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There are problems to be overcome: negative faculty attitudes toward compliance with regulations, the entrenched reward system for hyper-productive individuals and aggressive research groups, and the opprobrium of being known as a whistle-blower. The leadership must provide convincing assurances that fine work will be rewarded and that error and fraud will both be weeded out and corrected. Faculty members should be rewarded for the quality of their work rather than for the length of their bibliographies. Administrators can limit the growth of laboratories to a size in which trainees can be adequately supervised by exercising proper control of space and personnel resources. ...The integrity and good judgment of the administration in dealing with its faculty, department chairs, and the public sets a standard for the integrity of the faculty and trainees.<sup>29</sup>



Research Ethics, Due Process, and Common Sense Paul J. Friedman JAMA, Oct. 7, 1988–Vol 260, No.13







#### **Committee on Responsible Science**

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National Center for Professional & Research Ethics Fostering Integrity in Research







These trends are changing the research environment and creating new challenges for fostering integrity.

Fostering Integrity in Research

## Integrity of Research: Core Values?

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### **Chapter 9: Best Practices**

#### For all involved parties:

- 1. Research institutions
- Individual researchers 2.
- 3. Journals
- 4. Research Sponsors
- 5. Scientific Societies

Addresses relationships between, among components



BOX 9-1 Best Practices Checklist for Researchers

BOX 9-3 Best Practices Checklist for Journals

es Checklist for l

BOX 9-2 Best Practices Checklist for Res

rity and Institutional Management strate that fostering research integrity is a central pris

ain high standards in own work.

Bex 9-4: Reveared



## Framework: Disciplinary Authorship Standards

- Contributions defined: design, conduct, data analysis and drafting for intellectual content, etc.
- All authors approve final manuscript,
- Identify author(s) responsible for entire work, require disclosure of roles,
- Unacceptable: gift/honorary, coercive, and ghost authorship,
- Developed by leading societies and/or journals

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# Detrimental Research Practices ("DRPs")

Authorship misrepresentation

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- Not retaining or making available data, code, or other significant information
- Misleading statistical analysis
- Neglectful or exploitative supervision in research
- Inadequate institutional policies, responses
- Irresponsible publication practices by journal editors, peer reviewers

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Cognitive Biases "[You] are the easiest person to fool. So you have to be very careful about that. After you've not fooled yourself, it's easy not to fool other scientists..."



Richard Feynman, 1974











We are each always individually responsible for our own actions.



Consider the environment. We know that people are influenced by the choices of those *around* them.





























	Temptation	Example:
	Rationalization	We can always justify improper actions to
Career	Ambition	ourselves
TRAGEDIES	Group, authority pressure	Think about a graduate student who is about to submit a paper for publication that will determine job prospects.
	Entitlement	▲ Experiments to complete
	Deception	O Limited time to repeat and iterate
	Incrementalism	Believes the research is good and important work
	Embarrassment	Data <i>almost</i> tell the best story
	Stupid Systems	





1992

"The argument that science must be regulating itself pretty well because it is making progress is far from compelling; perhaps progress would be twice or four times as fast with greater 'scrupulosity.'"



On Misunderstanding Scientific Misconduct Paul J. Friedman Knowledge: Creation, Diffusion, Utilization. vol. 14 No. 2, December 1992 153-156



