

# Standards in Society: A Critical Curricular Platform

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Summer Institute:  
“Standards in Society”  
Philadelphia, PA  
July 12-25, 2015

Supported by:

NIST

Drexel University

College of Arts & Sciences



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*Special thanks* to Kristen Frederick-Frost (NIST) &  
Jim Olshefsky (ASTM)



# Summer Institute:



- An immersive, critical workshop at the doctoral level...seminar, panels and field trips
- 10 Humanities, Social Science and STEM students from 7 universities (5 nations) working with 15 visiting experts
- Historical, cultural and geopolitical factors shaping standards and their use









ASTM Headquarters,  
Conshohocken, PA



1918 Manayunk Bridge,  
Philadelphia, PA



NIST Library,  
Gaithersburg, MD

Academy of Natural Sciences,  
Philadelphia PA



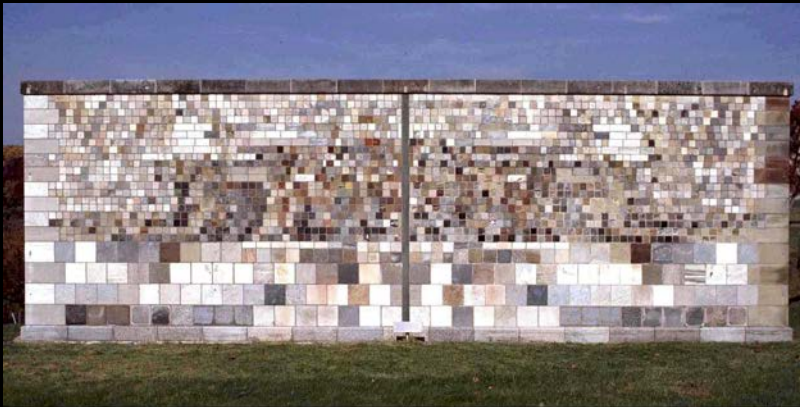
# Case #1: AD-X2 Battery Additive

- A site of controversy: Does NBS expertise guarantee neutrality?
- Who *is* an expert? NBS engineers, academic scientists, amateurs?
- Conflicting interests, “alternative” science and standards, and *suspense* in this seemingly mundane material case



# Case #2: Stone Test Wall, 1880-?

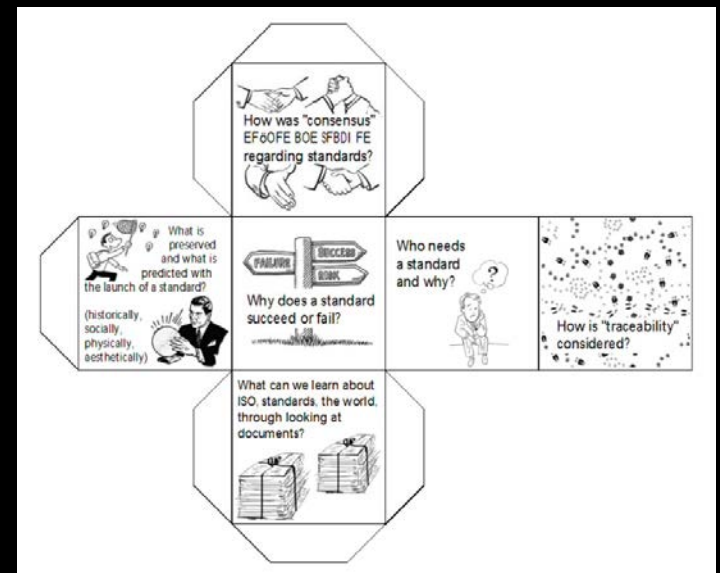
- Pathways of scientific knowledge production...*what will be standardized?*
- Pathways can close....The vital role of institutional resources
- What counts as science? As culture?  
And who decides?

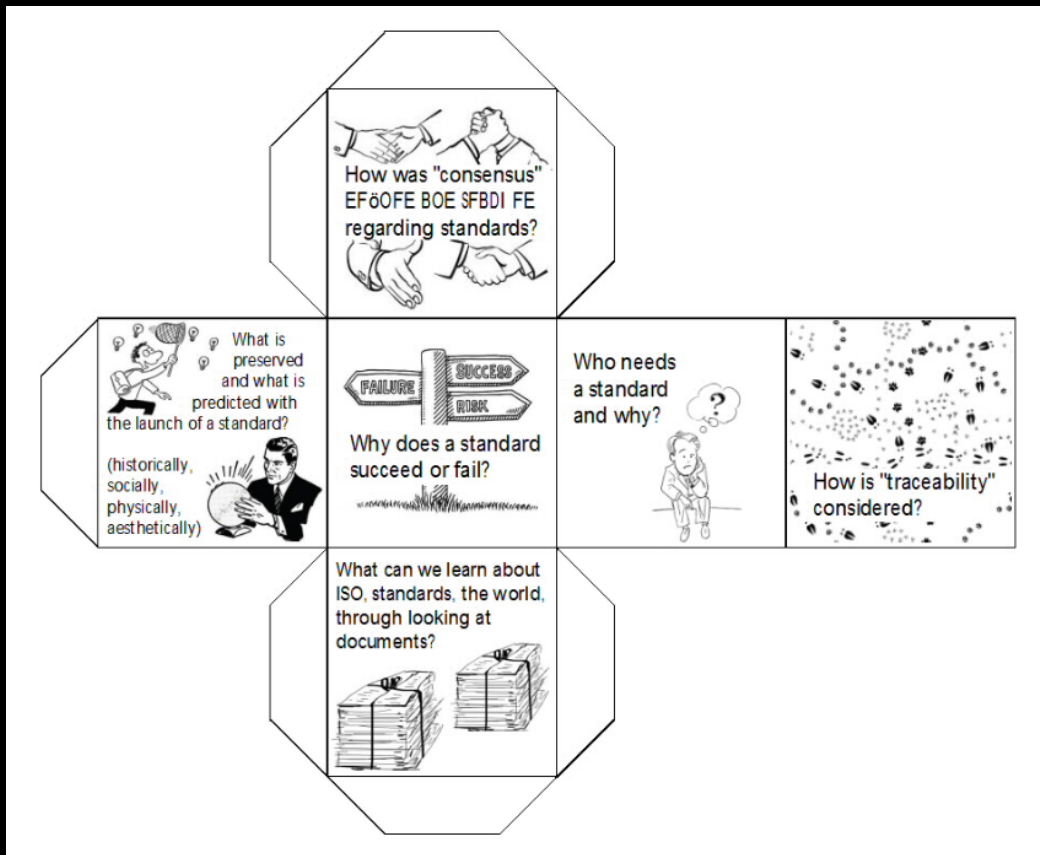




# Case #3: ISO Nano documentary standards

- The power of document: What enables documents to possess the agency of governance?
- Science for/as diplomacy: Whose consensus, and how to harmonize international differences?
- Standardization and game theory: How to play the dice?







# What the Students Said:

- “I came away from the institute with an appreciation for the process of standards development and how I can explore those processes in my research and teaching”
- “Invaluable....With the sole purpose of learning, experimenting with, and challenging all things standards, the experience impressed us with an opportunity to start new discussions on standardization.”

# Challenges and Lessons:

- An immense topic: How do we select our cases and questions to serve multiple disciplines?
- A difficult position: Critical historical analyst *or* contributing contemporary expert?...Posing questions *or* providing answers?....Can (should?) we do both?




# *Yes!:* Through the Study of Standards, a New Place for Humanities and Social Sciences in an Industrial World:

- Real-time engagement with standards production...
- Raising questions about interests and evidence, engaging with complexity...
- Leads to more reflexive standards-making, supporting a more democratic process



# Plans and Opportunities:

- “Standards In Society” syllabi (grad and undergrad) now under construction (Drexel and beyond)

 **Swedish institute for disability research**



**MISSISSIPPI STATE UNIVERSITY**

*Department of History*



**DREXEL UNIVERSITY**  
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Degrees  
Research

### SUMMER STANDARDS INSTITUTE

The National Institute of Standards and Technology (NIST) — the federal agency that “works with industry to develop and apply technology, measurements and standards” — has recently begun to fund standards-focused educational initiatives, seeking to establish curricula on the social, political and technological features of standards for secondary and post-secondary students.



The agency’s aim is better to prepare those who will one day work with standards in technical, legal or regulatory capacities. Drexel’s 2015 summer institute, “Standards in Society,” will offer 13 graduate students from Drexel and nine other universities an immersive, two-week exposure to social scientific and policy approaches, exploring the disciplinary, legal and ethical conditions under which standards are produced and deployed. Drawing on methodologies from history, science and technology studies, policy, anthropology and other disciplines, students will survey existing understandings and formulate newly critical questions about the social origins and impacts of standards.

Just as NIST itself now undertakes research on standards that inform manufacturing.

DEPARTMENT OF  
*HISTORY*  
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**HISTORY & SOCIOLOGY**  
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# Plans and Opportunities:

- “Standards In Society” syllabi (grad and undergrad) under construction
- Drexel’s new Master’s in Transnational History of Science, Technology and Environment
- “The Maintainers” conferences, grants and Special Interest Group (Soc. for the Hist. of Tech.) with Stevens Institute (Russell, Vinsel)
- Grants underway: NSF and CCK Foundation
- Participation: ANSI, ISO and others

# RESEARCH

AD-X2\*



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WARNING: DO NOT JUST ADD DIVERSITY AND STIR.

## DIRECTIONS

1. Rid yourself of the notion of a static, objective reality.
2. Confront your own positionality, put your identity at risk.
3. Question ahistorically constructed narratives.
4. Engage with individual embodied experiences and practices and their power relations.
5. Interrogate if attempts to propagate the research project should persist at all.
6. Ask yourself if the prior 5 steps are useful and just.

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