The Diffusion of Scholarship Across Disciplinary Boundaries through Data Sharing

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Overview

- Background and Motivation
- Data Source
- Methods
- Findings
- Discussion

Background

- CivicLEADS – a data archive in the context of Spencer Foundation's New Civics Initiative
- Civic education and youth civic engagement is a research area studied across many disciplines
- Importance of data sharing for the advancement of research and knowledge
- Many researchers did not know about large, existing datasets

Motivation

- To what extent are shared data being used outside their disciplines of origin?
- How do we measure this as an indicator of the impact of data sharing?
- What can we learn from the multidisciplinary use of data to improve our work as an archive?

Literature Drawn Upon

- Diffusion as the movement of information across a social group over time
- Data sharing as a research best practice and a mechanism for expanding scholarship
- Interdisciplinary research and means of measuring it, especially citation analyses

Data Sources

- 11 datasets in the CivicLEADS collection
- 228 related publications, catalogued by ICPSR's bibliographer

Methods (Overview)

- Select all datasets curated by CivicLEADS (11 to date)
- Identify disciplines of P.I.s
- Identify disciplines of authors of related publications
- Categorize disciplines based on the National Center for Education Statistics' Classification of Instructional Programs
- Determine interdisciplinarity of secondary analyses

Methods (Identifying Disciplines)

- Sources used to identify disciplines
  1. Departmental affiliation in publication
  2. Departmental affiliation on university website at time of article publication
  3. Departmental affiliation in CV at time of article publication
  4. Discipline of terminal degree (from CV or other source)
  5. Discipline of journal
  6. Other

Determining Interdisciplinarity

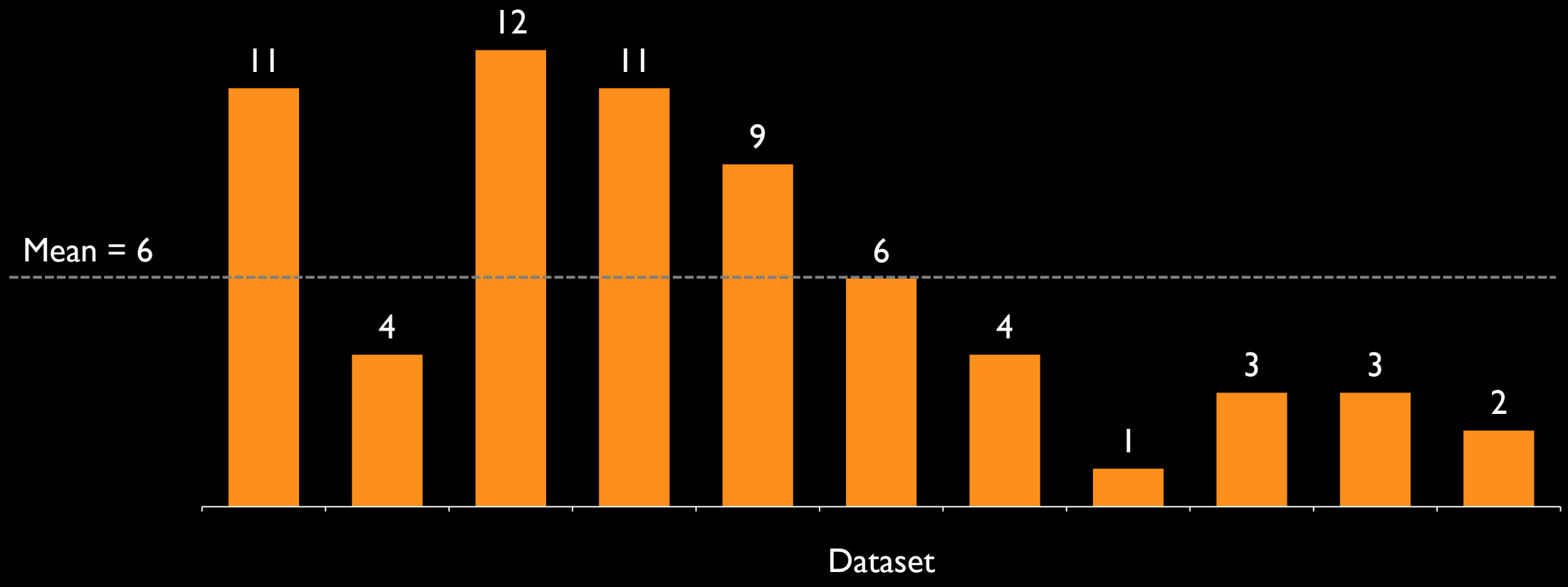
An author is considered to be from a different discipline than the P.I.(s) only if the author shares no common discipline with (any of) the P.I.(s).

Descriptive Findings

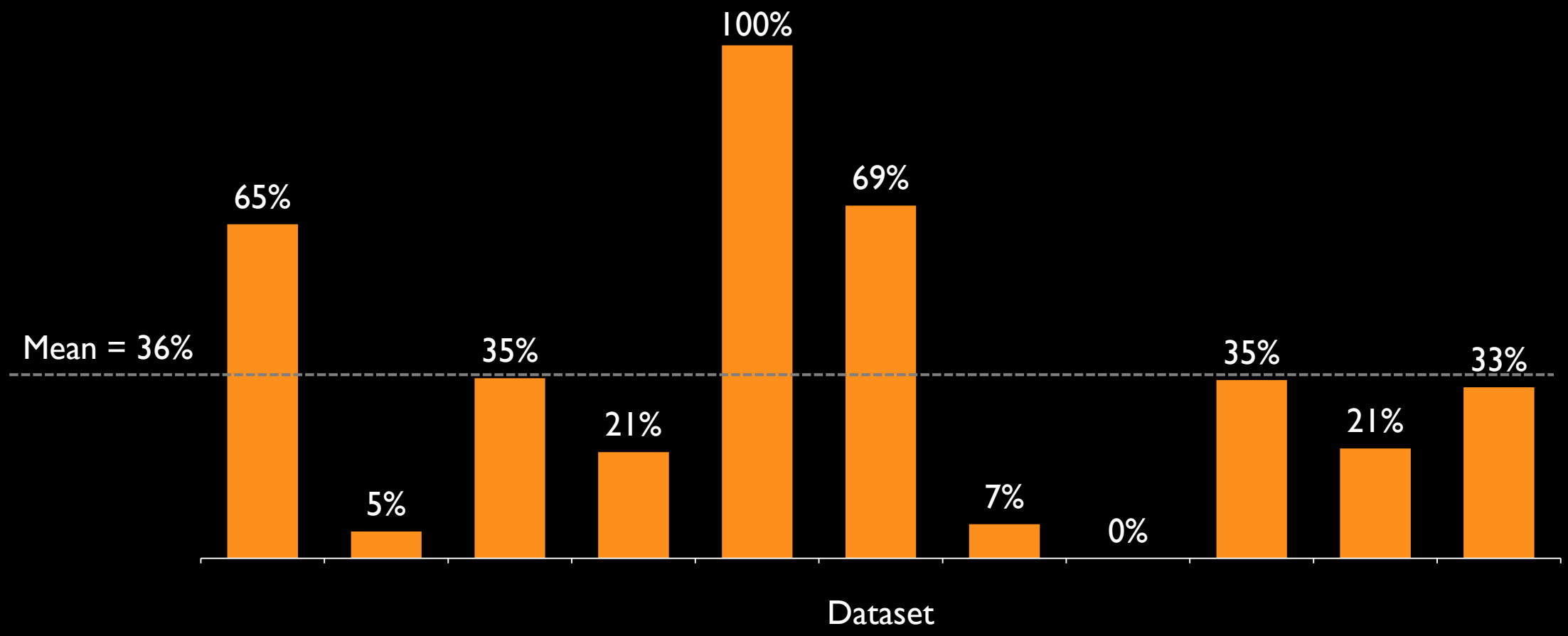
- The 11 datasets analyzed were created by one to three P.I.s from one to three disciplines.
- Education and Political Science & Government were the most common source disciplines with four and three studies, respectively.

Measure	Mean	Minimum	Maximum
Related Publications	21	2	83
Publication Authors	41	3	169

Number of Author Disciplines by Dataset



Percent of Publication Authors from a Different Discipline than the P.I.s, by Dataset



Datasets shared for longer periods of time have greater interdisciplinary diffusion.

Dataset Age Group	Number of Publication Authors	Average Number of Publication Author Disciplines	Percent of Publication Authors not from same discipline as P.I.
Pre-2016 Datasets (n=6)	386	8.8	39%
Newly-acquired Datasets (n=5)	68	2.6	19%

Study of Political Socialization: Parent-Child Pairs Based on Survey of Youth Panel and Their Offspring, 1997 – P.I.s

Political Science & Government

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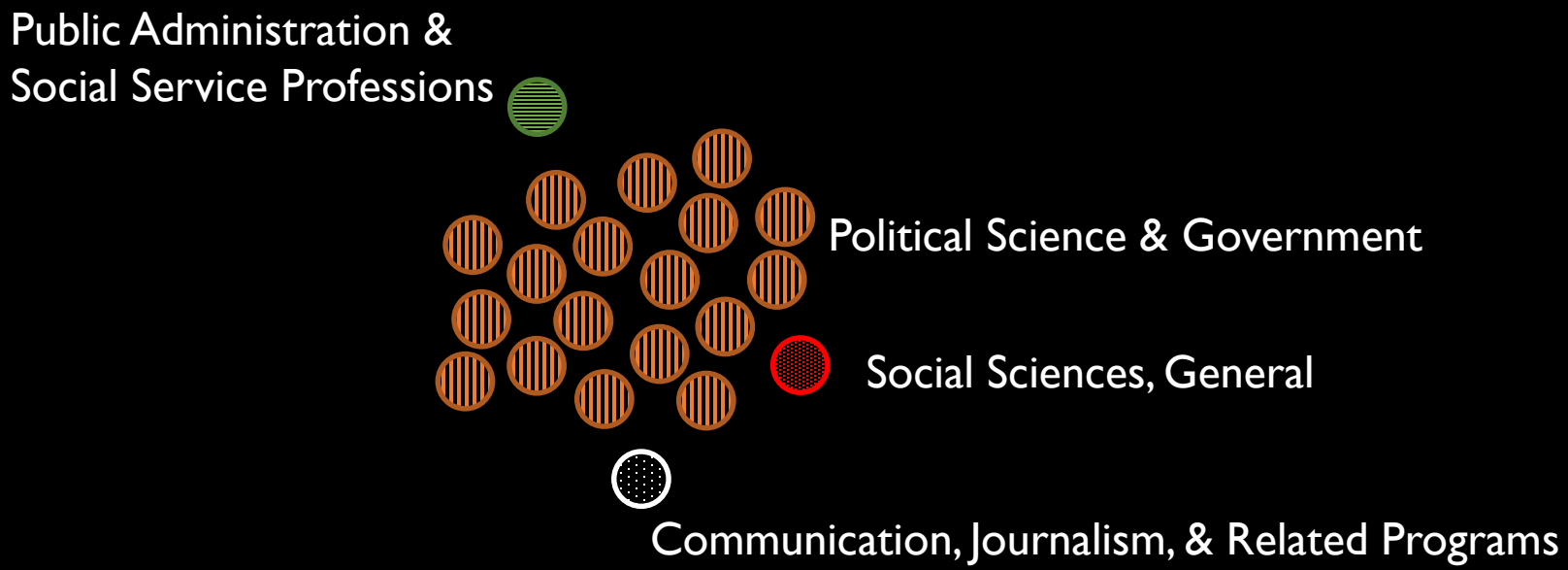
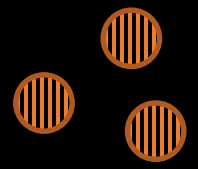


United States Citizenship, Involvement, Democracy (CID) Survey, 2006 – P.I.s



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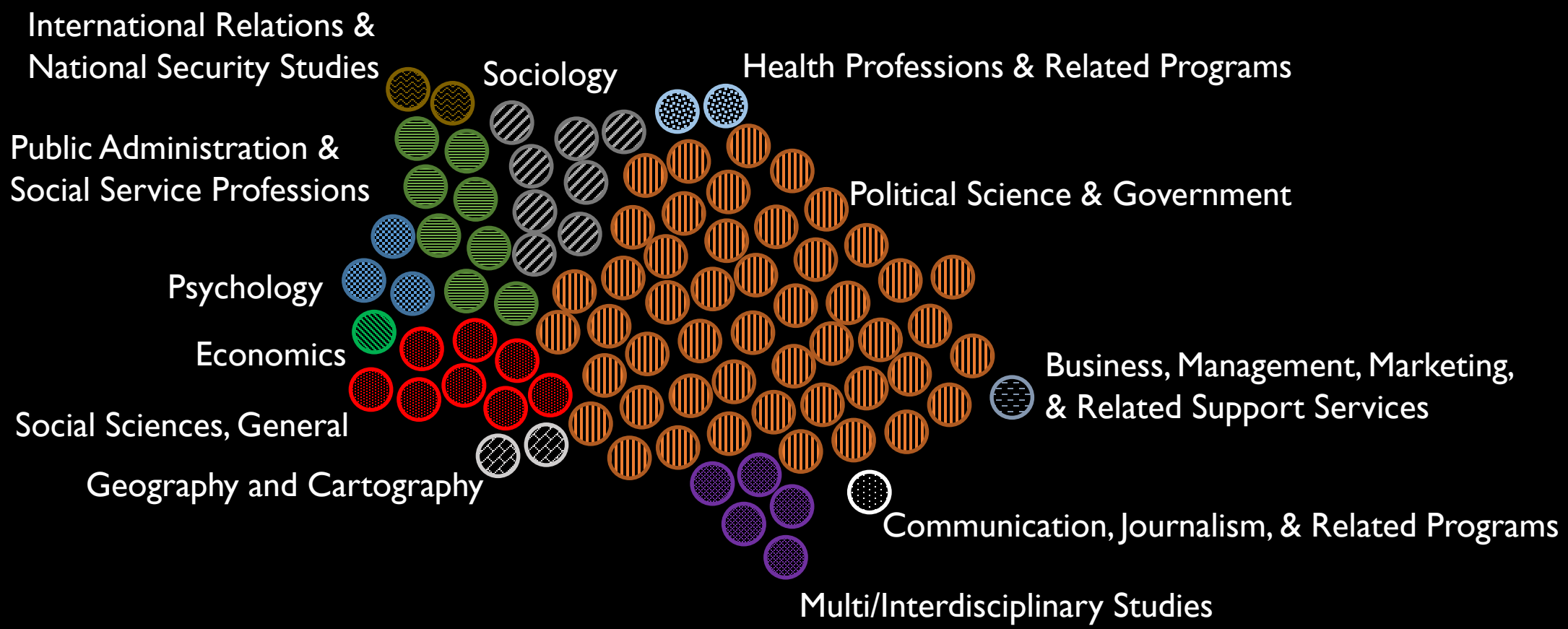

Development and Validation of the Critical Consciousness Scale, 2011 – P.I.

Psychology

Development and Validation of the Critical Consciousness Scale, 2011 – Publication Authors

Discussion

- Most datasets shared in the archive are being used outside their disciplines of origin.
- Secondary analyses of shared data were undertaken in as many as 11 disciplines outside of the P.I.s' disciplines.
- The proportion of authors publishing outside the P.I.s' disciplines varies by dataset.
- Datasets which have been shared for longer periods of time had larger proportions of interdisciplinary diffusion.

Questions for Future Research

- What factors impact interdisciplinary diffusion?
- How does diffusion occur over time?
- How does multidisciplinary collaboration impact diffusion?
- How do citations interact with data diffusion?

Implications

- Emphasizing interdisciplinary use may be helpful in encouraging P.I.s to share their data and may lead to opportunities to collaborate and innovate.
- Interdisciplinary diffusion gives P.I.s and archives an additional way to understand the impact of data sharing.
- Data archives should consider targeting data dissemination efforts outside of the disciplines of the originating dataset P.I.s
- Emphasizing interdisciplinary use may provide added motivation to encourage secondary analysis of data.
- Further research into how data are diffused across disciplines over time will provide insights into how to better facilitate data sharing across the data lifecycle.

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Questions?

Thank you!

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