



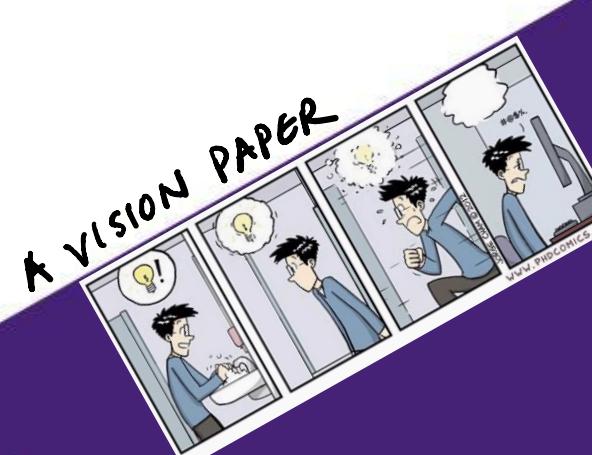
Engaging Content  
Engaging People

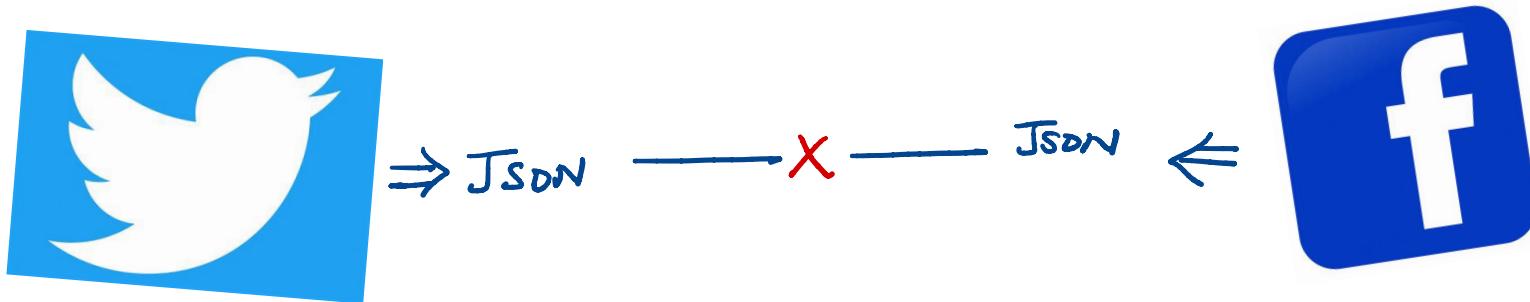
# Semantic Schema Mapping for Interoperable Data-Exchange

Harshvardhan J. Pandit\*, Damien Graux, Fabrizio Orlandi, Ademar Crotti Junior, Declan O'Sullivan, and Dave Lewis

ADAPT SFI Centre, Trinity College Dublin

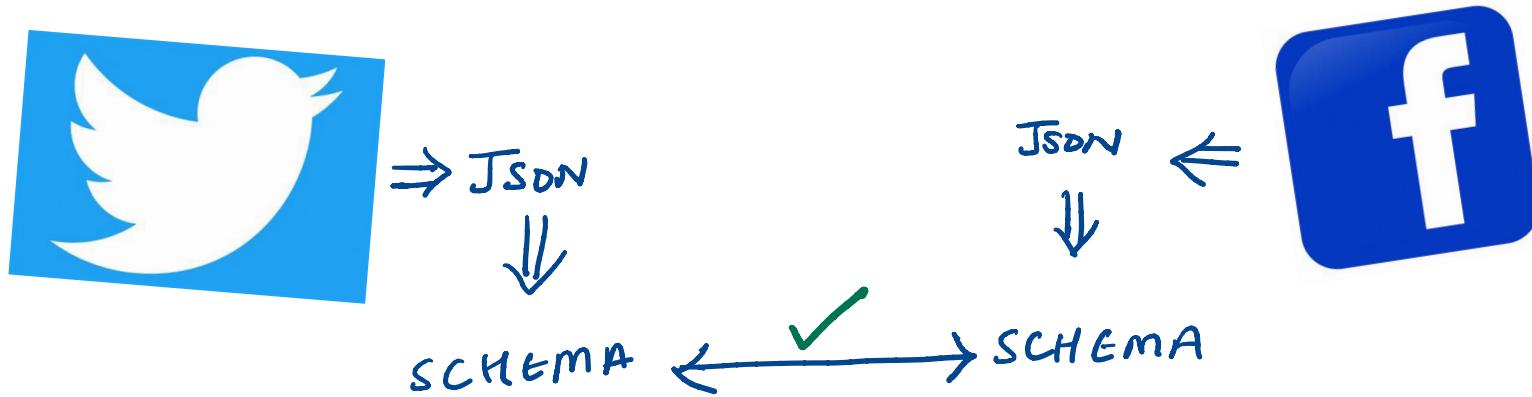
[pandith@tcd.ie](mailto:pandith@tcd.ie) | @coolharsh55





Real-life datasets have NO or INCOMPATIBLE schemes

This prevents data interoperability.



To create data interoperability between services, we need interoperability between schemas

## ① Right to Data Portability (GDPR A.20)

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② Structured Commonly Used and  
Machine - Readable

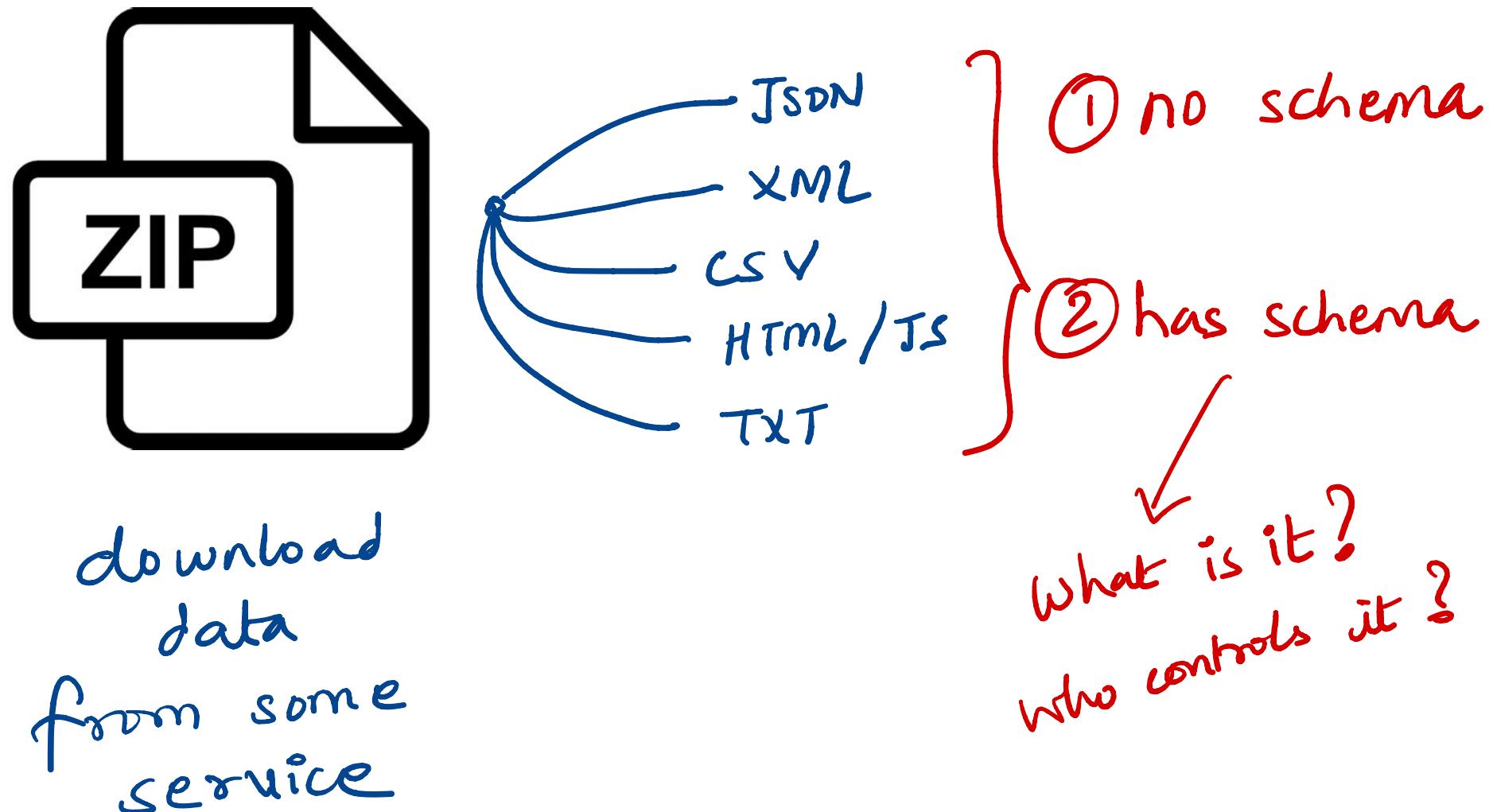
RDF ? ←

→ XML  
JSON  
CSV

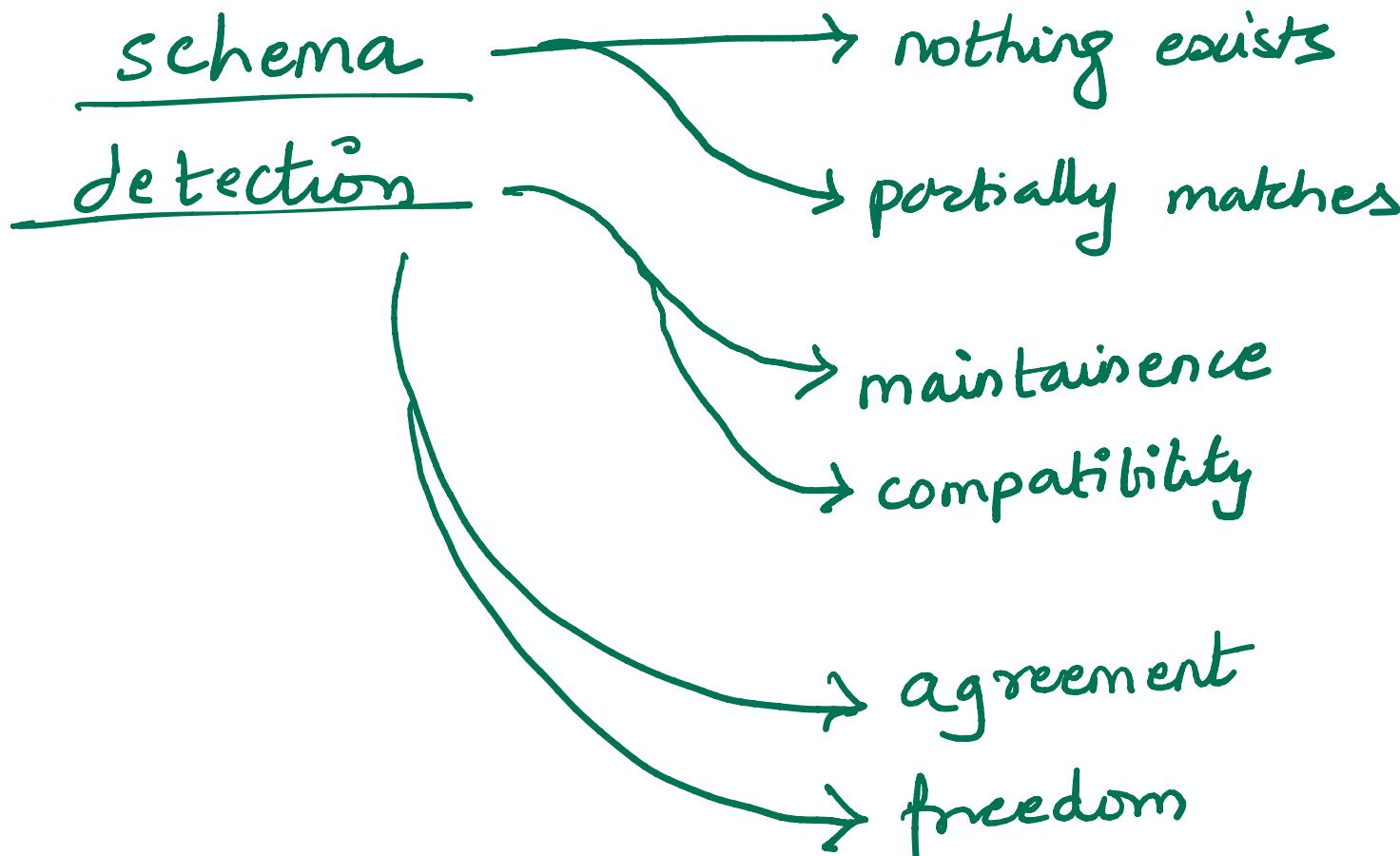
- ① Right to Data Portability (GDPR A.20)
- ② Structured Commonly Used and  
Machine-Readable  
RDF ? →  
XML  
JSON  
CSV
- ③ Transfer from one Controller  
to Another  
standardisation? ↗  
schema  
negotiation?

# Problem #1

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## Problem #2



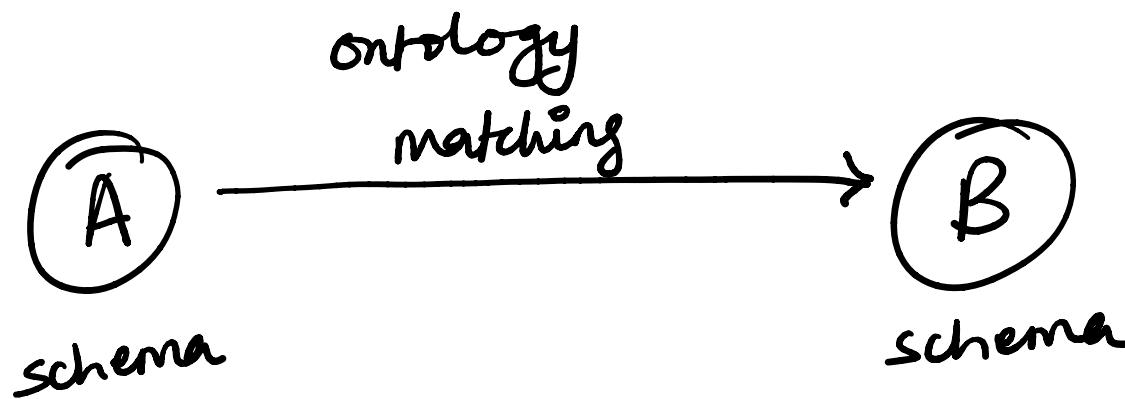
# Problem #3



Reusability of data is skewed in favour of larger players and smaller players have to do a lot of work to even offer competitive services

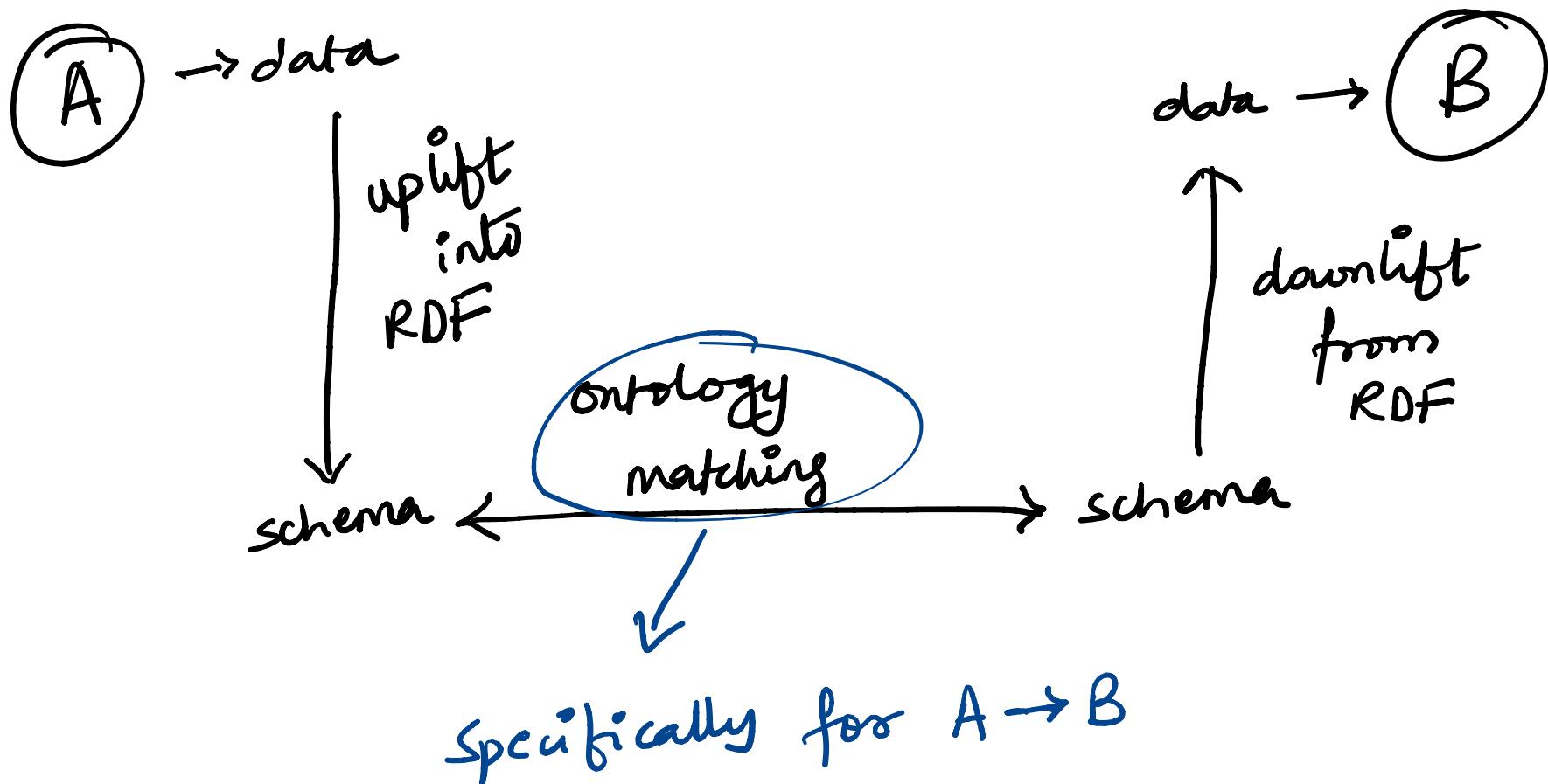
# Solution: Ontology Matching and Mappings

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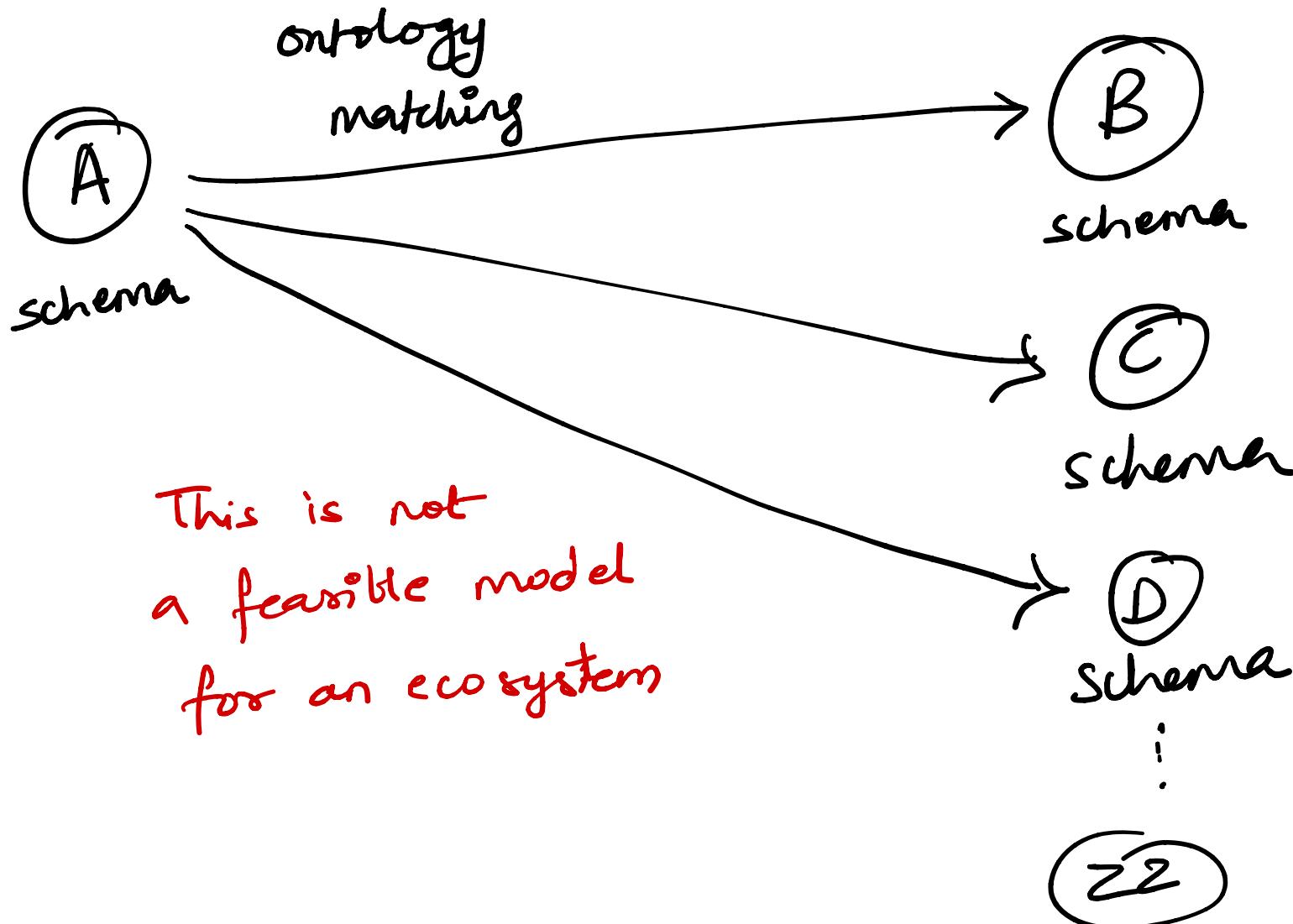
# Solution: Ontology Matching and Mappings

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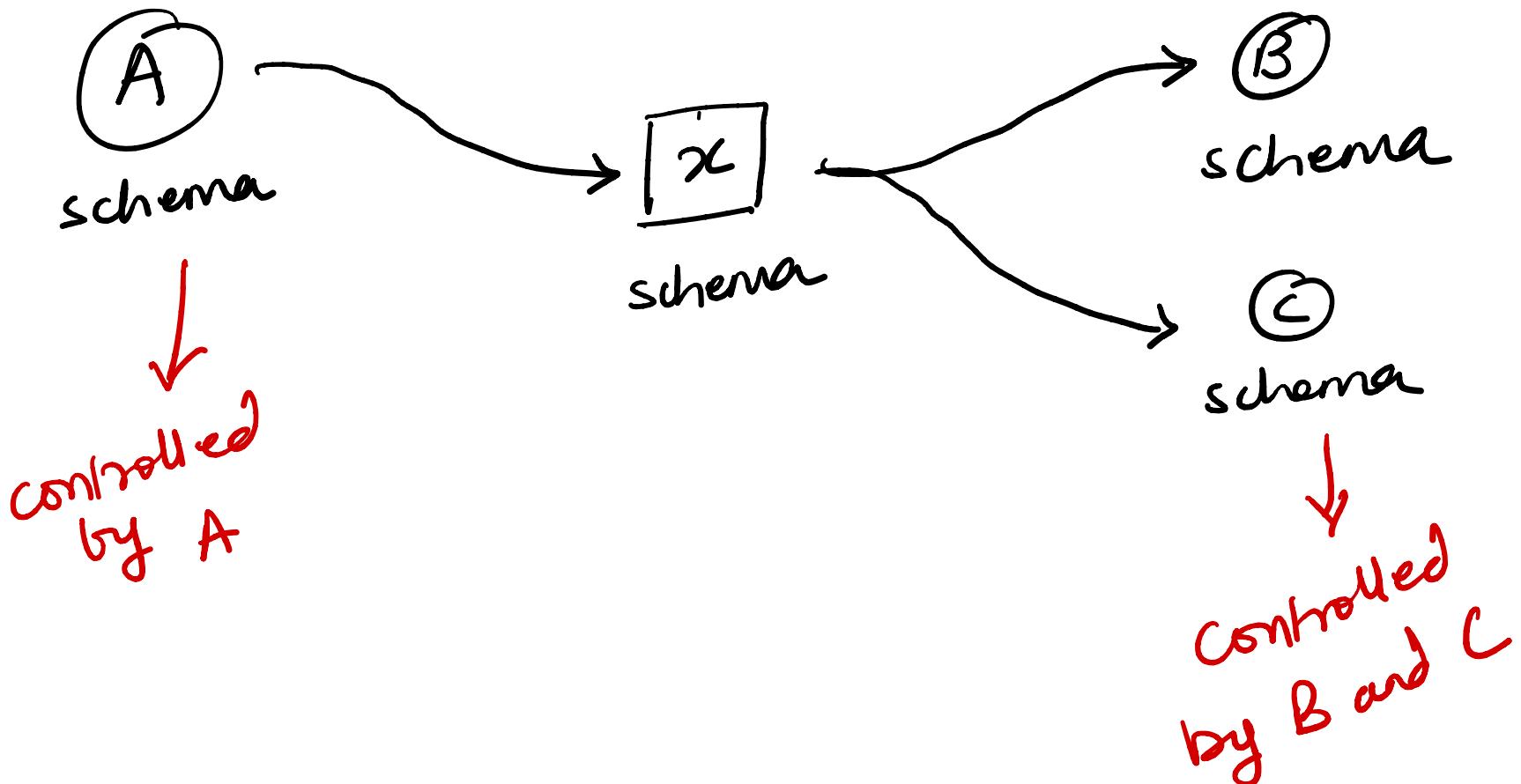
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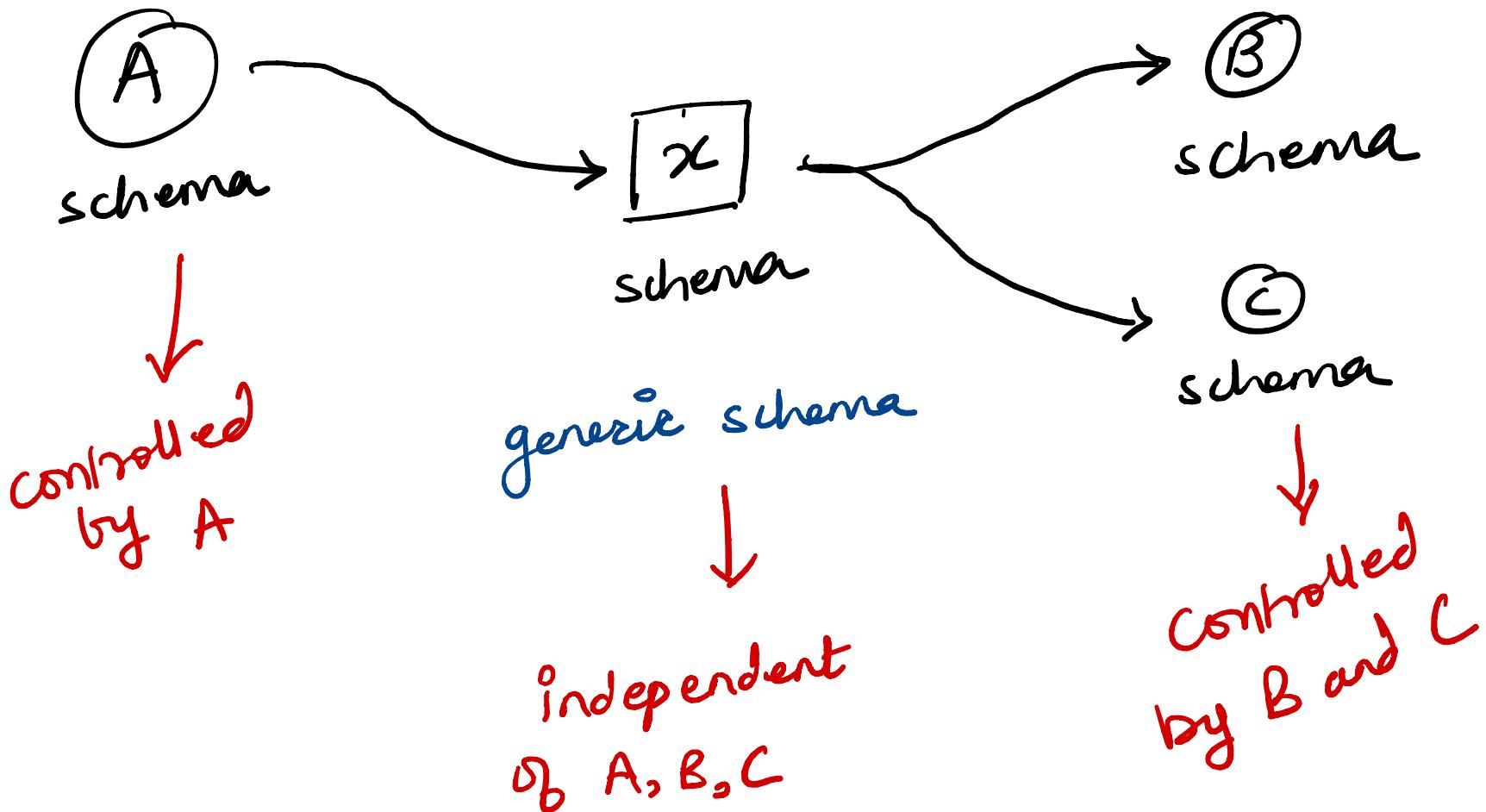
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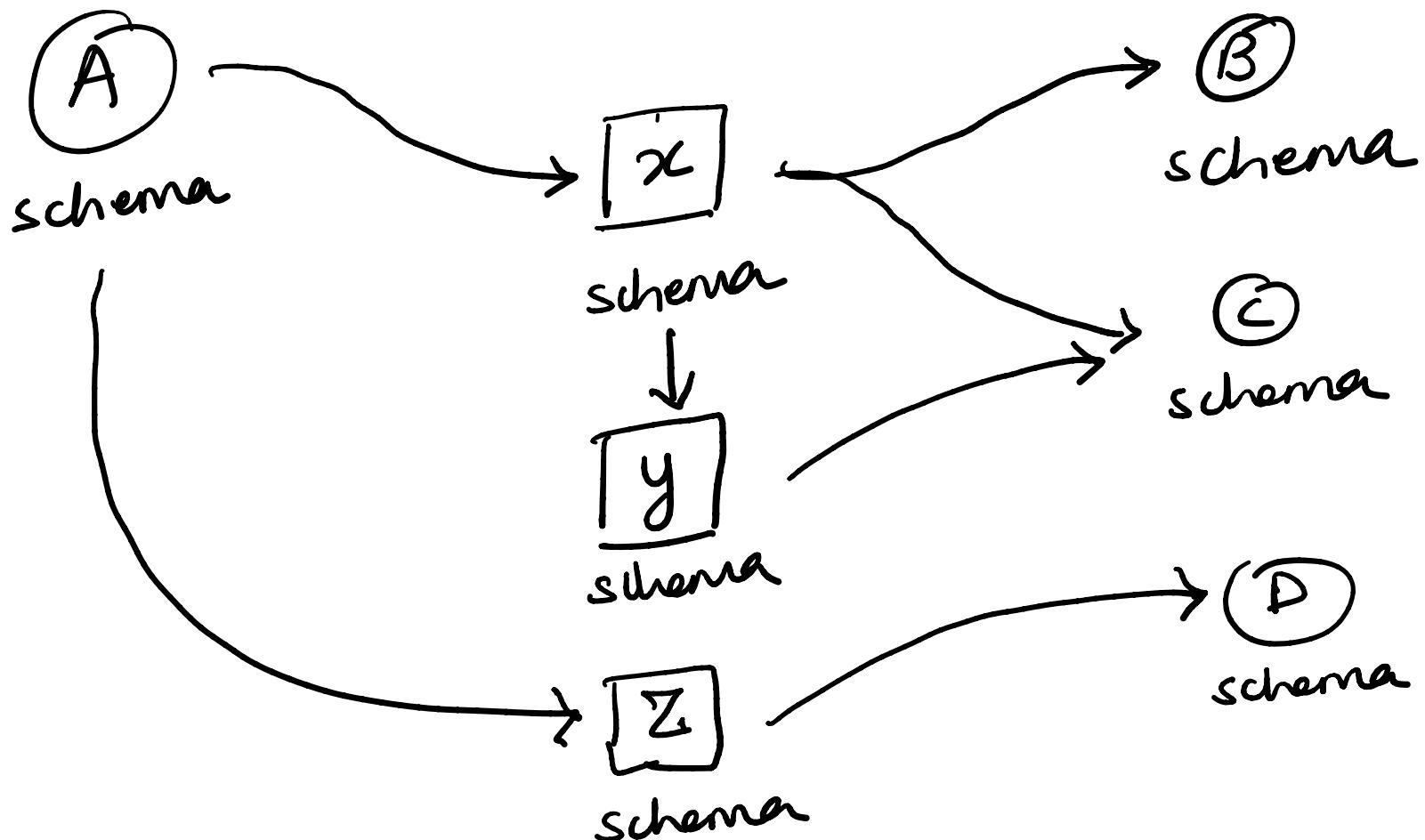
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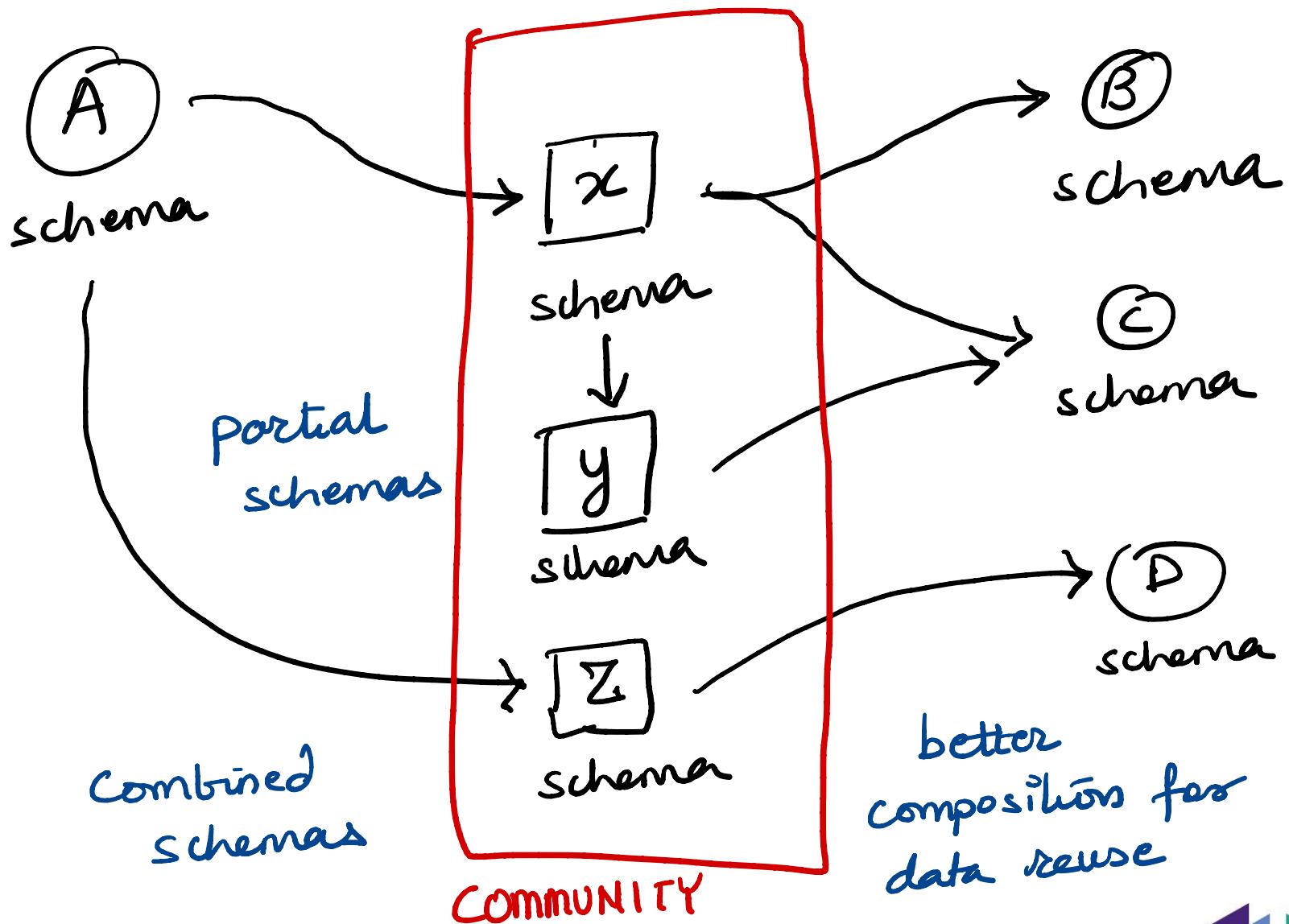
# Solution: Ontology Matching and Mappings

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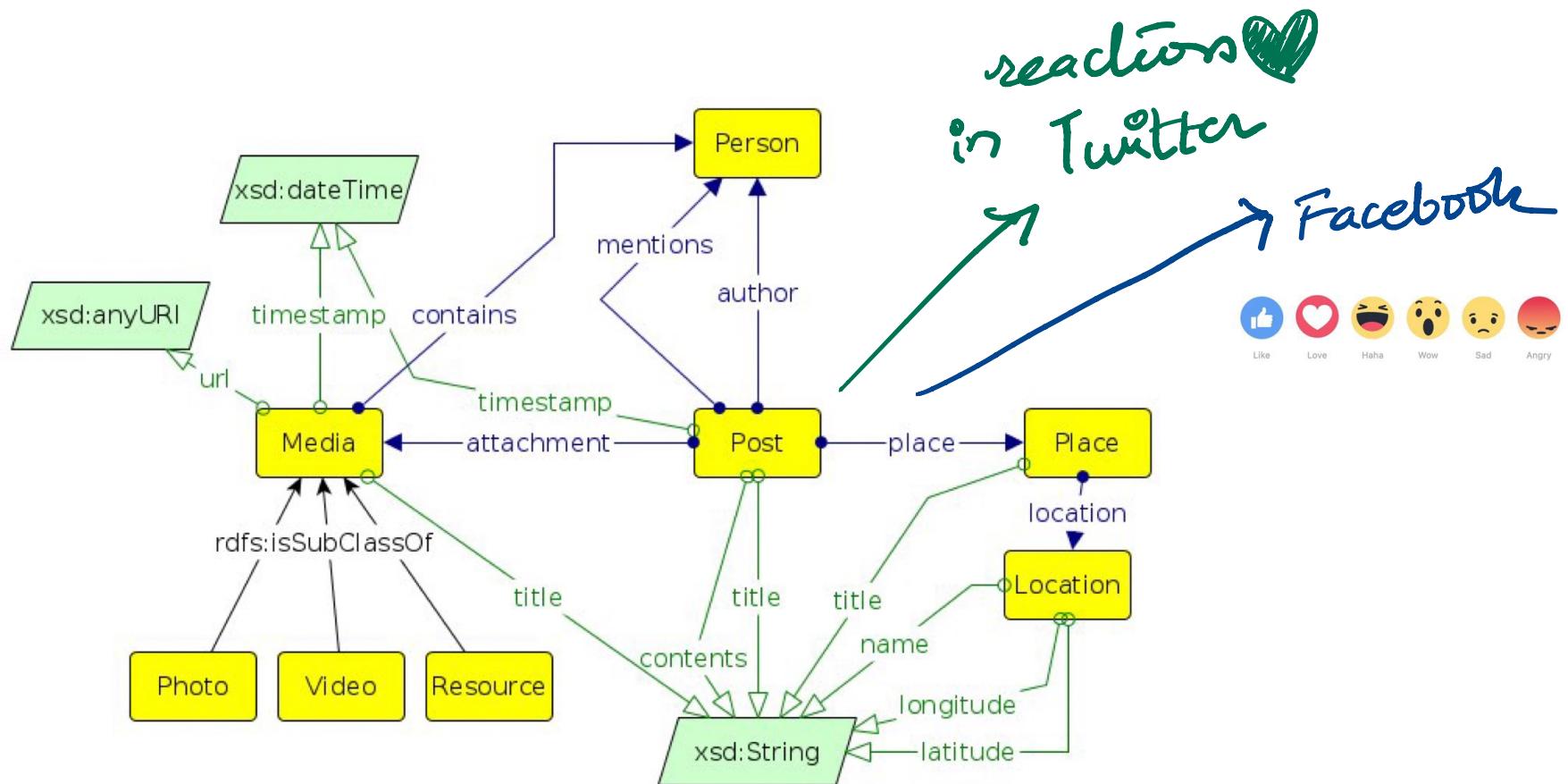
# Solution: Ontology Matching and Mappings

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# Use-Case: Twitter → Facebook

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- ① schemas are open  
maintained by community
- ② remove points of control for data hoarding  
bottlenecks for innovation
- ③ reduce burden for data export / import  
reduce complexity of reuse
- ④ automate uplift / downlift / mapping

- NEW CHALLENGES FOR MATCHING / ALIGNMENTS
- APPLY SOTA to REAL-WORLD
- SEMANTIC WEB TECHNOLOGIES ARE PERFECT FOR THIS!

# In Conclusion...

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CALVIN & HOBBES  
- BILL WATTERSON

- DATA PORTABILITY = MORE DATA  
= MORE SERVICES  
= INTEROPERABILITY
- SCHEMAS = MATCH  
= ALIGN  
= MAINTAIN
- DATA PIPELINES = UPLIFT / DOWNLIFT  
= CONVERSIONS