



# Trust in science

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# The „why”s and the „how”s of trust in science

- **WHY** – **PERFORMED/PUBLISHED**

- **HOW** – **PERFORMED**

- **PUBLISHED**

- **REPORTED**

- **PERCEIVED**

## TYPES OF SCIENTIFIC PAPER

WE PUT A CAMERA  
SOMEWHERE NEW

HEY, I FOUND A TROVE  
OF OLD RECORDS! THEY  
DON'T TURN OUT TO BE  
PARTICULARLY USEFUL,  
BUT STILL, COOL!

MY COLLEAGUE IS  
WRONG AND I CAN  
FINALLY PROVE IT

THIS TASK I HAD TO DO  
ANYWAY TURNED OUT  
TO BE HARD ENOUGH  
FOR ITS OWN PAPER

HEY, AT LEAST WE  
SHOWED THAT THIS  
METHOD CAN PRODUCE  
RESULTS! THAT'S NOT  
NOTHING, RIGHT?

CHECK OUT THIS WEIRD  
THING ONE OF US SAW  
WHILE OUT FOR A WALK

THE IMMUNE SYSTEM  
IS AT IT AGAIN

WE FIGURED OUT HOW  
TO MAKE THIS EXOTIC  
MATERIAL, SO EMAIL  
US IF YOU NEED SOME

WHAT ARE FISH EVEN  
DOING DOWN THERE

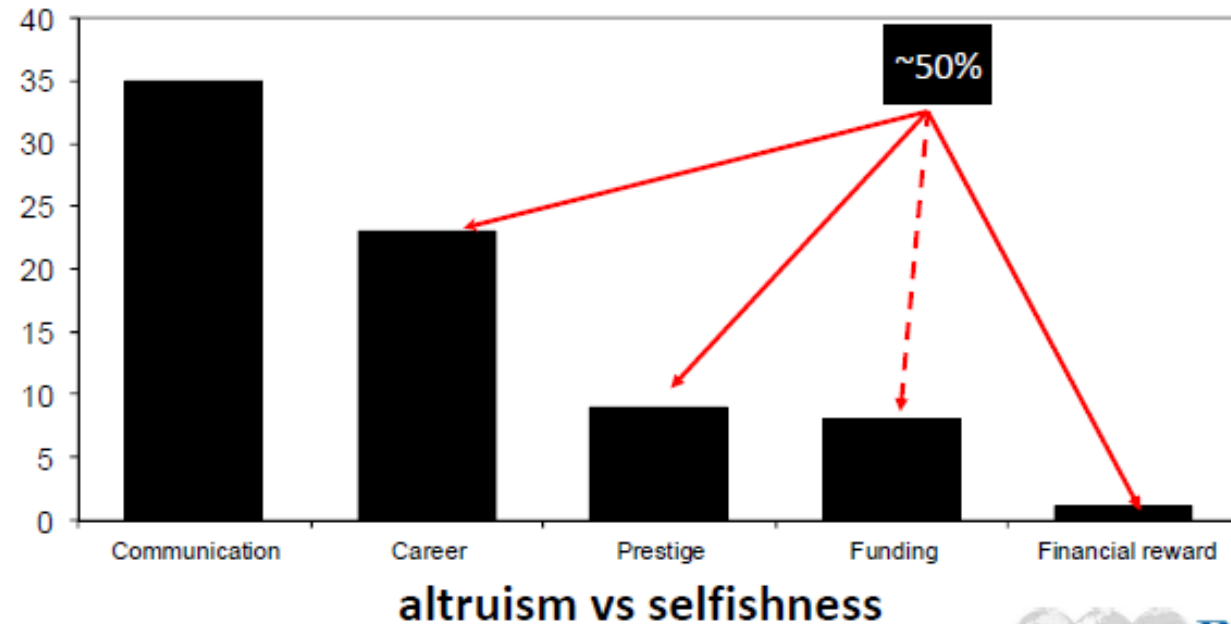
WE ARE 500 SCIENTISTS  
AND HERE'S WHAT WE'VE  
BEEN UP TO FOR THE  
LAST 10 YEARS

SOME THOUGHTS ON  
HOW EVERYONE ELSE  
IS BAD AT RESEARCH

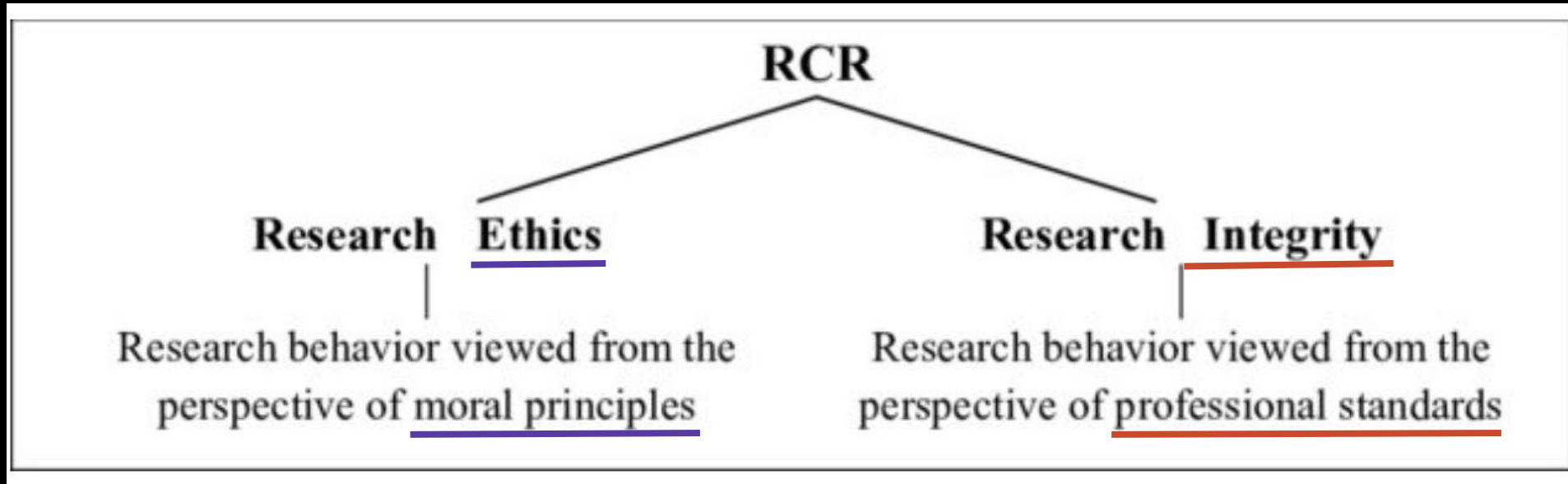
WE SCANNED SOME  
UNDERGRADUATES

# WHY — PERFORMED/PUBLISHED

## ALPS (1999) – why publish?



# HOW — PERFORMED



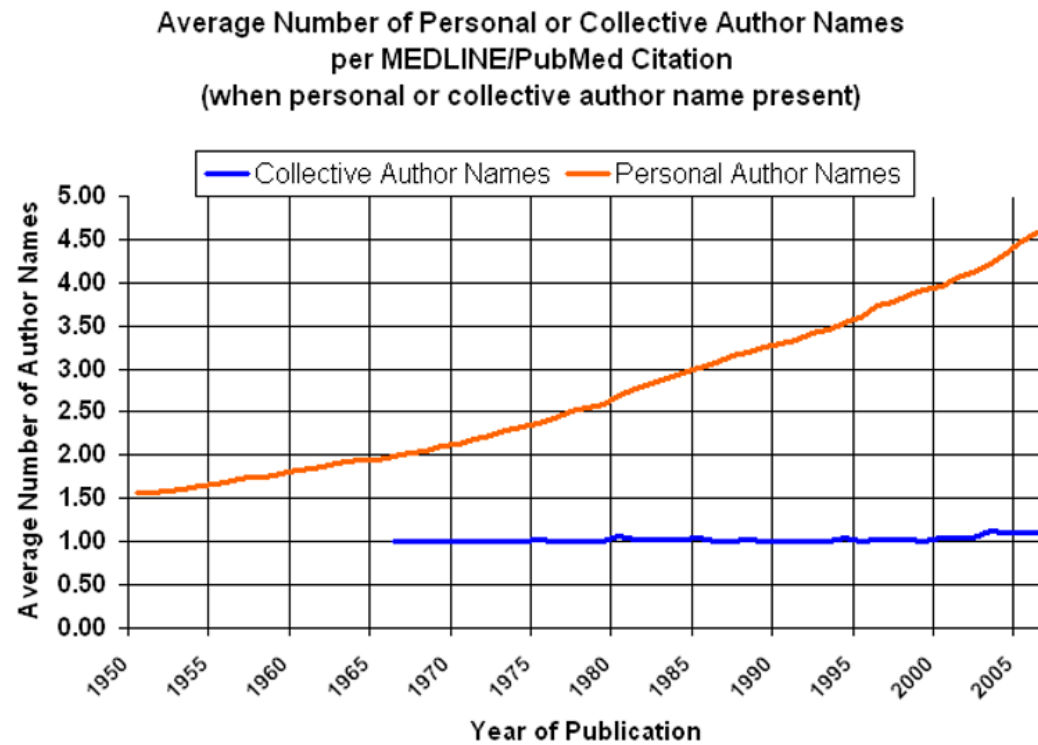
Fostering integrity in research: Definitions, current knowledge, and future directions

[Nicholas H. Steneck PhD](#) 

[Science and Engineering Ethics](#) 12, 53–74 (2006) | [Cite this article](#)

2893 Accesses | 190 Citations | 14 Altmetric | [Metrics](#)

# HOW — PUBLISHED



# HOW — REPORTED

## JOURNALISTS



What my friends think I do



What my parents think I do



What society thinks I do



What my editors think I do



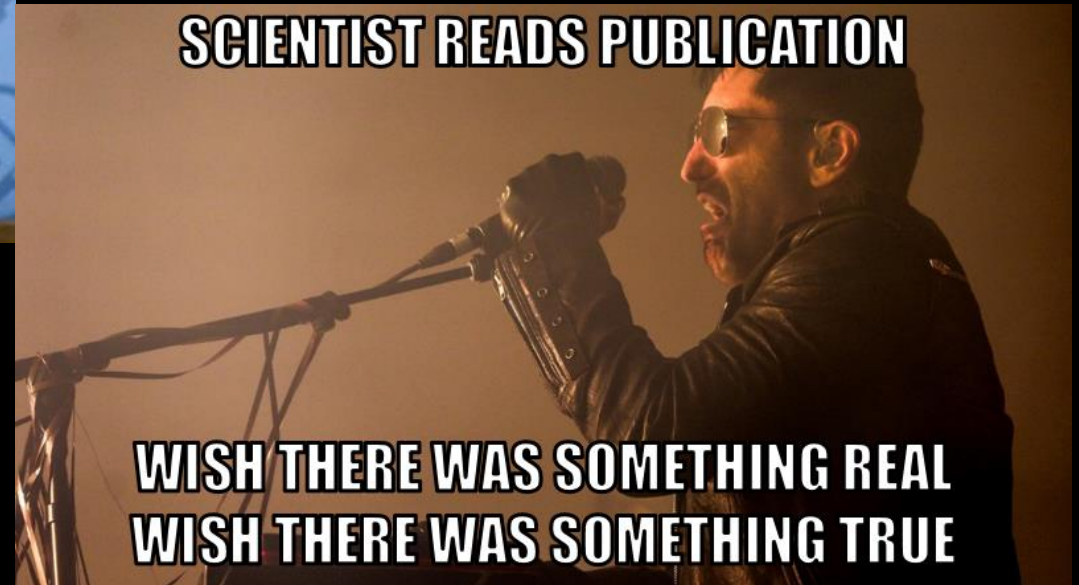
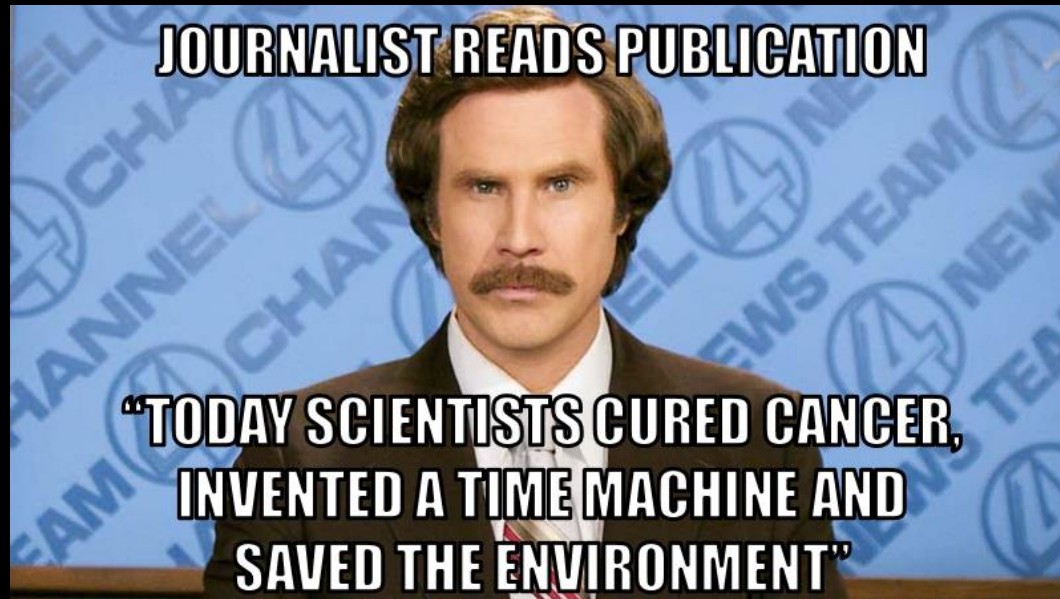
What I think I do



What I really do



# HOW — PERCEIVED





**THE LEVEL OF  
MISCOMMUNICATION**



**IS TOO DAMN HIGH**

[memegenerator.net](http://memegenerator.net)

# Possible answers

- **TRUE**
  - integrity vs FFP, QRPs
- **JUST/FAIR**
  - ethics, QRPs
- **WISE**
  - public responsibility, privilege

# Possible tools

- **publication ethics/outreach** – scientific and popular
- **education** – bias(es), correlation vs causation, evidence hierarchy
- **citizen** (involvement) **science**
- ...