The Roles of Digital Libraries as Boundary Objects Within and Across Social and Information Worlds

Adam Worrall

Doctoral Candidate

Florida State University

School of Information

Dissertation Defense   Thu 7/3/14

Background

- **Purpose**: Improve **understanding of digital library contexts**

    organizational   institutional   **social**
            cultural   collaborative

- **Social digital libraries**

    – **content + services + organization(s)**

    – **information / knowledge creation & sharing**

Background

- Calls to **consider social contexts** of DLs
- Experimental, promising **models, frameworks, methods** of study
- Support for **communities, collaboration**
- Need for **theoretical, practical research**
- **Implications**: design, use, research, theory

Framework and Approach

Social Paradigm

Social Informatics	Social Constructionism

Social Worlds Perspective	Boundary Object Theory	Theory of Information Worlds
(Strauss, 1978)	(Star & Griesemer, 1989)	(Jaeger & Burnett, 2010)

Case study approach (Yin, 2003)

LibraryThing LT and **Goodreads** GR

Research Questions

What **roles** do
LibraryThing and **Goodreads** play,
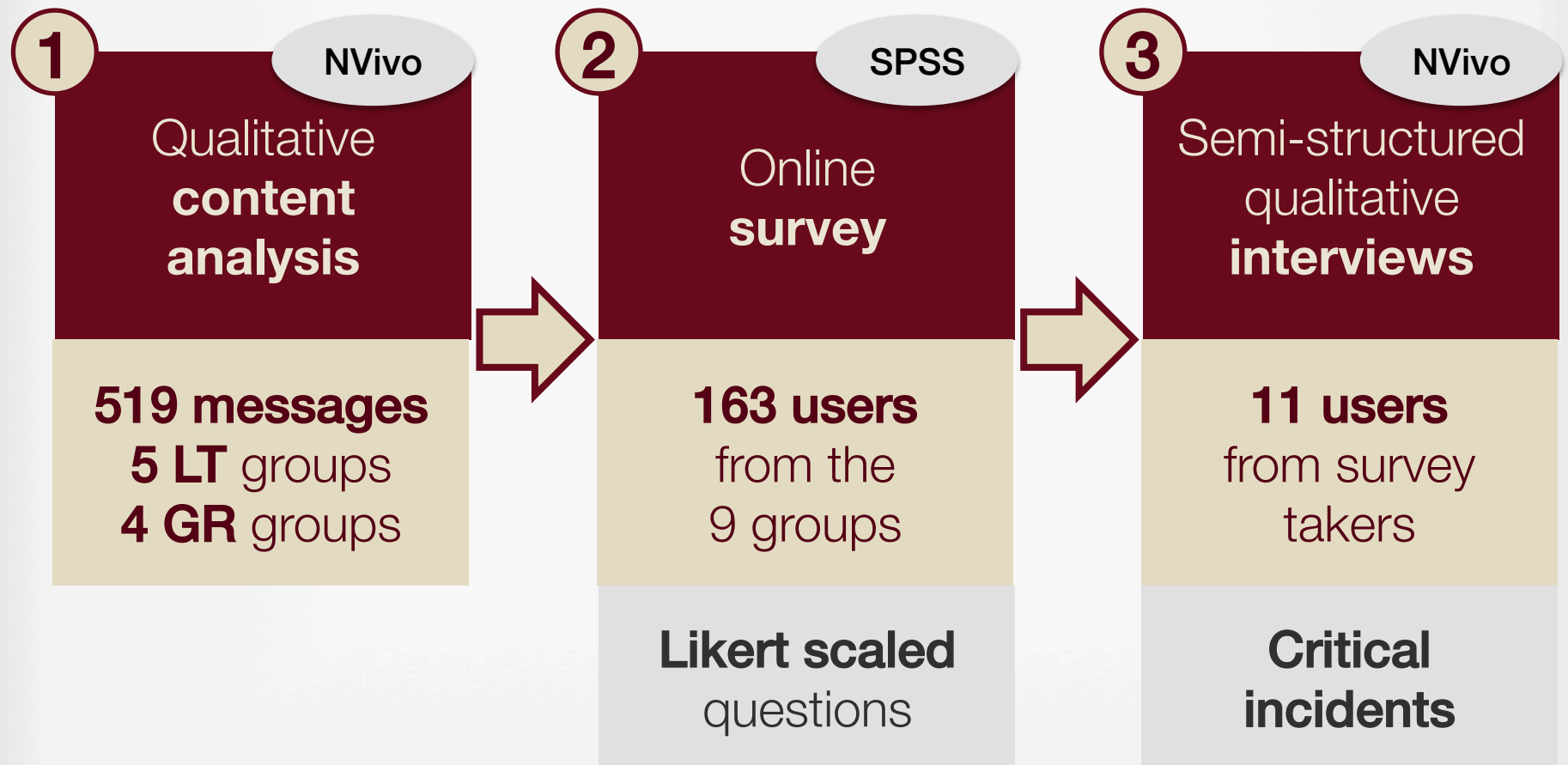as **boundary objects**, in

RQ1 **translation** and **coherence** between *existing* social & information worlds; and

RQ2 **coherence** and **convergence** of *emergent* worlds around their use?

Method

1 NVivo

Qualitative **content analysis**

519 messages
5 LT groups
4 GR groups

2 SPSS

Online **survey**

163 users
from the
9 groups

Likert scaled
questions

3 NVivo

Semi-structured qualitative **interviews**

11 users
from survey takers

Critical incidents

Findings

- **Translation**
  - Based on information needs
  - Negotiating, explaining norms / rules
    - Disruptions
  - Explaining point of view, coming to agreement
  - Getting to know each other
  - Convergence not guaranteed

- **Social norms**
  - **GR** Convergence stronger
  - New topics emerged – digressions
  - Written and unwritten; institutionalized
  - Comparative, contextual
  - Violations, conflicts

Findings

- **Social types**
  - Stronger [LT] in
  - Nicknames
    - "Sir Pterry," "DFW," "Mel," "AJ"
  - Outsiders
    - Authors (friction)
  - Individuals, each other
  - Collectives, roles
  - Self-typing

- **Information value**
  - Convergence of shared group interests, understanding
  - Coherence between individuals, groups
    - Impact of existing values
  - Occasional conflicts

8

Findings

- **Information behavior and activities**
  - Individually, collectively coherent, normative
    - Information-based activities
  - Moderators, active members
    - Encouraged normative activities, information sharing
    - Build convergent community
  - Divergences, everyday life information behavior became normative

- **Organizations**
  - Few references
  - Emergent worlds
    - Boundary-spanning individuals
    - Group transitions
    - Language used
  - Existing worlds

9

Findings

- **Sites**
  - **GR** More apt to use as emergent site
  - More topic drift **LT**
  - Emergent discussions within existing threads
  - Some information behavior in other sites
  - Different perceptions of existing, emergent communities
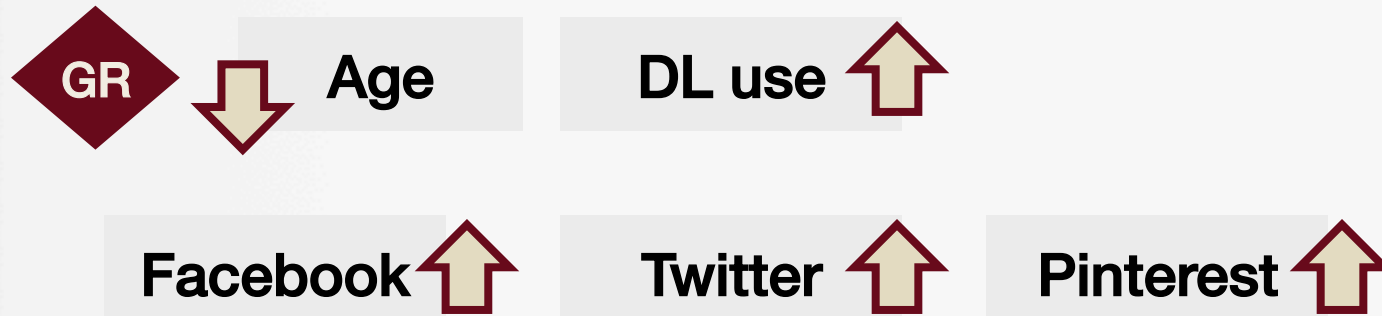
- **Technologies**
  - Linking
    - Books, authors, series
    - Within, beyond thread, group, site
  - Organizational / cataloging features
  - Other features, tech
    - Blogs
  - Role of tech in helping community convergence
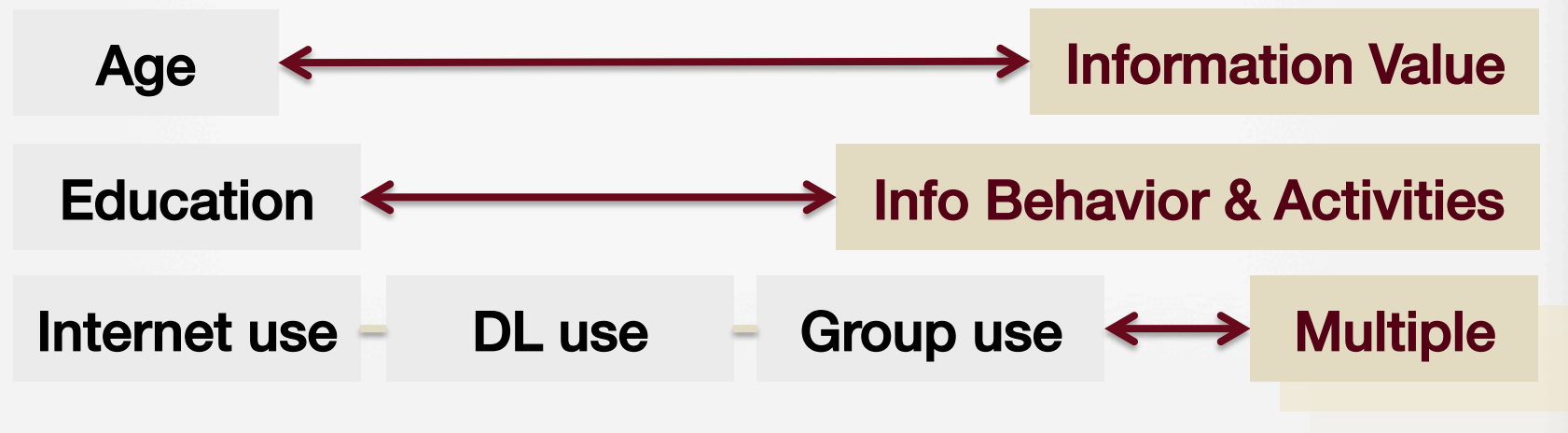
Findings

- **Open codes**
    - Other boundary objects
        - Books!
    - Boundary spanners
    - Outsiders
    - Lifecycles

Findings
Survey

GR ⬇ **Age**   **DL use** ⬆

Facebook ⬆   **Twitter** ⬆   **Pinterest** ⬆

Compared to general population, per Pew data (Duggan & Brenner, 2013)

Age ⟷ **Information Value**

Education ⟷ **Info Behavior & Activities**

Internet use – **DL use** – **Group use** ⟷ **Multiple**

Findings
Survey

Strong role in most phenomena

Phenomenon	Mean rating	Median rating
Sites	3.939	4.000
Translation	3.882	3.833
Organizations	3.824	4.000
Coherence / Convergence	3.773	3.750
Social Norms	3.736	3.800
Technologies	3.659	3.666
Info Behavior & Activities	3.620	3.750
Information Value	2.975	3.000
Social Types	2.945	3.000

Significant
(all p < 0.001)

Most correlations between phenomena were significant

Not: information value vs. translation, technologies, organizations

13

Structure

As **collection, organization**

"Fit" as boundary object, site for existing practices

Technology for full spectrum of features

Moderators, key members **establish community structure**

Groupthink?

Translation maintains convergence

Roles

Social network

Common **activities**, "pursuits"

Connections, ties, sense of community

Site for activities, sharing of **values**

"Off-topic," everyday life information behavior

Values

Divergences accepted

Not complete

"Invisible work"

Translation leads to coherence, **common ground**

Emotional, cultural, informational reasons

DL Design / Practice Implications

- **Establishing a community**
  - Highlight translation processes and resources
  - Make DL-wide norms, values clear
  - Be willing to engage in translation, negotiation
  - User profiles

- **Right features, right audience**
  - Sociotechnical approach
  - Support roles identified herein

DL Design / Practice Implications

- **Cross the streams**
  - Encourage users' boundary spanning
  - Facilitate linking, bring in related content
  - Encourage interaction about the DL, its communities
  - Work with other practitioners, researchers beyond one's home discipline

Research Implications

- **Digital libraries in context**
- **Social informatics** and **information behavior**
  - **Information values**
  - Boundaries / **boundary-centric**
- Work **across disciplines, boundaries**

Theory Implications

- **Social digital libraries**
  - Further develop, test survey instrument
  - Slight revisions to framework, instructions for coding and analysis, for edge cases

- **Boundary object theory**
  - Scope and scale in sociotechnical research
  - Remain pluralistic