Coalface Governance: Fostering Daily Compliance in Laboratories

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GOVERNANCE OF DUAL USE RESEARCH IN THE LIFE SCIENCES: ADVANCING GLOBAL CONSENSUS ON RESEARCH OVERSIGHT
Compliance in Academic Labs*

- Researchers:
  - Experience compliance requests as intrusions and impediments to their work (Evans 2014, Gray & Silbey 2014, Smith-Doerr & Vardi 2015, Silbey & Ewick 2003)
  - Communicate safety as peripheral to research work and delegate to students and technicians (Huising & Silbey 2013)
  - Incorporate safety features into their practices when they align with efforts to control of physical matter (Bruns 2009, Sims 2005)
  - Variation in response across departments (biology versus chemistry) (Silbey 2016)

- Most violations are minor* (housekeeping) (Basbug, Cavicchi, Silbey, 2018)

- A small number of labs account for the majority of violations (Basbug, Cavicchi, Silbey, 2018)
What is Special about Academic Labs?
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**Authority**
- PIs have authority over lab. Report to peers. Collaborative governance.

**Employment Relationship**
- Rotating membership. Most members not employees. Decided by PI.

**Resources**
- Local, uncertain, cyclical

**Rules and Procedures**
- Mostly local, verbal, tacit. Org.-level rules secondary.

**Work and Expertise**
- Tend to collaborative and open. Large variation across labs.

**Academic**
- Hierarchical decision-making and communication structure

**Corporate or Diagnostic**
- Employees (perm or contract). Covered by HR.

- Org-level, likely less uncertain

- Org-level, written

- Privacy and security issues. Potentially less variation.
What is Special about Academic Labs?

Academic Side:
• Professional logics

Professional Bureaucracy

Administrative Side:
• Bureaucratic logic
The Professional Bureaucracy

• Implications for safety and security
  • Responsibility for legal and admin requirements?
  • Authority to enforce requirements?
  • Resources for compliance activities and equipment?
  • Authority over people working in laboratories?
Increased focus on culture as problem and solution

• Organizational culture as both the
  • problem: “lax culture”, an “insufficient culture”
    and
  • solution: “build a culture of safety”, “change the culture”

• Understood by policy makers and managers as a tool to change
  and manage behavior

• Overshadowing other levers

Consider Important Complementary Approaches

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<td>Individual Cognition:</td>
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<td>Framing choice sets and providing information.</td>
<td>Standardization of expectations via formal roles, rules, and procedures.</td>
<td>Work beyond official role to understand compliance issues and craft local, pragmatic solutions.</td>
<td>Socialization and communication through human resource practices and leadership example.</td>
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| Responsibility for Compliance: | Distributed: all actors who inform, shape, and make decisions | Techno-Legal Professions (Specialists) | Team of Employees (Generalists and Specialists) | Distributed: all members of the organization |

Lab Coats

Lab coats must be worn in this area

NOTICE
Lab Coat and Eye Protection Required

Please
Remove Lab Coats Before Entering Restroom
Bureaucracy

• Organizations have:
  • Written policies
  • Signs and reminders
  • Training
  • Inspection
  • Corrections

• Important work by professional staff
Relational Regulation

• Yet, there are numerous logistical issues related to lab coats:
  • Which suppliers?, What type of coat?, Who pays?, Who cleans?, Who replaces?

• Logistical barriers to compliance identified and solved via relational work
  • Working beyond their role, department, responsibility to solve problems that fall through the cracks

• Necessary to supplement bureaucratic means which often over such problems.
Importance of Techno-Legal Experts

• Organizations depend on EHS staff (i.e. Biosafety Officers) to ensure compliance
  • Walk researchers through record-keeping, inspections, corrections and maintain compliance (Huising & Silbey 2011, Stephens, Atkinson, & Glasner 2011)
  • Negotiate increased daily compliance by working in laboratories, generating familiarity, trust, and relations (Huising 2015)
  • Anticipate problems and identify emerging dangers

• Boots on the ground chronically underfunded and experience challenges to authority
Organizational Culture

• A conscious attempt to influence the action, language, thoughts, and feelings of employees.

• Promotion of values and norms reinforced through organizational rituals, symbols, language, stories, and other artifacts.

• Culture change is an expensive, long-term project.

• Reinforced by human resource practices and leadership example.
Responsibility for culture must be aligned with authority and resource control
TIE DYE YOUR LAB COAT FOR FREE!!!

HOSTED BY THE CHEMISTRY STUDENTS ASSOCIATION

FRIDAY, OCTOBER 24th
9am - 5pm
Chemistry E3-15
Nudge

• How to change the choice architecture?
  • Laboratory design
  • Work routine design
  • Placement of signs and message
  • Personalized reminders
Know which labs are on the tail

- Tenured
- Significant resources
- Not related to publications or lab size

Coalface Governance

• Organizational Structure – distribution of authority and resources, structure of employment – has important implications for compliance.

• Use Multiple Levers Simultaneously

• Central Role for Biological Safety Profession
I... have a confession to make, Prof. Smith.

Uh oh.

I had an accident in the lab.

Did anyone die?
No.

Is anyone going to sue us?
No.

Was any equipment permanently damaged?
No.

Did you clean it up?
Of course!

Did you get data out of it?
Actually, yes.

Can you do it again?