CONTENT ANALYSIS:
A vocabulary perspective

Candace Jones
Organization & Mgmt. Dept.,
Boston College
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Academy of Management, Lake Buena Vista, FL

A vocabulary perspective uses content analysis

- the system of words and their meanings commonly used by social collectives

- Vocabulary structure
  - word frequencies,
  - word-to-word relationships, and
  - word-to-example relationships

- Provides insights into
  - cultural knowledge, categories, institutional logics

- Content analysis identifies vocabularies and their meanings
  Loewnstein, Ocasio & Jones. 2012. Vocabularies and vocabulary structure, AMA Annals

In my studies, content analysis is guided by theory

- Institutional theory examines role of social environment and context on fields, organizations and people. Thus,

- Data
  - Focus on a field—medicine, architecture
  - Select influential professional journals
  - Analyze actors' writings over time
  - Examine institutional change so use longer time periods (i.e., 10 to 50 years)

- Create dictionaries
  - Since actors' meanings and cognition expected to depend on context, universal dictionaries are not congruent with theoretical perspective
  - Word meaning and usage differs, even among similar professionals

Coding- a focus on words and word structure

- ☐ What is unit of analysis
  - ◻ word, sentence, paragraph, document
  - ◻ Typically use paragraph because it is a complete thought unit

- ☐ What counts as a word?
  - ◻ Parsing: Syntactic role, word sense, stemming, compound words
  - ◻ Check for synonyms: elaborating key word (provides meaning) versus structural equivalence (can be substituted because has same pattern of elaboration)

- ☐ What words?
  - ◻ Emerges out of context and usage
  - ◻ Combine words that empirically co-occur to identify logics

- ☐ Computer aided content analysis and programs
  - ◻ MAXQDA (started with Atlas TI)
    - ◼ Designed to assess linguistic—word frequencies and relations
  - ◻ Autocoding, but also check words in context for accuracy of coding

Counting words to identifying cultural register and institutional logic

- keywords that comprise a cultural register within a time period and particular social context (Weber, 2005).

- Calculate frequency of all words in texts
  - Identify most frequent word, focusing on verbs and nouns (i.e., exclude the, and, or, but)
  - Standardize to compare word frequencies
  - Words that occur across percentage of texts
  - Verify using Cronsbach alphas or factor analysis
  - Patterns of word-to-word co-occurrences reveal culture or logic
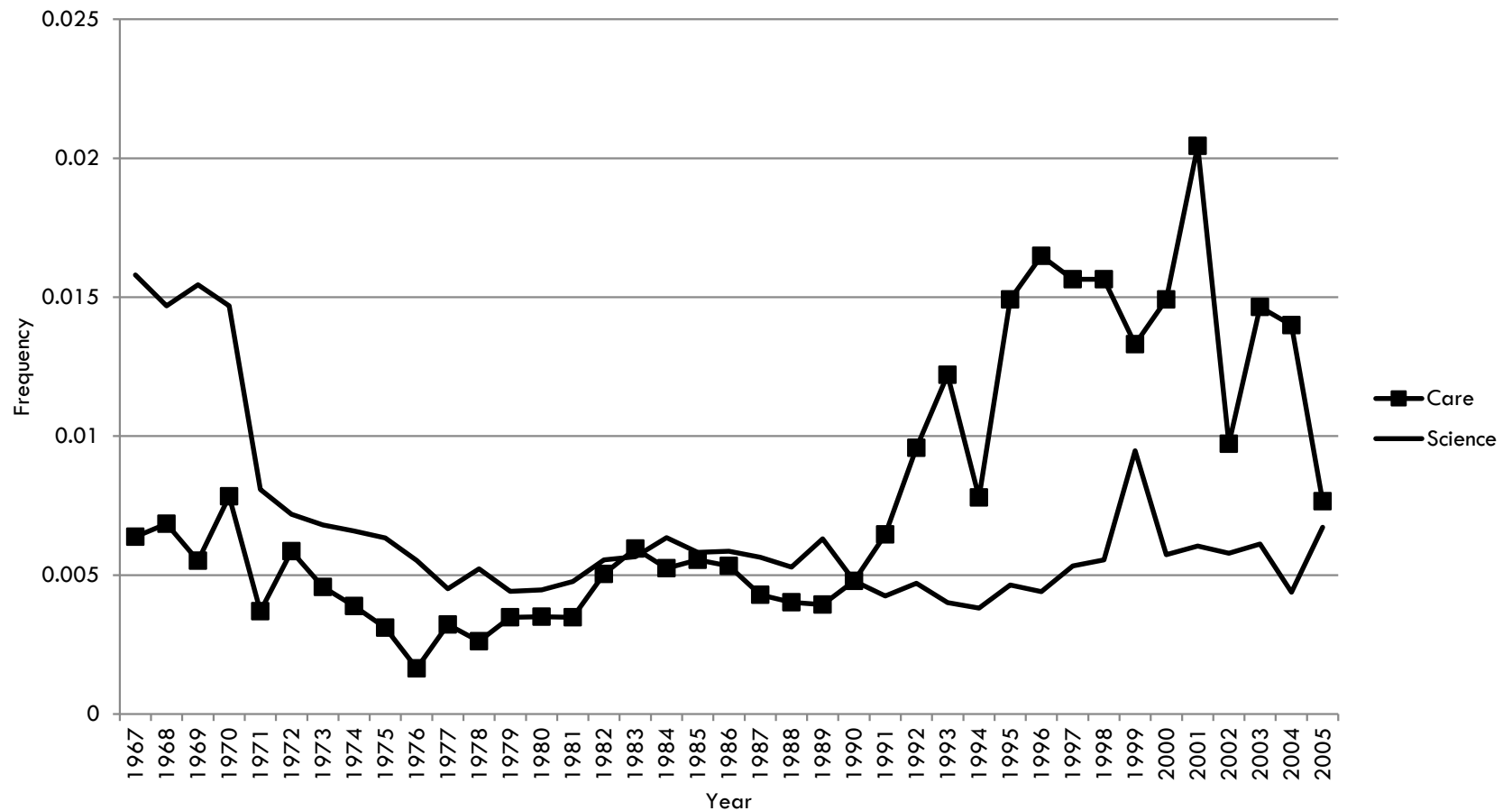 - Works well with shorter time period and focused search

Key Words from Cultural Register

logic	Business practice		Professional exemplars		State bureaucrats	
Texts	Two top selling text books		Book Interviews 91 exemplary architects		State Request for Proposals (27 projects)	
Key words	*Architect*	.0093	**Building**	.0083	**Project**	**.0178**
	Architecture	.0075	*Architecture*	.0063	**Building**	.0087
	Firm	.0068	Space	.0033	**Firm**	.0086
	Building	.0065	Structure	.0028	Facility	.0086
	Profession	.0061	Use	.0026	Statement	.0073
	Design	.0057	*Work*	.0026	Qualification	.0072
	Project	.0042	House	.0025	**Construction**	.0070
	Client	.0041	Build	.0030	Program	.0069
	Practice	.0036	*Architect*	.0022	Submit	.0065
	Services	**.0034**	*Design*	0022	Experience	.0064
	Work	.0034	Great	.0021	**Service**	.0054
	Office	.0030	People	.0020	**Office**	.0050
	Construction	.0027	New	.0019	Space	.0049
			Time	.0019	Room	.0048
			Form	.0018		
	N=13		N=16		N=14	

Jones & Livne-Tarandach, 2008, Designing a frame, JOB

Word to word relations: reveal logics

- Shared word Versus unique words

Jones & Livne-Tarandach, 2008, Designing a frame, JOB

Creating Dictionaries: Care & Science

Top five keywords that elaborate care & science	Examples from the *JAMA* text
Care logic: Clinical, care, clerkships, family, community, and physicians

Cronsbach: . 7199 | 1967: "A unique aspect of the teaching of *family* and *community* medicine is its integration into the practices of selected *family physicians* in the *community* who are full-time faculty members."
1983: "*Clinical clerkships*…in which students participate in patient *care* in a supervised setting.."
1996: "Will *community*-based primary *care* sites be available to provide *clinical* experiences …?" |
| Science logic: Sciences, basic, research, science, hospital, and laboratory

Cronsbach: .9410 | 1968: "The *sciences basic* to medicine thus serve the teaching and *research* functions..."
1973: "established the cardiovascular center at Norfolk General *Hospital*, the cardiopulmonary *laboratory* at Children's Hospital, and the *research* institute."
1999: "The *basic science* curriculum varied from …busy practitioners to an emphasis on *laboratory* teaching by full-time faculty who engaged in *research*." |

Dunn & Jones, 2010. Institutional pluralism in medical education. ASQ

Frequencies of logics

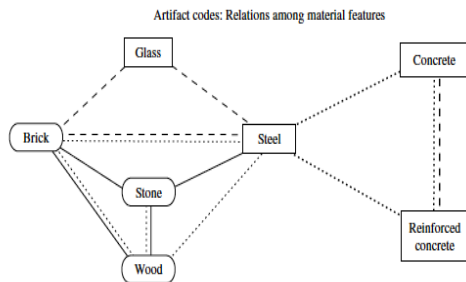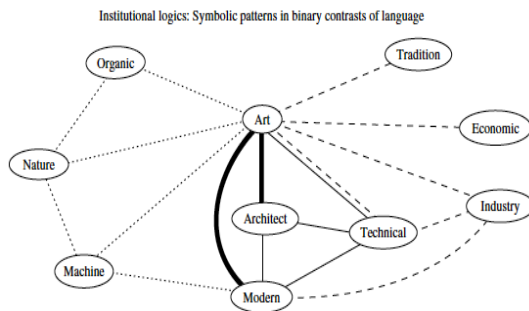Dunn & Jones, 2010. Institutional pluralism in medical education. ASQ

Creating dictionaries-semiotic approach: Binary Contrasts to illuminate meaning

☐ Derived from text—context dependent

☐ Especially useful for comparative data, large datasets and change over time
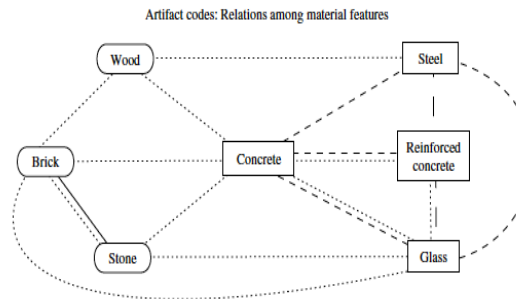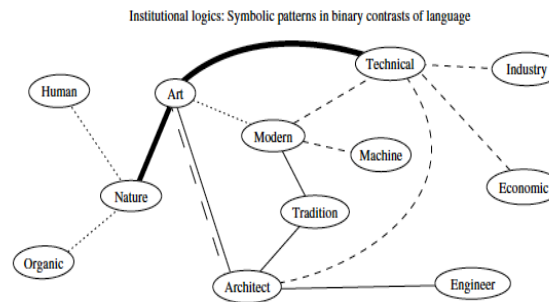
Modern Architecture auto-coded and counted frequencies for these words, using stems

☐ modern–traditional,

☐ economic–artistic,

☐ engineer–architect,

☐ machine–nature,

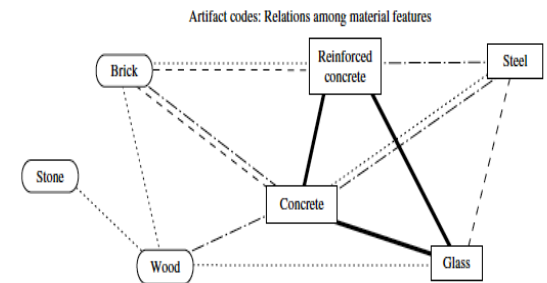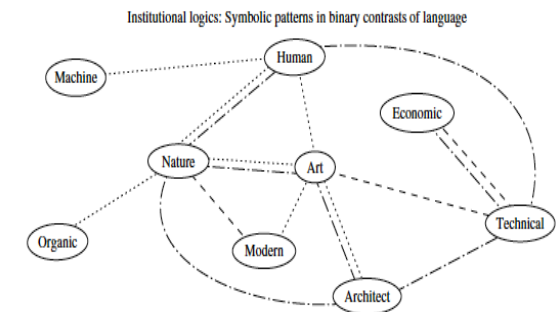☐ industry–human,

☐ technical–organic

Structural analysis-
logics & material practices

1870-1915

1919-1945

1946-1975

Jones, Maoret, Massa & Svejenova, 2012. Rebels with a Cause, Org Science

Enables comparative analysis

	Revivalists	Modern Organic	Modern Functional
Actors	McKim, Laloux, Webb, Ostberg, Lutyens	Wright and Saarinen (joined by Dudok & Aalto)	Gropius, Le Corbusier and Perret (joined by Mies & Fuller)
Clientele	Human traditions : 39% State, 6% Religious	Mix of adaptive and tradition: 52% Residential, 29% State	Adaptive and Functional: 51% Residential, 30% Commercial
Guiding Logic	Professional: Enact Aesthetic tradition based on historical knowledge and referents	Professional: Transform aesthetic traditions from Classical to Gothic and incorporate industrial production to enhance artistic expression	Commercial: Transpose market into profession and reject aesthetic traditions for universal, efficient and economical solutions of industrial production
Symbolic System	Modern as modifier: contemporary *architecture* and *art*, that is more *technical* than prior architecture	Modern as new category: *Art* based on *Nature* and *Organic* that serves *Human* needs	Modern as new category: reject *Tradition* and based on *Technical, Industrial, Economic* needs and processes
Artifact Code	Restricted: focus on wood, stone, brick. Steel used but covered	Flexible: Combines traditional (wood, stone, brick) and new (concrete, steel, glass)	Restricted: Focus on new materials-concrete, steel and glass

Jones, Maoret, Massa & Svejenova, 2012. Rebels with a Cause, Org Science

Dictionaries guided by theory: key words (stems) based on logic definition

Cognitive Beliefs	Normative Expectations	Material Practices
Meaning	Culture	Structure
Cognition	Values	Practice
Symbol	Rules	Resources
Schema	Normative	Technology
Belief	Moral	Material
Script	Expectation	Investment
Knowledge		Artifact
		Asset

Jones, Boxenbaum & Anthony 2013 The immaterial of material in institutional logics, RSO

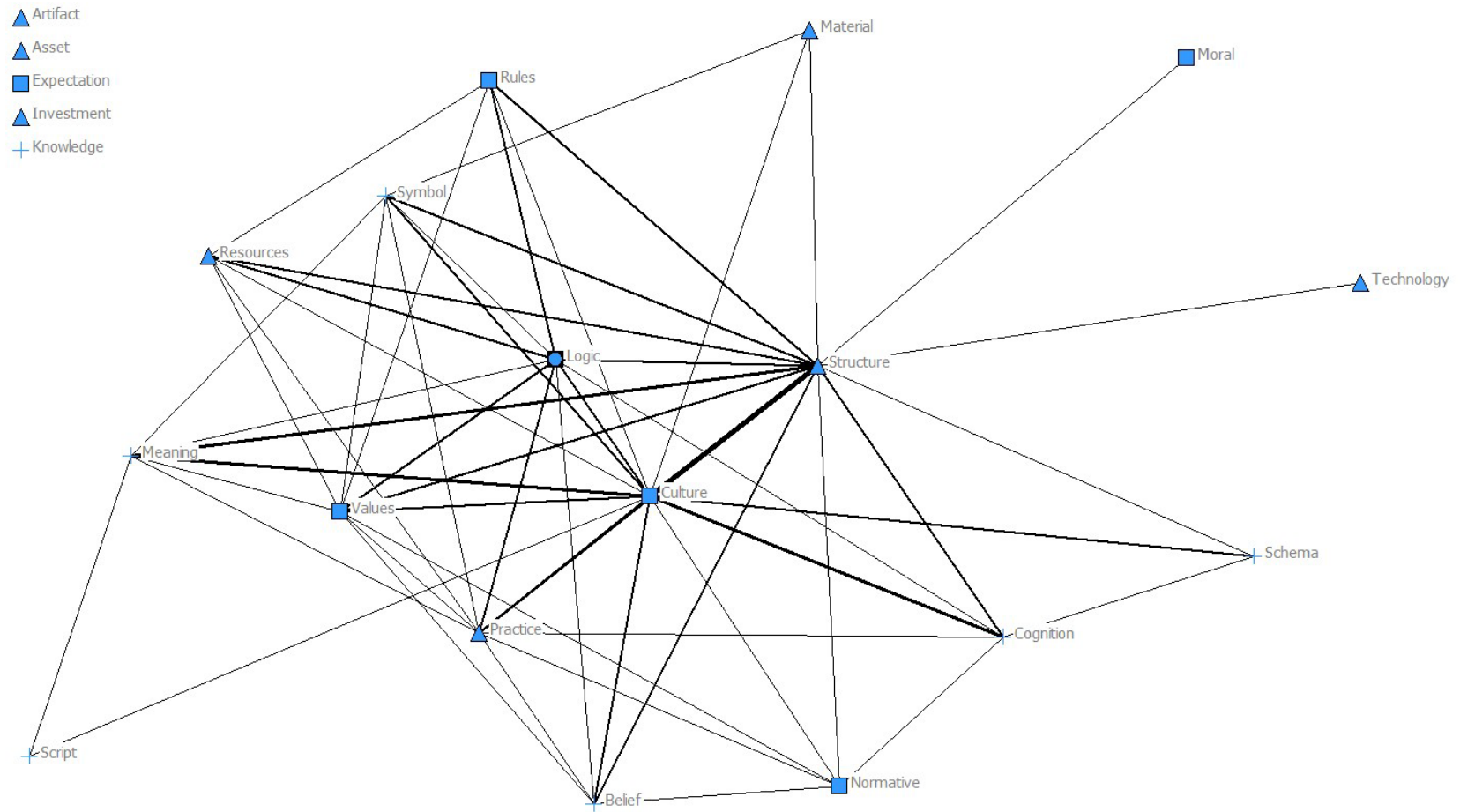# Word centrality in language usage: Used network centrality techniques

Cognitive Beliefs	Normative Expectations	Material Practices
Meaning (5.84)	**Culture (10.99)**	**Structure (10.54)**
Symbol (4.18)	*Values (5.28)*	*Practice (5.98)*
Cognition (4.08)	*Rules (3.31)*	*Resources (3.77)*
Belief (4.00)	*Normative (3.11)*	Material (1.95)
Schema (1.82)	Moral (1.91)	Technology (1.79)
Script (1.57)	Expectation (1.28)	Artifact (0.93)
Knowledge (1.32)		Investment (0.87)
		Asset (0.28)

logic (6.926)

Jones, Boxenbaum & Anthony 2013 The immaterial of material in institutional logics, RSO

Structural analysis of language-
Word to word relations Institutional Logic

Jones, Boxenbaum & Anthony 2013 The immaterial of material in institutional logics, RSO

THANK YOU!

- QUESTIONS??

- Email me: candace.jones@bc.edu

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