

The future is open

part of a symposium:

Into the future: ISSID Presidents' perspectives
International Society for the Study of Individual Differences
Florence, Italy

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Slides available at personality-project.org/sapa

July, 2019

Open Science: What does it mean for ISSID and PAID?

At the Center for Open Science, we believe an open exchange of ideas accelerates scientific progress towards solving our most persistent problems. The challenges of disease, poverty, education, social justice, and the environment are too urgent to waste time on studies lacking rigor, outcomes that are never shared, and results that are not reproducible. Join us! (from <https://cos.io>)

1. How do the members of ISSID and the editors and authors of PAID do this?
2. Show Your Work.
3. Share Your Work.
4. Advance Science.
5. That's OPEN SCIENCE.

Show your work

Share Data, Materials and Code

Making your work openly visible to other researchers invites collaboration, allows others to benefit from and build on your work, and facilitates replication. Share your work today!

1. Share your data analysis plans: consider preregistration of your studies
2. Document your analytic code: Use open source software (e.g., R) and then include the analysis scripts as appendices
3. Share the data (if possible). Use one of the many open data repositories (e.g. [OSF](#) , [DataVerse](#), GitHub, etc.)
4. For commentaries on data sharing, see “Data sharing and how it can benefit your scientific career” in [Nature](#) or “Data Sharing” in [Science](#) or [Wikipedia](#)

Open Science in Personality and Individual Differences

1. Open Materials
2. Open Data
3. Open Analysis
4. Open Reporting

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Open materials in Personality and Individual Differences

1. Lew Goldberg (1999) introduced the International Personality Item Pool (IPIP) as “A Scientific Collaboratory for the Development of Advanced Measures of Personality and Other Individual Differences”. It has $> 3,000$ items and may be explored at <https://ipip.ori.org>. The IPIP has been cited $> 3,700$ times.
2. David Condon (2019) has extended the IPIP to include $\approx 10,000$ items in an open database of individual differences sapa-project.org/did
3. The International Cognitive Ability Resource (ICAR) (Condon, Doebler, Holling, Gühne, Rust, Stillwell, Sun, Chan, Loe & Revelle, 2014) is to IPIP as ability is to temperament and has $\approx 1,000$ ability items for public use which may be downloaded from icar-project.com or icar-project.org

Open Materials are used beyond the original investigator

1. The items of the IPIP have been cited at least 3,700 times
2. The original ICAR items (Condon & Revelle, 2014) have been used in studies never considered by us when we developed them.
 - Behavior genetics (Liu, Rea-Sandin, Foerster, Fritsche, Brieger, Clark, Li, Pandit, Zajac, Abecasis & others, 2017), (Willoughby, McGue & Lee, 2019)
 - Testing theories of openness and intelligence (Kim, Willoughby & Lee, 2019)
 - Validating the ICAR against the WAIS (Young, 2019)
 - Measuring various personality and health characteristics of the Dutch (“How Nuts are the Dutch”) (Krieke, Jeronimus, Blaauw, Wanders, Emerencia, Schenk, Vos, Snippe, Wichers, Wigman & others, 2016)
 - Measuring ability and temporal discounting in retirement savings plans (Goda, Levy, Manchester, Sojourner & Tasoff, 2015)

Open Data

1. By making data public and using one of the data sharing services such as [OSF](#) , [DataVerse](#), GitHub, etc. others can use them.
2. Examples of others using data that we have shared from the [sapa-project.org](#) data include
 - The Big 5 structure is age dependent ([Beck, Condon & Jackson, 2019](#)) (extends ([Condon, Roney & Revelle, 2017](#)) and makes public SAPA data until spring 2017).
 - ICAR16 factor structure is invariant across age and gender ([Young & Keith, Young & Keith](#)) (uses public data from ICAR). ([Condon & Revelle, 2016](#))

Open science is more than just open Materials, it is open Methods

1. Preregister your designs and analysis to avoid HARKing
 - How many subjects will you run?
 - Inclusion/exclusion criteria
 - How much of the data have you already seen? (if using archival data sets).
 - What analyses are you planning to do?
 - Are specific hypotheses being tested?
2. Show your analytic code and data so others can replicate and extend your analyses
 - Document your code (this is for you to replicate your own work. Your closest collaborator is you 6 months ago, but you never answer your email).
 - Use open source software if possible. Explain why you did not if you don't.

Publish for the world, Flip the process

1. Science is not a secret society open only to those who can afford the journals.
2. Flip the process
 - Put up your preprints on [PsyArXiv](#)
 - Add your reviews to [PsyArXiv](#)
 - Editors should curate the best of the open literature
3. But what about junior scholars who need the prestige of publishing in a refereed journal?
 - Search committees and promotion committees should learn to read rather than count

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