



National Institute of  
Environmental Health Sciences

# Balancing Transparency and Security – Ethical Considerations

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# What is Transparency?

## **Definition of *transparent*, Merriam-Webster**

Having the property of [transmitting](#) light without appreciable scattering so that bodies lying beyond are seen clearly : [PELLUCID](#)

Allowing the passage of a specified form of radiation (such as X-rays or ultraviolet light)

Fine or sheer enough to be seen through : [DIAPHANOUS](#)

Free from pretense or deceit : [FRANK](#)

Easily detected or seen through : [OBVIOUS](#)

Readily understood

**Characterized by visibility or accessibility of information especially concerning business practices**

# Sharing of Information

- Details of scientific projects, proposed, in process, or completed
  - Data, results, analyses, interpretations
  - Materials, methods, assumptions
  - Facilities, personnel, equipment, funding, financial interests
- Details of peer review deliberations for grant review or journal peer review
- Intelligence used in peer review decisions
- Processes for making peer review decisions

# Transparency to Whom?

- Peer reviewers at funding agencies, journals
- Scientific public, through publication in journals, pre-print servers, presentations at meetings, other outlets
- Other stakeholders, e.g. public health officials, national defense community, police, pharmaceutical or biotech companies
- General public through press conferences, community engagement, etc.

**Note: different audiences may have different informational needs or expectations**

# For Transparency

- Transparency promotes openness and honesty, which are part of the ethos of science
- Transparency is essential for peer review, reproducibility, criticism, scientific debate, objectivity, scientific progress
- Transparency promotes accountability and trust
- Transparency benefits the public
- Restrictions on transparency can undermine freedom of expression which is part of the ethos of science and a basic human right

# Against Transparency

- Transparency could cause harm to public health, society, the environment, or national or international security
- Transparency could violate the confidentiality of peer review
- Transparency could disrupt ongoing research and jeopardize scientific priority
- Transparency could violate restrictions on the release of propriety information
- Transparency of could violate restrictions on classified information

# Burden of Proof

- Given the importance of disclosure for science and society, the ethical burden of proof should be on those who are proposing restrictions on disclosure.

# Benefit/Harm

- What are the possible benefits and harms of disclosure?
- How likely are these benefits/harms to occur?
- Can we reliably and accurately estimate probabilities?
- What evidence do we have?
- How should we make decisions when faced with uncertain outcomes? E.g. risk of a pandemic caused by accidental release of a pathogen or bioterrorism



# Peer Review

- How important is confidentiality to peer review? [It is important for reviewers, to protect them from retaliation and promote candor and for reviewees to protect their research]
- Will disclosure have a negative impact on current or future peer review processes?
- What logistical issues are involved in disclosing peer review deliberations?

# Ongoing Research

- Will transparency disrupt ongoing research or jeopardize scientific priority? [Note: this may not be the case if research is completed.]
- Are the benefits of transparency important enough to disrupt research or harm careers?

# Proprietary Information

- Are the benefits of disclosure great enough to justify violations of restrictions on proprietary information?
- Will the owners of the proprietary information (e.g. companies) agree to disclosure?

# Classified Information

- Will the government agree to release classified information?
- Are the benefits of disclosure great enough to justify violations of restrictions on classified information?

# Options

- Full disclosure
- No disclosure—e.g. classified research
- Partial disclosure
  - Not sharing all the details on scientific publications
  - Publishing in technical journals not likely to be read by journals or the general public
  - Sharing information with select audiences
  - Sharing of peer review comments without naming authors
  - Informing the public about the overall results of research and its significance, but not sharing the details with the public

Questions?