

# Project for Scholarly Integrity

## New Resources in the PSI Toolbox

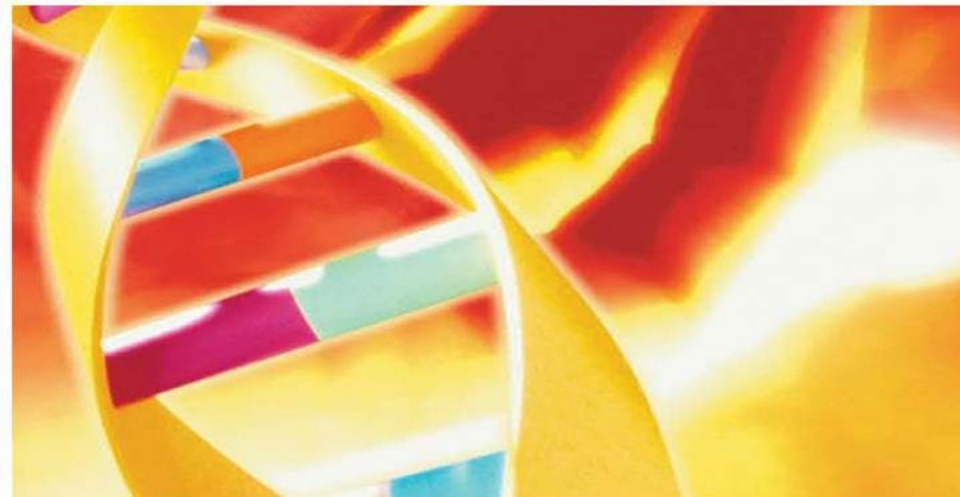
Daniel Denecke, CGS and Julia Kent, CGS

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*CGS Summer Workshop, Monterey, CA, July 13, 2011*



# Project for Scholarly Integrity

## PSI Update, Tools and Resources

*Daniel Denecke, Julia Kent, and Jeffrey R. Allum, CGS  
CGS Summer Workshop, Monterey, CA, July 13, 2011*

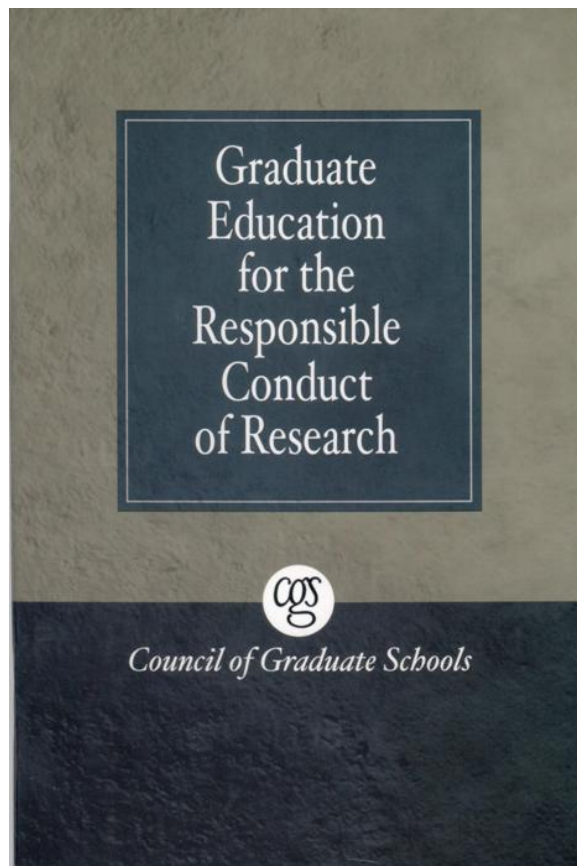


# Overview

- **Project for Scholarly Integrity (PSI)**  
Background and Overview
- **PSI Climate Survey Activities**
- **PSI Activities and Resources Inventory**
- **PSI Website**



# CGS Best Practices in Responsible Conduct of Research: ORI (2004-05)



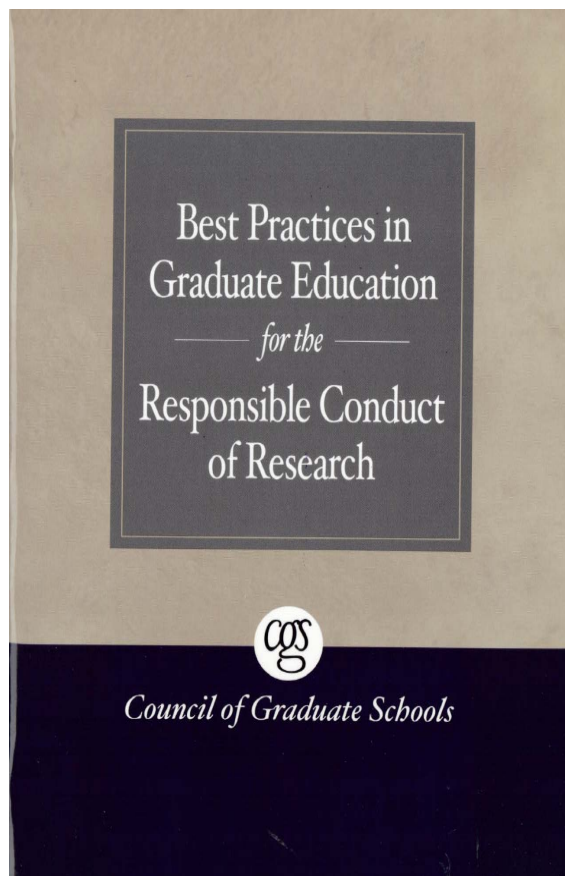
*10 universities*

## ***Best Practices in RCR Program Start Up***

1. Establish an Advisory Board
2. Provide Public Forums
3. Offer Two-tiered Instruction  
(University-wide, discipline-specific)
4. Include Education in Ethical Reasoning
5. Make RCR Training Mandatory
6. Develop Multi-level Assessment



# CGS Best Practices in Responsible Conduct of Research: NSF (2006-07)



## ***8 Universities***

### ***Best Practices in Institutionalizing RCR Programs***

1. Build on existing resources and programs
2. Ethical deliberation best taught by experts
3. Use assessment results/disparities to generate awareness and support
4. RCR requirements best when sequenced appropriate to student progress
5. Online resources cost-effective; face-to-face most effective (but more costly)

# The CGS Project for Scholarly Integrity

(2008-2011, supported by contract with ORI)

- Year-long planning phase
- Five subcontracts to seven universities
- Common multi-level assessment
- PSI Website and digital library
  - [www.scholarlyintegrity.org](http://www.scholarlyintegrity.org)
    - (now includes 737 “resources” + PSI resources)
    - Gateway to assessment tools, instruments
- Newsletter (154+ subscribers)
- Publication (winter, 2011) and Dissemination



# PSI Awardees

- Columbia University
- Emory University
- Michigan State University
- Pennsylvania State University
- University of Wisconsin-Madison
- University of Alabama at Birmingham
- University of Arizona



# PSI Affiliates

- Duke University
- Georgia Institute of Technology
- Howard University
- Marquette University
- Northern Arizona University
- Princeton University
- Purdue University
- Simmons College
- University of California-San Diego
- University of New Mexico
- University of North Carolina at Chapel Hill
- University of West Florida
- Wake Forest University





# The Framework

[The Project for Scholarly Integrity: A Framework for Collaborative Action](#) (2008)

*Engage* the community in identifying needs

*Invite* key stake holders to reflect on a plan of action

*Enact* the plan

*Communicate* with the broader community about activities and their ongoing impact

*Integrate* activities to ensure the greatest impact and sustainability



# The National Context for Assessment

Evaluation of RCR education for graduate students is now an intrinsic part of federally funded research

## NIH Requirement Update, 11/2009

- Instruction in [RCR] is an integral part of all research training programs, and its evaluation will impact funding decisions.

## NSF Requirement, 1/2010

- While training plans are not required to be included in proposals submitted to NSF, institutions are advised that they are subject to review upon request.



# Survey of Organizational Research Climate

## Purposes

- To understand how different stakeholders perceive how climate factors impact SI, identify gaps and opportunities.
- To provide graduate schools, college deans, dept. heads and others with data for evidence-based improvements in RCR & SI education.

## Possible Uses

- Initiate discussions about and strengthen faculty engagement in addressing possible problem areas (identified through intra- and multi-university benchmarking).
- Efficiently direct resources to target areas of greatest need and vulnerability.
- Compare student & faculty perceptions and compare both with behavioral activities survey.



# User's Manual for the Survey of Organizational Research Climate

This document provides a description of the survey including a brief overview of its background and development, terms of permission to use the survey, intended respondents and settings, administration and scoring instructions and considerations regarding data analysis and reporting basics.

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3/1/2011



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Developed by researchers Carol Thrush and Brian Martinson in collaboration with tri-university consortium (MSU, PSU, UWM)

## 7 Survey “Subscales” (#=# of items)

- Institutional RCR Resources (6)
- Institutional Regulatory Quality (3)
- Program Integrity Norms (4)
- Program Integrity Socialization (4)
- Program Advisor /Advisee Relations (3)
- Program Integrity Inhibitors (6)
- Program Expectations (2)

PLUS

- Global Climate of Integrity (4)

<https://sites.google.com/site/surveyoforgresearchclimate/>

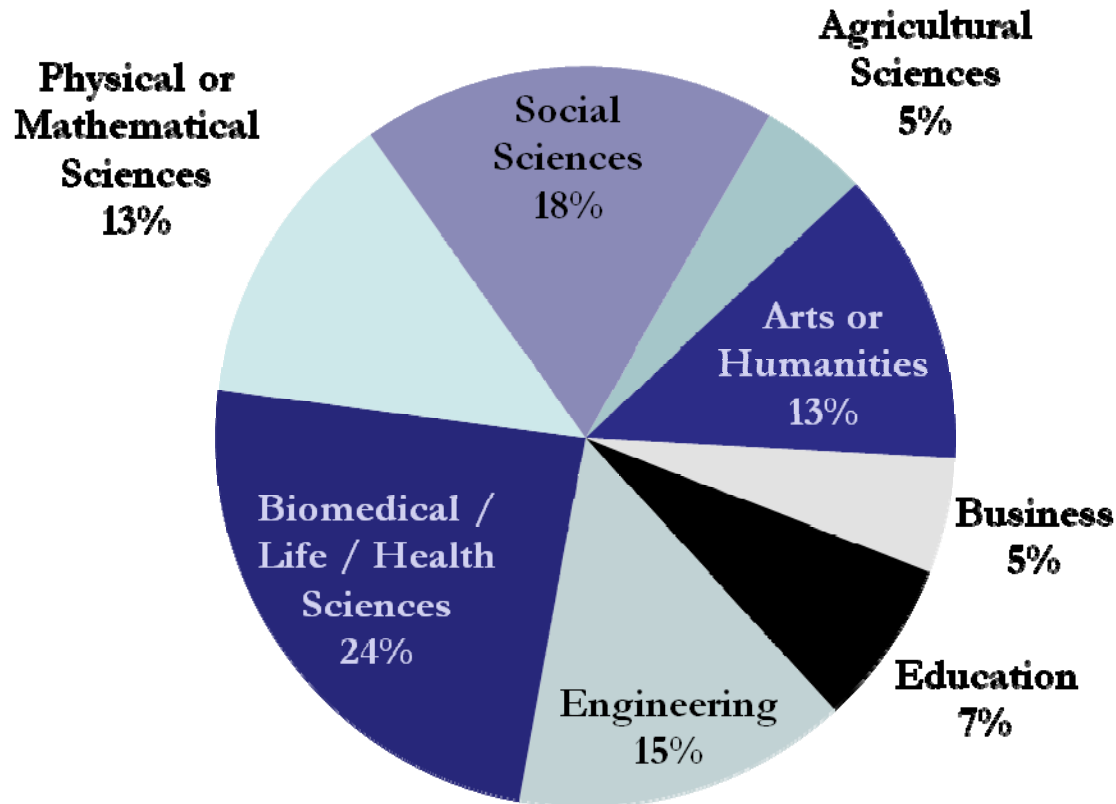
Also accessible through: [www.scholarlyintegrity.org](http://www.scholarlyintegrity.org)



Council of Graduate Schools

# Climate Survey Data by Broad Field

N=21,313 Individual Respondents

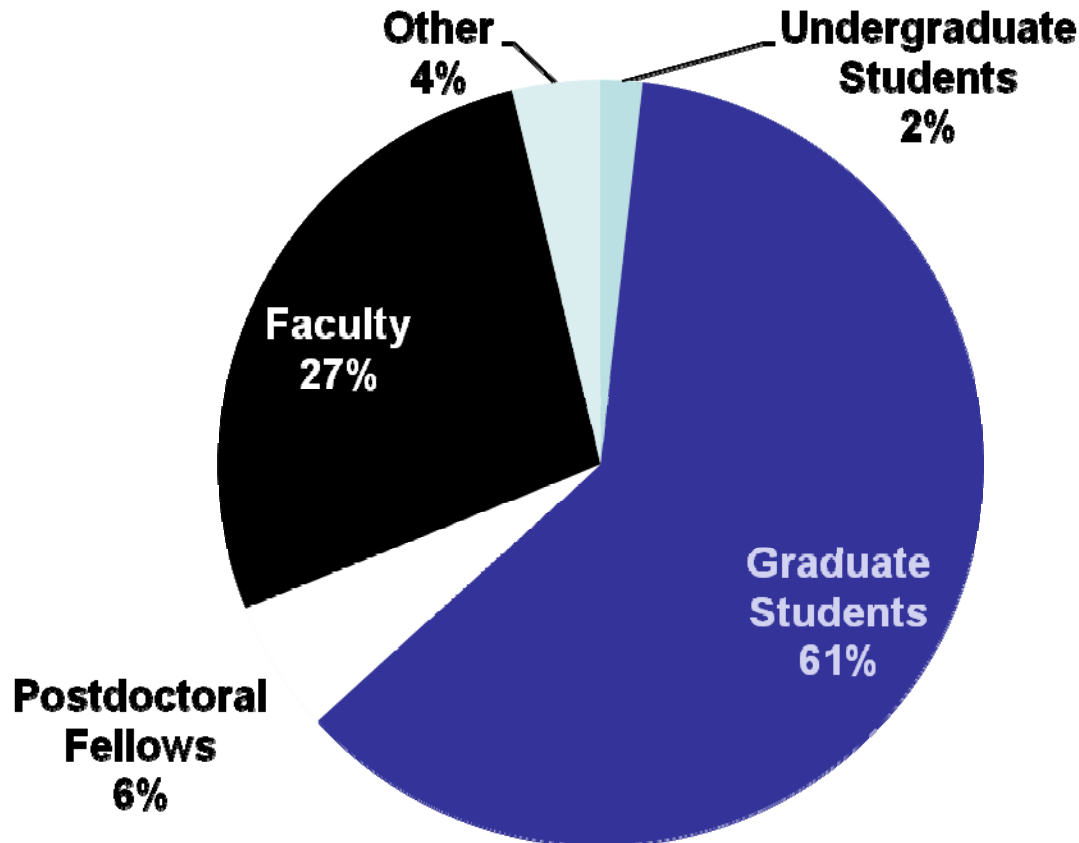


Preliminary findings based upon the Survey of Responsible Research Practices (Climate Survey). Revised June 30, 2011



# Climate Survey Data by Academic Status

N=21,313 Individual Respondents



*Note:*  
Graduate Students in  
Course-based  
Master's Programs  
constitute 17% of all  
respondents

Preliminary findings based upon the Survey of Responsible Research Practices (Climate Survey). Revised  
June 30, 2011



# CGS Inventory on Program Activities and Resources

## Purposes:

- *Primary:* To provide graduate schools with data tools for evidence-based conversations with programs about optimizing practices, activities, resources and policies to enhance research and scholarly integrity.
- *Secondary:* To understand national gaps and trends in RCR curricular activities and track improvements over time.

**“The most comprehensive survey available of central, school, and departmental training”-PSI awardee university final report, 2010**

**“The Activities assessment was an essential baseline for our understanding of what campus program representatives perceive about RCR. It also provided core benchmark comparisons to other schools that used the instrument.”-PSI awardee university final report, 2010**



# Activities and Resources

- How are students receiving information about core RCR and research ethics issues?
  - resources, activities, educational experiences
- What is the departmental/program policy environment for RCR?
- How much curricular integration is already in place in 12 core areas?
- What opportunities exist for benchmarking and practice exchange?



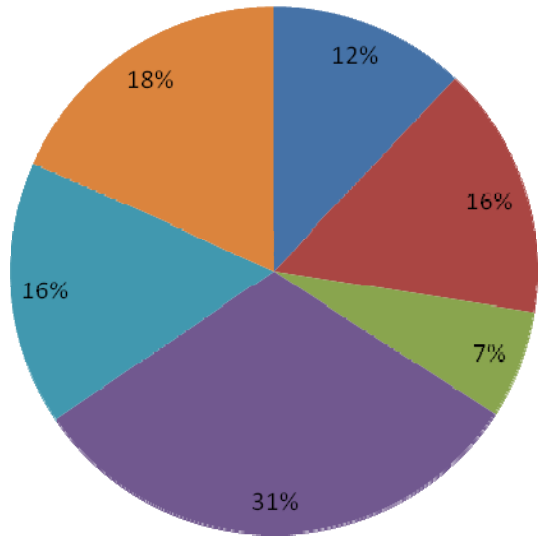
# Activities Survey Design and Methodology

- **Survey Length**
  - 12 questions about program-level policies and practices
- **240 usable responses from six institutions**
  - Respondent = the graduate program
- **Graduate deans sent to program chairs/DGS's**
- **Data cleaning issues**
  - Variations in questionnaires were addressed on a case-by-case basis

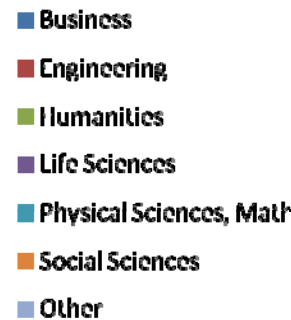
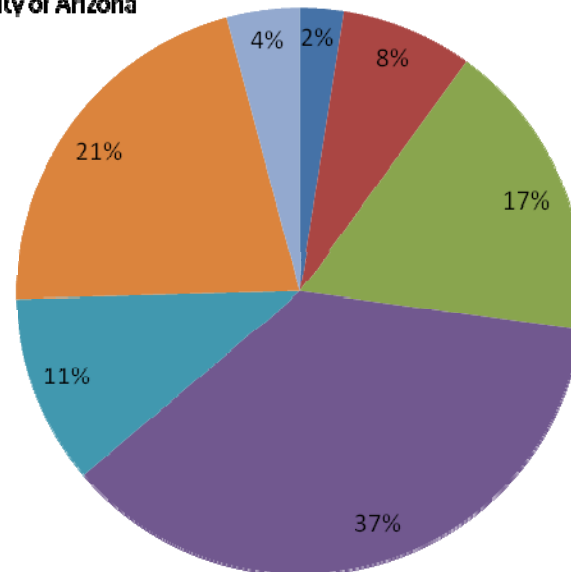


# Activities Survey Dataset Overview

## Responses by Institution



## Responses by Broad Field



*Slides containing preliminary data from an analysis of the CGS-developed Research Integrity Activities Inventory Survey have been removed from electronically distributed copies. Analysis of these data will be published by CGS and available December 2011.*

# Understanding how scholarly integrity topics are conveyed to different populations within an institution (Part 1)

Mode	Faculty	Postdoctoral fellows	Graduate students
Independent research	✓		
Mentor/advisor		✓	✓
Courses/classroom		✓	✓
Workshops	✓		✓
Print/web-based materials	✓	✓	✓
No resources	✓	✓	✓
Not applicable	✓	✓	✓



# Understanding how scholarly integrity topics are conveyed to different populations within an institution (Part 2)

## General “RCR” topics

- Data acquisition, management, sharing and ownership
- Conflicts of interest and commitment
- Research misconduct
- Publication practices and responsible authorship (including plagiarism)
- Mentor and trainee responsibilities
- Peer review (manuscript, grants)
- Collaborative research

## Field-specific topics

- Use of human participants in research
- Use of animals in research
- Use of hazardous substances

## Other topics

- Personnel Management
- Financial Stewardship (grants management)



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# What Do the Activities Data Tell Us?

- **Programs report that faculty already address all RCR areas appropriate to their fields through advising and mentoring**
  - Mentoring is perceived by programs as the core of a graduate student's professional development in RCR & SI areas.
- **Only about 1/2 covered SI issues in coursework; less than 1/3 offered workshops on SI issues**
- **Web training overlooked program-specific issues and key areas (peer review, mentoring, collaboration, personnel management, financial stewardship)**



# How can graduate schools use the PSI Activities & Resources Inventory to Improve/Assist Programs?

## Curricular approach:

- What should the curricular “content” be?
- How should it be delivered? Online/f2f contact hours? Scheduled/sequenced?
- What proportion of professional standards & ethical skills? etc.

## Institutionalization approach:

- What should be centralized? Program-specific?
- Where should centralized programs be housed?
  - e.g., Graduate school? Centers for ethics? Compliance and integrity offices?
- What are the appropriate roles for senior university leadership?
- What are the challenges, sources of resistance?
- Where have graduate schools succeeded in overcoming these?
- Do existing policies reinforce and support RCR education?





# How Will We Know that the PSI Approach is Working?

- Less misconduct?
- Fewer allegations of misconduct and wrongdoing?
- More students who demonstrate knowledge of regulations and professional standards or norms?
- More students who report exposure to and familiarity with ethical issues and ethical deliberation skills?
- More students engaging in required RCR training and elective research integrity educational activities?
- More formal and informal discussion about responsible and ethical research on campus?
- Greater integration into graduate curricula?
- Greater perception among students, faculty, staff of a shared institutional climate for scholarly integrity?
- More future faculty take ownership of RI/RCR education as an integral part of their scholarly responsibilities?

# Thank You!

## *Funder*

**Office of Research Integrity (ORI), Department of Health and Human Services** (Don Wright, John Galland, Loc Nguyen-Khoa)

## *Awardees*

**Columbia University** (Carlos Alonso, Jan Allen, Henry Pinkham), **Emory University** (Lisa Tedesco, Mark Risjord, Michelle Lampl, Melissa Gilstrap), **Michigan State University** (Karen Klomprens, Terry May), **Pennsylvania State University** (Henry Foley, Suzanne Adair, Eva Pell, Michelle Stickler), **University of Alabama Birmingham** (Bryan Noe, Jeffrey Engler), **University of Arizona** (Andrew Comrie, Elizabeth Boyd, Tina Tarin), **University of Wisconsin-Madison** (Martin Cadwallader, James Wells), + many others at each awardee university

*Affiliates:* **Duke Univ., Georgia Institute of Technology, Howard Univ., Marquette Univ., Northern Arizona Univ., Princeton Univ., Purdue Univ., Simmons College, Univ. of California-San Diego, Univ. of New Mexico, Univ. of North Carolina at Chapel Hill, Univ. of West Florida, Wake Forest Univ.**

*Researchers:* Carol Thrush and Brian Martinson

*Research and Analysis:* Sheila Kirby, Jeff Allum, Scott Naftel, the PSU Survey Research Center

*Others:* AAAS (Mark Frankel), the National Science Foundation, prior CGS RCR awardees & affiliates

