# How Do Experts Use Digitized Photographs?



# Theory Development on Users and Use

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# **Presentation Elements**

- Research questions
- Study population
- Initial findings
  - Expertise
  - Modes of inquiry
  - Material/visual

#### Implications for practice



Thanks to the National Science Foundation for funding support, the Library of Congress Prints and Photographs Division, and UM doctoral student Ricardo Punzalan, who conducted phase one interviews.



# **Research Questions**

- What is the nature of visual expertise?
- What is the relative importance of visual content versus technical properties in determining use?
- What is the archival nature of digital surrogates?
- Theory development [Yeo 2008]
  - Embedding and perceiving information quality dimensions in digitized collections [information products]
  - Advancing theory of archival quality [boundary objects]

# Method of Investigation

- Participant identification
- Phase one interviews [45 min. each]
- Collection and user project contextual data
- Phase two interviews [2-1/2 hours each]
  - In-depth
  - Semi-structured
  - On-site
- Grounded theory analysis of transcripts
- Iterative assumption testing

# Please attend the poster session this afternoon for more information.

### Expertise

#### **Based on Medieval guild hierarchies, an expert is:**

"...the distinguished or brilliant journeyman, highly regarded by peers, whose judgments are uncommonly accurate and reliable, whose performance shows consummate skill and economy of effort, and who can deal effectively with rare or 'tough' cases. Also, an expert is one who has special skills or knowledge derived from extensive experience with subdomains."

R. Hoffman, et al., (1995) "Eliciting Knowledge from Experts: A Methodological Analysis," *Organizational Behavior and Human Decision Processes*, 62 (2), 129-158.

# **Expert User Categorization**

## Challenging User Categories

- Status/employment orientation
- Seriousness of purpose
- Gate counts for administration
- Motivation [Conway 1994]
  - Affiliation(s) [social group]
  - Process [inquiry method]
  - Product(s) [outcome]

#### Visually Intelligent Users

Photo-based projects



Interview Subjects [phase one categories]

- Library of Congress / Prints and Photographs
  - United States based
- Criteria
  - Significant use [18 months]
  - Tangible product



- Orientation toward visual artifacts
- Influences on decisions to use



# Findings: Self-Assessment of Knowledge

Picture Domain		P1	P2	Р3	Р4	Р5	P6	P7	Mean
Antique Photographic Processes	Picture	2	1	1	1	3	3	1	1.7
Appropriate Techniques of Chemical Analysis	Picture	1	1	1	1	1	1	1	1.0
Characterization of Commercial Photo Materials	Picture	1	2	1	2	1	1	1	<i>1.3</i>
Documentation of Physical Condition	Picture	3	1	1	2	2	1	1	1.6
Optical Perspective	Picture	2	1	1	2	1	1	1	1.3
Physical Analysis of Photographic Types	Picture	1	2	1	2	2	2	1	1.6
Mean		1.7	1.3	1.0	1.7	1.7	1.5	1.0	1.4
Image Domain									
Biography of Particular Image Makers	Image	3	3	3	3	3	3	2	2.9
Characteristics of Particular Collections	Image	3	3	2	3	3	2	1	2.4
History of Art	Image	1	1	2	2	3	2	1	1.7
History of Photographic Equipment	Image	2	3	3	2	2	2	1	2.1
History of Photography	Image	3	3	2	3	3	3	1	2.6
Social History Relevant to Image Subject	Image	2	3	3	3	3	3	1	2.6
Working Methods of Particular Artists	Image	3	3	3	3	3	3	1	2.7
Mean		2.4	2.7	2.6	2.7	2.9	2.6	1.1	2.4

Roger Bruce, "Capturing Expertise for the Evaluation of Photographs," *First Monday*, 13, (4 Aug. 2008).

W.J.T. Mitchell. "Four Fundamental Concepts of Image Science." In J. Elkins (ed.). *Visual Literacy* (Routledge, New York, 2008).

# Findings: Modes of Inquiry [phase two categories]

#### **Discovering** [visual detail] [P1, P4, P5, P7]

- V. Unknown, unseen, unappreciated
- T. Ultra high quality; camera negatives
- A. Intrinsic qualities [reliability] of record







# Findings: Modes of Inquiry [phase two categories]

#### **Storytelling** [composition] [P1, P2, P3, P5, P6]

- V. Narrative of scene's composition
- T. Derived descriptive metadata
- A. Image as authentic record





# Findings: Modes of Inquiry [phase two categories]

#### Landscaping [context] [P2, P5, P4]

- V. Geographical and temporal context
- T. Object sequencing; structural metadata
- A. Information beyond the image





# Findings: View of Digital Surrogate



# Implications for Practice: Building & Using

- Selection: Comprehensive, cohesive, collaborative
- Digitization: Masters, derivatives, and versions
- Metadata: Derived trumps applied metadata
- Interface: Beyond search to navigation
- Interface: Tools for personal information management
- Interface: Tap user knowledge
- Archival properties of digitized records
- User perspective on archival values

The New Yorker, June 25, 2007. Artist: Lee Lorenz. ID: 124060.

# The Legacy of Digitization?



"I aspired to authenticity, but I never got beyond verisimilitude."

SAA Research Forum 11 Aug 2009

#### THANK YOU FOR YOUR ATTENTION.

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