

## Why We Do Research?

At its heart, the mission of research is pretty straightforward: We ask questions about the world because **we want to uncover truths**. Whether we're investigating how language shapes the mind, how galaxies evolve over billions of years, or whether AI can be creative, our shared goal as researchers is to explore, explain, and expand what we know.

To move closer to these truths, we:

- Collect data and make careful observations
- Apply trusted methods of analysis—whether through statistical models, simulations, or qualitative interpretation
- And we strive to draw fair, evidence-based conclusions

But for this process to be **reliable, credible, and worth building on**, research must be done with **INTEGRITY**.

## What Is Research Integrity?

It refers to the set of behaviours, values, and standards that guide researchers toward responsible, high-quality science. At its core, it means adhering to ethical principles and professional norms—not just in outcomes, but throughout the entire research process.

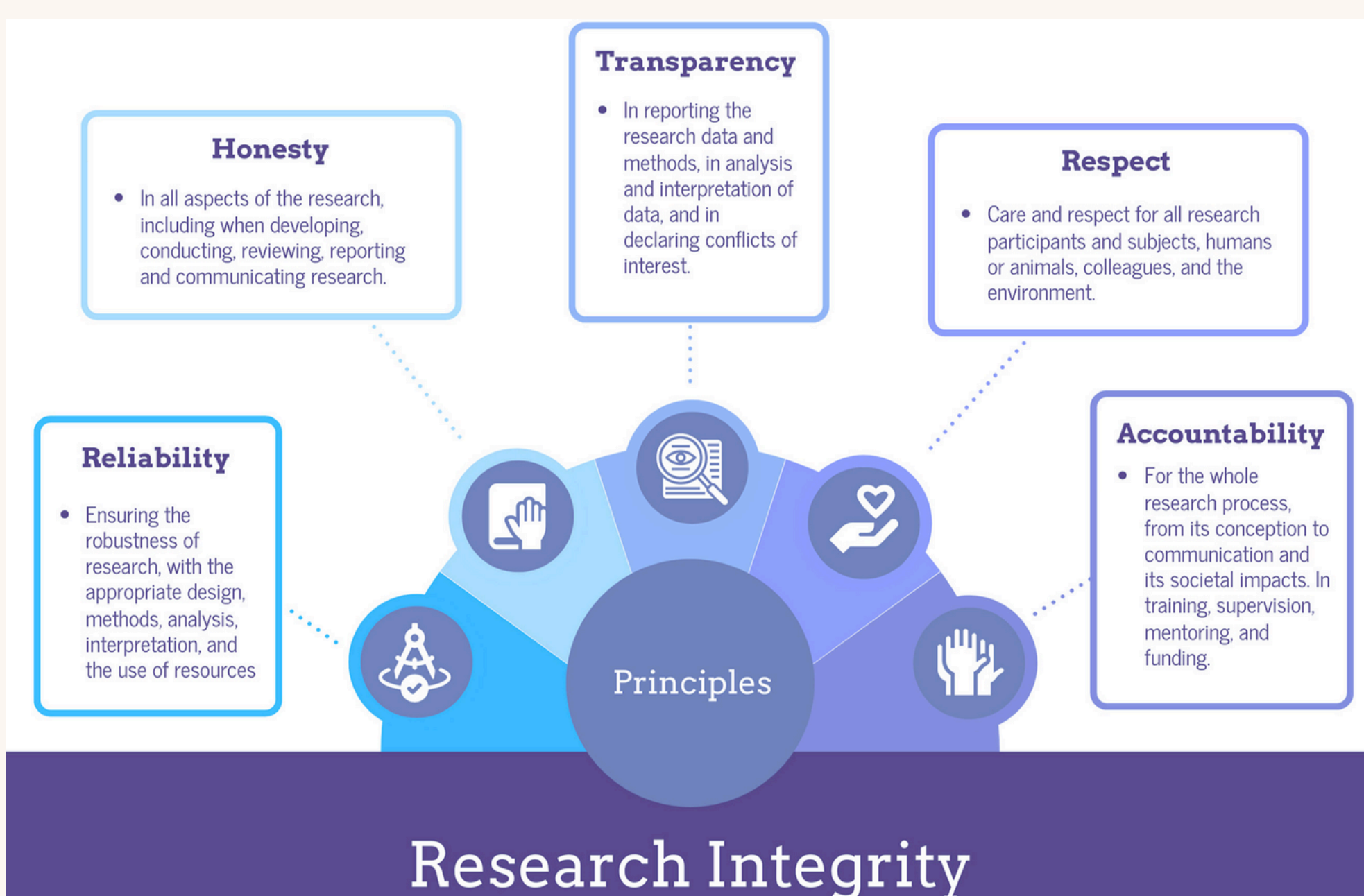
Research integrity involves:

- A personal responsibility to uphold honesty, rigour, and fairness
- A commitment to transparency in how data are collected, analysed, and reported
- Being accountable to participants, peers, and the broader community

## The Five Principles of Research Integrity

Research integrity is built on five interconnected principles that guide responsible research across all disciplines and methods. Let's break them down:

- **Reliability:** Ensuring that your findings are robust by using appropriate designs, methods, and analyses. Rigour is the foundation of meaningful results.
- **Honesty:** Being truthful and objective at every stage of the research process—from data collection to reporting.
- **Transparency:** Making your research process visible. This includes sharing methods, data, and results so others can verify and build upon your work.
- **Respect:** Acknowledging the rights, dignity, and well-being of everyone involved in your research—whether human participants, animal subjects, or broader communities.
- **Accountability:** Taking ownership of your research. This means recognising mistakes, correcting them where needed, and being responsible for your contributions to the scientific record.

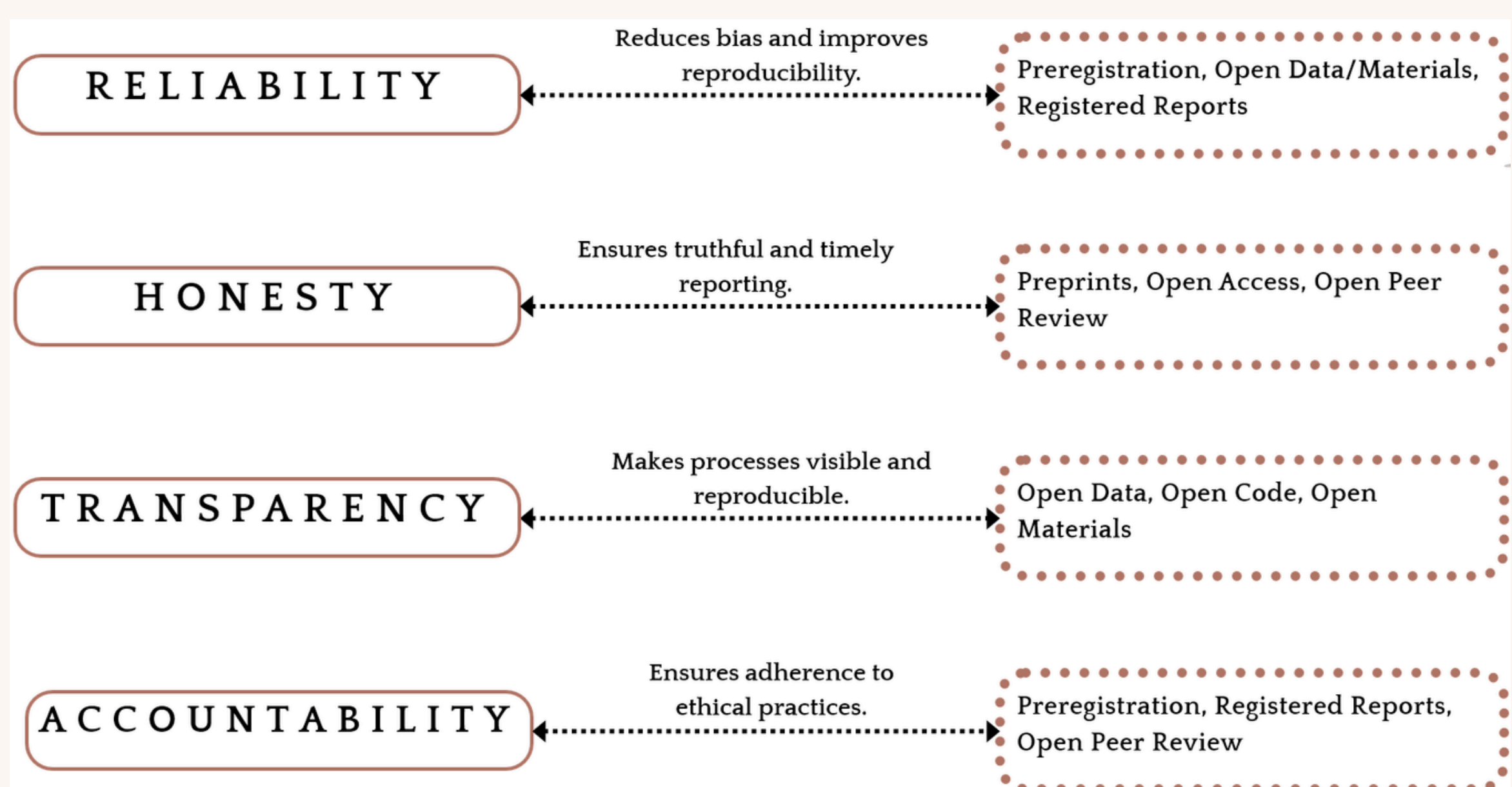


Armond, A. C. V., Cobey, K. D., & Moher, D. (2024)

Integrity applies to every discipline, every method, and every stage of the research cycle—from idea generation to the dissemination of findings. In short, research integrity is the foundation of reliable knowledge. And this is where Open Research becomes a powerful ally: it gives researchers the tools to put these values into practice.

## How Open Research Practices Reinforce Research Integrity

The core principles of research integrity aren't just abstract values—they're actively supported by Open Research Practices:



- **Reliability** is strengthened through preregistration, registered reports, and the sharing of open data and materials, which promote rigour and reproducibility.
- **Honesty** is reflected in practices like preprints, open access publishing, and open peer review, which encourage full and fair reporting of findings.
- **Transparency** is achieved by making data, code, and materials openly available, allowing others to see and verify how results were produced.
- **Accountability** is embedded in practices such as preregistration and open peer review, which clarify responsibilities and make research decisions traceable.

Open Research isn't just about being open—it's about being accountable, rigorous, and trustworthy. In other words, it's about putting integrity into action.

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## Open Research Across Disciplines

Open Research is not a one-size-fits-all model. It adapts to the specific needs, methods, and cultures of different research communities—from psychology and sociology to physics and engineering. But the principles remain the same: transparency, rigour, accountability, and collaboration.

To see how researchers across disciplines are putting these principles into practice, explore the case study booklet below. It's based on interviews with experts from the UK Reproducibility Network (UKRN) and showcases trailblazing researchers who are integrating Open Research into their daily workflows.

These stories highlight what Open Research looks like in action—across diverse topics, methodologies, and challenges.



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## Putting Principles into Practice

So far, we've explored the why of Open Research—why it matters, how it connects to research integrity, and how it works across disciplines. Now it's time to focus on the how.

The next modules will guide you through practical aspects of making your research more open and robust. Each one focuses on a key component of the research process, with tools, templates, and examples to support your work in real contexts.

Here's what's coming up:

- **Module 4: Data Management Plans**

Learn how to create a structured plan for handling your data—aligned with funder expectations and best practices for sustainability and sharing.

- **Module 5: Reproducibility and Preregistration**

Discover how preregistration and transparent methods can help make your findings more reliable, and your process more credible.

- **Module 6: Publishing and Licensing**

Explore how to choose the right publishing strategy, license your work appropriately, and use preprints and Open Access platforms effectively.

These are not just formalities—they're powerful tools to make your research more rigorous, visible, and future-proof.