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Open Research

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Welcome

Welcome to the Summer 2023 edition of the Doctoral Times.

This issue of the Doctoral Times is focused on Open Research. Sharing your work can be intimidating. We all worry about how our research will be judged, about whether there are errors or things we should have put in but left out.

Those of us who advocate for Open Research practices need to remember this and think how it might affect early career researchers. I can't tell you that sharing more details of your research will ever be easy, but there are so many good reasons to, benefits for the research ecosystem, and benefits for individuals who do it that it is worth taking on the challenge.

Open Research doesn't mean one single thing. It changes depending on disciplinary context and depending on the methods. At base it means sharing—as much as possible—what can usefully be shared about the process of research as well as the outputs. This includes open access for research papers and books, as well as open licences for software, materials, and data generated by researchers.

For research to make a positive impact on the world it has to be trusted. In a world where everything from the legitimacy of elections to the benefits of vaccinations has been questioned, we can't take for granted that our findings will be believed. Indeed, we need to be sceptical of even our own claims, since errors and limitations come for free as part of any complex process. There's no magic bullet for increasing trust, but a core part must be to justifiably earn it—for research to be trusted because it is trustworthy. Transparency about what was done, how, and by whom, are core to allowing the detection of errors, validation of methods, and corroboration of findings. This is why the University released an Open Research statement to signal an ongoing commitment to Open Research practices, and why around the world governments and research funders increasingly demand Open Research practices. To do world-leading research in the future will mean to engage with Open Research, however it looks in your discipline.

Open Research practices also help other researchers build on your work, allowing them to more quickly and more easily build on your findings, repurposing your methods or reusing your materials. Open Research practices support collaboration and the exchange of ideas, which is good for research and also good for the researchers who are involved (numerous studies show that open-access publications, for example, can be more highly cited).

Engaging with Open Research practices—sharing code, data, publications etc.—also teaches us transferable skills, skills which set us up for the new era of research but also for work outside of academia. Being able to publicly demonstrate exactly what you did as part of a research project allows you to start building a portfolio displaying your skills much earlier, long before you might have a final thesis or journal publication from a project.

I believe we all need to be ready for a new era of transparency in research. Fortunately lots of support for getting started with Open Research practices is available within the University. You can start with the University pages on Open Research, or read in this issue about the different support for Open Research, as well as lots of ways to get involved with defining what Open Research looks like in your discipline.

Hop on board, and good luck with your research.

Tom Stafford, Professor of Cognitive Science & University Research Practice Lead, University of Sheffield.

Open Access is at the Heart of Collaborative PhDs

By Dr Daniel Clarke, Graduate, Department of English Literature.

As someone who completed their PhD as part of the first cohort of White Rose College of Arts and Humanities (WRoCAH) doctoral researchers, I soon learned the importance of open research.

Collaboration was woven into the DNA of my thesis project from the outset. Back in 2014, I answered a call to be part of a network of students across the universities of Sheffield, Leeds, and York (the main WRoCAH institutions). The network would focus on constructions of European identity in historical film and television drama.

Such network studentships are increasingly commonplace and for very valid reasons: they encourage—necessitate even—PhD students to share findings as they conduct their research. Often, network studentships also involve a tripartite structure of collaboration between students, institutions, and external stakeholders such as industrial partners. Although the three of us in the network were all working towards completing our own respective PhD theses, participation within the network meant that we shared our 'data' on an ongoing basis. For film and television studies, this meant disseminating ideas through a blend of mediums: from online documents and databases collating filmographies to sharing ideas as part of workshops and colloquia, and at regular meetings of the network's students and supervisors between the institutions.

This collaborative ethos developed during my PhD continued once I completed my thesis. As a condition of my scholarship, the thesis was to be immediately published as open access via the White Rose e-thesis repository. Open access to my work enabled me to consider feedback from readers interested in my field, individuals who served as unofficial 'peer reviewers'.

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For example, much of my thesis focused on the identification, categorisation, and analysis of mid-20th-century Hollywood films set in the European medieval period. Part of this exercise saw me compare films of the era to Hollywood's teen dramas of the 1950s such as Nicholas Ray's Rebel Without a Cause. In my original thesis, Ray's film served merely as a counterpoint, a case study through which to compare conventions of genre with my films of study. However, thanks to the feedback of one reader online, I was able to consider how Ray's film also renegotiated certain tropes of the medieval period. For instance, one scene of that film sees James Dean's titular rebel duel another boy with a switchblade in a sort of refigured sword fight within a setting reminiscent of a medieval fortress.

These productive experiences of having my research as open access encounters mean that I am very excited at the prospect of publishing my monograph with White Rose University Press in early 2024, almost a whole decade after I first started my PhD! As the 'White Rose' name might suggest, the press reflects the collaborative ethos of research across universities in the Yorkshire region. This spirit of cross-institutional cooperation interests me because I believe it to be at the heart of what academic scholarship is about thanks to my experiences during and since the writing of my thesis. Another central tenet of my research philosophy is producing work that is both accessible and engaging to a diverse range of audiences, and I believe that publishing open access helps me to achieve this.

The Challenges and Benefits of making Qualitative Research Open

By Dr Itzel San Roman Pineda, Graduate, Department of Geography

Open Research, often known as open science, is the practice of making research processes and outcomes as open as possible. Making research open enhances transparency and openness, enables data verification and reproducibility, and can foster cooperation, research integrity, data reusability, and innovation. While making research available is the standard for quantitative academic research, this has not been the case for qualitative academic investigations. Still, funders increasingly want all forms of research to be open. In this article, based on my PhD experience and involvement in research projects around Open Research, I discuss some of the challenges and benefits of conducting open qualitative research.

One of the main challenges I perceive in making qualitative data open revolves around ethics. As a human geographer, I employed a qualitative approach for my PhD research, which included semi-structured interviews, participant observation, and participatory network diagrams of social interactions. I decided not to make my research data open because, although I was not investigating a sensitive topic, I would be working with Indigenous populations in a Global South country. My fear was that I would uncover conflicts between community members and key actors, such as government officials, and that by making these public, I could risk their relationships.

Since I chose not to make my data open, I did not include this in the participant consent forms. However, another difficulty would be to properly explain to my study participants the implications of making their data open access and to ensure research participants had a clear understanding of this. While it is possible to secure data by utilising Creative Commons licences that limit data usage to academic and educational purposes, as well as by setting data embargoes, it is hard to control who has access to the data or how it is interpreted or processed. Repositories like the UK Data Service's repository will allow you to use different levels of restriction, making it possible to control who has access to your data, although of course this then limits the data's openness.

The next challenge revolves around how to make interpretative research open access.

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As an interpretivist researcher, I believe that the interpretation of reality is influenced by the cultural and historical environment in which the inquiry is conducted, as well as the researcher's awareness of the particular circumstances of research participants. The difficulty lies in figuring out how to precisely and clearly explain the specific context to potential users of the data as well as the decisions made when analysing the data through metadata. While the metadata should contain information about the dataset, it is designed to describe quantitative research and does not seem to provide the flexibility required to describe qualitative datasets.

Finally, technicalities are an important challenge to making qualitative research open access. Preparing data and analyses for storage in a data repository takes time and effort, and this includes not just transferring data into appropriate file formats for working and archiving, but also reviewing and editing the data itself. I conducted over seventy-six interviews in Spanish, each lasting more than two hours, with participants who spoke with a distinct accent and made extensive use of local terminology. If I were to translate the interviews into English, I would have to heavily edit my participants' words to make their interviews understandable to any audience. If I had elected to keep the transcription in Spanish, I would have had to edit them as well for any Spanish-speaking reader to understand the material. In addition, making my data available would have required me to anonymize and redact all the materials that could lead to the identification of my participants or potentially harm them.

Despite the difficulties outlined above, I believe there is a benefit to making qualitative research data open. It is beneficial to qualitative research because it increases transparency, rigour, and trust in the research process. Making qualitative research open access encourages research synergy and collaboration. Furthermore, making qualitative data open can encourage interdisciplinary research and give novel perspectives on particular datasets. Furthermore, making qualitative data and research open access could potentially contribute to the preservation of knowledge in the communities with which we, the academic community, work.

I do not mean to imply that all data should be made open. There may be qualitative research on very sensitive themes that could endanger research participants, or that is so niche that data anonymisation is unfeasible. However, some data can be made public, such as the tools and methodologies we employ to collect and analyse data. We can also make qualitative research open access by disseminating it in accessible formats to non-academic audiences, like blogs and podcasts.

Making your research open access should be considered from the start of the PhD journey, and planned for when developing a data management plan. The University of

Sheffield Library provides a great variety of resources around Open Research, the FAIR principles, and even guidelines for specific disciplines to make research open access. Finally, I would like to encourage you to really consider the possibility of making your research open, what this entails, and to assess to what extent you can do it.

Open Research Projects

The University Library is leading a number of current and recent projects around Open Research. Many of these are funded from Research England grants dedicated to the improvement of research culture. Find out more about some of the projects below:

Open Research Prize 2023

The Open Research Prize is a competition for researchers to gain recognition for their Open Research activities. Cash prizes are awarded in three categories (staff, PGR, and team), with a number of runner-up prizes. This year, the Library will also publicise the winning projects and for each of the three prize winners, will pay the Article Processing Charge for an article resulting from the research to be published in an open-access journal. Winners and runners up will be invited to share details of their projects at OpenFest 2023.

The winners of this year's competition will be announced in June/July 2023. Follow the links to view details of the competition and information about previous prize winners.

Unleash Your Data and Software

Unleash Your Data and Software was a funding competition last held in spring/summer 2022. Researchers at all levels applied for awards of up to £5,000 to make their research data or software more visible and reusable. This was part of Library support for researchers' efforts to make their data and software more FAIR (Findable, Accessible, Interoperable, and Reusable). A range of projects received funding, from antineutrino-detection software to 3D models of medieval abbeys. You can read full details of the funded projects here, and recordings of a number of speakers discussing their funded projects can be accessed on the 2022 OpenFest webpage. We plan to hold this competition again in the future—look out for information!

FAIR video case studies

In 2022, the University Library led a project to create video case studies of researchers across the University who apply FAIR principles to their research outputs. This project aimed to raise awareness of the FAIR principles and the different ways these can be applied in different disciplines, from Architecture to Materials Science and Engineering. You can view the finished case studies as well as a short video summarising the benefits of FAIR for the featured researchers.

Department FAIR checklists

In spring/summer 2022, staff in the University Library's Scholarly Communications Team worked with PGR students in a number of departments across the University on a pilot project to develop discipline-specific guidance on how to make data and software FAIR. Seven discipline-specific FAIR checklists were created and are available to view.

FAIR guidance resource

Drawing on the work done in the department FAIR checklist project, we recently developed a resource containing guidance on how to make research outputs and software FAIR—both in general and for specific types of data. As well as guidance, it contains a series of micro case studies which illustrate the different steps involved in sharing data or software. Over the coming months, we'll be working with faculties and departments to explore ways the resource can support their research—in the process, we plan to further customise the resource and create additional bespoke guidance.

Sheffield Thesis Publishing Prize

In 2022, the University of Sheffield and White Rose University Press—the open-access University Press of the Universities of Sheffield, Leeds, and York—held a joint competition for recent PGR graduates interested in developing their thesis into a monograph with White Rose University Press. Successful applicants won a cash prize and the opportunity to work with WRUP to develop their thesis into a proposal for an open-access book, with the potential for their monograph to be commissioned. Book-processing charges for commissioned monographs will be paid by the University. Read more about the competition.

OpenFest

Initiated in 2022, OpenFest is the University's flagship Open Research event, providing an opportunity for researchers at all levels to share information, ideas, and good practice in Open Research. See elsewhere in this issue for a discussion of the event, or find further details about 2023's event on our webpages. Registration for 2023's event will open in June/July, and all PGR students are welcome to attend.

A number of other projects are also in the pipeline—look out for updates from the Library in University newsletters and via the Think Ahead team for opportunities to get involved. In some instances, paid roles for PGR students are available on Library-led projects.

FAIR Data and Software

By Deniz Simsek, PhD student, Department of Biomedical Science.

Last year, I had the opportunity to involve myself in the FAIR data and software project which was coordinated by the University of Sheffield Library. I joined the project as a departmental lead in the School of Bioscience and created a departmental checklist which shows how to make data FAIR (Findable, Accessible, Interoperable, Reusable). Before I started the FAIR project, I had limited knowledge and experience of what FAIR data was and how to apply it to my academic research project. I was in the last year of my PhD and so had a pile of data which needed to be organised, stored in a safe way, and be accessible and shareable if necessary. I was aware of the importance of data management and wanted to learn how to store it correctly. Therefore, I decided to participate in the project to gain more knowledge and experience.

During the project, I realised why applying FAIR principles to research projects is important besides performing experiments and producing data. I learned that FAIR data means not only making your data accessible and shareable to the others, but also gaining good data management skills from data creation to storing and sharing it. Within the field of biosciences, there are many subject-specific repositories such as genomics, proteomics, structural biology, microscopy, and many other areas which make data sharing more advantageous in the same field besides general repositories.

Following FAIR data principles provides several benefits for researchers and students. It increases the rate of collaboration, contribution, and improvement in the research field, and also reproducibility and reliability of the data. Accessing data and methods from articles is not an efficient way to reuse data or repeat experiments because they are mostly restricted and not completely open. FAIR data enables more transparency for reproducibility. Another advantage is that people can ask new/different questions of the same data years later. There is plenty of data, maybe we don't need more? When you share your data (code) with FAIR principles, others can do modifications to it by citing you, so they can improve your code. If your data is not specific to other people's research, it can be useful for other tasks. For example, an established researcher in the School of Biosciences used shared data from the 1990s for different purposes. FAIR data encourages researchers to do more effective and sustainable research.

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However, there are still some obstacles for sharing data that researchers come across. For example, sharing raw data in some areas is impractical because it is interpretable and not straightforward to get the results—requiring more time and effort. Computer representation of the research is important for FAIR data but some data is not computer readable so there is no easy way of reading data. In some research fields, the proper library doesn't yet exist. For instance, peptidoglycan, as a molecule of interest, does not exactly fit in either the glycomics or proteomics library. One of the main obstacles for applying FAIR principles to your research is technical problems. Depositing data can be complicated at the beginning. At this point, access to the Research Software Engineering team is very helpful.

A common concern highlighted for sharing data from PhD students to an established researcher is security and transparency. Therefore, researchers mostly deposit and share their data after they have published it. Generally, only the positive results of research data have been shared after publication. People tend not to share negative biological results, but they are also very important to share so that others won't repeat the same experiment or use the same method and waste their time.

Convincing researchers to share their data can be difficult because they might have reservations when it comes to sharing their method and data, which is totally understandable. On the one hand, some researchers don't want to share because their data might not be reproducible or their analysis might be incomplete. Additionally, their research objectives may not be clear. That's why sharing is not common but important. On the other hand, research groups collaborating with industry tend not to share their data for commercial reasons. Despite these concerns, sharing data is one of the most important parts of scientific research, because making your data accessible to everyone is very beneficial for the sake of science. The concept of FAIR principles overcomes these concerns mostly and enables an appropriate sharing process which is useful for both sides. Increased advertising, provision of more information, and institutional support would improve understanding of FAIR principles and eliminate any bias for FAIR.

Lastly, a FAIR checklist for each department would be very useful to encourage people to follow and apply FAIR principles to their data. Simple and clear FAIR checklists with funder-specific links and good standard DMP (data management plan) examples would be very effective to encourage researchers to follow FAIR principles. Furthermore, IT support, courses, and online training would be helpful at the beginning to make it easier to learn and apply FAIR principles.

Overall, it was a useful experience to be a part of this project and to gain knowledge and skills on FAIR data principles. I hope FAIR principles will become more common in all research fields in the future, which would promote developments in any subject.

The FAIR Checklist for Open Research

By Tha'er K. Abdalla, PhD student, School of Architecture.

As the departmental lead in the School of Architecture, I had the opportunity to work with a research team on developing domain-specific FAIR checklists for Open Research. FAIR stands for Findable, Accessible, Interoperable, and Reusable, and these principles are becoming increasingly important for researchers across all fields.

Open Research is the practice of making research data, software, and other research outputs freely available to the public. This can include making data sets available online, sharing code for software programmes, and publishing research articles in open-access journals. Open Research has many benefits, including increased transparency, improved research quality, and collaboration.

However, Open Research also presents some challenges, particularly when managing and sharing research data. For example, data must be organised, documented, and stored to make it findable, accessible, interoperable, and reusable. Additionally, data sharing must comply with legal and ethical frameworks.

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To address these challenges, our research team developed practical checklists that researchers could use to ensure that their research practices were FAIR. The FAIR checklists guide how to make research data findable, accessible, interoperable, and reusable and manage, document, and share data responsibly. The checklists are domain specific and are designed to be flexible and adaptable and can be used by researchers across all disciplines.

So why are Open Research and FAIR principles particularly important for PhD students and early-career researchers? There are several reasons for this. Firstly, PhD students and early-career researchers are often at the forefront of research innovation. They are more likely to explore new research questions, develop new research methods, and work with cutting-edge technology. By embracing Open Research and FAIR principles, they can help advance the field and ensure their research has a broader impact.

Secondly, PhD students and early-career researchers often have limited resources, both in terms of funding and support. Open Research can help to address some of these resource limitations by providing access to research data and tools that might otherwise be out of reach. Additionally, Open Research can help build research networks and collaborations, providing valuable opportunities for learning and growth.

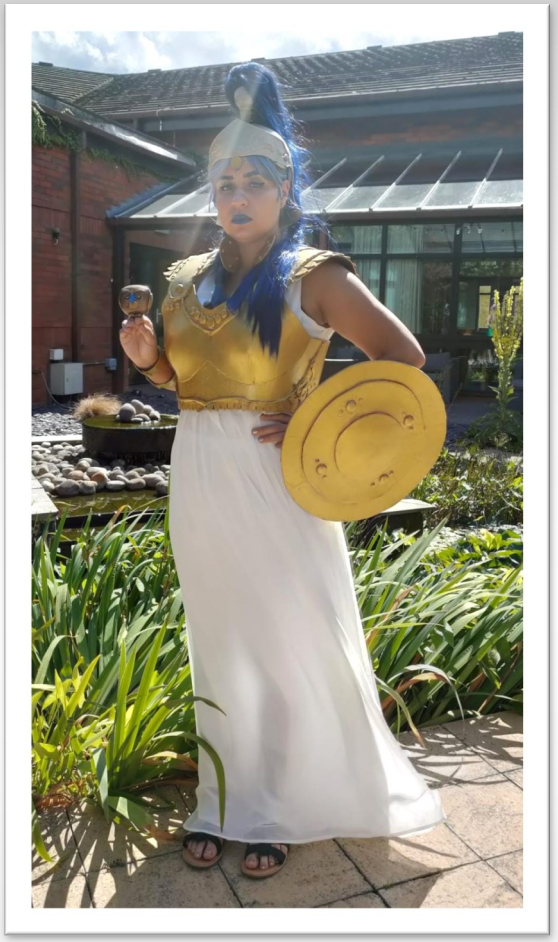
Thirdly, PhD students and early-career researchers often face unique challenges when managing and sharing research data. For example, they may be unfamiliar with the legal and ethical frameworks governing data sharing or lack the resources and infrastructure to manage data effectively. The FAIR checklists can help address these challenges by providing clear guidance on managing and sharing data responsibly and effectively.

Finally, Open Research and FAIR principles can help PhD students and early-career researchers to build their research profiles and establish themselves as experts in their field. By sharing data and research outputs they can increase the visibility and impact of their research and establish themselves as leaders in their field. This can be particularly important for PhD students and early-career researchers seeking to establish themselves in a competitive job market.

In conclusion, my experience as a departmental lead on developing FAIR checklists for Open Research has underscored the importance of Open Research and FAIR principles for PhD students and early-career researchers. By embracing these principles, PhD students and early-career researchers can help to advance their field, address resource limitations, manage and share data responsibly, and build their research profiles. Furthermore, as the research landscape evolves, PhD students and early-career researchers must stay abreast of these developments and embrace Open Research and FAIR principles as critical components of their research practices.

Open Access Publishing

By Dr Adele Celia Mason-Bertrand, Graduate, Department of Sociological Studies.



This year I was delighted to be selected as one of the winners of the Sheffield Publishing Prize which gives recent graduates the chance to publish their work as an open-access monograph. I was particularly excited to win this award, as I had always intended for my research to be published as an accessible piece. As my thesis focuses on a social group that has been widely misrepresented, I wanted to use my research to clear any misconceptions surrounding them by making my work readily available.

As you can see by the picture of me in costume, my PhD research focused on the topic of cosplay, an activity where individuals emulate fictional characters. Within much of the media the terms cosplay and fancy dress are used interchangeably, however the two are very different activities. Whilst fancy dress describes simply wearing a costume, cosplays are a form of subcultural dress. Members of the cosplay subculture emulate characters (largely from geek media sources) with this activity mainly taking place at geek-culture conventions. Cosplayers place a particular emphasis on the amount of effort put into emulations, as well the accuracy of the costumes worn. A degree of roleplay is also required when interacting with other fans, or when posing for photographs at cosplay conventions. A failure to know your emulated character, or the media source they originate from, places you at risk being labelled as a normie in fancy dress, or even worse—a fake geek!

My interest in cosplay stemmed from a love of geek culture as I had seen cosplayers at many of the conventions I had attended growing up. The cosplayers I saw at these events seemed to be a community who displayed and shared their passion for geek media through their costumes. In contrast however, the limited published texts on cosplay were based on theory and assumptions, rather the accounts of those within the subculture. As a result, like many wider geeks, cosplayers were presented as anti-social weirdos which opposed my observations of cosplayers as a highly sociable diverse group.

This discrepancy prompted me to conduct an empirical sociological study on cosplay. Over a period of three years, I attended

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cosplay events across the UK and interacted with hundreds of cosplayers in order to explore the sociological significance of cosplay. As cosplayers were found to be distrusting of outsiders, I decided to use participatory methods, where I made and wore cosplays in the field. Transitioning from an outsider to a full member of this subculture gave me a privileged insight into cosplay's inner workings, which revealed that cosplayers prided themselves on their inclusivity and liberal values. Cosplay was also framed as a space where members could find true escape from the intolerances that they encountered in their day to day lives. Therefore, I decided to explore how a group that prided itself on its inclusivity, maintained its exclusive boundaries.

I also explored the degree to which cosplayers could escape from the key areas that were uncovered within my research which were: sex and gender, ethnicity, neurodiversity, and mental health. Through doing so I discovered that cosplayers drew upon the most liberal norms from everyday life to shape their ideas on tolerance, which influenced the degree to which escape could be successfully achieved. As a result, cosplayers' experiences of escape were found to be affected by their intersecting social characteristics, the nature of the media they consumed, as well the demographics of the subculture itself.

Whilst cosplay is of increasing public interest, the accounts of this subculture continue to be inaccurate. Therefore by publishing my work as an open-access monograph I hope that my research will provide an easily accessible text that could help to address many of the widely held misconceptions surrounding cosplay. In addition, after I completed my PhD many of my research participants thanked me for providing a reflective account of their subculture, requesting copies of my thesis, and asking to be kept updated with any further publications. As cosplayers come from a range of diverse backgrounds, locking my research behind a paywall would have made my work inaccessible to many within the subculture who didn't have institutional access through a University. Plus, publishing my monograph in an open-access format could also have benefits for my professional development. Making my work free to access would help to increase its viewership, which could lead to higher research metrics.

Once I identified that I wanted to publish my work as a monograph I needed to make changes to adapt it from a thesis into a book. Whilst the aim of my thesis was to convince my viva examiners that my research was original and robust enough to be awarded a degree, I wanted my monograph to give readers an insight into the cosplay subculture and to appeal to a broader range of disciplines outside of my own. I did a literature search of similar books on cosplay to explore what set my research apart from what was on the market. I brainstormed who would be interested in my monograph, how my work could be enhanced and tailored to interested parties, and what could be added to make my work as up to date as possible. I also identified a range of undergraduate and postgraduate modules which could draw upon my work, to see the potential impact that my research could have. This process encouraged me to explore literature outside of my field of study and expand my research in ways that I hadn't considered within my PhD.

The act of converting my thesis to a monograph has been challenging so far but also rewarding. Whilst it was difficult at first to unpick a piece of work which had taken years to meticulously stitch together, doing so allowed me to present my research on my terms, without being tied to the rules and requirements of an examined thesis. Exploring the range of audiences who could find interest in my monograph has also changed the way that I think about this piece of work: seeing it evolve from an individual project to a piece of research that can be shared and situated within the wider research community.

Open Access Opens up Opportunities for Accessibility

By Dr Alice Siberry, Graduate, School of Law.

As a recent graduate with a PhD from the University of Sheffield, I have been awarded the Sheffield Thesis Publishing Prize, an opportunity for PhD graduates to develop their thesis into an open-access monograph. With the support of the White Rose University Press, the Sheffield Thesis Publishing Prize has provided me the opportunity to share and continue my research, whilst working in the consultancy field as a Specialist Criminal Justice Neurodiversity Consultant.
The topic of my research and lived experience is 'neurodiversity', which is the embodiment of accessibility. It is my personal, ethical, and moral belief that research should be made accessible and available to everyone. Having open-access sources means that I can still engage with academic research in my practitioner capacity, which I hope to share with those who have been involved in and written about in my own research.

Both in my consultancy practice and as a researcher, I spend a vast amount of time considering how to make my work more accessible and available to as wide a range of people as possible. An integral part of open-access publishing, and in keeping with principles of neuroinclusion, is digital accessibility.

As we move into a digital age, there are fewer people physically reading books. Instead, many people prefer listening to

audiobooks or engaging with audio-visual content (such as YouTube videos). Therefore, in translating my research into a digital, open-access book, I am making a conscious effort to include audio-visual elements, such as video introductions, recorded chapters, and chapter summaries. Audio accessibility

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also extends to readers who use Read Aloud software to process written words, something that can be made available through online monographs in a way that physical books cannot offer. Visual opportunities include using pictures and images to break up large chunks of text, contextualise concepts, and engage visual learners. With the success of 'easy-read' or accessible materials in some criminal justice and autism studies (Holloway, 2020, Justice Inspectorates, 2021), it seems appropriate that there are images, glossaries, and activities to encourage learning that is set apart from traditional reading styles; this is something that is enhanced in open-access formats.

I am looking forward to exploring the accessibility opportunities that are available through open-access publishing. Open-access research allows resources to be available in a range of audio-visual formats, on demand, and delivered in a way that is best suited for a range of people. With one in seven people identifying as neurodivergent, and increased recognition that people absorb knowledge in different ways, I hope that my monograph, 'Exploring Neurodiversity in British Policing', an exploration of the current landscape, language, training, and partnership working in relation to neurodiversity in policing, is user friendly and made available to anyone who accesses it.

OpenFest

Celebrating Open Research at Sheffield

OpenFest is the University of Sheffield's annual celebration and exploration of Open Research. It provides an opportunity for researchers at all levels to explore issues around Open Research, share experiences, and consider how Open Research can be applied in your discipline.

This year's OpenFest will include an online symposium, 'New Perspectives on Open Research', creating space for researchers across the UK and internationally to explore broader debates around Open Research. There will also be an in-person Sheffield Showcase (with hybrid capability) bringing together researchers from the University of Sheffield and Sheffield Hallam University to explore current practice, share ideas, and build connections. Registration is free and will open in June/July 2023—all PGR students are very welcome to participate. Details of the programme will be added to the event webpage when registration opens.

Recordings from 2022's OpenFest can be found here. Last year's event included keynote talks from Dr Jessica Butler (University of Aberdeen) and Dr Demmy Verbeke (KU Leuven), as well as discussions of OA monograph publishing, Open Educational Resources, FAIR data and software, open qualitative research, and software licensing.

Dr Monica Fratczak, Department of Sociological Studies, participated at the 2022 OpenFest, presenting on Living With Data Dataset.

"Taking part in OpenFest was an exciting experience, as it showcased the diverse world of Open Research. The event featured a mix of qualitative and quantitative presentations from various disciplines, providing a rich exploration of openness in academic research. It highlighted the potential and challenges associated with this, while also offering a valuable opportunity to learn from the innovative approaches of fellow researchers. Moreover, it allowed me to share my experiences and contribute to the broader conversation on this topic." Monica has also written a blogpost on this topic where you can read more about this project.

Dr Jacob Macdonald, Department of Urban Studies and Planning, participated at the 2022 OpenFest, presenting on Open Research in Practice.

"Bringing together researchers, teachers, and practitioners from different backgrounds is important as our work and applications become increasingly multi-disciplinary. That is why events like the University of Sheffield OpenFest are invaluable to meet with others working in open science, share ideas, and form collaborations. OpenFest has been a great catalyst for building these networks and helping me develop my own work using open data and software for spatial social science and urban studies research." You can read more about this project idea and how Jacob implemented this into his work in the following article 'The Open Research project'.

The Open Research Project

By Dr Jacob Macdonald, Lecturer in GIS/Spatial Analysis, Department of Urban Studies and Planning.

Open-science principles have inspired a fundamental shift in how we view and implement research best practice. Under these frameworks there is an emphasis on making the entire research life cycle open to support reproducibility, accessibility, further collaborations, and build off existing work. These have also been crucial for reducing barriers to research, promoting science communication, and cross-disciplinary work.

My Open Research journey began when I needed to find and develop an entire PhD project wanting to focus on data science—but without any formal funding for data collection or high-powered computer infrastructure to do so. I turned to urban open-data platforms to find extremely detailed and valuable open secondary-data sources available to use. To actually work with these resources, I used open software and libraries, learning from openly available resources and tutorials online. From this point on, where possible, I started to embed open practices into my research project lifecycle. This ultimately evolved itself into a research stream which falls across the spectrum of quantitative urban studies and GIS/spatial analysis.

At the start of any Open Research project lifecycle is developing a valid question to ask. This is made easy from the wide variety of open journals, blogs, online tutorials, and open educational resources available that can teach anyone about a given topic or research method. Consulting these sources at the start of a project, and throughout, can help you formulate a strong and contributing research hypothesis.

Open data and open software tools are invaluable resources to support the analysis stage of your research project—from building an entire analysis based on open resources, to simply including some supporting open data and descriptives to help motivate your research. As a quantitative urban studies researcher, my go-to suite of resources include municipal open-data platforms, administrative data, remotely sensed aerial imagery, demographic, and economic data—most with a spatial component and accessible. Advanced, open spatial research has progressed significantly, especially in recent years, and now it is very feasible to learn and introduce a suite of open software and methods to your work—for example R, Python, QGIS, and the collection of libraries being developed in open source by the community.

Most importantly, is to finish and follow up your own project life cycle using open principles. Make the code and data available (where non-disclosive and not secure). Write an open-source, accessible blog to be made available online. Publish in an open-source journal. And support the community back by giving proper references and citations to the open-resource data and software you've used.

The status and evolution of open science and Open Research is up to those contributing, and so there are many valuable ways to get engaged and involved. The research landscape is changing, and by adopting an open framework where possible across your project, you are supporting and building a strong community making research accessible for all.

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Open Research: A Key Area of Research Culture

Kathrine Jensen, Strategic Projects Officer, Research Services.

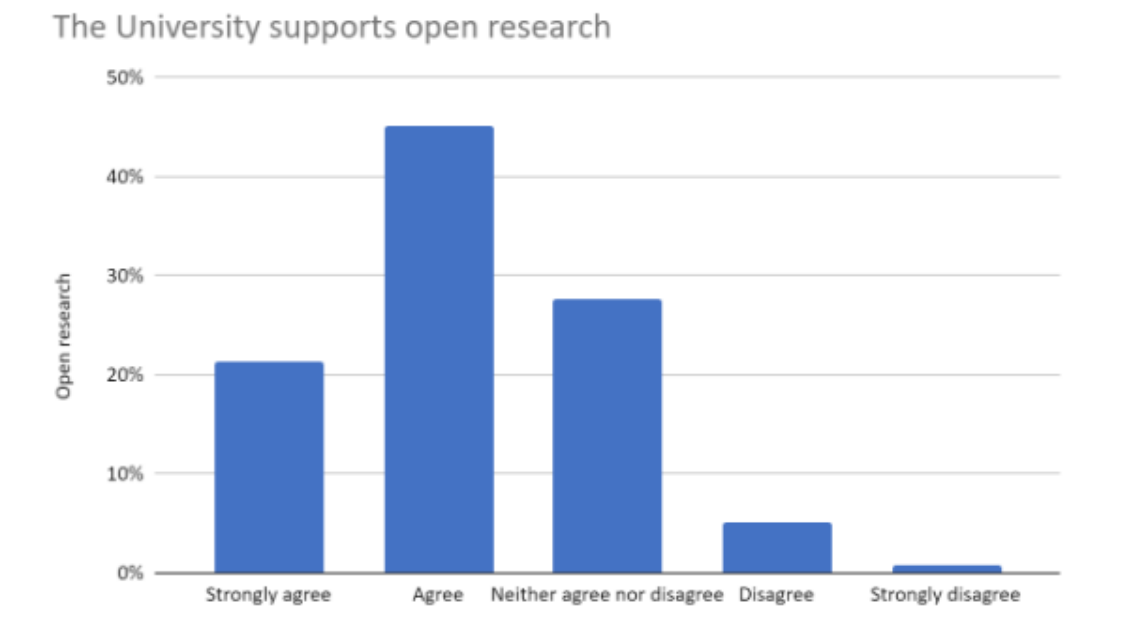
The Research Culture Survey
A survey of PGRs was designed to develop our understanding of current awareness, behaviours, and experiences in some of the areas that make up research culture. The survey went out in October 2022 for a month and had over 600 responses.

We asked PGRs how they perceived the culture at the University of Sheffield in relation to research culture areas that are central to the culture we are aiming to develop. Specifically, we asked if they agreed that the University of Sheffield supports a culture of:

- research integrity (e.g. good authorship practice, robust study design);
- open-access publication;
- Open Research (e.g. open data, pre-print publishing, making research materials or designs publicly available, or other ways of increasing transparency);
- valuing quality of publication (or output) over quantity;
- collegiality (in which colleagues support each other to succeed in research);
- collaboration across groups and disciplines.

The majority of respondents agree that the University supports all those areas of research culture with research integrity at the top with 79% of respondents agreeing. However, 21% disagree that collaboration across groups and disciplines is supported and 16% that collegiality is supported.

Chart 1: The University supports Open Research

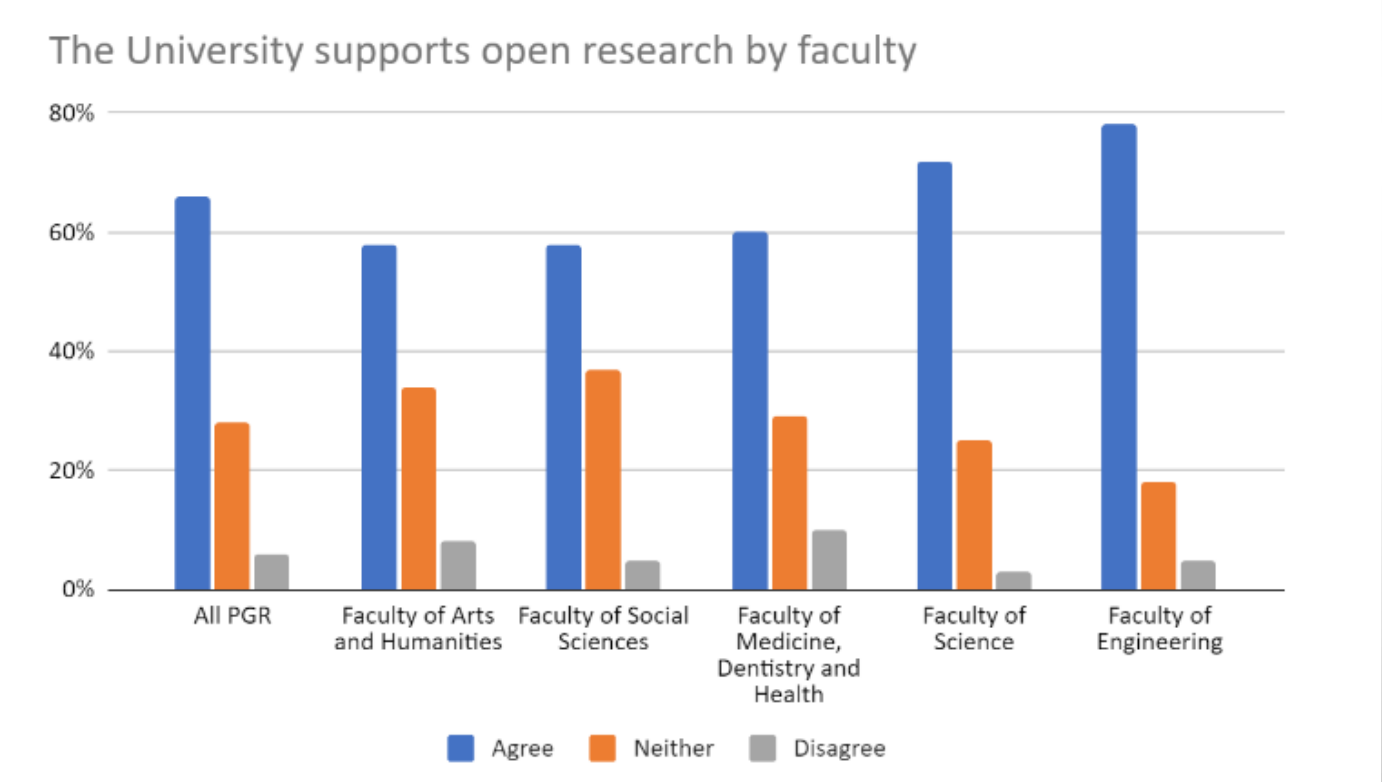


If we look specifically at Open Research (see Chart 1), 21% of respondents strongly agree and 45% agree that the University supports open access. However, almost a third (28%) neither agree nor disagree, perhaps an indication that there is more work to be done to spread awareness of the commitment to Open Research as well as the support for Open Research activities that is available.
You can read more about the Open Research training opportunities available on this web page.

If we look at the responses by faculty, there are some differences with 78% of respondents from the Faculty of Engineering agreeing compared with 58% from the Faculties of Arts and Humanities and Social Sciences (see Chart 2). Although the survey data can't tell us more about the reasons why, it is interesting to consider whether this difference in response can be attributed to differences in support for Open Research across disciplines, differences in disciplinary practices, or other reasons.

One current research-culture project is looking more closely at the challenges of Open Research practices in relation to qualitative research:
Fostering cultures of open qualitative research | iHuman | The University of Sheffield

Chart 2: The University supports Open Research by faculty



A huge thanks goes to the PGRs who took the time to contribute by sharing their experiences and ideas for how to improve the research culture at the University of Sheffield.

You can read more about research culture activities and projects at: Our research culture | Research | The University of Sheffield

UKRN Open Research

By Adam Partridge, Open Research Training Lead, University of Sheffield

What? The research landscape is evolving!

The uptake of Open Research practices is increasing. By using these practices, such as study pre-registration, sharing research materials, preprints, and publishing open access, researchers are able to demonstrate their research methods are rigorous and share the outputs of their work more effectively to create wider impact. They are also able to create and sustain wider research collaborations to share knowledge and experience across disciplinary silos. Beyond these benefits for individual researchers, there are also benefits for wider society. Research outputs like study protocols or datasets that are licensed for reuse can be built upon, visualised, and understood by others. Open-access publishing of books and research articles leads to more people being able to read them and less public money ending up as publisher profit. While you don't have to be an Open Research activist to reap the benefits, it is clear why many researchers who use Open Research practices are proud of their efforts and keen to shout about it!

However, realising the benefits of Open Research practices does require researchers to learn new skills. In turn, it also requires research institutions and the wider research ecosystem to adapt, for example, to provide

new training for researchers. One project aiming to address this is the UK Reproducibility Network's (UKRN) Open Research Programme. The UKRN is a peer-led consortium that aims to ensure the UK research system is outstanding in conducting and promoting rigorous and transparent research.

In July 2021, the UKRN was awarded £4.5 million by Research England (with an additional £4 million in-kind contribution from partners) to deliver a national programme focused on embedding Open Research practices across UKRN partner institutions and, ultimately, the wider sector. The programme is currently in its second year (of five) and is composed of three parallel workstreams, each focusing on a distinct area: training, evaluation, and sharing best practice.

The training workstream, which is currently being led by the University of Sheffield, is working with institutions and international experts in Open Research training to develop and deliver train-the-trainer events focusing on Open Research topics. Through the programme, University of Sheffield researchers and professional-services staff have access to these train-the-trainer events, an exclusive accreditation and ongoing support to develop and deliver their own training. This cascading model aims to accelerate the uptake of high-quality Open Research practices. You can read a report that summarises findings from scoping activities undertaken during year one of the programme here.

The evaluation workstream is working to survey the current state of Open Research practices and how this changes over the course of the programme. It is also working with institutions to develop Open Research indicators. Finally, it is also looking at improving systems of reward and recognition, such as hiring and promotion policies, to ensure researchers who engage with Open Research are adequately supported.

The final workstream is focused on sharing best practice between UKRN institutions and the wider public. This has resulted in the creation of useful resources, such as the institutional pages on the UKRN website, aggregating Open Research policies and other information in a central place, for easier sharing.

There will be many opportunities for early-career researchers to get involved with the programme. For example, the first train-the-trainer events are taking place in June 2023 and newly developed training events will start to be delivered shortly after that. All training opportunities will be shared on the Open Research Working Group mailing list and with relevant groups across the University. We understand that Open Research practices can be more or less common across disciplinary boundaries and our goal at Sheffield is to work with researchers in all disciplines to develop what Open Research means in their context.

Look out for these opportunities on the Open Research Working Group mailing list and don't hesitate to contact me for more info!

Adam Partridge: email a.partridge@sheffield.ac.uk for more info!

Open Research Working Group

By Dr Jim Uttley, Co-leader of the Open Research Working Group.

Getting involved with the Open Research community at Sheffield

At Sheffield we are committed to supporting Open Research. A key characteristic of the Open Research movement is the sense of community it engenders. It began through groups of like-minded people getting together to discuss issues related to research that concerned or enthused them. This idea of an Open Research 'community' is reflected here at Sheffield as there are various places where you can engage with others who have an interest in Open Research, or get support when trying to apply open practices in your work. The Open Research Working Group (ORWG) is a network of people at the University of Sheffield who have an interest in Open Research. It is a way to disseminate information related to Open Research such as events and activities, training, or policy. It is also a forum to discuss ideas, proposals, and generally muse about Open Research and scholarship. Anyone who works or studies at the University of Sheffield can join the ORWG here. You can also visit the ORWG's webpages.

The ORWG holds monthly drop-in sessions. Anyone can come along to these if they want to discuss a topic related to Open Research, get some help in applying Open Research practices in their work, or are just curious about what this whole 'Open Research' thing is about. The drop-in sessions are held in the Students' Union View Meeting Room 6 on the last Tuesday of each month.

Another strand of the Open Research community here at Sheffield is the ReproducibiliTea (ReproTea) journal club. ReproTea aims to build a community of people interested in Open Research, particularly amongst PGR students and early -career researchers. Topics discussed at ReproTea vary from session to session and do not always involve discussion of a specific journal article like more traditional journal clubs. No specialist knowledge is required and all staff and students are welcome. You can join the ReproTea mailing list here: https://groups.google.com/a/sheffield.ac.uk/g/reproducibilitea. ReproTea meetings are currently paused but will resume again in September.

If you would like to know more about the ways you can get involved with the Open Research community at Sheffield or are just curious to know more about what Open Research is, sign up to the ORWG mailing list, come along to an ORWG drop-in session, or contact one of the ORWG co-leads (Jim Uttley, j.uttley@sheffield.ac.uk, Claudia von Bastian, c.c.vonbastian@sheffield.ac.uk).

Support for Open Research from the University Library

By Dr Jenni Adams, Open Research Manager for the University Library.

The University offers a range of support to researchers interested in adopting Open Research practices. In addition to the services detailed on the University's main Open Research webpages, specific support is available from the Library:

Support for open-access publishing

Guidance on open-access publishing can be found on the Library webpages. You can find details about different types of open access, University and funder policies around OA, and how we support researchers to comply with these. We also provide information on how you can apply to our Institutional Open Access Fund in instances where you do not have funds to cover the cost of publishing open access, and how to deposit your publications and thesis in our White Rose repositories.

Support for (open) research data management

The University Library offers a range of support and advice on data-management planning and research data management, which are central to ensuring you can adopt Open Research practices such as sharing your data or code via a repository. A great starting point is the Library's RDM hub page: https://www.sheffield.ac.uk/library/research-data-management. As detailed below, we offer a range of training that PGR students will find beneficial in planning ways to most effectively manage your research data.

Training and advice

Open Research training is available in a range of areas including copyright and open access, writing a data management plan (DMP), introduction to Open Research, and digital research data management. Researchers at any level can also book a one-to-one advice session. Details can be found on this page: https://www.sheffield.ac.uk/library/research-data-management/training, and also on the University's Open Research Training Portal, which provides details of Open Research training available across the University more widely.