Promoting Responsible Science: Policies and Practices within the Scientific Community for Research with Dual Use Potential

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Introduction

• Building on presentation by Robin Fears and ideas/challenges that emerged from the Herrenhausen meeting

• Highlighting where behavioral and social sciences can contribute to addressing these challenges; STS relevant to all

• Presenting or proposing specific research efforts to do so
Four Challenges

• Identifying and assessing risk

• Fostering scientists engagement in security

• Promoting and sustaining a “culture of responsibility” in science

• Designing appropriate governance measures and strategies
Identifying and assessing risk

• Features of the issue: Contested, significant uncertainty, reliance on “expert” judgments

• Literature: decision science

• Particular advantages: qualitative; systematic; transparency of underlying assumptions facilitates discussion/debate

• Example: NASEM report on *Biodefense in the Age of Synthetic Biology*
Fostering scientists engagement in security

• Features of the issue: Still limited awareness, uneven acceptance, often contested, “competing catastrophes”

• Literature: “Science of Science Communication”

• Particular advantages: multidisciplinary; practical as well as normative guidance; relevant; accepted when applies to the public

• Proposal: Turn the focus, treat scientists as a “public” to understand how best to engage
Designing appropriate governance measures and strategies

- Features of the issue: rapid pace of S&T advances; inability of regulation to keep up; “governance” more than formal/legal measures

- Literature: “Anticipatory governance”

- Particular advantages: designed for these problems; being applied in some cases/settings so gaining experience; accommodates range of measures beyond formal/legal (i.e., scientific “self-governance”)

- Examples: neuroenhancement project under Horizon 2020; current efforts re gene drives and syn bio
Promoting and sustaining a “culture of responsibility” in science

- Features of the issue: currently popular remedy for this and other issues in conduct of science; includes both compliance with formal/legal measures and self-governance

- Literature: Organization studies (sociology and psychology)

- Particular advantages: relevant; practical as well as normative guidance; examples from other fields, some biosecurity work

- Examples: NASEM studies of safety in academic chemical labs; Huising and Silbey on culture in regulated bio labs
Thank you!

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