



Codes of Conduct for the Life Sciences: Past, Present, and Future

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What is a “Code of Conduct”?

- **Formal statement of values and professional practices of a group of individuals with a common focus, either an occupation, academic field, or social doctrine.**
- **Defines the expectations and directs the actions of a group.**





Examples of Codes of Conduct for the Life Sciences

- **The Nuremberg Code**
- **The Belmont Report**
- **American Society of Microbiology (ASM) Code of Conduct**
- **Code of Ethics for the Life Sciences: Somerville and Atlas – (*Science* 2005)**



Why a Code of Conduct for Dual Use Research?

- **Government cannot oversee all scientists and experiments across the nation**
- **Offers greatest opportunity for improving security of research at the level of individual scientists**
 - **Increases understanding of biosecurity**
 - **Persistent reminder of moral and ethical responsibilities**
 - **Creates a “culture of responsibility and accountability”**
- **Sets professional standards that may have legal implications**



Analysis of Representative Codes of Conduct

- **Provide an overview of trends in the development of codes**
- **Identify common and distinguishing features among different codes**
- **Identify factors that may influence a code's utility or success**



Methodology

1. Identification

- **Codes were identified based upon:**
 - **Electronic databases maintained by academic Ethics Departments and/or Ethics Societies***
 - **General Internet Searches**
 - **Other Sources:**
 - **By-laws for Professional Groups**
 - **Organizational Internet Websites**
 - **Libraries**

*** Primary source of codes for this project.**



Methodology

2. Selection

- **Codes were selected based upon:**
 - **Relevance of sponsoring organization**
 - **Specificity of content**
 - **Potential applicability to biosecurity and/or dual use Research**



Methodology

3. Classification

- **Codes were classified by:**
 - **Group (or Type)**
 - **Sponsor or Initiating Organization**
 - **Year of Initiation/Year of Revision**
 - **Context**
 - **Content (specific vs. unique elements)**



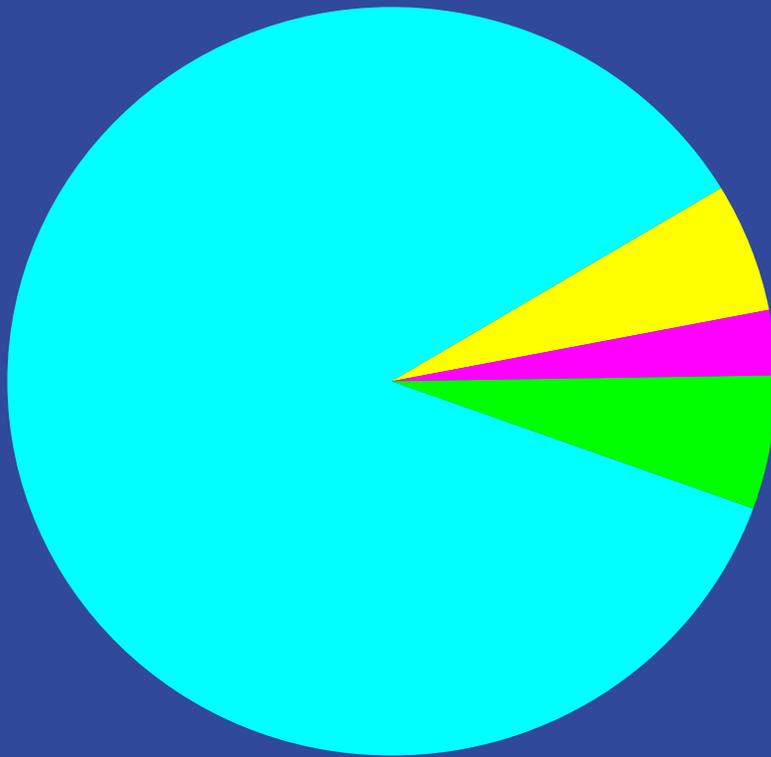
Results: Major Groups of Codes

- **Guidelines**
 - code, guidelines & principles
- **Pledge**
 - oath & pledge
- **Statement**
 - appeal, recommendation, manifesto, statement, declaration, resolution
- **Others**
 - convention, charter, canon, edict & law



Guidelines Predominate Over Other Types of Codes

**Guidelines =
60**



Statement = 4

Pledge = 2

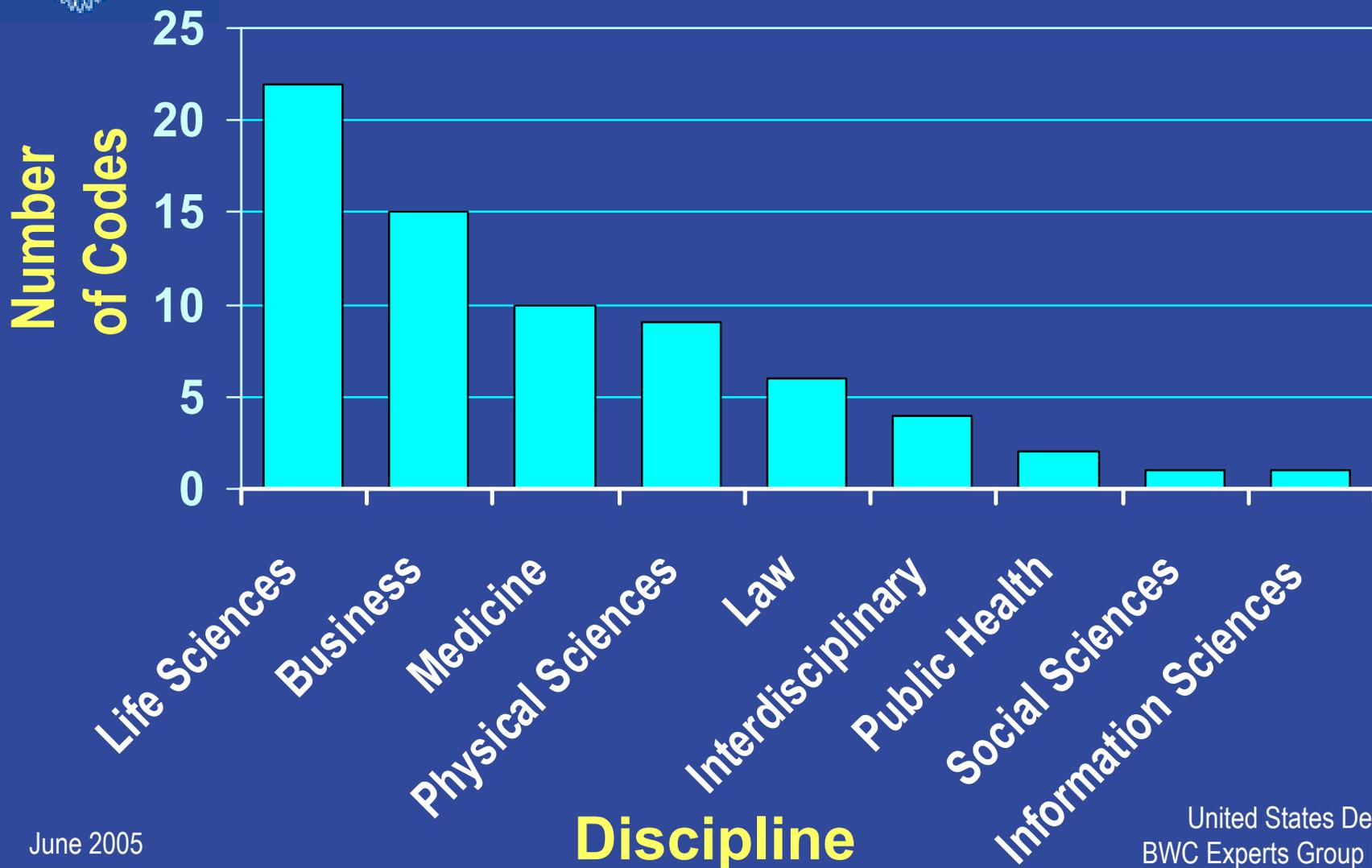
Other = 4

n = 70



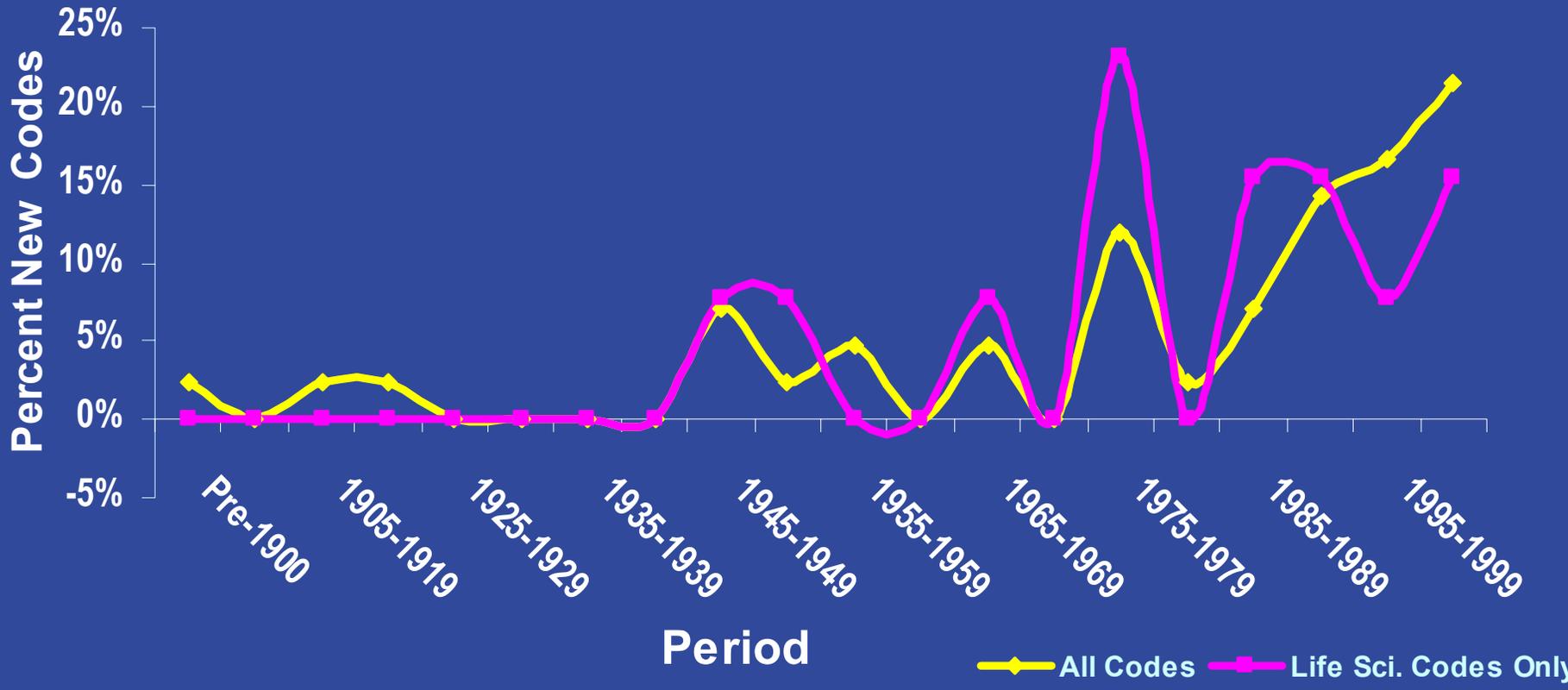
Selected Codes By Discipline

n = 70



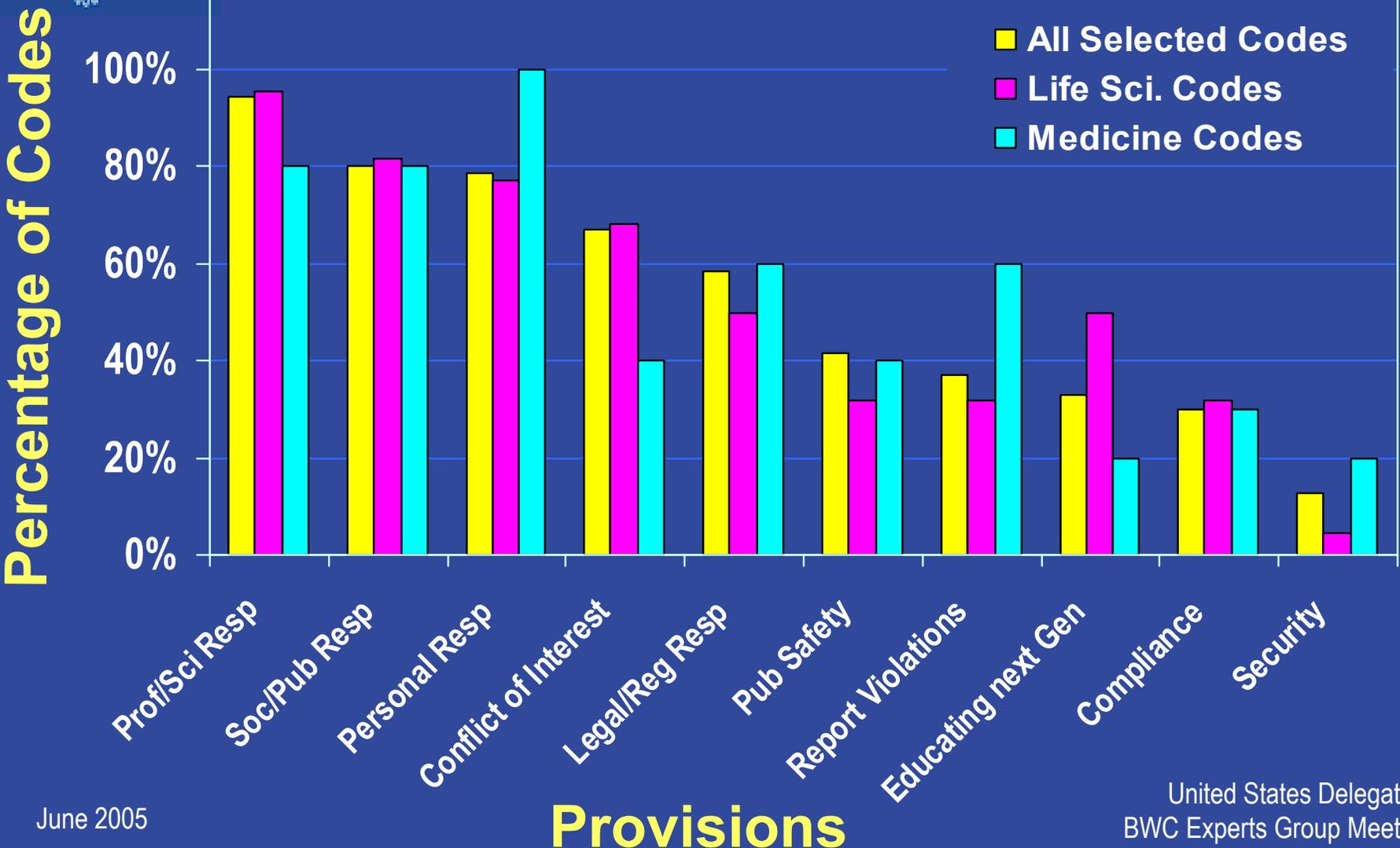


Selected Codes: Promulgation over Time (n = 70)





Selected Codes: Most Frequent Provisions (n = 70)





Findings: Social and Professional Contexts

- **Most codes addressed relationships between professionals and:**
 - **The public, environment, and/or society**
 - **Colleagues**
 - **Constituencies served**
- **Fewer codes addressed relationships with trainees**



Rare But Relevant Provisions

- **Security**
 - Preserve national security
- **Funding**
 - Fiscal responsibility
- **Training**
 - Expectations of mentors
- **Confidentiality**
 - Human research subjects



Rare But Relevant Provisions

- **Data Integrity**
 - Documentation procedures
- **Communication**
 - Communication with media
- **Reviews**
 - Protocols and misconduct charges
- **Professional Image**
 - Public awareness



Summary

In general, codes of conduct are:

- Found for most professions
- Increasing in number
- Promulgated as guidelines
- Used to train the current and future scientific community in best practices
- Living documents and subject to change