Impact case study (REF3)

Institution: Oxford Brookes University

Unit of Assessment: 27, English Language and Literature

Title of case study: Driving Social Inclusion with Texts and Technology: Digital Co-Creation with the AGAST Project

Period when the underpinning research was undertaken: 2014–2020

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Dr. Eric White Prof. Alex Goody	Senior Lecturer Professor	[text removed for publication]

Period when the claimed impact occurred: 2014–2020

Is this case study continued from a case study submitted in 2014? N

1. Summary of the impact

Founded on White and Goody's interdisciplinary research into technology, literature and culture, the Avant-Gardes and Speculative Technology (AGAST) Project recovers the forgotten promise of modernism: that art and technology can combine to produce significant social change. We have co-created a bespoke Virtual Storytelling Application and Toolkit resulting from 23 workshops for hundreds of young people (aged 12-24) in Oxfordshire focusing on BAME, LGBTQ+ and disabled groups. The international reach of this resource has been further enhanced in collaboration with our partners in Bergen and Berlin, engaging young people and recent immigrant communities. The core impacts have been to:

- transform outreach, digital heritage and Science, Technology, Engineering, Arts and Maths (STEAM) policies in 48 public libraries, 2 museums, and 5 third sector partners in 3 countries, benefiting tens of thousands of users
- enhance capacity and provision for marginalised young people in partner organisations
- engender new understanding of cultural spaces and reduce problems of social marginalisation with 3 new art installations co-created from research with award-winning writers and artists.

2. Underpinning research

The AGAST Project emerges from the research of Eric White [**R1, R2, R3**] and Alex Goody [**R4, R5, R6**] into modernist technologies, digital textualities and media. Their findings show that modernist avant-gardes used technology not only as a means of analysing culture but also as a way of feeding back into it. Writers across the twentieth century believed that technology was not something to master, or be mastered by; rather, it was an extension of their creative practice. White and Goody's research demonstrates that by combining art and technology, practitioners from modernism onwards have been able to challenge hierarchies of gender, sexuality, race and class.

White's interdisciplinary monograph [**R1**] explores how modernists marginalised by their gender, sexuality, race and class invented new technologies as a means of contesting the rules that excluded them from society. From the poet Mina Loy's new thermoplastic 'Verrovoile' (first discovered by White), which helped her team of female artisans create bespoke new lighting designs, to the technical solutions developed by African American writers to negotiate segregated rail systems, modernist technologies became a powerful tool for dismantling repressive social and cultural hierarchies. White's work also proves that, contrary to critical consensus, the 'Reading Machines' invented by poets Bob and Rose Brown in 1931 were fully functional devices designed to make reading more accessible to working class communities. White's practice-based research activities have tested the functionality of this and other modernist inventions, working reciprocally

with collaborators and youth groups. The results of this research have informed, in turn, the development of White's recent outputs [**R1, R2, R3**]. Workshops exploring WWI noise-intoners tested sensory augmentation theories developed by Futurist artists that White first examined in **R2**. Furthermore, 3D modelling workshops at Makerspace recreated the transmission system used in the Browns' patent model Reading Machine, first reported by White in **R3.**

Goody is a leading expert on literature and technology. Her interdisciplinary research examines modernist media and gender politics [**R4**], literature and analogue/digital technologies [**R5**], and hypertext and media [**R6, R7**]. Goody's 2011 monograph explores the intersections between technology and culture across the twentieth century and into the current day, uncovering both the oppressive dynamics of technological development and the empowering potential of writing, broadcast and digital technologies [**R5**]. Her latest monograph (2019) theorises technicity (the relationship between 'humans' and 'technology') as a frame through which to examine the mediascape of the early twentieth century, and discovers how women modernists took leisure technologies as their stimulus for realising different subjectivities, embodiments and spaces [**R4**]. Goody's other publications analyse how modern women poets adapted technology for their own purposes, challenging dominant patriarchal paradigms and reinscribing marginalised bodily and affective experiences [**R6**], and explore how digital and popular media can be redeployed to create new forms of agency across real and virtual worlds [**R7**]. This underpinning research has generated key ideas about social change through technology and contributed to the development of digital pedagogies central to the Virtual Storytelling Application and Toolkit (VSAT).

3. References to the research

R1. White, Eric B., *Reading Machines in the Modernist Transatlantic: Avant-Gardes, Technology, and the Everyday* (Edinburgh: Edinburgh University Press, 2020). ISBN: 9781474441490
'Outstanding: ...a brilliant, deeply researched exploration of the relationship between avant-garde creative practices and technological innovation' (Laura Marcus, University of Oxford).

R2. White, Eric B. 'Technicities of Deception: Dazzle Camouflage, Avant-Gardes and Sensory Augmentation in the First World War', *Modernist Cultures* 12 (2017), pp. 36–58. DOI: 10.3366/mod.2017.0155

R3. Brown, Bob, Craig Saper, and Eric B. White, *Readies for Bob Brown's Machine: A Critical Facsimile Edition* (Edinburgh: Edinburgh University Press, 2020). ISBN: 9781474455053
'The editors have done a superb job...a foundational edition' (Charles Bernstein, University of Pennsylvania).

R4. Goody, Alex. *Modernist Poetry, Gender and Leisure Technologies: Machine Amusements* (New York: Palgrave Macmillan, 2019). ISBN: 9781349959617
'A ground-breaking study of modernist women' (Anne Vickery, Deakin University, Australia).

R5. Goody, Alex. *Technology, Literature and Culture* (Cambridge: Polity Press, 2011). ISBN: 9780745639536
'Eminently readable, and enlivened by a particular talent for exploring how novelists, poets, and short story writers have [shaped] how we experience the modern world's changing mediascape . . . a brave book' (Christopher Keep, Western University, Canada).

R6. Goody, Alex. 'Poetry and Technology', in *Cambridge History of Twentieth-Century Women's Poetry*, ed. by Linda Kinnahan (Cambridge: Cambridge University Press, 2016), pp. 359-374. DOI: 10.1017/CBO9781316488560

R7. Goody, Alex. 'The Theme Park of Forking Paths: Text, Intertext and Hypertext in *Westworld*' in *Reading Westworld*, eds. Alex Goody and Antonia Mackay (Palgrave Macmillan, 2019), pp. 255-276. ISBN: 9783030145156

Grants Awarded

R8a. ERC Marie Skłodowska-Curie Grant (grant agreement No. 734770), 'Co-Creation Network: The Reading Machine in Berlin and Oxford', 2017-2020 (2019-2020), €2000

R8b. Chartered Institute of Library and Information Professionals (CILIP)/Arts Council England, Building Bridges Grant, 2020, £20,000.

4. Details of the impact

Since launching in 2014, AGAST has dismantled barriers to social, technological, and cultural inclusion in the UK and internationally by: A) improving outreach, digital heritage, and STEAM policy and provision in libraries and museums; B) building capacity and enhancing outreach for marginalised young people in third-sector organisations; and C) generating new public works of art from research. Together these activities have empowered disenfranchised groups, especially young people, to combine creative and technical activity for positive social change.

New technologies such as Virtual Reality (VR)/Mixed Reality (MR) can easily create a 'black box effect', a paradox encountered by modernists whereby devices (and art works) become less comprehensible to users as they become more accessible in culture **[R1]**. AGAST opens this 'black box' with powerful, highly accessible modernist-inspired pedagogical tools and installations that change VR from a passive to an active experience. This work has benefited 2 partner library networks serving 48 libraries in 2 countries (Oxford County Library [OCL] and Bergen Public Library); and 2 museums (Ashmolean Museum, Oxfordshire County Museums). The project has hosted 23 Co-creation workshops for young people (aged 11-24), many of whom are from BAME, disabled, LGBTQ+, and socio-economically disadvantaged communities. Impact has been achieved in 5 third-sector organisations in two countries (Ark-T Centre, EOF Hackspace, Film Oxford Digital Media, InSpire Oxford; and, in Germany, Tesserae). The project has further engaged transnationally with 3 academic networks (Co-Creation, Open University's Performance Augmentation Lab [PAL], and Interkulturell lærerkompetanse i klasserommet [COPE]). Working with internationally recognised sound artist Mike Blow, digital artist John Twycross, and award-winning writers Iain Sinclair and Jay Bernard, AGAST has co-created 3 installations from research which have been exhibited nationally and internationally to thousands of members of the public. The reach and significance of the impact is achieved through the integration of these exchanges, which realise the emancipatory promise of modernist and avant-garde technological creation and the power of technology for driving positive social change.

A) Improving outreach, digital heritage & STEAM policies/provision in libraries & museums
Responding to a gap in the Virtual Reality (VR) pedagogy market, White and OCL built the Virtual Storytelling Application and Toolkit (VSAT) with the support of funding awarded by ERC [**R8a**] and CILIP [**R8b**]. Existing VR technologies (such as TWINE and Unity) require extensive expertise and specialist training. By contrast, VSAT updates the emancipatory agenda of the 1930s 'Reading Machine', which delivered swift and efficient results to all users regardless of their background and experience. VSAT is a free, open-source and open access web-based application. It also contains a repository of workshop plans and learning resources, which guide participants through 'rapid prototyping' workshops to create a viable VR experience in under two hours. Uniting digital technology with co-creative pedagogy, VSAT puts modernist aspirations into practice by engaging participants at all key stages (analysis, concept generation, restitution, and integration). VSAT's interface **[C8i]** introduces users to the fundamentals of computer coding and digital production using a practice we call 'inter-coding'. This incidental learning process connects creative writing, visual expression, and technical activity, equipping learners with coding techniques transferable to most digital production suites. Oxfordshire's libraries, community centres and museums, recently hit by funding cuts and the pandemic, now have a powerful, flexible and free resource with a proven ability to engage young people in ways that speak directly to STEAM learning, remotely and on-site. Over the duration of our partnership, OCL recorded a 25% increase in 12-24-year-olds participating in its outreach programmes **[C1i, C1ii]**. Mark Sutcliffe, Oxfordshire County Council Service Improvement Lead, reports that AGAST impacted OCL's policy and resource allocation for digital heritage and outreach not only for the target group, but for all other groups of library and museum users in the future: '*The impact has been considerable, shifting preconceptions, improving confidence[,] developing capacity…and has turned us into credible digital developers. The project has provided our STEAM and social inclusion policies with methods we didn't have before. Furthermore, the international collaboration and grant process has transformed the way we work in our community and beyond*' **[C1i]**.

VSAT is also the project's main pathway to international impact. Our collaborators in Norway (Bergen Public Library and COPE) and Germany (Tesserae) immediately turned VSAT into a

multilingual tool for delivering face-to-face and remote classes on language and technology for immigrant learners. Initially engaging 12 Grade 9 school girls with a multi ethnic/language background in 2 workshops, Bergen Public Library used VSAT to continue a VR programme cancelled due to the pandemic **[C2]**. This will now reach up to 50 participants aged 12-18, and hundreds thereafter. The Library's Head of Technology and Learning said that VSAT '*makes our work with democratizing technology easier. The focus on Storytelling for Inclusion provides a new take in both digital and social inclusion*'. He added, '*VSAT gives us a framework and the essential elements that make us able to provide learning and storytelling activities based on new technology.…Developing the workshop toolkit together has increased the quality of our activities and we have learn[ed] a lot ourselves about how to work with inclusion and different target groups*' **[C2].** Project partners in Germany have also engaged young women immigrant e-learners in 2 workshops at Berlin Libraries using VSAT resources**.** Tesserae's Director affirms VSAT's particular usefulness for remote language e-learning '*to foster social inclusion*' among '*younger groups in the communities*' since '*the stories are a focal point for talking together*' **[C5]**.

B) Building capacity and enhancing outreach for marginalised young people in third-sector organisations and museums

From 2014 to the present, the AGAST Project has created, facilitated and strengthened working relationships between OBU and its government and third sector partners. The development of resources for VSAT took place across 23 Co-creation workshops designed to improve young people's confidence and capacity with digital and material creativity. The first series of 6 workshops, held in 2016-2017 and based around Bob and Rose Brown's 1931 'Reading Machine', attracted 120 participants, 25 of whom were from BAME and disadvantaged communities. EOF Hackspace, a new Oxford makerspace working in partnership with Film Oxford Digital Media, participated in 2 workshops. EOF's Director confirms that '*the collaboration …has benefitted EOF Hackspace tremendously*'. It '*has enabled us to expand our policies to allow 16 to 18 year olds to use our equipment under supervision*' and '*further[ed] our goal to allow everyone in Oxfordshire to have access to an affordable space to learn new skills*' **[C3ii]**.

The second series of 4 workshops, in OCL's Makerspace, and supported by the Ashmolean Museum and EOF Hackspace, were facilitated by local industrial designers who encouraged students to create their own 'Reading Machines' for today's urban realities **[C8ii]**. Participants reported that this '*was an amazing way to understand mechanics and its effect on how we read now*' and that it '*changed what I wrote and thought about the future of my city*' **[C1ii]**. In a series of 3 follow-up creative writing workshops, 12 participants wrote about the 'future of reading' in Oxford to read on their Reading Machines. Their creations demonstrated the 1930 prototype's viability as a functioning technology. These models were exhibited at the Ashmolean museum's 'Cool Modernism' exhibition (March-July 2018) with an accompanying MR exhibit co-created with Ashmolean's fabrication team using 3D-printing, carpentry and electromechanics **[C8ii, C4]**. These machines are now on permanent display at OCL's Makerspace. The exhibition reached an audience of 2,100, with 45% in the museum's targeted 18-35 age range, and visitor '*feedback was overwhelmingly positive*' **[C4]**. White delivered a public lecture for an audience of 90 including families of workshop participants whose work featured in the exhibition **[C8iii]**. Participants said '*it was brilliant to see so many people using something I built and reading my work*'; and '*[I] felt so proud that my machine is now an exhibit – I feel like I can build anything*'. One parent said '*[my child] was more excited about this project than I thought possible, and she wants to take up coding next*' **[C1ii]**. The Ashmolean's Public Engagement Officer confirmed that the partnership '*leaves a fantastic legacy*' as the '*[VSAT] is making an important contribution*' to the Ashmolean's '*digital outreach programmes*' **[C4]**.

A grant from CILIP's Building Bridges programme allowed White and OCL to build, test, and workshop VSAT in collaboration with the Ark-T Centre (supported by facilitators from local music outreach charity InSpire) and Bergen Public Library. Originally working with 12 BAME, LGBTQ+ and disabled young people in 6 workshops at Makerspace and Oxford's community arts Ark-T Centre, VSAT is now engaging over 500 young people from one of the 20% most deprived wards in the UK with creative technologies **[C3i]**. Ark-T's Project Manager states that '*working with a big university*' benefits their participants because '*access issues to education*' and creative industries '*can be experienced by both LGBTIQA+ and Disabled young people*'. VSAT now features audio

tools requested by young people at Ark-T and InSpire. '*For these features to be incorporated is a really useful way for us to work in partnership*', and the remote capability '*means that we were able to run workshops that would not have been possible during the pandemic lock-down*'. **[C3i]** Ark-T participants found VSAT '*inspirational… the project made me understand how digital storytelling could help me feel better about myself, and I think it is something I can do for a job*'. The parent of one participant reported the '*session was brilliant – it has brought her out of herself and given her new skills*' **[C3i].** Tesserae, a third-sector European urban policy research centre also working with marginalised communities, is part of the Co-Creation network. An ERC Grant **[R8a]** enabled White and Tesserae to share co-creative practices using storytelling to foster social inclusion in Berlin. This expertise helped developers at OCL design VSAT so the software could be translated by partners in Norway for language learning workshops even during lockdown. These were tested in 2 workshops for 24 young people **[C5]**.

C) Co-creating new art with award-winning writers
The outputs generated in the workshops described above generated three high-profile installations and exhibitions, all of which raised awareness of the creative possibilities of technology for effecting social change and provided examples for co-creation workshops:

i) TRAAK! (2015): curated by White in collaboration with sound artist Mike Blow. Drawing on White's research on futurist noise-intoners [**R2**] this MR exhibition used Google Cardboard headsets featuring animations and soundscapes erupting from interactive 3D 'sculptures' **[C8iii]**. It introduced 150 people to MR for the first time and connected humanities research to digital development and sound art. One participant commented that '*It made me think about the possibilities of engaging with art outside of (and within) traditional settings*' [**C7**].

ii) 'Reading Machine' (2017): AGAST partnered with renowned writer Iain Sinclair. Using MR devices, photographs and interactive holographic texts, this exhibition aimed to diagnose barriers faced when seeking to access Oxford's shared urban spaces. 120 members of the public engaged with this exhibit. Sinclair said the '*project showed that new digital technologies could help...reclaim the power of the word, getting it back to being a means of connecting with how human beings live, breathe and communicate with each other*'[**C6**].

iii) UNBODY (2019-2020): this Microsoft Hololens installation was co-created by prize-winning poet Jay Bernard, Fridolin Wild and the Open University's PAL, and AGAST's workshops at OCL and the Ark-T Centre. Interactive holographic texts and films spilled from dayglow totems and photos of Bernard, documenting the experience of gendered 'haunting' and urban marginalisation from the perspective of LGBTQ+ and BAME youth **[C8v]**. UNBODY was seen by 120 members of the public, and 15 original workshop participants, at Oxford Brookes' 'Think Human' festival before lockdown. UNBODY was named a finalist for the 'Best Art Work' Auggie Award at the world's leading MR event (Augmented World Expo in Santa Clara, CA) and seen by tens of thousands of delegates at that event **[C8vi]**. The project was also shortlisted for an Independent Social Research Foundation Flexible Grants award in December 2020, and won it in March 2021.

5. Sources to corroborate the impact

C1. Oxfordshire County Council Testimonials: i) Service Improvement Lead, Mark Sutcliffe; ii) Service Manager Libraries and Heritage, Marian Morgan-Bindon
C2. Bergen Public Library Testimonial: Head of Technology and Learning
C3. UK Third Sector Testimonials: i) Ark-T Project Manager; ii) EOF Hackspace Director
C4. Ashmolean Museum Testimonial: Public Engagement Officer
C5. Tesserae Berlin Testimonial: Director
C6. Creative Practitioner Testimonial: Iain Sinclair
C7. TRAAK! Workshop Surveys
C8. Multimedia Evidence (urls): i) VSAT demo video; ii) Reading Machine Workshop film; iii) TRAAK! film iv) Reading Machine 2017 film; v) UNBODY film vi) Auggie Award Finalist link