

Distributional semantics

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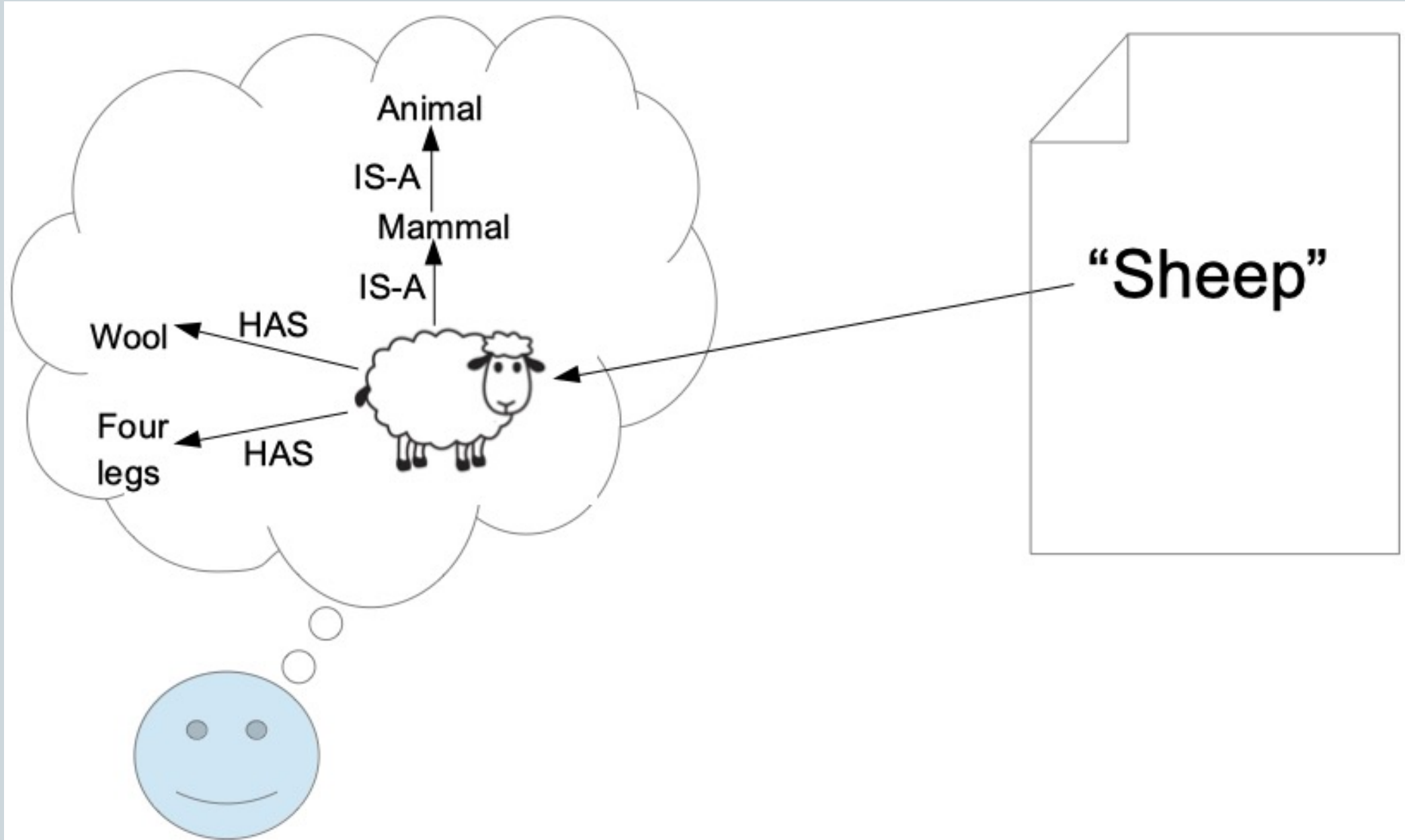


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Representing words

- So far we have looked at how we might represent documents
- How can we represent words numerically, so we can build computational models of language?
- How can we account for:
 - Their similarities?
 - Their meaning, or semantics?
- We can use *distributional semantics*, taking a word's context as a proxy for its meaning
- Use this to build vector based representations of words

Lexical semantics



An experiment – wombling and snetches

The Captain's side raked first. Tom staked. The hired sportsmen played so hard that they **wombled** too fast, and were shaky with the rakes. Tom fooled around the way he always did, and all his stakes dropped true. When it was his turn to rake he did not let Captain Najork and the hired sportsmen score a single rung, and at the end of the **snetch** he won by six ladders.

From How Tom beat Captain Najork and his hired sportsmen
by Russell Hoban and Quentin Blake

Distributional semantics

- “You shall know a word by the company it keeps” (JR Firth)
- The contexts in which words appear correlate with their meaning
- We understand a word by its distribution: the set of contexts in which it is found
- “Don't think, but look!” (Wittgenstein) - i.e. the meaning of a word is the description of its use,

Words in context – concordances and collocations

WebCorp: The Web as Corpus

webcorp.org.uk/live/cache.jsp?id=3Ue97SG4UM&span=c50&colls=on&stopwords=on&sort...

WebCorp Live
Concordance the web in real-time.

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Results for query "cheese"

[Jump to collocates table](#)
[Jump to options](#)

case insensitive,
using the Bing API

1:	by texture Cheeses by color Vegetarian Cheeses	Cheese recipes Cheese facts Serving and storage Cutting
2:	by color Vegetarian Cheeses Cheese recipes	Cheese facts Serving and storage Cutting tips Cheese
3:	Cheese facts Serving and storage Cutting tips	Cheese and Wine Pairings Blog Alphabetical Cheeses by
4:	by texture Cheeses by color Vegetarian Cheeses	Cheese recipes Cheese facts Serving and storage Cutting
5:	by color Vegetarian Cheeses Cheese recipes	Cheese facts Serving and storage Cutting tips Cheese
6:	Cheese facts Serving and storage Cutting tips	Cheese and Wine Pairings Blog Find over 2,015 specialty
7:	from 74 countries in the world's greatest	Cheese resource. Serving, cutting and storage; find out
8:	to make the most out of this delightful dairy.	Cheese and wine, the perfect recipe for a great dinner
9:	learn more about the wonderful combinations.	Cheese is nutritious food made mostly from the milk of
10:	animals and process their milk. That's when the	Cheese was born. Explore this site to find out about
11:	this site to find out about different kinds of	Cheese from all around the world. You can search the
12:	You can search the database of 2015 varieties of	Cheese by names, by country of origin, by kind of milk
13:	includes information on most famous sorts of	Cheese such as Cheddar, Camembert, Stilton or Parmesan,
14:	de Chavignol. Did you know? The most expensive	Cheese in the world is Pule and it's made from donkey's
15:	world is Pule and it's made from donkey's milk.	Cheese of the day Gorgonzola Piccante DOP Find out more
16:	more Latest Blog Posts 24 July, 2024 How to Pair	Cheese with Non-Alcoholic Beverages There's something
17:	is perfect ... 5 July, 2024 Five Unknown Dutch	Cheese You Have to Taste in The Netherlands The
18:	nation also produces plenty of dairy and loves	Cheese. From making it ... 27 June, 2024 8 Facts about
19:	it ... 27 June, 2024 8 Facts about Mozzarella	Cheese Don't you just love cheese? The stringy, gooey
20:	about Mozzarella Cheese Don't you just love	Cheese? The stringy, gooey goodness that you can
21:	for any foodie ... 26 June, 2024 Quick and Healthy	Cheese Snacks with Sucralose: Perfect for Fasting Days
22:	1 2 3 4 ... 98 99 100 101 Gouda Brie American	Cheese Pecorino Romano Cheddar Manchego Smoked Gouda
23:	2 3 4 ... 98 99 100 101 BACK TO TOP Search Love	Cheese? Use our large database to learn more about your
24:	Fat Content, Type and Country of Origin. Share!	Cheese is made for sharing. So share the fun facts and
25:	grateful for your brie-lliant knowledge. Fact.	CHEESE FACTS Serving and storage Cutting tips How to
26:	Serving and storage Cutting tips How to match	Cheese and wine? POPULAR CHEESES American Cheese Asiago
27:	match cheese and wine? POPULAR CHEESES American	Cheese Asiago Blue Cheese Bocconcini Brie Buffalo
28:	POPULAR CHEESES American Cheese Asiago Blue	Cheese Bocconcini Brie Buffalo Mozzarella Burrata
29:	Chihuahua Colby Colby Jack Comte Cotija Cream	Cheese Dubliner Edam Emmental Feta Fior Di Latte
30:	Edam Emmental Feta Fior Di Latte Fontina Goat	Cheese Gorgonzola Gouda Grana Padano Gruyere Halloumi

<https://www.webcorp.org.uk/>

Thank you

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