

## UCL Statement on Transparency in Research

November 2019

UCL is committed to transparency and rigour in research across all disciplines, and to continue to improve the ways in which we conduct research. This is part of our broader efforts to enhance the quality of research practice, as outlined in related UCL positions:

- UCL's [Research Strategy](#) emphasises our commitment to responsible research, including a commitment to open research and ensuring open access to research outputs.
- UCL's [Statement on Research Integrity](#) sets out our commitment to the highest standards of integrity in all aspects of research as well as observing the [Code of Conduct for Research](#).

### Expectations of UCL researchers

#### *Approaches to Transparency*

We recognise that actions that support transparency in research and scholarship vary considerably across disciplines and methodologies. Therefore, we expect researchers to pursue transparency through the most effective and appropriate means, according to the nature of their research.

Approaches to pursuing transparency may include exploring multiple conclusions that could be drawn from evidence that has been reviewed or produced; publishing research methods, manuscripts or data; or disclosing the approach used when interpreting a text or research evidence.

In addition, all potential conflicts of interest should be declared, in line with UCL's [policy](#).

#### *Open Research*

Making research open is a core part of research transparency, and open research practices are rewarded in promotion decisions.<sup>1</sup> We recognise that there is significant variation across disciplines, influencing how appropriate open research practices may be. With this in mind, as far as is possible and appropriate, we expect researchers to:

- make their **research methods, software, outputs and data open**, and available at the earliest possible point, according to statements such as the [Berlin Declaration](#)
- describe their data according to [FAIR Data Principles](#), ensuring that it is Findable, Accessible, Interoperable and Reusable
- deposit their outputs in **open access repositories**:
  - publications in repositories such as preprint servers, and [UCL Discovery](#) via [Research Publications Service](#)
  - research data in repositories such as the [UCL Research Data Repository](#) or the [UK Data Archive](#). Where [subject-specific repositories](#) are used, we recommend using repositories that meet *Nature Scientific Data's* [trusted repository criteria](#), such as these [recommended repositories](#)
  - software in suitable repositories, for example [GitHub](#) and [Zenodo](#).

We note that exceptions exist where research data should not or cannot be shared, owing to privacy, non-consent, contractual agreements, legislation or practicality. For instance:

- researchers may be allowed access to **private archives** on the condition that the records accessed are not made open
- data pertaining to research participants should only be shared when this is in line with **ethics and privacy policies** associated with the research, consent has been obtained in line with guidelines,<sup>2</sup> and the data can be fully anonymised
- in some cases research participants may have agreed to certain data, such as **merged data**, being shared but not individual data, such as transcripts
- the data could be **misused** by others with the intention of causing harm
- it may not be possible to share fully raw data for practical reasons, such as the size of the data. Data should be at a **level of granularity** that is feasible to share, while also enabling research methods or results to be reproduced as comprehensively as possible
- it may be necessary to delay publication of research outputs and research data to allow for **protection of intellectual property**, for example through patenting
- publication of research data or outputs may breach **confidentiality of collaborating parties** or require their consent under the terms of a collaboration agreement.

### *Reproducibility*

The reproducibility of both research methods and research results (see [Annex](#) for definitions) is critical to research in certain contexts, particularly in the experimental sciences with a quantitative focus. Reproducibility forms part of UCL's wider commitment to transparency and rigour in all of our research. We recognise that behaviours in support of transparency and rigour vary considerably across disciplines and methodologies, and encourage our researchers to adopt actions most appropriate to their disciplines.

In the arts, humanities and social sciences, it may be more useful to refer to transparency or academic rigour in the use of research methods and in the whole research process – from the collection of evidence or thoughts through analysis to final conclusions and the publication of findings.

The reproducibility of research methods is required for research to be replicated (see [Annex](#)). This, in turn, is essential in research contexts where findings must be robust and reproducible in order to form a solid foundation on which to build further knowledge. In research contexts where reproducibility is possible and appropriate, we strongly encourage researchers to use measures that support it. These include (but are not limited to):

- **pre-registration** of study procedures and analysis plans, and use of **registered reports**<sup>3</sup> where appropriate
- transparent **reporting** of research in line with recognised community guidelines<sup>4</sup>
- disclosure of **all tested conditions**, analysed measures and results
- transparency around **statistical methods** (including sample size planning and statistical assumptions and pitfalls)
- use of **preprints**
- carrying out **replication studies**
- publication of **“null” findings**.

Munafò et al. have set out a [summary of initiatives that support reproducibility](#).<sup>5</sup>

## UCL's work to promote transparency in research

UCL is committed to supporting transparency in research and to developing approaches to improve the quality of the research we produce. This includes:

- continuing to **support open research** (including through the [Academic Careers Framework](#)<sup>1</sup>) and the necessary cultural change, as discussed in LERU's [policy paper on open science](#)
- the development of **governance processes** to enable research outputs to be **found, accessed, and reused appropriately** when open sharing is not appropriate
- the development of additional **training**, including in **research methods**, and consideration of how to promote transparency in academic teaching
- improving the **sharing of knowledge and best practice** across UCL.

See UCL's [webpage on research transparency](#) for more information, resources and details of the support UCL offers. Contact us at [ovpr@ucl.ac.uk](mailto:ovpr@ucl.ac.uk) with any questions or suggestions.



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## References

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<sup>1</sup> In the [Academic Careers Framework](#), each Grade has a 'threshold' statement that articulates the pre-requisite qualities expected for those seeking to make a case for promotion to that grade. The threshold statements for all Grades (7-10) in the Framework include the expectation for all research outputs to be made available through Open Access wherever possible.

<sup>2</sup> Guidance on obtaining consent from research participants, including for data sharing, has been produced by the ESRC-funded [UK Data Service](#) and the [Health Research Authority](#), while UCL has a number of guides and resources on [research data management](#). The [UCL Research Ethics Committee](#) and the [Research Ethics Guidebook](#) provide guidance on ethics and consent.

<sup>3</sup> Further information on Registered Reports can be found on the [Center for Open Science website](#).

<sup>4</sup> The [Equator Network](#) provides numerous reporting guidelines for health research; NC3Rs' [ARRIVE guidelines](#) support the reporting of research involving animals.

<sup>5</sup> Table 1, Munafò M R. [A manifesto for reproducible science](#). Nature Human Behaviour 2017; volume 1 (0021)

*See overleaf for Annex containing definitions of terms used in this paper*

## Annex: Definitions

Below we set out what we mean by some of the terms used in this statement.

### *Transparency*

Research is transparent if the methods, analysis and data are reported and disseminated openly, clearly and comprehensively.

### *Integrity*

Research has integrity if it has been conducted, analysed, reported and disseminated honestly and to a high standard, ensuring that the research and its findings can be trusted.

### *Results reproducibility*

The findings of a research study are reproducible if they can be obtained in an independent study using the same methods and data as those used in the original study.

### *Methods reproducibility*

A research investigation is reproducible if sufficient detail about the methods and data used is provided, so that the study can be independently repeated as it was originally conducted.

### *Replication study*

A replication study aims to test the reliability of a prior study's findings. It usually involves repeating the original study using the same methods, but involving different data or a new context, to confirm whether the study's conclusions are applicable to other circumstances. Alternatively, a replication study may use the original data and context in an effort to reproduce the original study and its results.

### *Replicability*

A research study is replicable if its results can be obtained in an independent study using the same methods as those in the original study, but using different data or a new context.

### *Robustness*

Research findings are robust if they can be consistently produced a) across a range of tests within a research study, and/or b) across different research studies that involve variations in assumptions, variables or procedures.