

Open Scholarship¹ at Oxford Case Studies



The University of Oxford strategy 2018-23² includes two priorities that highlight the University's commitment to open scholarship

- Priority 9: Invest substantially in the research environment, both human and physical (including the estate, libraries, collections, equipment and IT) by 2023.
- Priority 20: 'Continued investment in digital tools and infrastructure to be a leader in open scholarship and support open access to collections and research data outputs.'

To be successful in fulfilling these priorities, change is required across the Collegiate University, for example in research methods, dissemination channels, support tools and services, but most notably in the research culture of the institution.

Open Science opens up new ways in which research/education/innovation are undertaken, archived and curated, and disseminated across the globe. Open Science is not about dogma per se; it is about greater efficiency and productivity, more transparency and a better response to interdisciplinary research needs. All this can have a profound impact on universities because, to deliver Open Science, both universities and university researchers should develop new perspectives. To embrace Open Science, universities and researchers need to embrace cultural change in the way they work, plan and operate. The result will infuse a culture of Open Science throughout the academic organisation and may support other evolutions in academic practice, such as the use of next-generation metrics in the evaluation of research output

Open science and its role in universities: a roadmap for cultural change. LERU (League of European Research Universities) Advice paper No 24, May 2018. Available at <https://www.leru.org/publications/open-science-and-its-role-in-universities-a-roadmap-for-cultural-change>

Although there is much to be done to engender open scholarship amongst Oxford researchers, there are a number of researchers already working in ways that typify open scholarship. Four varied case studies are described below that are exemplars of good practice and activity already in evidence at the University of Oxford with respect to open scholarship.

1. I-Sicily (Inscriptions of Sicily)
2. PCI (Peer Community In)
3. PERL (Psychopharmacology & Emotion Research Laboratory)
4. Young Lives

A description is given of how each activity addresses openness and working in an open scholarship environment. Each includes a brief assessment by the Project Lead of, in their opinion, the benefits and drawbacks of the open approaches they have taken.

The approach taken uses headings created by Kramer & Bosman in their *Rainbow of open science practices* (see Appendix 1).



Bodleian Libraries
UNIVERSITY OF OXFORD

Sally Rumsey
Head of Scholarly Communications & RDM
The Bodleian Libraries
24th July 2019

¹ The term 'Open Scholarship' is interchangeable with the terms 'Open Science' and 'Open Research.' 'Open Science' is common international terminology using 'science' with its meaning of "knowledge or understanding acquired by study; acquaintance with or mastery of any branch of learning" or "a particular area of knowledge or study; a recognized branch of learning" [OED], and which includes social sciences and humanities as well as 'the sciences.' The University of Oxford has adopted the term 'Open Scholarship' within its Strategic Plan 2018 – 2023, which is the reason this term has been selected for the title of this paper.

² <http://www.ox.ac.uk/about/organisation/strategic-plan-2018-23>

Background and executive summary

These case studies were created at the request of the Oxford Research Information Management and Technology Sub-committee of the Research and Innovation Committee (RIMTS).

Background

In talking to researchers it was clear there are many open scholarship activities underway around the University. Discovery of such existing activities prompted the Bodleian to hold an Open Scholarship Workshop in November 2018. The aim of the workshop was to explore how the Bodleian Libraries might plan to support Open Scholarship, which forms one of the University's strategic priorities³. The wide ranging and valuable discussion resulted in a long list of ideas and suggestions for support. The Bodleian Libraries are currently focusing on actions that emerged from the workshop including:

- Working with Oxford Reproducible Research Group <https://rroxford.github.io/> and Research Services on provision of an Open Scholarship website to complement the OA Oxford and Research Data Oxford sites
- The Bodleian Libraries are collaborating with the Oxford Reproducible Research Group on an Open Scholarship conference – initially this takes the form of collaboration for the Oxford-Berlin conference in September 2019.

Oxford Open Scholarship Case Studies summaries

1. The four groups or individuals who contributed to the case studies were chosen so that there is representation from each of the four academic divisions
2. Each presents a different perspective on open scholarship, which combined, provides a more comprehensive world view on the topic.

Prof Jonathan Prag is a member of RIMTS and kindly volunteered his iSicily research to be a case study. The project presents some interesting challenges in data description and citation and of working within cultural heritage abroad. A key message is that the open approach has encouraged collaboration and made it easier.

I discovered the PCI project via a colleague at the Sorbonne, and was directed to Prof Tim Coulson here at Oxford. This service runs peer-review on top of works disseminated via pre-print servers and is an example of a type of innovation that has the potential to disrupt traditional publication models. Authors appear to appreciate the open dialogue with recommenders.

The PERL researchers have a broad open approach that underpins their research workflows. This is related to the approach taken by the WIN (Wellcome Institute for Neuroscience) which is a model that could be adopted by other groups. The list of benefits of the open approach includes benefits to patients, for good science, and adding a competitive edge to their research and skills base.

The drivers for Young Lives going open includes access to outputs from researchers distributed across many countries and with minimal access to publications. The open approach enables them the project to communicate widely, supported by communications grant.

The main findings from the case studies are:

- The variety of approaches and tools in use
- The innovation on the part of these research projects in adopting openness
- The projects offer practical examples of HOW to DO open scholarship
- That the University can learn from these excellent exemplars in order to promote the benefits and support open scholarship wider

With thanks to all those who participated and gave so generously of their time.

Sally Rumsey, The Bodleian Libraries, July 2019

³ University of Oxford strategic Plan 2018 – 23 <http://www.ox.ac.uk/about/organisation/strategic-plan-2018-23>

I-Sicily (Inscriptions of Sicily): CASE STUDY 1

Project overview

I.Sicily is a project to make freely available in digital form the complete corpus of inscriptions from ancient Sicily, in all languages across all of antiquity. The aim



is to create a unified and up-to-date corpus, across all languages, with translations, images and detailed object records.

- Project lead: Professor Jonathan Prag, Faculty of Classics
- Project website: <http://sicily.classics.ox.ac.uk/>

Open Approach

One of the aims of the project is “to make a continually improving body of data available for the study of the epigraphy of Sicily, whether through collaboration within the project, or through the export and re-use of the available data.”

Analysis

- Research data are openly shared via the project website; and in GitHub repository: <https://github.com/JonPrag/ISicily>; and in Zenodo (DOI: 10.5281/zenodo.2556744).
- Research data are available in standard formats: XML; CSV of metadata; PDF
- Publications metadata are available in Zotero
- The XML TEI files are curated in the parallel GitHub repository prior to being pushed to the Faculty maintained web front end. <https://github.com/JonPrag/ISicily>

Writing

- TEI-XML mark-up
- Contributions to the corpus requires contact with PI and registration: but NB this is now possible also in GitHub, so you can reuse and exploit all the XML freely via GitHub, and contributions can be done through GitHub also and a simple pull request.

Publication approach

A bibliography of publications related to the project is listed on the I-Sicily publications database <http://sicily.classics.ox.ac.uk/publications> including publications about the inscriptions published prior to the I-Sicily project. Links to records are on Zotero.

- No overall policy for open access to publications. Some publications OA. Related publications are subject to a range of different policies, depending on how and when they were produced. All items cannot be made directly available, although ‘Green’ OA is possible for everything in principle through ORA (requires time to deposit older material). <https://isicily.wordpress.com/presentations-and-publications/>
- Rights & licensing: Publications
 - No policy to retain copyright (although release under CC-BY licence)
- Rights & licensing: Database and data
 - Licence: CC-BY I.Sicily is licensed under a Creative Commons Attribution 4.0 International License (and shortly also the Italian equivalent: <https://www.dati.gov.it/content/italian-open-data-license-v20>)
 - All data in I.Sicily is available for download and re-use under a [CC-BY 4.0 licence](#) – in other words, free use, but please give appropriate credit, provide a link to the license, and [indicate if changes were made](#). You may do so in any reasonable manner, but not in any way that suggests that *I.Sicily* endorses you or your use.
 - The project is in the process of adding a versioned copy of all XML files in Zenodo under a DOI [not yet live], which will provide an archive of all previous versions for citation and retrieval.

- Rights & licensing: Software is 100% open source, governed by various copyrights and licenses. Consult [the individual packages](#) for details.
- In the first instance, the intended audience is scholars working on ancient Sicily and Sicilian heritage institutions (especially museums), but the audience and the aims are broadening steadily, to include collaborating with local museums, schools and others, and inclusion of, for example, Italian translations. This together with the free re-use of the data is intended to make it of value to a much wider audience.

Outreach

- Website <http://sicily.classics.ox.ac.uk>
- Blog <https://isicily.org/>
- Twitter @Sicilyepigraphy
- Facebook <https://www.facebook.com/ISicily/>
- Some outputs such as posters made open access to download via the project website. No policy for open access to outputs (see above). <https://isicily.org/presentations-and-publications/>

Search & discovery

- The data in I.Sicily can be searched in many different ways (see <https://isicily.org/how-to/> for guidance). The main set of search tools can be found on the inscriptions page, but it is also possible to explore the data via museum collections or existing publications. For guidance on how to cite I.Sicily see <https://isicily.org/how-to/#cite>.
- Search via map with clickable links
- Shared reference library of publications in Zotero

Assessment, Metrics and impact

Currently basic use of Google analytics.

Comments from Prof Jonathan Prag:

Cost

- Funding from University of Oxford and hosting by Oxford's Faculty of Classics
- Costs may have been saved by the use of open source software. Likewise, avoiding publishers and other bodies, and working through GitHub, etc., surely makes things cheaper. I'm not otherwise aware of obvious cost-savings. The use of basic software and data standards and a distributed approach has reduced sustainability costs (because enables use of free tools such as GitHub, etc.).

Benefits of an open approach

The benefits of the open approach the project has adopted are that it encourages collaboration, and makes it easier too. Sicilian museums are traditionally protective of their collections and have tightly controlled access, but the museums lack the resources to study their collections or to improve access; because I.Sicily generates free catalogues of the individual collections and makes virtual access possible, this has rapidly encouraged collaboration and increased openness on the part of collections for whom this is a strongly desirable resource. Overall, it has undoubtedly facilitated engagement from the data curators.

Drawbacks of open approach

The difficulties of the approach taken are mostly the lack of understanding of how to approach open data within the discipline, and how it works. Other supposedly 'open' projects working on the same data in parallel are, in reality, not fully open (often for historical reasons, constructed in older software environments), and do not therefore fully reciprocate the open approach. More broadly, the failure of the discipline so far to embrace digital publication and to treat it on a par with traditional paper publication in general is limiting the impact to date. But these are not serious drawbacks.

Is there anything you would like to change to make the research more or less open?

Ensuring open access to the underlying material remains challenging, as cultural heritage administration in Sicily is still very bureaucratic and relatively restrictive; permits are required at almost every step. Much

more broadly, open data would be much easier if the citation mechanisms were better understood, and in particular if the mechanisms were more robust to ensure that intellectual credit could be passed along with the data more easily and in more standardised form (so free and open data, but proper attribution and acknowledgement retained in re-use, as per the ideal of a CC-BY licence or equivalent).

Peer Community In Ecology (PCI Ecology): CASE STUDY 2

Project overview

The “Peer Community in” (PCI) is a non-profit scientific organization that aims to create specific communities of researchers reviewing and recommending, for free, unpublished preprints in their field (i.e. unpublished articles deposited on open online archives like arXiv.org and bioRxiv.org). These specific communities are entitled *Peer Community in X*, e.g. [Peer Community in Evolutionary Biology](#) (PCI Evol Biol), [Peer Community in Ecology](#) (PCI Ecol), *Peer Community in Computational Statistics* (PCI Comp Stat), and [Peer Community in Paleontology](#) (PCI Paleo).



Peer Community in Ecology (PCI Ecology) launched in December 2017. It is a community of recommenders playing the role of editors who recommend unpublished preprints based on peer-reviews to make them complete, reliable and citable articles, without the need for publication in ‘traditional’ journals. Evaluation and recommendation by PCI Ecology are free of charge. When a recommender decides to recommend a preprint, he/she writes a recommendation text that is published along with all the editorial correspondence (reviews, recommender’s decisions, authors’ replies) by PCI Ecology. The preprint itself is not published by PCI Ecology; it remains in the preprint server where it has been posted by the authors. PCI Ecology recommenders can also recommend, but to a lesser extent, postprints.

- Oxford member of PCI Ecology Managing Board: Professor Tim Coulson, Department of Zoology
- Project website: <https://peercommunityin.org/>

Open Approach

The aim of PCI is to offer scientists a free, stimulating, transparent and non-exclusive way to validate and promote their scientific output, by removing this monopoly from journals. PCIs publicly highlight and recommend high-quality preprints. The preprints recommended by PCIs are complete articles of high value, that are reliable and citable without the need for publication in traditional journals. PCI wants to promote scientific repeatability to improve the overall robustness and integrity of our scientific conclusions.

Analysis

- **Recommendations and peer-reviews are deposited** in [HAL open archive](https://hal.archives-ouvertes.fr/search/index/?qa%5BjournalPublisher_t%5D%5B%5D=peer+community+in). (https://hal.archives-ouvertes.fr/search/index/?qa%5BjournalPublisher_t%5D%5B%5D=peer+community+in)
- **PCI encourages authors to use preregistrations:** Authors may post their research questions and analysis plan to an independent registry before observing the research outcomes, and thus before writing and submitting their article. This provides a way for them to clarify their hypotheses, avoid confusing “postdictions” and predictions, and carefully plan appropriate statistical treatment of the data (eg see [10.1073/pnas.1708274114](https://doi.org/10.1073/pnas.1708274114)).
- **PCI welcomes submissions of preregistrations.** Authors can submit their preregistrations to a PCI before beginning their study, and thus before acquiring the data. Preregistrations are then evaluated by recommenders based on independent reviews, in exactly the same way as preprint articles. Preregistrations can thus be rejected or undergo revisions, improving the quality and robustness of the experimental design. When a preregistration is accepted, the subsequent article submitted to the corresponding PCI would be recommended provided the study has been conducted as described in the preregistration (or with any modifications clearly justified). In this way, an article cannot be rejected due to the outcome of the study only.

Publication approach

- All information leading to the recommendation of an article is made public: the name of the recommender responsible for recommending the article, his/her editorial decisions and recommendation text, the reviews and suggested corrections and the authors’ replies are available

from the PCI X website, and the consecutive versions of the preprint are deposited in open archives. Only the name of the additional reviewers may be withheld.

- The recommendation has its own title, contains between about 300 and 1500 words, describes the context, contains references (a reference to the preprint recommended at the very least) and explains why the preprint is particularly interesting. The limitations of the preprint may also be discussed. Once validated by the Managing Board, the “recommendation” and all the editorial correspondence (reviews, your decisions, authors’ replies) are then published by PCI X. The recommendation text, signed by two recommenders, provides a link to the DOI of the article and is published. See for example <https://ecology.peercommunityin.org/public/rec?id=7&reviews=True>
- Comments/reviews for rejected papers are not made publicly available
- When a pre-print has been recommended the recommendation can be cited
- No editing (formatting) of the articles is carried out and articles are recommended without modification of their format. Unpublished versions of recommended preprint deposited in an open archive are not edited. PCI X ask only that the authors of recommended preprints add a cover page to their preprint, together with a sentence at the beginning of their abstract or in the acknowledgements stating that their preprint has been recommended by PCI X
- Pre-prints (eg in BioArXiv) link to PCI Ecology recommendation. See for example <https://www.biorxiv.org/content/10.1101/324178v5>.
- The intended audience is primarily academics, although the paper, peer reviews and authors response are freely available to all.

Outreach

- Website <https://ecology.peercommunityin.org/>
- Blog (as website) <https://peercommunityin.org/>
- Twitter [@PCI_Ecology](https://twitter.com/PCI_Ecology) and [@PeerCommunityIn](https://twitter.com/PeerCommunityIn)

Assessment, Metrics and impact

Recommendations display almetric donuts

Comments from Prof Tim Coulson:

Cost

- Supporters include a number of scientific societies, journals, research institutions, and laboratories. See <https://peercommunityin.org/who-supports-peer-community-in/>
- The cost has mainly been in the time input by academics within CNRS and recommenders.

Benefits of open approach

The benefits of the open approach adopted by the project are it is transparent, straightforward, and fair. It should reduce the number of peer reviews an article receives.

Drawbacks of open approach

I think that even papers that are not recommended should be made available with the reviews and the authors’ comments. This is valuable work that the academic community could benefit from.

Is there anything you would like to change to make PCI Ecology research items more open?

It would benefit from a larger community of peer reviewers and recommenders.

Oxford colleagues who are editors/recommenders for PCI:

Katrina LYTHGOE, Big Data Institute

Roger BENSON, Department of Earth Sciences

Donald DAVESNE, Department of Earth Sciences

Erin SAUPE, Department of Earth Sciences

Tim COULSON, Department of Zoology

Sunetra GUPTA, Dept of Zoology

Christophe FRASER, Nuffield Department of Medicine, The Big Data Institute

Alexandra ALVERGNE, School of Anthropology and Museum Ethnography

PERL (Psychopharmacology & Emotion Research Laboratory): CASE STUDY 3

Project overview

The PERL explores how the brain processes emotional information and how this is influenced by brain chemicals and medicines. This helps researchers to understand disorders such as depression and anxiety and to understand and contribute to the development of drug and psychological treatments.



- Project lead: Professor Catherine Harmer, Professor of Cognitive Neuroscience, Dept of Psychiatry (contact: Dr Cassandra Gould van Praag)
- Project websites: <https://www.psych.ox.ac.uk/research/psychopharmacology-and-emotion-research-laboratory>
 - <https://www.perloxford.org/>
 - <https://oxfordhealthbrc.nihr.ac.uk/research/clinical-research-infrastructure-and-experimental-medicine/>

Open Approach

- The Wellcome Centre for Integrative Neuroimaging WIN (<https://www.win.ox.ac.uk/>) of which the PERL is a part, does not have a local policy on OA publication other than the requirements of funders. The lab's research is funded by MRC and the BRC (Oxford Health Biomedical Research Centre) is funded by NIHR, both of which have OA publication policies. See Appendix 2 For details of WIN Open Neuroimaging
- Much of the lead in open neuroscience comes from North America, e.g. Poldrack Lab at Stanford Centre for Reproducible Neuroscience (as confirmed through interview with WIN group leaders: <https://git.fmrib.ox.ac.uk/open-science/Documentation/wikis/home>). There is room for Oxford to have a significant impact as a UK driving force.
- The director of PERL is supportive to moving forward with respect to increasing openness. This includes permission to spend time curating metadata in line with best practice.
- The WIN has a commitment from the outset for 'open neuroimaging' (Theme 5 <https://www.win.ox.ac.uk/about/themes>). "One of the key themes of WIN is to increase the openness of our data, to be a leader in the way that data is shared, and importantly, in how tools (such as the FMrib Software Library), pipelines and databases can be used to ensure that the data shared is useful to other researchers... All members of the WIN management board are committed to sharing their data openly by the end of the 5 year project, and all Centre members are encouraged to do so."
- The Centre employs a Public Engagement Ambassador in each lab <https://www.win.ox.ac.uk/for-the-public/engaging-with-the-public> and is developing a role of Open Scholarship Ambassador for each lab, who will be trained to support colleagues to work in an open way.
- A key organization for researchers, the Organization for Human Brain Mapping (OHBM), an international society dedicated to using neuroimaging to discover the organization of the human brain, is taking an open policy stance, and has an Open Science Special Interest Group whose mission is to advance neuroimaging research by fostering the open sharing of ideas, data, and tools between members of the OHBM community. (<https://www.humanbrainmapping.org/i4a/pages/index.cfm?pageid=3712>).
 - The society has published its Committee on Best Practice in Data Analysis and Sharing (COBIDAS) report in an attempt to advance open science in neuroimaging. (<http://www.humanbrainmapping.org/files/2016/COBIDASreport.pdf>).
 - A new publishing platform, Aperture, is due to be release by the society and which is described as 'A new initiative to develop an open publishing platform by and for the OHBM

community.’ See <https://www.ohbmbrianmappingblog.com/blog/announcing-aperture-the-ohbm-publishing-platform>. This platform will include the facility for open peer review, support reproducibility and dynamic publication.

- PERL and BRC Experimental Medicine researchers are following COBIDAS recommendations which provide evidence of good practice for reporting to funder NIHR

Analysis

- The degree of openness of research data is limited by data protection and ethics regulations because much of the data gathered by researchers comprises sensitive personal information. For example, a brain scan cannot be released without permission even if the data have been anonymized. The WIN is due to develop infrastructure and publish advice on permitted openness: at the time of writing release of summary data within figures in papers is allowed, however raw data and other data may not be released. Researchers often initially reserve data under privileged access until they have published at least one paper based on the data. Reasonable requests for access to data may be treated on a case by case basis e.g. for collaboration. For the time being, researchers are being cautious with own data until clearer guidelines have emerged.
- The BRC aims to support its researchers by giving people the skills to empower themselves to make their research transparent and reproducible. Much of this initiative involves understanding programming and sharing code packages. The group is currently using tools with licences that results in the content being locked up, so a decision has been taken to move towards Python and open source software where possible in future. The group is currently reprogramming experimental tasks and stimuli into an open form (PsychoPy, an open-source application allowing you run a wide range of neuroscience, psychology and psychophysics experiments). Tasks will be released with DOI (using Zenodo or OSF) alongside an empirical research publication, so the software will become a documented and attributable research output.
- Training events have taken place involving the use of GitLab, programming in python and bash, using electronic lab notebooks (LabArchives) and working within the guidance of the Brain Imaging Data Structure (<http://bids.neuroimaging.io>) standards for image file naming and metadata. Further training is scheduled for document version control using the Open Science Framework (<https://osf.io>)
- Experiments are routinely preregistered on clinicaltrials.gov as a required by many journals in this field (e.g. <https://uk.sagepub.com/en-gb/eur/journal/journal-psychopharmacology#submission-guidelines> “The Journal of Psychopharmacology conforms to the ICMJE requirement that clinical trials are registered in a WHO-approved public trials registry at or before the time of first patient enrolment as a condition of consideration for publication.”). The group is in the process of preparing materials for more complete pre-registrations (e.g. full statistical analysis plans) via OSF.
- WIN is building a local data repository for sharing images
- PERL is collecting metadata about the tools, analysis methods and settings in use so details can be reported well.

Publication approach

- Articles are published OA in compliance with funders’ requirements, however there is no local policy requiring open access to publications.
- MIT licences may be applied to software when their use has been approved by OUI and by the Head of Academic Department (<https://researchsupport.admin.ox.ac.uk/reporting/openaccess#collapse393821>).
- Open peer review: See Aperture platform above
- Dissemination is aimed at patients and the general public as well as other researchers.
- Innovative dissemination tools?

Outreach

- There is a strong focus on returning information to patients. Experiments are designed with patients in mind and to ensure their needs are accommodated eg transport, how questions are

phrased. In March 2019 Dr Jessica Scaife of PERL won a departmental award for public patient involvement and science communication

- Websites <http://www.perloxford.org> and <https://www.psych.ox.ac.uk/research/psychopharmacology-and-emotion-research-laboratory>
- Twitter <https://twitter.com/oxfordperl>
- Facebook <https://www.facebook.com/PERL.Oxford/>
- Active public engagement programme as part of WIN <https://www.win.ox.ac.uk/for-the-public/engaging-with-the-public>

Search & discovery

- See metadata above.

Assessment, Metrics and impact

- PERL works with pharmaceutical companies to ensure that trials are pre-specified. PERL published the first study (to their knowledge) that locked down and pre-registered fMRI analysis pre-blinding. This information was used alongside other results to modify the 'label' (Summary of Product Characteristics) for the antidepressant vortioxetine by the European Medicines Agency to include cognitive impairment (Smith et al., 2018 [Mol Psychiatry](#). 2018 May;23(5):1127-1133)

Cost

- Funding is provided by MRC and NIHR
- Funding can be used to cover costs of some publications, plus contributions towards training of open scholarship focussed staff such as ambassadors and open scholarship facilitators. BRC contribute towards this, with main funding from (Wellcome Trust funded) WIN.

Benefits of open approach

- Enables contribution to the field of research in the best way for the benefit of patients
- Allows the best science to be undertaken in most efficient and effective way
- The tools and processes that have been put in place are now being used to train the next group of researchers in making open scholarship normal practice.
- Adds an additional competitive edge to the group who can spread their research wider
- The skills needed to openly put individuals at a competitive edge because such skills are increasingly being recognised as valuable on a personal CV.

Drawbacks of open approach

- Although pre-registration should be the norm, researchers are worried about spending precious time on peer review of methods when involved with a short project. There is a risk the project will not be completed before the grant runs out and the researcher leaves. Better ways to work pre-registration into the grant lifecycle would be valuable.
- Learning new skills when using new tools requires time investment. There is a temptation to muddle along ad hoc not using best practice rather than spending the time required to learn new skills. The result would therefore be that some of the reproducibility is lost.

Is there anything you would like to change to make the research more or less open?

- A restricted instance of OSF (Open Science Framework) has been set up for depositing all documents around reproducibility, for example, parameters of how data were recorded.
- WIN Open Scholarship working group may benefit from support in finding managing communications
- Additional freely available information and advice for all members of the group and other external researchers about working in an open research environment and how to successfully promote openness by individuals would be beneficial.

Young Lives: CASE STUDY 4

Project overview

Young Lives is an international study of childhood poverty following the lives of 12,000 children in Ethiopia, India (in the states of Andhra Pradesh and Telangana), Peru and Vietnam over 15 years. Its aim is to shed light on the drivers and impacts of child poverty, and generate evidence to help policymakers design programmes that make a real difference to poor children and their families.



- Project lead: Prof Jo Boyden, Department of International Development
- Project website: <http://www.younglives.org.uk>

Open Approach

The project donors require that outputs are open and in the most accessible format so they are available to non-academic users, as well as policy makers and users in non-English speaking countries. The project needs to engage directly with policy makers to guarantee research uptake and impact and to ensure that the data are available to and understood and used by external users as well as Young Lives staff, thereby maximising the study's reach. Young Lives is governed by a logframe, in which outreach to non-academic audiences, for example governments, civil society organisations, policy-makers, practitioners and child advocates, is a central objective and one of the three key study outputs. Young Lives has developed a theory of change to drive the study's efforts to increase outreach and impact beyond the academic community. Rigorous policy relevant research disseminated widely through OA and other means is a second output and high-quality data archived publically for OA is the third. Young Lives' performance on these outputs is monitored annually by the study's donors using a set of agreed indicators and if appropriate, the resulting reviews include recommendations for improvement on OA and other criteria. Indicators include the numbers of publications by study country partners, the number of external researchers using the data and other targets explicitly related to OA, policy engagement and outreach.

Theory of change <http://www.younglives.org.uk/content/young-lives-theory-change>

Data, methods and research <http://www.younglives.org.uk/content/data-research>

Research methods <http://www.younglives.org.uk/content/our-research-methods>

<http://www.younglives.org.uk/content/our-research-methods>

Data links - <http://www.younglives.org.uk/content/school-survey>

Analysis

The research comprises a longitudinal data survey and longitudinal qualitative research. The donors require data are made freely available for the public good, however, no qualitative data is in the public domain because it is sensitive as individuals, their households and communities could be identified. The project follows the principle of 'Open as far as possible, as closed as necessary.' The Research Team is able to match Young Lives data with other data sets, thus enhancing the power of the findings, but because data matching requires use of personal data such as names, addresses and GPS locations that would reveal respondents' identities, external researchers are not able to use this procedure. In recognition of the contribution made by project staff and partners in the UK and study countries to survey design, data gathering and data management, Young Lives delays public archiving of data for a period to allow them exclusive access for analysis. Data that can be made openly available are deposited with the UKDS and are OA so anyone can access these sets by clicking the link and completing the form.

Protocols for research policy are freely available including details of the research methods employed such as research questions, technical notes, ethics and survey design. Such documents contribute to the community of practice.

ESRC is funding a 2-year methodological learning project to allow Young Lives to share its experience of conducting 15 years of comparative mixed-methods longitudinal research in low- and middle-income

countries with people interested in setting up similar research programmes. The project is aligned with the ESRC's aim of building a community of practice around longitudinal research and will use interactive methods such as blogs, webinars and podcasts to facilitate engagement with researchers and policy makers globally.

Publication approach

The audience for YL publications is broad. As well as other researchers, it includes policy makers and the general public, both in the UK and in other countries. The publication list extends to over 800 publications.

The project donors require that outputs are open and in the most accessible format. All results are published. Reports, working papers and summative outputs as well as data visualisations, infographics and other types of work are all made freely available via the YL website, and many works including AAMs are deposited and made available via the University's institutional repository (ORA). Self-published materials are peer-reviewed.

Licences are not currently habitually assigned to publications and data. This matter may be a subject for future consideration.

The project published a book, *Tracing the Consequences of Child Poverty*, with Policy Press that is available in print for a charge, and also freely available OA under CC-BY-NC licence via OAPEN.

<https://policy.bristoluniversitypress.co.uk/tracing-the-consequences-of-child-poverty>. The charge for OA publication was £7,500.

The YL Working paper series uses light touch peer review. The working papers enable the group to disseminate their research findings quickly, whilst ensuring they publicly register and certify their findings. Medical journals prohibit prior OA publication, whether as working papers or in other formats.

Outreach

There is a significant budget within the project grant for project communications – probably more than most projects, across all countries.

- Website <http://www.younglives.org.uk>
- Additional websites in study countries – sometimes in local languages. Local communications officers populate the sites
- Blog <http://www.younglives.org.uk/content/young-lives-blog>
- Twitter [@yloxford](https://twitter.com/yloxford)
- Facebook <https://www.facebook.com/YoungLivesStudy/>
- YouTube channel <https://www.youtube.com/channel/UCsZkpcrroOVnzNG2X3Iijg>
- Flickr <https://www.flickr.com/people/134030298@N05/>
- LinkedIn <https://www.linkedin.com/company/younglivesstudy/>
- Newsletter <http://www.younglives.org.uk/node/8117>

With the aim of building capacity and increasing OA, a data visualization tool has been implemented on the website to enable anyone to manipulate the data. This tool also helps people to see the possible uses of the data and shows how to use them. It therefore has a role as a training tool.

Data visualizations <https://www.younglives.org.uk/content/young-lives-data-visualizations-guide>

The raw data, visualization and archive data have tools and documents to support people using the data, for example, to explain why a particular question has been asked as part of the research.

Search & discovery

- The group would welcome Post publication Commenting tools, but does not have the budget to support such a specific service on their own websites. Instead, the team relies on social media services to enable discourse and engage with others.
- Young Lives grant proposals are not generally made OA

Assessment, Metrics and impact

- Being able to report the impact of the research is important to Young Lives because the main objective of the study is to provide high-quality evidence to inform policy and practice—the study's performance on this objective being monitored by donors. However, it is challenging to monitor the impact of YL research and outputs because policy influencing is a complex and non-linear process and takes time to yield results. This challenge also applies to monitoring the use of publicly archived data by external users, many of which are being used, but not attributed to YL.
- When possible, Young Lives documents examples of its impact on policy and practice <http://www.younglives.org.uk/content/young-lives-impact>
- The social science journals the group most often publishes in do not tend to have high impact factors in the same way some medical journals do.
- A team from Young Lives was runner up in the 2018 OxTALENT awards for its data visualizations on childhood poverty. <https://www.qeh.ox.ac.uk/news/young-lives-team-runners-2018-oxtalent-awards-data-visualizations>. The awards recognise members of the University who have made innovative use of digital technology.

Cost

- The project has benefitted from 15 years of support from a wide range of funding agencies listed at <http://www.younglives.org.uk/content/our-funders>. From 2001 and 2018, its core funding was provided by the Department for International Development (DFID) for the benefit of developing countries. The project is currently trying to raise funds to continue its work with additional survey rounds. DFID has commissioned an independent evaluation of the study, which focuses on policy and programme uptake and impact and value for money of its research.
- Although the main donor required publication in OA journals, no budget was provided to pay APCs (Article Processing Charges). This requirement was therefore waived and outputs have been made freely available via other channels (eg AAMs are lodged with the University (ORA) and much of the research is published as working papers on the website).

Benefits of open approach

- Research outputs are freely available to a wide global audience
- Meeting donor requirements supports case for further funding

Drawbacks of open approach

- Lack of attribution for data sets and difficulty of proving impact of policy-influencing activities (see below)

Is there anything you would like to change to make the research more or less open?

- Find a means of gaining attribution for data sets
- Having opportunities to learn from other studies in terms of how they demonstrate research uptake and impact in policy and practice
- Explore use of licenses for outputs

APPENDIX 1

Kramer & Bosman. *Rainbow of open science practices*

You can make your workflow more open by ...

- adding alternative evaluation, e.g. with altmetrics
- communicating through social media, e.g. Twitter
- sharing posters & presentations, e.g. at FigShare
- using open licenses, e.g. CC0 or CC-BY
- publishing open access, 'green' or 'gold'
- using open peer review, e.g. at journals or PubPeer
- sharing preprints, e.g. at OSF, arXiv or bioRxiv
- using actionable formats, e.g. with Jupyter or CoCalc
- open XML-drafting, e.g. at Overleaf or Authorea
- sharing protocols & workfl., e.g. at Protocols.io
- sharing notebooks, e.g. at OpenNotebookScience
- sharing code, e.g. at GitHub with GNU/MIT license
- sharing data, e.g. at Dryad, Zenodo or Dataverse
- pre-registering, e.g. at OSF or AsPredicted
- commenting openly, e.g. with Hypothes.is
- using shared reference libraries, e.g. with Zotero
- sharing (grant) proposals, e.g. at RIO

Bianca Kramer & Jeroen Bosman <https://101innovations.wordpress.com>

DOI: 10.5281/zenodo.1147025

<https://zenodo.org/record/1147025#.XMmwuqbTVTZ>. In: Tennant, Jonathan, Jennifer E. Beamer, Jeroen Bosman, Björn Brembs, Neo Christopher Chung, Gail Clement, Tom Crick, et al. 2019. "Foundations for Open Scholarship Strategy Development." MetaArXiv. January 30. doi:10.31222/osf.io/b4v8p.
<https://zenodo.org/record/1147025#.XFwDDPxpTY>

APPENDIX 2: WIN Open Neuroimaging

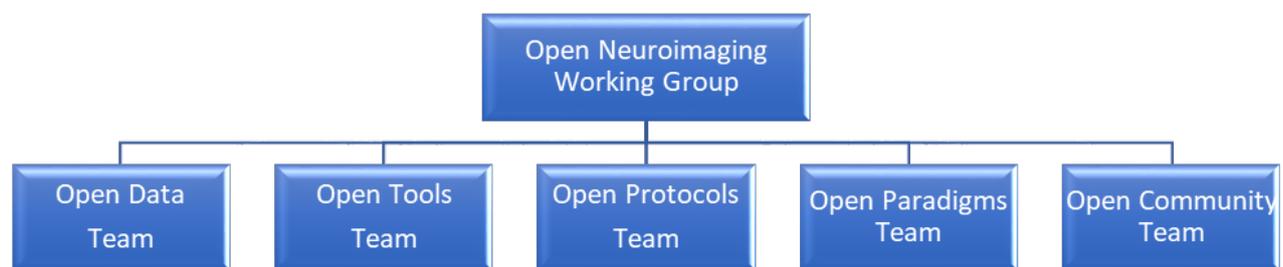
Details of WIN Neuroimaging are available at <https://www.win.ox.ac.uk/open-neuroimaging/>

Extracts from the website are copied below

“The WIN Open Neuroimaging Working Group leads the Open Neuroimaging project.

WIN is an open science community with a positive culture for sharing data, tasks, tools and protocols, and research practices that improve the transparency, reproducibility and impact of our outputs and accelerate translation to the clinic. We develop the technical and ethical framework to facilitate and promote sharing while protecting the security of participant data and enhancing our scientific pursuits

The working group has identified 5 key areas of work and set up teams that will work on these different aspects of the Open Science Project. Each group has agreed the aims and success criteria for their area.



The Open Neuroimaging Working Group meets quarterly and includes the leaders of each of the other groups. The working group is responsible for the delivery of the WIN open science aim, for developing policies that will work across the whole of WIN and for developing links between the project groups.”