### Travelling Arts x HCI Sketchbook: Exploring the Intersection Between Artistic Expression and Human-Computer Interaction

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Institution</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makayla Lewis</td>
<td><a href="mailto:m.m.lewis@kingston.ac.uk">m.m.lewis@kingston.ac.uk</a></td>
<td>Kingston University, London</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Mauro Toselli</td>
<td><a href="mailto:mauro.toselli@gmail.com">mauro.toselli@gmail.com</a></td>
<td>Independent Artist, Italy</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Denise Lengyel</td>
<td><a href="mailto:Denise.Lengyel@newcastle.ac.uk">Denise.Lengyel@newcastle.ac.uk</a></td>
<td>Open Lab, Newcastle University</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>John Miers</td>
<td><a href="mailto:j.miers@kingston.ac.uk">j.miers@kingston.ac.uk</a></td>
<td>Kingston University, London</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Miriam Sturdee</td>
<td><a href="mailto:ms535@st-andrews.ac.uk">ms535@st-andrews.ac.uk</a></td>
<td>University of St Andrews</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Violet Owen</td>
<td><a href="mailto:r.v.owen@lancaster.ac.uk">r.v.owen@lancaster.ac.uk</a></td>
<td>Imagination Lancaster (LICA),</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Josh Urban Davis</td>
<td><a href="mailto:josh.u.davis.gr@dartmouth.edu">josh.u.davis.gr@dartmouth.edu</a></td>
<td>Dartmouth Department of Computer</td>
<td>USA</td>
</tr>
<tr>
<td>Anna Troisi</td>
<td><a href="mailto:a.troisi@arts.ac.uk">a.troisi@arts.ac.uk</a></td>
<td>CCI Creative Computing Institute,</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Kim Snooks</td>
<td><a href="mailto:k.snooks@lancaster.ac.uk">k.snooks@lancaster.ac.uk</a></td>
<td>University of the Arts London</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Laia Turmo Vidal</td>
<td><a href="mailto:laiatv@kth.se">laiatv@kth.se</a></td>
<td>Dept. Media Technology and Interaction Design, KTH Royal Institute of Technology</td>
<td>Sweden</td>
</tr>
<tr>
<td>Patricia Piedade</td>
<td><a href="mailto:patricia.piedade@tecnico.ulisboa.pt">patricia.piedade@tecnico.ulisboa.pt</a></td>
<td>Interactive Technologies Institute,</td>
<td>University of Lisbon, Portugal</td>
</tr>
<tr>
<td>Nick Bryan-Kinns</td>
<td><a href="mailto:n.bryankinns@arts.ac.uk">n.bryankinns@arts.ac.uk</a></td>
<td>Creative Computing Institute,</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Beatriz Severes</td>
<td><a href="mailto:beatrizseveres@tecnico.ulisboa.pt">beatrizseveres@tecnico.ulisboa.pt</a></td>
<td>Interactive Technologies Institute,</td>
<td>University of Lisbon, Portugal</td>
</tr>
<tr>
<td>Kirsikka Kaipainen</td>
<td><a href="mailto:kirsikka.kaipainen@tuni.fi">kirsikka.kaipainen@tuni.fi</a></td>
<td>Tampere University</td>
<td>Finland</td>
</tr>
<tr>
<td>Miriam Palosaari Eladhari</td>
<td><a href="mailto:mirjam@dsv.su.se">mirjam@dsv.su.se</a></td>
<td>Department of Computer and System</td>
<td>Sweden</td>
</tr>
<tr>
<td>Anna Troisi</td>
<td><a href="mailto:a.troisi@arts.ac.uk">a.troisi@arts.ac.uk</a></td>
<td>CCI Creative Computing Institute,</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Corey Ford</td>
<td><a href="mailto:c.j.ford@qmul.ac.uk">c.j.ford@qmul.ac.uk</a></td>
<td>Queen Mary University of London</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Miriam Palosaari Eladhari</td>
<td><a href="mailto:mirjam@dsv.su.se">mirjam@dsv.su.se</a></td>
<td>Department of Computer and System</td>
<td>Sweden</td>
</tr>
<tr>
<td>Anna Troisi</td>
<td><a href="mailto:a.troisi@arts.ac.uk">a.troisi@arts.ac.uk</a></td>
<td>CCI Creative Computing Institute,</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Ana Henriques</td>
<td><a href="mailto:ana.gfo.henriques@campus.ul.pt">ana.gfo.henriques@campus.ul.pt</a></td>
<td>Interactive Technologies Institute,</td>
<td>University of Lisbon, Portugal</td>
</tr>
<tr>
<td>Nick Bryan-Kinns</td>
<td><a href="mailto:n.bryankinns@arts.ac.uk">n.bryankinns@arts.ac.uk</a></td>
<td>Creative Computing Institute,</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Beatriz Severes</td>
<td><a href="mailto:beatrizseveres@tecnico.ulisboa.pt">beatrizseveres@tecnico.ulisboa.pt</a></td>
<td>Interactive Technologies Institute,</td>
<td>University of Lisbon, Portugal</td>
</tr>
<tr>
<td>Kirsikka Kaipainen</td>
<td><a href="mailto:kirsikka.kaipainen@tuni.fi">kirsikka.kaipainen@tuni.fi</a></td>
<td>Tampere University</td>
<td>Finland</td>
</tr>
</tbody>
</table>
ABSTRACT

When thinking of arts in HCI, one might be tempted to keep one’s eyes focused on prominent realms such as sketching for UX Design and design probes from participants. A closer look shows that practices go beyond this, involving a variety of arts-based expressions by researchers, the researched and third parties, e.g. graphic facilitators. Inspired by Toselli’s Sketchnote Army Travelling Sketchbook, researchers and artists contributed to a ‘Travelling Sketchbook for Arts in HCI’, showcasing their arts-based practice in HCI. The resulting sketchbook explores the intersection between HCI and artistic expression, illuminating what it means to use art in HCI. It shows the breadth of Arts in HCI, illustrating the many fruitful possibilities for extending existing research and dissemination methods in HCI. It also calls into question current practices, which often do not recognise the significance of artist attribution, and, in turn, advocates for equal authorship between principal researchers and contributing artists.

KEYWORDS

sketching; arts; sketchbooks; video; animation; making; drawing; painting; digital art;

CCS CONCEPTS

• Human-centered computing → Human computer interaction (HCI).

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s).

CHI EA ’24, May 11–16, 2024, Honolulu, HI, USA
© 2024 Copyright held by the owner/author(s).
ACM ISBN 979-8-4007-0331-7/24/05
https://doi.org/10.1145/3613905.3644069

ARTIST ACKNOWLEDGEMENTS

To the artists who have opted not to be included in the author list, your contributions are of equal value to those in the author list. Thus, the acknowledgement section has been moved from the customary end of the paper to the beginning; we would like to thank Joaquin R. Diaz Duran, Francisco de la Mora, Natalia Perez, Em Harmsen, and Sue Nichols for contributing to Art in HCI Travelling Sketchbook.

OPENING COMMENTARY

This AltCHI paper advocates for an equal approach to authorship between principal researchers and contributing artists. The absence
of the artists would render the narrative of Arts in HCI incomplete, while the lack of principal researchers (who are also artists) would impede the analysis of artwork. Recognising the significance of artist attribution, this AltCHI paper suggests that the equitable recognition of creative input is crucial for fostering a sense of value, respect, and fairness within the Arts in the HCI community. We identify an issue within the SIGCHI templates: few authors and re-
stricted incorporation of visual elements that are supportive rather than constitutive of the narrative [18]. In response to this limitation, this AltCHI paper ensures each artist’s adequate representation (authorship). Consequently, this AltCHI paper cannot conform to the stipulated 8–12-page length (excluding references) to accommodate our inclusive authorship model. Regrettably, the font size has been reduced to five to adhere to the page length constraints. We hope this compromise demonstrates our commitment to the significance of this research, the ethos of authorship, and the visibility of imagery remains unwavering. Thus, to view this paper you may need to utilize accessibility software such as a screen reader or magnifier.

3 INTRODUCTION

Sketchbooks are used by artists (professionals and hobbyists) for art practice, life observation, and experimentation, e.g. trying different approaches to drawing hands, observational studies, sketching ideas for potential future artwork and blueprints (mapping out work) before starting the final artwork; they enable the artist to put your/paintbrush/pencil/pen on paper or digital canvas; it is a tool and practice that encourages habitual creativity [4], e.g. see Figure 1. It is often a solitary and private space to express oneself without a need for perfection. A sketchbook is like the juicy viewer/glimpse the artist’s creative process in a personal and inspiring way. However, these creative pages are usually found years after the artist has died, e.g. Leonardo da Vinci’s flying machines. The use of technology, especially social media, sketchbooks and digital artwork have become much more readily available as blogs/social media posts 1, books, and papers [11, 12, 16] by the artist. These collections are often themened.g. [7, 8, 15] by artist’s independent publications (e.g. [10]) and 1 and 2. These artists offer glimpses into their creative process to showcase their work, connect with their audience, and expand their reach! The Art in HCI Travelling Sketchbook explores the intersection between HCI and artistic expression: what does it mean to be an artist in HCI? What art forms are being used? Are they text-, image- or performance-based or hybrids? Are participants actively involved in art-making or in art-making mainly researched by the researchers themselves as described for example, in Barone and Eisner [3]? And if the latter, are those trained and actively practicing artists or not, which McNiff [14] described as a prerequisite to conduct arts-based research?

3.1 Inspiration

In 2016, Massimiliano Fattorini (founder of the Sketchnoting. Art Travelling Sketchbook, a 112-page handwritten notebook) invited us to present a previously published work: “Let the idea of the community sharing something real, something we can touch and create in some ways a contact closer than those we use to have through the internet. The contributions to be gathered from it are the universe of the works of the century, thanks to the sketchbook.” The sketchbook traveled a distance of 9000 Km, which involved 39 stops (locations: 17, countries: 21 and continents: 4). 546 contributions (96% to 100% of the total) were received. Contributions and the public museum watched the book rip-up via social media (GitHub/massimiliano) and via a world map (see Figure 2). The result was a beautiful collection of sketchnotes depicting how the creative approach is used and the medium used: a given awareness of the potential of the sketchbook. It has also fostered a rich and active community of sketchers with respect, love, and creativity at its heart. Makayla and Miriam (authors) were contributors to the Sketchnoting. Art Travelling Sketchbook. We are greatly inspired by the concept; they wondered what is happening in the Art in HCI space? what medium is the community using, what are they using art for, and, of course, we won’t show you to get a perfect glimpse of a page of their Sketchbook. During one of the meetings of their local SIGCHI chapter “Art in HCI” they discussed the contributions received, including image-, text- and performance-based approaches as well as mixtures thereof such as comics and cartoons. In addition, they asked the participants to follow up on this idea with a digital travelling “Arts in HCI Sketchbook” inviting people to share their explorations of the intersection between arts and HCI in a digital format. They used an affinity diagramming approach [6, 13] whereby codes (n=28) and 4 themes were identified:

- CONTRIBUTION: adding reactions under ten words; contributions could have multiple reactions. Reactions were the following:

- SUPPORT: specifying how the artist could have expanded on the current contribution.
- ECONOMY: adding reactions under ten words; contributions could have multiple reactions. Reactions were the following:

- ENCOURAGEMENT: adding reactions under ten words; contributions could have multiple reactions. Reactions were the following:

- INSPIRED: adding reactions under ten words; contributions could have multiple reactions. Reactions were the following:

4 METHOD

The co-authors (HCI researchers, students, and artists) were invited to contribute various art forms, ranging from sketches and illustrations to performance, music, comics, videos, etc. Invitations to contribute were sent via mailing lists, social media, and research interests. The contributions were optional. The artwork was collected using an international sketchbook, the thematic approach facilitated global collaboration. Contributions were asked to respond to a prompt, “What does art in HCI mean to you like you?” Stock photos from Pixels that depicted a wide range of art practices were included in the prompt so that they could be submitted (see Figure 1). Each contribution was accompanied by descriptive metadata: artist name, email, artist institution, artwork caption, artwork name, and artwork alternative text (see Figure 1). The book-based remained open for two months, allowing participants ample time to contribute their artistic creations. This extended timeframe aimed to accommodate diverse schedules and time zones, thus cultivating a comprehensive and representative collection of artwork.

4.1 Analysis

A comprehensive analysis of the thirty-nine submissions revealed diverse artistic expressions within the HCI community. The Travelling Arts in HCI Sketchbook travelled 116,337 Km (Figure 3, right). This sketchbook included a variety of artistic elements, including image-, text- and performance-based approaches as well as mixtures thereof such as comics and cartoons. In addition, we asked the participants to follow up on this idea with a digital travelling “Arts in HCI Sketchbook” inviting people to share their explorations of the intersection between arts and HCI in a digital format. They used an affinity diagramming approach [6, 13] whereby codes (n=28) and 4 themes were identified:

- CONTRIBUTION: adding reactions under ten words; contributions could have multiple reactions. Reactions were the following:

- SUPPORT: specifying how the artist could have expanded on the current contribution.
- ECONOMY: adding reactions under ten words; contributions could have multiple reactions. Reactions were the following:

- ENCOURAGEMENT: adding reactions under ten words; contributions could have multiple reactions. Reactions were the following:

- INSPIRED: adding reactions under ten words; contributions could have multiple reactions. Reactions were the following:

We invite you to view and reflect on the Travelling Arts in HCI Sketchbook (see figures 5 to 10); we then ask, if you prefer, to contribute by responding to the question: What does art in HCI mean to you like you? We invite you to use the same template used by the authors (see Figure 1) 1. We aim to create a collaborative, open-ended conversation about the future of arts in HCI, to put a spotlight on the arts in HCI, to promote arts-based approaches to computational design, and to explore the intersection between arts and HCI in a digital format. The artistic expressions of dystopia and utopian worlds suggest combining machines, resulting in new outcomes. Soon, will artists team with machines? Will artists be supported by machines? or will artists fight analogical machines. The artistic expression of dystopia and utopian worlds suggest combining machines, resulting in new outcomes. Soon, will artists team with machines? Will artists be supported by machines? or will artists fight analogical machines. The artistic expression of dystopia and utopian worlds suggest combining machines, resulting in new outcomes. Soon, will artists team with machines? Will artists be supported by machines? or will artists fight analogical machines.

6 INVITATION TO REFLECT AND CONTRIBUTE TO THE TRAVELLING ARTS X HCI SKETCHBOOK

We invite you to reflect and contribute to the Travelling Arts in HCI Sketchbook. This is an invitation to use the same template used by the authors (see Figure 1) 1. We aim to create a collaborative, open-ended conversation about the future of arts in HCI, to put a spotlight on the arts in HCI, to promote arts-based approaches to computational design, and to explore the intersection between arts and HCI in a digital format. The artistic expressions of dystopia and utopian worlds suggest combining machines, resulting in new outcomes. Soon, will artists team with machines? Will artists be supported by machines? or will artists fight analogical machines.

6 IMAGE COPYRIGHT STATEMENT

These images are provided here for viewing purposes only. They are not royalty-free images and may not be used for reproduction or private use. Any modifications to the images must be approved by the authors. The authors reserve all rights to the images and any re-use of the images is not permitted. The images may be not be copied, manipulated, interpreted by any other means, nor used without prior written consent by the author.

6 FUNDING STATEMENT

The research is in part funded by the Centre for Digital Cultures (EP/T002382/1). For the purpose of Open Access, the authors apply a CC BY public copyright license to any Author Accepted Manuscript (AAM) version arising from this submission.
Figure 1: [Left] Example rough storyboard by Miriam. [Right] Final version during inking (right). This was later developed into a full page comic for ACM Interactions magazine's new sketch-based feature [17]. Note the visible differences between the first draft and the final, which was signed off by the editors. Miriam Sturdee, 2023.
Figure 2: [Left to Right, Top to Bottom] Sketchnote Army Travelling Sketchnote Book creator holding the completed book, Mauro Toselli, 2023; Maps of the route of Sketchnote Army Travelling Sketchnote Book, Mauro Toselli, 2023; ‘Lancaster’ entry to Sketchnote Army Travelling Sketchnote Book, Miriam Sturdee, 2017; ‘London’ entry to Sketchnote Army Travelling Sketchnote Book, Makayla Lewis, 2017.

Figure 3: Left: Traveling Arts x HCI Sketchbook on Miro www.miro.com/app/board/uXjVMpkw7Ns=/?share_link_id=361870028909. Right: Extract for journey of the Traveling Arts in HCI sketchbook on Google, starting in the UK then hopping to EU and the rest of the world
Figure 4: Affinity diagram and discussion notes [www.miro.com/app/board/uXjVNMzQ0=/?share_link_id=568749316191].
Figure 6: [Left to Right, Top to Bottom] HCI that enhances HHI (Human-Human) interaction. Anna Troisi, 2023; Creating Playful Comics Together with AI. Yana Knight, 2023; “Do Not Fold, Spindle or Mutilate” – this project explored visualising how websites track you by producing punch cards adorned with the names of common ‘cookies’ one might encounter while browsing the web. Using punch cards – an outdated method of data collecting and processing – as a metaphor to make this digital data tangible, it is easier to understand how these data can accumulate quickly over time, their function as processable pieces of information, and present an opportunity for agency over what happens to this data. Gareth McMurchy, 2021; Designing future sustainable interactions using GenAI, RAY LC, 2022; Human: Ethical Reflection on Future Cyberworld Identity. Lanxi Xiao, 2020; Tomato Screen Saviour. Violet Owen, 2023; Breaking the Surface Using Hands and Body to Think and Express. Denise Lengyel, 2023.
Figure 8: [Left to Right, Top to Bottom] Multimodal attention. This collaborative work was created as a printed collage, the content of the collage was created based on generative AI prompts. The artwork was first conceptualized, then generative images and texts were selected, human editing and 2D design were also used. Andrey V. Vlasov, 2022–2023; Illustrating Research Practice, a collection of iPad scribbles for and from field studies. Patricia Piedade, 2022 – 2023; Multilingual teenagers’ images of digital devices. Sue Nichols, 2023; Conducting User-Centered Design / ideation session with contemporary dancers. Rivière Jean-Philippe, 2018-2019; (Re)envisioning telepresence robotics from [16]. ISOTTA - Intelligent System for Organic Tweeting and Thoughtful Artistry. Michele Cremaschi, 2023 [3]
Figure 9: [Left to Right, Top to Bottom] Humans were made for dancing. Jacinta Jardine, 2023; The design & documentation process. Em Harmsen, 2023; The Steampunk Mechanical Bunny: a fantasy contraption that expresses concepts related to Technology by depicting it in a realistic or even conceptual way to trigger emotions in the viewer and convey a message that, very often, transcends the aesthetics and goes beyond the artwork, to be provocative and to create the so-called Experience. Mauro Toselli, 2021; Japan Gawa Meeting 2023. Comic poster. A. Grek, 2023; Polyqin. Nick Bryan-Kinns, 2019; Top: When we build games, we do it together, over borders, and we build on a history older than the first written words. This painting is based on a number of symbols - Egyptian hieroglyphs, blueprints of microchips, and ancient board games. Bottom: This is a painting of a group of i4004s. They are 3 in/on a motherboard that they perceive as a marsh. The microprocessor Intel 4001 (i4004) is a 4-bit central processing unit (CPU). Mirjam Palosaari Eladhari, 2023; This street photograph is a photo-ethnographic account of residents playing mahjong in a physical world community center in Rui An (Zhejiang Province, China). The authenticity of the scene contrasts with virtual world gatherings. The image falls into the category of storytelling and context as a matter of visual communication germane to notions of community. The quality of the photograph as photographic Artwork also matters, wherein the natural light and colours in the scene bridge the physical world and its digital representation to create a surreal effect. Eli Blevis, 2012.
Figure 10: [Left to Right, Top to Bottom] Illustrations were created in response to a workshop where participants shared their experiences of living with HIV (individuals’ journeys and supported the researcher’s sense-making) as part of UKRI-funded INTUIT project. Caro Claisse, 2020; Imagining sustainable futures for older adults through tabletop role-playing. Kirsikka Kaipainen, 2023; Reflection as a work in progress in the design process. Beatriz Severes, 2023; Picking away at the blocks. Corey Ford, 2023; Mouja, or the Magnetic Ouja. Performance with Magnetic Scores and Neural Synthesis. Nicola Privato, 2023.
Figure 11: Arts x HCI Contribution response template. Please scan the QR code or follow the link www.miro.com/app/board/uXjVNmE0-Q=/?share_link_id=976424183640 to add your response to the Traveling Arts in HCI Sketchbook.
ACKNOWLEDGMENTS
Corey Ford is supported by the EPSRC UKRI Centre for Doctoral Training in Artificial Intelligence and Music (AIM) [EP/S022694/1]; Caro Claiese is supported by the EPSRC UKRI INTUIT project [EP/R033900/2]; Center for Digital Citizens [EP/T022582/1]; Ana O. Henriques is supported by the European project DCitizens (GA 101079116) and the FCT project UIDB/50009/2020; Laia Turmo Vidal is supported by Sweden’s Digital Futures Research Center through a postdoctoral fellowship (nr 81501); Language and Learning Transitions of New Arrival Youth’ (Nichols, Caldwell & Yoshida, 2019) was funded by a Smolicz Foundation grant, administered by the Multicultural Education and Languages Committee of South Australia; Jacinta Jardine is supported by the Irish Research Council (EBPPG/2020/53); Claudia Núñez Pacheco’s research is funded by the Portuguese Foundation for Science and Technology (FCT) under agreement No. 955990; Beatriz Severes is receiving funding from the Innovation programme under the Marie Skłodowska-Curie grant agreement No. 955990; Beatriz Severes is receiving funding from the Portuguese Foundation for Science and Technology (FCT) under grant 2023.05034.BD; Michele Cremaschi’s work was supported by Singlens and the National Recovery and Resilience Plan (NRRP), Mission 4, Component 2 - Investment 3.3 - call for tender No. 352 of 09/04/2022 of the Italian Ministry of University and Research, funded by the European Commission under the NextGeneration EU programme; Patricia Piedade is supported by the Portuguese Recovery and Resilience Program (PRR), IAPMEI/ANI/FCT under Agenda C64502399-00000057 (eGamesLab), through the scholarship BL195/2023-IST-ID, the European project DCitizens (GA 101079116) and the FCT project UIDB/50009/2020. For the purpose of Open Access, the authors apply a CC BY public copyright license to any Author Accepted Manuscript (AAM) version arising from this submission. For the purpose of Open Access, the authors apply a CC BY public copyright license to any Author Accepted Manuscript (AAM) version arising from this submission.

REFERENCES