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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

THEORY-BASIS RESEARCH

- ▶ Example: cognitive dissonance vs. self-perception theory, and the “critical” experiments testing between them



THEORY-BASIS RESEARCH

- ▶ 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)

THEORY-BASIS RESEARCH

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

LAY-BASIS RESEARCH

- ▶ Example: Do official national apologies actually promote forgiveness in recipient group members, as some believe?



LAY-BASIS RESEARCH

- ▶ 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).

LAY-BASIS RESEARCH

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)

EFFECTS-BASIS RESEARCH

- ▶ 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 ...

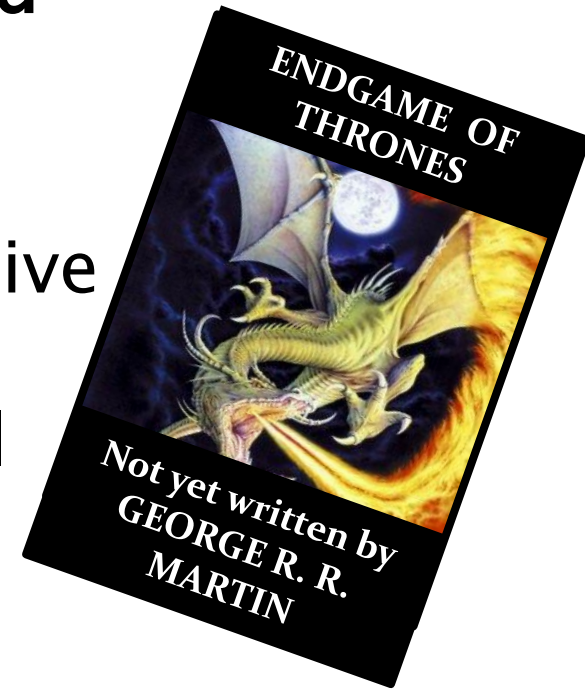
EFFECTS-BASIS RESEARCH

- ▶ 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).

EFFECTS-BASIS RESEARCH

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?
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