Designing Scalable Storylines

for Hypergraph Exploration

Vanessa Peña-Araya
Anastasia Bezerianos

journalists …

base their investigations on large collections of articles (news, public DB, reports, …) and their own knowledge (personal sources)

… and search for *relationships*

Journalists in Washington, DC to discuss the Panama Papers prior to publication. www.icij.org

relationships

people

locations

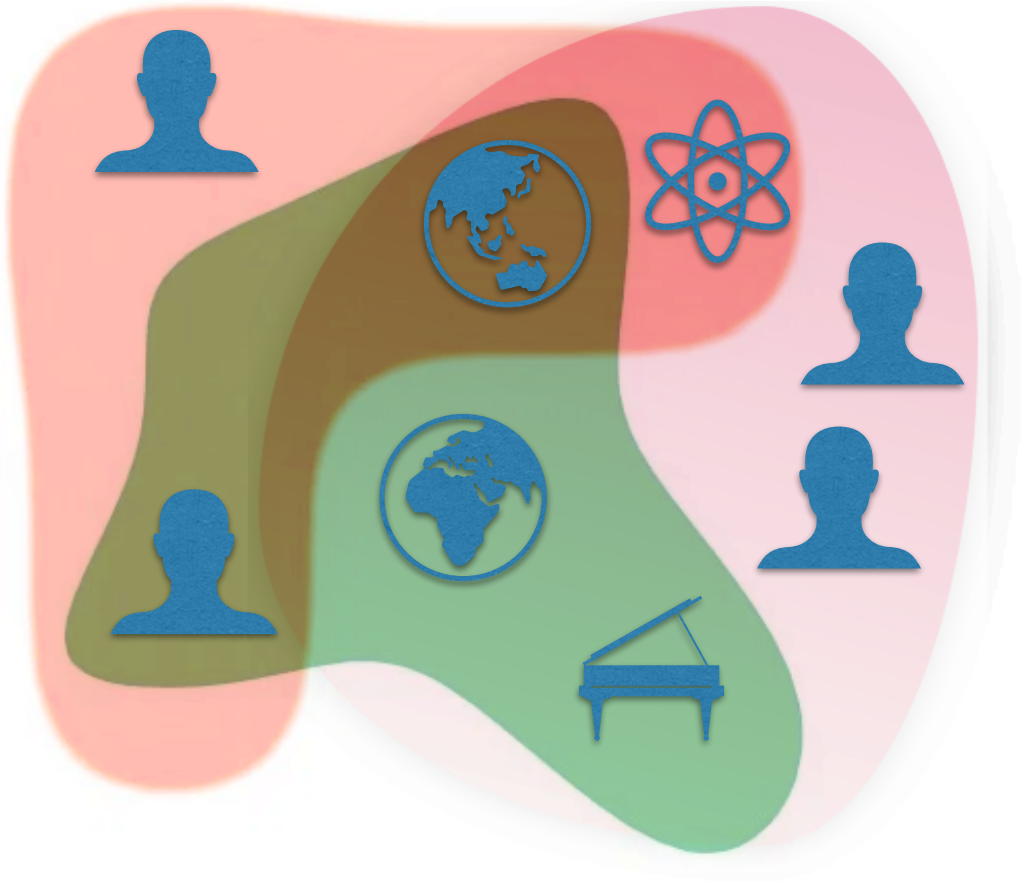
political parties

organizations

movements

topics

positions



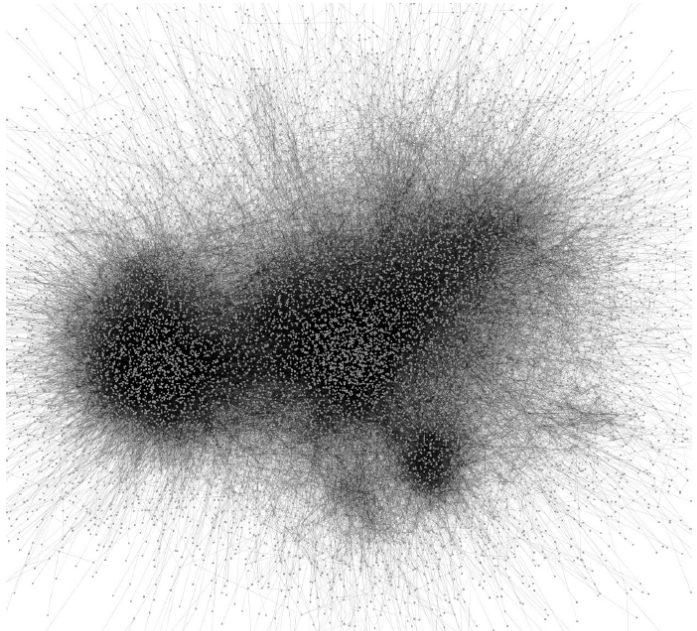
to form hypothesis and write stories

these relationships …

can be represented in the form of a huge graph (hypergraph), linking entities between them

is evolving, as relationships change over time

…. we do not want to see this graph!

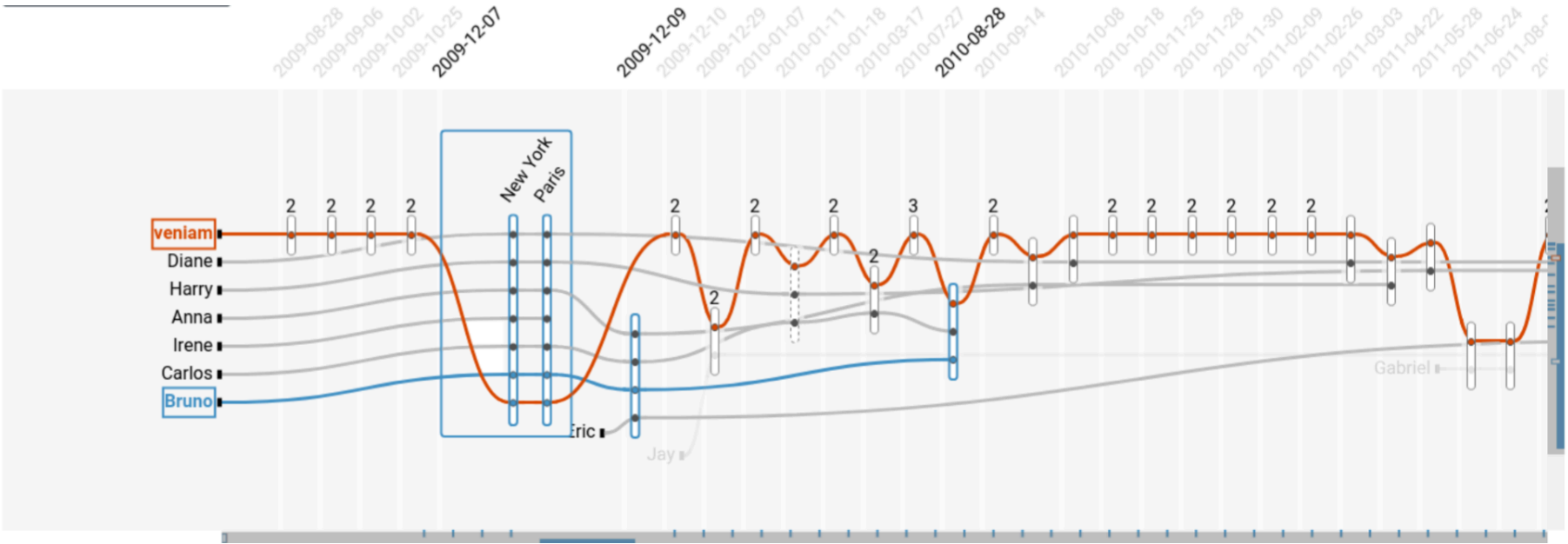


instead, use storylines

evolution of some pieces of knowledge

each line is an entity (person, location, theme, …)

lines come together to form relationships

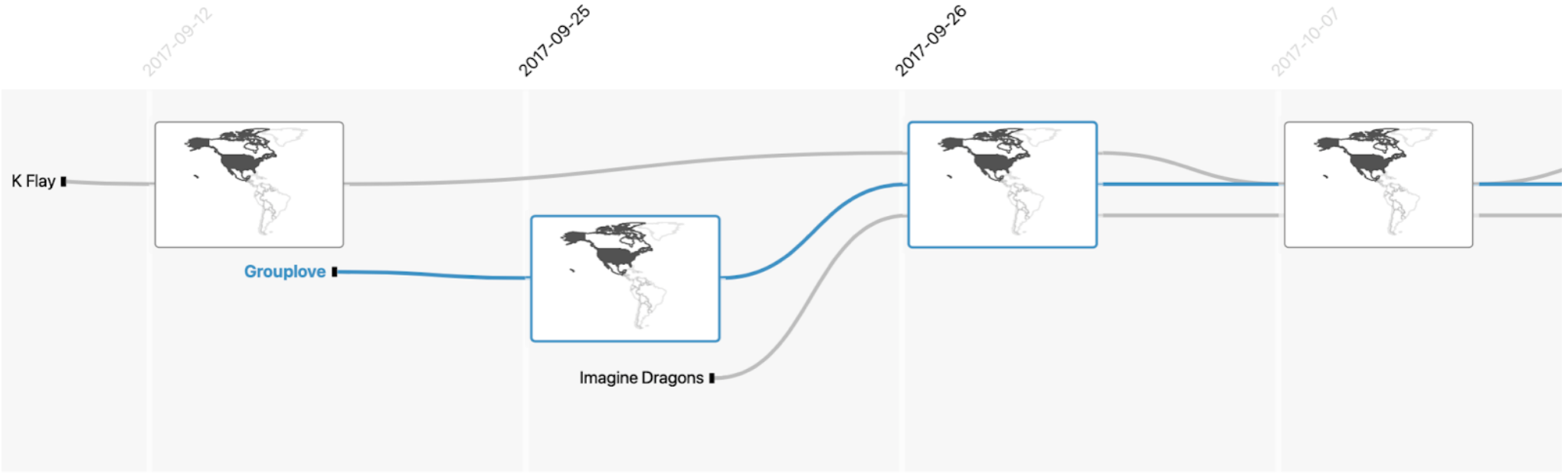


instead, use storylines

this works well for ~20 people and locations,

can be combined with maps,

and journalists like it!

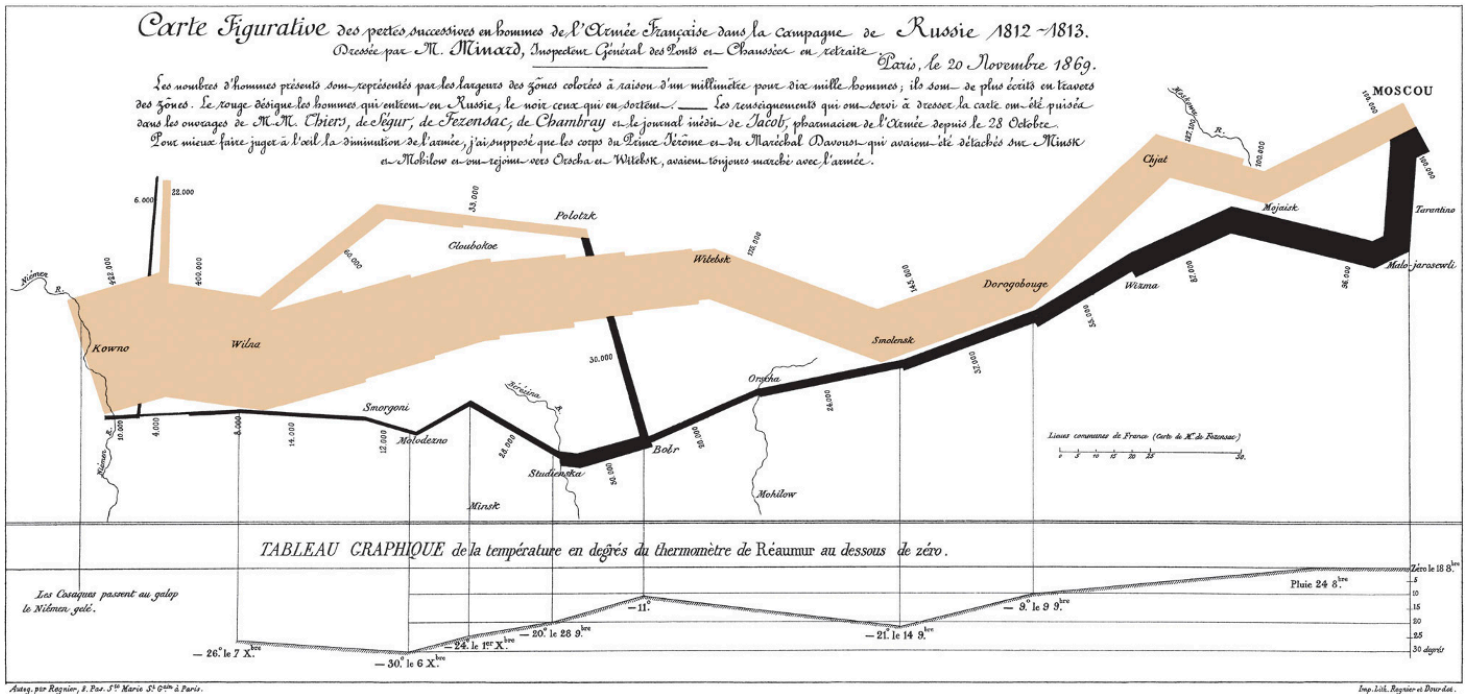


but …

how can we adapt the visualization to see

more entities (people, locations, themes, …)

… and their recurring patterns in *space* and *time*



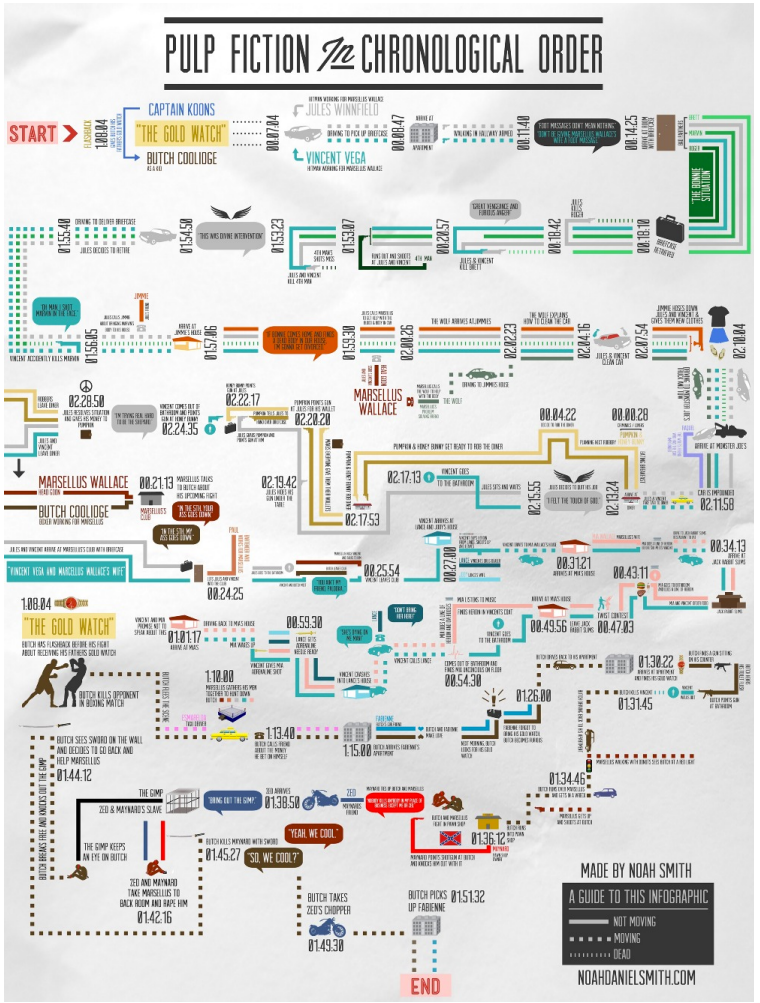
Napoleon's invasion of Russia
by Charles Minard

internship goal

visualization designs

for summerize relationships between multiple entities

that highlight recurring patterns in *space* and *time*

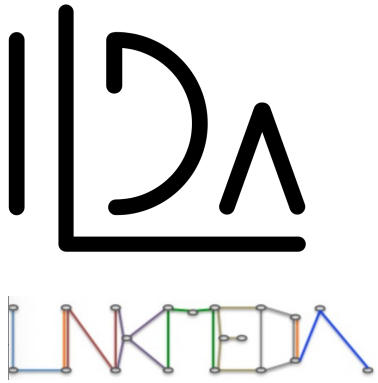


http://infographicsmania.com/pulp-fiction-timeline/

context

collaboration with journalists from a news agency

scenarios come from users and we could test with them



internship process

literature review

design workshops to generate alternatives for scalable storyline vis

creation of a design space (taxonomy) of possible designs and tasks they support

IF time permits, implementation + evaluation for most promising designs

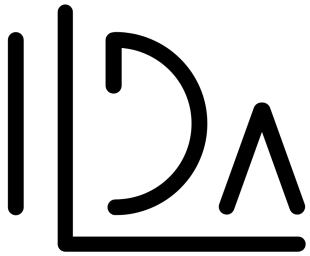
requirements

one or more of the courses:

information visualisation, experimental design and analysis, design of interactive systems

programming experience is a plus (e.g., web dev JS)

work environment



within the ILDA team

access to in-house tools and to our collaborative platforms (e.g., the HyperStorilines tool)

start early Spring 2023, 6 months

contact: vanessa.pena-araya@inria.fr

anastasia.bezerianos@universite-paris-saclay.fr

Full description: https://ilda.saclay.inria.fr/jobs/internships/2023/ILDA_internship_scalableHSL_design.pdf