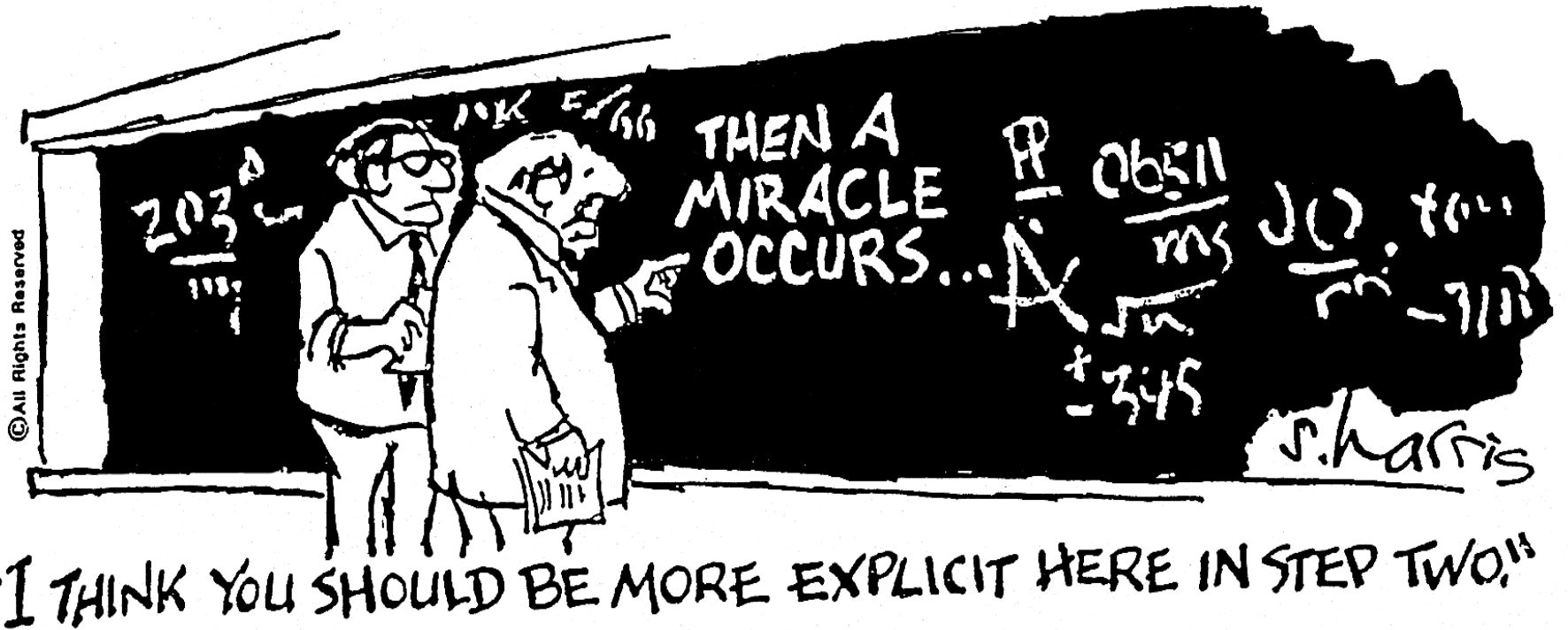


# ***Getting Your D&I Grant Funded***

**MT DIRC  
2017**

**Ross C. Brownson  
Washington University in St. Louis**

# What's inside the "Black Box"??



# Success in grant writing

*What are common review comments?*

# Investigators

- “Candidate was too advanced/too many publications for further training”
- “Investigator/research team is not racially diverse enough to credibly produce findings that will influence cancer disparities”
- “Research publication record could be stronger”
- PI is too junior, no evidence they can carry a trial of this size
- Team strength and track record was critical to success”
- What are you going to be doing in your career in 15 years?  
Spotty training record.

# Significant/Scientific Premise

- “maybe there are not yet any clear activities to improve care”
- Why is another smoking cessation text-message program needed?
- I don't think the intervention will have an effect but the protocol is well written and the program is running so we might as well evaluate it. (funded)
- Why would we need a study of physical activity in rural youth? They are plenty active working on farms and such!
- Very responsive to previous review
- The intervention isn't going to impact on the primary outcome.
- This is the wrong population to focus on for this project.
- The use of focus groups as part of your RE-AIM evaluation plan seem too ambitious and of unclear value

# Significance- Implementation Science

- What is the significance of this work to implementation science?
- The project is very important but this is not implementation science?

# Approach

- Wasn't innovative – using traditional technology (e.g. website) rather than a new technology even though data supports the use of traditional approaches
- The geriatric assessment does not measure frailty.
- Informed decision making scale (ICM-18) was not developed to measure cancer and not shared-decision making
- Need additional sites or population – too homogeneous
- This makes a lot of sense to me – it is a good argument
- How do make sure you can do this?

A real life case...



Principal Investigator

BROWNSON, ROSS C PHD

Applicant Organization: WASHINGTON UNIVERSITY

Review Group: CLHP

Community-Level Health Promotion Study Section

Meeting Date: 02/08/2011

RFA/PA: PAR10-038

Council: MAY 2011

PCC: K5CI

Requested Start: 07/01/2011

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Project Title: DISSEMINATING EVIDENCE-BASED INTERVENTIONS TO CONTROL CANCER

SRG Action: ++

Human Subjects: 44-Human subjects involved - SRG concerns

Animal Subjects: 10-No live vertebrate animals involved for competing appl.

#### 4. Approach:

##### Strengths

- Substantive pilot work conducted by this team
- Integrated theoretical framework to guide implementation
- Overall power analysis for subsets of samples appears adequate and feasible sample sizes are noted

##### Weaknesses

- Although the theoretical framework is well described, the connection to study outcomes and intervention steps is not clear.
- Unclear why more than 12 states cannot be enrolled in the study
- If the states have an average of 40 practitioners, unclear how 59 per state will be recruited
- Targeted selection of states with highest cancer mortality rates is not random selection and creates bias.
- Additionally, states with the highest mortality may already be implementing programs at a higher rate than states with lower cancer mortality
- It seems that if practitioners are not in a position to implement cancer control programs given their position/role, should selection be stratified by position/role?
- Will the sample for the qualitative interviews be the same people in the randomized study? Which aspect will come first? It seems that either way, these individuals are already favorably biased and possible in a higher stage of awareness or readiness than others?
- The description of the intervention lacks clarity; what is the menu of choices? Is the same as the workshops? Or is the menu offered during the workshops?

**Application Number:** 1 R01 CA160327-01A1

**Principal Investigator**

**BROWNSON, ROSS C PHD**

**Applicant Organization: WASHINGTON UNIVERSITY**

**Review Group:** CLHP  
Community-Level Health Promotion Study Section

**Meeting Date:** 09/26/2011

**RFA/PA:** PAR10-038

**Council:** JAN 2012

**PCC:** B5C1

**Requested Start:** 04/01/2012

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**Project Title:** Disseminating Evidence-Based Interventions to Control Cancer

**SRG Action:** Impact/Priority Score: 11    Percentile: 5

**Human Subjects:** 30-Human subjects involved - Certified, no SRG concerns

**Animal Subjects:** 10-No live vertebrate animals involved for competing appl.

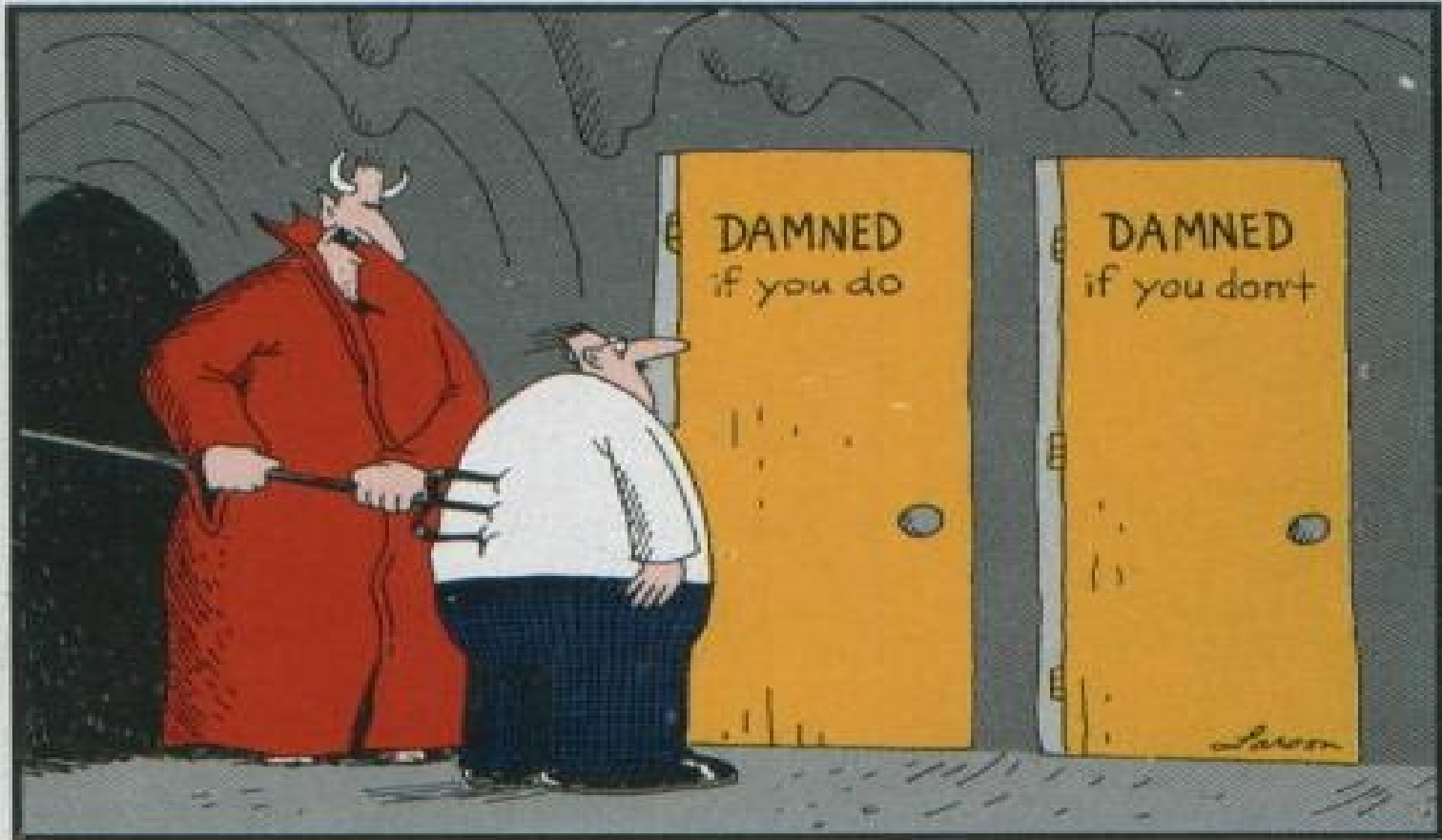
**Gender:** 1A-Both genders, scientifically acceptable

**Minority:** 1A-Minorities and non-minorities, scientifically acceptable

**Children:** 1A-Both Children and Adults, scientifically acceptable

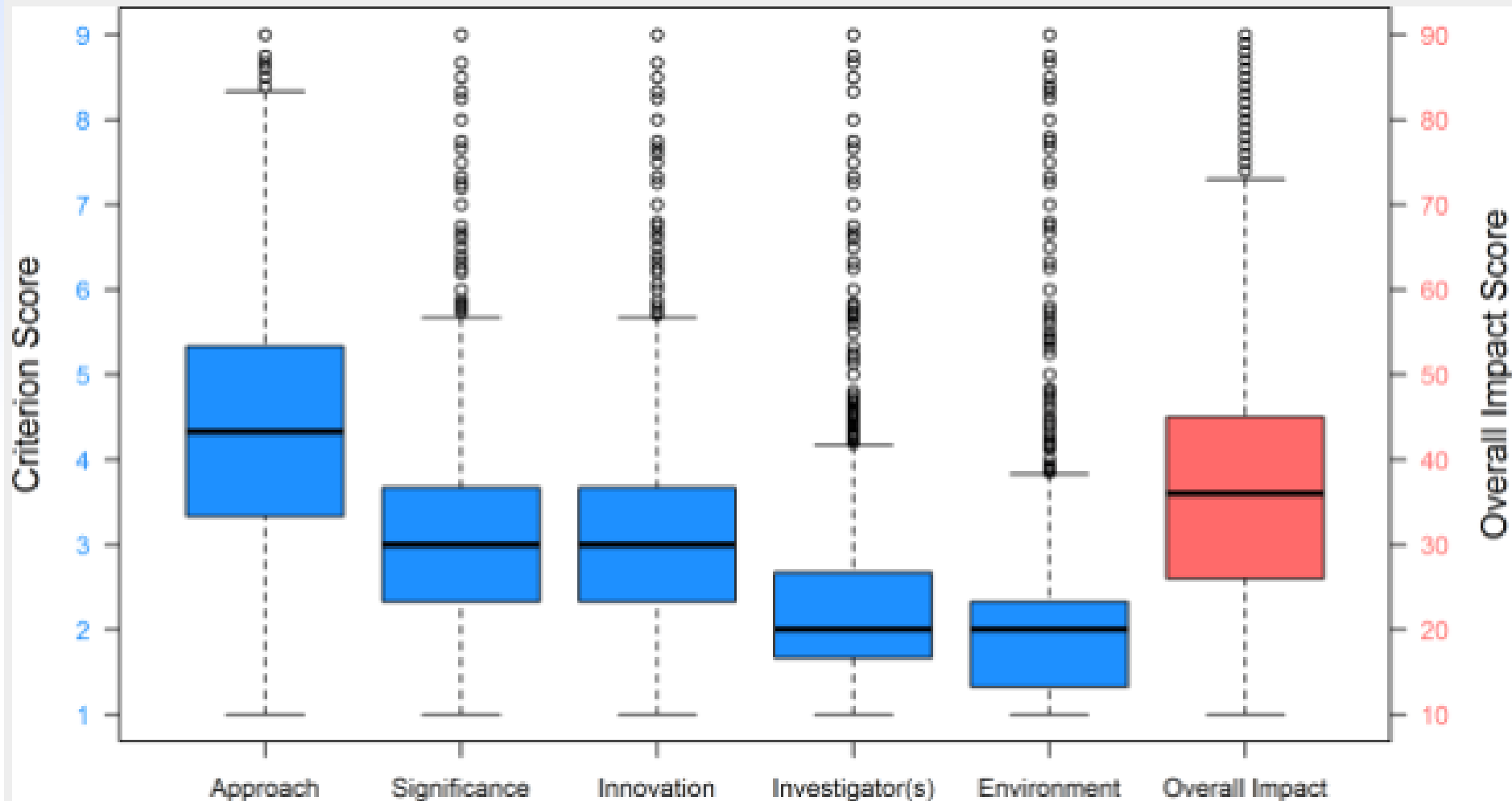
**Clinical Research:** not NIH defined Phase III Trial

And decision points are not always clear...



**"C'mon, c'mon — it's either one or the other."**

# What gets you funded?



— *Figure 1 from “How Criterion Scores Predict the Overall Impact Score and Funding Outcomes for National Institutes of Health Peer-Reviewed Applications” by Eblen, et al.: Box Plot Distributions of Criterion and Overall Impact Scores for R01 Applications, FY 2010–2013.*

# Significance

- Scope of the problem (keep it brief)
- Attributable risk (better yet, prevented fraction)
  - The meaning of “scale up”
- Careful (not exhaustive) review of key literature to set up your study
- Needs in D&I research
- Gaps in literature (the scientific premise)

# Strong focus on the approach

- Make this the core of your application
- Design
  - Design rigor matches the research questions
  - Address key threats to internal validity
  - Address external validity (often ignored)
  - Methods matter
    - Across measures, sampling, analytic plan, D4D

# Overarching issues & tips...

- Read the funding announcement carefully
- Smaller grants = easier to get funded
- Think like a reviewer (busy, quick reaction, easily irritated, may be novices to D&I research or your content area)
- Match the grant type to your project/aims
- Discuss your idea with the program officer
- Turn to your institution for pilot funding to build the foundation for a larger grant

# Overarching issues & tips...

- Use tables/figures effectively
- Write, re-write, budget plenty of time to present your best work
  - Unlike a journal article, a grant application should be as close to perfect as possible
- Hold a pre (mock) study section (seek out brutal reviewers)
- How best to craft your revised application
- Participate in a review (may be ECR)
- Just like the best baseball players have a short memory at the plate; top scientists need to learn from rejection, build on it and move on.



# Overarching issues & tips...

- Potential changes being discussed at NIH
  - Limiting the number of awards per PI
  - Limiting the indirect recovery rate

# Rigor and Transparency in Research

To support the **highest quality science, public accountability, and social responsibility in the conduct of science**, NIH's Rigor and Transparency efforts are intended to clarify expectations and highlight attention to four areas that may need more explicit attention by applicants and reviewers:

- Scientific premise
- Scientific rigor
- Consideration of relevant biological variables, such as sex
- Authentication of key biological and/or chemical resources

**Role of reviewers:** Assess the scientific merit of each application according to the review criteria, which include consideration of scientific premise, rigor, and consideration of relevant biological variables, and the adequacy of the authentication of key biological and/or chemical resources as an administrative issue. Evaluations should be based on current best practices in the field.

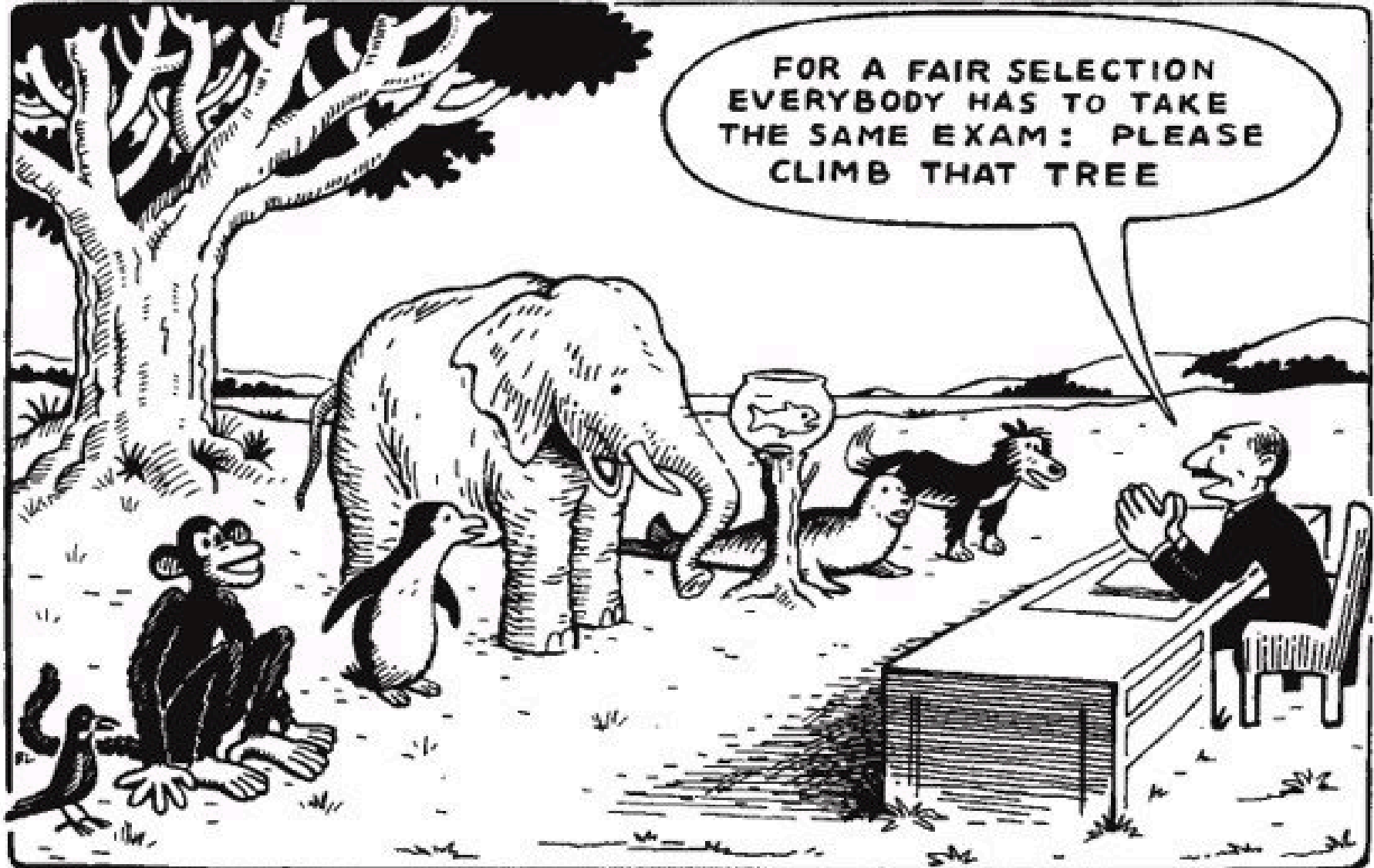
# Reviewing Rigor and Transparency of Research: **RPG** Applications

	<b>Applies to which applications?</b>	<b>Where will I find it in the application?</b>	<b>Where do I include it in my critique?</b>	<b>Addition to review criteria</b>	<b>Affect overall impact score?</b>
<b>Scientific Premise</b>	All	Research Strategy (Significance)	Significance	Is there a strong scientific premise for the project?	Yes
<b>Scientific Rigor</b>	All	Research Strategy (Approach)	Approach	Are there strategies to ensure a robust and unbiased approach?	Yes
<b>Consideration of Relevant Biological Variables, Such as Sex</b>	Projects with vertebrate animals and/or human subjects	Research Strategy (Approach)	Approach	Are adequate plans to address relevant biological variables, such as sex, included for studies in vertebrate animals or human subjects?	Yes
<b>Authentication of Key Biological and/or Chemical Resources</b>	Project involving key biological and/or chemical resources	New Attachment	Additional review considerations	Comment on plans for identifying and ensuring validity of resources.	No

# Resources

- Proctor et al- Ten Tips on getting your IS grant funded  
[Impl. Science, 2012, 7:96](#)
- Brownson et al—successful D&I grant writing
- Tannenbaum et al—why sex and gender matter in IR
- NCI website- Content analysis of funded grants:  
<http://cancercontrol.cancer.gov/IS/pdfs/DandI-PAR-Grant-FundedContentAnalysis.pdf>
- UNC D&I website containing successful grant applications  
<http://impsci.tracs.unc.edu/>

It won't always seem fair....



With the right preparation,  
opportunity, and hard work...



# Questions

