UCLA

EDUCATION INFORMATION STUDIES

Interrogating "identity"

A philosophical approach to an enduring issue in knowledge organization

Jonathan Furner
GSE&IS, UCLA

August 6, 2008

1

UCLA

EDUCATION INFORMATION STUDIES

The enduring issue

- "Culture and **identity** in knowledge organization (KO)"
- How well do KO systems (KOSs) represent identity -- and identities?
  - i. How well do KOSs represent relationships of **identity** between classes of documents? How well do KOSs help people explore those relationships?
  - ii. How well do KOSs help people organize knowledge about personal/social **identities**? How well do KOSs help people find documents about identities?

2

UCLA

EDUCATION INFORMATION STUDIES

Propositions

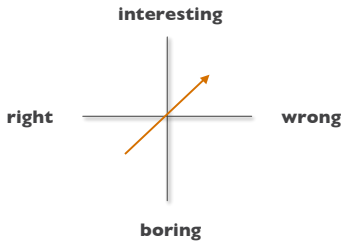
- analysis of identity as a relation informs analysis of **aboutness** and **relevance**
- the production of identity is the **goal** of KO
- effective representation of **personal/social** identities is a complex special case of a general challenge facing "traditional" KO
- the concept of identity is central to KO

3

UCLA

EDUCATION INFORMATION STUDIES

(The real goal)



4

UCLA

EDUCATION INFORMATION STUDIES

Identity
is the crisis.
Can't you see?

Identity!
Identity.

5

UCLA

EDUCATION INFORMATION STUDIES

$\forall x \forall y[\forall P(Px \leftrightarrow Py) \rightarrow x=y]$

6

UCLA

EDUCATION INFORMATION STUDIES

The philosophical approach

- **conceptual analysis**, of ...
  - **identity / identities**
  - **KO / KOSs**
  - **representation**
  - **goodness** (i.e., "quality": cf. María López-Huertas 2008)

7

UCLA

EDUCATION INFORMATION STUDIES

Kinds of identity, I

- individual, personal, self
- group, collective, shared, communal, community, social
- cultural, political, economic, psychological, legal, metaphysical, logical, mathematical ...
- racial, ethnic, gender, sexual, national, linguistic, religious, professional, occupational, familial ...
- numerical, qualitative, relative, absolute, transworld, synchronic, diachronic

8

UCLA

EDUCATION INFORMATION STUDIES

Kinds of identity, II

- disciplinary, institutional, departmental
- corporate, brand, product, visual
- mistaken, split
- digital, electronic, virtual, online
- user, object, work, bibliographic, record, citation

9

UCLA

EDUCATION INFORMATION STUDIES

Related concepts, I

- user identifier, object identifier, work identifier, record identifier
- identity problem, theory, politics, crisis, theft, status, card
- sense of identity
- property, relation, image, role
- privacy, security, confidentiality, trust, reputation, verification, authentication

10

UCLA

EDUCATION INFORMATION STUDIES

Related concepts, II

- sameness, identicality, similarity, indiscernibility
- individuality, uniqueness, distinctness, difference, diversity
- authenticity, cohesion, coherence, tolerance, hybridity
- formation, construction, capture, representation, exploration, manipulation, management
- identification, individuation, differentiation, discrimination, instantiation, exemplification, characterization
- organization, classification, categorization

11

UCLA

EDUCATION INFORMATION STUDIES

Analytical approaches to identity

- philosophy of **logic**
- **metaphysics**
- **social / political** philosophy
- philosophy of **technology**
- philosophy of **art**
- philosophy of **documentation / KO**

12

UCLA

Two conceptions of identity

- as a **relation**: "the identity of *x* and *y*"
- as a **property**: "the identity of *x*"

13

UCLA

Identity as a relation

- we say that *x* and *y* are numerically **identical** if *x* is (the same object as) *y*
- we say that *x* and *y* are qualitatively **indiscernible** if *x* has (all and only) the same properties as *y*
- if *x* is *not* (the same object as) *y*, then we say that *x* and *y* are numerically distinct or **individual**
- if *x* does *not* have (all and only) the same properties as *y*, then we say that *x* and *y* are qualitatively discernible or **dissimilar**

14

UCLA

Continuous relations and binary relations

- a relation is a **continuous** relation (i.e., a relation of degree) if its value can be represented by any point on a line
  - e.g., (partial) equivalence, qualitative **indiscernibility**, similarity, partial correspondence
- a relation is a **binary** relation if its value can be represented only by one or other of the two poles of a line
  - e.g., complete equivalence, numerical **identity**, sameness, complete correspondence

15

UCLA

Leibniz's Law

- "No two substances resemble each other entirely and differ in number alone." (*Discourse on metaphysics*, 1686)

1. the principle of **the ident[ical]ity of indiscernibles**: if *x* and *y* are qualitatively indiscernible, then they are numerically identical
2. the principle of **the indiscernibility of identicals**: if *x* and *y* are numerically identical, then they are qualitatively indiscernible

16

UCLA

The ident[ical]ity of indiscernibles

- *p*: *x* and *y* are indiscernible
- *q*: *x* and *y* are identical
- $\neg(p \wedge \neg q) = p \rightarrow q = \neg q \rightarrow \neg p$
- if *x* and *y* are indiscernible, they're identical: indiscernibility is a sufficient condition for identicality
- only if *x* and *y* are identical, are they indiscernible: identicality is a necessary condition for indiscernibility
- if *x* and *y* are distinct, then there is at least one property that either *x* has and *y* hasn't or vice versa

17

UCLA

Questions ...

- Is principle 1 true? Contingently or necessarily?
- Is principle 2 true? Contingently or necessarily?
- answers will depend on what is counted as a property
  - weak versions of the principles include **extrinsic properties** (i.e., relations to other objects)
  - strong versions exclude extrinsic properties

18

More questions ...

- What are the **identity conditions / criteria** to be used in the process of identification?
  - What are the criteria for **individuation** (determining identicality vs. individuality)?
    - e.g., Under what conditions is document *x* the same document as document *y*?
  - What are the criteria for **instantiation** (determining similarity vs. dissimilarity)?
    - e.g., Under what conditions is document *x* an instance of the same work, class, kind, type as document *y* is?

Approaches to personal/social identity

- **developmental psychology**
- **social psychology**
- **cultural anthropology**
- **cultural studies**
- **political science/theory**
- **social/political philosophy**

Personal identity

- the property (or set of properties) that identifies a **person**
- ... i.e., that distinguishes one person from another

Social identity

- the property (or set of properties) that identifies a **group of persons**
- ... i.e., that distinguishes one group of persons from another

Kinds/facets of personal/social identity

- age
- ancestral territory
- ancestry/genealogy
- class
- community
- culture
- discipline/field
- ethnicity
- family
- gender
- group
- history
- hobby/interest
- home/birthplace
- language
- mental ability
- mythical origin
- nationality
- organization/ department
- physical ability
- political party
- profession/occupation
- race/phenotype
- religion
- sexual orientation
- skin color
- society
- subculture

Identity as a property, I

- identity as: the property (or set of properties) that *x* has, in virtue of which it is **different** (and thus distinguishable) from *y*
- i.e., the property that *x* has that makes *x* **individual** and/or discernible
- the identity of *x* is what **identifies** *x*
- identity as **difference**

UCLA EDUCATION INFORMATION STUDIES

Identity as a property, II

- identity as: what person *a* thinks is the property that makes *x* individual
- ... or what person *b* projects to others as an image of the property that person *a* thinks is the property that makes *x* individual
- ... or what person *c* thinks is the image projected by person *b* of the property that person *a* thinks is the property that makes *x* individual
- ...

25

UCLA EDUCATION INFORMATION STUDIES

The process of identification, I

- identification is an **action** ...
- ... carried out by an **agent**/subject ...
- ... on an **object**
- the result of the action is the naming of the **property** that identifies the object (i.e., the **class** instantiated by the object)

26

UCLA EDUCATION INFORMATION STUDIES

The process of identification, II

- if the agent is the object, then identification is a process of self-categorization or **affiliation** ...
- ... engaged in by an agent acting (more or less) autonomously
  - i.e., free of logical constraints

27

UCLA EDUCATION INFORMATION STUDIES

Properties of acts of identification, I

1. **subjectivity**
   - **objective**: what *is* the identity of object *x*
     - (Is that possible? knowable?)
   - **intersubjective**: what most people *think* is the identity
   - **subjective**:
     - what I think is the identity
     - what I think most people think is the identity
     - what I think you think is the identity

28

UCLA EDUCATION INFORMATION STUDIES

Properties of acts of identification, II

2. **singularity** (of the object)
   - **elementary**: a single object
   - **collective**: multiple objects. grouped
3. **intentionality** (of the object)
   - **persons**
   - **things**
4. **singularity** (of the agent/subject)
   - **elementary**: a single agent
   - **collective**: multiple agents, grouped

29

UCLA EDUCATION INFORMATION STUDIES

Properties of acts of identification, III

5. **identity relation** of the subject to the object
   - **self**
   - **other**
6. **power** of the subject relative to the object
   - **dominant**
   - **subordinate**

30

UCLA

EDUCATION INFORMATION STUDIES

Properties of acts of identification, IV

7. **particularity**
   - **numerical**: distinguishing particular things
   - **qualitative**: distinguishing kinds of things
8. **intrinsicality** of the identifying property
   - **intrinsic** to the object
   - **extrinsic** to the object

31

UCLA

EDUCATION INFORMATION STUDIES

Empirical research questions

- What (kinds of) **processes** (affective, behavioral, cognitive) are involved in individuals' affiliating with and prioritizing particular identities?
- What (kinds of) **factors** affect individuals' affiliating with and prioritizing particular identities?
- In what ways and to what extents do individuals' affiliations with and prioritizations of particular identities **affect** decision-making, action?
  - In what ways and to what ends are individuals' affiliations with and prioritizations of particular identities represented, expressed, and/or **reflected in symbolic form**?

32

UCLA

EDUCATION INFORMATION STUDIES

KO

- cf. Joe Tennis (2008): "KO ... is the field of scholarship concerned with the design, study, and critique of the processes of organizing and representing documents that societies see as worthy of preserving."
- another working definition: KO is the practice (and theory) of building KOSs that work well

33

UCLA

EDUCATION INFORMATION STUDIES

General KO research questions

- the **design** question:
  How ought subjects, and the relations between them, to be represented in a KO system?
  - [answer: In the ways that evaluations tell us are best]
- the (meta-)**evaluation** question:
  How do we evaluate?
  i.e., *How do we decide* how subjects, and the relations between them, ought to be represented in a KO system?

34

UCLA

EDUCATION INFORMATION STUDIES

Two conceptions of the goal of KO

- cf. (e.g.) Raya Fidel's (1994) identification of two conceptions of the goal of indexing:
  - **document**-centered
  - **user**-centered
- two conceptions of the goal of KO:
  - **description**-oriented
  - **retrieval**-oriented

35

UCLA

EDUCATION INFORMATION STUDIES

Description-oriented KO

- goal: to produce a representation/model of the "universe of knowledge" (or a part of it)
- evaluation criteria:
  - internal
    - **coherence**; **richness**; **simplicity**; **elegance**
  - external
    - **correspondence** with the way things really are
    - **correspondence** with the way someone thinks things are

36

UCLA

"Correspondence with the way someone thinks things are"

- different people see reality in different ways
- every KOS is "biased" in the sense that every KOS reflects the view of reality of its designer(s)
- Can any KOS either (i) simultaneously reflect the views of everyone, or (ii) simultaneously reflect the views of every one of its users?
- that it should, is an expression of a communitarian (rather than contractarian) principle of **social justice**

37

UCLA

The just KOS

- the **just** KOS is one that supports the distribution of cultural resources ...
- ... without violating the **rights** or liberties of particular **groups** or communities and their members
  - especially minorities and other groups that have historically been oppressed by those in power
- (desirability ≠ possibility)

38

UCLA

Retrieval-oriented KO

- goal: to help KOS users [indexers and searchers] (a) improve the quality of access to resources/documents, and (b) benefit from that access
- evaluation criteria:
  - **effectiveness**
  - **efficiency**
  - **usability**

39

UCLA

Factors affecting effectiveness

- two conceptions of the priority of factors:
  - **objectivist**
  - **user**-oriented

40

UCLA

Objectivist evaluation

- key measure = the degree of match / **correspondence** between
  (i) the model of reality constructed by the KOS designer and
  (ii) reality itself

41

UCLA

User-oriented evaluation

- key measure = the degree of match/correspondence between
  (i) the (explicit) model of reality constructed by the KOS designer and
  (ii) the (implicit) model of reality constructed by the KOS user [indexer or searcher]
- cf. user-centered indexing: key measure = indexer/searcher consistency

42

UCLA

EDUCATION INFORMATION STUDIES

Prospects for a taxonomy of kinds of relations

- cf. Rebecca Green 2008: "Relationships are at the very heart of knowledge organization."
- two ways of distinguishing relations:
  - identify properties of the entities being related
  - identify intrinsic properties of the relations themselves

43

UCLA

EDUCATION INFORMATION STUDIES

Kinds of entities being related

- **worlds**; states of affairs
- **works**; propositions; concepts
- **words**; documents
- persons
- ... etc.
- (bundles of properties?)

44

UCLA

EDUCATION INFORMATION STUDIES

Relations in themselves

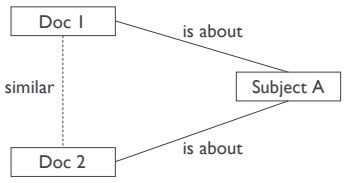
- kind / instance
- whole / part
- genus / species
- this / that
- ... etc.

45

UCLA

EDUCATION INFORMATION STUDIES

Aboutness, I

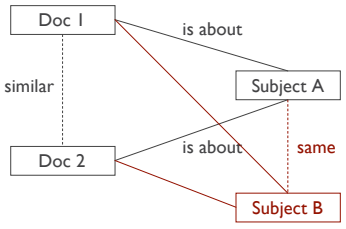


46

UCLA

EDUCATION INFORMATION STUDIES

Aboutness, II

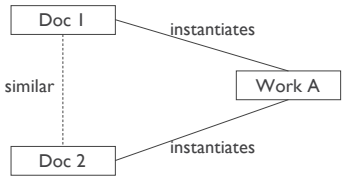


47

UCLA

EDUCATION INFORMATION STUDIES

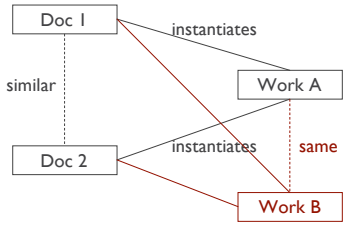
Work-instantiation, I



48

UCLA

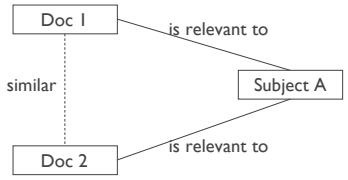
Work-instantiation, II



49

UCLA

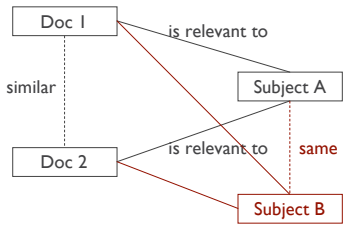
Relevance, I



50

UCLA

Relevance, II



51

UCLA

Aboutness = relevance

- aboutness, (work-instantiation,) and relevance are **equivalent** in structure
- an understanding of identity is helpful in analyzing that structure

52

UCLA

Subjects aren't natural kinds

- subjects (and works) are nominal kinds
- subjects are not properties of documents: they are properties of intentional acts
- judgments of aboutness, (work-instantiation,) and relevance are arbitrary and **subjective**

53

UCLA

Identity is the goal of KO, I

- aim of IR:
  to **produce identity** between sets of *aboutness* judgments and sets of *relevance* judgments
- aim of indexing:
  consistency between the *aboutness* judgments made by indexer *a* with respect to subject *x* at time t_1,
  and the *relevance* judgments made by searcher *b* with respect to subject *x* at time t_2

54

UCLA

EDUCATION INFORMATION STUDIES

Identity is the goal of KO, II

- aim of KO:
  consistency between the KO system *designer's* view of the world (i.e., the aggregate of the extensions of all subject classes, and the relations between them),
  and the KO system *user's*

55

UCLA

EDUCATION INFORMATION STUDIES

The challenge for KO

- there are many views of the world! ...
- ... so KO systems must be **dynamic and adaptive**

56

UCLA

EDUCATION INFORMATION STUDIES

Two classes of relation-types

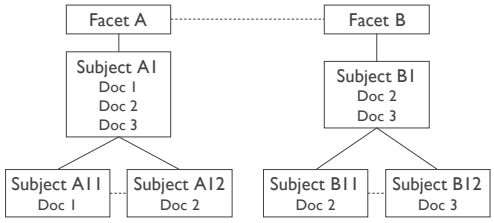
- **set** (class / kind / type)
  –element (instance / token)
  - e.g., aboutness; relevance
- **set** (class / kind / type)
  –set (class / kind / type)
  - e.g., genus–species; broader–narrower subject

57

UCLA

EDUCATION INFORMATION STUDIES

Inter-class relations



58

UCLA

EDUCATION INFORMATION STUDIES

Question ...

- Is the set of relation-types commonly instantiated in KO systems adequate for the representation of relationships between classes of (documents about) people?

59

UCLA

EDUCATION INFORMATION STUDIES

Identities as subjects

- some subjects of documents are the identities of the persons to whom the documents are relevant
- one way in which people's views of the world vary is in their images of personal/social identities ...
- ... which intensifies the challenge for KO

60

UCLA

EDUCATION INFORMATION STUDIES

Recap: General KO research questions

- the **design** question:
  How ought subjects, and the relations between them, to be represented in a KO system?
  - [answer: In the ways that evaluations tell us are best]
- the (meta-)**evaluation** question:
  How do we evaluate?
  i.e., *How do we decide* how subjects, and the relations between them, ought to be represented in a KO system?

61

UCLA

EDUCATION INFORMATION STUDIES

Specific KO research questions

- the **design** question:
  How ought identities-as-subjects, and the relations between them, to be represented in a KO system?
  - [answer: In the ways that evaluations tell us are best]
- the (meta-)**evaluation** question:
  How do we decide how identities-as-subjects, and the relations between them, ought to be represented in a KO system?

62

UCLA

EDUCATION INFORMATION STUDIES

Recap: Criteria for goodness of representation

- **description-oriented**
  - intrinsic: coherence, richness, simplicity, elegance
  - extrinsic: correspondence, **justness**
- **retrieval-oriented**
  - **effectiveness**, efficiency, usability

63

UCLA

EDUCATION INFORMATION STUDIES

Factor affecting effectiveness

- one component of any strategy designed to maximize the degree of inter-categorizer consistency is ...
- ... to ensure that categorizers' **self-identities** are **reproducible** in the KOS

64

UCLA

EDUCATION INFORMATION STUDIES

A bill of rights for autonomous KOS users?

- I have the right ...
  - ... to find resources that are relevant to any one or any combination of my multiple personal identities
    —as effectively, efficiently, and easily (i) as I would find resources about any other subject, and (ii) as anyone would find resources about any of their personal identities
  - ... to use, and expect others to understand, my own vocabulary in communicating about identities-as-subjects
    —without hurting effectiveness, efficiency, or ease of retrieval
  - ... to describe identities-as-subjects, including my own, differently in different situations and at different times
    —without hurting effectiveness, efficiency, or ease of retrieval

65

UCLA

EDUCATION INFORMATION STUDIES

Complexities

- **multifacetedness** of personal identities
- individual **differences in prioritization** of facets
- intra-facet **mixedness**
- intra-facet **multidimensionality**
- **vagueness**

66

UCLA

Multifacetedness of personal identities

- every person may have "multiple identities" ...
- ... in the sense that each person may simultaneously affiliate with multiple classes, each of which is defined by a property instantiating a different facet
- e.g.: age; gender; nationality; etc.

67

UCLA

Individual differences in prioritization of facets

- different persons **prioritize** their affiliations in different ways, at different times
- different persons who have the same set of multiple identities may have different "defining characteristics"
- e.g., a person who self-identifies as a middle-class, racially-mixed, lesbian woman may self-identify most strongly as a middle-class person *or* as a racially mixed person *or* as a lesbian *or* as a woman *or* as a middle-class woman *or* ...

68

UCLA

Intra-facet mixedness, I

- every person may have "multiple identities" ...
- ... in the sense of affiliating with multiple classes defined by different properties in the same facet
- e.g., a racially mixed person may self-identify as a person of one race and as a person of another race, at different times or *even at the same time*

69

UCLA

Intra-facet mixedness, II

- Maria Root's "A bill of rights for racially mixed people": "I have the right ...
  - ... to have loyalties and identification with more than one group of people
  - ... to identify myself differently in different situations
  - ... to change my identity over my lifetime—and more than once
  - ... to identity myself differently than strangers expect me to identity
  - ... not to keep the races separate within me
  - ... to create a vocabulary to communicate about being multiracial"

70

UCLA

Multidimensionality

- some facets aren't "simple" or unidimensional
- e.g., sexual orientation?
  - one dimension: homosexuality through heterosexuality?
  - or two: homosexuality, and heterosexuality?

71

UCLA

Vagueness

- the boundaries of the classes with which persons affiliate are **vague**
- it is seldom clear where one non-natural class ends and another begins
- non-natural classes are not constructed on the basis of shared properties but on the basis of **family resemblances**
- cf. Wittgenstein, Rosch, Lakoff, Williamson

72

UCLA

Desirability ≠ possibility

- Can KOSs deal with the multifacetedness, differences in prioritization, mixedness, multidimensionality, vagueness of identities-as-subjects ...
- ... in ways that protect the rights of users?

73

UCLA

Methods of representing relationships

- traditional library classification: **hierarchies**
- facet analysis: **hierarchies + facets**
- critical-theoretic KO: **???**
  - IR?
  - tagging?

74

UCLA

What the Third Way™ is *not* about

- removing humans from the process
- rejecting vocabulary control

75

UCLA

What the Third Way™ *is* about

- advocacy for a "new" kind of structure for representing the relations among documents
- encouraging people to look at different kinds of relationship (cf. Rebecca Green, DDC)
- engaging seriously with the challenges for KO presented by analyses of identity and identity-forming processes

76

UCLA

Prospects for a philosophy of documentation / KO

- Margaret Egan & Jesse Shera: **social epistemology** (SE) as a normative foundation for information service design
- Luciano Floridi: SE alone can't provide a complete philosophy of information
- Can metaphysics and ethics of identity fill the gaps?

77

UCLA

Thank you.

Jonathan Furner
Graduate School of Education & Information Studies
University of California, Los Angeles
furner@gseis.ucla.edu

78