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# reframing Open Big Data

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## context and motivation

- Open Big Data **research theme**
- conceptual **framework**
- **genuine IS**



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## open data

- “A piece of content or data is open if anyone is free to use, **reuse**, and **redistribute** it – subject only, at most, to the requirement to **attribute and/or share-alike**”

[opendefinition.org](http://opendefinition.org), last access 12th Oct. 2012



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# WHERE DOES MY MONEY GO?

*Showing you where your taxes get spent*

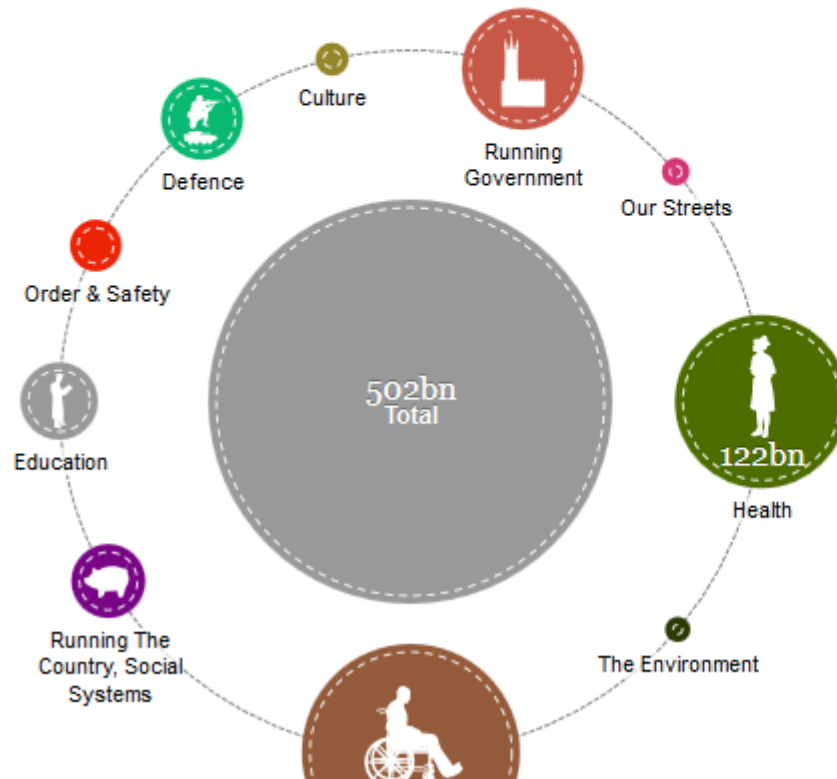


[The Daily Bread](#)

[Country & Regional Analysis](#)

[Departmental Spending](#)

[About](#)



*Expenditure on  
Total*

- 18bn – 20bn (£)
- 20bn – 27bn
- 27bn – 32bn
- 32bn – 43bn
- 43bn – 47bn
- 47bn – 96bn





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## 5 star model (Berners-Lee)

1. any **online** content published under **open license**
2. **machine** readable format
3. **non**-proprietary format
4. W3C open standards for **unique identification**
5. data is **linked** to other data



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## big data

- “[...] refers to datasets whose size is **beyond** the ability of **typical** database software tools to capture, store, manage, and analyse.

This definition is intentionally subjective and incorporates a moving definition of how big a dataset needs to be in order to be considered big data – i.e. we don’t define big data in terms of being larger than a certain number of terabytes [...]”

Manyika, et al. 2011:1



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google.org Flu Trends

[Google.org home](#)

[Dengue Trends](#)

**Flu Trends**

[Home](#)

Netherlands ▾

National ▾

[Download data](#)

[How does this work?](#)

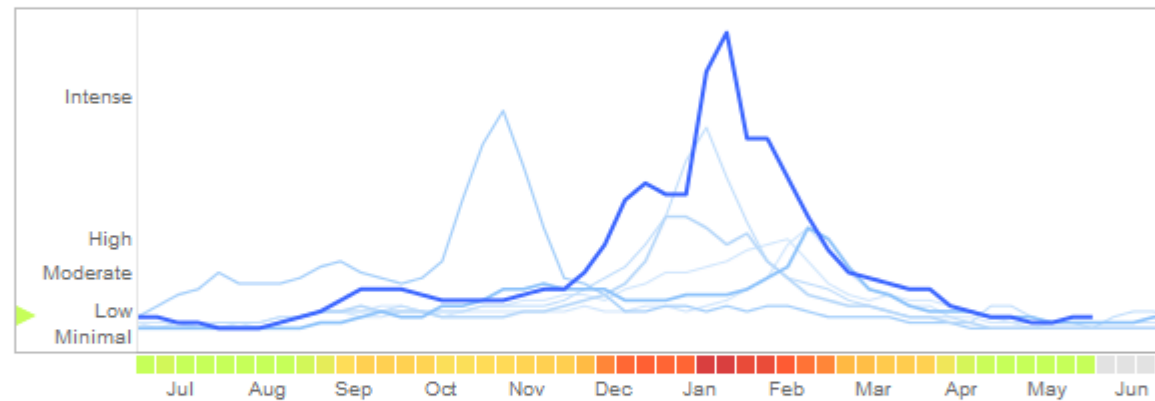
[FAQ](#)

## Explore flu trends - Netherlands

We've found that certain search terms are good indicators of flu activity. Google Flu Trends uses aggregated Google search data to estimate flu activity. [Learn more »](#)

**National**

● 2012-2013 ● [Past years ▾](#)







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# **3Vs** (Doug Laney – META Group)

- 1. volume**
- 2. variety**
- 3. velocity**





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## closed data

- silos of knowledge
- curation
- control



## open data

- networks
- linked data
- release of control



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## small data

- data warehouse
- structured data



## big data

- noSQL
- unstructured data



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## small data

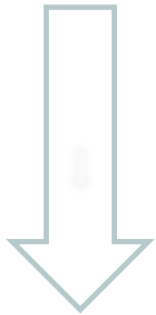


## big data

### closed data

- relational databases and data-warehouses
- structured data
- centralized computing and storage
- **Traditional IS**

- non-relational databases
- structured and unstructured data
- distributed computing and storage
- **Big Data Analytics**



### open data

- machine-readable and "linkable" data
- semantic web technologies
- **Open Architectures**

# OBD?



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# Open Big Data

**data < > information**

**potential  
information**



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**open data**

high **potential** to link data

**high relationality**



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**big data**

high **potential** to order data

**ex-post ordering**



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# high relationality

**open data**

**big data**

# ex-post ordering

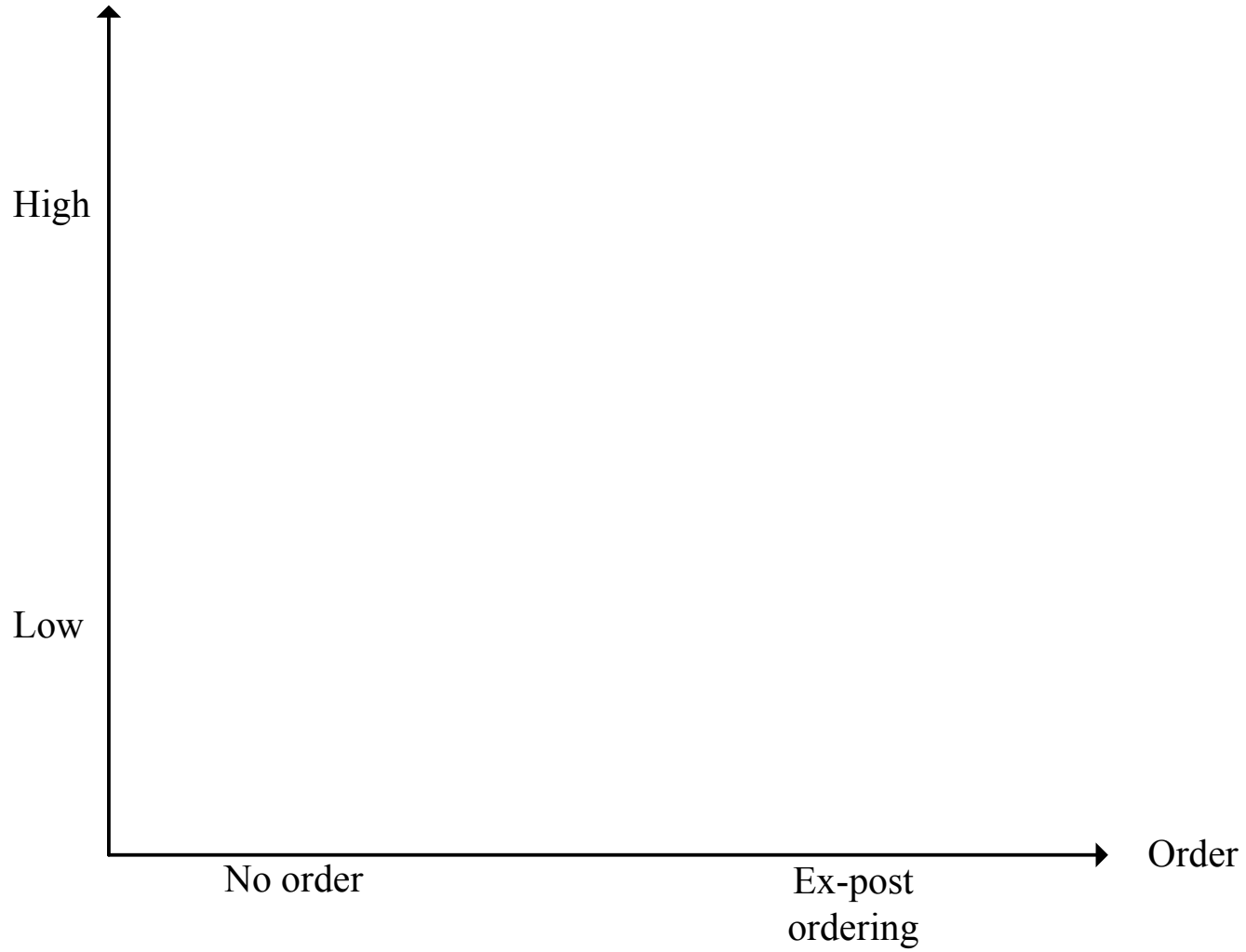




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Relationality

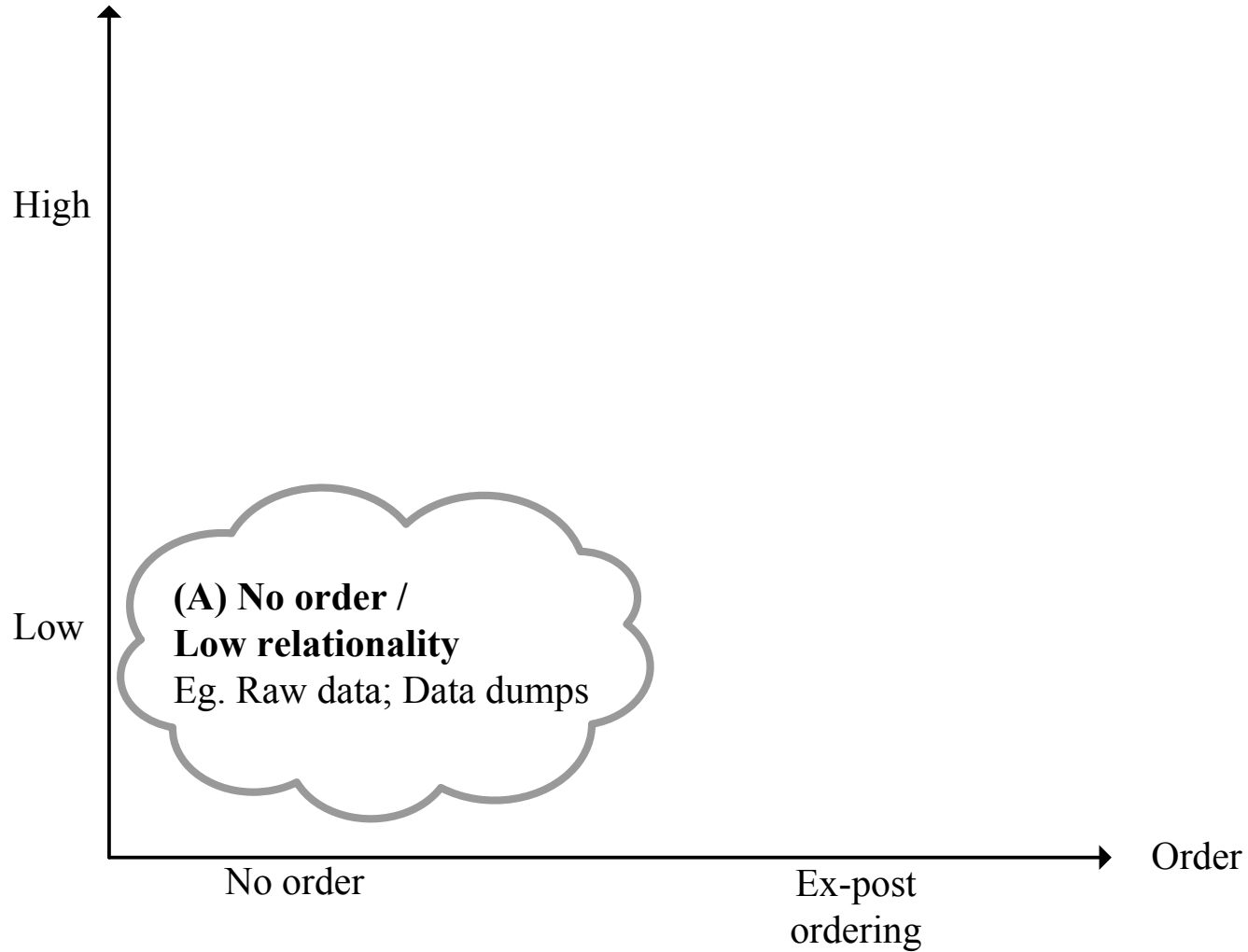




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Relationality

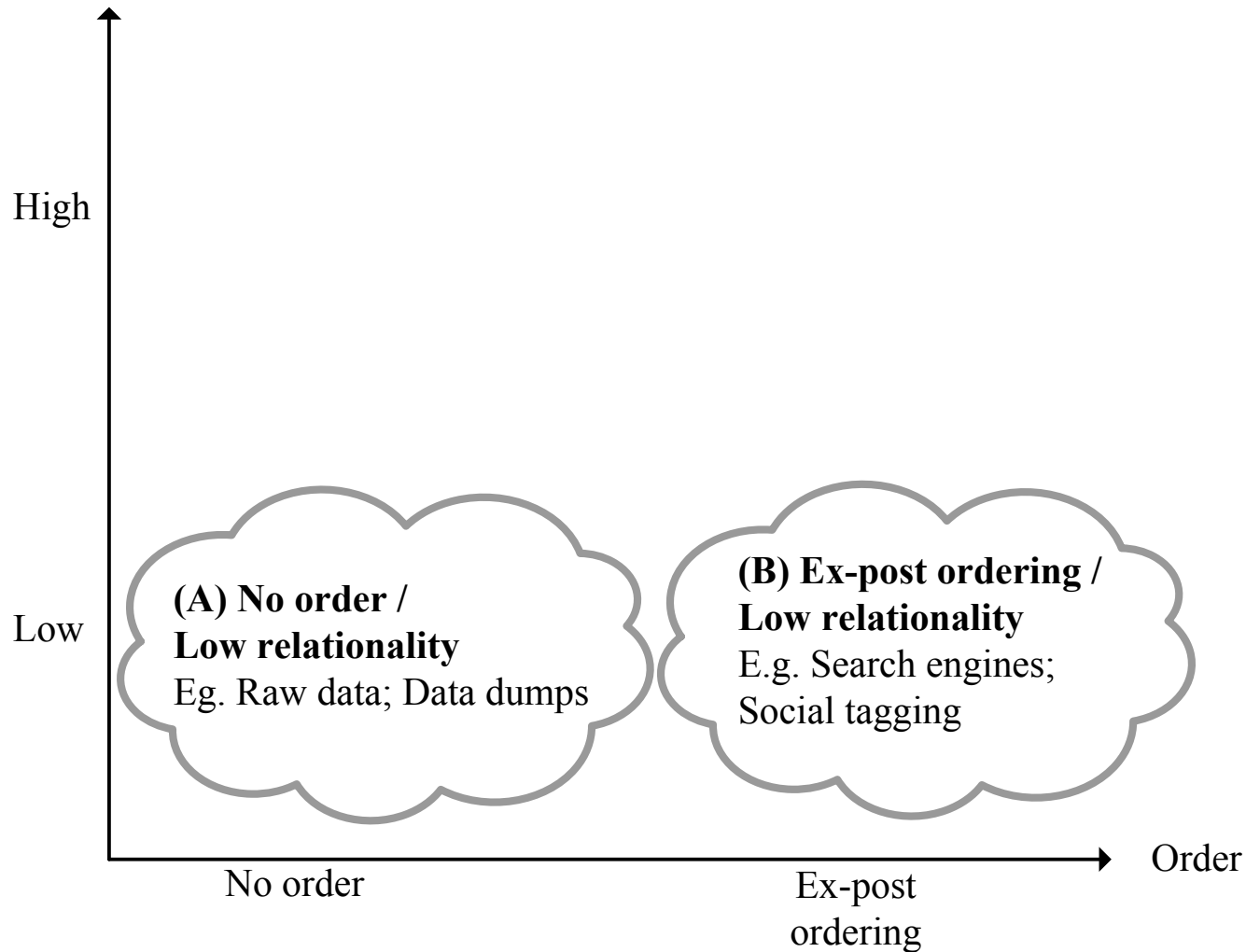




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Relationality

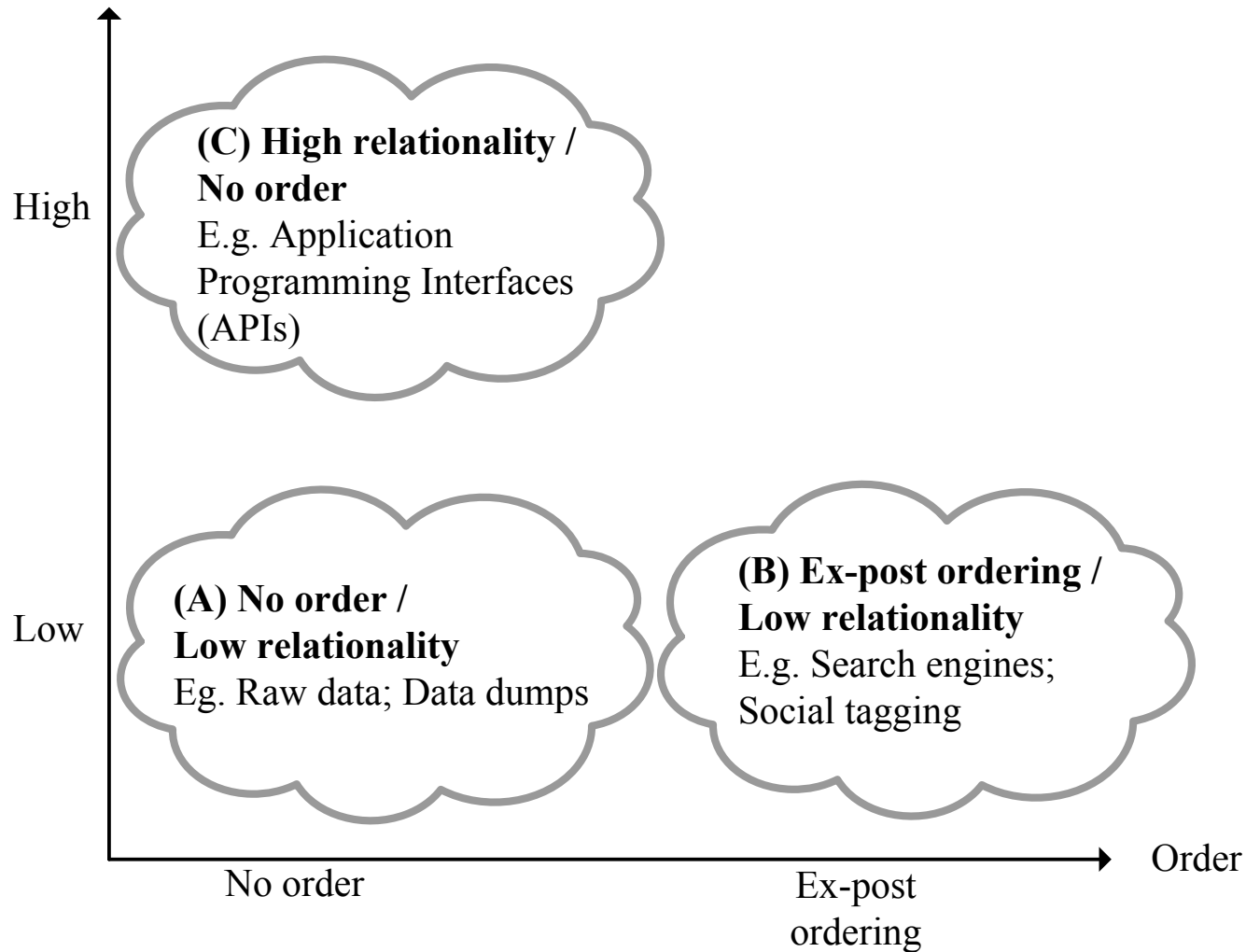




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Relationality





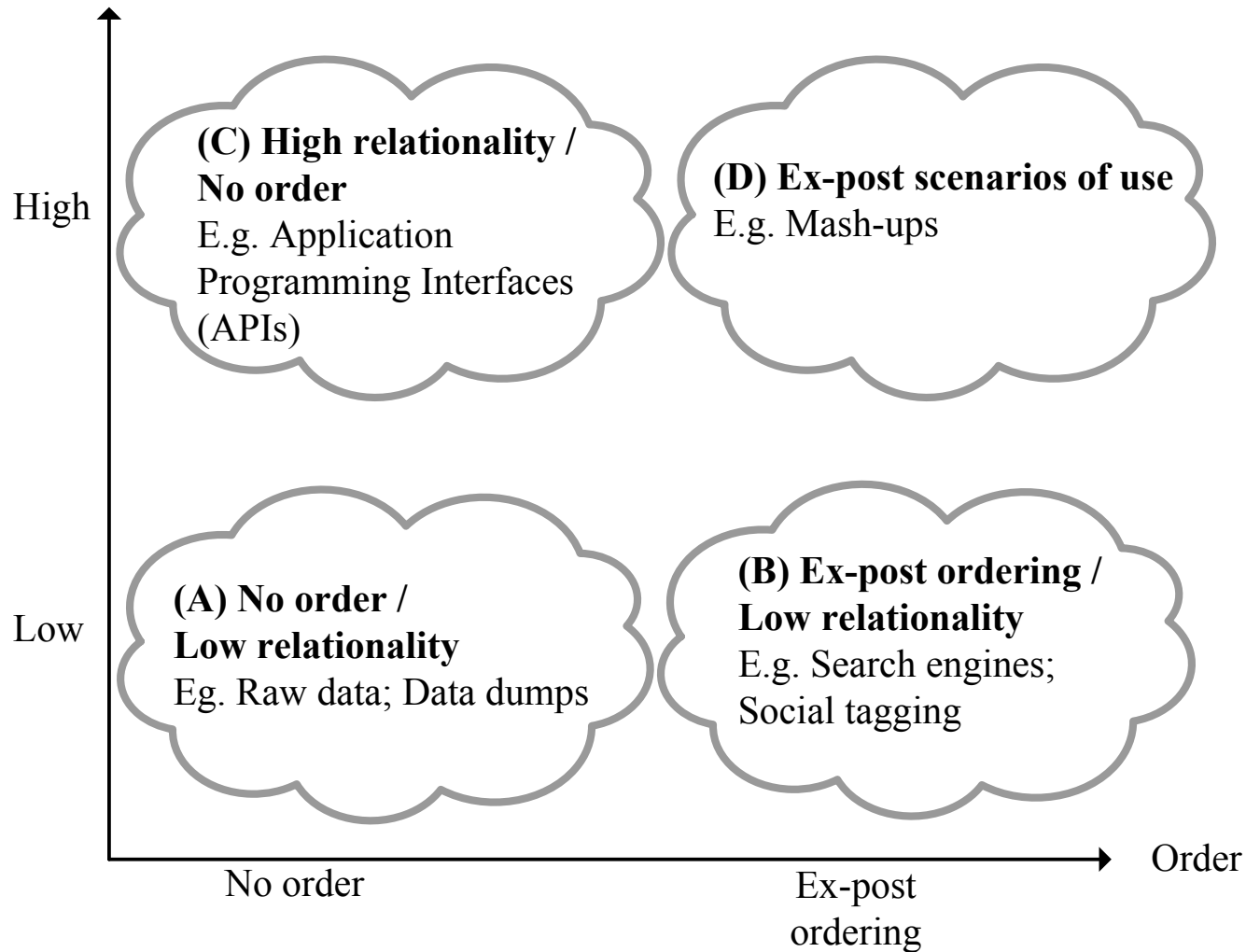
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Relationality





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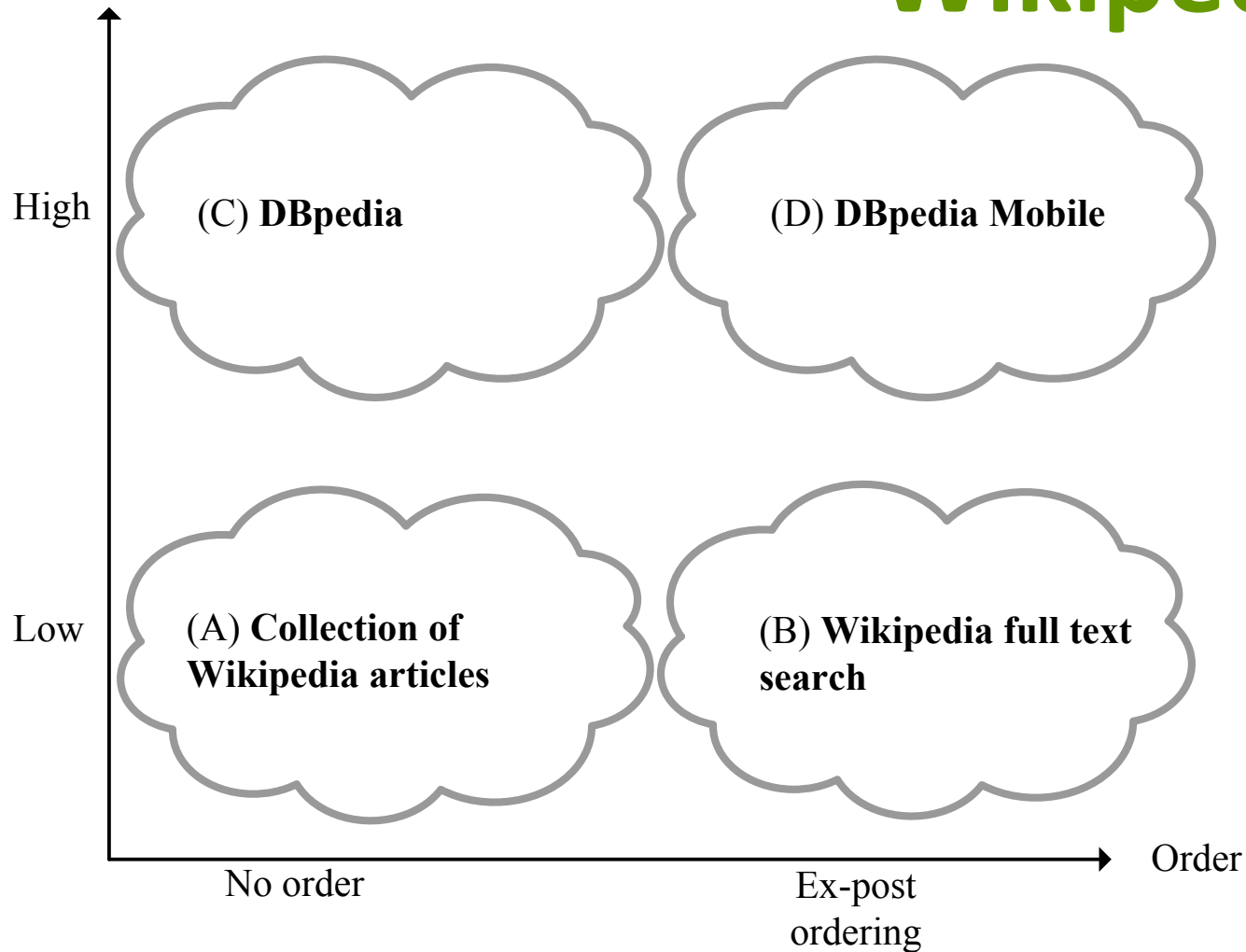


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Relationality

Wikipedia





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## conclusion

- data is not closed/open or small/big, it is just data
- distinction between data and information
  - increased potential for information
  - high relationality and ex-post ordering
- better aligned to value proposition of IS research and practice