# unTangling transdisciplinary knowledge insights in alternative formats

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Design Fiction, History, Public History, Cultural Venues, Artificial Intelligence, Configuring Participation

## 1  Introduction

In this position paper, I present two distinct case studies which will enrich the conversations at the DIS2023 workshop on *Beyond Academic Publication: Alternative Outcomes of HCI Research*. The first case study is a large collaborative project involving configuring transnational participation. I offer it as an example of the urgency to reconsider how we might give back to a wider network of multi-lingual participants. The second case study is a nascent small design fiction project carried out within my department. In respect to it, I lay out my motivation to engage in the production of a fictional radio-play to translate research insights into a more personal and emotional outcome to ignite future action. Through the case studies, I will illustrate my motivation grounded in sustainability of research results and the idea of "giving back" to the participating communities.

The two case studies are markedly transdisciplinary and informed by my own research and interests background. I hold a PhD in designing participatory interpretation of cultural heritage and currently work in the fields of history, public history and museology. My focus remains on design for diversifying historical interpretation, participatory design configuration and negotiating the ways in which HCI and design methodologies could alter how history and cultural heritage are practised. Yet, oftentimes, I struggle making insights relevant through formulaic research papers. Hence, I am also interested in exploring the potential of alternative research outputs to inspire action and broaden the ways in which colleagues from various disciplines engage with each other's knowledge and ways of seeing the world. I am motivated by an observation that HCI research generates interdisciplinary knowledge – the insights and sensibilities of which cannot simply be contained to "implications for design" but require better suited formats to be made actionable.

My interest in other forms of outcomes is recent so in this position paper I will not illustrate existing outputs. I will outline the complexities within which I work to ground my motivation to produce such outputs – across disciplines, across different knowledge obtained during research, and across different audiences with whom such knowledge could be shared.

## 2  Case Studies Description

### 2.1  Case Study 1

The first case study is a longitudinal collaboration with a European history museum, which extends my previous co-design engagement with cultural institutions [7]. In this work in progress, my colleague Camilla Portesani and I engage with participatory design and public history to incorporate long-term participation practice within the museum's approach to historical interpretation. We work with 14 students (at BA, MA, and PhD level) from four universities – in the Netherlands, Switzerland, Poland, and Bulgaria. The students are researching and writing historical narratives based on their family archives and through conducting oral history interviews with members of their families. The students-written narratives will be translated into a museum-approved and audience-appropriate format and exhibited in a temporary interactive installation. Our aim for this intervention is to offer alternative and nuanced interpretations on what European heritage and memory could mean alongside exploring design approaches to exhibiting polyvocality (i.e., multiplicity of voices and perspectives).

Albeit I can talk about the installation design and the HCI knowledge which will be gained in the design process (and I am eager to engage in that conversation during the workshop), I want to bring attention to questions around how to "give back" to a transnational cohort of participants. For instance, although the project's official language is English, the students between themselves speak seven languages. To gather primary sources to base their narratives on, students engaged with their family members – from immediate caregivers to grandparents, to aunts and uncles – who do not speak English. This has an implication that the families and relatives would not be able to read the full narratives. English, in fact, cannot be the only language we are communicating in, especially when looking into decolonising knowledge and as future projects become even more transnational. Simultaneously, per museum policy, the exhibition texts (shorter than the full narratives) will be translated into the 24 official languages in the European Union. We will bring the students to the installation opening event, yet we would not be able to do this for their family members – and for us, they have been instrumental to the project's completion. We thus have a responsibility to give back to those actors in a way that resonates with their own responses and realities. We would like to explore options around online exhibitions, self-published catalogues and make these multilingually accessible at least to the main five languages involved (Dutch, German, Italian, Polish and Bulgarian).

Alongside looking to support more equitable relationships with our participants, we are motivated to explore alternative routes of disseminating projects' insights to capture the multiple layers of research. Our project will produce knowledge relevant to: public history, museology, cultural heritage, design, and HCI. For example, insights around concepts such as polyvocality, sharing authority and sharing power could have implications on research practice in all the above. Yet all these disciplines have their own ways of framing and conveying research outcomes in written article forms. Exploring other formats of publication could have the potential to showcase the interweaving of concepts, disciplines and insights in a manner that clearly communicates the relevance of taking these multiple layers into account when configuring participation in different contexts.

## 2.2 Case Study 2

The second case study is a design fiction project I am conducting internally within my department – the Centre for Contemporary and Digital History (C2DH) at the University of Luxembourg. I am exploring questions around the changing role of historians and the practice of history through the lens of how AI and the conditions under which AI is developed could include – or exclude – diverse types of knowledges. My focus is specifically on knowledge construction in the historical discipline

History follows a strict set of rules to produce knowledge from primary source collection, primary source research, cross-referencing sources and fact-checking, interpreting, writing the interpretations up. What is counted as knowledge and how that knowledge can be reached, however, changes, grows, and transforms over time and is shaped by the tools available. Artificial Intelligence (AI) is one such tool changing the practice of history - AI (and machine learning) have been employed to examine historical documents to fill in missing information about past events [9], are trained to predict what constitutes a historically important event [6], and more recently AI is being discussed in bridging disciplines and imagining more ethical and just history making [8]. Simultaneously, AI draws strong attention to its existence and impact. We needn't look further than the recent discussions sparked by ChatGPT to illustrate this – from fears of "super intelligence" [4], to AI hallucinations [3], to AI tools' accessibility perpetuating inequalities [1]. These discussions affect the imaginary of how the historical practice will change over time.

In this project, I move beyond utopian and dystopian dichotomies of replacing the historian with an AI tool. Instead, I explore the much wider and entangled elements of ethical, political and economic systems, social beliefs, values and fears that might influence the development of AI and its implementation in historical research. By using a design fiction approach of researching and communicating these entanglements, I aim to discuss the already exclusionary practice of history making, considering opportunities for enriching it with other forms of knowledge, as well as discussion how to influence the future of AI tools by fostering a dialogue between historians and HCI researchers. My methodology includes interviews with historians, speculative

designers, and literature research to create the concrete speculative future within which to position a number of speculative product prototypes and organise these into a product catalogue.

Alongside organising a product catalogue, I am also working with a playwright to develop a short radio play translating the research ideas. My motivation is to move beyond a podcast narration and instead explore fiction writing as a valid route of communicating the themes underpinning this research and its outcomes. There are two experiences that inspired this decision illustrating how fiction can help us make better sense of the world. First, in his book *Ways of Being*, James Bridle [2] described visiting the forests at the edge of Vancouver led by Suzanne Simrad, Professor of Forest Ecology the University of British Columbia. In this scientific talk Prof Simrad explained the interconnectedness of trees and how they organise their own forms of mutual aid. That scientific talk captivated Bridle at the time but as soon as it was over, he continued with his everyday research activities. That is until a year later he read a work of fiction – the book *The Overstory* by Richard Powers [5]. Powers had translated Simrad's research into a captivating narrative that brought together personal and intimate stories which translated the science into a personal and emotional experience, creating a sense of urgency that Bridle resonated with. Similarly, I began untangling my own understanding of AI through the fictional podcast series – The Program Audio Series [10]– which weaves social, cultural, economic, political and deeply personal narratives in a world governed by AI. The podcast creates a nuanced world populated with people who have benefitted from the new system and those who suffer from it. My goal is to produce a radio-play that could make the production of historical knowledge and AI explicitly related and actively implicating the world we inhabit.

## 3  Contributing to the workshop discussion

Both case studies presented will offer strands for discussion during the workshop. I will contribute insights into translating HCI and design insights for the humanities and insights from humanities into HCI knowledge. For instance, doing a design fiction with AI is an established methodology but here I want to offer the consideration of how AI impacts other disciplines and in turn how those disciplines might inform the future of AI. These subtle influences are not obvious and are not always clearly brought to attention in HCI development. They are not obvious to historians either, limiting some of those practitioners' imagination regarding how they might engage with these systems. I continue to struggle with clearly explicating those entanglements and am interested in exploring with a group of like-minded people how to proceed with communicating these: nonlinear narratives, decentralised storytelling – how might these approaches take shape to communicate research insights.

More importantly, my work continues to develop in the field of participatory design, and I am motivated to be part of conversations where the work of giving back and decolonising knowledge is not an afterthought of a project but an underlying principle. For this to happen, there is a need of having a strong support network and people to work with. I am keen on meeting the wide-ranging group of participants with whom to strengthen and develop such a frame for reflecting and engaging critically with alternative research publications.

If accepted, I would like to attend online.

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