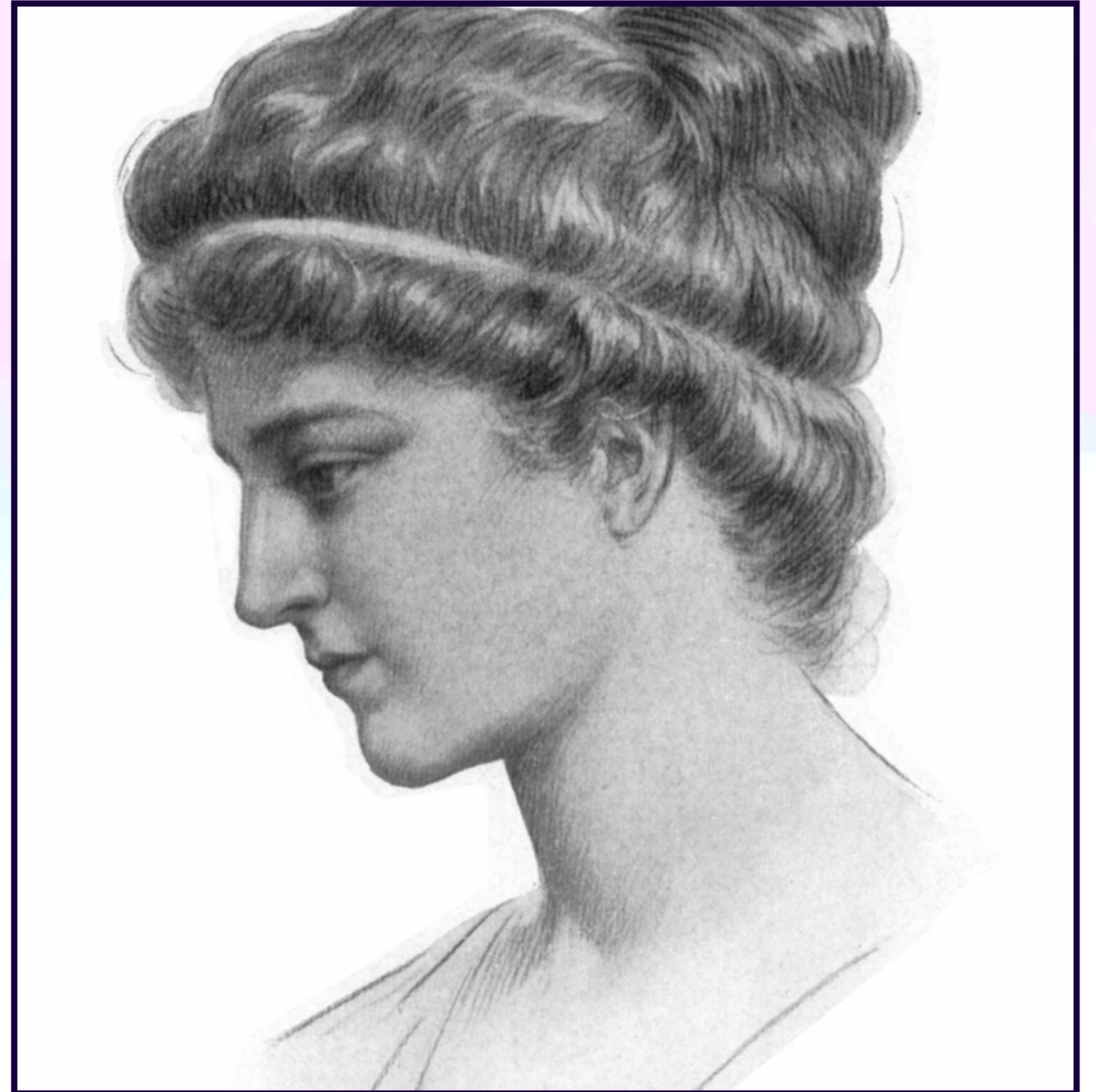


Karina Puente, Hypatia City (2017)

**There is no
language without
deceit.**

Italo Calvino, *Invisible Cities* (1972)



Jules Maurice Gaspard, *Hypatia* (1908)

Submission process:

- Send something thought-provoking to us: If you would like to attend, please submit a one-page technical position paper that presents a viewpoint on a **controversial topic**

Millions of Tiny Databases

Marc Brooker
Amazon Web Services

Tao Chen
Amazon Web Services

Fan Ping
Amazon Web Services

Postmodern Systems

Intersubjectivity through Dialog

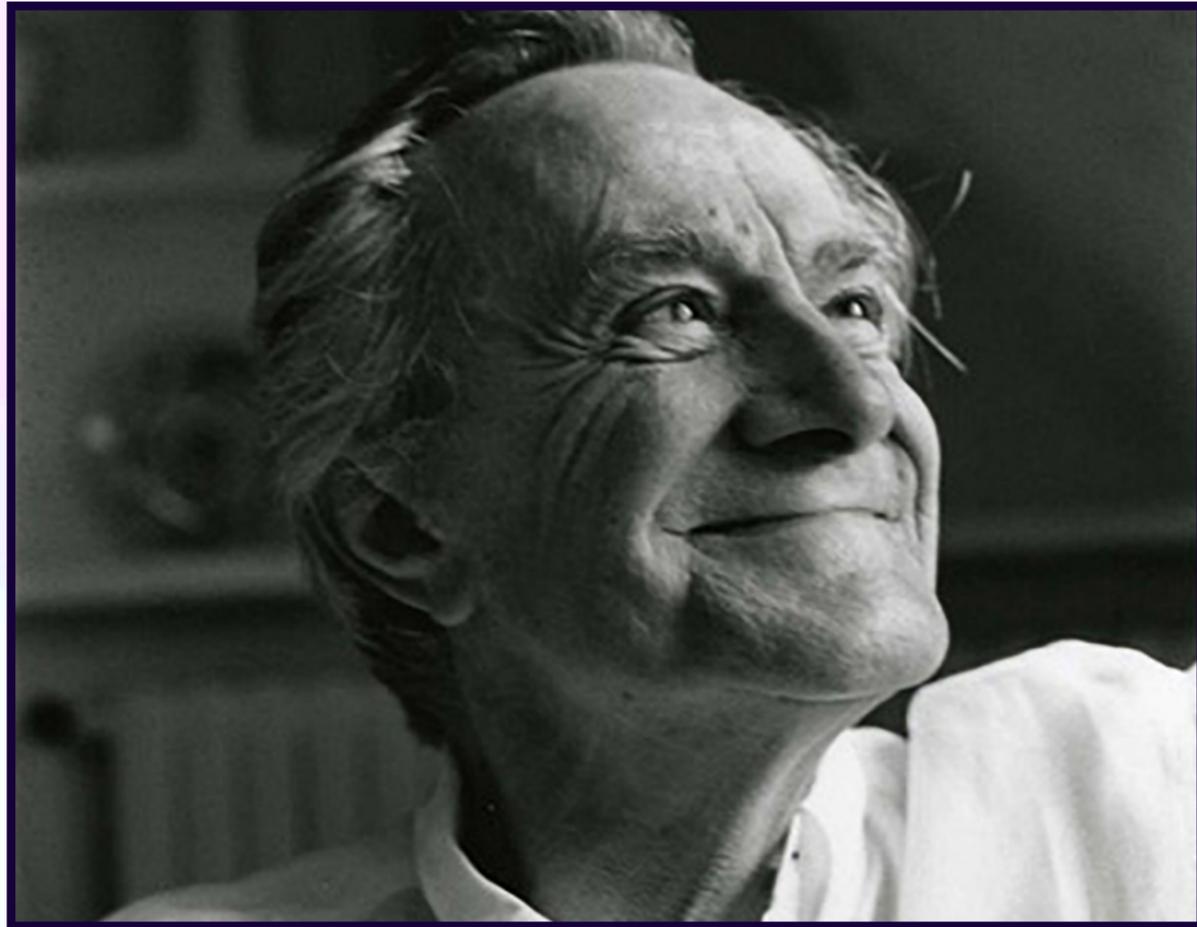
Quinn Wilton (she/her)

Quinn Wilton

@wilton_quinn

- Applied Researcher @ Fission
 - Building a planetary scale database for local-first apps
- Programming language anthropologist and flâneuse of digital detritus
- Agenda
 1. Philosophy
 2. Language
 3. Data



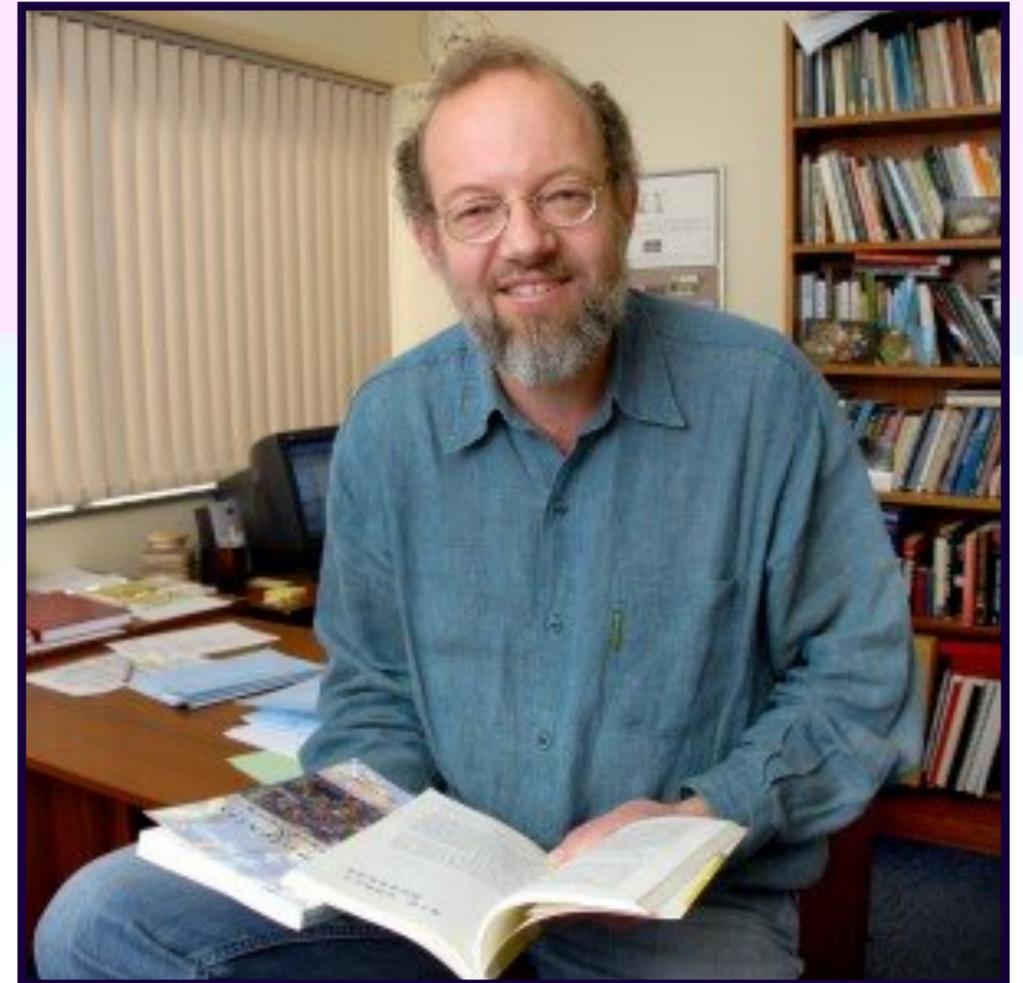


**Simplifying to the extreme, I
define postmodern as
incredulity toward
metanarratives.**

Jean-François Lyotard, The Postmodern Condition (1979)

The postmodern condition is characterised by the co-existence of a multiplicity of heterogeneous discourses—a state of affairs assessed differently by different parties.

Paul Cilliers, Complexity and Postmodernism (1998)



Glasgow

55.86 N, 4.26 W

Tue 4 Oct @ 05:42:47

Go to Map - Go to Grid - Change City



WEATHER (METAR) 863

Glasgow International

Winds WSW-240 at 10kt, Vis 10km, Few clouds at 1500ft, Scattered clouds at 2000ft

SW at 8 mph **13 C**

FORECAST (OPENWEATHER) 1763

Glasgow

13.9 C

moderate rain

AIR POLLUTION (DEFRA) 1763

$\mu\text{g}/\text{m}^3$
TIME AVGD

OZONE NO₂ SO₂ PM_{2.5} PM₁₀

St Enoch
Central Station
Dumbarton

MOOD (LSE MAPPINESS) 53

0% happier
than the long term average for here

0% happier
than the whole country right now

TWITTER TRENDS FOR GLASGOW 113

#nffc Maddison Forest #CPC22 U-turn Haaland Cooper #WorldAnimalDay #LEINFO

#ToryConference GDPR Lingard Leicester daily quordle 252 Yom Kippur Gove harvey barnes Elon Rangers Dean Henderson Kanye Jake Berry

Andrea Jenkyns Wordle 472 X Dunfermline Steve Bray Ian Hamilton DYCHE Man City Eamonn McCabe Stone of Destiny Nadine Dorries Kouyate Lee Anderson Nick Robinson Year 5 Penny Mordaunt Benitez Birmingham

White Lives Matter Aurier brandon lewis Wolves Ben Doak Overwatch 2 Eugene Vardy

STOCKS (YAHOO) 117

Weir Group plc

1883.0

39.0 (2.07%)

TWITTER: GLASGOW NEWS AND EVENTS 24

G Glasgow Live: ScotRail has announced it has withdrawn services from Glasgow due to extremely heavy rain <https://t.co/Xey6Qm2ban>

TWITTER: GLASGOW UNIVERSITIES 9

UyG University of Glasgow: RT @UofGArts: Something woolly this way comes... 🧶 Knitting needles and headphones at the ready - #StoriesFromGlasgow podcast featuring @U...

BBC GLASGOW AND WEST SCOTLAND 63

Police probe racist abuse aimed at St Albert's Primary School pupils Lawyer who removed Stone of Destiny dies aged 97 Wrong side of road driver jailed for causing fatal Highland crash

OPENSTREETMAP UPDATES (OSM) 263

Changed permissions and path type to allow routing across Greenside Dam Added area for Glasgow Airport #MSFTOpenMaps building number& type Updated Mosque info update brands update brands Updated a pub

SCOTRAIL 263

City Dashboard Glasgow (2022)

... if the CASA Geiger counter is showing a high reading, please do not panic! Somebody in the office might just have placed some Brazil nuts or another calibration source in front of the detector.

CityDashboard (2022)

... algorithms and interfaces tend to bracket out those messy and disorderly concerns that simply "do not compute." We're left with the sense that everything knowable and worth knowing about a city can fit on a screen—which simply isn't true.



**Shannon Mattern,
A City is Not a Computer: Other Urban Intelligences (2021)**

'So vague, it invites abuse': Twitter reviews controversial new privacy policy

The policy meant to tackle doxxing on the platform was weaponized by the far-right, leaving many anti-fascist activists locked out of their accounts

The Guardian (2021)

Stop TikTok Stalkers: How to Keep Creeps Off Your Account

TikTok can be a dangerous place. Control your privacy settings to protect yourself.

CNET (2022)

Social Media Misinformation and the 2022 Philippine Elections

November 22, 2021

Center for Strategic and International Studies (2021)

Uber makes changes amid swarm of criticism over rider safety

The app will allow on-trip reporting of incidents such as erratic driving or invasive questioning.

 By [Faiz Siddiqui](#)

September 26, 2019 at 1:27 p.m. EDT

The Washington Post (2019)

Facebook criticised after women complain of inaction over abuse

Amnesty says social media firm must do more to support users who report harassment

The Guardian (2019)

**Computer Science is in
deep trouble. Structured
design is a failure.**

**Gerald Jay Sussman,
Robust Design through Diversity (1999)**

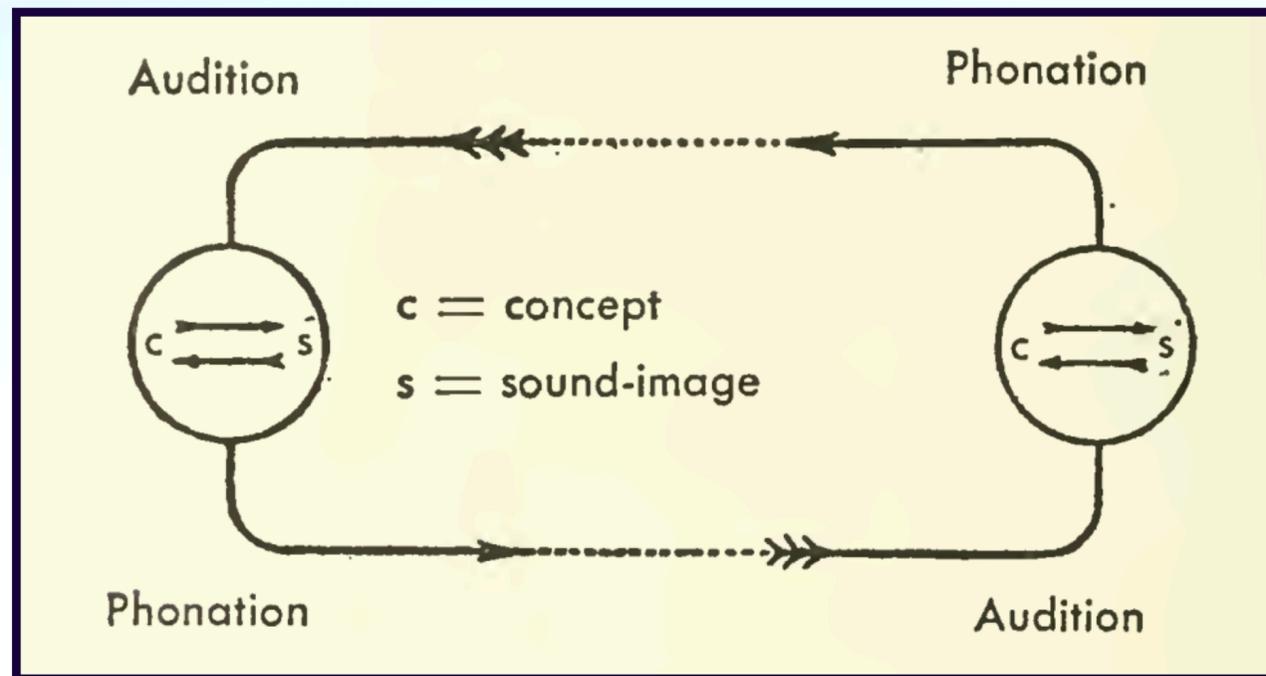
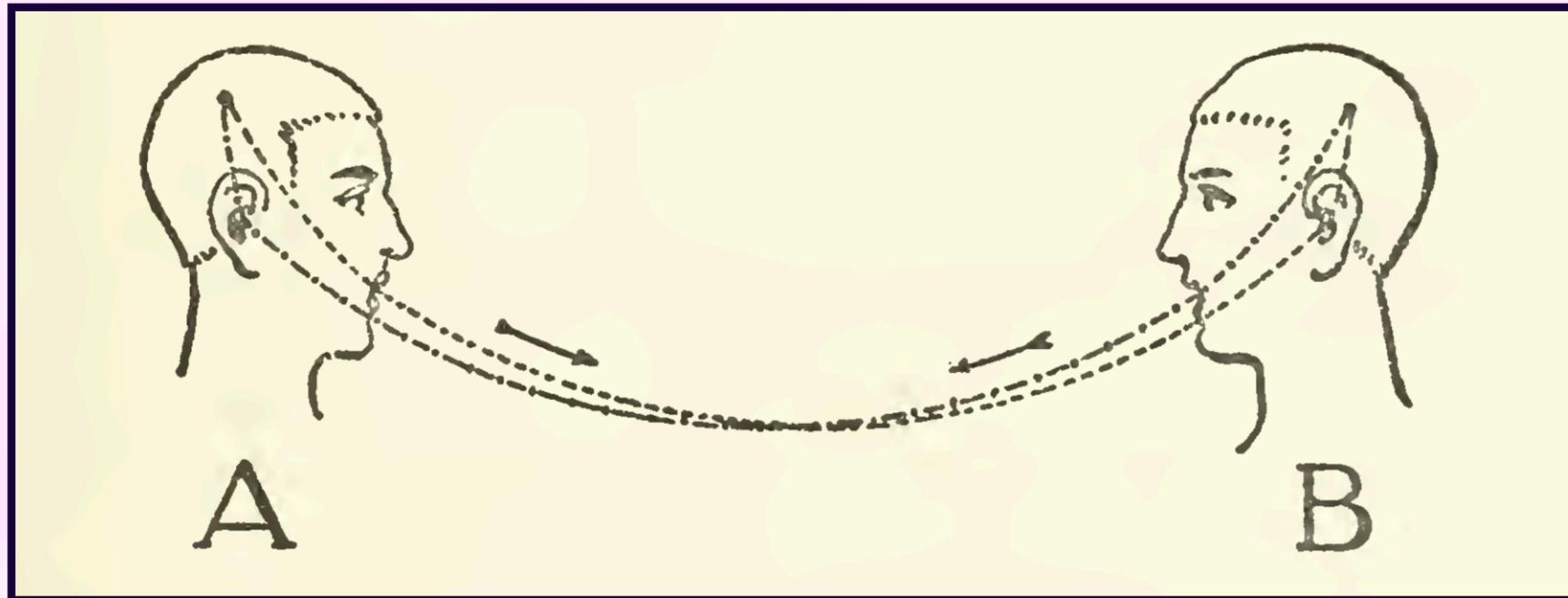


To advance beyond the existing problems we must change, in a fundamental way, the nature of the language we use to describe computational systems.

**Gerald Jay Sussman,
Robust Design through Diversity (1999)**



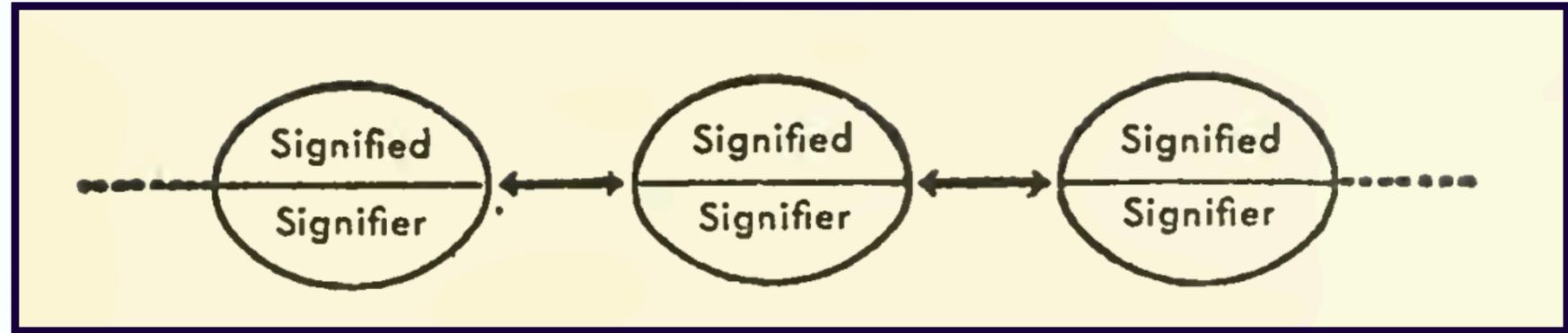
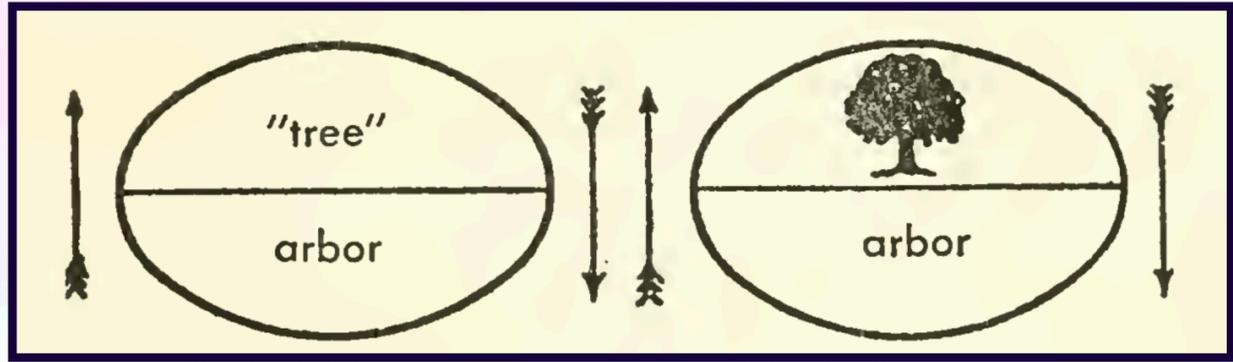
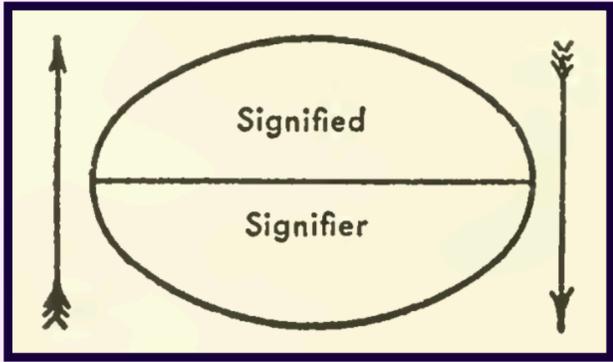
Karina Puente, Zobeide City (2017)



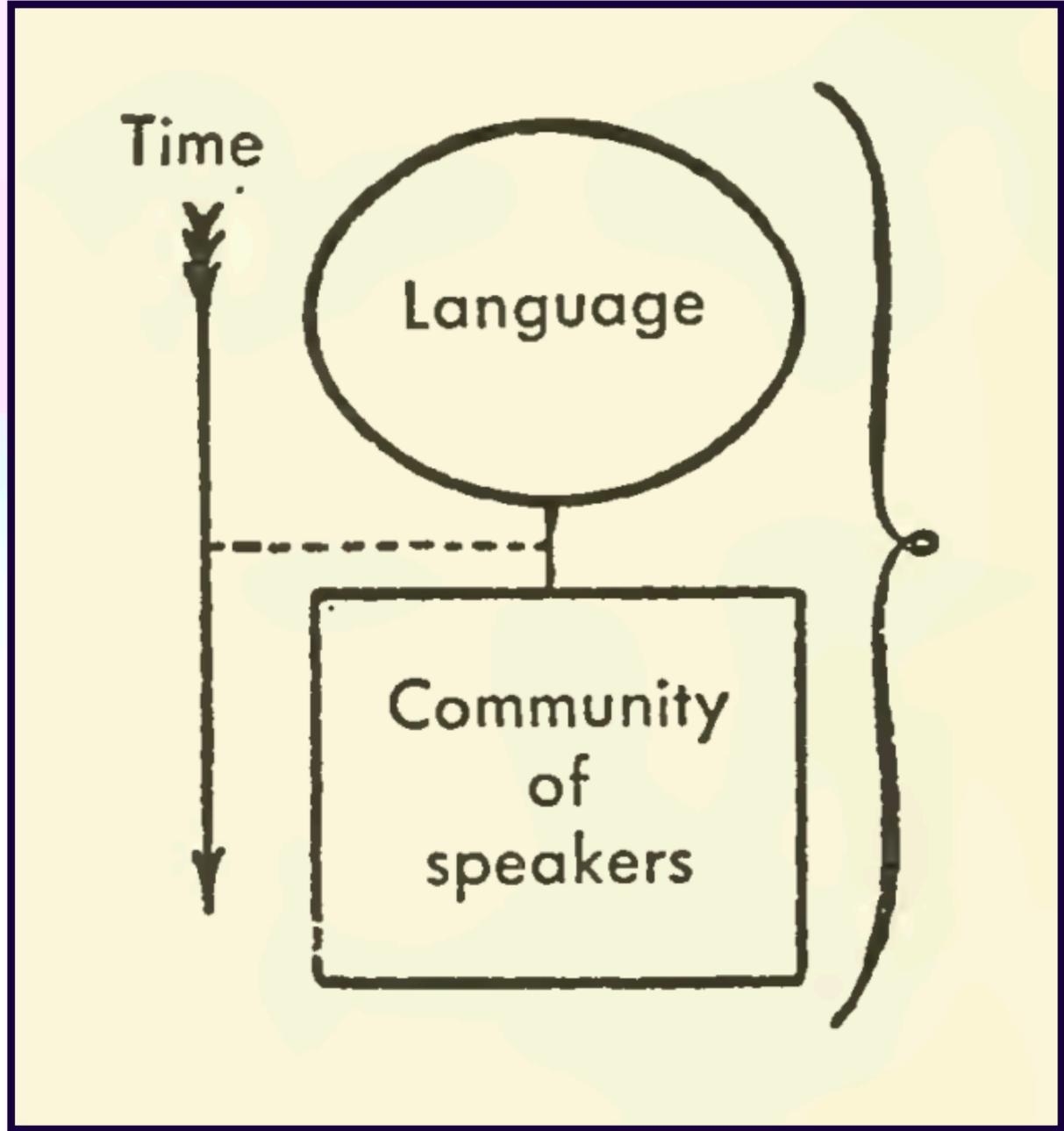
Place of Language in the Facts of Speech



Ferdinand de Saussure
Photograph by F. Jullien Genève (before 1913)



Nature of the Linguistic Sign, and Linguistic Value



Immutability and Mutability of the Signs

We had first to weed out variations and irregularities characteristic of oral delivery ... and present each part of it in the order intended by the author even when his intention, not always apparent, had to be surmised.

Charles Bally & Albert Sechehaye (1915)

COURSE IN GENERAL LINGUISTICS

FERDINAND DE SAUSSURE

Edited by CHARLES BALLY *and*
ALBERT SECHEHAYE

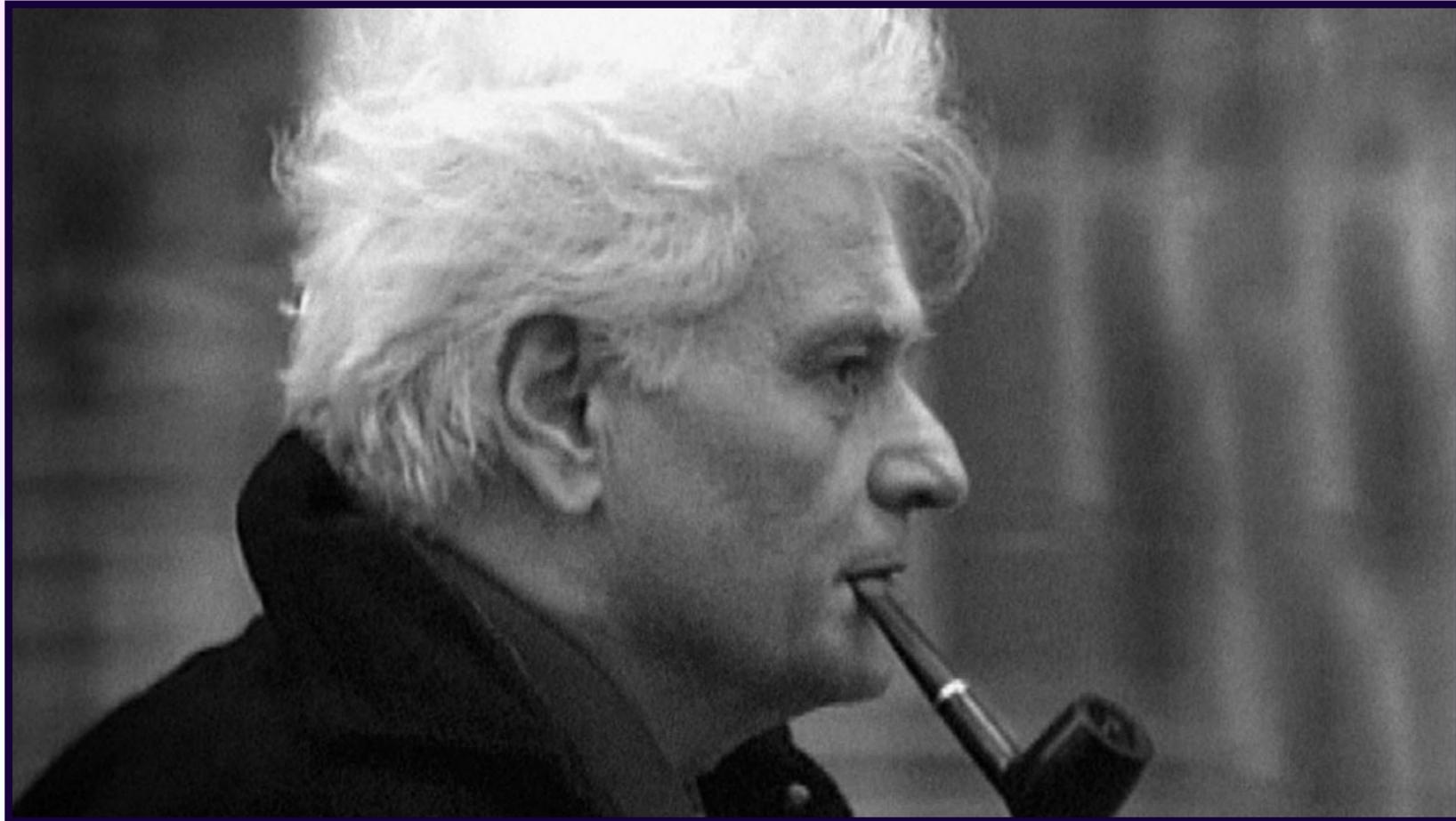
In collaboration with
ALBERT REIDLINGER

Translated from the French by WADE BASKIN



PHILOSOPHICAL LIBRARY

New York



Jacques Derrida (1930 - 2004)

Of Grammatology

BY

**Jacques
Derrida**

Corrected Edition

Translated by

Gayatri Chakravorty Spivak

The Johns Hopkins

University Press

Baltimore and London

A Certain Tendency Of The Database Community*

Christopher S. Meiklejohn
Université catholique de Louvain
christopher.meiklejohn@gmail.com

November 11, 2018

Abstract

We posit that striving for distributed systems that provide “single system image” semantics is fundamentally flawed and at odds with how systems operate in the physical world. We realize the database as an optimization of this system: a required, essential optimization in practice that facilitates central data placement and ease of access to participants in a system. We motivate a new model of computation that is designed to address the problems of computation over “eventually consistent” information in a large-scale distributed system.



These designs are inherently limiting: we impose a structure of a single primary site for information because it makes processing easier with the tools that we have today.

Christopher S. Meiklejohn, A Certain Tendency of the Database Community (2018)

CONJECTURE 1. Consistency And Logical Monotonicity (CALM). *A program has an eventually consistent, coordination-free execution strategy if and only if it is expressible in (monotonic) Datalog.*

Joseph M. Hellerstein, *The Declarative Imperative* (2010)

```
1 pending(Id, Sender, P) :-
2   request(Id, Sender, P).
3
4 pending(Id, Sender, P)@next :-
5   pending(Id, Sender, P),
6   !response(Id, Sender, _).
7
8 service_out(P, Out)@async :-
9   request(Id, Sender, P),
10  service_in(P, Out).
11
12 response(Sender, Id, 0) :-
13   pending(Id, Sender, P),
14   service_out(P, 0).
```

An asynchronous service in Dedalus
The Declarative Imperative (2010)

Data structures as queries:
Expressing CRDTs using Datalog

Martin Kleppmann, University of Cambridge, UK

Joint work with Victor B.F. Gomes, Dominic P. Hurligan, Alastair R. Beresford

Local-first software

You own your data, in spite of the cloud

Ink & Switch

Martin Kleppmann

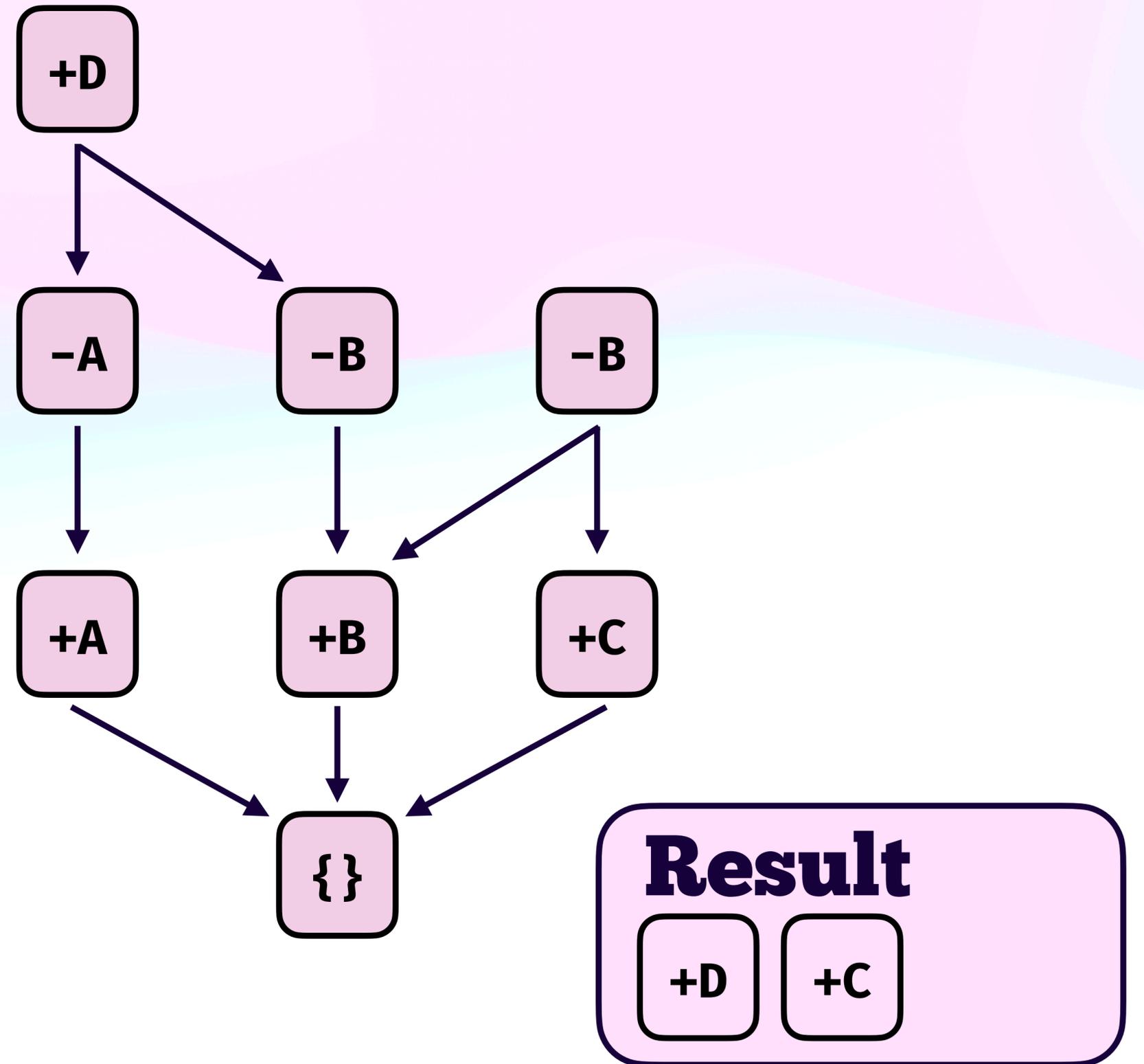
Adam Wiggins

Peter van Hardenberg

Mark McGranaghan

April 2019

Entity
Attribute
Value
Causality

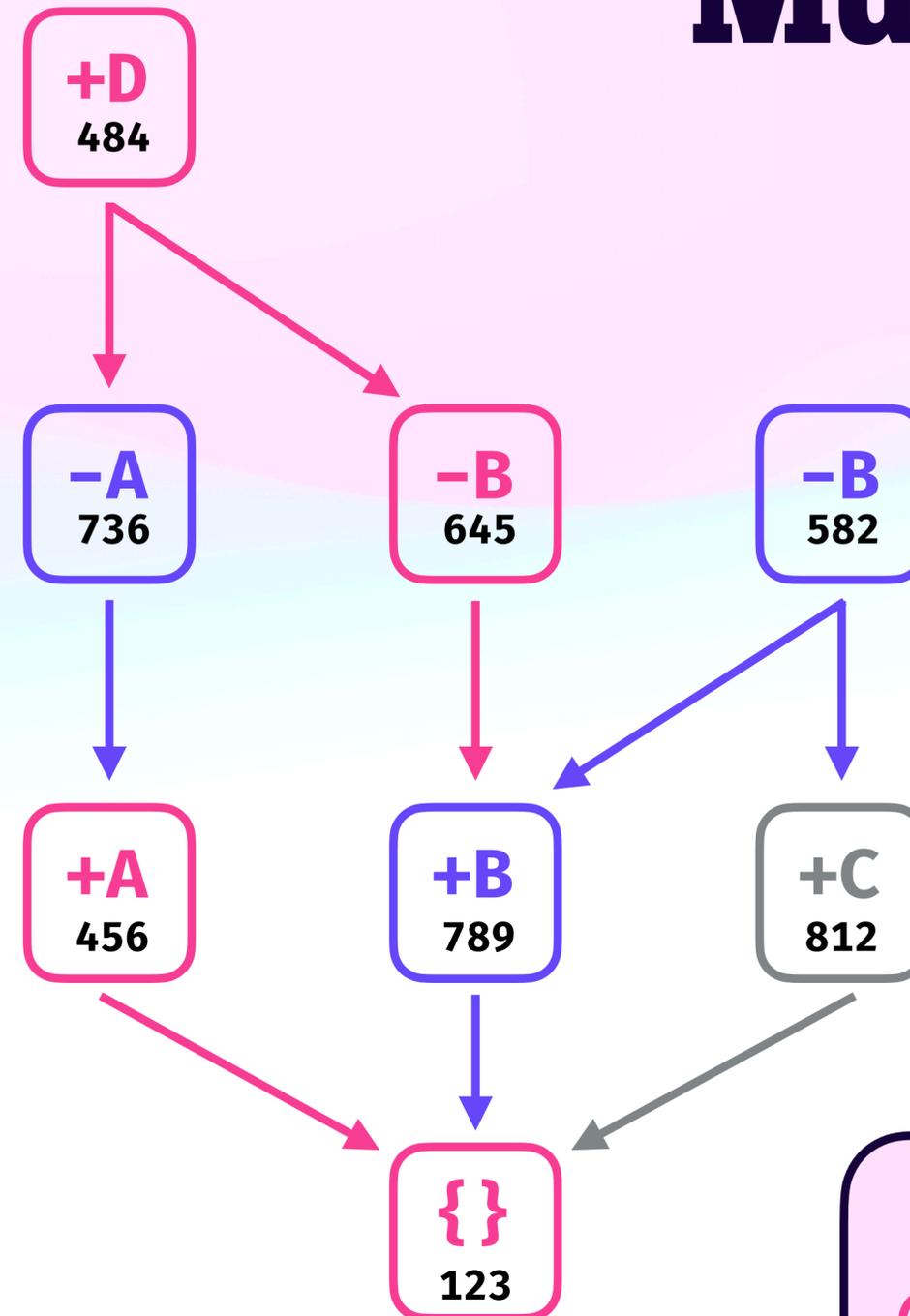


Entity Attribute Value Causality

Writers



Multi-Writer



Result

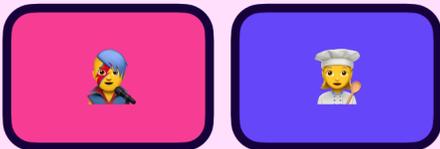


Entity
Attribute
Value
Causality

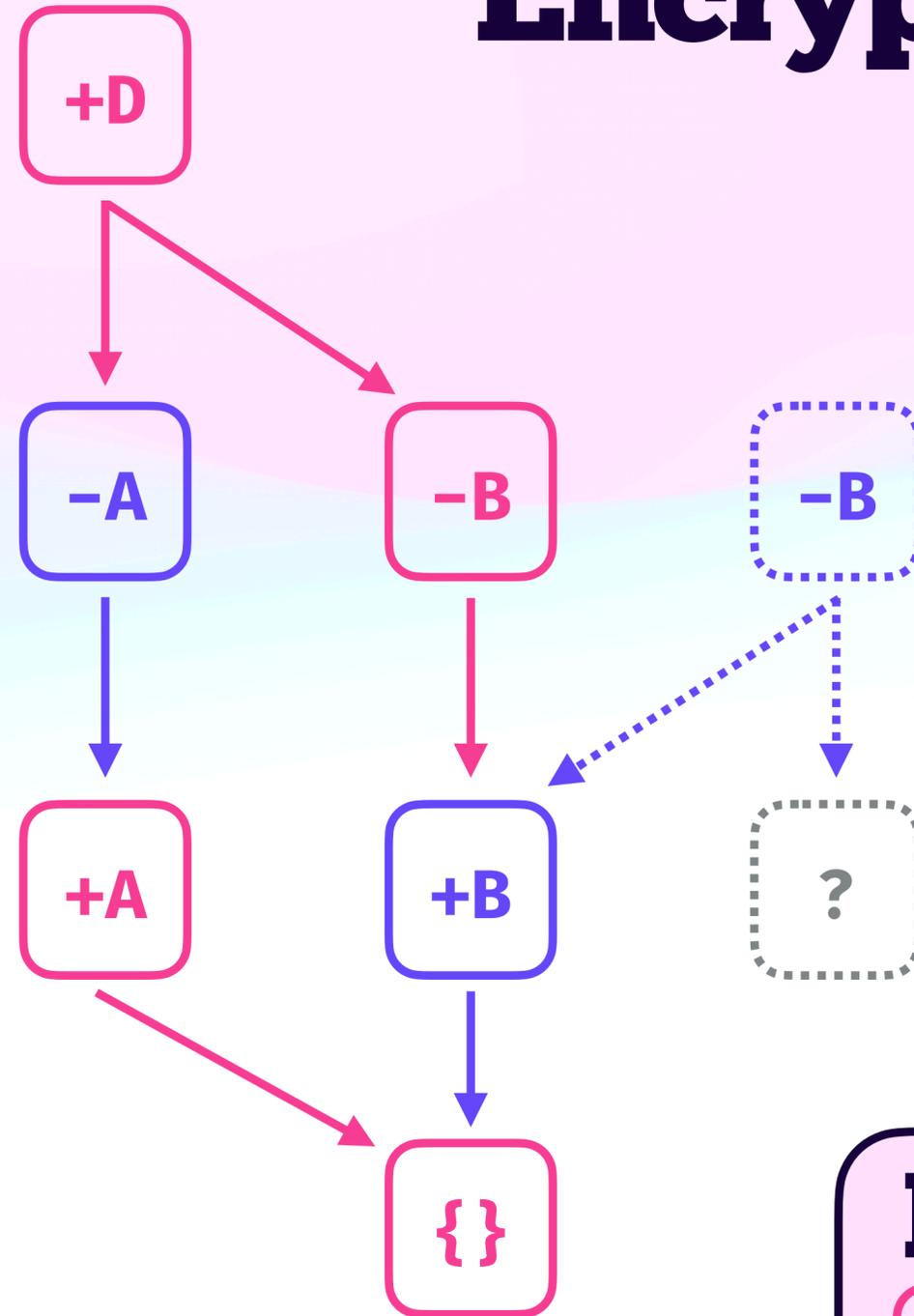
Writers



Crypto Keys



Encrypted Data



Result

+D

Entity Attribute Value Causality

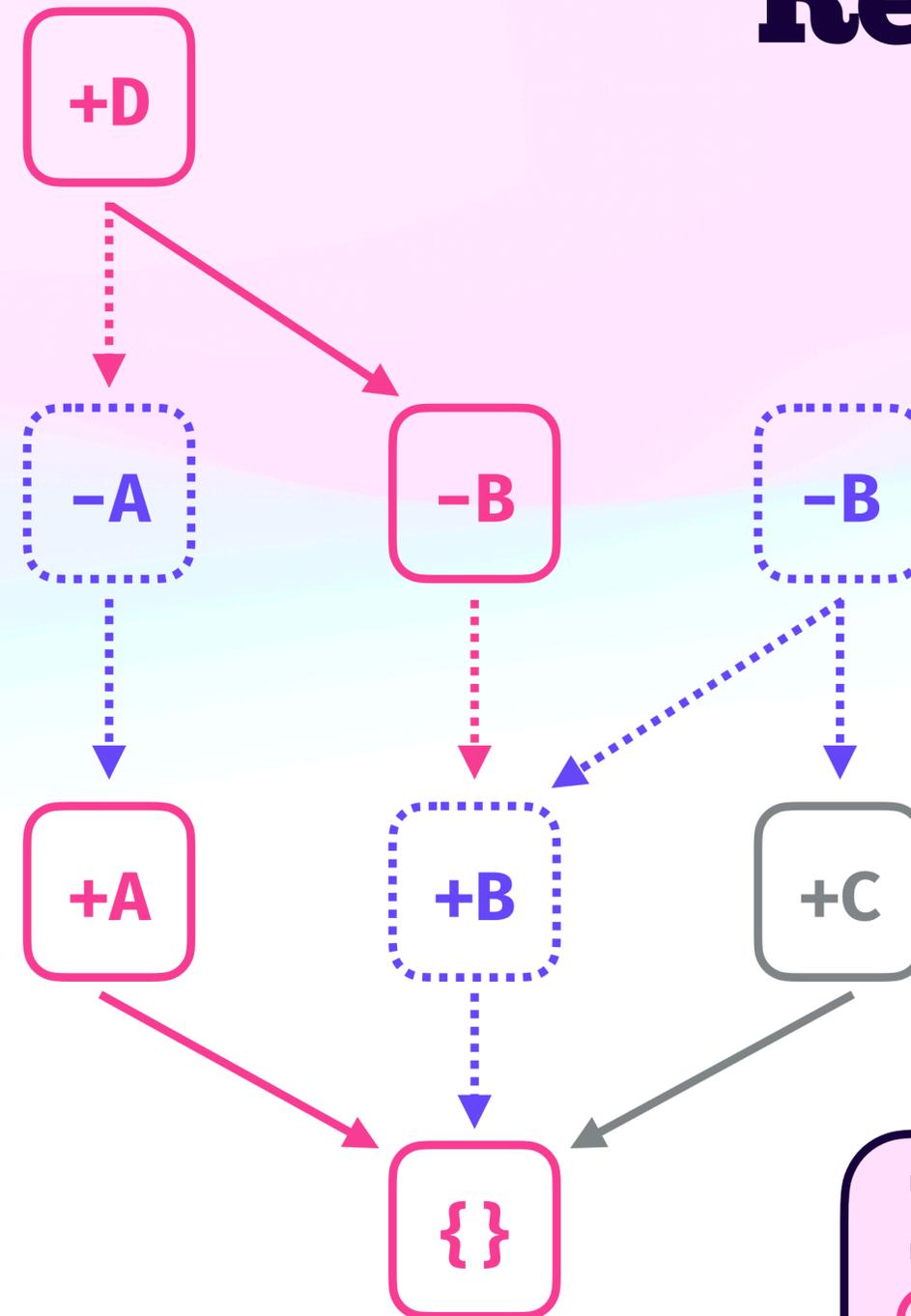
Writers



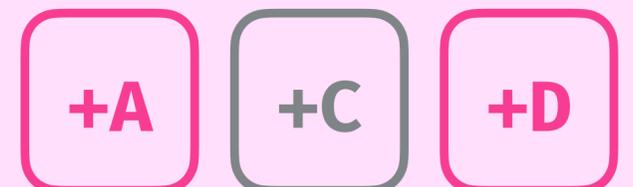
Revoked



Revocation



Result

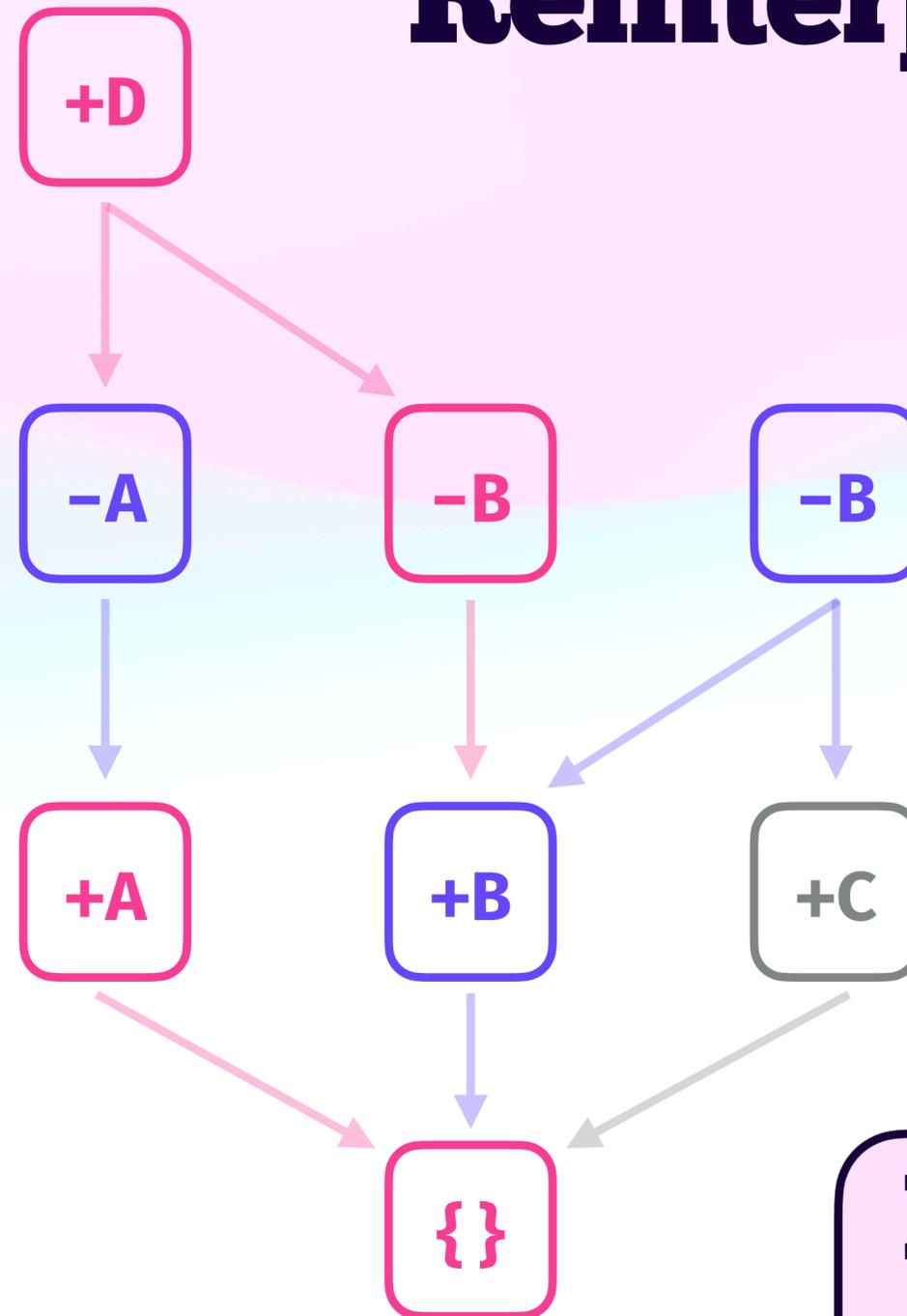


Entity
Attribute
Value
Causality

Writers

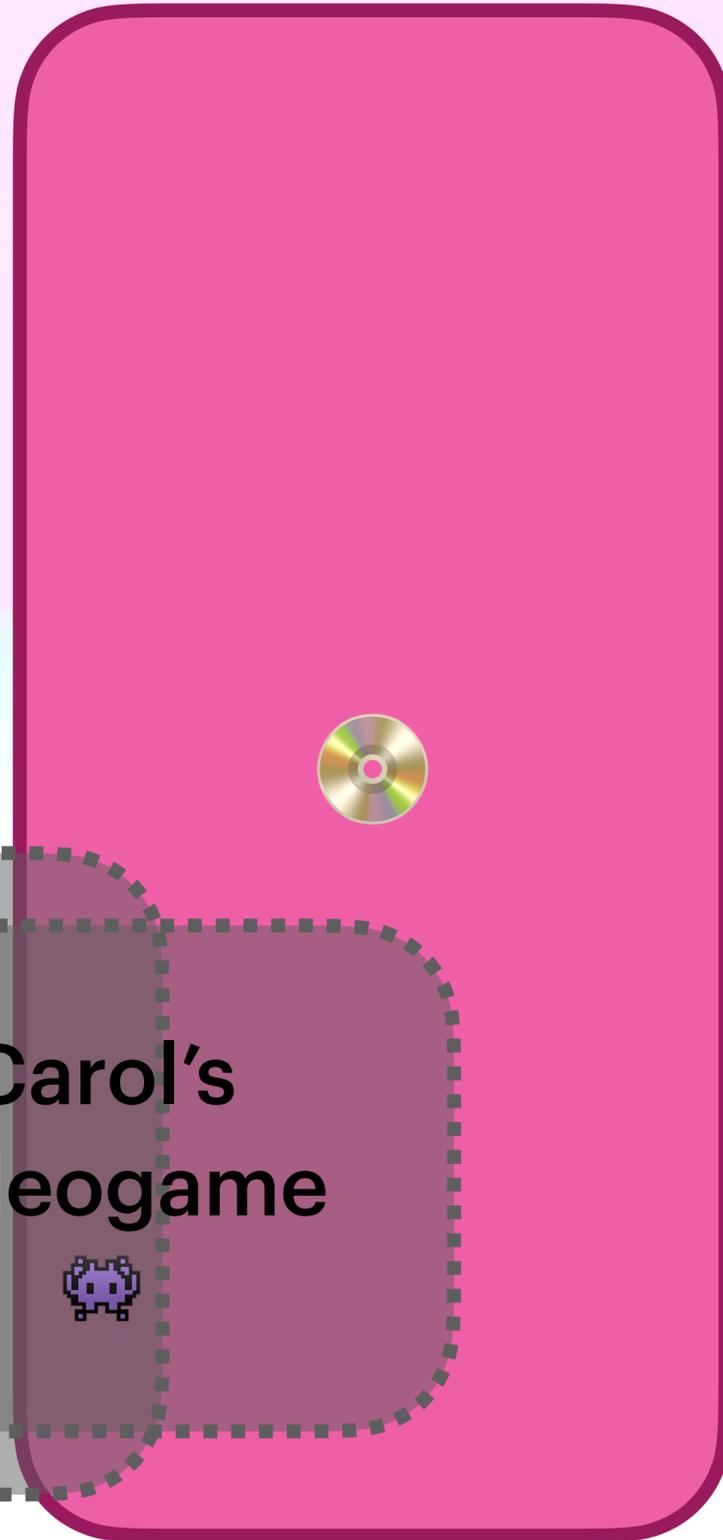
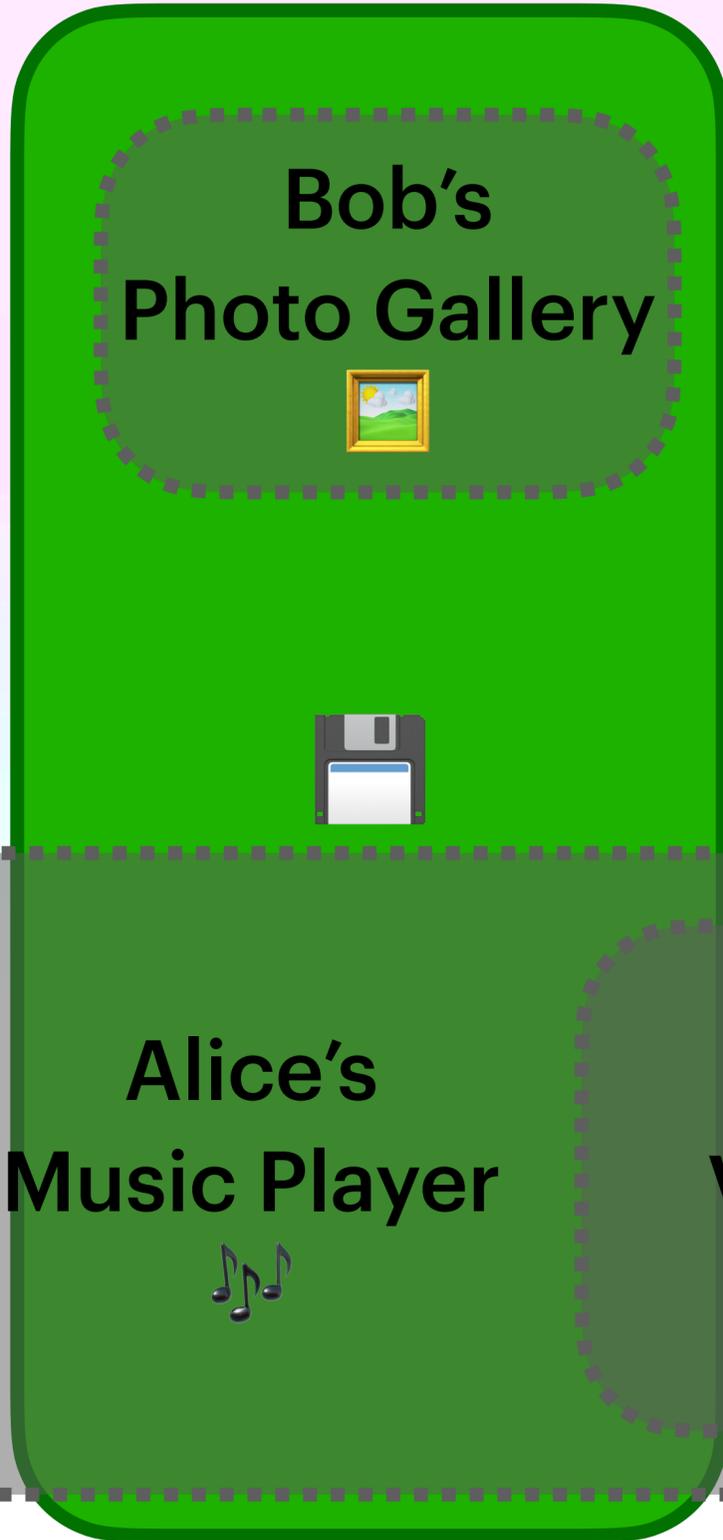
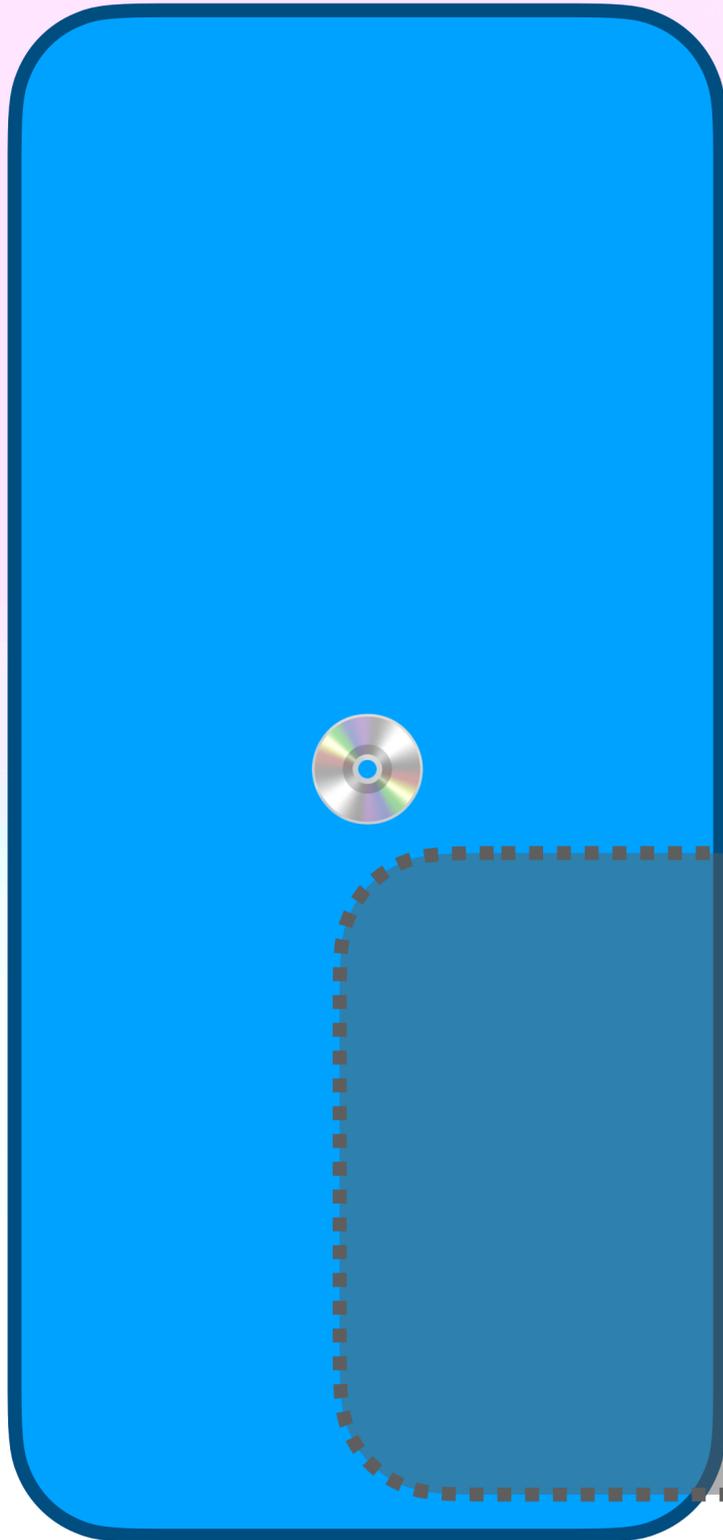


Reinterpretation



Result

2



**Bob's
Photo Gallery**



**Alice's
Music Player**

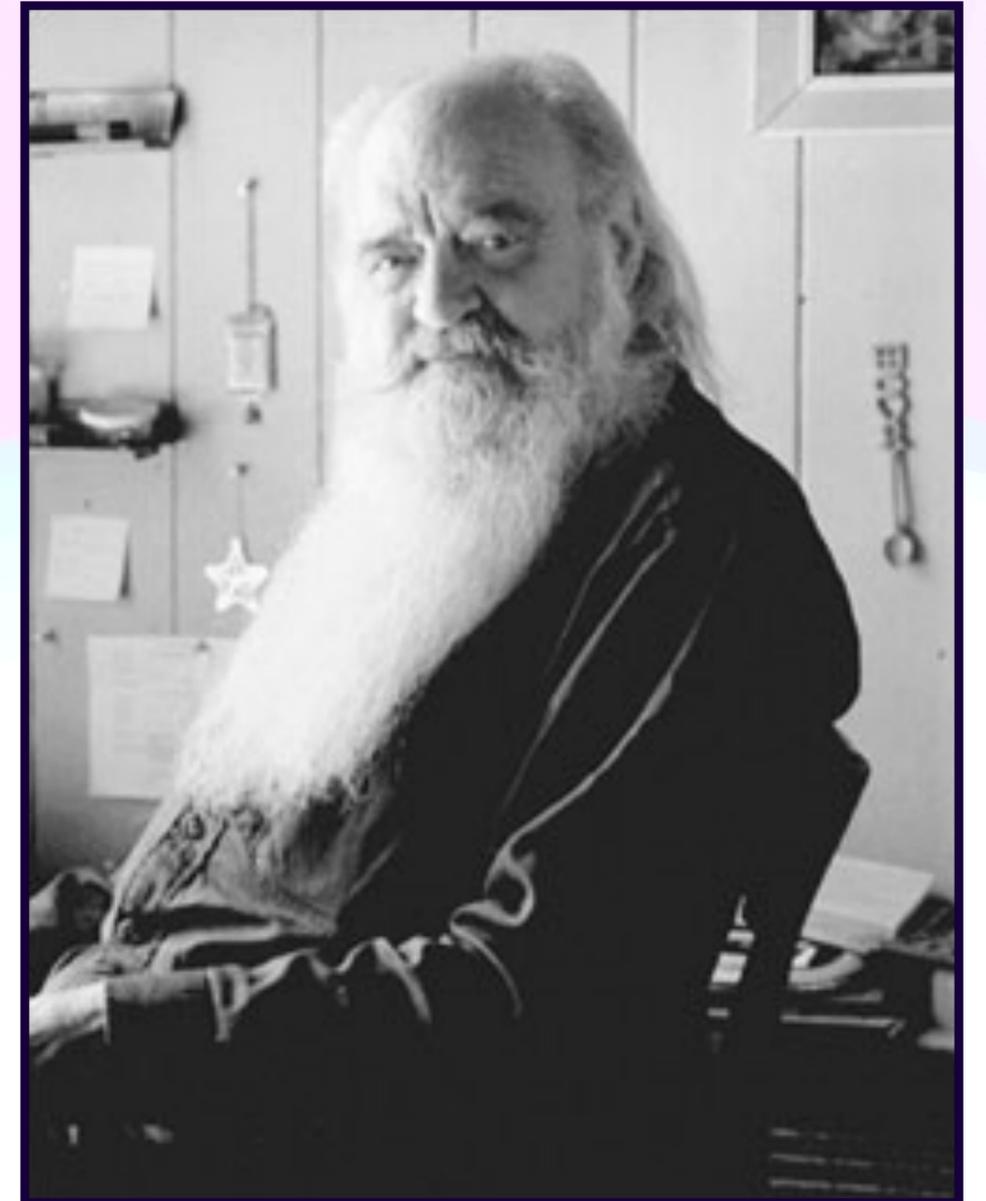


**Carol's
Videogame**

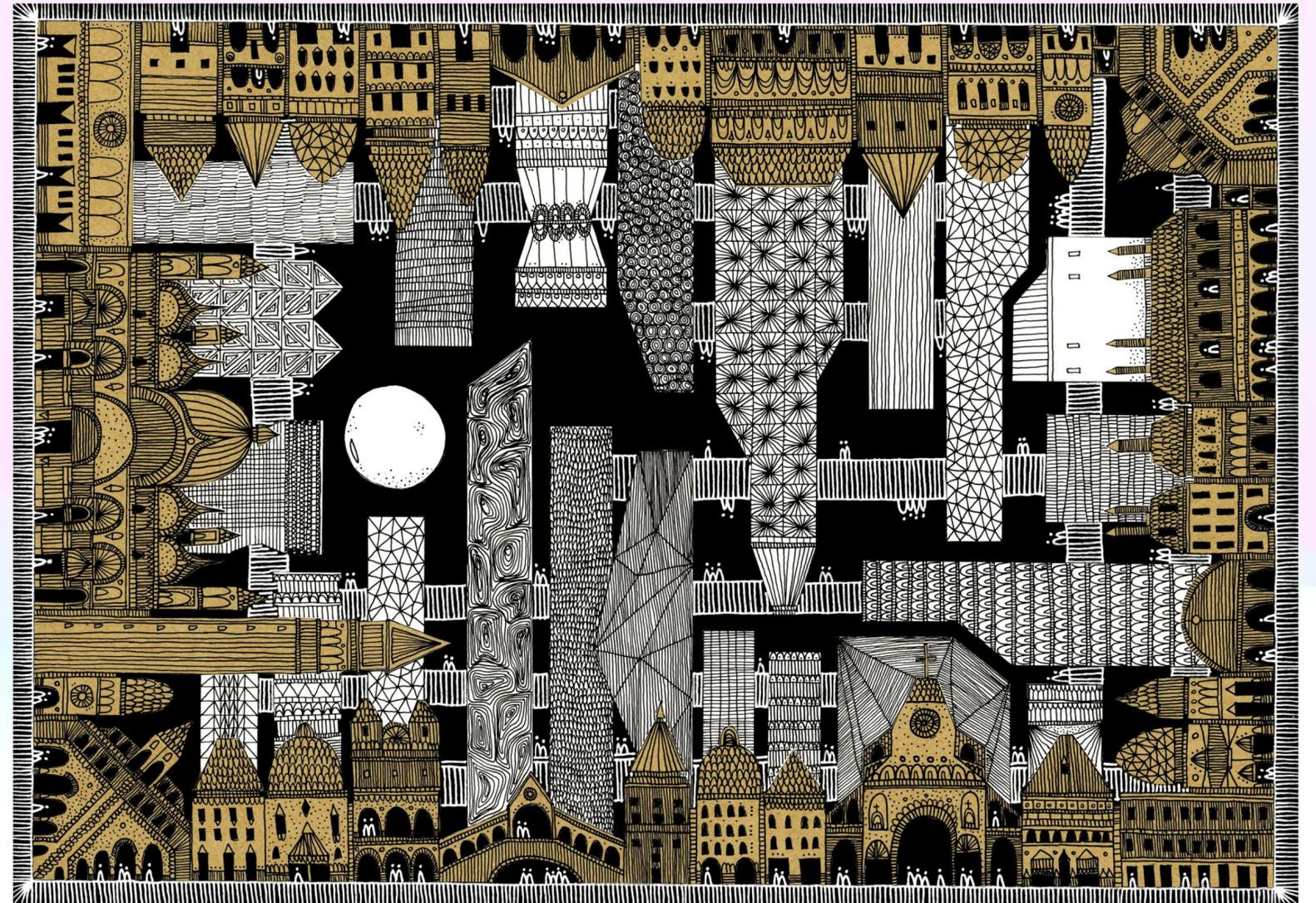


Science is ... a world view in which real systems are annihilated in trying to understand them, in which relations are lost because they are not categorized, in which synthesis is relegated to poetry and mysticism ...

Stafford Beer, Preface to Autopoiesis: The Organization of the Living (1980)



**Futures not achieved are
only branches of the
past: dead branches.**



Karina Puente, Maurilia City (2017)

Thank you HPTS!
@wilton_quinn