

***Promoting Digital Scholarship:
What do Scholars Do?
What do Scholars Need?***

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Assessing Scholars' Behavior

- Motivation for assessment
- Understanding the research process
- Strategies to bring new functionality & coherence to the research environment: partnerships, services, systems

Late 20th Century: The Diffuse Library

“With the incorporation of **distributed technologies** and more **open models**, the library has the potential to become more involved at all stages, and in all contexts, of knowledge creation, dissemination, and use. Rather than being defined by its collections or the services that support them, the library can become a **diffuse agent within the scholarly community.**”

Lougee, CLIR, 2002

21st Century Trends

Publication: *from product to process*

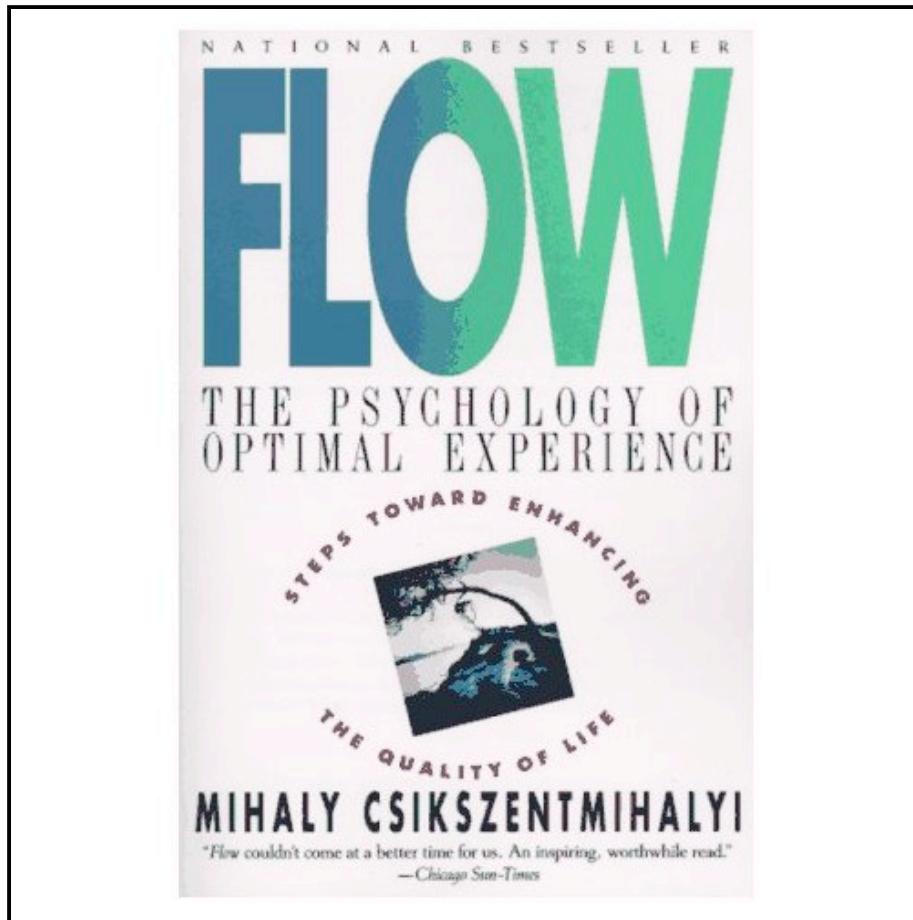
“By 2100, our current view of electronic publications as copyright-able artifacts will be viewed primarily as a historical allegiance to a pre-participatory, non-interactive, essentially dull and lifeless era of publishing - an era in which one thought of digital libraries...as a collection of linked “things” rather than articulated processes and procedures...”

Hal Berghel

“Into the flow” (process)

“Where attention is scarce, the library needs to provide services which save time, which are built around user workflow, and which are targeted and engaging...Aggregating resources may not be enough. They will be **shaped and projected into user environments** in ways that support learning and research objectives.”

Lorcan Dempsey, Ariadne, 2006



“The Flow”

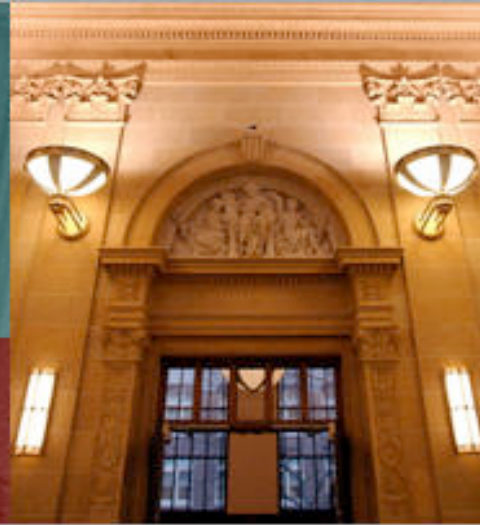
1990

The Flow is best described as the state where attention, motivation, and situation meet.

...it's about shaping the environment, optimal Information experience.

A MULTI-DIMENSIONAL FRAMEWORK FOR ACADEMIC SUPPORT

A UNIVERSITY LIBRARIES RESEARCH PROJECT
FUNDED BY THE ANDREW W. MELLON FOUNDATION



2005-2007

- Understand behavior, challenges of graduate students and faculty
- Overarching methodology, two phases: humanities & social sciences, sciences (physical, natural/life, health sciences communities)

<http://www.lib.umn.edu/about/mellon/>

<http://www.lib.umn.edu/about/scieval/>

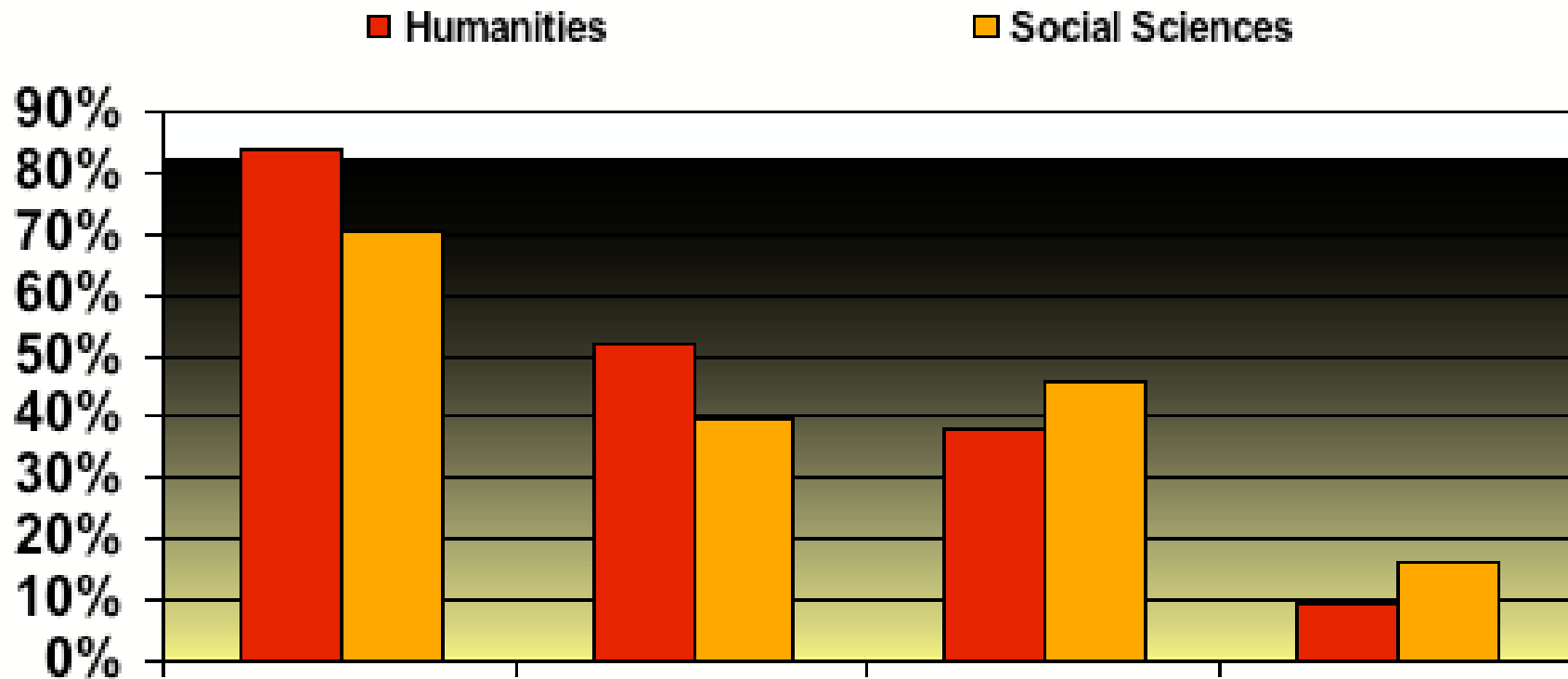
Project Strategy

- **Humanities/Social Sciences**
 - 16 Departments within the College of Liberal Arts
 - Interviews with ~ 50 faculty
 - Focus groups with graduate students
 - Survey of ~1150 faculty and graduate students (>50% response rate)
- **Sciences**
 - Interviews with ~ 50 faculty, 20 grad students in physical, natural, and health sciences
- **Community analysis (Bioethics)**

Key Question Areas

- **Research Practices:** What methodologies are used? What usage trends can be identified?
- **Interdisciplinary & Collaborative Research**
- **Resource Organization and Storage:** What materials do researchers use, collect, self-organize, and preserve?
- **Library Research:** What role do libraries currently play?
- **Effectiveness:** *Where are you challenged? How effective are your current strategies?*

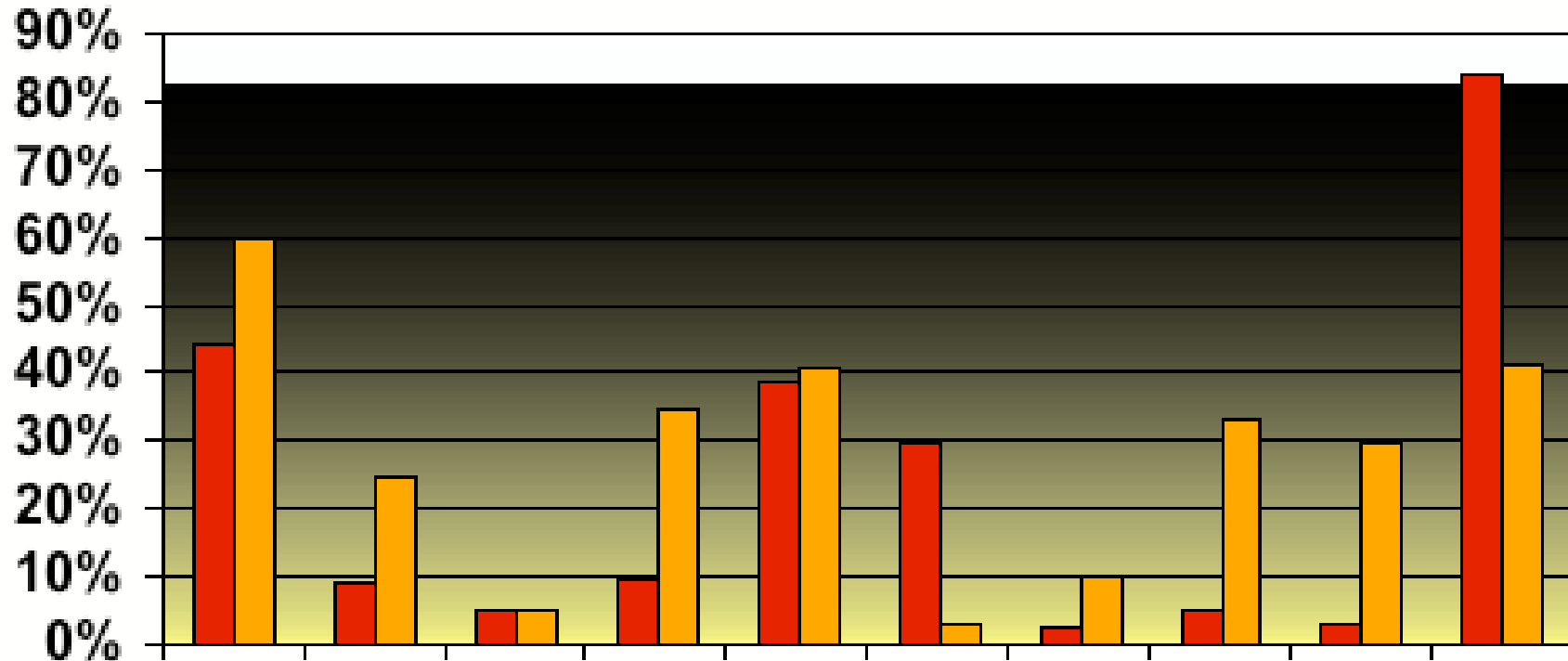
Where Researchers Work:



Research Methodologies Used:

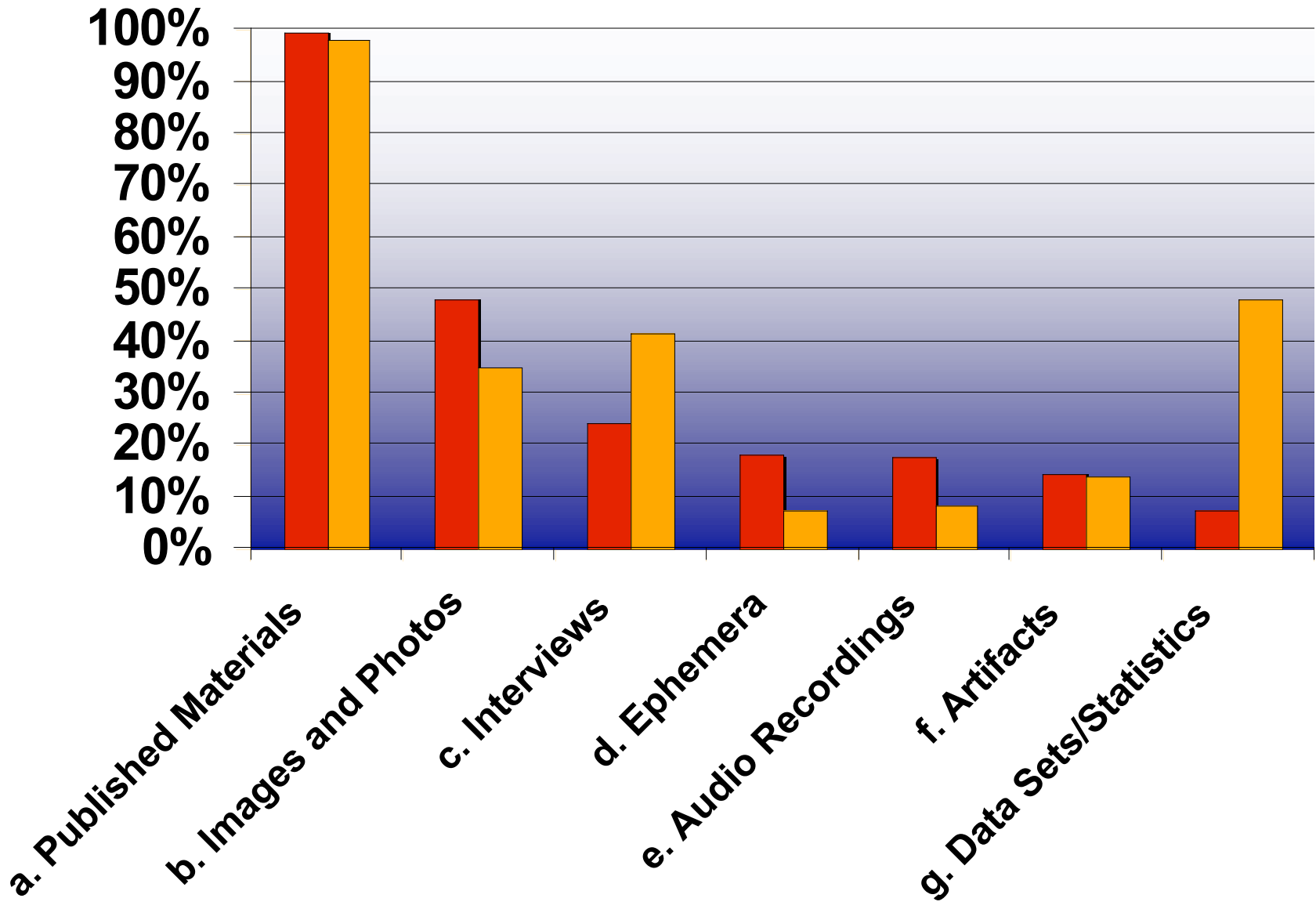
■ Humanities

■ Social Sciences



Research Materials Used:

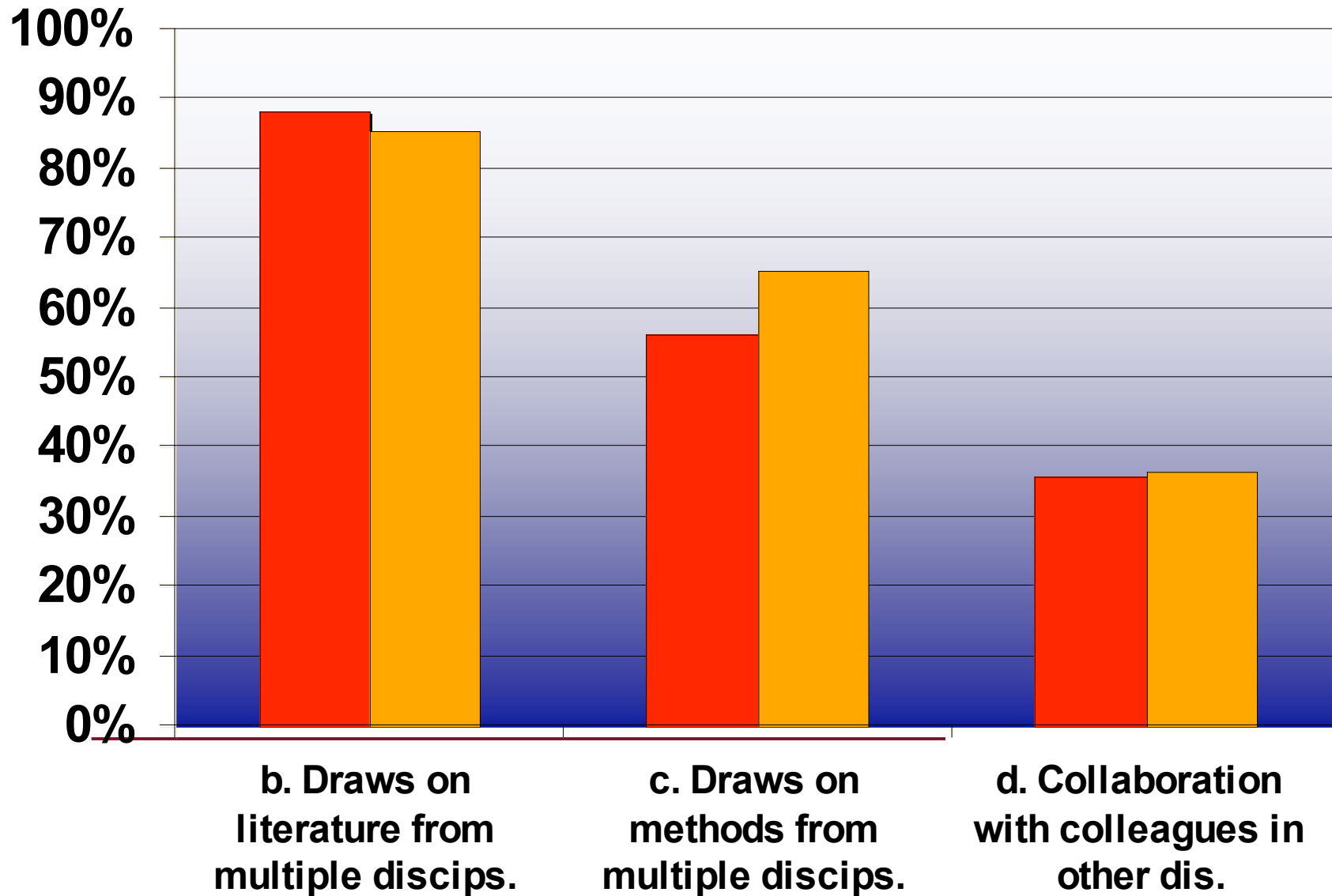
■ Humanities ■ Social Sciences



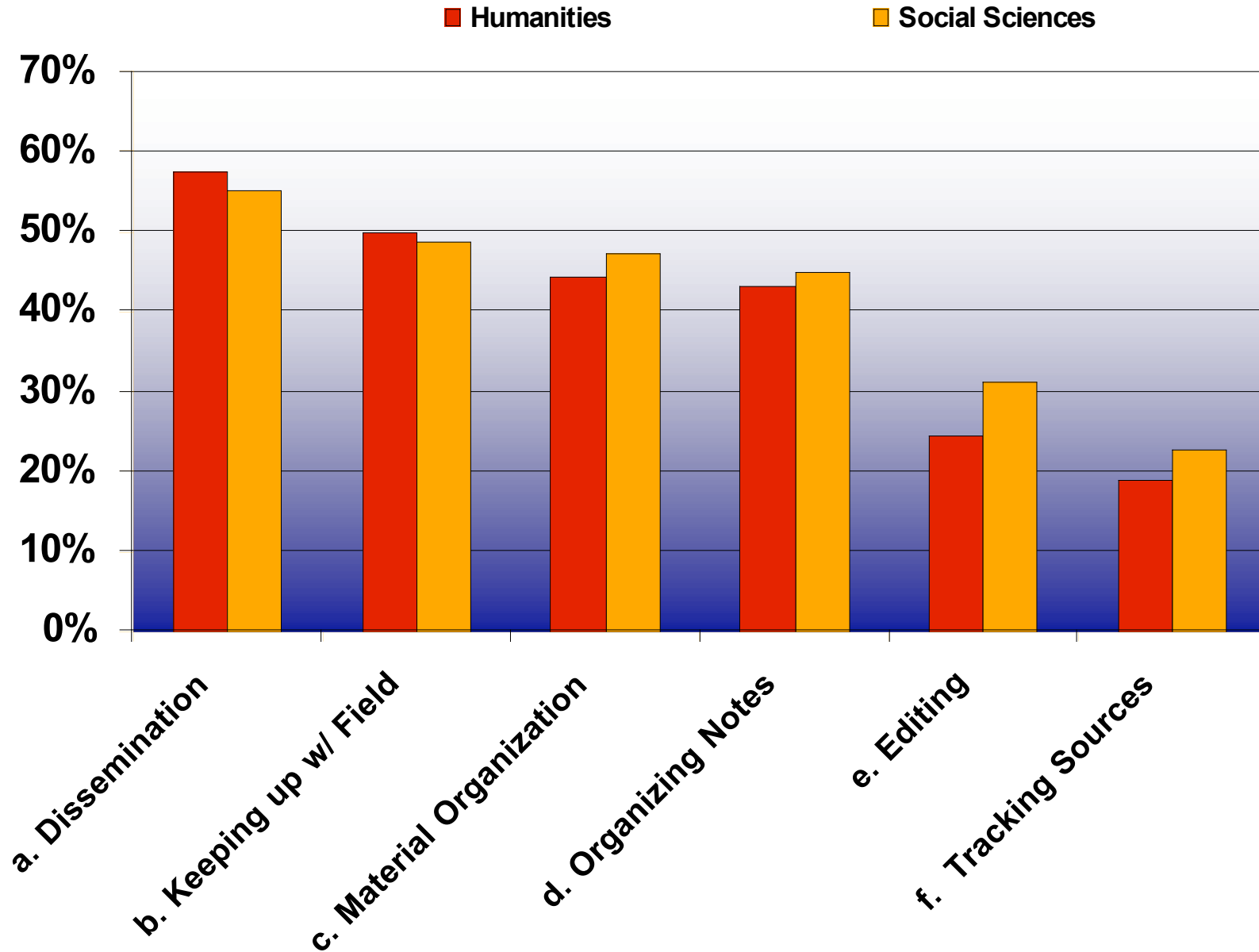
Research is Interdisciplinary b/c:

■ Humanities

■ Social Sciences



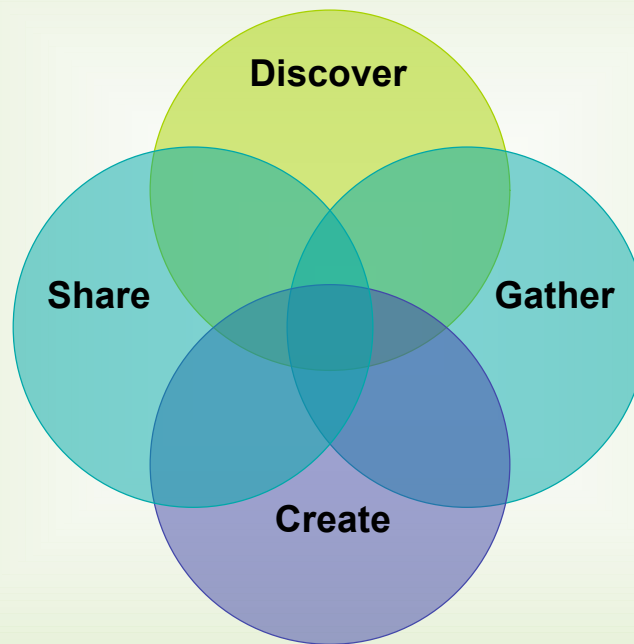
Methods Somewhat/Not Effective For:



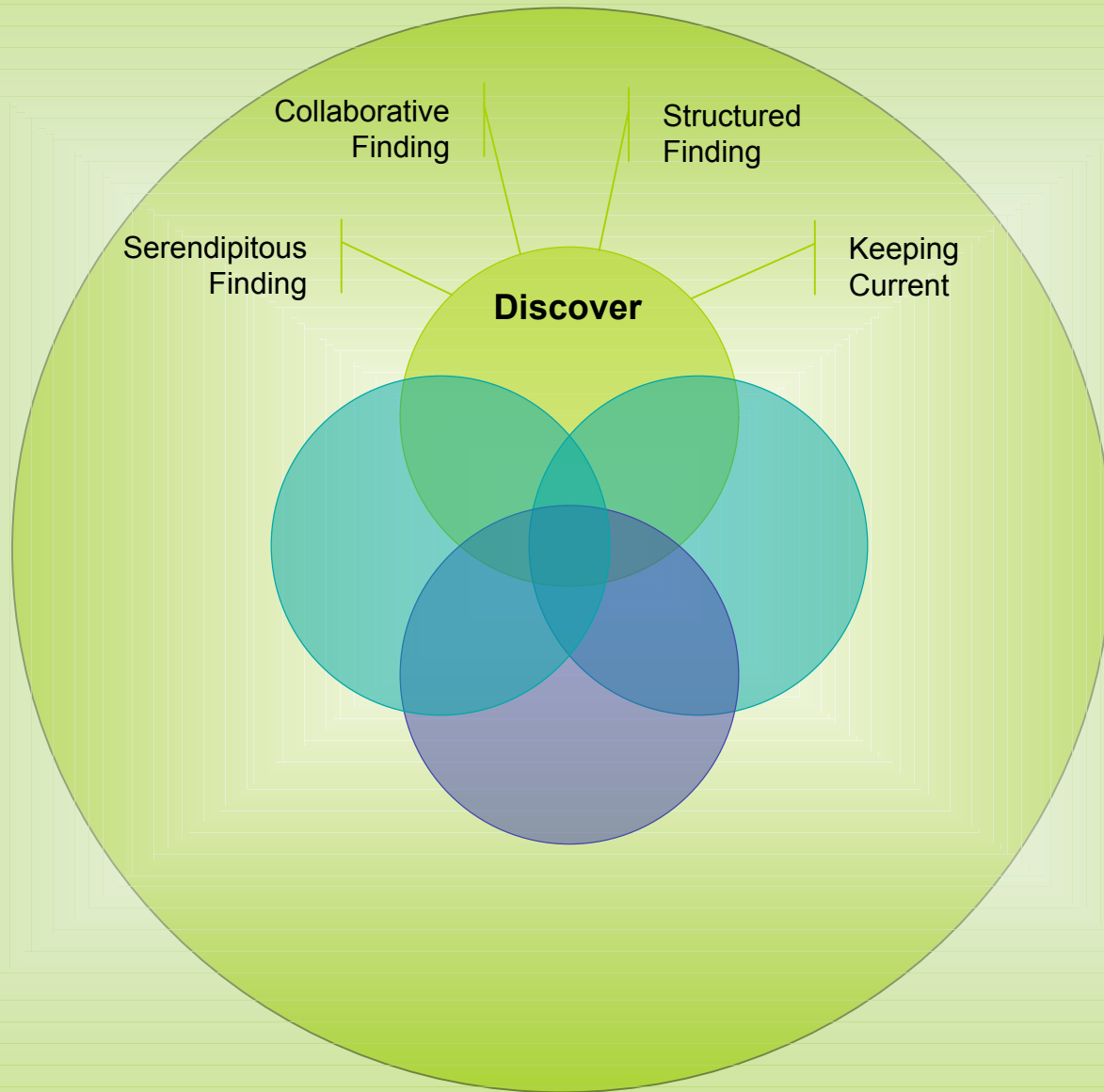
Analytical Framework

- Categorize behaviors & identify “primitives”
- Analyze behavioral data, trends, relationships
- Identify potential tools/new services
- Prototype tools/services; solicit scholar feedback (iterative process)

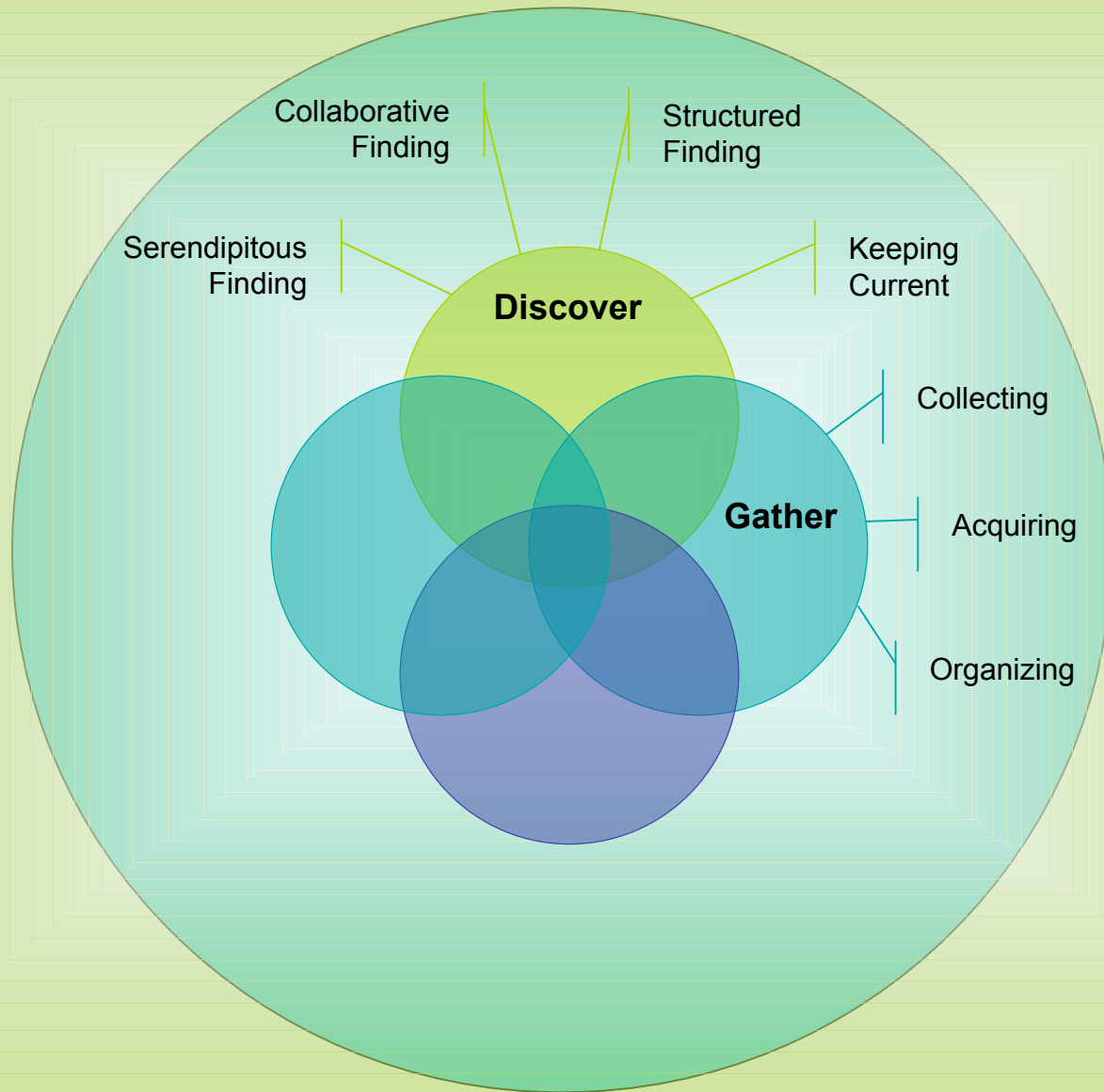
Primitives



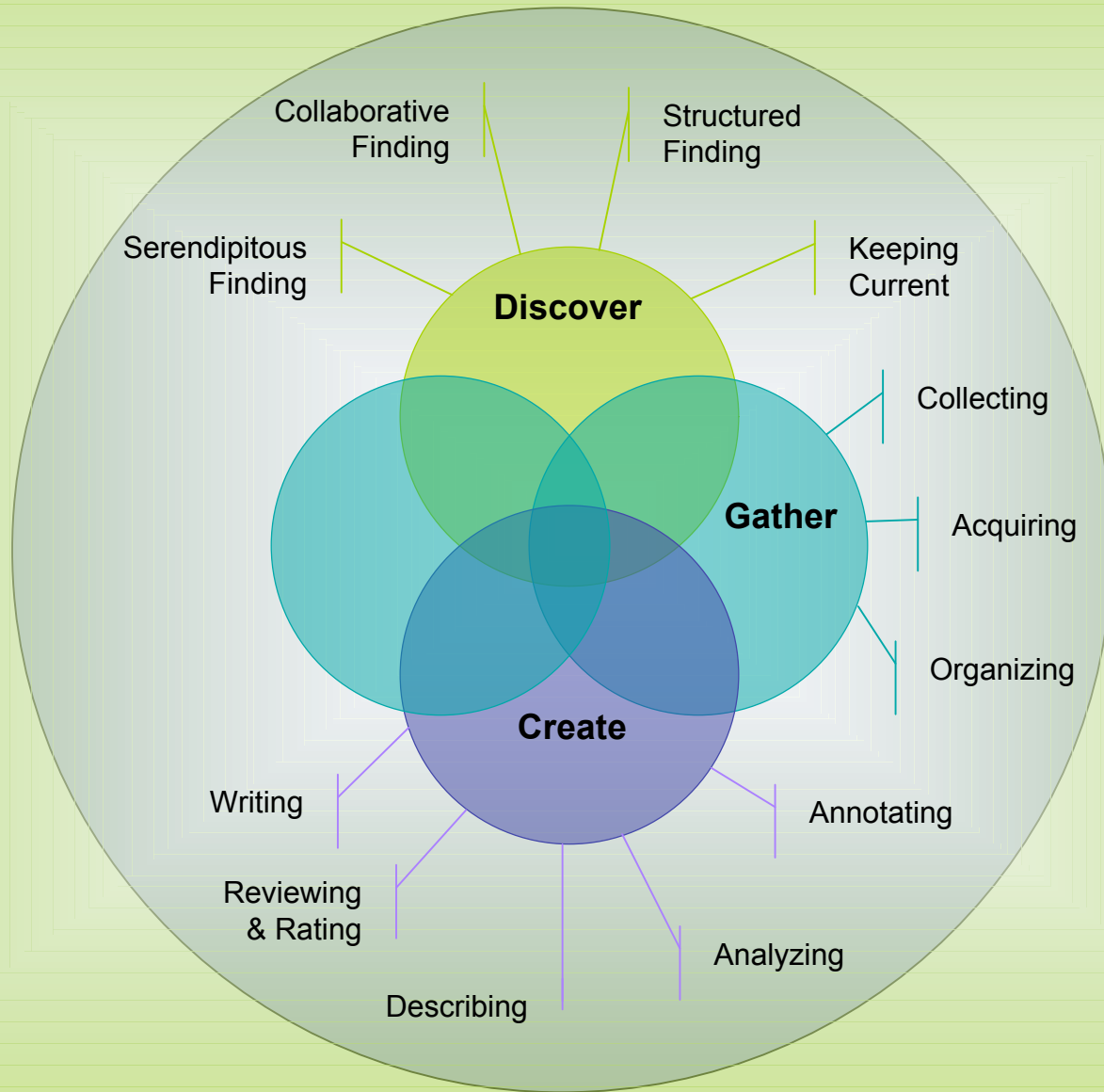
Primitives => Behaviors



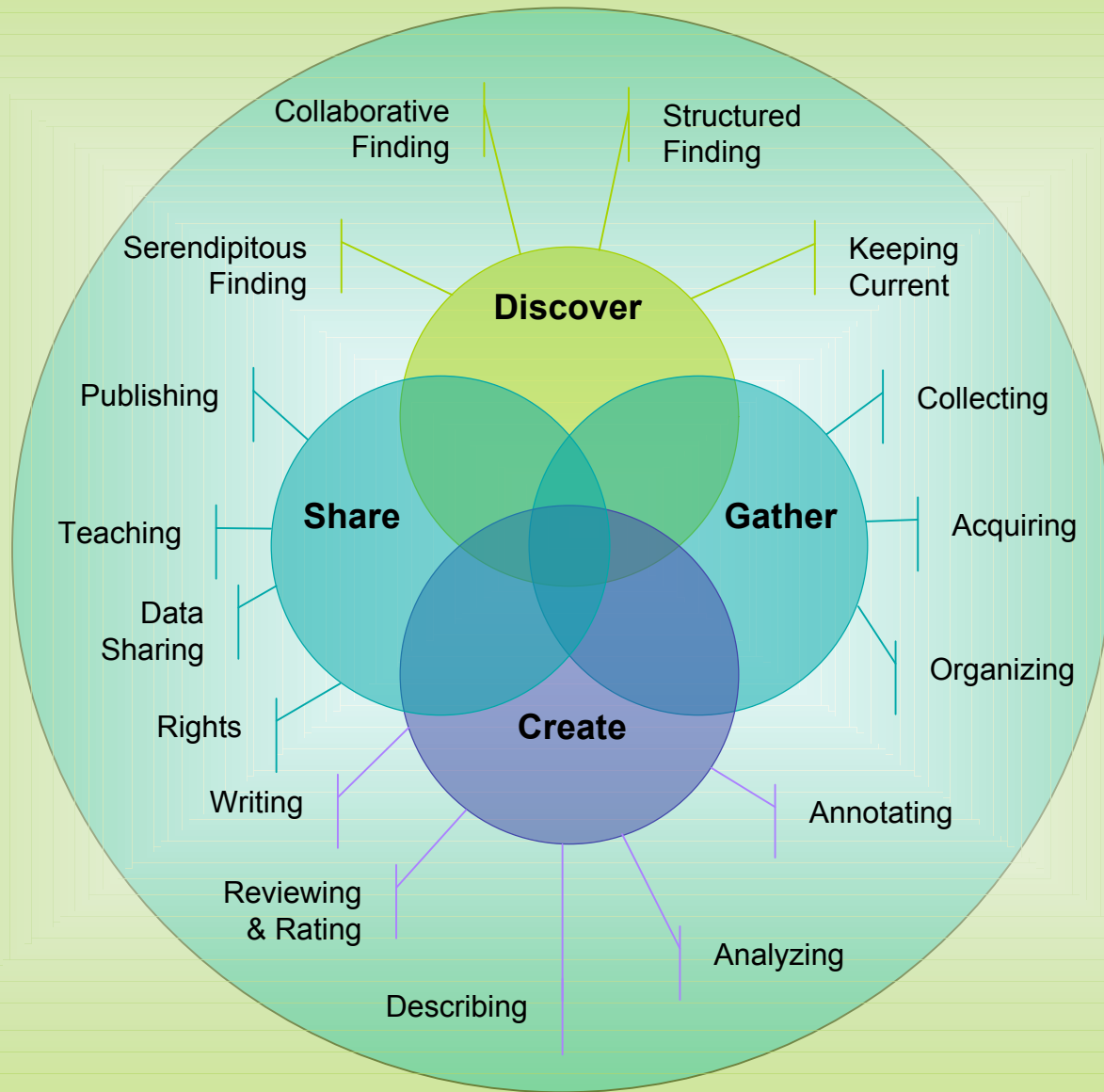
Primitives => Behaviors



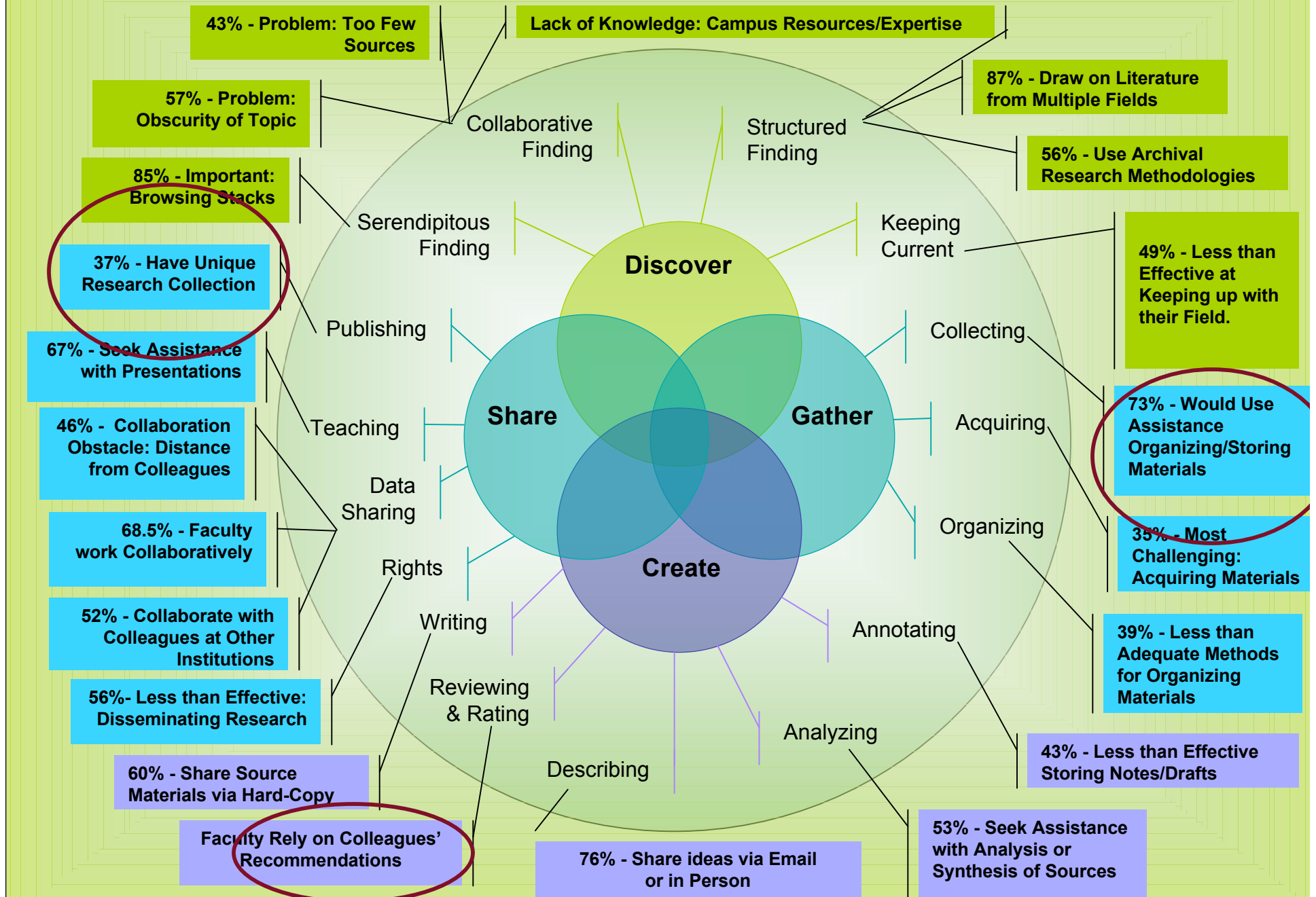
Primitives => Behaviors



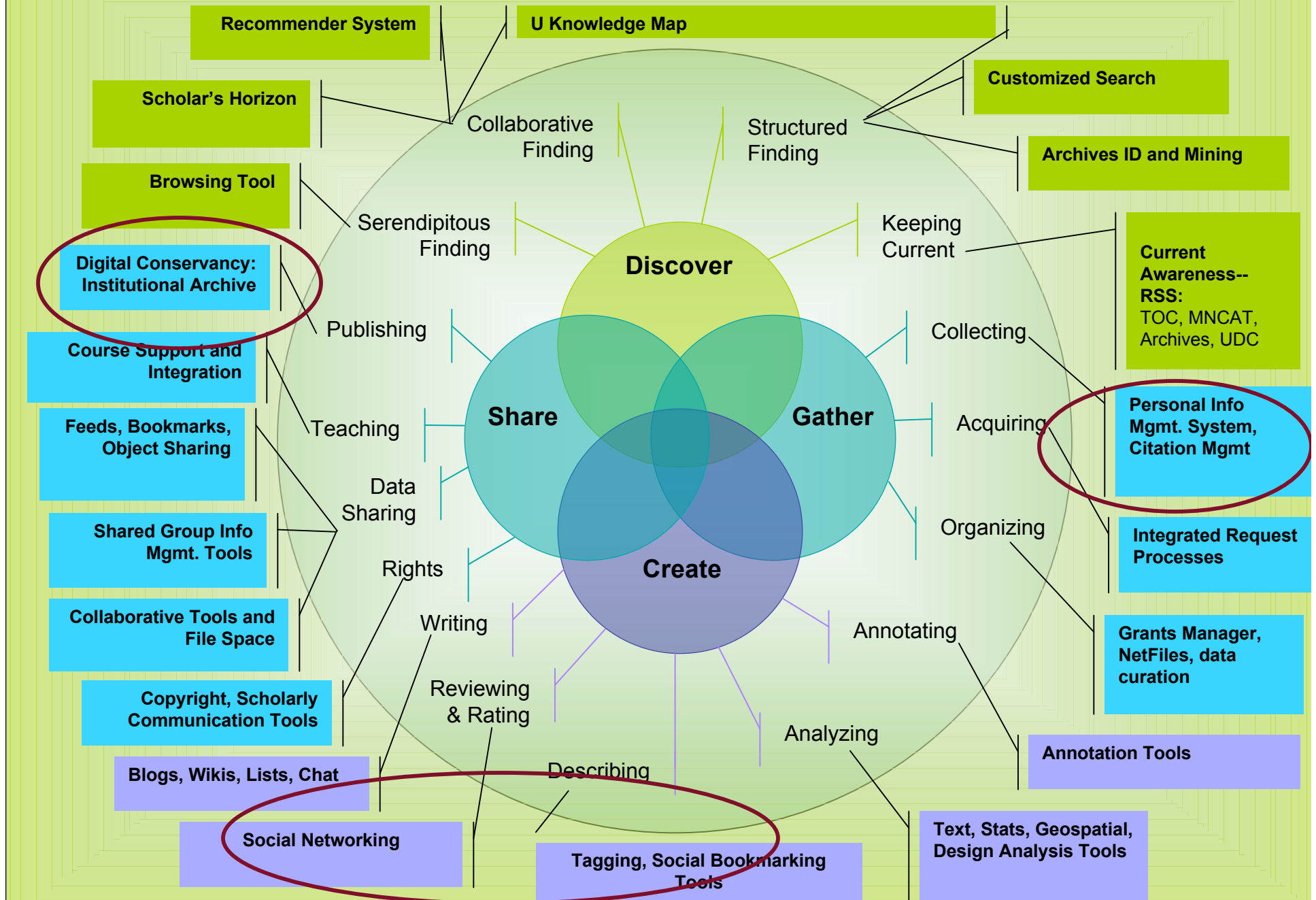
Primitives => Behaviors



SURVEY DATA RESULTS



POTENTIAL TOOLS & SERVICES



Summary of Results

- Strong interest in digital resources
 - Diversity of locations, mobile
 - Diversity of resources/media used, interdisciplinary
 - Methods learned in “traditional” contexts are not easily transferred to digital context
 - Significant problems in managing “gathered” resources
 - Increasing interest in collaboration, but challenged by time/space, distance
 - Researchers have unique collections, data to be shared
-

Sciences: Unique Issues

- Interdisciplinarity/collaborative - challenged
- Keeping up within a discipline, understanding another discipline, key figures, vocabulary
- Organizing/managing products of research
- Dependence on journals for long-term preservation
- Idiosyncratic data management, compliance concerns
- Grad students: importance of mentors/advisors (people as information sources)

Sciences: Interdisciplinary Research

Based on the **attributes** of individuals working on a common problem. People are resources.

“I work with colleagues who bring to the table what I can’t do or don’t want to do.”

[Physics:] “Interdisciplinary research is working with people who work on different wave lengths.”



- 2004 Mellon Foundation/CLIR sponsored Scholarly Communication Institute (practical ethics)
- Develop sustainable, multi-institutional, interdisciplinary community
- A Place for Bioethics community: discovering, gathering, creating, sharing

How “Social”? (from Bio-ethics)

- “Social” features moderately important:
 - Get Updates via Email/RSS about New Content (77%)
 - Get Recommendations of Resources (68%)
 - Ability to Share Your Work With your Colleagues (76%)
 - Ability to Review a Resources (79%)
 - Community Discussion Space (79%)
 - Add Resources to the Site (71%)
- Significant generational differences

Challenges & Questions

- How refine discovery tools to meet multi- and inter-disciplinary needs?
- How integrate distributed resources on campus, create opportunities to share?
- What services support/facilitate/fuel collaboration?
- How do libraries/universities support collaborative scholarship that spans institutional borders?
- How facilitate researchers migrating to new services/tools/methodologies? What are the costs of migration?

Supporting the Research Workflow

Creating optimal information experiences
and environments...

*“where attention,
motivation,
and situation meet.”*



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