



University
of Basel

Actor-network theory (ANT) as a preliminary approach to data modelling

Julien A. Raemy, 14.06.2022

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Agenda

- 1 Foreword
- 2 Actor-network theory (ANT)
- 3 Knowledge Representation within the PIA research project
- 4 The PIA Data Model through the ANT lens
- 5 Conclusion/Discussion



Data (models) are full-fledged actors

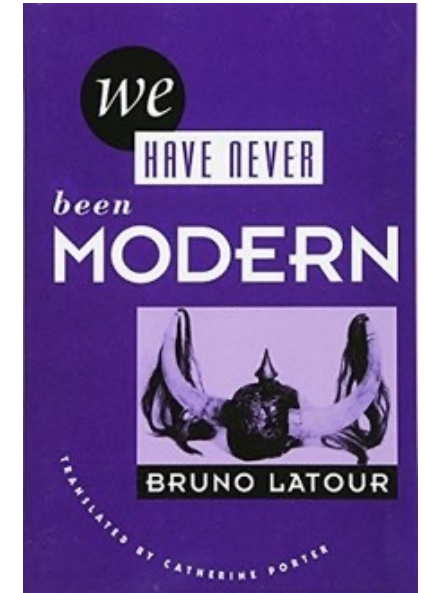
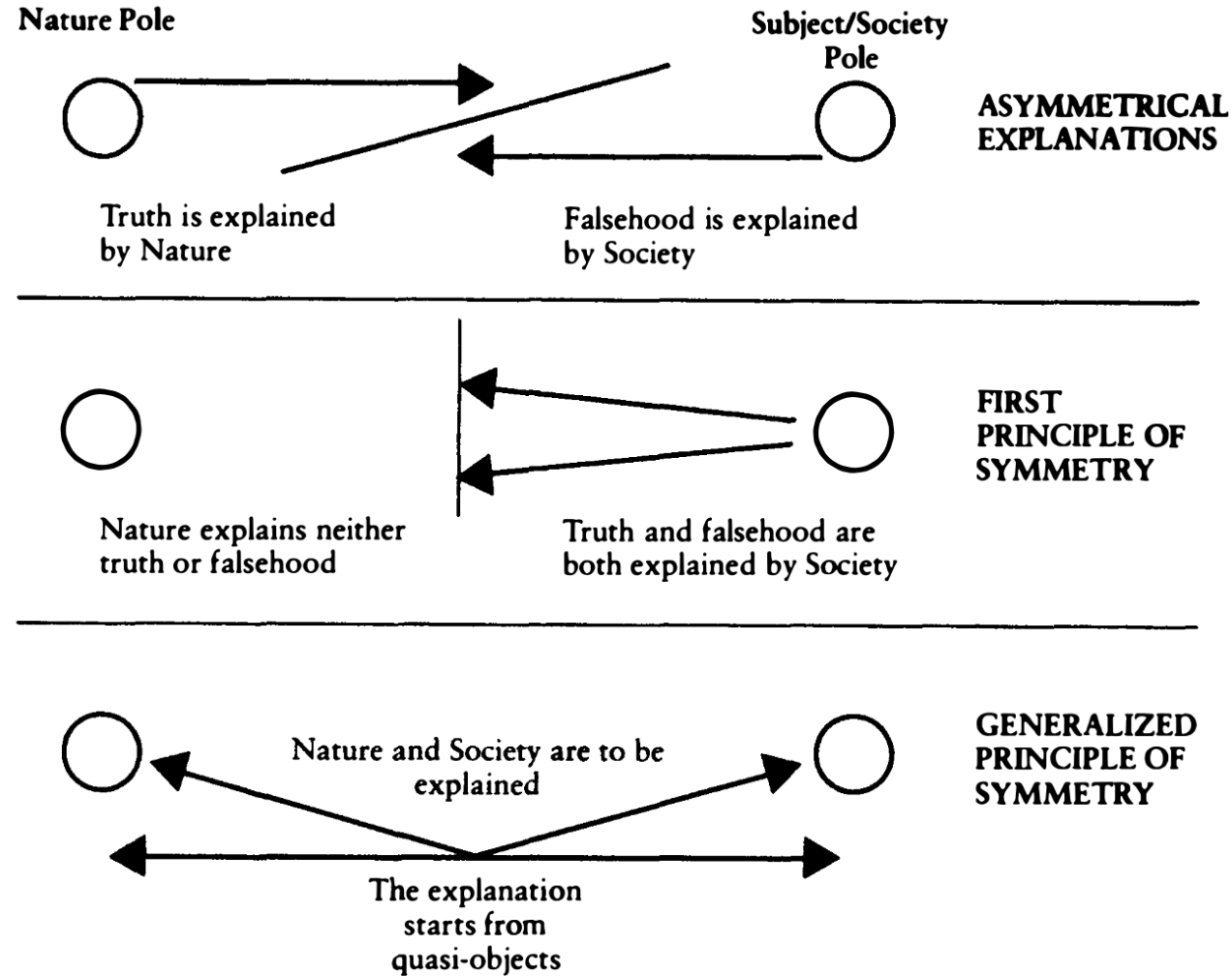
“There is no doubt that data are full-fledged actors that take part in the social network the actor-network theory describes, in which both human and non-human intertwine and overlap.”

(Akrich et al., 2006 as cited in Rodighiero, 2021)

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The principle of symmetry (Latour, 1996, p. 95)



→ "A joint dissolution of both collectors" (Latour 2005, p. 76)

Definition

“Actor-network theory (ANT) [...] aims at describing the very nature of societies. But to do so it does not limit itself to human individual actors, but extends the word actor - or actant - to non-human, non-individual entities.”

(Latour 1996, p. 369)

Key concepts

Actor/Actant

"An "actor" in ANT is a semiotic definition – an actant –, that is something that acts or to which activity is granted by other. It implies no special motivation of human individual actors, nor of humans in general. An actant can literally be anything provided it is granted to be the source of an action." (Latour, 1996, p. 373)

"[A]ny thing that does modify a state of affairs by making a difference is an actor—or, if it has no figuration yet, an actant." (Latour, 2005, p. 71)

Network

"A string of actions where each participant is treated as a full-blown mediator." (Latour 2005, p. 128)

"[...] a set of actors such that there are relations and translations between the actors that are stable, in this way determining the place and functions of the actors within the network." (Detel 2001, p. 14265)

Translation

"A relation that does not transport causality but induces two mediators into coexisting." (Latour 2005, p. 108)

Five major controversies of the social sciences

1. The nature of groups → *Groups are made*
2. The nature of actions → *Agencies are explored*
3. The nature of objects → *Objects play a role*
4. The nature of facts → *Facts are constructed / Social should mean again 'association'*
5. The type of studies done under the label of a science of the social → *writing (true and complete) accounts*

(Latour 2005, p. 22 and following)

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Participatory Knowledge Practices in Analogue and Digital **Image Archives** (PIA)

<https://about.participatory-archives.ch/>

Project funded by the SNSF Sinergia programme (February 2021 – January 2025)

<https://data.snf.ch/grants/grant/193788>

- **Cultural Anthropology:** University of Basel, Institute for Cultural Anthropology and European Ethnology
- **Technology:** University of Basel, Digital Humanities Lab
- **Design:** Bern University of Applied Sciences, Bern Academy of the Arts

- **SGV_05** Atlas der Schweizerischen Volkskunde (ASV)
- **SGV_10** Familie Kreis
- **SGV_12** Ernst Brunner

SGV_05
Atlas der Schweizerischen Volkskunde



Der „Atlas der Schweizerischen Volkskunde“ (ASV) entstand im Anschluss an die „Enquête I“ (SGV_04). Der Erhebungsbogen wurde von den beiden Volkskundlern Paul Geiger und Richard Weiss entworfen und generierte über 100'000 Antwortzettel zur schweizerischen Volkskultur der 1930er- und 40er-Jahre. Nebst umfangreichen schriftlichen Materialien dokumentieren rund 1'500 fotografische Abzüge und über 600 Negative der Jahre 1912 bis 1947 den Alltag in der Schweiz auf eindrückliche Weise. Dies just in der Zeit, als sich der Alltag durch die Industrialisierung, Urbanisierung und den Beginn der modernen ...

SGV_06
Appenzeller Senntumsmalerei



Diese Sammlung umfasst rund 900 Fotografien von Senntumsmalereien aus den 1930er- bis 1950er-Jahren. Sie ist das Resultat einer von der SGV initiierten Bestandsaufnahme der Senntumsmalereien im Appenzellerland und im Toggenburg, die vom damaligen Konservator des Kunstmuseums St. Gallen, Rudolf Hanhart, geleitet und 1956/57 von Dr. Otto Frehner aus Herisau und Albert Edelmann aus Ebnet durchgeführt wurde. Frehner und Edelmann erstellten einen Zettelkatalog, der die Malereien nach Künstler/-innen ordnete. Ein grosser Teil der Fotografien dieser Sammlung zeigen Werke von Bartholomäus Lämmer (1809...

SGV_07
Gebäckmodel



Im Auftrag der SGV legte die Basler Kunsthistorikerin Margarete Pfister-Burkhalter (1903–1999) zwischen 1942 und 1968 eine fotografische und zeichnerische Dokumentation über Gebäckmodel, die damals in privatem (Bäckereien, Konditoreien, Sammlungen) und öffentlichem Besitz (Museen) waren, an. Nach Abschluss des Projektes führte Frau Pfister-Burkhalter die Dokumentationsarbeit privat weiter und übergab sie im September 1990 der SGV. Diese Sammlung enthält rund 2'300 Negative und 3'700 Positive – davon viele Originalabzüge – und präsentiert einen in seiner Art einzigartigen und akribisch geführte...

SGV_08
Relistab und Buchmann



Die Journalistin Ursula Relistab und der Fotograf Max Buchmann erstellten in den 1960er- und 1970er-Jahren Porträts von Personen aus unterschiedlichen Regionen der Schweiz, die seltenen oder ungewöhnlichen Berufen nachgingen. Sie dokumentierten ebenfalls kulinarische Trends sowie regionale Spezialitäten und klärten anstehende Fragen, wie zum Beispiel jene, ob die bürgerliche Hausfrau ihren Gästen gekauften Kuchen servieren darf. Rund 500 Negative und 500 Dias sind dabei nebst schriftlichen Reportagen entstanden.

<https://archiv.sgv-sstp.ch/>

SGV_09
Familie Surbeck



Die Objekte dieser umfangreichen und heterogenen Sammlung stammen aus dem Nachlass der Familie Surbeck. Der Ingenieur und Chemiker Heinrich Surbeck (1876–1945) aus Hallau (SH) wanderte aus gesundheitlichen Gründen in

SGV_10
Familie Kreis



Diese Sammlung ermöglicht einen Streifzug durch mehr als 100 Jahre Familien- und Fotografieggeschichte. Die wohlhabende Drucker- und Ärztfamilie Kreis zog 1876 nach Basel und dokumentierte ihr privates und berufliches

SGV_11
Olga Frey-Schmidlin



Die Sammlung Olga Frey-Schmidlin ist seit 1997 im Besitz der SGV und besteht aus einem handgeschriebenem Reisetagebuch und sechs Alben. Das Tagebuch enthält Fotografien und Postkarten aus der Zeit um 1900 und

SGV_12
Ernst Brunner

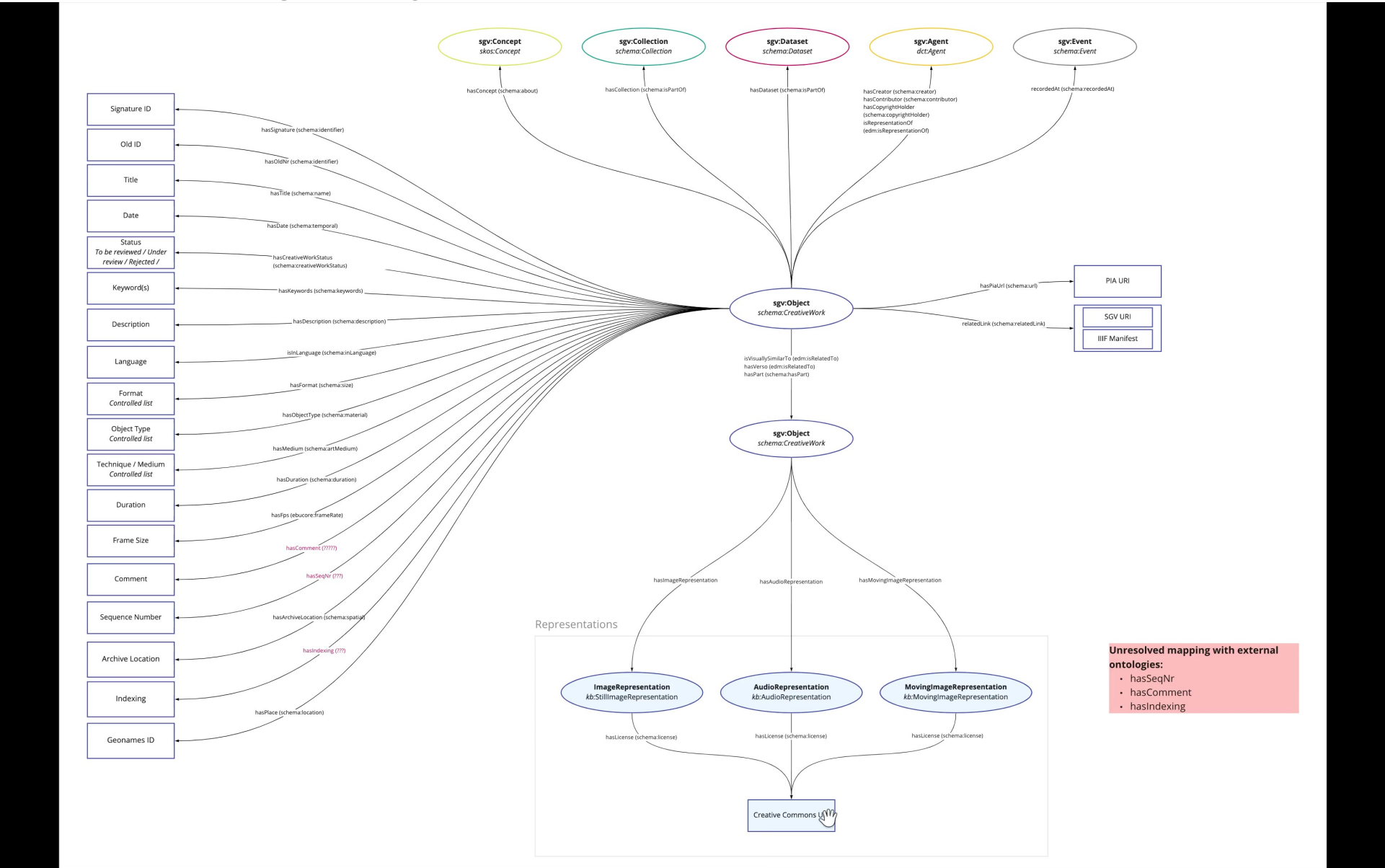


Der Nachlass Ernst Brunner (1901–1979) ist die umfangreichste Sammlung der SGV. Er wurde 1980 nach dem Tod des Fotojournalisten und Bauernhausforschers der SGV übergeben. Die rund 48'000 schwarz-weißen Negative im

SGV Data Model

Old SGV Data Model (Salsah)	New SGV Data Model (DaSCH Service Platform)
sgv:Image	will be deprecated in favour of sgv:Object. Files will be represented through ImageRepresentation
sgv:Film	will be deprecated in favour of sgv:Object. Files will be represented though the MovingImageRepresentation
sgv:Tonbildschau	will be deprecated in favour of sgv:Object. Files will be represented through ImageRepresentation
sgv:Sequence	sgv:Sequence
sgv:Album	will be deprecated in favour of sgv:Object. Files will be represented through ImageRepresentation
sgv:Subject	sgv:Concept
sgv:Collection	sgv:Collection
sgv:Persons	sgv:Agent
	sgv:Object <i>sgv:ImageRepresentation, sgv:MovingImageRepresentation, sgv:AudioRepresentation</i>
	sgv:Dataset
	sgv:Event

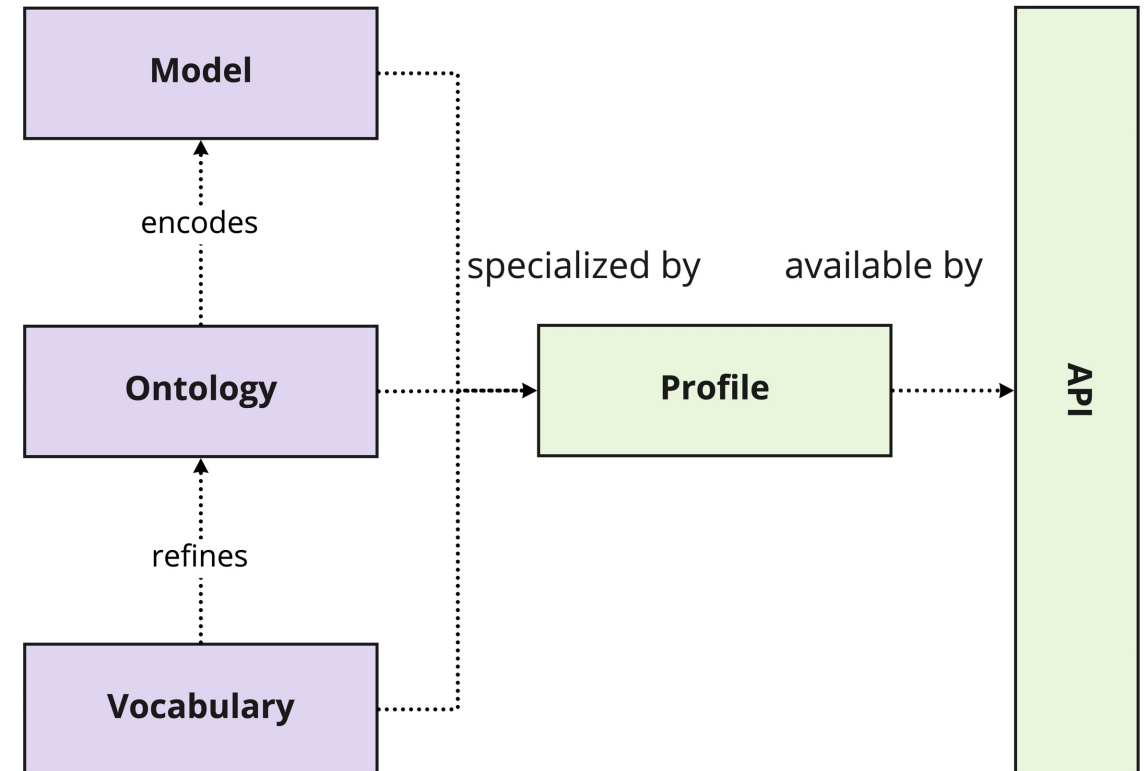
SGV Data Model – sgv:Object



Linked Art API Endpoints / Entities - <https://linked.art/api/1.0/endpoint/>

- Digital Objects - Images, services and other digital objects
- Events - Events and other non-specific activities that are related but not part of other entities
- Groups - Groups and Organizations
- People - People
- Physical Objects - Physical things, including artworks, buildings or other architecture, books, parts of objects, and more
- Places - Geographic places
- Provenance Activities - The various events that take place during the history of a physical thing
- Sets - Sets, including Collections and sets of objects used for exhibitions
- Textual Works - Texts worthy of description as distinct entities, such as the content carried by a book or journal article
- Visual Works - Image content worthy of description as distinct entities, such as the image shown by a painting or drawing

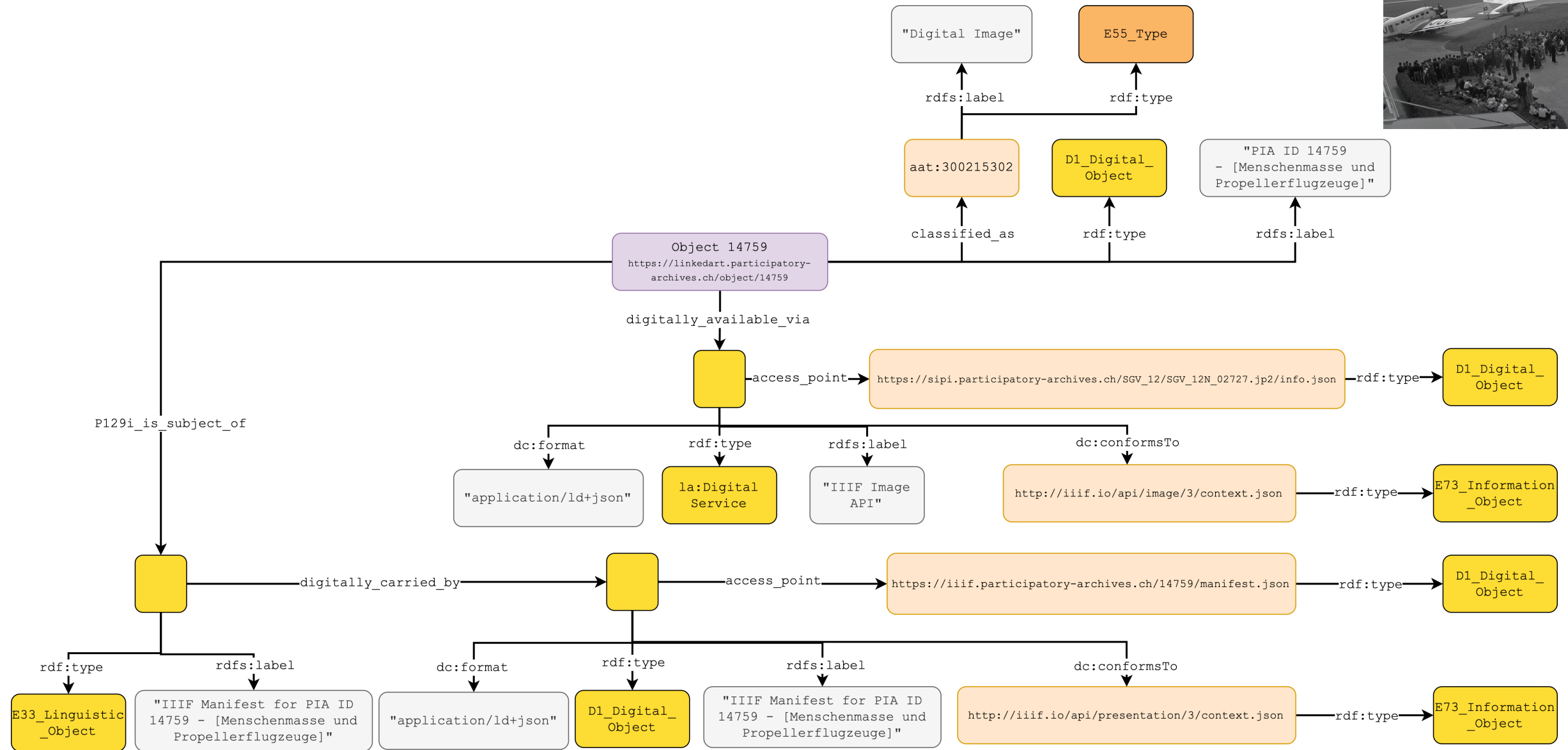
An RDF application profile of CIDOC-CRM that uses JSON-LD and the Getty vocabularies





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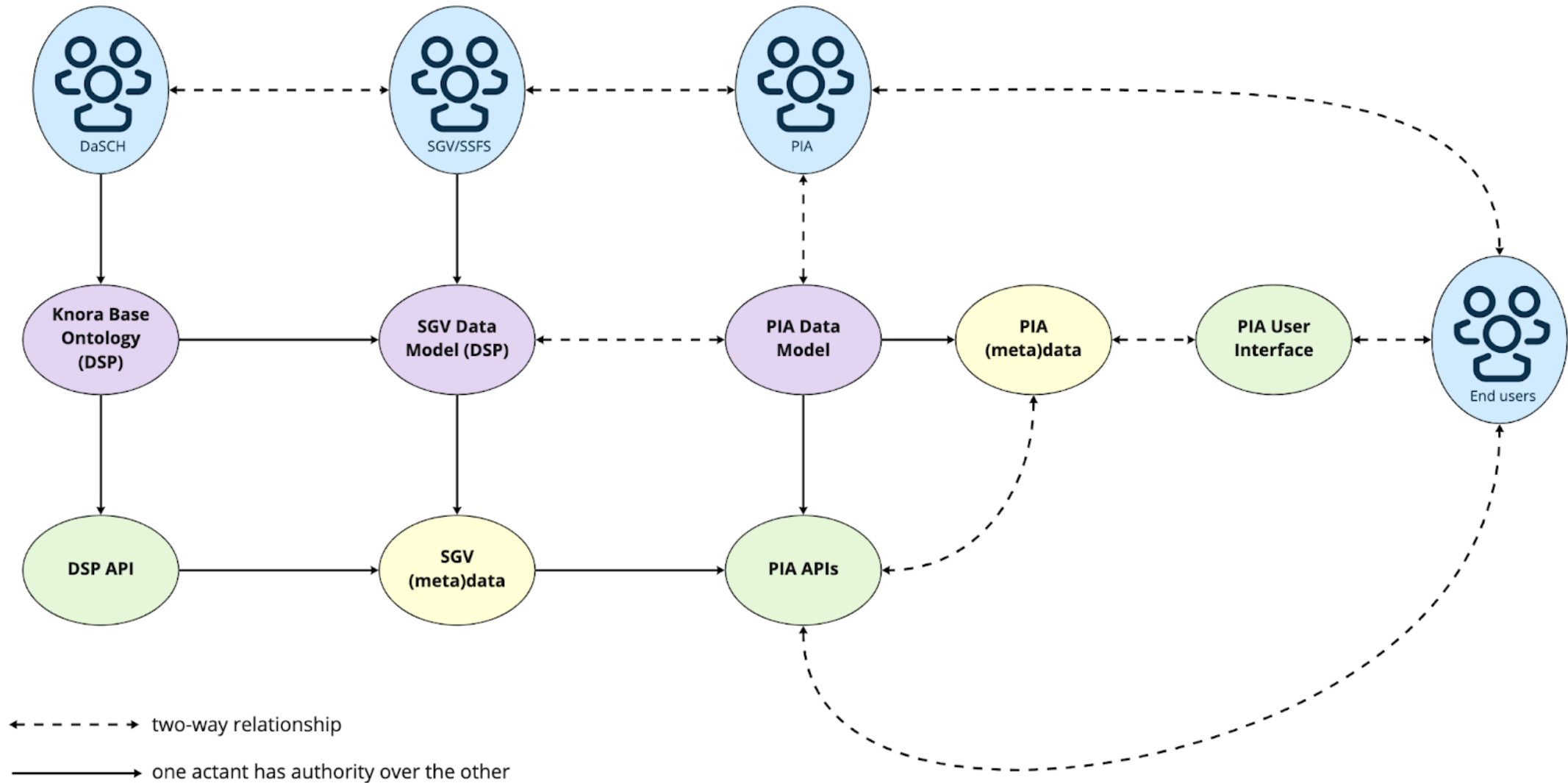
Integration of IIIF in Linked Art



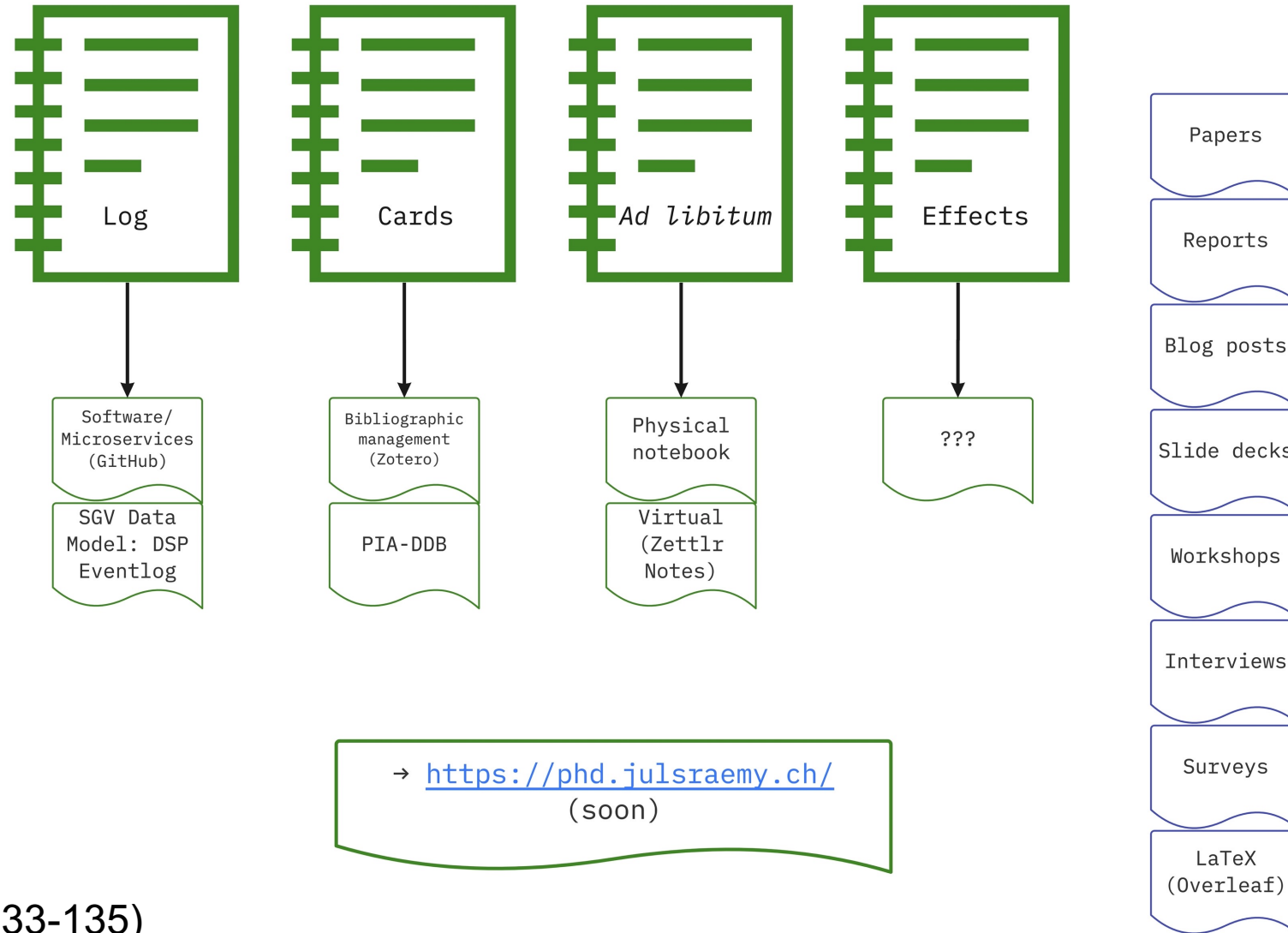
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A very rough (und quite unapplicable) sketch



Back to basics: notebooks




(Latour 2005, pp. 133-135)

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Conclusion – trudging like an ant

Writing accounts (narratives, descriptions, propositions) **that traces a network where all the actors *do something*** (Latour 2005, p. 128)


 To reassemble the social in my PhD thesis: reassembling, assessing and reorganising the outputs by keeping notebooks

Treating the PIA Data Model as a *matter of concern* (and not simply a *matter of fact*) **in a given *hybrid collective*** (Callon 2001)

 “ANT claims that we should simply not believe the question of the connections among heterogeneous actors to be closed, that what is usually meant by ‘social’ has probably to do with the reassembling of new types of actors.” (Latour 2005, p. 75) → Similitude with the Open-world assumption applied in the Web Ontology Language (OWL)





 Further down the road: finding out how JSON-LD files/representations (IIIF Resources, Linked Art API endpoints, Web Annotation Data Model records) could be understood as *boundary objects* defined by Susan Leigh Star (1999; 2001)

There are hybrids everywhere









 ANT is definitely something to take into account in the Digital Humanities. Traditional social sciences have failed on science. ANT need pass through all the “[...] turfs and destroy [the hard science]’s objects with social explanations” (Latour 2005, p. 101)

 Data are full-fledged actors - “Everything is a society and that all things are society” (Tarde as cited in Latour 2005, p. 218)

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University
of Basel

Thank you for your attention.

Julien A. Raemy
Assistant / PhD Candidate - Digital Humanities Lab

julien.raemy@unibas.ch
<https://orcid.org/0000-0002-4711-5759>