

Networks, Links & Topics

Classifying and collaborating in the Web

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Vrije Universiteit, Amsterdam.

International UDC Seminar,
The Hague, 19 Sept 2011.

Overview

- Three notions of ‘network’ (or ‘graph’).
- Three notions of ‘information’.
- Linked Data & Linked Information.
- Where does ‘subject classification’ fit?

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SIX DEGREES



THE SCIENCE OF A CONNECTED AGE

DUNCAN J. WATTS

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Albert-László Barabási

LINKED

The New Science of Networks

How Everything is Connected to Everything Else and What it Means for Science, Business and Everyday Life

Copyrighted Material

"Connected could change your life forever."
— DANIEL GILBERT, author of *Stumbling on Happiness*

NICHOLAS A. CHRISTAKIS, MD, PhD
AND JAMES H. FOWLER, PhD



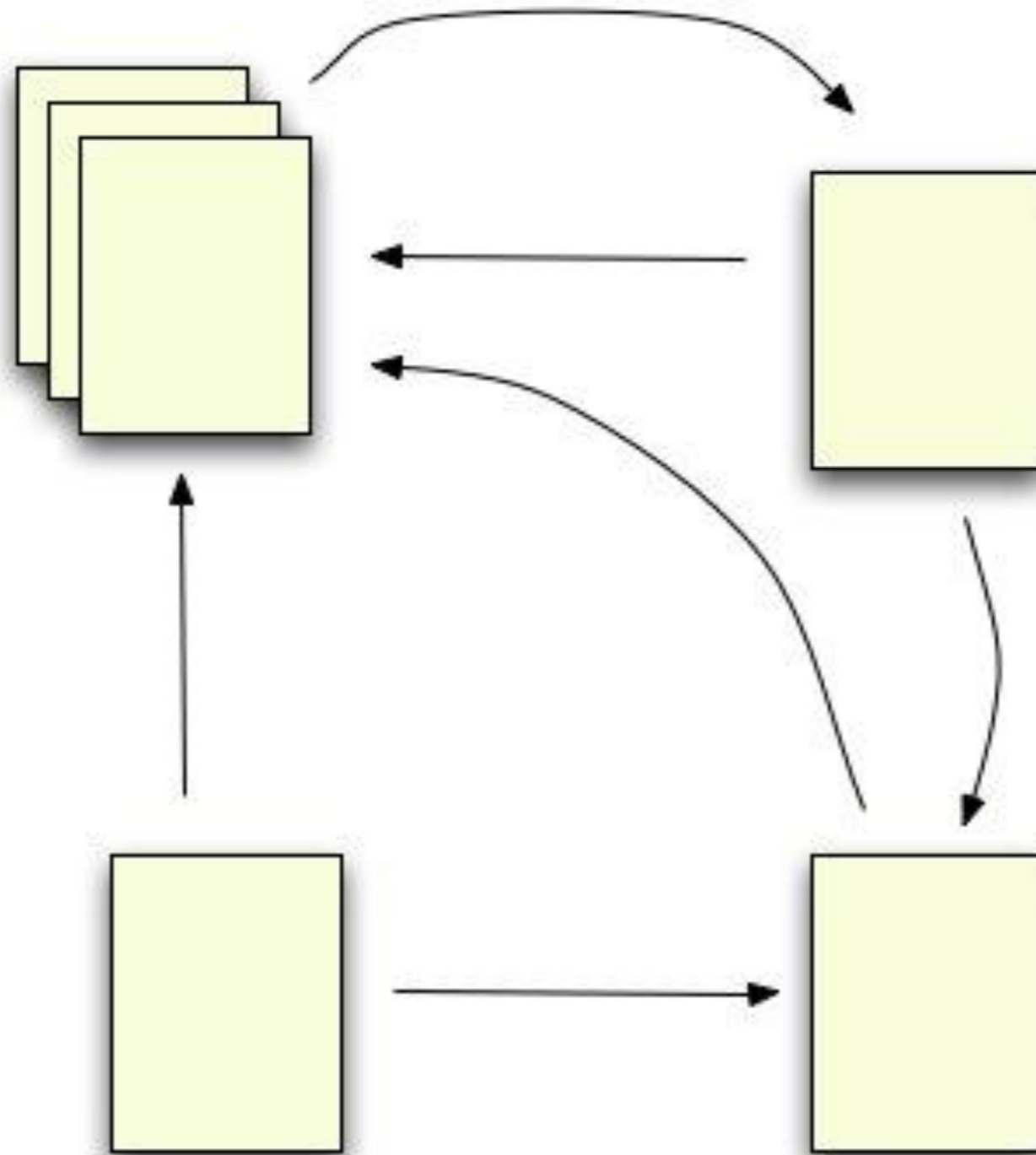
Connected

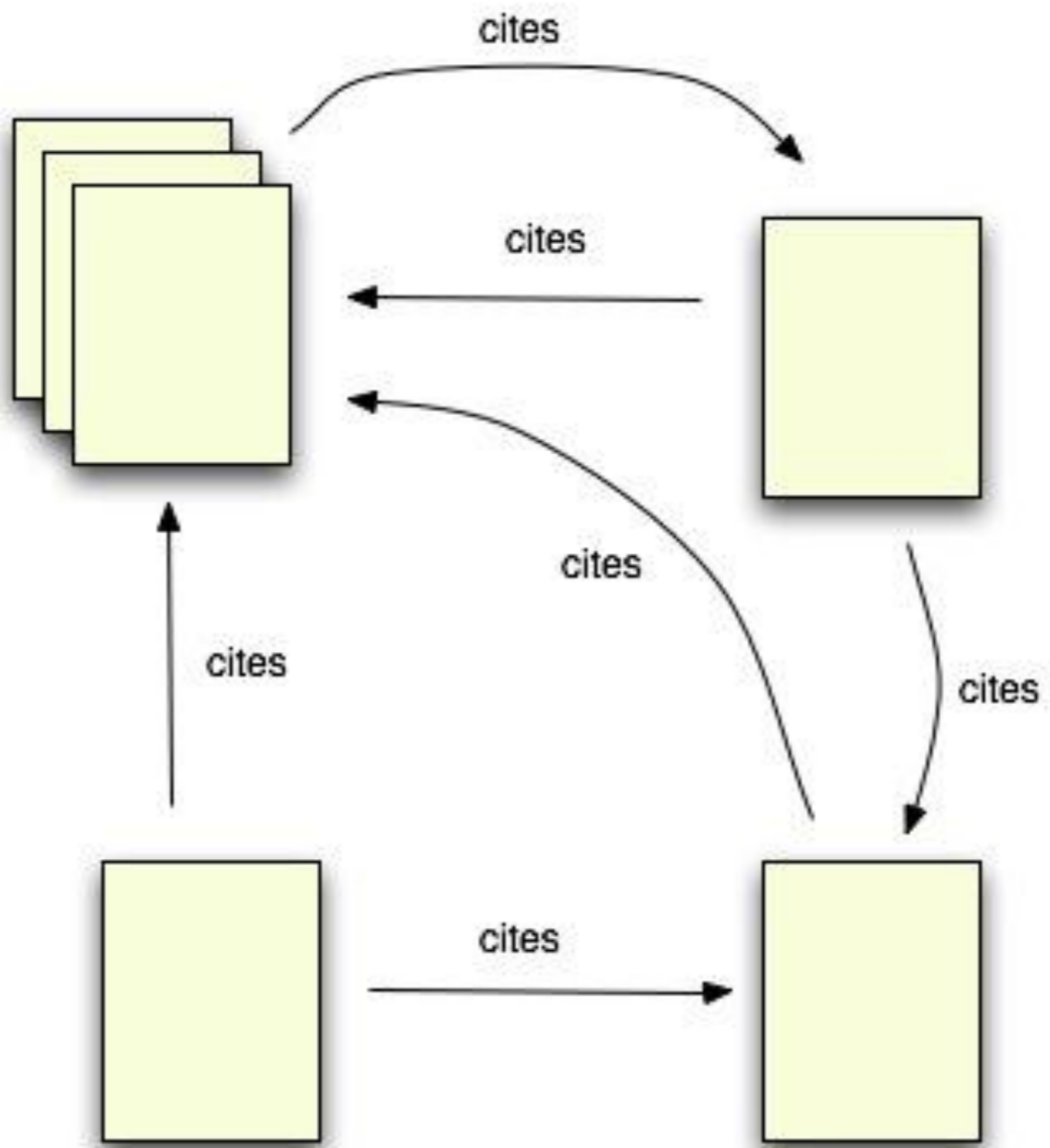
The Surprising Power of Our Social Networks
and How They Shape Our Lives

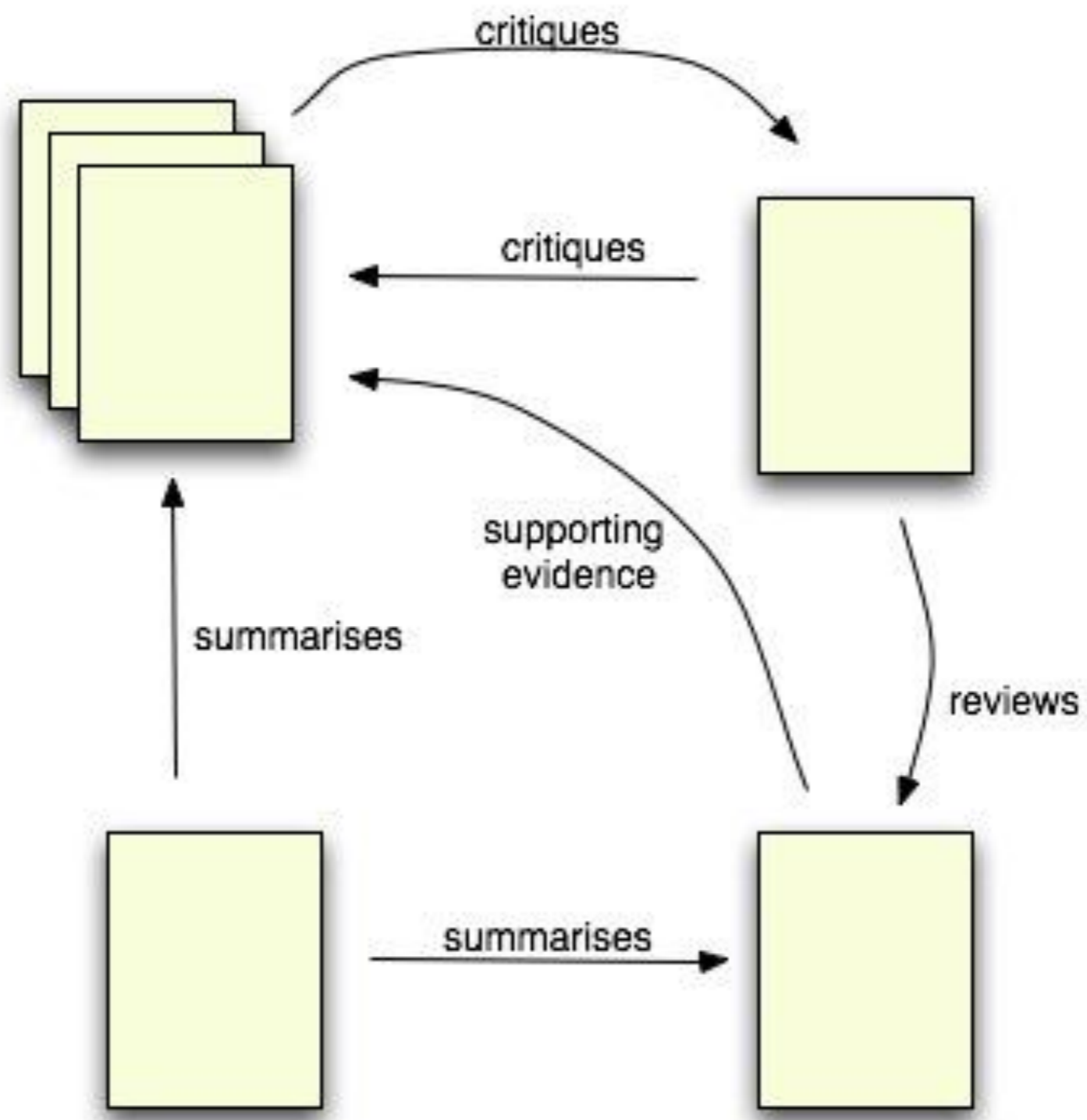
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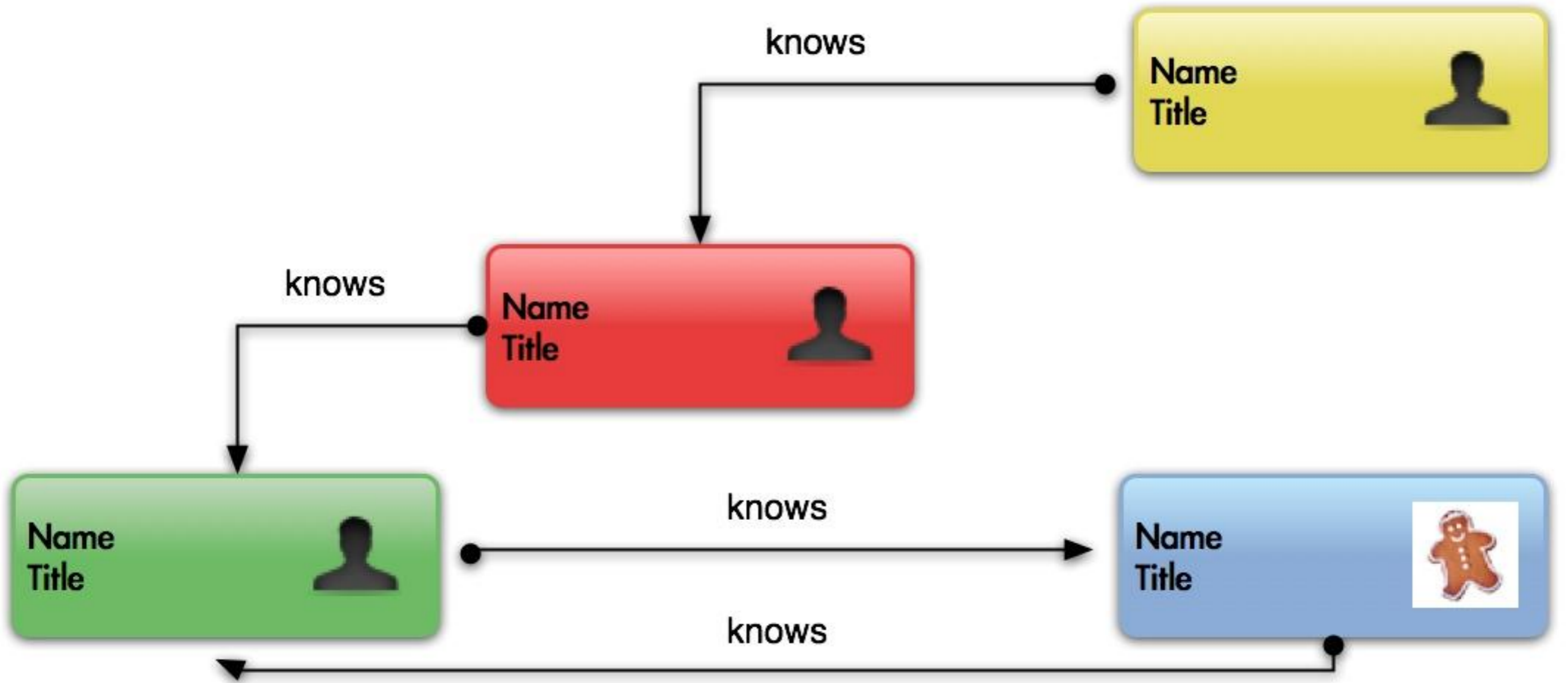
“Hypertext Graph”

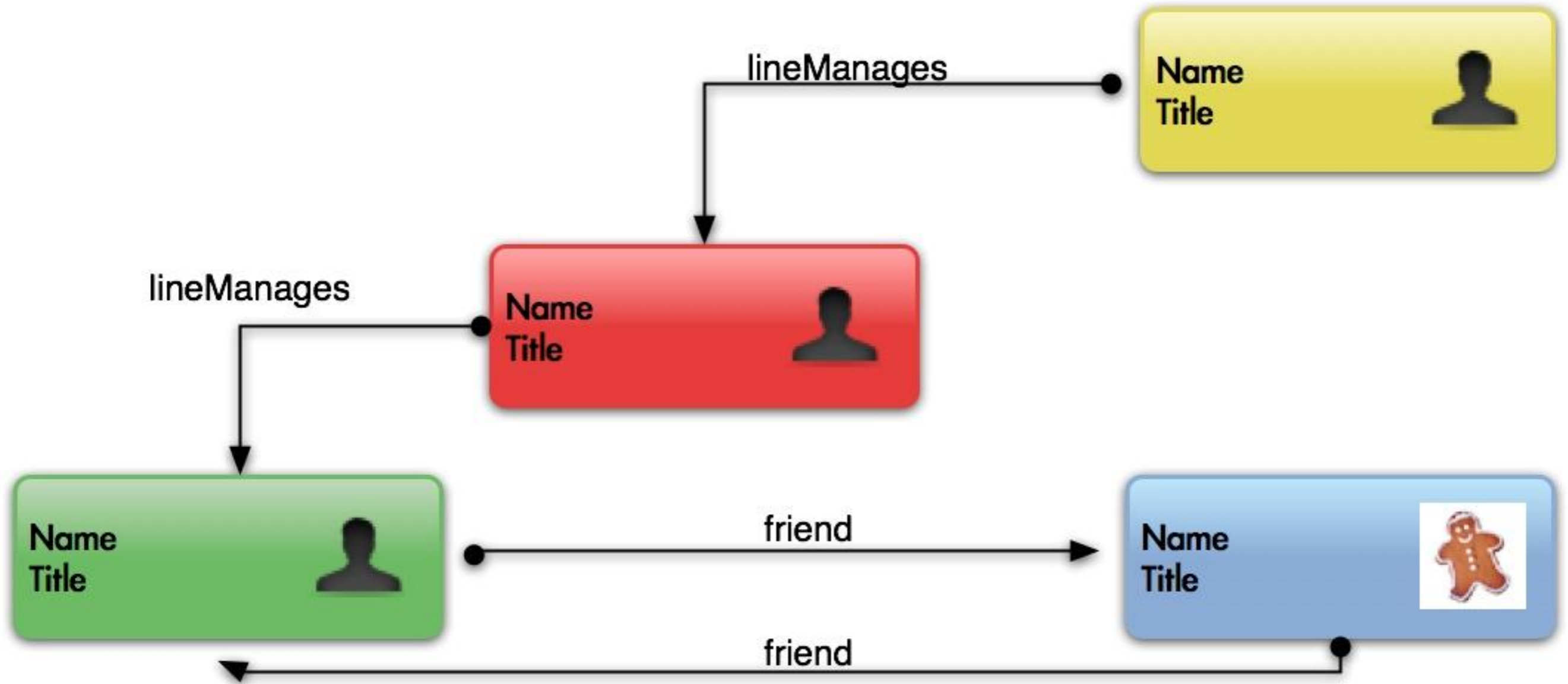






“Social Graph”





Recap:

Hypertext Graph: Linked documents

Social Graph: Linked people

Factual Graph

- or “Semantic Network”, “Data Graph”
- you’ll also hear “Semantic Web”, “Linked Data”, RDF, OWL, “triples”, “quads”, and other terms...
- descriptive, open-ended, domain-neutral
- it can describe hypertext graphs, social graphs, ... any graphs

biographer

Bruce
Chatwin

wrote

In Patagonia

wrote

The
Songlines

primaryTopic

coverArt

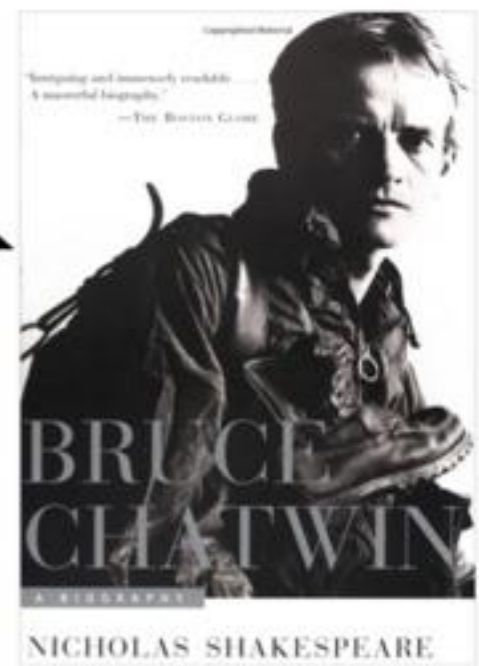


primaryTopic

[http://en.wikipedia.org/
wiki/Bruce_Chatwin](http://en.wikipedia.org/wiki/Bruce_Chatwin)

Bruce Chatwin:
A Biography

coverArt

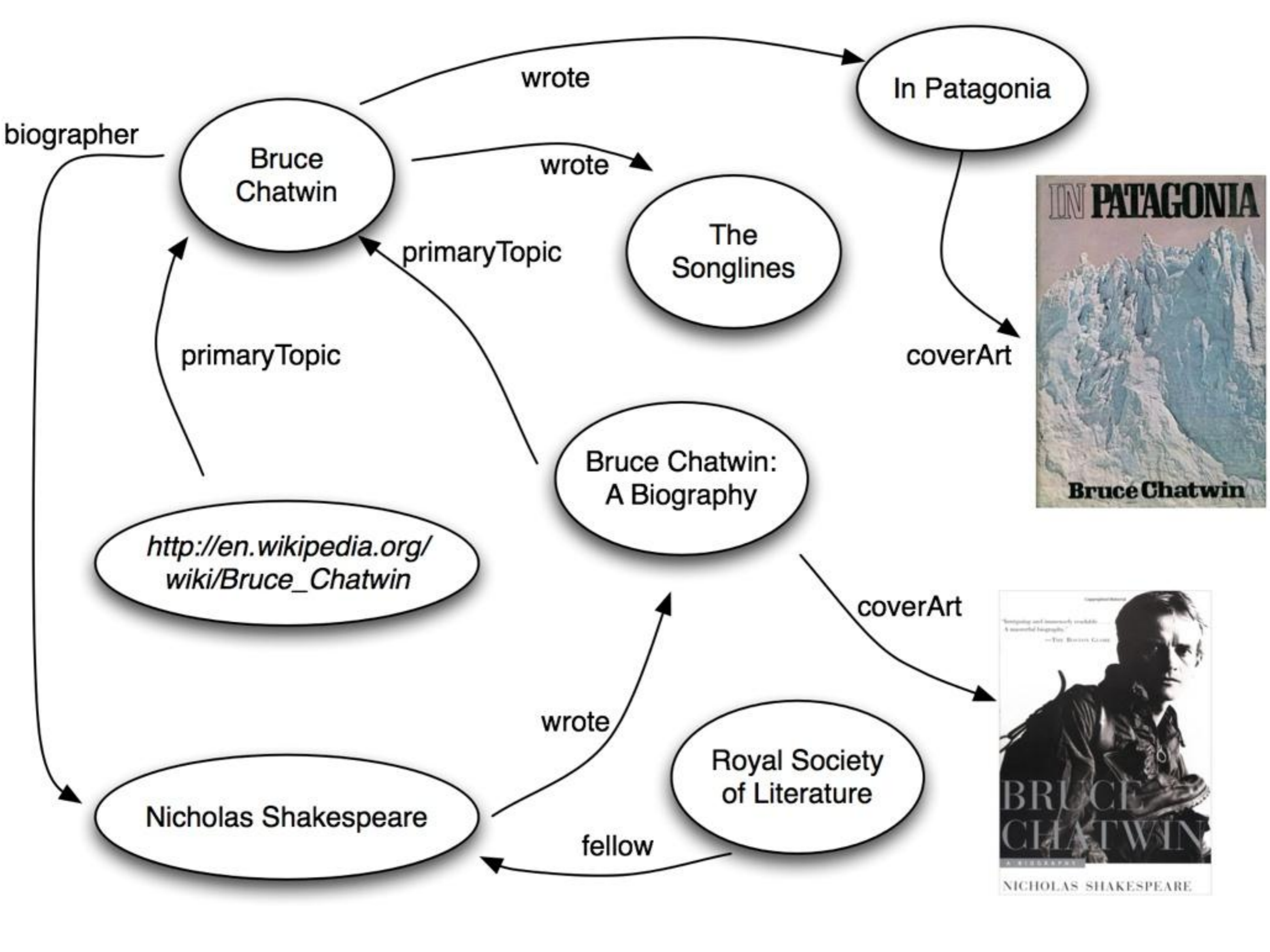


wrote

Royal Society
of Literature

fellow

Nicholas Shakespeare



Linked Data

Factual Graphs + Hypertext Graphs = Linked Data

- Share Factual Graphs using Hypertext Graphs
- e.g. as RDF documents in the Web
- each gives a partial description, and ‘further reading’ links (for machines... for people...)

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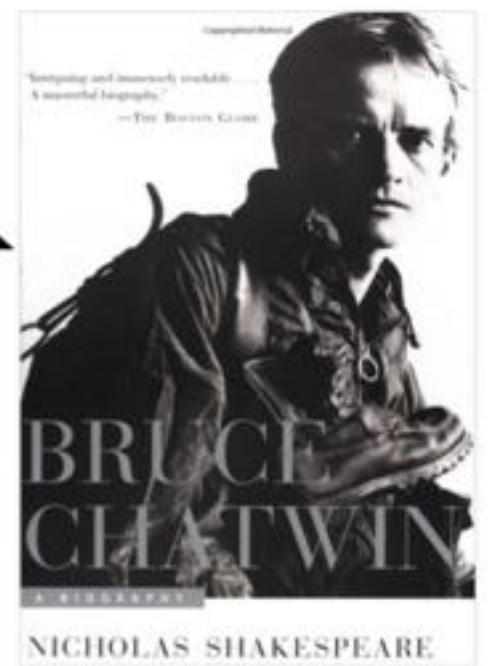


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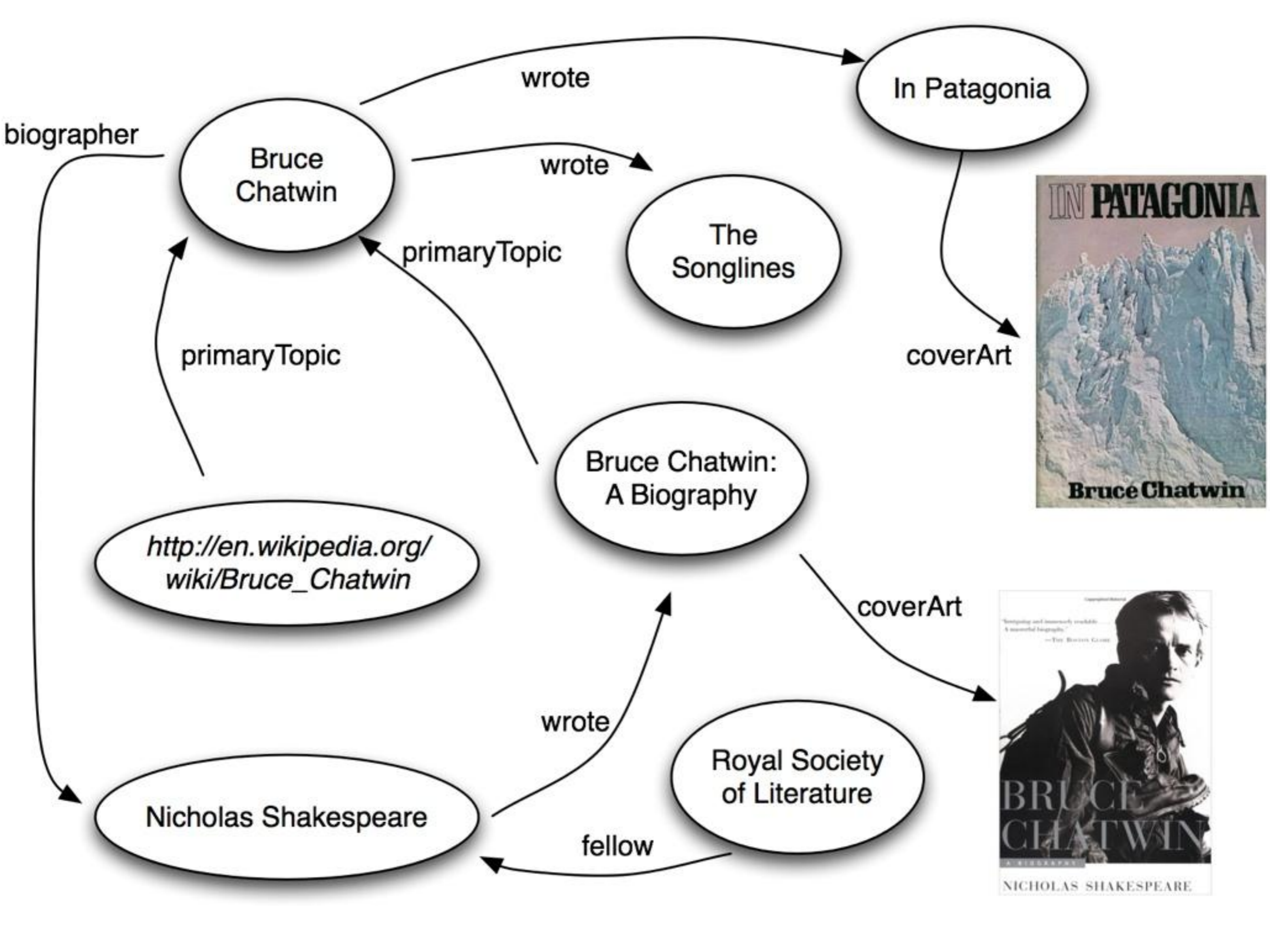


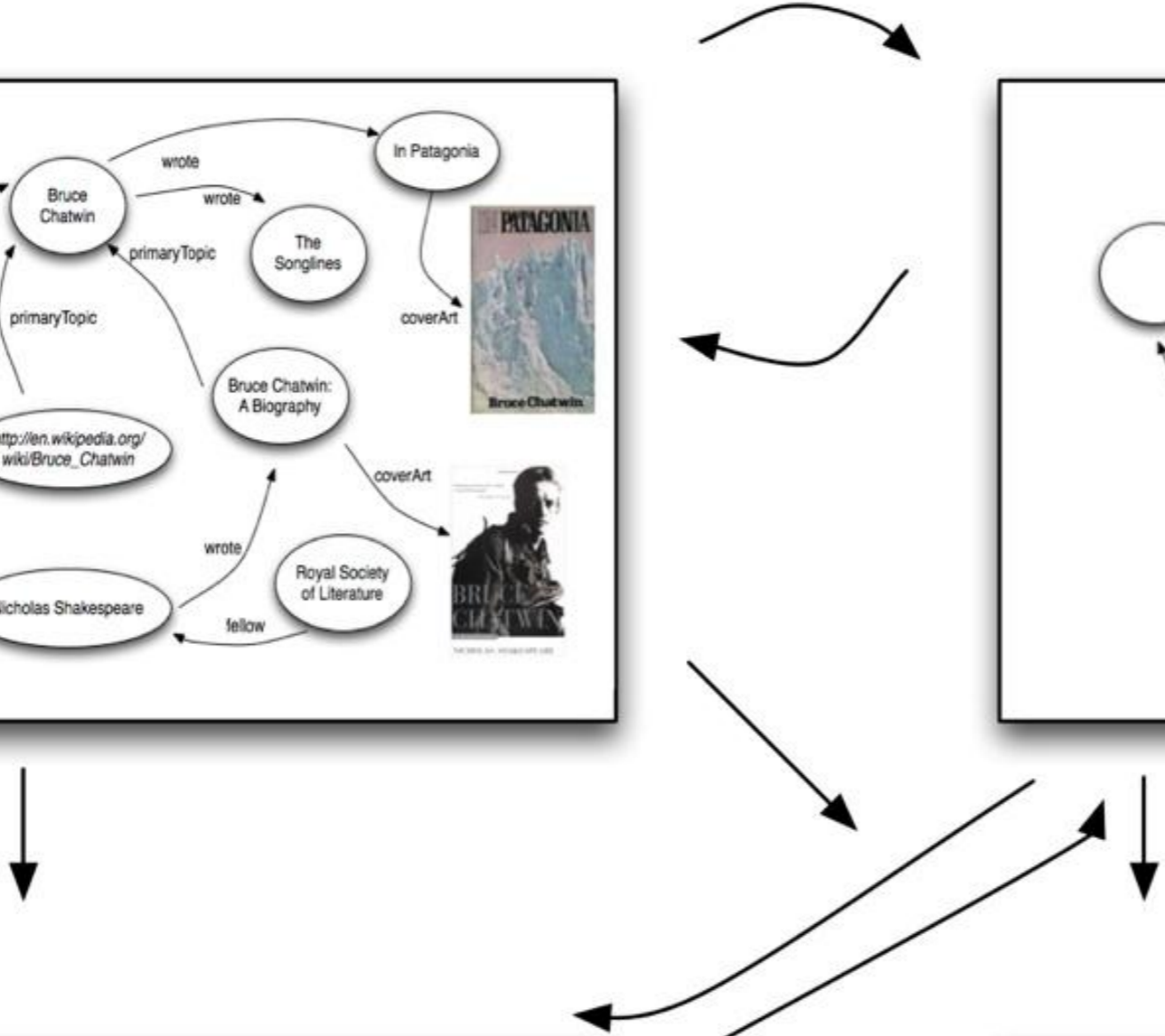
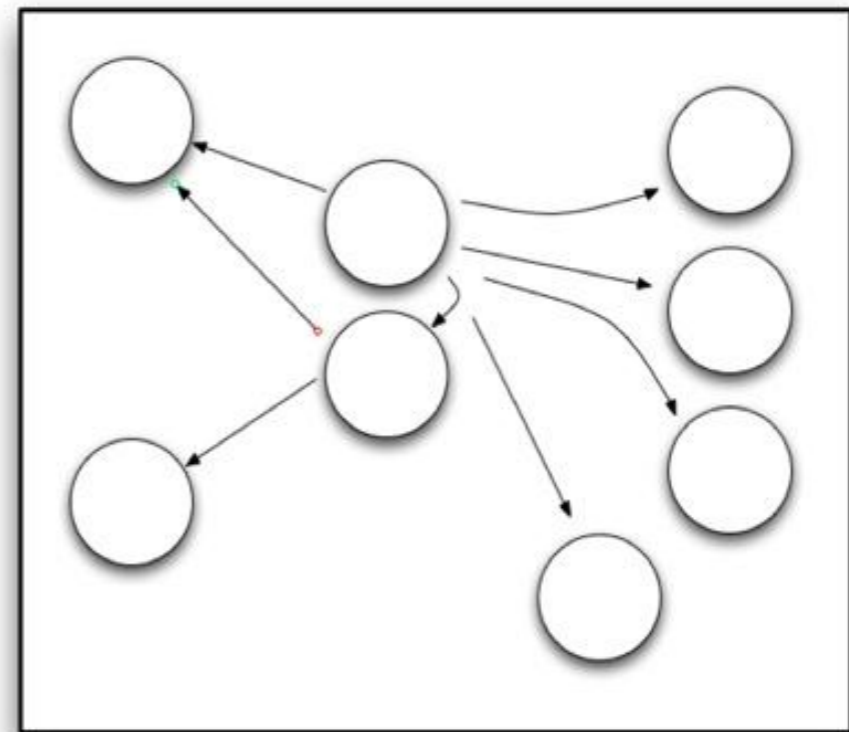
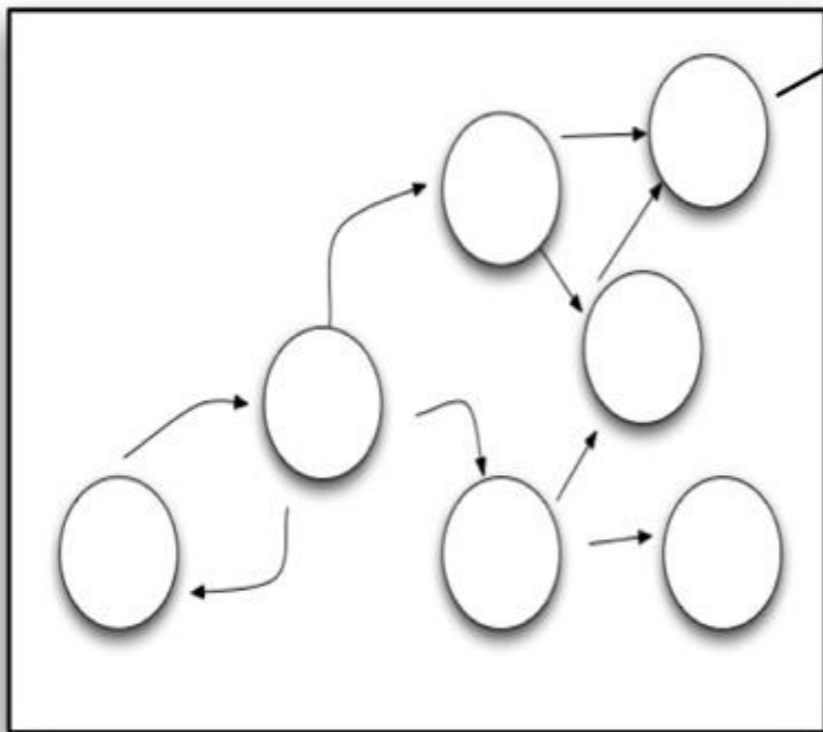
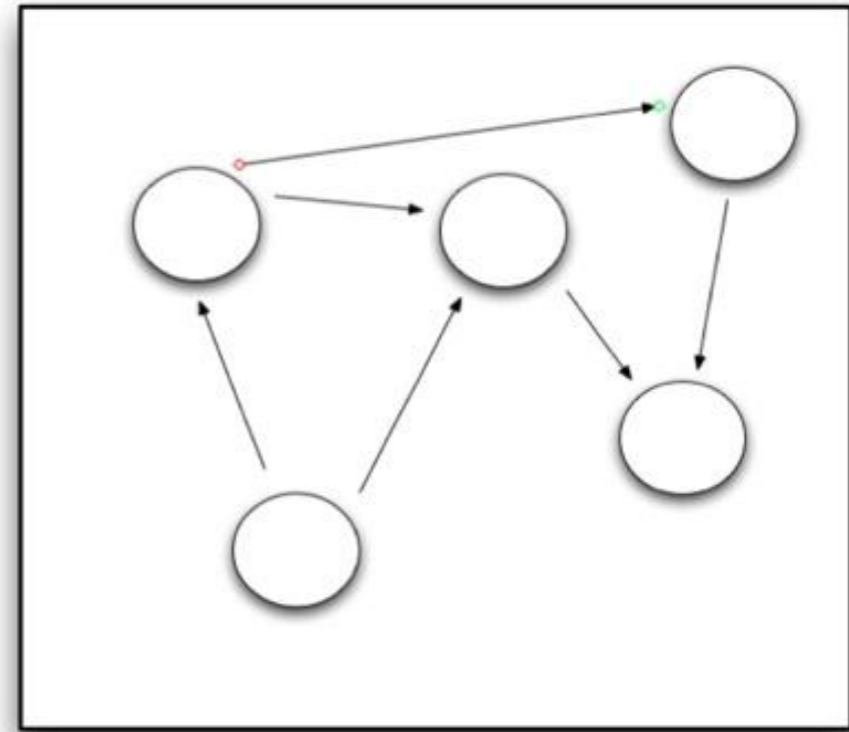
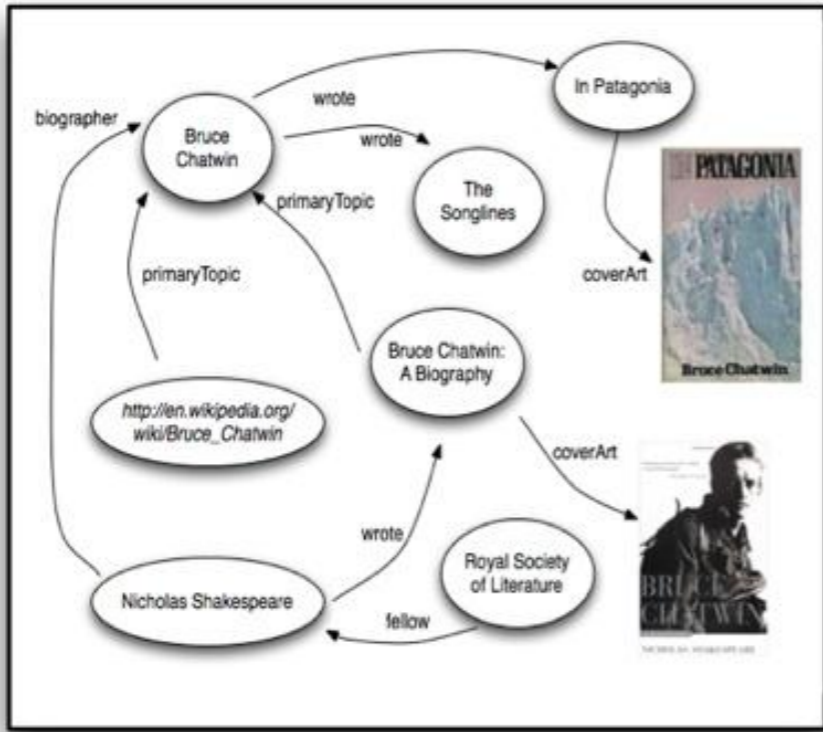
wrote

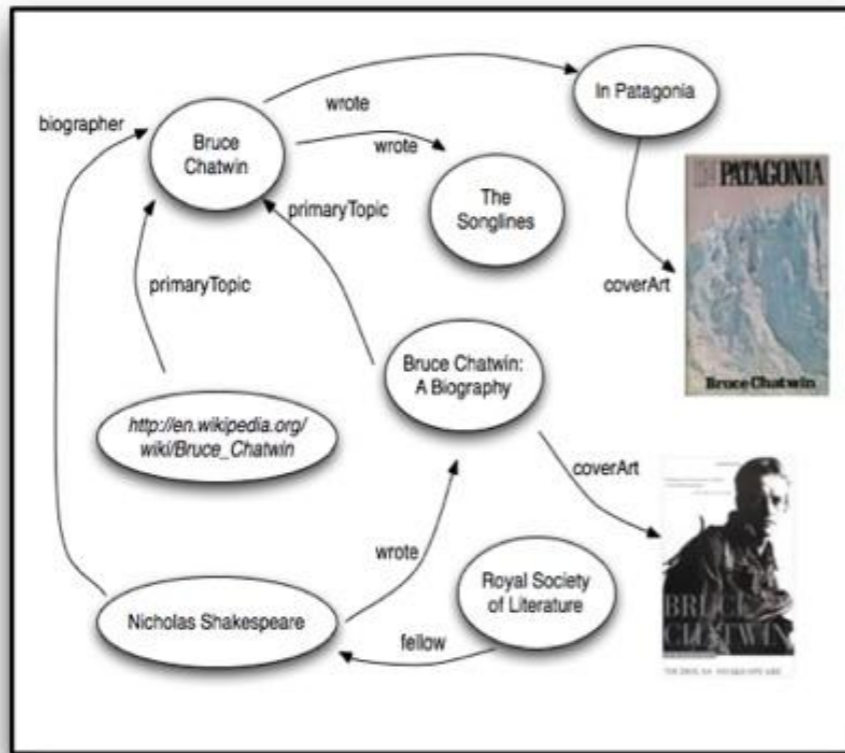
Royal Society
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About: Bruce Chatwin
 An Entity of Type: `artist`, from Named Graph: `http://dbpedia.org`, within Data Space: `dbpedia.org`

Charles Bruce Chatwin (13 May 1940 – 18 January 1989) was an English novelist and travel writer. He won the James Tait Black Memorial Prize for his novel *On the Black Hill* (1982). Married and bisexual, he was one of the first prominent men in Britain known to have contracted HIV and died of AIDS, although he hid the facts of his illness.

Property	Value
<code>dbpedia:owl:abstract</code>	<ul style="list-style-type: none"> Bruce Charles Chatwin war ein britischer Schriftsteller. Bruce Charles Chatwin fue un novelista y escritor de viajes inglés. Bruce Chatwin of englandläsken matkustajalla, laulajalla ja kuvataiteen asiantuntijana. Hän työskenteli Gothroyin huutoaupoikamäärän impressionistisen asiantuntijana. Sieltä hänet keuhkoin Sunday Times Magazineen kirjoittamaan kuvataiteesta ja musiikista. Gothroyllä Chatwin nousi photostehävin, mutta koetti vuonna 1996 ja lähti opettamaan arkeologia. Hän lähti opettamaan kahden vuoden kuluksa ja matkusti Mauritaniaan, Iranin ja Algeriaan, ja oli valokuvia ja teki musiikkia ja palmentuokien elämästä. Tunnetuin teoksensa Patagonia, Patagonia Chatwin kirjoiti matkusteluun kuusi kuukautta Patagoniassa. Hän kirjoiti myös romaaneita. Chatwin kuoli AIDS:in seurauksena. Hän oli biseksuut, Hänen hautausmaansa löydettiin kreikkalais-ortodoksinen peppi. Hän oli kääntynyt uskoon jorkkäläisen näyn Apocryphally koettaan. ブルース・チャトウィン (Bruce Charles Chatwin, 1940年5月13日 - 1989年1月18日) はイギリスの作家、シェフィールド生まれ、サザビーズに勤めたのち、エジンバラ大学で考古学を学ぶ。新聞社の特派員を経て作家的活動に入る。西アフリカ、オーストラリア、ブラジルなど世界各地を旅し小説を書き、旅行記『パタゴニア』はイギリスの『サンデータイムズ』、『フォー』など主要な文学賞にノミネートされる。『ニューズウィーク』『タイムズ』『ブックレビュー』紙でも数回に渡り紹介される。 Bruce Charles Chatwin was een Engels romanschrijver en reisbeschrijver. Bruce Chatwin - angolai pianist i podribrnik. Bruce Charles Chatwin foi um romancista e escritor de viagens inglês. Charles Bruce Chatwin (13 May 1940 – 18 January 1989) was an English novelist and travel writer. He won the James Tait Black Memorial Prize for his novel <i>On the Black Hill</i> (1982). Married and bisexual, he was one of the first prominent men in Britain known to have contracted HIV and died of AIDS, although he hid the facts of his illness. Bruce Chatwin, född 13 maj 1940 i Dronfield, Derbyshire, död 18 januari 1989 i Nice, Alpes-Maritimes, var en britisk författare, resevaktör och vägabönd. Spice "Artist" — amerikansk rockers. Bruce Charles Chatwin, né à Dronfield, le Modèle Date, et mort à Nice le Modèle Date est un écrivain britannique, auteur notamment de récits de voyages.
<code>dbpedia:owl:activeYearsStartYear</code>	1977-01-01 00:00:00 (xsd:date)
<code>dbpedia:owl:birthDate</code>	1940-05-13 (xsd:date)
<code>dbpedia:owl:birthPlace</code>	<ul style="list-style-type: none"> <code>dbpedia:Sheffield</code> <code>dbpedia:England</code>
<code>dbpedia:owl:deathDate</code>	1989-01-18 (xsd:date)
<code>dbpedia:owl:deathPlace</code>	<ul style="list-style-type: none"> <code>dbpedia:Nice</code> <code>dbpedia:France</code>
<code>dbpedia:owl:influenced</code>	<code>dbpedia:William_Darbylowe_(historiker)</code>
<code>dbpedia:owl:influencedBy</code>	<ul style="list-style-type: none"> <code>dbpedia:Jorge_Luis_Borges</code> <code>dbpedia: Evelyn_Waugh</code> <code>dbpedia:Jerome_K_Jerome</code>
<code>dbpedia:owl:occupation</code>	<code>dbpedia:Travel_Writer</code>
<code>dbpedia:owl:wikPageExternalLink</code>	<ul style="list-style-type: none"> <code>http://www.splk.com/magazine.com/0606chat.php</code> <code>http://www.splk.com/magazine.com/0606chat.php</code> <code>http://www.bbc.co.uk/1/hi/health/5073_1121.shtml</code> <code>http://www.uni-halle.de/institute/inf/glas/projekte/07_3_utz.html</code> <code>http://www.bbc.com/news/health-10795815</code>

VIAF

Virtual International Authority File

Search

Select Page: All Names | All VIAF

Select Index: All Names | All VIAF

Select Terms: Bruce Chatwin, 1940-1989 | Bruce Chatwin, 1940-1989 | Bruce Chatwin, 1940-1989

Chatwin, Bruce, 1940-11 | Chatwin, Bruce, 1942-11 | VIAF ID: 115867912

Preferred Forms

- 100 1 | \$a Chatwin, B., Bruce, B., 1940-1989, |
- 100 1 | \$a Chatwin, Bruce, B., 1940-1989, |
- 100 1 | \$a Chatwin, Bruce, B., 1940-1989, |
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- 100 1 | \$a Chatwin, Bruce, B., 1940-1989, |
- 100 1 | \$a Chatwin, Bruce, B., 1940-1989, |

Alternative Name Forms (15)

Selected Titles

1. Utz (20) [View record](#)
2. The songlines (20) [View record](#)
3. On the black hill (20) [View record](#)
4. In Patagonia (20) [View record](#)
5. Auf dem schwarzen Berg Roman (22) [View record](#)
6. What am I doing here? (12) [View record](#)
7. The elderly of Quilín (12) [View record](#)
8. Patagonia revisited (12) [View record](#)
9. Songlines (12) [View record](#)
10. In Patagonia (12) [View record](#)

Selected Co-authors

Countries of Publication (8)

Publication Statistics

GeoNames Home | Postal Codes | Download / Webservice | About

Map center: S 43° 46' 8" W 67° 59' 59"

displaying Geonames id: 3941798
[refresh](#) to display all features in area
[GeoNames WikiData](#)

Patagonia ca. 398 m
 La Patagonia, Patagonia, Patagonia Region, Patagonia
 Argentina
 region
 S 44° 0' 0" W 68° 0' 0"
 -44 / -68
 GeonameId: 3941798

Name	country	feature	km to center
1 Patagonia	Argentina	region	0 km

Export: [csv](#) [img](#)

	A	B	C	D
1	SUBJECT	PREDICATE	OBJECT	SOURCE
2	wiki:Bruce_Chatwin	wrote	wiki:In_Patagonia	Dan
3	wiki:Bruce_Chatwin	nationality	British	DBPEDIA
4	wiki:Bruce_Chatwin	genre	History, travel, fiction	DBPEDIA
5	wiki:Bruce_Chatwin	biographer	wiki:Nicholas_Shakesp	Dan
6	wiki:In_Patagonia	subject	wiki:Patagonia	DBPEDIA
7	loc:n50036212	altLabel	Chatwin, C. Bruce (Charles Bruce), 1940- 1989	LOC
8	loc:n50036212	altLabel	Chatwin, Charles Bruce, 1940-1989	LOC
9	viaf:110567910	sameAs	wiki:Bruce_Chatwin	VIAF
10	viaf:110567910	sameAs	libris.kb.se:218894	VIAF
11	viaf:110567910	sameAs	gnd:11886128X	VIAF
12				
13				
14				
15				
16				
17				

Friend of a Friend (FOAF)

- Linked Data = Hypertext Factual Graphs
- FOAF = Linked Data + Social Graph
- Brings together three notions of information network: hypertext, factual and social.

FOAF examples

- “Pat Hayes” and “Dan Brickley” are members of the RDF Core WG (& which closed in 2004)
- the person with homepage at danbri.org/ has a workplaceHomepage of www.vu.nl/
- Dan knows Guus, Aida and Tom.
- Pat is an expert in the topic <http://id.loc.gov/authorities/subjects/sh85086421> labeled “Model Theory”. (and Dan isn't.)

Where are we?

- We're describing social graphs, using factual graphs, published and shared as hypertext graphs.
- Mildly confusing but fairly straightforward.
- How does subject classification fit in?

“Information” x3

- Factual information: logical claims (RDF), generalisations(OWL), also statistics, geospatial, spreadsheets, ...
- Documents and artifacts; books, CDs, photos, videos, texts, literature, Web pages, ...
- “In people’s head” - skills, abilities, ...

Linked Data in Context

- Linked Data addresses roughly 1/3 of the ‘Information linking’ problem: publishing and aggregating simple factual claims.
- Info in document form is **not going away**, ever.
- Info “in people’s heads” is invaluable (world population approaching 7 billion heads).

Mistakes to avoid

- “Docs bad, data good” thinking.
- idea that “Semantic Web” *replaces* “Doc Web”.
- That ontologies are always better (richer, cleaner, more useful) than earlier subject-based approaches.
- That posting factual claims in the Web is our core shared business.
- That all data in the Web must be in RDF.

Three uses of RDF

- To share simple factual data directly in the Web.
- As metadata, to describe other useful information.
- Describing people, their lives, experience and works.

Linked Information

- An integrated approach, linking networks of documents, databases and people to 'share what we know' in the Web.
- Common approaches to describing topics, people, places and things, with supporting factual information.
- SKOS and subject classification at its heart.

Questions?