

Institution: University of Northumbria at Newcastle
Unit of Assessment: UoA 32 Art and Design: History, Practice and Theory
<p>1. Unit context and structure, research and impact strategy</p> <p>Overview</p> <p>Through critical examination and innovative forms of practice across its Arts and Design subject areas, Northumbria's submission to UoA 32 is united by core principles of social engagement through creativity, collaboration, participation, and cross- and interdisciplinarity. These principles have shaped distinctive research outputs emerging, for example, from investigations of transglobal exchange in visual and material cultures; experimental forms of exhibition making and curation; human computer interaction and participatory design. They have given rise to unique interactions and partnerships across fields of fine art, science and technology; design innovation; digital and health-care contexts; and between BAME communities and cultural studies' academics in the interpretation and policy implications of cultural heritage. As a result, the submission has increased from 41 FTE submitted in REF 2014 to 105 FTE. Notable impacts from the Unit's research have emerged, for instance, within voluntary sector organisations; multinational manufacturing corporations; at popular genre film festivals in Europe and amongst international societies supporting survivors of conflict and trauma. Finally, these principles have informed its current and future research and impact strategy, the nature of its evolving staff and PGR community, and the character and importance of its regional, national and international engagements across non-profit, public and commercial sectors.</p> <p>Research strategy</p> <p>Aspirations identified in 2014 were: extending and diversifying research income; strengthening the impact of partnership-based cross- and interdisciplinary research and public engagement; investing in new and strategically located academic appointments; and further developing a scholarly and practice-based PGR community focused on collaboration with partners and stakeholders. In line with these ambitions there has been substantial investment in existing and new highly research-active staff. Consequently, the almost threefold increase in the number of researchers returned here constitutes 74% of staff. The 41 FTE submitted in 2014 comprised 34% of staff and in RAE 2008 just 29.40 FTE were submitted collectively in UoAs 63 and 64A. Building on a strong performance in 2014 in Research Power (joint 9th of 84 Art and Design institutions nationally), this cycle has seen considerable growth in research capacity with the appointment of 75 new colleagues at all levels across the staff base. This ensures strong leadership and, relatedly, ongoing peer-support for capacity building, while also underpinning new and emerging areas of research strength.</p>

The Unit's success in expanding its external funding streams has resulted in a total of £4.45 million in RGCI. Funding has been drawn from AHRC, EPSRC, ESRC, STFC, British Academy and sources beyond UKRI including industry, UK Government, European Commission, charitable institutions and other public bodies. Collectively these have supported an output submission which includes 61 practice portfolios, 24 monographs, 81 journal articles, 37 peer-reviewed conference contributions, 12 edited collections and 8 patents.

Demonstrating a flourishing postgraduate research culture, PhD awards have increased from 39 reported in REF 2014 to 87 in 2021, of which 20 were awarded in the final year of this cycle. That overall figure includes seven staff researchers from primarily professional/ practice backgrounds - itself an indicator of the impact of the Unit's research environment. 48% of the staff body now have doctorates compared to 34% in 2013-14. Underpinning this is sustained focus on aligning the postgraduate community with the Unit's cross and interdisciplinary research expertise and commitment to partnership-working and collaboration. A longstanding reputation in supporting practice-based doctoral research has been a considerable factor in this achievement. From 2014, the Unit led the AHRC consortium Centre for Doctoral Training in Arts and Design (CDT) with the University of Sunderland and partners BALTIC Centre for Contemporary Art and the National Glass Centre, Sunderland. This was one of just seven CDTs then funded by AHRC nationally. That award built upon previous success in the AHRC's first round of Block Grant Partnership funding (2008-2013). The CDT has contributed enormously to the development of vibrant new networks and collaborations for both PGRs and staff across the Unit. Continuing in this spirit, in 2019 Arts and Design joined the AHRC Northern Bridge Consortium (DTP) for the recruitment and training of PhD students alongside six other University partners in North-East England and Northern Ireland.

Through investing in new and strategically positioned appointments, the Unit has advanced its capacity to carry out world-leading research across and between disciplines, with important developments in its Multidisciplinary Research Themes. (MDRT). The first MDRT *IDEATE* (led by Cockton) increased an international reputation for design-led research from 2014-19. Working across Design, Social Science, Psychology, Business and Computing, and in collaboration with an extensive network of external partners, IDEATE projects harnessed creative approaches to deliver new understandings of social, political and environmental issues and to develop valuable new services and products. That investment facilitated a productive environment for research, with new appointments and new interdisciplinary research spaces created for academic staff, post-doctoral and postgraduate researchers to collaborate in and involve externals.

Following University reviews of strategic direction, the new (2020) MDRT *Human & Digital Design* (H&DD), extends the achievements of IDEATE. This is one of six MDRTs operating across the

University specifically 'aligned to societal and global challenges and complementing disciplinary expertise which will contribute challenge-led research to support critical mass and collaboration, and address regional economic strategy (NE LEP), UK Grand Challenges and UN Sustainable Goals'. H&DD responds to the need for practical examples and demonstrators of digital technologies designed and built in ways that account for the requirements of diverse populations. H&DD members provide research and insights that embed social responsibility and ethical practice into the development of digital products, services and systems, to ensure benefits are maximised. Closely linked, and to support the next generation of researchers, the appointments of **Rogers** and **Taylor** have brought to Northumbria the 'OpenDoTT Marie Skłodowska-Curie Innovative Training Network' (2019-22) which, with accompanying in-kind resources from Mozilla, funds Early Stage Researchers (ESRs) from outside the UK. OpenDoTT (Open Design of Trusted Things) will produce a cohort of leaders fluent in design, technology, society and policy issues to explore, create and advocate for more open and trustable approaches to the Internet of Things. Another vitally important development is the establishment in 2020 of the 'Centre for Digital Citizens' (CDC) involving **Vines**, **Rogers**, **Taylor** and **Wallace**. Funded from EPSRC, the universities of Northumbria and Newcastle and partners, the CDC takes an inclusive and participatory approach to the design and evaluation of new technologies and services intended to support 'smart' 'data-rich' living in urban, rural and coastal communities, co-created between academics, industrial, public and third-sector partners.

Advances in internationalising research across the Unit include the enhanced capacity for critical investigations of non-western forms of visual and material culture brought by the new 'International Research Centre for the History and Culture of Nanzhao and Dali Kingdoms in China' (Nanzhao and Dali Research Centre). The Centre embodies commitment to international partnerships, to investment at all levels of research leadership and sustainability - from Professorial to ECR posts, Research Fellowship and PhD studentships - and to new infrastructure and facilities. That the core academic posts related to the Centre are occupied by women (**Tythacott**, **Bellini**, **Fuentes**) also reflects Unit-wide concern for maintaining gender balance across the staff base.

To further support researchers of the future and expand cross-disciplinary collaborations, the Unit has benefitted from the appointment (via University and external funding sources) of exemplary Research Fellows. Most recently, for example, **Mulholland**, a Vice Chancellor's Fellow (VCF) based in Fine Art Conservation working in the field of cultural heritage and international conflict; **Pitsillides**, Senior VCF in Design researching the intersection of design, technology, death and bereavement; **Harrison**, VCF working in digital health, well-being and personal informatics with a design, computer science and social science background; and **Talhok**, a Global Challenges Fellow in Design collaborating with researchers in Northumbria's 'Centre for International Development' in integrating refugee communities within digital health and community service

networks. With a University policy that Fellows transition to permanent academic appointments, these colleagues bring a wealth of academic and professional networks and are located in key research areas, or those identified for growth. Through developing the impact of their research, they make critical contributions to the Unit's strategy of addressing international, ethical and user-focussed research problems in collaborative ways.

Having achieved the aspirations identified in 2014, the Unit is extremely well-placed to meet what continue to be its strategic ambitions beyond REF 2021, i.e. it will continue to:

1. develop capacity in cross- and interdisciplinary research and knowledge exchange with its regional, national and international partners, stakeholders and connected communities across diverse cultural organisations, institutions, public, commercial and voluntary sectors;
2. uphold the principles of equality, diversity and inclusion at every level in its activities and continue to extend its research in related areas of investigation;
3. ensure consistent support for the next generation of researchers (postdoctoral fellows and ECRs) and the staff base overall through mentoring, development opportunities and continually improved infrastructure;
4. draw upon these mechanisms to secure larger and more diverse forms of external funding to extend opportunities for research with collaboration and participation at its core, as related to the Unit's disciplinary expertise;
5. build upon its successes (e.g. AHRC BGP2 CDT and the Northern Bridge Consortium DTP) in securing funded PhD students, but draw from sources beyond research councils too, e.g. from cultural and industrial partners through match or full funding;
6. embed support and investment in activities relating to the social, economic and cultural impact of its research;
7. build on existing synergies between Arts and Design researchers, as demonstrated in the context of CDT training and co-supervision of PGRs. The Unit will pursue further opportunities for collaborative research and funding, drawing, for example, on shared expertise and experiences in socially engaged practice and co-production;
8. foster yet greater participation across research centres, institutes, groups and themes. These provide the intellectual infrastructure for the Unit and through these it delivers its strategy; communicates existing and future research plans; draws in and shares networks, partners and stakeholders.

All staff and PGRs are aligned to research groups or to themes related to their individual areas of interest and expertise. Equally, all are encouraged to engage across these wherever common concerns arise. Certain groupings have been in existence since REF 2014, others have formed in

response to the focus of new staff and/or emerging research imperatives. In each case they include both practice-based and scholarly researchers. As relevant, they hold meetings, seminars, workshops, exhibitions and performances, invite external speakers and organise public facing events, symposia and conferences within the University and beyond. All have benefitted from major investment in new appointments; produced new and distinctive collaborations or partnerships and delivered world-class and internationally significant research.

Research groupings in Arts

BxNU Institute of Contemporary Art (BxNU). The Unit's emphasis on socially engaged forms of public-facing research and dissemination with stakeholders across cultural and creative sectors is exemplified in the partnership (established in 2012) with BALTIC in the BxNU Institute. Harnessing skills and expertise from across the Unit and the University as a whole, BxNU is a dynamic forum for public, practitioner and professional communities' dialogue over the role of arts and cultural organisations and for forging new networks and research opportunities. With **Borland** as first BALTIC Professor (2012-2017), BxNU brought the relationships between art, science, technology and ethics to public audiences through symposia, exhibitions and talk programmes. These collaborations continue, but the Institute has since built new synergies and expanded interdisciplinary capacity in tandem with national and international arts and cultural organisations. Led since 2017 by **Phillips**, its concern is with the function of cultural institutions and cultural producers in socio/political and educational contexts. Within BxNU's Experimental Studio, a contemporary arts hub established in 2018 at B39 in Newcastle city centre, PGRs, ECRs and staff from across the University share their work informally through workshops, conferences and symposia with BALTIC curators and invited specialists and community members.

Visual and Material Cultures (VMC). In existence prior to 2014, the group's current concerns encompass the negotiation of political, national, racial, ethnic and gendered identities in art history and art criticism; museum and periodical cultures (**Potter, Horne, Ashley**); ethnographies of arts practices and human non-human relations (**Crawshaw, Hudson**); cultural landscapes and environments; contested spaces and collective memory (**Ashmore, Holt, Hudson, Johnston, Johnson** and Leverhulme Early Career Fellow, **Fisher**); and in a developing focus on non-western fields, the visual and material culture of Asia in transcultural and trans global exchange (**Tythacott, Kramer, Bellini**). Through investigations of materials and techniques, Fine Art conservators join academic researchers in specialist engagements with museums and art collections (**Brown, Colbourne, Theodorakopoulous, Fuentes** and **Mulholland**). Conservation researchers are also aligned to the Nanzhao and Dali Research Centre, referenced above, the result of considerable University and philanthropic donor- investment. Led by **Tythacott**, Woon Tai Jee Professor of Asian Art, with **Bellini** and **Fuentes**, the Centre is a collaboration between Yunnan Provincial

Museum in South-West China, the Woon Brothers Foundation, Singapore and Northumbria, and builds upon the establishment in 2018 of the University's Woon Gallery of Asian and Buddhist art.

The Cultural Negotiation of Science Group (CNoS) unites fine artists (**Crisp, Borland, Lee, Bowen**), researchers from animation (**Goodfellow, Dolan**) and art and technology historian (**Sloan**) who critically engage with expert cultures across a broad spectrum of fundamental, bio-medical and climate science, as well as the fields of genetics, geology, botany and museology. Challenging the tendency amongst the sciences to use art as an instrumental or illustrative device to interpret science, the group adopts a performative approach to the production of knowledge and new models of understanding and relating. A key example here is the dialogue with scientists and the exhibitions, symposia and publications arising from **Crisp's** Leverhulme Fellowship supported research 'Material Sight: Re-presenting the Spaces of Fundamental Science' (2016-18).

Collaborative and Curatorial Practices (CCP) explores, predominantly, Fine Art researchers' interests in definitions and forms of curation, and collaborative and collective practices in contemporary art through a focus on exhibition making, installation, live events and performances with text, video, sculpture or audio (**Campbell, Rohtmaa Jackson, A. Hughes, Danby, Liston**); investigations of art school pedagogy (**Butt, D. Hughes, Thomas**); of potential forms of social and political reorganisation within artistic and curatorial culture (**Phillips**); of how cultural matter produces us as social subjects (**Sworn**); the politics of locality (**O'Sullivan** and Tatham); and the conditions of popular and experimental cultural production in the regions (**Butt, Campbell**). All researchers exhibit and curate nationally and internationally and the majority, including **Campbell** with artist collective 'Common Culture', co-author critical texts to accompany major exhibitions.

Moving Image, Popular Media and Culture (MIPMC). Uniting existing Film and TV Studies researchers with recent appointments, this new group focuses on the analysis, production, circulation, history and reception of 'popular' forms of print and audio-visual production in British cinema and TV genres (**Leggott**); on national and international horror genres (**Hunter, Walker, Jones**); genre film festivals, cult and independent cinema (**Hunter, Sexton, Jones, Egan**); music cultures (**Sexton, McLaughlin**); concepts of moral philosophy and identities in violence and pornography (**Jones**); sexual identities and representations and the use of on-line pornography (**Smith**); and the professional experience of unpaid workers in the film and TV industry (**Percival**). Practice-researchers collaborate on feature film and animation production with social groups, community and health organisations, often with non-professional actors (**Stenbom, Land, Cottage, Collin**). Indicative of the range of this group's research are **Collin's** multi-award winning film *Sanctuary* (2016), produced with intellectually disabled actors in Ireland and an impact case

study for this UoA; and **Walker's** AHRC Early Career Fellowship (awarded Nov 2020) 'Raising Hell: British Horror Cinema in the 1980s and 90s'.

Spaces of Appearance in Theatre and Performance (SoATP) has evolved from the 'Performance and Identity' group of 4 Theatre and Performance researchers at Northumbria in 2014 to now 12 researchers. The group investigates the interdisciplinarity and cultural urgency of the practices, methods and theories through which new socio-political 'spaces' are crafted in performance. Their research spans 'Theatres of Witness' (**Arnfield**); the philosophy of performance (**Power**); historical and contemporary contexts of conflict, crisis, trauma and genocide (**Duggan, Arnfield, Gilroy**); socially applied performance for and with communities (**MacPherson, Hargrave, Hepplewhite, Taylor**); physical performance practices (**Lennox, Pavey**); scenography and costume (**Hann**); and transgender studies and queer theory in contemporary performance (**Hann, Pearlman**). Representative of SoATP's concerns is **Duggan's** AHRC COVID-19 Response project, 'Social Distancing and Reimagining City'. Awarded in Nov 2020, this project will work with strategic decision makers, artists and arts organisations to investigate the value of performance theory and practice in addressing the impact of the pandemic on how we live and work in cities.

Research groupings in Design

The Unit's Design researchers engage in developing new and innovative practices *within* design, and in innovation and research *through* design. They interact within the University through the research group CoCreate and three research themes: Design + Wellbeing; Design + Business and Publics, and Design + Making and Materials. These themes intentionally cut between specific design subjects, areas of expertise and methodologies to support collaborations and align research strengths across multiple domains and problem spaces for the development of multidisciplinary and cross-institutional funded projects.

CoCreate investigates societal challenges and cultural experiences through participatory and design-led research, emphasising the intersections of digital interaction, social design and creative practice. The group has a core community of 12 academics (**Holmquist, Marshall, Rogers, Strohmayer, Taylor, Vines, Wallace**, ECR **Gatehouse** and VCFs **Pitsillides, Dylan, Harrison, Talhouk**), seven post-doctoral researchers (working on externally funded projects with academics) and 19 PGRs, all located in its research space; and a wider membership of six academic staff (**Briggs, Blythe, Gibson, Mason, Richardson, Yee**) who contribute to its activities. Members engage across the themes and initiatives outlined below and, as with BxNU, build capacity for cross-disciplinary research throughout the University. Regular CoCreate activities include a fortnightly digital design research series with internal and external speakers; craft futures forums exploring aspects of emerging making cultures and practice-led design

research; and annual public-facing ‘digital disruption’ events to demonstrate on-going projects and build University-Industrial-Public sector collaborations in emerging technologies.

Researchers allied to Design + Wellbeing (D&W) examine how designed artefacts, services and systems can promote wellbeing, broadly defined, and the benefits of engaging in making, collaborative design and creative practice. Investigations include the role of design in improving health and care service delivery and intervention design (**Warwick, Lievesley**); designing new systems and technologies to enable physical and mental health and wellbeing promotion for individuals living with specific conditions (**English, Morehead, Scott-Harden, Durrant**); or community public health interventions in low-income countries (**Talhok**). Researchers in this theme also examine the role of design in community contexts, creating public spaces and forms of civic engagement to support the wellbeing of all citizens (**Wallace, Duncan, Trueman, Pitsillides, Vines**).

Design + Business and Publics (D+BP) explores how design processes, methods and techniques can support innovative ideas and value creation for organisations and society. Concerns include design’s strategic role in responsible corporate innovation and creativity in product manufacturing and service organisations (**Lievesley, James**), and how design thinking and practice facilitates innovation across organisations and sectors (**Yee, Parkinson, Glover, Bradford, Bailey, Spencer**). Within public and third sectors, researchers examine the uses of design processes and methods in terms of citizen involvement in service and systems (re)design (**Mason, Warwick, Young**). Research is also conducted with manufacturing companies (**Qin, Wong**) and with organisations to understand how they can capitalise on and ensure the ethical use and human-centred adoption of emerging technologies (**Briggs, Steane, Vines, Holmquist**). Further, **Strohmayer** and **Gatehouse** consider the potential impact of the adoption of technologies by state and non-profit organisations and their ramifications for marginalised groups.

Design + Making and Materials (D+MM) activities encompass design materialities and the cultural value, meanings and benefits of making in society (**Elliott, Luscombe, Whittingham, Duncan, Wallace, Gaston, Sampson**), and the effects of emerging technologies and materials on making and craft practices (**Marshall, Morehead, Kitchman, Dylan**). Researchers in this theme conduct experimental practices exploring new technologies in performance (**Gibson**) and cultural heritage (**Richardson**) contexts. They also examine spatial design and environments (**Adams, Marlor**); design practices as forms of semiotic communication (**Barron**), and have driven forwards the theory and practice of design fiction and forms of speculative research (**Blythe**). New practices and ways of articulating and disseminating ‘designerly’ forms of making are central to work in this theme, as demonstrated by the international Research Through Design (RTD) conference series

which was established and still steered by several staff in UoA 32 (**Marshall, Wallace, Vines Yee**).

Future strategic plans and aspirations

To support funding objectives there will be further applications to renew and build upon projects funded in the 2014-2020 period, as well as the delivery of recently awarded large, collaborative grants. The latter includes the new phase of Digital Economy research between Northumbria and Newcastle universities in the EPSRC CDC running between 2020 and 2025. The CDC (with **Wallace** as Co-Director and Northumbria Lead) will see the appointment of four new Innovation Fellows in the School of Design, each with a remit to lead a series of collaborative research projects exploring the design of socially impactful and citizen-centred digital technologies. These projects will seek to secure long-term sustainability outside the CDC's funding, and will be tied to the Centre's four citizen challenge themes addressing issues of digital citizenship in relation to wellbeing, political connectivity, cyber-security, and growth across the human life-course. The CDC will also mobilise the wider membership of the H&DD MDRT, which is aligned to this Centre in, for example, a series of internal interdisciplinary workshops around its challenge themes to foster further collaborations across Northumbria. These will be followed by externally facing engagements with industrial, public and non-profit sector partners (from CDC and beyond) to co-create collaborative projects with MDRT staff in preparedness for large-scale funding applications to build on successes in Digital Economy research.

New projects relating to further international collaboration objectives include **Qin**'s contribution to global development challenges through his 2019 Newton Fund Prize project on transforming service design for sustainable urbanisation through the use of big data technologies, a joint initiative between the School of Design at Northumbria and the Chinese Academy of Sciences in China.

The Unit will also further its international objectives and decolonizing curriculum concerns through developing research in the visual and material cultures of Asia, as reflected in appointments related to the Nanzhao and Dali Research Centre. The Centre will enhance academic research, as well as the preservation of existing collections, promote and strengthen cultural and academic exchanges, develop joint research projects and initiate collaborative exhibitions in China, Singapore and the UK. Research will also benefit from the forthcoming donation to the University of the 'Stride Asian Art Collection', with its extensive and important collection of art and ceremonial textiles. Examples of the Centre's ambitions ahead include the development of publications with Yunnan Provincial Museum and a global database of the Nanzhao and Dali collection hosted by Northumbria in both English and Chinese.

To support objectives for impactful collaborative research, dissemination and knowledge exchange, **Bailey** and **Spencer** will extend their work on multidisciplinary innovation via the 'phase 2' funding of Creative Fuse North East. Funded by AHRC, Arts Council England and ERDF across five North East universities, this vital contribution to the cultural prosperity and sustainability of the region leverages impact from research, combining ideas and skills from creative arts, design and technology disciplines to develop new ways of working between businesses, freelancers and academics. Over the next three years (2020-2023) the partnership will increase the creative capabilities of 50 organisations in North East England using methodologies devised in 'phase 1' workshops. Also funded by ERDF (2020 -2023) **English** will contribute to the 'Rural Design Centre' developed across the region's universities, government agencies and community groups to bring communities, businesses, public authorities and researchers together to support rural innovation.

In extending cross- and interdisciplinary partnership-working objectives with cultural organisations and community groups, under **Phillips'** leadership BxNU will expand intercultural investigations of new ways of building arts and cultural organisations, of spatial and strategy analyses of the community arts movement and questions of inequality, agency and leadership in the arts. To support ambitious investigations between fine art, science and technology, CNoS researchers will develop new methodologies and models for residency programmes; prepare applications to the Wellcome Trust and AHRC (**Crisp**) and extend their existing collaborations through a recently prepared MoU with CERN (the European Organization for Nuclear Research), as CERN's first non-science partnering in the UK.

The Unit will continue to pursue objectives related to a dynamic and expanding PhD community focussed on partnerships and collaboration with, for example, digital technology industries, arts and cultural organisations through the OpenDoTT network; the Northern Bridge DTP and via CDP opportunities including, for example, **Theodorakopoulos's** recently awarded AHRC Training grant with the Conservation Department at Tate.

In addition, the recently formed (2020) initiative, CARF (Contemporary Arts Research Forum), led by **Sworn** and **Butt** draws together PhD researchers as well as academic staff from across Arts and beyond in relation to objectives for expanding cross and interdisciplinary research, supporting the next generation of researchers and growing an already strong reputation in practice research. In the context of both staff and PhD research, CARF will also support post-REF ambitions for the establishment of an International Centre for Performance Studies with a focus on cultural survival and social justice, building on the expertise of existing and recently appointed researchers across Fine Art and Theatre and Performance.

Open Access and ethical research practice

Enabling wider dissemination and broad-ranging public and professional engagement with the Unit's research is vital to its core principles of co-production and partnership. 98.1% of the 'in-scope' submitted outputs meet REF OA requirements. This includes journal articles from both Arts and Design and, from Design in particular, published conference proceedings with an ISSN. Given the nature of the Unit, a considerable proportion of outputs are beyond standard OA compliance, taking the form of portfolios, artefacts and patents, as well as monographs. Predominantly following the Green OA route, Gold access is applied to publications via the library's dedicated fund as required by UKRI charitable funders or by specific publishers, but also where it is agreed that making the research freely and more quickly available will benefit wider publics and communities, including the Unit's networks of national and international co-authors, external collaborators and partner organisations - the latter in particular are often without university library access. In this context the University will meet Gold access costs for **Ashley's** forthcoming edited collection *Whose Heritage? Challenging Race and Identity in Stuart Hall's Post-nation Britain*. Amongst the Unit's many researchers involved in journal editorship, **Leggott** is on the editorial board of OPEN SCREENS, a peer-reviewed journal affiliated with the BAFTTSS (British Association for Film, TV and Screen Studies) subject association. The journal is published through the Open Library of Humanities who have been pathfinders in the field for Open Access.

The Unit fully complies with the Universities UK's 'Concordat to Support Research Integrity'. Before they begin their projects all staff and PGRs engage with the Online Research Ethics and Governance Approval System to ensure principles of good practice. In addition a specific approval process, IRAS, is conducted for applications to the National Research Institute for Health Research (NIHR) for project-based research working with the NHS. **Blythe**, a design ethnographer, is currently Faculty Director of Ethics. Several of the Unit's researchers lead on the development of new ethical practices in their fields; e.g. in human-computer interaction and digital design, **Vines** has published on and contributed to a series of international workshops on the ethical implications of conducting human-centred research on emerging technologies; and **Wallace** with colleagues on her 'Ongoingness' project has developed an ethical roadmap toolkit to help researchers engaged in design work with potentially vulnerable groups or around highly sensitive topics to plan their projects and engage in ethically-grounded practice. In the heritage field, **Ashley's** participatory action co-investigation supports her BAME partners in self-articulation, challenging research histories that have often been premised on what academics 'do to' communities rather than engage publics actively (see UKRI, 2019). Her '(Multi)cultural heritage' research evolved from a study of disparate minority-led Arts/Cultural organisations into a comprehensive, participant-led venture providing BAME stakeholders with a newfound sense of agency in discussion of concepts of culture and policy. This has collectively challenged

representatives from the wider Heritage sector with regards to BAME inclusion, leading to changes in strategy, understanding and policy.

2. People

Staffing Strategy

Consistent with the University's objective to increase the volume of staff producing quality research whilst holistically developing academic disciplines, the Unit has had notable success in its policy of developing practice research capacity, both in the appointment of leading researchers in all subject areas and in supporting and encouraging existing staff members. An established staffing strategy is designed to ensure the well-being and development of all staff and the vitality of their research; to support opportunities for new collaborations and partnerships and for extending impact across a growing number of cultural, social and commercial contexts. As stated, there has been strategic investment in 75 posts targeted across all subject and research groups, and at all levels from ECR to Professorial to ensure both leadership and future sustainability, and a research and teaching base that is contemporary and interdisciplinary. Of the eight current Design Professors, four are new appointments since the last REF and four have been internally promoted. Of the 10 Arts Professors in post, three have been internally promoted and four appointed since 2014. At present the Unit has 15 Associate Professors and 16 ECR staff will be submitted in 2021. Appointments overall have supported a policy of building capacity in strong or emergent areas of research and of replacing staff in key disciplines who have retired, moved to other institutions or outside HE.

The internal promotion of existing staff is actively supported. As one means to this, the Unit has invested for the first time in in-service doctorates, with, as noted, seven completions in the current cycle and 13 staff currently enrolled. This is an especially important consideration for the Arts and Design sector where, traditionally, it is not uncommon for staff to be without doctoral qualifications. As a measure of success in this area, **Adams**, for example, is now Associate Professor in Design having been supported to do a PhD. In the context of retaining excellent researchers, **Briggs** provides just one example of a colleague first appointed as a researcher on an EPSRC funded project, who became Anniversary Research Fellow in Interaction Design and now Associate Professor in Design.

To support evolving research priorities, recent appointments include Fine Art Professor **Sworn** who, as noted in relation to CARF, underscores the Unit's focus on inter and cross-disciplinarity and forging new practice-based collaborations. Sworn herself researches across installation, photography and film, so connecting with fine artists in the CCP group, but equally the investigations of MIPMC researchers such as ECR **Stenbom** (appointed Sept 2019). **Butt's**

appointment as Professor in Arts (Sept 2019) enhances expertise and potential new collaborations across visual culture, performance and queer studies, including in studies of popular music and art school pedagogies. Equally, ECR **Sloan** (March 2020), an interdisciplinary art historian and historian of technology, brings expertise on post-war British art and design pedagogies and cybernetics to practice research in CNoS. Senior Lecturer **Egan** (Jan 2020) with her focus on broader engagement with film and TV genres adds to MIPMC enquiry in both scholarly and practice research and in developing new forms of knowledge exchange through expertise in film censorship and media audience studies. **Smith**, Professor of Media and Sexual Cultures considers the implications of demands for regulation and censorship amongst her wider investigations of sexual media and representations. The recent externally funded ECR appointments of **Bellini** (Technical Art History) and **Fuentes** (Art Conservation) support further research in relation to the Woon and Stride collections and the development of the Nanzhao and Dali Centre. Newly appointed (2020) in Theatre and Performance, Associate Professor **Duggan** furthers research into the experience of tragedy and trauma in the SoATP group, but more generally too in Fine Art as in the performance practices of **Johnston**, concerned with collective memory and experience of conflict.

Investment in Design staff has added interdisciplinary expertise in the fields of interaction design and human-computer interaction. As noted, this was supported by the appointment of **Vines** and Durrant as part of the University's investment in the 2014-19 IDEATE MDRT. **Holmquist**, as Professor of Innovation, contributes specialism in interactive and ubiquitous computing. Since 2018 he has developed a partnership with the PROTO Emerging Technologies Centre at the Northern Design Centre, an incubator for the creative industries investigating augmented and extended reality technologies. The appointments of Associate Professor **Marshall**, Professor **Wallace**, Senior VCF **Pitsillides** and ECR **Dylan** reflect commitment to practice research at the intersection of digital technologies and socially engaged design. **Dylan** first a PhD student in Design, then an SRA attached to the EPSRC-funded 'Playing out with IoT' project, is now FTE and another example of longer-term career support for the Unit's valued researchers. **Strohmayer** and **James** are ECR appointments with expertise on responsible innovation in the emerging design contexts of social justice and circular economies and support the greater visibility of ethically engaged and responsible design research and practice. **Mason** and **Richardson** add to research on the implications of digital technologies for cultural organisations and archives. The aim to develop research capacity in Fashion led to the 2020 appointments of **Gaston**, **Sampson** and **Gilligan** who draw interdisciplinary perspectives and creative methodologies from the Arts and Social Sciences to expand understanding of the uses and implications of Design. **Sampson** is co-founder of the interdisciplinary Fashion Research Network which will encourage participation from the growing ECR and PGR community in a subject under-represented in the 2014

submission. As an indication of a developing research culture here, six Fashion staff were accepted to the peer reviewed conference 'Futurescan 4: Valuing Practice' in 2019.

Staff Development

As with staff at all levels, ECRs are allocated a mentor directly on taking up their posts. As well as being integrated into the research culture by, for example, introducing their own research at group or themed workshops and seminars, they are incorporated into the wider Faculty ECR community and encouraged to participate in the University's ECR Forum and the ECR Development Programme organised by Research and Innovation Services (RIS). Through those structures they become familiar with appropriate funding schemes and processes and are supported to plan their future trajectory as researchers. As a result, for example, the Unit has been awarded three AHRC ECR Fellowships in the current cycle. As they progress through their probationary period (typically 22 months) workloads are balanced to ensure capacity to meet research objectives, and to complete an HEA Fellowship. ECRs have opportunities to convene research groups (e.g. **Horne** for VMC) and lead in the planning of events or conferences. They are also able to undertake PGR supervision where mentoring in the team can be provided from experienced additional supervisors with the required number of completions. In these ways ECRs are supported in their own career progression while ensuring the vitality of the wider research culture in the longer term. Similarly Research Fellows across the Unit receive guidance and support from mentors and line managers and are typically accommodated close by those most associated with their projects.

Permanent staff (both full-time or fractional) are encouraged to apply for a Research Sabbatical, usually on a one semester in seven scheme and, as noted above, there has been a particular concern to support practice researchers who were not returned in REF 2014, e.g. **MacPherson**, **Pavey** and **Duncan**. Applications are invited on an annual basis and the Unit operates a rota system so researchers can plan their activities accordingly. On occasions such as an external funding award or a valuable research opportunity with a particular deadline, applications are considered from outside the rota. Sabbaticals may facilitate a range of activities, including engagement in collaborative research projects or knowledge exchange or, as with **Yee**, for the development of an Impact Case Study. Individuals discuss their interest in sabbatical leave, their aspirations and plans as part of the PDA process and in discussion with mentors and Research Leads. Staff who have experienced interrupted service (e.g. Maternity or long-term Sick Leave) are encouraged to apply for sabbatical leave to enable them to re-establish their research activity: such applications may be considered outside the normal cycle. During the current REF period, staff have benefitted from sabbaticals across all disciplines in the Unit, including ECRs just out of their probation period. The sabbatical rota is an initiative that has only been fully established in Design within the present REF cycle. In some instances professors at the very start of their

contracts (e.g. **D Hughes**, **Phillips** and **Butt**) have been allocated sabbaticals to enable them to complete monographs or a substantial body of work.

The Unit provides strong support for its mid-career community. In addition to the Faculty Mid-Career Forum, mentors and line-managers provide guidance and advice towards Associate Professor and Professorial applications. Aside from Unit-wide mentoring in relation to research plans, outputs and funding applications (which may include facilitating roles as Co-Is on particular projects), opportunities are provided for mid-career staff to gain experience in leadership through roles such as PGR leads, Head of Subject (HoS) or Associate Head of the Dept (AHoD). Across the current cycle in Arts, for example, **Arnfield** has progressed from ECR status in REF 2014 to Associate Professor via periods as HoS in both Fine Art and Theatre and Performance. **Gilroy** (AHoD) and **Brown** (Director of the Woon and University Gallery) have been promoted from Senior Lecturer to Associate Professorships. **Potter** transferred from Senior Lecturer in REF 2014 to Associate Professor and now Professor in Art History undertaking roles as HoS and AHoD in Arts. Both **Holt** (UoA Lead) and **Crisp** have transferred from Reader/AP to Professor within the REF cycle.

Through these mechanisms the Unit provides a consistently supportive environment for individual and collaborative research and for staff progression. We recognise that excellent communication is key to this process. News of research awards, prizes and successful PhD vivas is routinely circulated, as are details of upcoming research events, exhibitions, symposia and conferences. In addition to information regularly disseminated through RIS and via the faculty at large, for example, an Arts' Sharepoint site ARIS (Arts Research and Innovation Site) provides a 'one-stop' location for materials needed to engage with core research activity. This includes documentation such as away day presentations, external funding procedures, forms and information relating to QR and sabbatical applications, current mentor-mentee lists, REF-related information (including OA procedures) and templates, details on staff members' past and current PhD supervisions, and on upcoming PGR training opportunities.

Equality and Diversity

Of vital concern for this Unit, Northumbria has been awarded an institutionally wide Bronze Athena SWAN Award to 'demonstrate a solid foundation for eliminating gender bias and developing an inclusive culture that values all staff.' A joint Arts and Design application in this category will be submitted in November 2021. Arts and Design Equality and Diversity Leads (**MacPherson**, Arts and **James**, Design) were instrumental in organising fully-booked 'Leading Effective Change' faculty workshops in 2019-20 delivering training on creating an inclusive culture, on intersectionality, LGBTQ+ issues, imposter syndrome, unconscious bias and cultural awareness and inviting discussion on any issues concerning protected characteristics. In addition, LGBTQ+

and Women's staff networks were launched in 2019. EDI matters are regularly addressed at staff away days and, as appropriate, in individual meetings with line managers and mentors. In addition, information is regularly circulated on upcoming regional and national events and webinars exploring, for instance, the implications of racial inequality for Higher Education. A BAME staff network was established in 2020 to provide a confidential environment for all staff who self-identify as coming from a Black, Asian or other Minority Ethnic Background. This network, along with the Race Equality Charter Consultative Group, plays an important advisory role in the diagnostic work and action planning of the Northumbria Race Equality Charter team with its commitment to understanding, removing or overcoming racial inequalities at Northumbria.

Procedurally, attendance at fair selection training is a pre-requisite for all new appointment interviews, as are mixed gender panels. In practical terms it is understood that the ability of colleagues to be productive researchers can be impacted by a range of personal circumstances, including health, maternity, paternity and caring responsibilities. These individual circumstances and constraints are considered in the timetabling of meetings and committees and, following periods of family-related leave, in the scheduling of sabbaticals to allow time to regain research momentum (as in the case of **Warwick** and **Liston**). Noteworthy in terms of gender balance is that of the current 18 Professors across the Unit, ten are female, while the FTE submission overall is 48% female and 52% male. 2020 has also seen a new faculty-wide initiative to support women towards promotion.

In addition to these institutional concerns and procedures, the Unit's holistic engagement with the principles of equality and diversity extend to its research in numerous contexts. In addition to those already referenced, examples include **Strohmayer**, a founder of the feminist technology collective, Fempower.tech, which improves experiences of people made marginal in human-computer interaction and technology research more widely; **Phillips**' developing new research into feminist leadership in Arts organisations; **Pearlman**'s publications on transgender studies and **Land**'s award-winning animated documentary 'Bathroom Privileges' (2020) focussed on themes of race, disability, gender and power relations in public space.

Research Students

Staff overall are highly active in PhD supervision, either as principal supervisors or attached to supervisory teams in order to gain experience; and they attend regular supervisory training on aspects of the role. As noted, postgraduate awards across Arts and Design increased from 27 (REF 2014) to 87 (2019-20), and 121 students are currently enrolled. Within this period the Unit has benefitted from involvement in, firstly, from 2013, the AHRC consortium Centre for Doctoral Training in Arts and Design (CDT, £1.2m award 2014-19). Northumbria was lead RO with the University of Sunderland and partners BALTIC and the National Glass Centre Sunderland

(directed by **Campbell**), and from 2019, membership of the AHRC Northern Bridge Consortium (NBC) with **Jackson** as co-ordinator from Arts. NBC, like the CDT, is committed not simply to supporting excellent PhD candidates in their individual studies and training programmes, but in contributing wholeheartedly to the vitality and sustainability of its cultural and economic regions (the north of England and Northern Ireland). This is demonstrated in part by its 20% yearly allocation of Collaborative Doctoral Awards (CDAs) so ensuring placement opportunities and underlining continual concern for building partnerships. The NBC will yield 335 studentships over five years, and it is envisaged that Arts and Design in particular (the latter unrepresented in NBC subject coverage until now) will benefit. In its first year Arts was awarded two NBC studentships and Design, one. In other AHRC contexts and drawing on longstanding collaborations with regional and national museums, Janine Barker's Design History CDA with Shipley Art Gallery was completed in 2015; Valentina Risdonne's current Conservation CDP (Collaborative Doctoral Partnership) studentship is focussed on the V&A's 19th century plaster cast collection and, as noted, another Conservation CDP studentship, with Tate Britain, was secured for 2020-2024. Also, in the context of externally funded studentships, the Nanzhao and Dali Research Centre offers two: the Lady Edwina Grosvenor Studentship and the Tan See Bock Scholarship. **Phillips** was awarded an NBC-funded CDA studentship with BALTIC in 2020. Examples in Design include Belen Barros Pena's current AHRC-NPIF studentship in collaboration with Santander on designing financial services for vulnerable populations, and the recent award to **Holmquist** of an NBC-funded CDA with PROTO. In addition, Arts and Design candidates compete annually for 20-25 University Research Development Fund Studentships (RDFS) and have received, on average, seven per year. Faculty adds an RDF studentship to all successful AHRC ECR Fellowship awards, contributing to those projects' diverse cultural or industrial partnerships. Finally, Arts and Design MRes programmes provide a valuable conduit for successful PhD applications (including those of staff members), and we are focused on increasing the number of self-funded PhD applications.

As well as the CDT lead and NBC co-ordinator, the Unit has overall PGR leads for both Arts (**Campbell**) and Design (**Holmquist**). They are members of the Faculty Research Degrees Sub-Committee which monitors and approves progression and awards. They oversee PhD applications, contribute to the interviewing and allocation of studentships, arrange supervisory teams and ensure PGR progression procedures are adhered to. PGR leads are also an initial point of contact should a student have concerns about supervision. Students have formal monthly meetings with their principal supervisor and meet in general three times annually with their second supervisors. Documents and reports related to supervisions and annual progression stages are entered into an electronic system (e-Vision) to ensure accurate and timely records are maintained with an expectation that completion will occur within standard duration (3 years), with arrangements for additional time requests and 'writing up' period. As with its staff, the University is committed to providing an inclusive environment for its research students where diversity is

valued and encouraged. The student support team offer dyslexia and disability support and a range of services for international students; the student LGBTQ+ network works closely with the University and the Student Union to continually ensure up to date and inclusive policies are in place.

The Unit's postgraduate programmes provide a rich experience of support and cross-disciplinary network opportunities for students and staff associated with their studies. PhD students contribute significantly to the overall vitality of the Unit's research groupings. They frequently initiate or collaborate in planning discursive events of value to their own studies as well as adding to the broader research culture of the associated academic community and beyond. All PhD students have access to dedicated space in the Glenamara Centre and to the University Library's Research Commons Collaboration Spaces. In addition, PhD students in Design are typically co-located with the staff aligned with their projects and in related workshop spaces. Practice-based PhDs in Arts have access to workshops and are allocated studio space at B39 where, along with MFA students they engage directly with Baltic exhibition programmes and related activities. As one example of commitment to collaborative postgraduate scholarly research and to cultural networks and partners, Laia Anguix received an RDF studentship in 2017 to work with the Laing Art Gallery, Newcastle on the origins and development of its collection; a project designed by **Potter** as Academic Lead on the NU-TWAM Partnership which contributes to the Unit's longstanding connections with Tyne and Wear Museums and Archives.

Within the REF period the CDT has consistently shared good practice and identified opportunities emerging from the breadth of distinctive Arts and Design research undertaken within the consortium. It has produced interdisciplinary training programmes, conferences and events – several staged at Baltic, the National Glass Centre in Sunderland and Northern Design Centre – responsive to the needs of students, partners and the wider community. From these, numerous new connections have been forged, and the collaborative aspects of PGR research projects has grown. One example is Robert Djaelini's 'Developing Dialogue through Design' research into the UKs integrated health and social care system. This led to multiple collaborations and work with local charities providing mental health services and contributed to a joint project between Northumbria and Central Manchester NHS Trust, and an NHS placement for Djaelini in the Scottish Parliament.

CDT students are supported by both Student Development Funding (SDF) and Cohort Development Funds (CDF), the latter ensures that particular forms of research training, themed workshops and events are available for the benefit of all PhD and frequently PGT students beyond the CDT community itself. One example, organised by VMC PhD student Inge Panneels in 2017, addressed how artists are engaging with the Anthropocene in practice, theory and policy; an

occasion which involved PhD students, staff and Visiting Fellows from across Arts, Design and Humanities as well as independent artists, geographers, environmentalists and rural arts organisations and resulted in new network opportunities and collaborations. The CDT in this regard has made a valuable contribution to the arts ecology of this region and beyond. As another example, student, practising artist and CNoS member, Jacqui Donachie organised a 'Meeting Place' salon-style discussion, to explore how artists collaborate with experts in the fields of science, the environment, health and medicine to generate new research. In 2015 one of Donachie's own works was awarded 'Best film by an AHRC/ AHRB-funded doctoral student since 1998'. Further illustration of the high level of training and support provided by the CDT is that one of its graduates, ECR **Liston** is now an active researcher in Fine Art at Northumbria and supervising her own PhD student.

Beyond their participation in and across research group seminars and events, PhD-led initiatives include, for example, James Bell's 2019 series of screenings of LGBTQ+ artist moving image, documentary and film. This was supported by the VMC group and the Faculty's LGBTQ+ network. From CNoS, Crystal Bennes devised and ran a two-day workshop exploring the environmental impacts of photographic processes and materials and considering the physical materials of photography from critical, cultural and creative perspectives. From the same group ex-RDF student Louise MacKenzie produced the 'Black Box' cinema programme in collaboration with the Institute of Genetic Medicine at University of Newcastle.

In leading these initiatives and taking part in research groups in general the PhD community become familiar with and, as appropriate, participate in their supervisors' research projects. In a subject-specific context, since 2016 **Walker**, of MIPMC has organised a successful annual mini-symposium for PhDs and ECRs working in the field of horror, cult and exploitation.

These examples of PhD activities and the support provided underscore the Unit's overall strategy in relation to cross and interdisciplinary research; to sustaining its public, professional and cultural networks and partnerships, its collaborations with local and national charitable services, and commitment to EDI principles. Underpinning these is the concern to ensure its postgraduate community is properly equipped to make a vital future contribution to society in professional, academic and creative contexts.

3. Income, infrastructure and facilities

Income

Within this cycle, as noted, the Unit's researchers have received funding from a wide array of sources, including UKRI, industry, government agencies and public bodies, charitable trusts,

national and international businesses and via individual philanthropic donors. Practice research outputs are also often realised through independent commissions, or via direct Arts Council England and Creative Scotland funds.

The Leverhulme Trust has provided an important source of funding for creative practitioners as well as academic researchers interacting across disciplines and institutions. Examples include:

- **Crisp's** 2015-16 Leverhulme Fellowship 'Material Sight: Re-presenting the Spaces of Fundamental Science' (£48,705). Hosted by Arts Catalyst, Crisp worked with partners, including the Institute of Physics and Laboratori Nazionale del Gran Sasso - the world's largest underground research centre for particle physics housed within a mountain in central Italy.
- Bowen's 2016-17 Leverhulme Fellowship for her interdisciplinary project 'Sensing and Presencing Rare Plants through a Contemporary Drawing Practice' (£65,638). Working at the interstices of fine art, botany and plant science, museology and cultural geography, Bowen investigated the relationships between the rare plant life of the south-western coast of India, drawing and herbaria.
- **Arnfield's** Leverhulme International Academic Fellowship, 2017-8, one of two achieved by the University, was awarded for her project 'Towards an interdisciplinary conceptualisation of (auto)biographical theatre practice' (£20, 987). This consolidated relationships developed since 2013 with Łódź University and The Institute of Sociology and the Marek Edelman Centre for Dialogue. Arnfield engaged with Holocaust and genocide archives, offering a performative, memorial voice and using witness testimony from victims of oppressive regimes.
- Leverhulme Early Career Research Fellow **Fisher's** project 'The Dialectical Landscape: Negotiating the Legacies of British Modernism in the Rural' (2019-22, £85,293) considers how experiences of exile and outsiderhood have shaped creative encounters with place through curatorial, art historical and interdisciplinary research methods.
- **Sexton's** 2020-2022 Leverhulme Project Grant (£129,000) was awarded to investigate 'Anonymous Creativity, Library Music and Screen Cultures in the 1960s and 1970s'.

AHRC funding has also proved a vital source of funding for cross and interdisciplinary research and collaborative engagement with publics and communities. In this context, for example:

- Rodgers' 2014-16 Research Fellowship, 'Disrupting Dementia', was important in its consideration of how design can contribute to the development of products, services and systems for people living with Dementia: a subject relevant to several of the Unit's current researchers.

- **Yee** received AHRC Network funds (£44, 059) for her 'Design for Social Innovation Research Network: bridging the UK and Asia Pacific (DESIAP)', investigating how the language and practices of design have been adopted by non-design organisations engaged in social innovation.
- **Ashley's** project '(Multi) Cultural Heritage; New Perspectives on Public Culture, Identity and Citizenship' was supported by a Leadership Fellowship awarded in 2016-17 (£173, 548). The value of that research resulted (March 2020) in AHRC Follow-on Funding for Impact and Engagement for the project '(Multi) Cultural Organisational Archives (£99,000)'.
- **Theodorakopolous's** success in securing CDP studentships with both Tate and V&A Conservation Departments has been noted.
- Also, in the context of Museum collaborations, on completion of her AHRC CDA studies Janine Barker, supervised by **Kramer** received AHRC Cultural Engagement funding to develop a digital platform for the Henry Rothschild Collection and Archive at the Shipley Gallery, Tyne and Wear.
- **Mason** was awarded an AHRC research, development and engagement fellowship in November 2020 (£250,000) for a 2-year project beginning in April 2021 to investigate digital cultural heritage practices in museums.
- **Duggan** was awarded AHRC COVID-19 funding in November 2020 (£150,000) for 'Social Distancing and Reimagining City Life: Performative strategies and practices for response and recovery in and beyond lockdown'.
- **Walker** was awarded an Early Career Fellowship in November 2020, 'Raising Hell: British Horror Cinema in the 1980s and 1990s (£140,000)

The Unit's researchers have had considerable success in securing large UKRI collaborative awards relating to societal challenges. These include:

- Durrant's 2018-21 EPSRC project 'INTUIT, Interaction Design for Trusted Sharing of Personal Health Data to Live Well with HIV'; a design-led programme addressing issues of trust, identity and privacy experienced by people with HIV when sharing self-generated data for the purposes of managing their condition (£924, 272, EPSRC);
- **Wallace's** 2016-17 EPSRC project 'Enabling Ongoingness: Content Creation and Consumption in the New Digital Age' (£1,106, 797) developed new ways to curate digital media to support the bereaved or those with a life-limiting illness. When awarded this and Durrant's INTUIT project were the largest UKRI grants held at the University.
- **Briggs** received £239,262 from EPSRC for her 2017-18 research 'Cumulative Revelations of Personal Data' and £209,794 for her project 'TAPESTRY: Trust, Authentication and Privacy over a Decentralised Social Registry; Participatory economies: online platforms for

exchange of making and managing value in the creative and cultural industries', which involved the study of human-centred applications of block-chain based services for proving the provenance of online digital identities across public and private service providers.

- **Vines** secured EPSRC funding for 'Ox-Chain: Towards secure and trustworthy circular economies through distributed ledger technologies' (£197, 459), a 2016-17 collaborative project with the universities of Edinburgh and Lancaster; ESRC funding for the project 'Loneliness and social isolation in mental health' (£63, 709) focused on co-designing digital interventions for populations at risk of transitory loneliness and social isolation, and £46,174 for 'CuRAtOR: Challenging online fear and OtheRing'.
- As an example of ESRC funding, **Briggs** was awarded £92,528 in 2014-15 for 'A Taxonomy of UK Crowdfunding and Examination of the Potential of Trust and Empathy in Project Success'.
- Northumbria is the overall lead (1.7m) in the CDC (£550,000 to ADSS)

In international collaborations, **Bailey** was PI responsible for a successful collaborative grant working with the American University of Armenia, to deliver start-up business innovation support in Yerevan. (£100,000 over three tranches from British Council). Also from British Council (2019) is **Yee's** funding from the 'Creative Hubs for Good' programme (with RMIT University, Australia) to support the development of cultural and creative districts in South-East Asia. This work is facilitated by **Yee's** 'Designing for Social Innovation in Asia-Pacific' (DESIAP) network which builds culturally grounded understanding of how design supports social innovation - the focus of one of this Unit's Impact Case Studies.

As noted, Design researchers have received funding from 'Creative Fuse North East' an action-research project involving Northumbria alongside Newcastle, Durham, Sunderland and Teesside Universities. Based at the Northern Design Centre in Gateshead, Northumbria Creative Fuse works with SMEs, freelancers, and large organisations to develop innovative ways of working, particularly focusing on 'fusion': the combination of creative art and design skills with technology expertise. Creative Fuse is funded by AHRC, ACE, and ERDF, with partners including Northumbria Police, Northern Dance, New Writing North, Rape Crisis and the National Trust Seaton Delaval. From this source **Bailey**, for example, received AHRC funding in 2015-16 (£468, 671) and in 2016-17 from the European Commission (£229,779) for the Creativity Works project. This explored the role of design processes and techniques in facilitating multi-disciplinary innovation in complex social and economic contexts and investigated strategies for particular organisations to develop their creative capacities and confidence through the use of design expertise.

Those practice researchers benefitting from individual ACE or Creative Scotland awards include **Crisp** whose Leverhulme Fellowship exhibition staged at MiMA in Middlesbrough and Catalyst Arts in London received an ACE award of £14,000; **Campbell**'s co-curated exhibitions 'Double Act: Art and Comedy' engaging with the comedic impulse within contemporary British culture and staged at the MAC, Belfast and Bluecoat Gallery, Liverpool received £60,000 from ACE and Arts Council Northern Ireland. **O'Sullivan** and Tatham's 'Are you LOCATIONALIZED' which considered the social function of contemporary art commissioned for specific locations was funded by Creative Scotland (£70,000). **Pavey** and **MacPherson**, received £15,000 from Creative Scotland for a final phase of their co-produced theatre project working with coastal fishing communities along the north east coast of Scotland and England, 'Get up and Tie Your Fingers, Eyemouth'.

Other sources for practice research include **Johnston**'s 'Border Crossings', a site-responsive residency project at Yuendumu in the Northern Territory of Australia and exhibition at the University of South Australia facilitated through British Council and Artists' International Development Fund grants. **Borland**'s 2018 'I Say Nothing', a site-specific installation commissioned for Glasgow Museums' First World War collection following her year-long research residency at Glasgow Museums Resource Centre, was supported by Public Art Fund 14-18 NOW. **Sworn**'s 2015 mixed media installation at the Whitechapel Gallery, 'Silent Sticks' developing the theme of mistaken identity resulted from a Max Mara Award for Women Artists. In the recent context of Covid-19 related research, **Jackson** was awarded (April 2020) £23,000 from an ACE initiative to support his IMT Gallery research in a series of online commissions for artists to present new free-entry, high quality digital art projects on the theme of 'This is Not-Me', exploring the problematic representations of life on online platforms.

Public bodies and the voluntary sector have provided valuable small funding for contract research for Design, including **Spencer**'s, 2014-15 'A collaborative approach to the development of responsible social enterprise model for the Percy Hedley foundation' (£9, 621); **Steane**'s, 2015-16 Gateshead Carers Association award of £10, 000 for 'GCAs E-Learning Package' and **Warwick**'s 2017-18 'Capture and critically review Ageing Better Middlesbrough's co-design process' award of £4,419 from Ageing Better Middlesbrough. The latter examined the positive impact co-design activities can have on service user wellbeing and sense of autonomy. Sources of funding for contract research projects with industry and commercial firms include **Adams**' £11, 429 in 2018-19 from furniture retailer Herman Miller inc. for the Eddystone Learning Space Pilot. More diverse small funds include **Horne**'s Paul Mellon Mid-Career Fellowship for research into the evolution of women artists' networks in the 1960-70s; **Potter**'s Lewis Walpole Library Fellowship (c.£8,000), and contributions to **Kramer**'s travel to Japan from the Pasold Research Fund.

Knowledge Transfer Partnership awards are an important indication of how our research has helped businesses to innovate. **Lievesley** has been involved in two KTPs; 1. with Solar Capture Technologies (£81, 891) to develop a modular range of micro-solar power solutions to meet the needs of transport infrastructure and waterways authorities using innovative management approaches, and 2. with the motion and control technology corporation, Parker Hannifin (£80, 945), to establish customer-centric innovation processes. As further evidence of the considerable value of KTP awards, the second of these underpins **Lievesley**'s impact case study for 2021.

Activity relating to research funding is overseen by the two Directors of Research and Knowledge Exchange, **Potter** in Arts and **Yee** in Design. They chair their respective Research Committees whose membership includes HoDs, PGR leads, UoA lead (**Holt**), Deputy UoA lead (**Marshall**), Heads of Subject and Research Group/Theme convenors. Funding applications across the UoA are supported by RIS, who provide individual researchers and teams with dedicated university Research Policy Managers, give budgetary and structural support and maintain a rigorous peer-review process supported through a Faculty Peer Review College which provides mentoring for the preparation of funding applications. In addition to researchers working on specific Impact Case Studies, those developing general funding applications can also receive advice from Impact Officers on how to embed and evidence impact.

Regular funding workshops are arranged for all staff in connection with specific schemes such as AHRC Fellowship (ECR and standard route) and Leverhulme Fellowships. The need for planning and substantial lead-in times is emphasised to ensure fair workload management and reflect ambitious funding applications. RIS systems ensure that applications are competitive and manageable. Unit researchers can apply for internal QR support for application development; this funding is responsive and can be used to support activities such as academic networks; pump-priming workshops and costs related to working collaboratively with partner organisations. Researchers can also apply for faculty funds for the hiring of an RA to scope out a potential project. The University runs an elite training programme ('Next Generation of Large Award Holders') for researchers who have already won small or medium-sized grants to help them transition to larger-scale applications. Several, including **Briggs**, **Crisp**, **Kramer** and **Potter** have taken part in this programme in the current cycle.

Infrastructure and facilities

This Unit's vibrant research environment is underpinned by considerable and sustained investment in facilities. Design's purpose-built building provides specialist workshop, lab and making spaces to support interdisciplinary and commercial research; with a public-facing exhibition area and adjacent presentation hall supporting a programme of research events.

Design's research resources allow for the combination of STEM approaches with design insights and expertise to translate scientific and technological advances such as 3D printing, synthetic biology, organic electronics, sensors and technologies. Improved infrastructure includes access to specialist research facilities enabling digital making and physical fabrication, and allows for the hosting of workshops and engagements with the public and collaborative organisations. As noted, new dedicated space provided for CoCreate brings together researchers from across the design disciplines and PGR students in one place, including two major EPSRC projects. Overall the Unit has 7,750 square metres of dedicated teaching, workshop and studio space, including 846 square metres of PhD and Master's studio provision at B39, which integrates postgraduate students and staff in collaborative space, including the Experimental Studio.

The University Gallery, directed by **Brown** and now supported by the Lim ai Fang Fellow, opened in 2018 in a new location on City Campus. This includes Gallery North and the University Art Collection (comprising 3,000 paintings, prints, drawings, and sculptures, ranging from Japanese prints to works by Manet and Paolozzi). It has a dedicated study area and holds the studio archives donated by descendants of the artists Norman Cornish and Charles Sims. Gallery North provides an experimental space for contemporary practice through a regular programme of exhibitions, symposia, research-in-progress and public-facing events for ADSS and the University at large. As an example of collaboration across the Unit's research and educational resources and in conjunction with Baltic, the Gallery supports the prestigious annual Woon Painting and Sculpture Prize open to all UK Fine Art undergraduates, which awards a total of £40,000 plus studio space for 12 months for the first prize winner, as well as the Woon Gallery of Asian Art. The Asian Art Collection is on long term loan from retired Singaporean lawyer and Northumbrian alumnus, Mr Wee Teng Woon, and the Woon Brothers Foundation who support research and public exhibitions in the region. The development of these spaces supports continued focus on widening participation and external engagement between the University and the city of Newcastle.

The period ahead will benefit from £2,000,000 investment in new research and exhibition facilities for the Nanzhou Dali Research Centre, and the Woon and Stride Collections in the recently acquired College House on the edge of the campus by the city centre, close to our Fine Art Conservation studios. This will provide a purpose-built new site for research, training, cultural and academic exchange with existing partners in the Yunnan museum and gallery sector. College House will have dedicated space for academic lectures and seminars and for public-facing events. Such investment, alongside the three related academic posts (part-funded for five years through the Woon and Stride partnerships) will further strengthen our capacity for international collaboration, partnership and knowledge exchange.

4. Collaboration and contribution to the research base, economy and society

The principles of collaboration and contribution are and will remain at the core of the Unit's activities. They define its forms of engagement, networks, partnerships and the beneficiaries of its research. One indication of success is the submission of eight Impact Case Studies drawn from across the Unit's subject areas, some referred to above. These encapsulate an overarching commitment to research of consequence for culture, society and the economy from, for example, design innovation practices for social, commercial and voluntary organizations, to support for sustainable healthcare delivery, and collaborative forms of social and cultural representation of benefit to marginalised communities and those suffering the longer term effects of conflict and trauma. These case studies emerge from continuous interaction with diverse communities, individuals and organizations: the sharing of expertise and contributions across an extensive range of academic disciplines, subject associations, public, commercial and voluntary sectors.

Research collaboration and partnerships

In terms of international university research partnerships, **Qin** leads the University's strategic partnership with Northwestern Polytechnical University in China which included the establishment of a joint Design Innovation Lab in 2017. As noted, the Nanzhao and Dali Kingdoms' research centre's partnership with Yunnan Art Gallery and Museum and forthcoming collaborations with five Yunnan Universities will further our research capacity in non-Western visual and material cultures.

Other collaborations yielding benefits in terms, for example, of research outputs, funding applications and public engagement with national and international cultural heritage and educational organisations include: **Arnfield**, University of Łódź, Poland and NYU; **Phillips** and **Crawshaw**, University of Gothenberg; **Theodorakopolous** and **Holt**, Tate Britain; **Holt** and **Crawshaw** rural arts organisations (e.g. Visual Arts in Rural Communities), local and national community groups (**Pavey**, **MacPherson**, **Warwick**, **Spencer**, **Taylor**), and conservation bodies such as the National Trust (**Brown**). Art and science research outputs have emerged through, for example, **Crisp**'s collaboration with Boulby Underground Laboratory, Institute of Computational Cosmology, Durham, Institute of Physics, London and **Borland**, Institute of Transplantation, Freeman Hospital, Newcastle. An example of diverse engagements across Arts and Design with one particular cultural organisation is **Kramer**'s role as fashion history consultant on the V&A's 2020 exhibition, 'Kimono: Kyoto to Catwalk', **Mason**'s exploration of the integration of design thinking and associated methodologies in its curatorial, exhibition design and visitor experience design processes; and **Theodorakopolous**' current role (as noted) as co-supervisor of Valentina Risdonne's AHRC CDP studentship with the V&A's Department of Conservation.

Vines has developed significant international collaborations with the universities of Toronto, Melbourne and University of California Irvine on the ethical dimensions of human-computer interaction, research evident through ACM CHI publications and workshops, and **Yee** has acted as consultant on CLEAR (Cambodia Leadership, Excellence and Responsibility) producing on-line training programmes supported by the British Embassy in Cambodia. In addition to the forms of collaboration in Design already indicated in reference to a range of funded research projects, other notable examples include, for instance, **Gibson's** long-term collaboration with Northern Dance based on his GAMS interactive motion-tracking system and **Dylan, Durrant and Vines'** work with charities, youth advocacy organisations and forest schools designing digital interventions to navigate the social and community barriers to children playing outdoors.

Contribution to the arts and design sector; leadership and academic citizenship

Across the Unit researchers contribute to and influence sector debate in numerous contexts. In relation to Research Council peer review, 11 researchers have been members of the AHRC Peer Review College since 2014 including the interdisciplinary and international panels: (**Duggan** (strategic college); **Yee, Leggott, Kramer, Holt, Marshall, Potter, Sexton, Wallace, Tythacott, Smith, Blythe, Briggs**); **Briggs** was recognised by the AHRC Head of Operations in April 2020 for her 'Outstanding Contribution to the AHRC' in evaluating applications over 2019, and is also an ESRC college member; **Tythacott, Ling** and **Yee** all have advisory roles on Research Council programmes; **Blythe** has been peer reviewer for ESRC and Wellcome; **Vines** has reviewed for EPSRC and ESRC standard grants since 2015, has been a member of EPSRC ICT Theme panels, and was a member of the Academy of Finland 'Human Technology' prioritisation panel, 2018-19. **Talhok, Strohmayer, Blythe, Taylor** and **Vines** are current CHI programme committee members. **Yee** is Advisory Board member for Impact Hub, Phnom Penh.

Researchers also have roles on numerous national and international subject associations. In the context of arts and culture associations examples include **Colbourne**, who sits on the Institute of Conservation Policy and Advocacy Panel; **Duggan** is Secretary (elected) of the Theatre and Performance Research Association; **Leggott** is Executive Member of the International Association for Media and History; **Ashley**, Executive Member, International Association of Critical Heritage Studies; on national museum and gallery initiatives steering committees and the Royal Society of the Encouragement of Arts, Manufacture and Commerce; on regional heritage committees; and several researchers are Fellows of Learned Societies, e.g. **Potter** is Fellow of the Royal Historical Society and **Tythacott** of the Royal Asiatic Society.

Of professional bodies, **Vines**, for instance is Vice-Chair of UK ACM SIGCHI (Special Interest Group on Computer-Human Interaction) Chapter. Examples of contributions to expert panels

include **Bailey** on the Design Museum panel on the future role of the museum as an activist for design across academia, industry, policy and the profession.

In the broader context of discussions on the future of practice research, **D Hughes** is a steering group member of the Practice Research Advisory Group (PRAG-UK), a body from the HE arts research community working to increase the visibility and accessibility of UK practice research. In the context of specific subject review, **Butt** is a member of the Live Art sector review Steering Group, 'Assessing the impact of Live Art on the cultural landscape of the UK', led by the Live Art Development Agency, London, and **Hann** has contributed to publications and delivered invited conference presentations on her arguments for a 'Second Wave' of practice research.

Many researchers have been active as journal editors within the REF period. Examples include **Phillips**, *PARSE: Journal for Artistic Research*; **Holt**, *Visual Culture in Britain*; **Tythacott**, *Museum and Society*; **Smith**, *Porn Studies*; **Brown**, the first ICOM CC e journal; **Leggott**, *Journal of Popular Television*; **Hudson**, Associate Editor, *Landscape Research* and Lead Editor, *Sociological Research Online* and **Gibson**, Associate Editor, *Journal of Professional Communication*. Many are also represented on editorial boards of journals, including: *Animation Practice, Process, Production; Multimodal Technologies and Interaction; Personal and Ubiquitous Computing; Tate Papers; Third Text; Arts; Art in Public Realm; Journal of Gender Studies; Participation and Sexualities*. Several researchers are series editors e.g. **Hudson**, 'Visual Modernities', **Tythacott**, 'Southeast Asian Art and Archaeology: Hindu-Buddhist Traditions'; and many serve regularly as peer reviewers to journals, publishers and educational charities.

As this document has demonstrated, contribution to arts and cultural organisations is a significant part of the Unit's activity. Amongst those who act as board members, trustees or steering group advisors on regional and national galleries and artist-run organisations are **Crisp**, D6: Culture in Transit, Newcastle; **Phillips**, Eastside Projects, Birmingham and Chisenhale Gallery, London; **Rohtmaa Jackson**, IMT Gallery, London; **Crawshaw**, Vane Gallery, Newcastle; **Johnston**, Bbeyond performing arts group, Belfast; **O'Sullivan**, Collective, Edinburgh; **D. Hughes**, Workplace Foundation, Newcastle and **Hudson**, Littoral Arts and Schwitters Merz Barn Site. In addition, a number have had advisory roles on aspects of museum collections, e.g. **Tythacott** was Curatorial Consultant on the China redisplay at the Lady Lever Art Gallery, Liverpool.

Scholarly awards, prizes and fellowships

Researchers based within CoCreate have received multiple awards from leading interaction design and human-computer interaction publication venues. This includes 'Best Paper' (top 2% of all submissions) awards for **Wallace** (2019) and **Vines** (2014) and 'Honourable Mention' (top 5%) awards for **Briggs** (2018), **Wallace** (2020) and **Vines** (2015, 2016, 2018) at the ACM CHI

conference. **Holmquist** was Royal Society Wolfson Research Merit Award Holder, 2016-2021. VCF **Talhok** was announced 'Young Digital Leader of the Year' in the Oct 2020 Digital Leaders 100 Awards. Amongst those to receive publication awards from subject associations are **Hargrave**, 2018 TaPRA New Career Researcher in Theatre/Performance Prize for his monograph *Theatre of Learning Disability*. **Bellini** won the 'International Prize for Literature, City of Como' 2016 for her study *In the Land of the Snow. Cultural History of Tibet from 7th to 21st Century*. Practice research awards prizes include, for example, **Collin**, whose feature film *Sanctuary* was winner of the 9th International Disability Film Festival and Best First Irish Feature at the Galway 2016 Film Festival and **Land** who received best feature film award for *Irene's Ghost* from FILMSTOCK 12 in 2019; in the following year the Royal Television Society 2020 Excellence in Craft: Animation award and, also in 2020 as noted above, an AHRC Research in Film Award (RIFA) for 'Bathroom Privileges'. **Johnston** was awarded the O'Malley Visual Arts Award in 2020 and **Sworn**, the Max Mara Prize in 2014 and a Philip Leverhulme Prize in 2015 for outstanding researchers of exceptional promise. Success in the award of research fellowships includes **Crawshaw**, recipient in 2019 of a Moore Institute Research Fellowship at the National University of Ireland, Galway relating to her ethnographic research in artist residencies, community development and rural planning. Examples of international Visiting Professorship include **Duggan** at University of Hildesheim (Germany) 2019/20 & 2015 and **Ashley**, at the Robarts Centre for Canadian Studies, York University, Toronto, 2019.

Invited keynotes and conference contributions (performances and exhibitions in REF2 and REF5)

Amongst international keynote lectures at academic conferences, in public galleries and at international biennials, are **Sworn** and **Phillips** at Venice Biennales, 2015, 2017, **Phillips**, 11th Gwangju Biennale; **Butt**, 'Art School without Walls', Helsinki Theatre Academy, and Luxus Symposium, Warsaw and Wroclaw Museum, Poland, 2015; **Johnston**, Artistspeak, University of South Australia 2016; **Holt**, Meaning of North, University of Rovaniemi, Finland, 2017; **Hunter**, European Minority Film Festival, Husum Germany; **Bailey**, Riga Stradis, Latvia, 'Innovative Approaches to Internationalisation'; **Marshall**, UK-China Creative Economy Roundtable, Shanghai, 2016; **Smith**, Sexual Cultures, III, Tampere, Finland, 2019; **Holmquist**, 2019 CHI conference on Human Factors in Computing Systems. Examples of national contributions include **Campbell**, 'What was Art School', Bluecoat, Liverpool, 2018.

Conference organisation

In this context examples include the 'Research through Design' conference, initiated by researchers in this Unit (**Wallace**, **Yee**, and later **Vines**) an established bi-annual international design conference with an important role in profiling practice research through exhibition and presentation. RTD attracts submissions from a global pool of researchers from a wide spectrum

of design research and HCI while also capturing aspects of craft research, historically with limited opportunities for dissemination. Across the Unit we regularly organise and host international subject association conferences at Northumbria, e.g. recently **Kramer's** convening of the International Design History Society conference held at Northumbria in September 2019 (an example of collaboration and networking amongst researchers from across Arts and Design) and **Leggott's** convening of the IAMH biannual conference in July 2019. (**Horne** was a convenor of the Association for Art History conference to be staged at Northumbria and Newcastle University in 2020 but cancelled due to COVID-19). International conference organisation includes **Qin's** joint conference with partners Northwestern Polytechnic University in Xi'An, China in 2018; and **Holmquist**, ACM Designing Interactive Systems, 2018. In future plans Design researchers (including **Yee**) will co-host the 2022 Participatory Design Conference (PDC) with the universities of Newcastle and RMIT, Australia.

Doctoral Supervision and External Examinations

Mechanisms for PhD supervision and the impressive increase in the number of PhD awards have been outlined earlier in this document. The Unit's researchers also regularly share their expertise as external examiners with examinations of 114 UK-based PhDs and 25 overseas: **Vines**: Oslo, Aalto, Aalborg; **Butt**: Auckland, Galway; **Johnston**: Dublin; **Phillips**: Dublin, Stockholm, Vienna; **Potter**: Western Australia; **Tythacott**: Hong Kong; **Crawshaw**: Adelaide; **Taylor**: Oulu; **Smith**: Dublin, New South Wales, Melbourne, Aarhus Denmark; Southern Cross Australia; **Holmquist**, Malardén Sweden; **Gibson**, Oslo; **Wallace**: Belgium, Portugal; **Yee**, Finland and Australia, and **Sexton**, Auckland, NZ.