requirements of attendance 0, the reduced environmental impact of travel and increased attendance of attendees from low- and middle-income countries 00. Digital conferences open up opportunities to be more inclusive for those that cannot travel because of various reasons; financial restrictions, disabilities, competing commitments, visa requirements etc. In contrast, digital conferencing also introduces new challenges and limitations compared to face-to-face events. Such challenges relate to the reduced social interaction, the juggling of time differences 0 and the limited participation level due to technical limitations such as load shedding or network connections, particularly for people from low to middle income countries (LMIC). A recurring concern has to do with the intangible and social assets of in-person interaction: the reduced opportunities for social contact, the moments in between the formal program to network or discuss scientific content beyond the fixed schedule, the reduced attendee participation due to the pressure of the daily duties and lower initial commitment to register00. Another concern mentioned in previous research on

virtual conferences is the lack of opportunity to take a step back and see the content from a different perspective 1090. Moreover, the pandemic introduced an additional challenge to online meeting in general, *zoomfatigue*. Bailenson build on previous research to explain Zoomfatigue: the fatigue would be caused by the continuous eye gaze at a distance, normally preserved for more intimate encounters, the difference in cognitive load for sending and receiving non-verbal cues, the all-day mirror and the reduced mobility (4).

Given these opportunities and constraints, there is a growing realization that the virtual sphere requires a different approach than face-to-face events 0. This paper reports on the 2022 annual congress of the European Network of Qualitative Inquiry (ENQI), the European Congress of Qualitative Inquiry (ECQI) which took place in a virtual format in from February 2 to 4, 2022. ECQI brings together qualitative researchers with the purpose to connect, network, share, learn and start new collaborations and partnerships. With the 2021 edition cancelled due to the pandemic and the health situation still unsure, the ENQI decided to transfer the 2022 edition to the virtual sphere. A total of 116 participants were registered. It was hosted by KU Leuven and amongst the first international congresses that opted for collaborative, interactive whiteboards as a congress environment. This decision to explore this new medium was in line with the timely congress theme, being technology, design and the arts in relation to qualitative inquiry. The medium moreover allowed for the development of a digital environment marked by a buzzing density, diverse opportunities and interactions to other people, very similar to urban ecosystems.

Our goal was to evaluate interaction patterns and experiences with the collaborative digital environment we created and how this environment affected engagement and inclusion of attendees. With the use of Miro the congress organizers tried to counter some of the challenges related to online events: it introduced a different way to engage with content and other participants. With this format we countered some of the challenges related to zoomfatigue by taking the spotlight off the video and on to a shared visual board: this creates a less intimate view on the other, removes the attention given to reading and sending non-verbal cues on camera and linked to the video, eliminates the focus on the own image and introduces a new mobility by the movement over the board.

### 1.1 Objectives and research question

It was our intention to experiment with and evaluate the use of the collaborative platform Miro in the virtual edition of ECQI 2022. Acknowledging the active role of place in research and social interaction (5), we focus on the role of the digital place. Specifically we focus on the effect of the environment on inclusion and engagement through the following assumptions:

**Assumption 1:** An interactive, collaborative platform increased a sense of inclusivity amongst delegates with English as their second (or more) language to engage with the content presented and discussed during the congress; as this would allow participants more time to formulate their thoughts at their own speed, assuming that those with English as a first language would have enough opportunity to speak up during the chat.

**Assumption 2:** An interactive, collaborative platform increased more engagement from early-career researchers (PhD researchers or master level students), for whom active participation at such events is of higher importance for the development of their career. It empowers them to step up and engage with the content and speakers, and make themselves known in the field (6);

**Assumption 3:** An interactive, collaborative platform created opportunities to participate for resource-depleted researchers to participate without having to travel. These restrictions could be due to time dedicated due to care, teaching or other responsibilities, or financial.



The assumptions were created to guide our evaluative focus and filter out meta-data and experiential data that spoke towards the ethos of trying to be as inclusive as possible with and within the congress environment.

## 2 METHOD

### 2.1. Development of the interactive congress platform

Miro is an online service application that provides its users with a digital, cloud-based whiteboard. The platform aims to facilitate collaboration by providing a shared space in the form of an endless white board where participants can work collaboratively by typing, drawing, sharing images, videos or files, chat or talk or drawing connections between elements. After using the platform in our own collaborative projects 0 and during two workshop we ran at ICQI 2021 00, we decided to use the platform as a central meeting place for ECQI 2022.

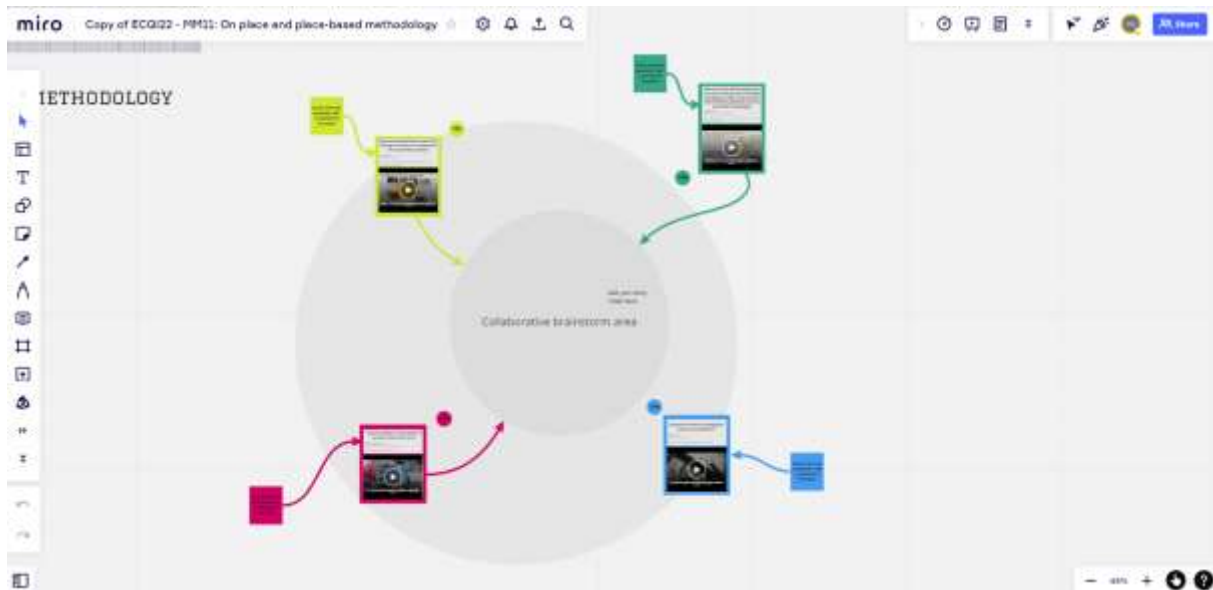
Using Miro, we aimed to infuse an emplaced element into the congress by creating a virtual environment which invited attendees to actively engage, co-create and populate the urban-like environment through a material trail, using video, images, other visual elements or text on various interlinked boards. The Welcome Board formed the backbone of the whole congress: here participants could access all necessary information and the schedule (Figure 1). This board served as a roadmap to navigate the various session environments through a link in the schedule. The logo from partners and sponsors were also included on this welcome board.



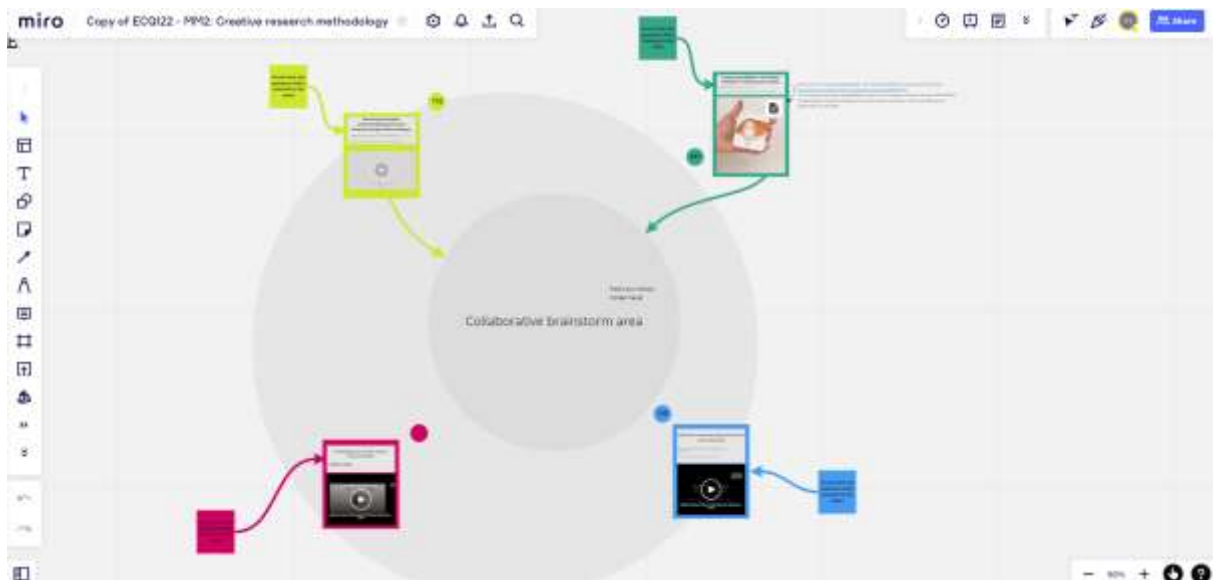
Figure 1: the interactive congress schedule with the links to navigate to the correct environments

The sessions at the congress were divided in the following categories:

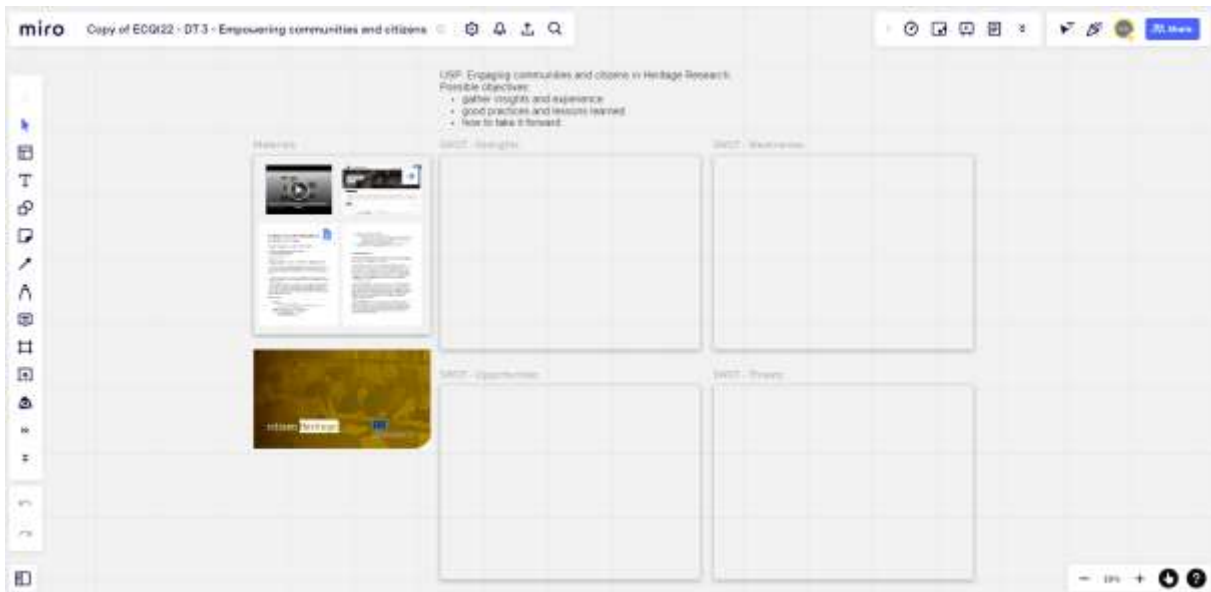
- *Multimedia sessions* are a series of short pre-recorded presentations clustered around a specific theme. Pre-recorded videos were hosted on YouTube and embedded in Miroboards,



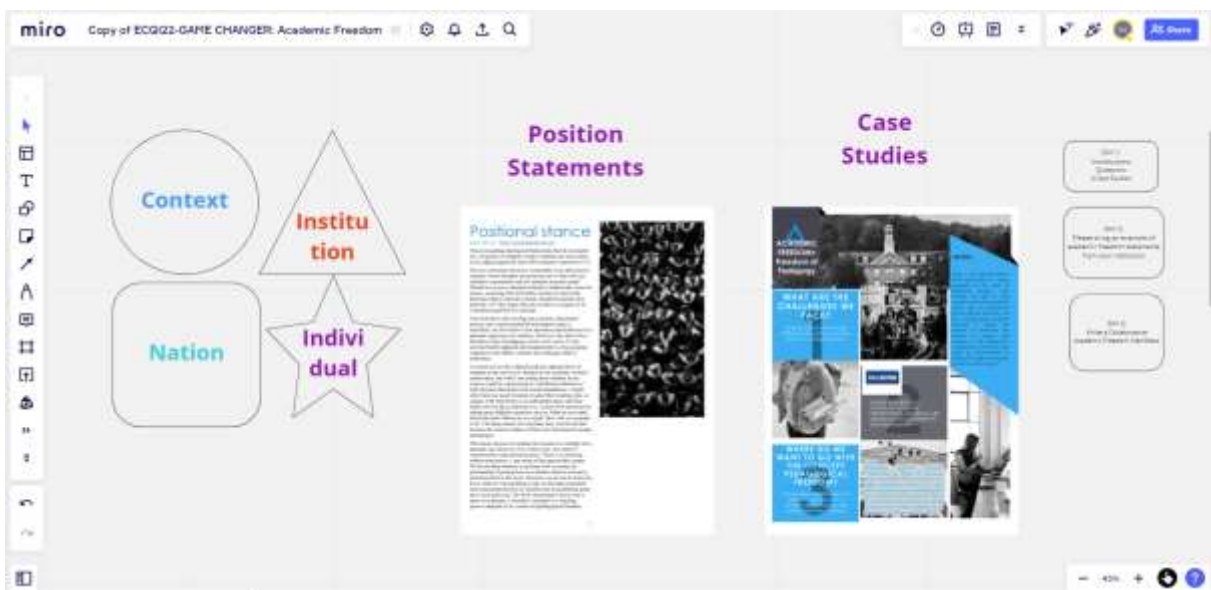
- *Multimedia panels* are similar to a multimedia session, but with a pre-established theme and presenters,



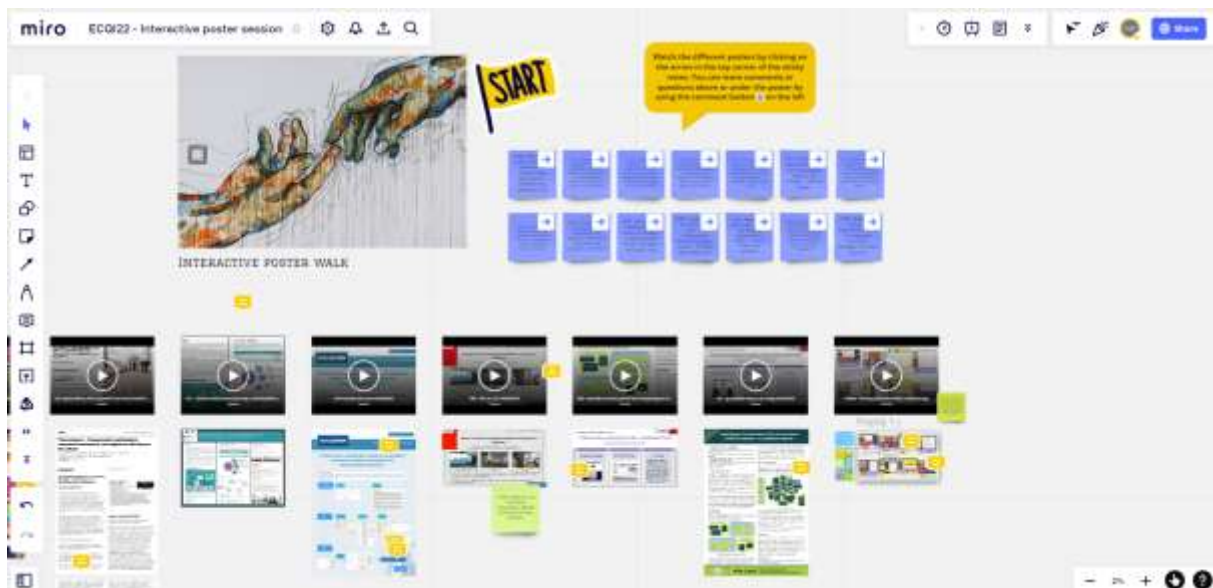
- *Dream Teams* are topical sessions for collaboration facilitated by topic owners who also prepared their boards in advance,



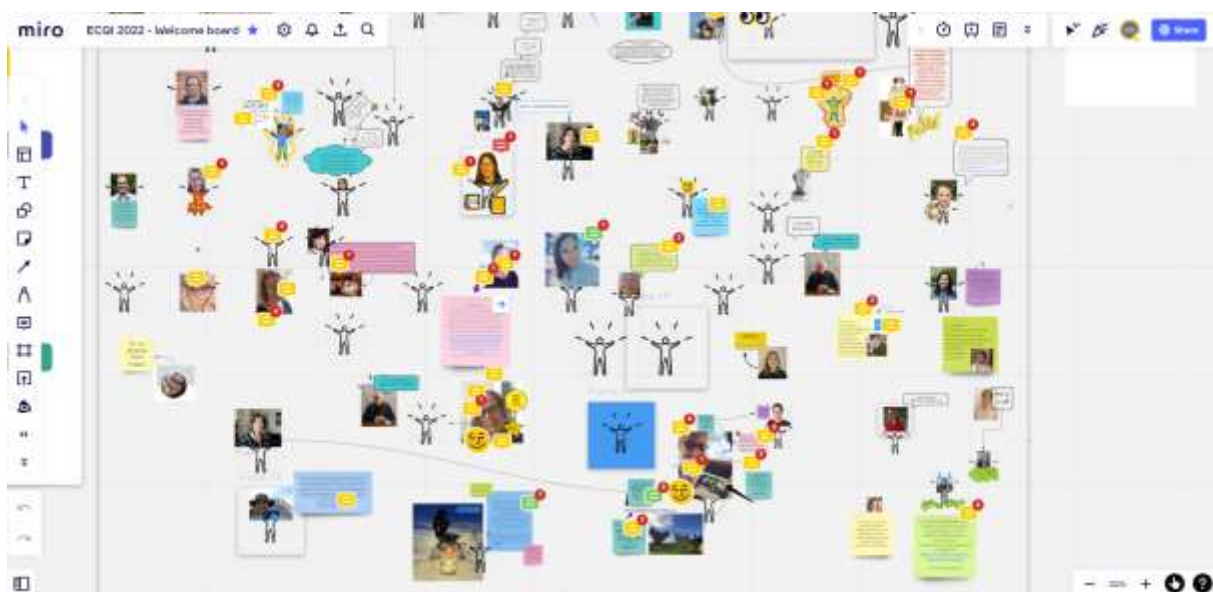
*Game Changers* are larger collaborative sessions that run over three days to open dialogue and address emerging trends or challenges. At ECQI 2022, there was one Game Changer on the topic of Academic Freedom that worked on the same board over the various sessions. For the game changer and dream teams, session facilitators were given access to the board beforehand, so they could prepare the environment.



- An *interactive Poster Sessions* was set up with interactive posters, many combining audio with a visual poster.



- A social 'who is who' in the form of avatars that participants personalized with images, speech bubbles, text and contact information.



Moreover, there was a key-note event (through Teams given the large amount of participants, which is not possible to accommodate within the platform), two social events/virtual receptions in a virtual reality platform. Just as in a life congress setting, sessions were held with up to 5 in parallel.

Two workshops for facilitators and participants were organized before the congress started to introduce the basics of the platform, with the purpose to ensure session moderators and participants to feel comfortable navigating the platform.

## 2.2 Evaluation of the interactive congress platform.

We evaluated the engagement with the digital environment through the delegates production of sticky notes, comments and other shapes. We targeted three markers of inclusion in our evaluation: first we looked at English as a second language compared to native speakers, to explore if the physical engagement offers a safe space to engage at a convenient speed. Second we looked at the career stage of attendees as the professional impact of cancelling cancellation of academic meetings



such as congresses is higher for early-career researchers 0 while they tend to be more apt in digital technologies. A third marker of interest was the income level of the country of the home institution (low to middle income country) as one way to look at limited resource availability. More specifically we wanted to evaluate whether this virtual format facilitated their active participation.

The evaluation was done by means of a mixed-method approach, using available quantitative meta-data, registration data of attendees and a qualitative evaluation. More specifically, it builds on the extraction of meta-data from the digital platforms used, combined with demographic registration data (country of home institution and student status – PhD or master level) and a digital feedback wall based on four prompts: 1/ *What will help us move forward and how did you engage differently through Miro*, 2/ *What held you back to engage fully digitally?*, 3/ *How could we do things differently and how can we rethink remote collaboration for the future?* and 4/ *What should we do next?* We used a thematic coding to cluster these comments.

### 3 ECQI 2022 - FINDINGS

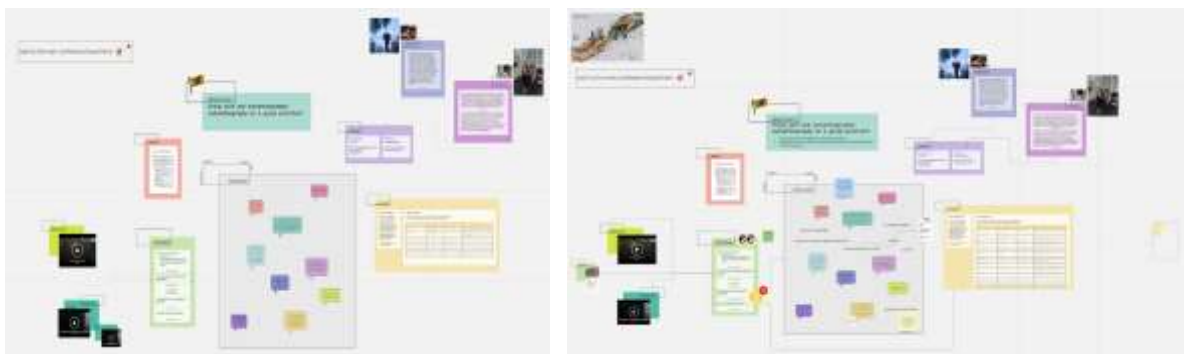


Figure 1: DT 7 before and after the congress

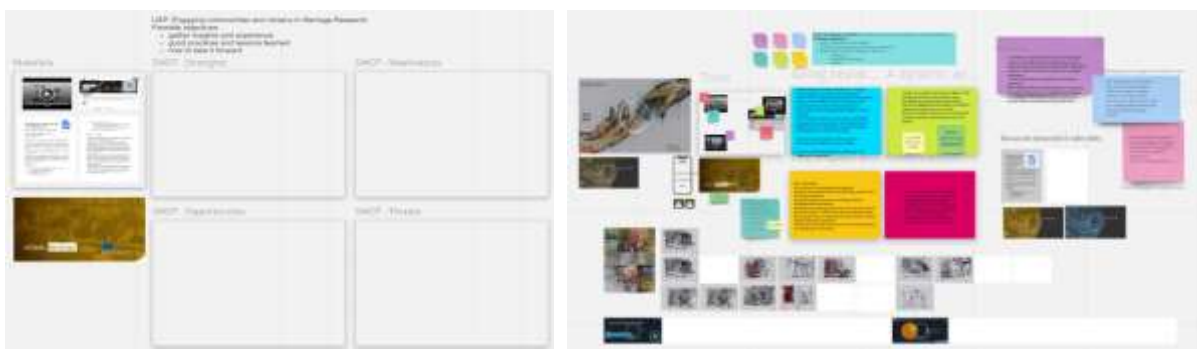


Figure 2: DT 3 before and after the congress

In the findings we start from a descriptive overview of the attendees and the retrieved quantitative and qualitative data before continuing with testing the assumptions through an evaluation of the various types of data.

ECQI 2022 welcomed 116 registered attendees of which 22 moderated sessions, on invitation and mostly members of the scientific steering committee of ENQI. Of these 116 attendees, 51% was based at an institution with English as an official language, 33% registered as a student and 9% of attendees was based at an institution situated in a Low to Middle Income Country. The congress hosted 15 multi-media sessions, 2 multimedia panels, 14 dream team sessions, 1 game changer and 14 interactive posters. The metadata are based on the engagement of individual participants with the board and as such it does not include those who joined by video in the virtual environment but did not edit or create anything on the board. This evaluation looked at 31 boards in the categories multimedia, multimedia panel and dream teams. On average, each board had between 6 and 7

contributors, with multimedia panels and multimedia sessions showing a stronger level of engagement of 7 to 8 on average compared to dream teams on average 5. However, the number of contributions (in the form of shape, arrows, photos, video or text directly on the board) per session was higher for the dream teams compared to multimedia session, 54 compared to 11, where the amount of comments (a collapsible speech bubble with a textual response) was higher for the multimedia sessions (on average 23 vs 9). This follows the setup of both sessions types: presentation sessions aim to present research and invite responses in the form of questions and comments, where a dream team session is set up as a co-creative exercise.

Interesting to note is that the engagement with the content went well beyond the closure of the congress on the 4<sup>th</sup> of February: 10 out of 15 multimedia boards received contributions after the delivery date, four of those even two to three weeks after the congress. For the dream team sessions, there were 7 out of 14 boards that received contributions after the delivery date, out of which 6 after the congress ended. There were 1443 views of the 74 videos offered during the congress and 287 views in the six weeks after the congress.

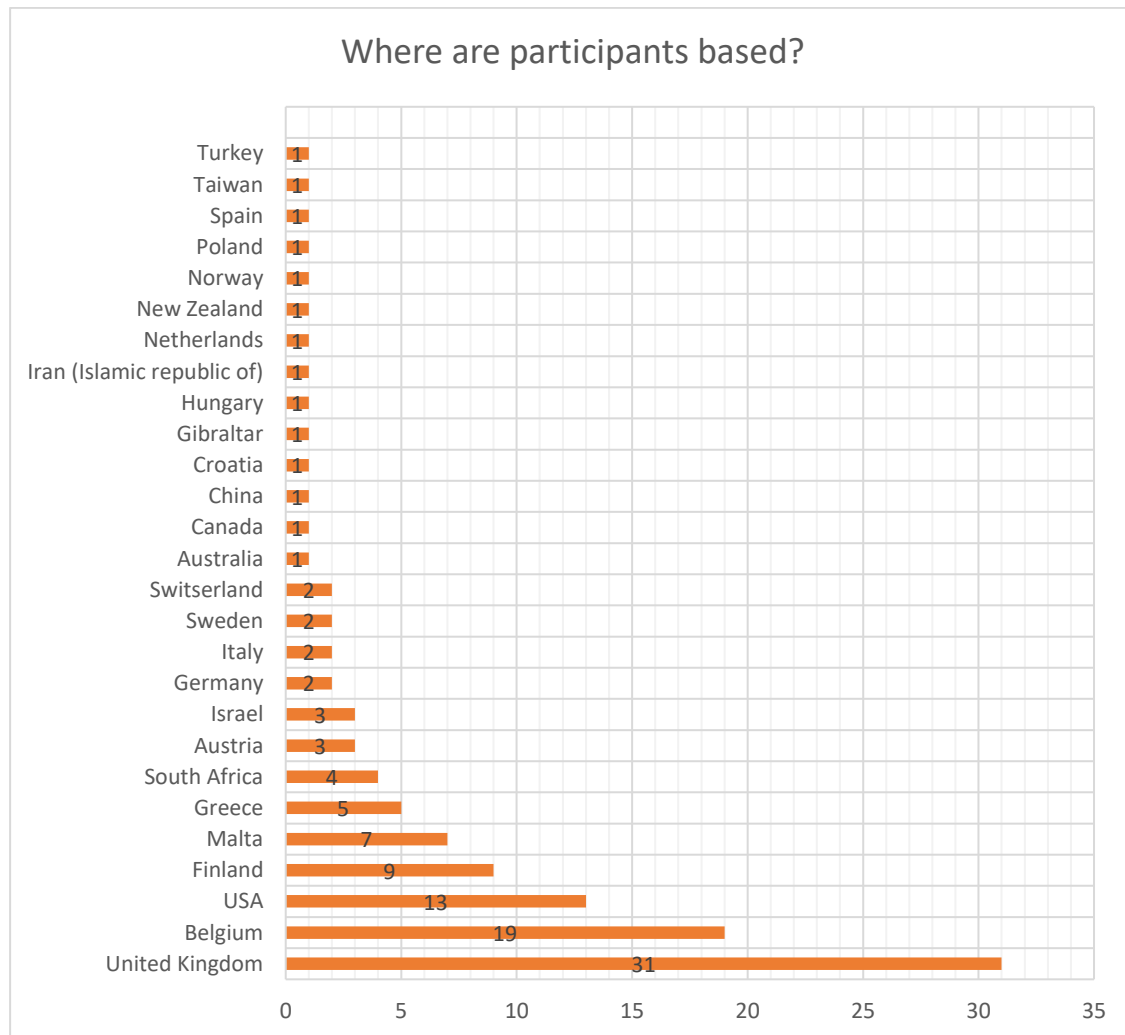
We also collected feedback from participants through an evaluation board. After clustering that data, the following findings came out. Firstly, many people (n=9) expressed a strong will to continue with this digital way of collaborating in some hybrid format referring to the stress, environmental impact and cost of travel. Secondly, there was an appreciation (n=8) for the ability to wander around between boards and engage asynchronous with presentations at their own convenience, as participants mentioned balancing congress participation with teaching and care responsibilities, [...] *the agency as a participant to move around and interact with different people, papers and boards was outstanding*. The boards were available the weeks after the congress and the data analytics show that there were still 169 views after the event ended. A third trend in the feedback was the sensitivity through the various modes of engagement, as some attendees indicated they felt not at ease to participate with camera or voice (n=6). Attendees felt they could *set their own boundaries*. Another recurring topic was the urge for connection: while some (n=3) were missing the connection to others, two comments proposed alternatives and some (n=4) expressed that they appreciated the opportunities to connect (such as through the avatar area to interact and engage further). Other comments referred to the ability to learn about digital environments and tools (n=1), the learning and sharing opportunities (n=3), the clear structure (n=1), the more inclusive format (n=1), the deeper level of engagement compared to a traditional conference setting (n=1) and the benefit of the material trail that was produced on the board during the session (n=2).

These data helped to explore our initial assumptions. For the first assumption, we noticed that the percentage of participants home in a native English speaking institution that were active on the boards was slightly higher than the overall average on the registration list. Their active contribution was 52.7% compared to the 51% overall presence among participants. This shows that our first assumption that non-native speakers would engage more through the board does not hold.

The data show that the second assumption on the active engagement of early-career researchers remains valid to a certain extent, as student were slightly more active during various sessions than other attendees while 33% of all attendees was registered as student, the percentage of students active per session was 37% on average. There is a clear difference between session types: the multimedia sessions had a more than average board input from students with 42,4% and the dream team sessions were slightly under the expected average with 30,9%. In the poster sessions, the early-career engagement was also low.

The third assumption regarding the opportunities for resource-depleted researchers shows some similar trends. We noticed that for the multimedia sessions, 8 out of 14 show a more than average participation from LMIC with an average of 10% compared to only 1 dream team session having an active engagement from these participants (10%), with the others no attendees. We also noticed no engagements from attendees based in LMIC in poster sessions. The qualitative feedback showed that

the interactive setup of the collaborative environment allowed people with other responsibilities (such as care and teaching ) or travel restrictions to participate.



### 3.1.1 A virtual city – place making

The pandemic has forced us to change our thinking about place making and brings to the fore the notion of congress environments in flux. With this setup we have explored a virtual environment that displayed itself to participants as a buzzy environment of city dwellers on their way to different destinations. Each board created an online sense of place. Developing a digital urban-like ecosystem through various boards boosted our confidence in the possibilities of digital place making. With a welcome board that provided a map of our digital urban-like ecosystem, participants could easily find their way to their area of interest, as if they were wandering off to visit different neighborhoods or topical sessions through a self-explaining network of links that served as signposts. An initial material skeleton or framework was laid out for each of these congress destinations, using templates, prerecorded presentations, shapes and images. These rapidly urbanized further through the various contributions during the sessions, which created an atmosphere of living environments.

## 4 DISCUSSION

Returning to our initial assumption about the creation of an inclusive environment, we find mixed results. Our first assumption was that this interactive, collaborative platform would increase participation of those that have English as a foreign language. Our findings cannot confirm this. Non-native speakers do not engage more compared to native speakers, but this needs to be tested against a cohort with similar characteristics taking part in a conventional or non-interactive virtual congress environment to evaluate the potential of the type of platform.

Our data do suggest that on average early-career researchers engage more than senior researchers, which is in line with the second assumption. The platform tends to be more inclusive towards researchers with a junior status, especially the multimedia sessions. This could be related to the idea that juniors are more at ease with the technology, which gives them more time to participate in the sessions and engage with the content through the 'material' format. It is not unlikely that senior researchers engaged more with the video chat. Our third and last assumption was that the online format resulted in a higher number of researchers from LMIC. Our data illustrates an overrepresentation of LMIC researchers in 8 out of 16 multimedia sessions. There was only one dream team session where this group participated actively. This suggests that researchers from LMIC select particular sessions to participate in. An additional unexpected path towards inclusion was that some researchers felt more at ease to engage through the board than through video chat. Our data suggest that different groups engage differently with session content.

These findings are in line with previous studies on virtual conferencing (6): virtual academic meetings have the potential to be more inclusive compared to live conferences. Sarabipour states that the virtual format improves access to research which can foster participation of underrepresented researchers, it advances innovation and knowledge exchange and creates learning and training opportunities (6).

This evaluation has its own limitations. On the one hand there are the technical limitations that limit us in the amount of data that has been collected (e.g. we can only see delegates if they are registered Miro users, while non-registered 'visitors' are assigned an anonymous name), moreover we have limited demographic data from the registration and therefore conducting a more detailed analytical evaluation for other categories such as gender, ethnicity or age was complicated. Another important limitation is that we were not able to take into account the oral facilitation and conversation during the live session, as the MIRO software does not allow recording of the video chat. Neither did we account for the topical interests or research trends, which likely will also have affected the material production of elements on the boards. We also acknowledge the technical challenges and power outages of some participants. This digital divide could further widen the inequality between attendees who lack digital recourses or access. Follow up research could focus on a comparative analysis of the value and potential of digital urban-like congress ecosystem and more traditional congresses targeting a similar population.. Further research is needed to confirm our assumptions about the role of a collaborative platform on inclusion.

## 5 CONCLUSION

With this paper we evaluated the use of a collaborative whiteboard format at ECQI 2022 , zooming into aspect of inclusion on the level of language, career stage and resource availability. While there was a general agreement that a digital congress cannot replace the life version, the evaluation showed that this collaborative format managed to counter some of the shortcomings of online academic meetings. Our findings suggest the format engaged natives and non-natives equally in the discussion. It made early-career researchers respond to queries and focus on multimedia sessions. Similarly, attendees from LIC and LMIC were more active in multimedia sessions than in dream team session. Just like in congress halls it allows people to choose between a more active and passive role. Moreover it allowed attendees to engage in the way they felt comfortable: through video chat, by



co-creating on the board or through comments, both synchronous or asynchronous. The availability of a diverse offer of sessions, session types and ways of engagement seems to be able to speak to a diverse audience. This opens up opportunities to create more specific and focussed sessions people can participate in in between congresses, to facilitate collaboration with international colleagues.

A benefit of this digital format that was well received by participants was the 'archive' that was created on the spot and the availability of the presentation throughout and even after the congress, allowing attendees to engage with the content at their own convenience, in line with the potential of a digital archive as mentioned by (3). By working with pre-recorded presentations, presenters were forced to prepare beforehand and would not be distracted with last-minute preparations during other sessions. While there was a schedule for the sessions, where the dialogue was opened through video chat, the environment served as a temporary archive that allowed asynchronous engagement with the content: it allowed participants to 'wander' through sessions and re-watch and engage with the recordings at different times. A material trail of the discussion was build, which allowed engagement beyond the fixed schedule. Some people could last minute not be online during their planned session due to a power outage in the area they live. While they could not join the video chat, the format allowed them to still have their presentation in the session and the board allowed for questions and engagement.

Miro facilitates movement into a virtual meeting sphere, which has shown to aid performance 0. As attendees are *wandering* through one board or multiple boards, this movement was seen by some new users as overwhelming, but allowed other users to engage differently. This format allowed to break through the hierarchy of more 'traditional' video conferencing, allowing attendees to actively co-create 'neighbourhoods' or boards and knowledge. When going to a life event, attendees fully free up their agendas, allowing active participation in the full program. In a virtual event, attendees do often not have this luxury and other responsibilities sneak into the time assigned to the program 0. In this way, the digital collaborative place opened up an unexpected level of inclusion for those unable to travel or juggling other responsibilities. Moreover, this format facilitated 'multiway exchanges', similar to more informal exchanges during life events during coffee breaks and social events. The avatars and the material trail allowed attendees to engage with each other which allowed - to a certain extent - the one-to-many exchanges common in online events.

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