

# The Role of Metadata in an Open Knowledge Age?

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# Open Knowledge Network

- <http://ichs.ucsf.edu/open-knowledge-network/>
- “...every known concept from the worlds of science, business, medicine and human affairs.”
- Semantic information
- Machine readable



# How might this work?

- In the form of a story about Sarah Connor who is coming home in her self-driving car and approaching her apartment...



# Elements of this Story

- Interaction with ambient environment – **no devices** needed to interact with information
- Different nature of **discovery** – already changing with library systems
- **Multiple types** of content
- Role of **machines and interpretation**
- Role of **privacy**
- **Print on demand** has more possibilities



# Containers in Linked Data

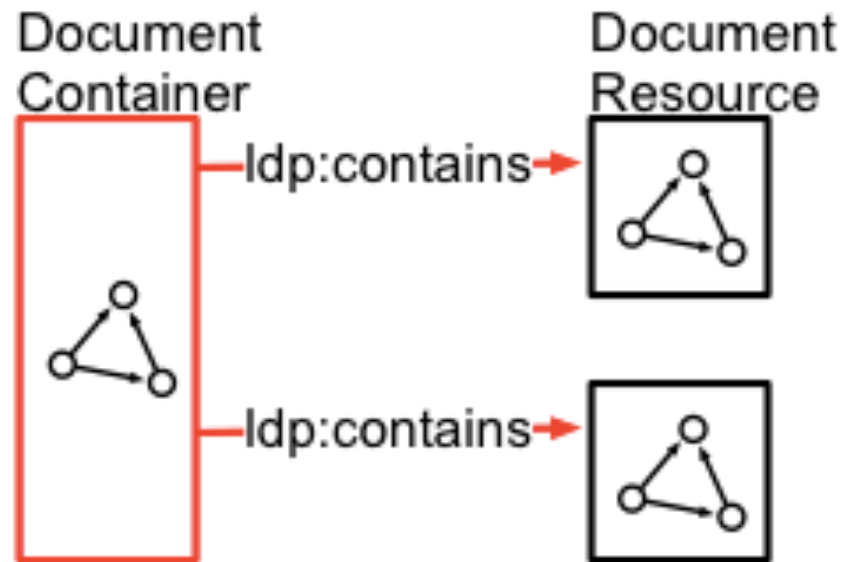


Fig. 1 Generic document storage using a Basic Container.



# Containers in Linked Data

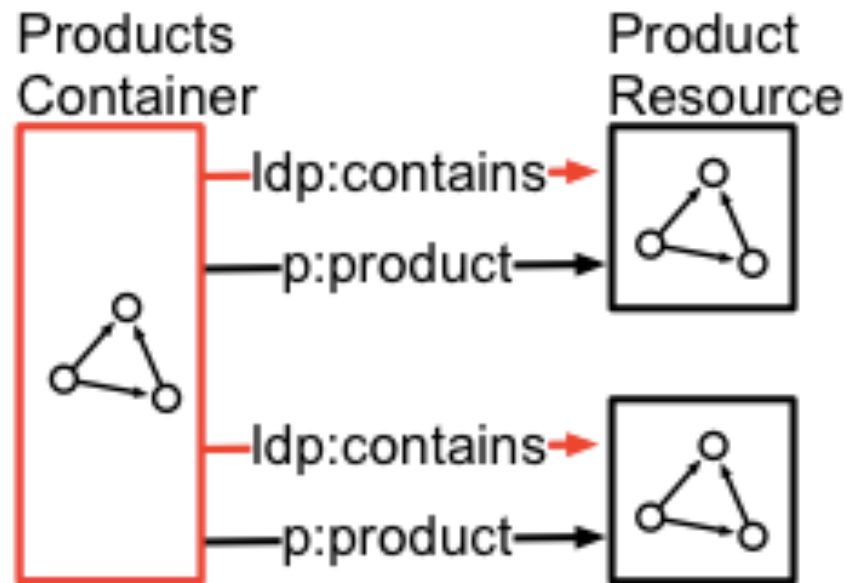


Fig. 2 Using domain vocabulary with a Direct container.



# Containers in Linked Data

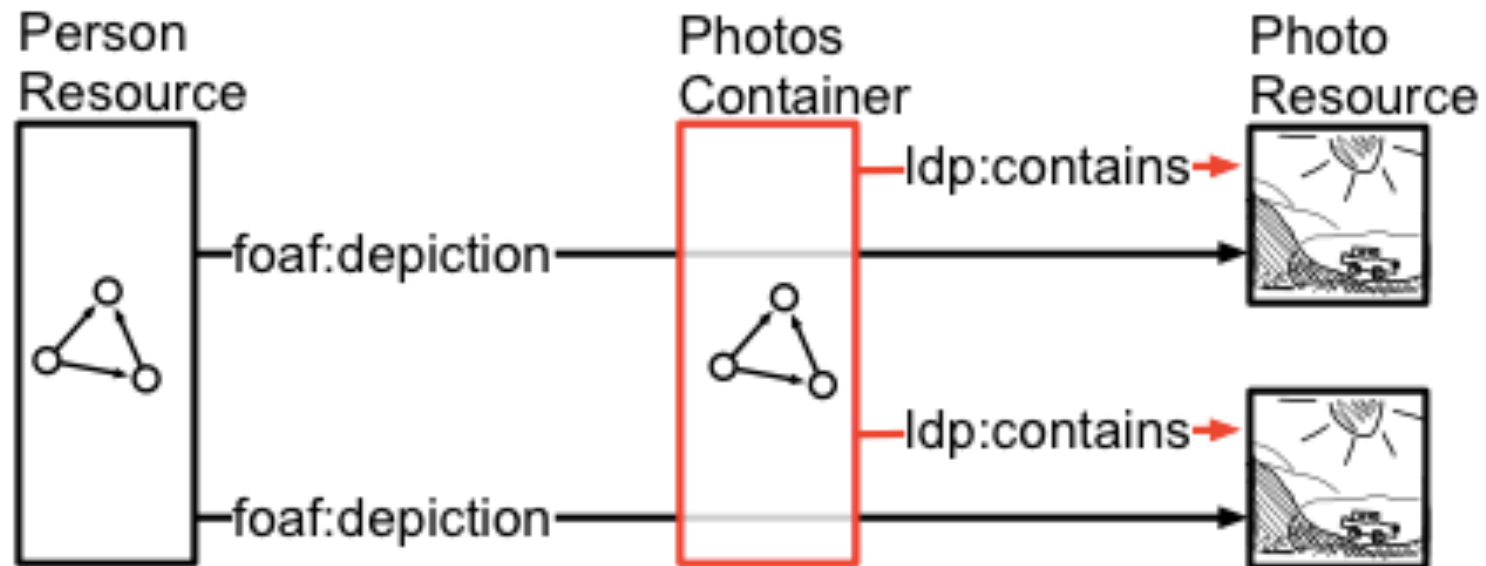


Fig. 3 Membership triples with a non-Container subject.



# Containers in Linked Data

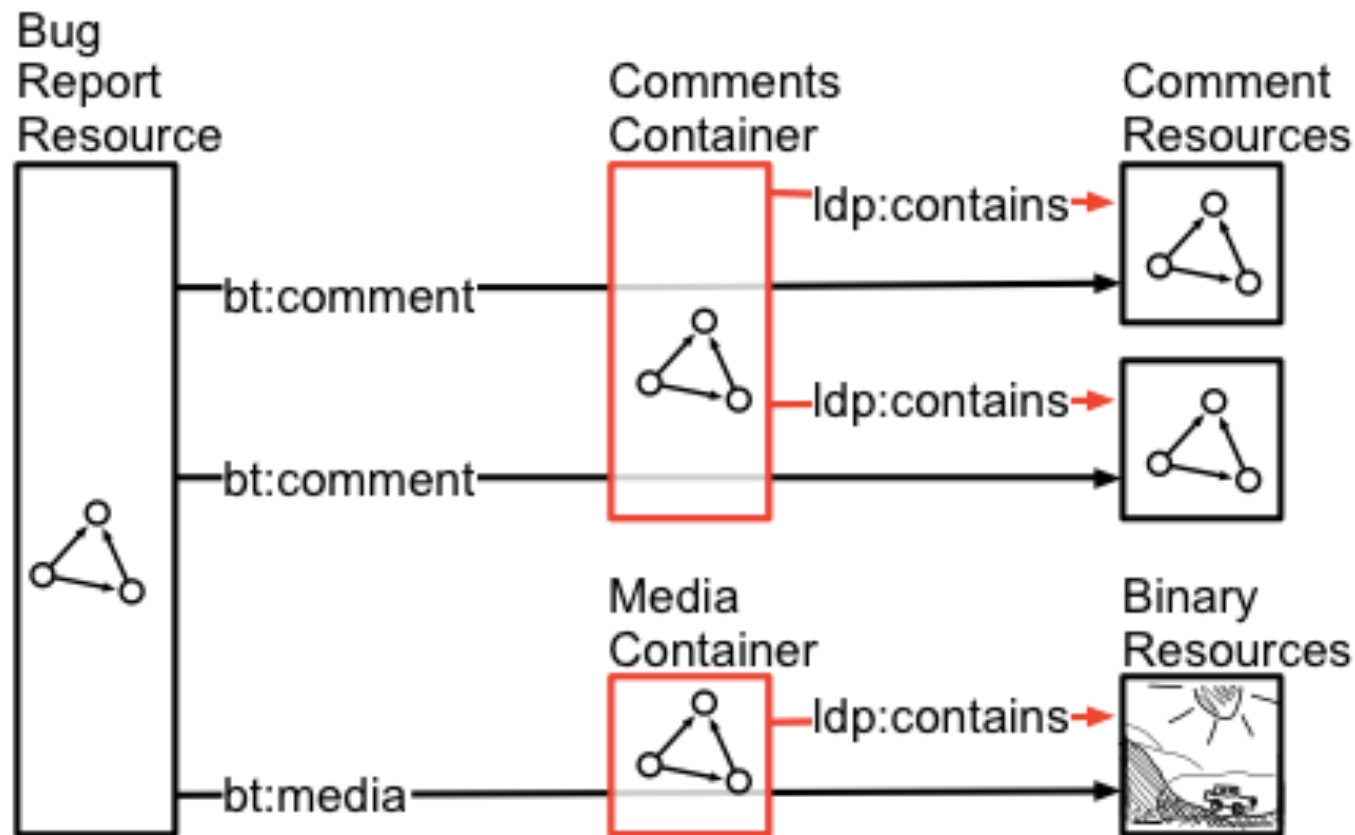


Fig. 4 Managing multiple facets of a Bug with two Direct Containers.



# Bento Box as a Container



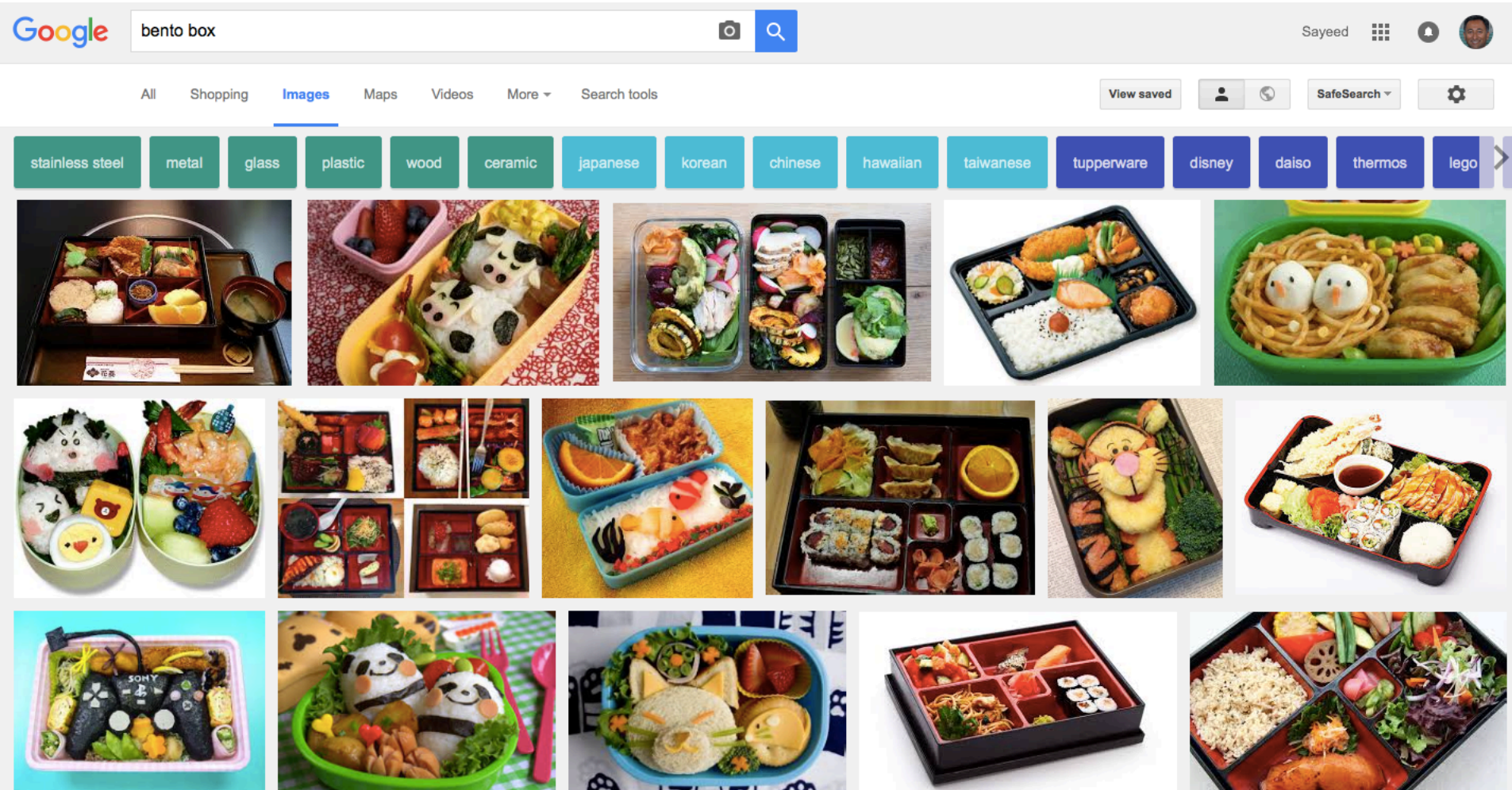


# Bento Box as a Container





# Bento Box as a Container





# So what is a Bento Box?

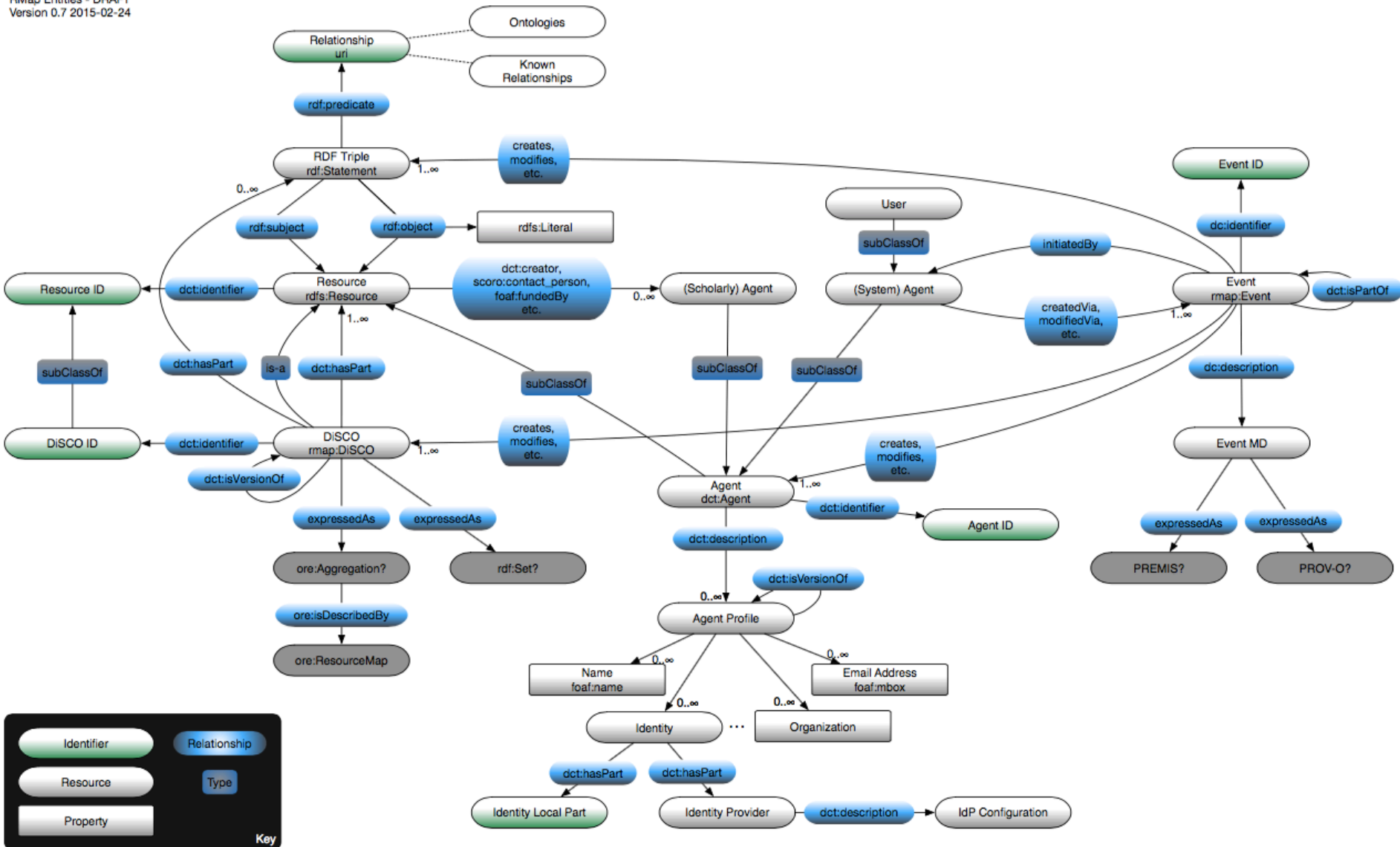
- Is it a meal? Is it only for lunch?
- Is it Japanese? Originally Japanese?
- Is it food? Are there specific items?
- Is it more generally a container for any type of food?
- Could you organize other items (e.g., sewing supplies) within a Bento Box?
- It is more about culture than food?







RMap Entities - DRAFT  
Version 0.7 2015-02-24



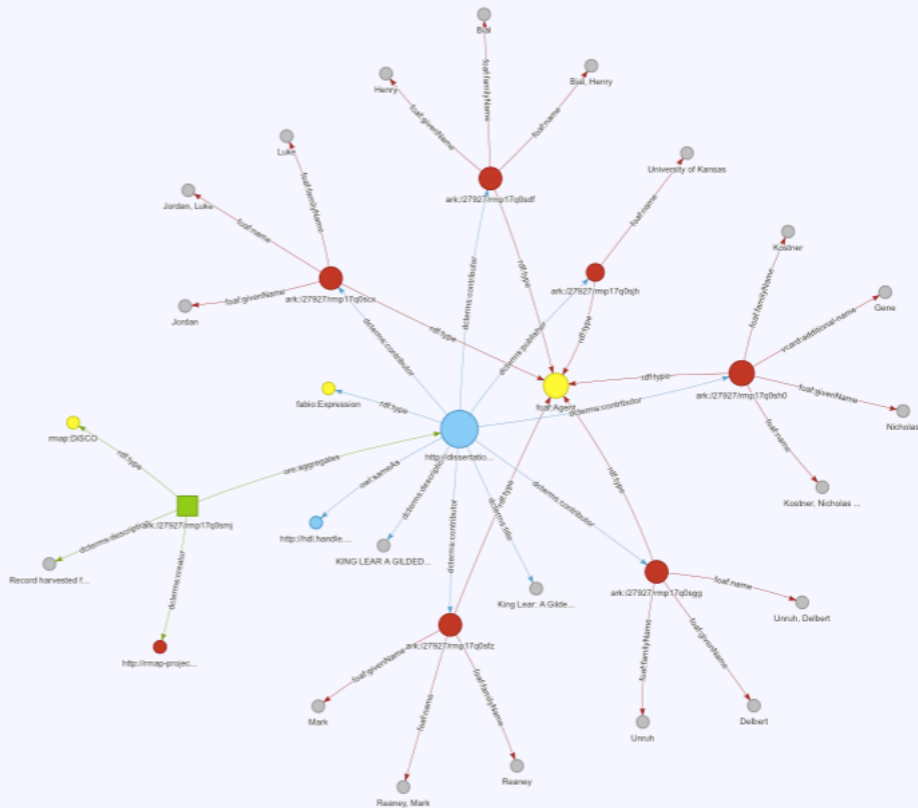


# RMap DiSCO from SHARE



## RMap DiSCO

ark:/27927/rmp17q0smj

[Return to summary](#) | [Hide literals](#) | [Show types](#)



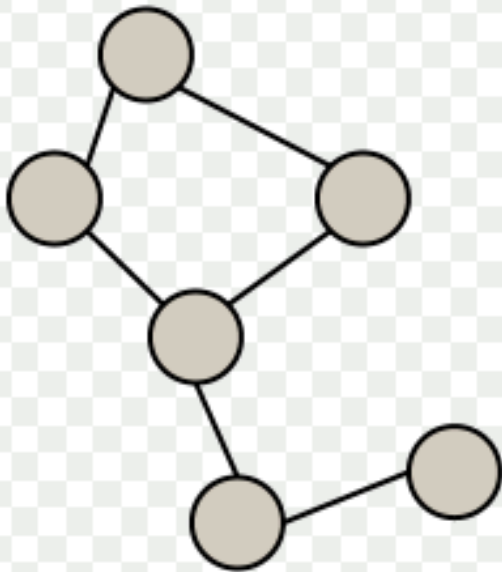
# “When Big Data is not Enough”

- Allan Yuille, **Bloomberg Distinguished Professor**, Department of Cognitive Science, Johns Hopkins University
- Combination of **big data**, **computation**, and **machine learning**

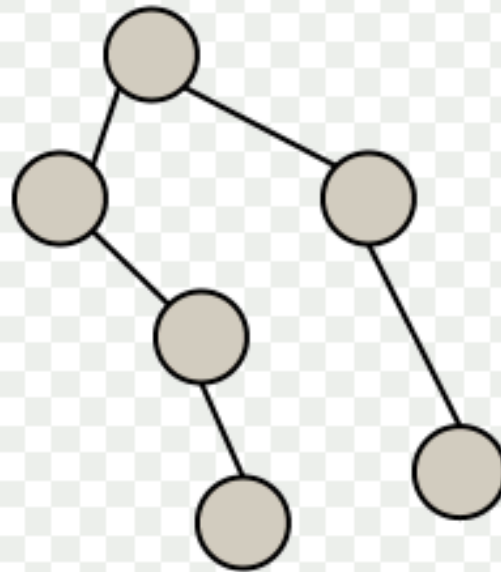


# Graphs and Trees

## Graphs & Trees



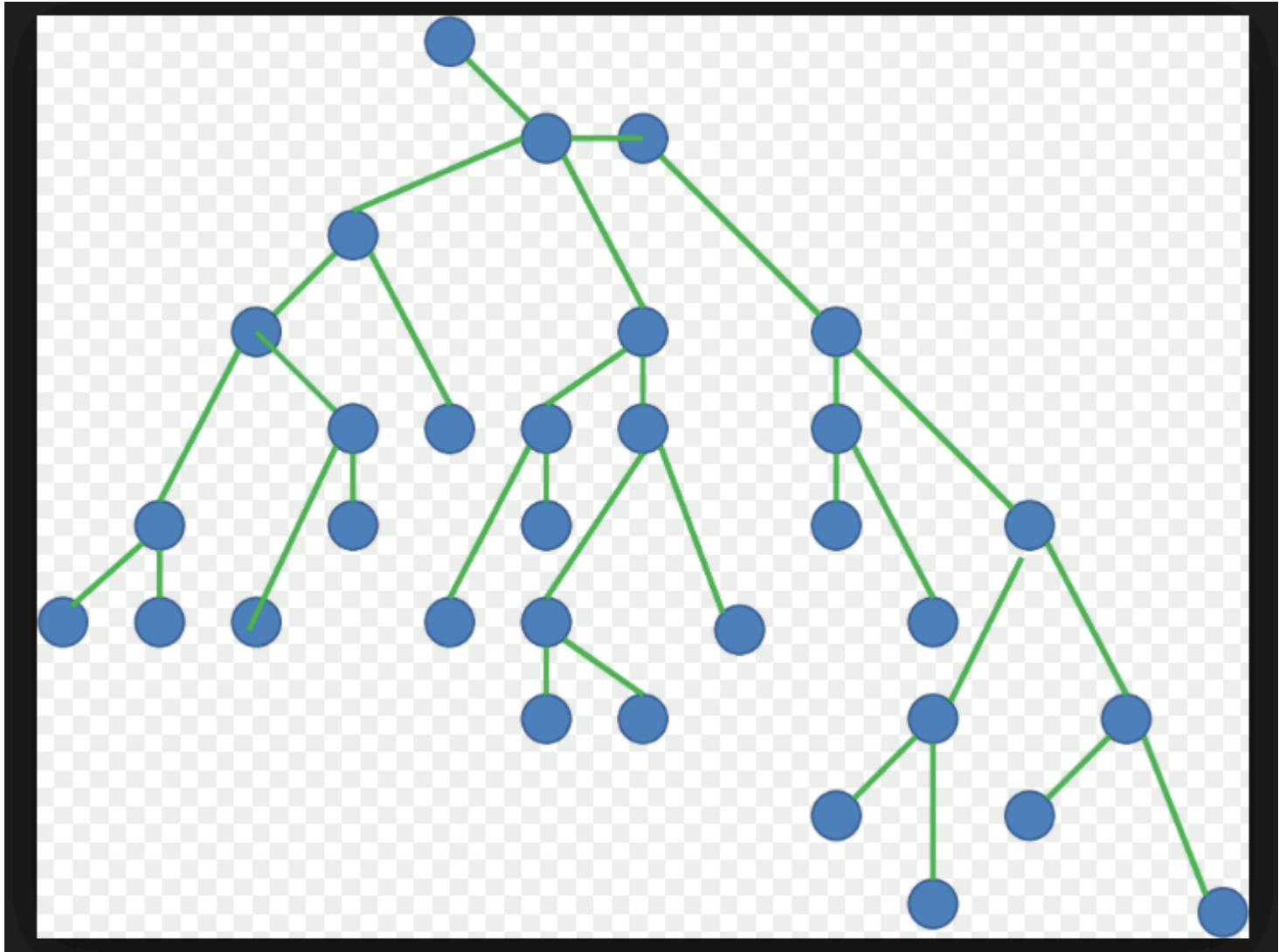
Graph



Tree



# Traversing a Tree





# Deep Blue vs. Kasparov

- 1996 Chess match between IBM computer and human world champion
- 1997 rematch during which time Deep Blue won





# A Different Kind of Blues





# AlphaGo vs. Lee Sedol





# Alpha Go vs...itself?

ars

TECHNICA



BIZ & IT

TECH

SCIENCE

POLICY

CARS

GAMING & CULTURE

FORUMS

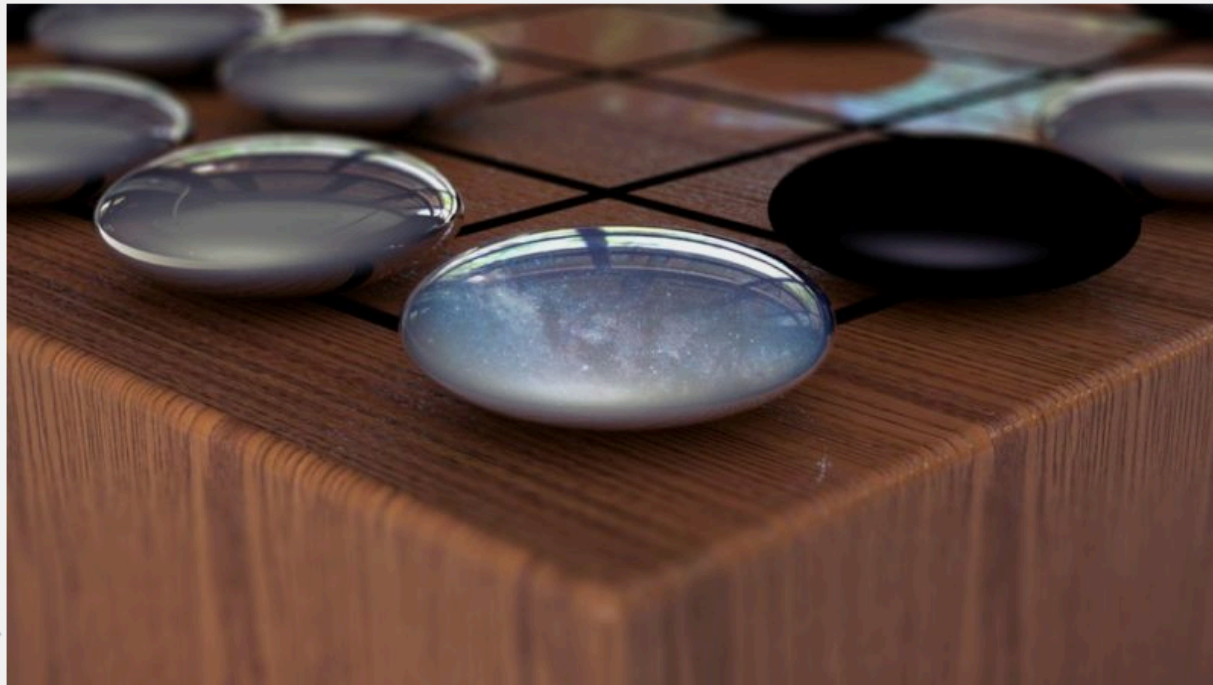


SELF-TAUGHT —

## New neural network teaches itself Go, spans the pros

This time, the Go-playing algorithm didn't need any human players to help it.

JOHN TIMMER - 10/18/2017, 3:30 PM





# Imagine

- What will happen when data, computing, and machine learning reaches this level of capacity?
- Right now, if you're not on Google, you don't exist.
- In the near future, if you're not on a graph, you won't exist.



# Role of Metadata in an Open Knowledge Age?

- Does metadata help with interpretation?
- Protecting privacy?
- Tracking events?
- Is it simply a node on a graph? Or the connections between the nodes?
- Or as the DARPA funded researcher asserts...there is no role for metadata.



Questions? Thoughts? Objections?