Games of Skill and Chance: How Open Science Norms Might Change Career and Research Strategies

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What if they see my null results?

- **Art**: arranging results and hypotheses to create an aesthetically attractive story
- **Science**: being honest about hypotheses and results a priori (Giner–Sorolla, 2012)

Open science = reporting results that didn’t support our initial hypothesis (not necessarily in journals)

- “Game of skill” in selective presentation becomes “game of chance” in confronting reality
What’s so scary?

- Some of our results might turn out to be nonsignificant
- But nonsignificant results happen even for true effects
When can null results be useful?

What if results are consistently null?

1. Methodological issues (see LeBel & Peters, 2011)

- Well-powered experiments
- Agreement on minimum useful effect size
- Confirmed methods
When can results that don’t support the hypothesis be useful?

2. Ownership of ideas and moral hazard: three kinds of research program

**THEORY BASIS:** testing large-scale theories about human psychology

**LAY BASIS:** testing the validity of psychologically relevant ideas believed by a certain population

**EFFECTS BASIS:** testing hypotheses that predict a relationship between two variables with a causal story
Example: cognitive dissonance vs. self-perception theory, and the “critical” experiments testing between them.
Large-scale ideas explaining many different effects, hypotheses, paradigms

Good psychologists were (are?) recognized early on for being creative in testing even other people’s theories (e.g., Fazio, Zanna & Cooper, 1977)
Do you, the researcher, have a vested interest in positive results?

- Only if it’s your theory (it’s not always) – and a theory is big enough to survive disconfirmation in any one area
- In a test between theories, results going either way are useful to report
Example: Do official national apologies actually promote forgiveness in recipient group members, as some believe?
Can include tests of ideas from philosophy, pop psychology, etc.

The researcher chooses, but does not create, the idea he or she is testing.

Can include applied intervention research if the researcher doesn’t “own” the intervention (literally or figuratively).
Do you, the researcher, have a vested interest in positive results?

- Not really ... Although you may have a personal interest in supporting one side out of ideological commitment

- Null results can indeed be interesting, as a “debunking” argument (e.g. Philpot & Hornsey, 2010; official apologies don’t lead to forgiveness)
Imagine if the Festinger & Carlsmith (1959) forced compliance finding had been published today – as a media-friendly “effect” without a large scale theory and just a very specific hypothesis?

**The Mighty Dollar Effect**

Surprisingly, offering someone $1 to turn pegs can make them like it more than offering them $20. At least that’s what researchers at Stanford University found in a mind-blowing study on college students ...
The researcher is identified as the creator and “owner” of the effect being tested.

Can focus on the effect, or on a limited-scope hypothesis that supports it.

Can include applied intervention research if the researcher “owns” the intervention (literally or figuratively).
Do you, the researcher, have a vested interest in positive results?

- Yes ... The hypothesis is your creative idea, so null results are no more interesting than an unwritten novel
- This is a problem when other researchers don’t see a reward in verifying or challenging “your” idea
A shift in viewpoint from “art” to “science”

- Are the ideas you test bigger than yourself?

- What would constitute an interesting finding against them?

- Do your Introduction sections promote only your own hypothesis, or do they consider alternatives?