



The GOLEM Ontology for Narrative and Fiction

Graphs and Ontologies for Literary Evolution
Models

A 5-year (2023-2027) research project funded by
the European Commission (ERC StG)

Federico Pianzola, Franziska Pannach, Xiaoyan
Yang, Luotong Cheng, Luca Scotti



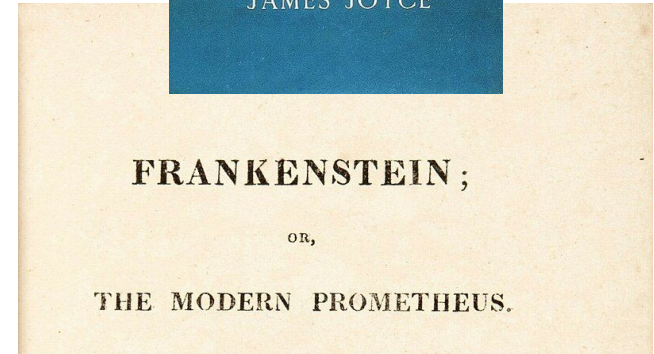
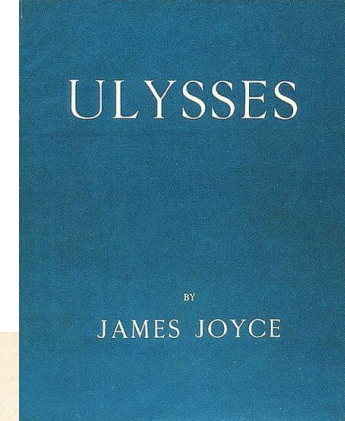
**What is a formal ontology
and why do you need one?**

A formal ontology is a structured and standardized representation of information.

Variants of characters and stories' traits



Zeus → ? ← Jupiter



Example: RQ → ontology

RQ: what are the most common **narrative locations** for **Italian sci-fi novels** published in the **21st century**?

locations → gc:G13_Narrative_Location

Italian → schema:inLanguage

sci-fi → schema:genre

21st century → schema:datePublished

novel → crm:E55_Type

GOLEM project's research goals

RQ1: How do story traits spread, become successful, disappear?

RQ2: Which narrative strategies have a stronger impact on readers?

Data: Fanfic communities of readers and writers who reinterpret stories and further transmit modifications of them



A tool to support comparative literary studies



Character-centric Formal Ontology for Fiction and Narrative

It should (minimally) express:

1. Characters are entities that appear in multiple **contexts** (e.g. a novel, its film adaptation, a wiki entry)

Character-centric Formal Ontology for Fiction and Narrative

It should (minimally) express:

1. Characters are entities that appear in multiple **contexts** (e.g. a novel, its film adaptation, a wiki entry)
2. Characters have some recognizable **features** (e.g. appearance)

Character-centric Formal Ontology for Fiction and Narrative

It should (minimally) express:

1. Characters are entities that appear in multiple **contexts** (e.g. a novel, its film adaptation, a wiki entry)
2. Characters have some recognizable **features** (e.g. appearance)
3. Characters engage in social **relationships** (e.g. become friends)

Character-centric Formal Ontology for Fiction and Narrative

It should (minimally) express:

1. Characters are entities that appear in multiple **contexts** (e.g. a novel, its film adaptation, a wiki entry)
2. Characters have some recognizable **features** (e.g. appearance)
3. Characters engage in social **relationships** (e.g. become friends)
4. Characters do things and participate in **events** (e.g. fight a dragon)

Character-centric Formal Ontology for Fiction and Narrative

It should (minimally) express:

1. Characters are entities that appear in multiple **contexts** (e.g. a novel, its film adaptation, a wiki entry)
2. Characters have some recognizable **features** (e.g. appearance)
3. Characters engage in social **relationships** (e.g. become friends)
4. Characters do things and participate in **events** (e.g. fight a dragon)
5. Characters fulfill some roles in the **plot** development (e.g. villain)

Character-centric Formal Ontology for Fiction and Narrative

It should (minimally) express:

1. Characters are entities that appear in multiple **contexts** (e.g. a novel, its film adaptation, a wiki entry)
2. Characters have some recognizable **features** (e.g. appearance)
3. Characters engage in social **relationships** (e.g. become friends)
4. Characters do things and participate in **events** (e.g. fight a dragon)
5. Characters fulfill some roles in the **plot** development (e.g. villain)
6. All the above aspects are either **explicitly** stated in the fiction (e.g. “Harry is brave”) or **inferred** from it (e.g. “Harry jumps into the fire to rescue Ron”)

Character-centric Formal Ontology for Fiction and Narrative

It should (minimally) express:

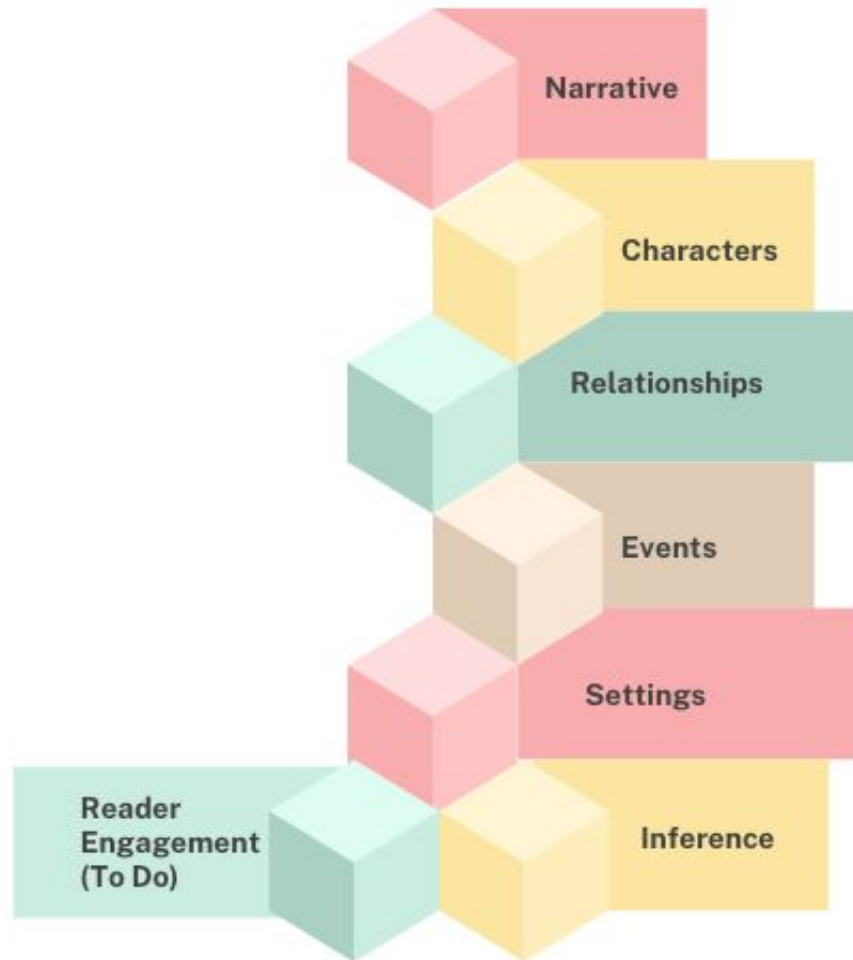
1. Characters are entities that appear in multiple **contexts** (e.g. a novel, its film adaptation, a wiki entry)
2. Characters have some recognizable **features** (e.g. appearance)
3. Characters engage in social **relationships** (e.g. become friends)
4. Characters do things and participate in **events** (e.g. fight a dragon)
5. Characters fulfill some roles in the **plot** development (e.g. villain)
6. All the above aspects are either **explicitly** stated in the fiction (e.g. “Harry is brave”) or **inferred** from it (e.g. “Harry jumps into the fire to rescue Ron”)
7. The **provenance** of each statement about characters should be clear.

GOLEM Ontology Modules

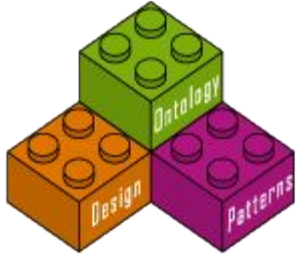
Description:

<https://ontology.golemlab.eu/>

<https://github.com/GOLEM-lab/golem-ontology/wiki>

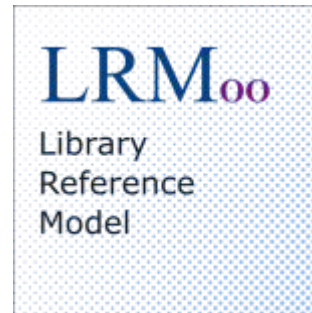


Basis of the GOLEM ontology



DOLCE

(Descriptive Ontology for Linguistic and Cognitive Engineering)



[Schema.org](https://schema.org)

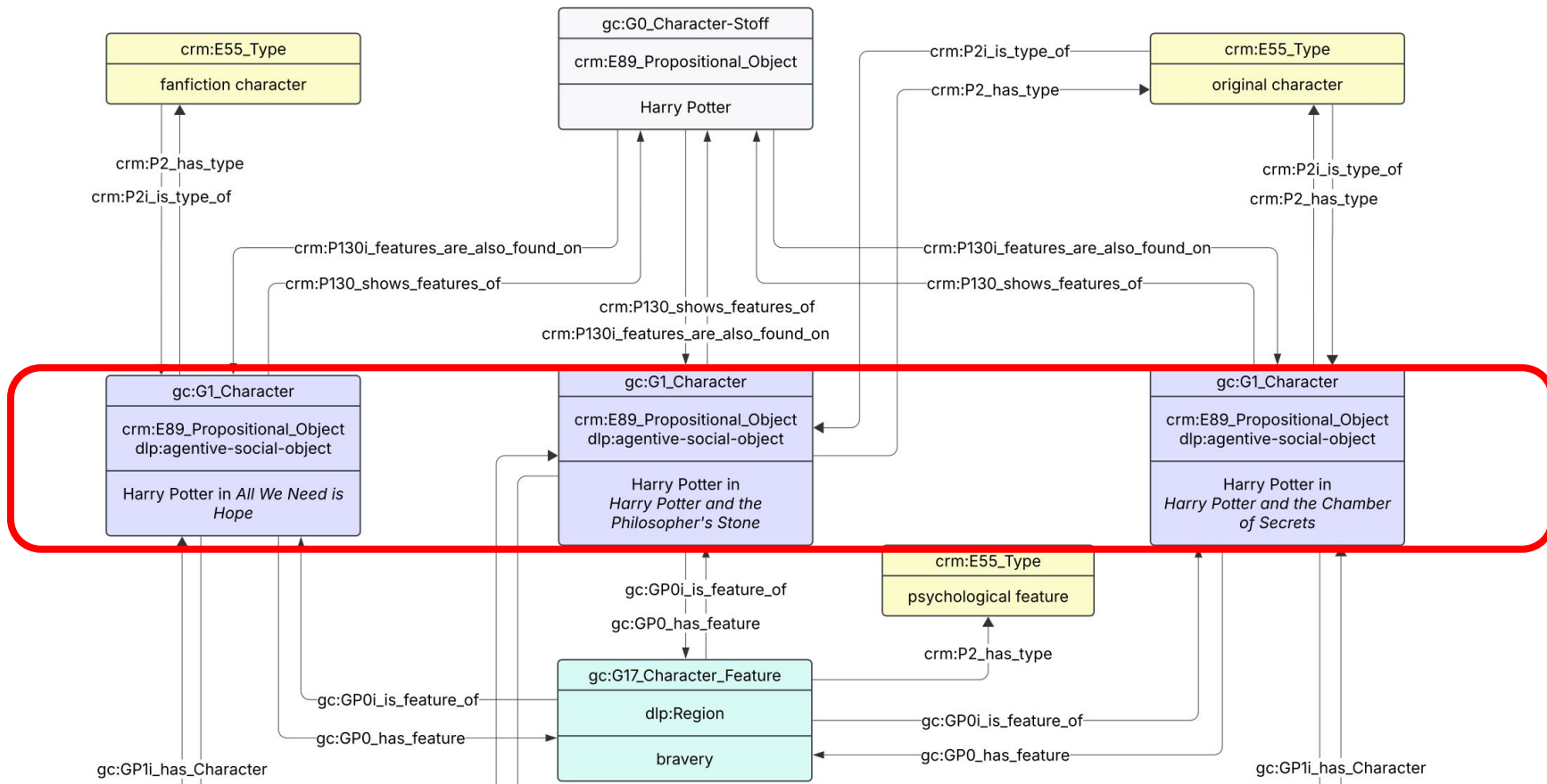
Representing characters in the GOLEM

- The GOLEM ontology models characters as evolving narrative entities whose identities, traits, and relationships transform across canonical and fan-generated texts.

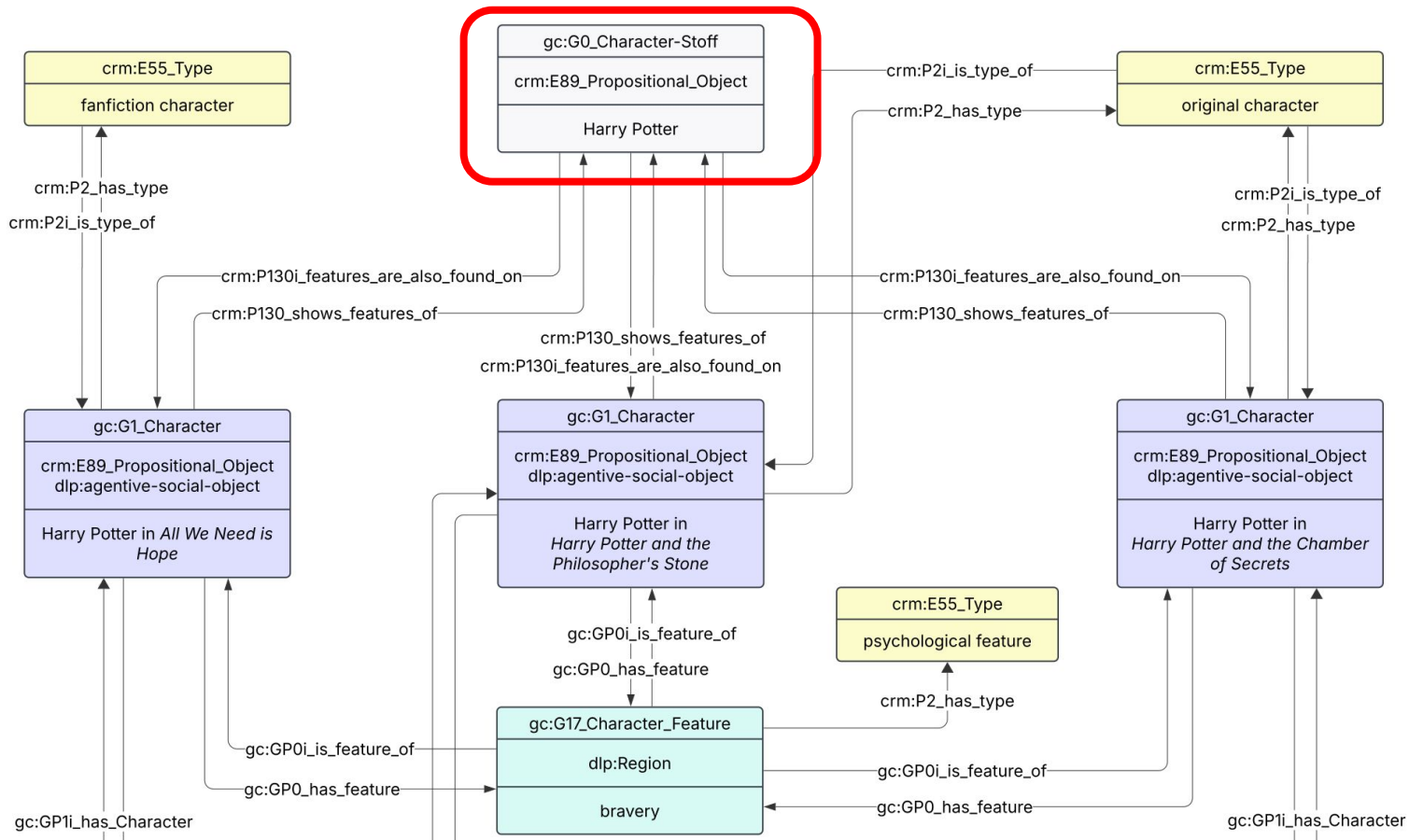
Representing characters in the GOLEM

- The GOLEM ontology models characters as evolving narrative entities whose identities, traits, and relationships transform across canonical and fan-generated texts.
- Two-level character modeling strategy:
 - **G1_Character**: Individual character instantiation in a work
 - **G0_Character-Stoff**: Broader conceptual entity linking various instances of characters appearing in single works

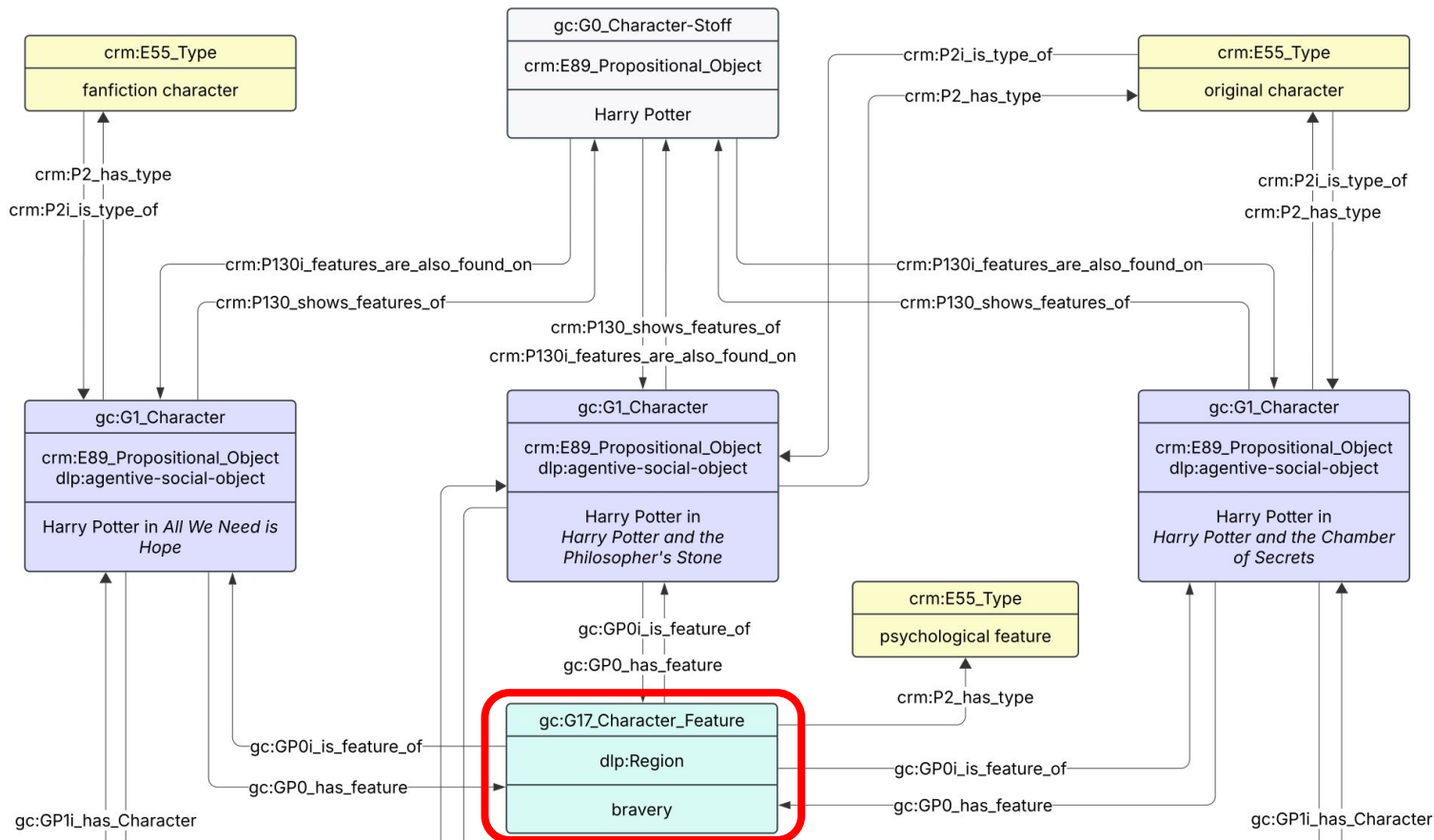
Characters in works



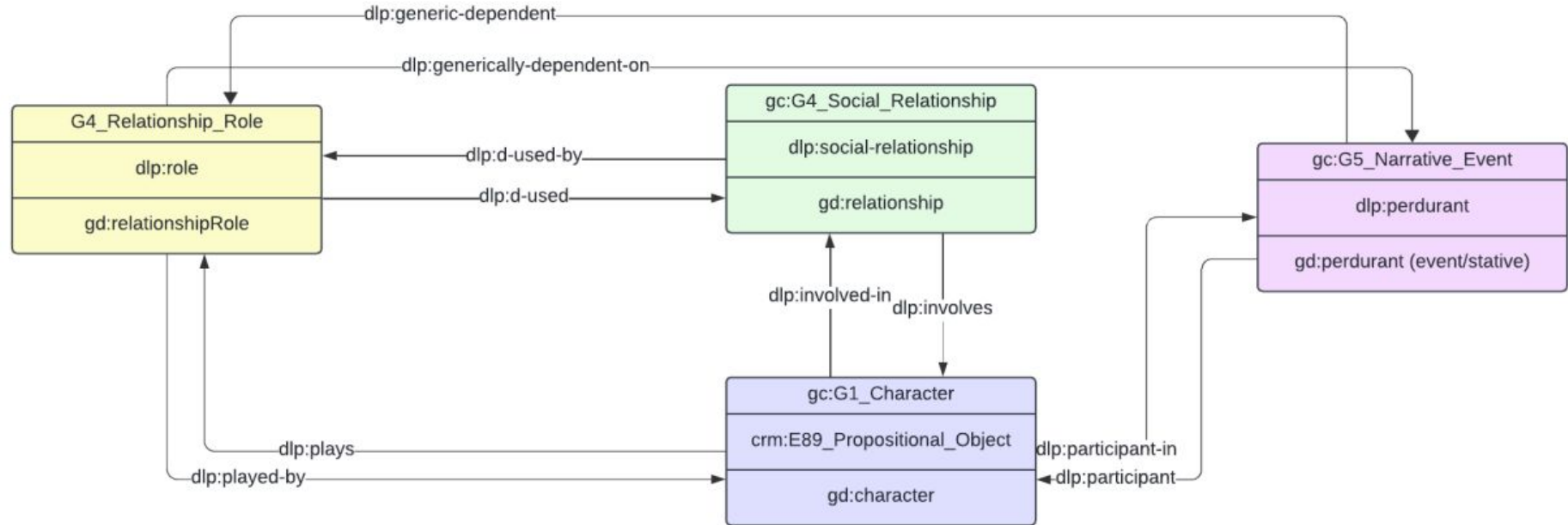
Character-Stoff



Character traits



Relationships between characters



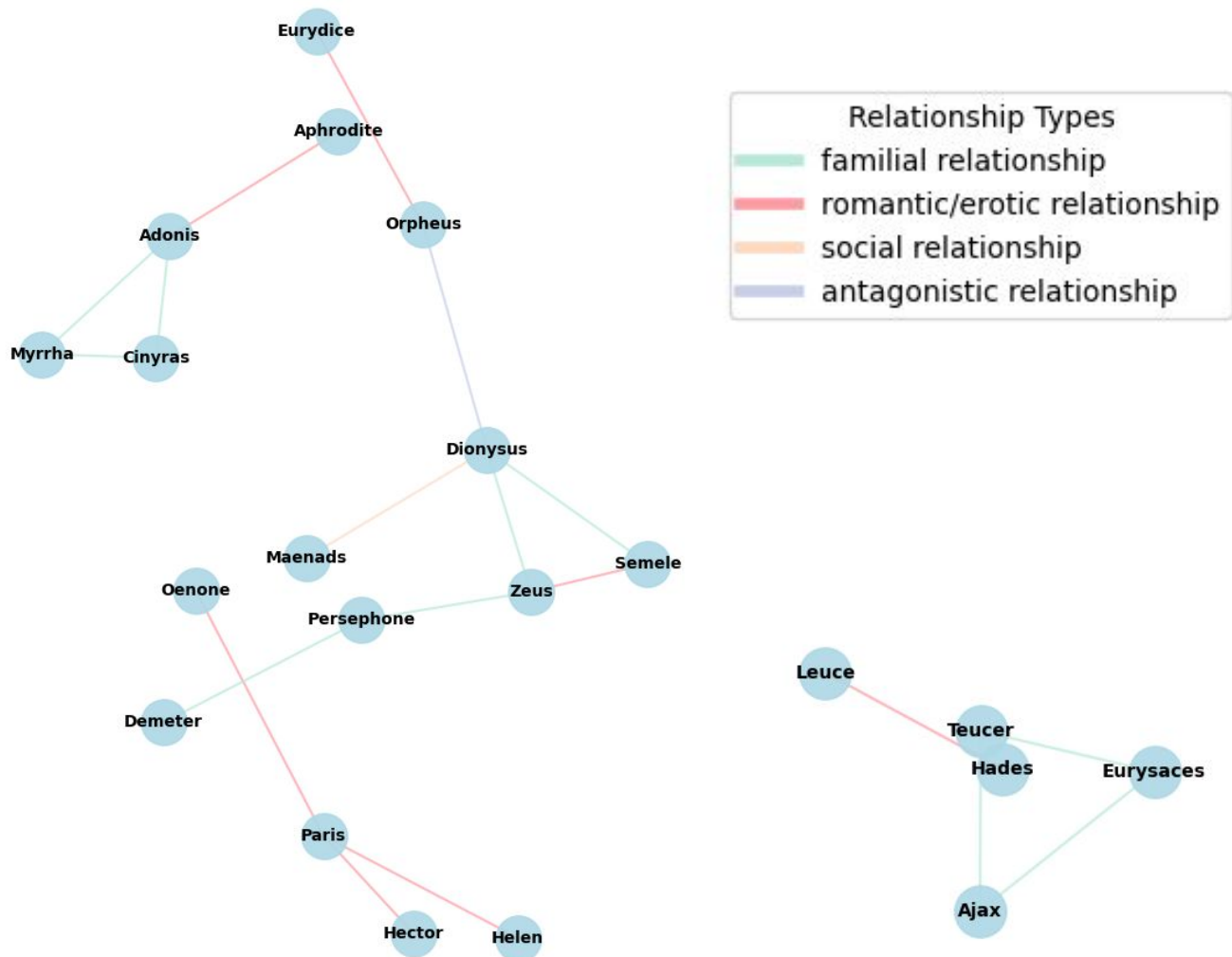
Characters linked to the same Character-Stoff

	Story Title	Character
0	(Appearing Like Images of Dreams)	Clytaemnestra, Cassandra
1	A Heavy Responsibility	Teucer, Ajax, Eurysaces
2	Poplar Tree	Hades, Leuce
3	Requiem	Achilles, Paris, Hector, Patroclus
4	The Face That—	Achilles, Paris, Hector, Helen
5	The gods know revenge	Oenone, Paris
6	Twice-Born	Semele, Zeus, Dionysus
7	Ugly Beauty And A Restless Love	Demeter, Zeus, Persephone
8	When the Myth is Over	Eurydice, Maenads, Orpheus, Dionysus
9	Who Weeps?	wild pig, Cinyras, Aphrodite, Adonis, Myrrha

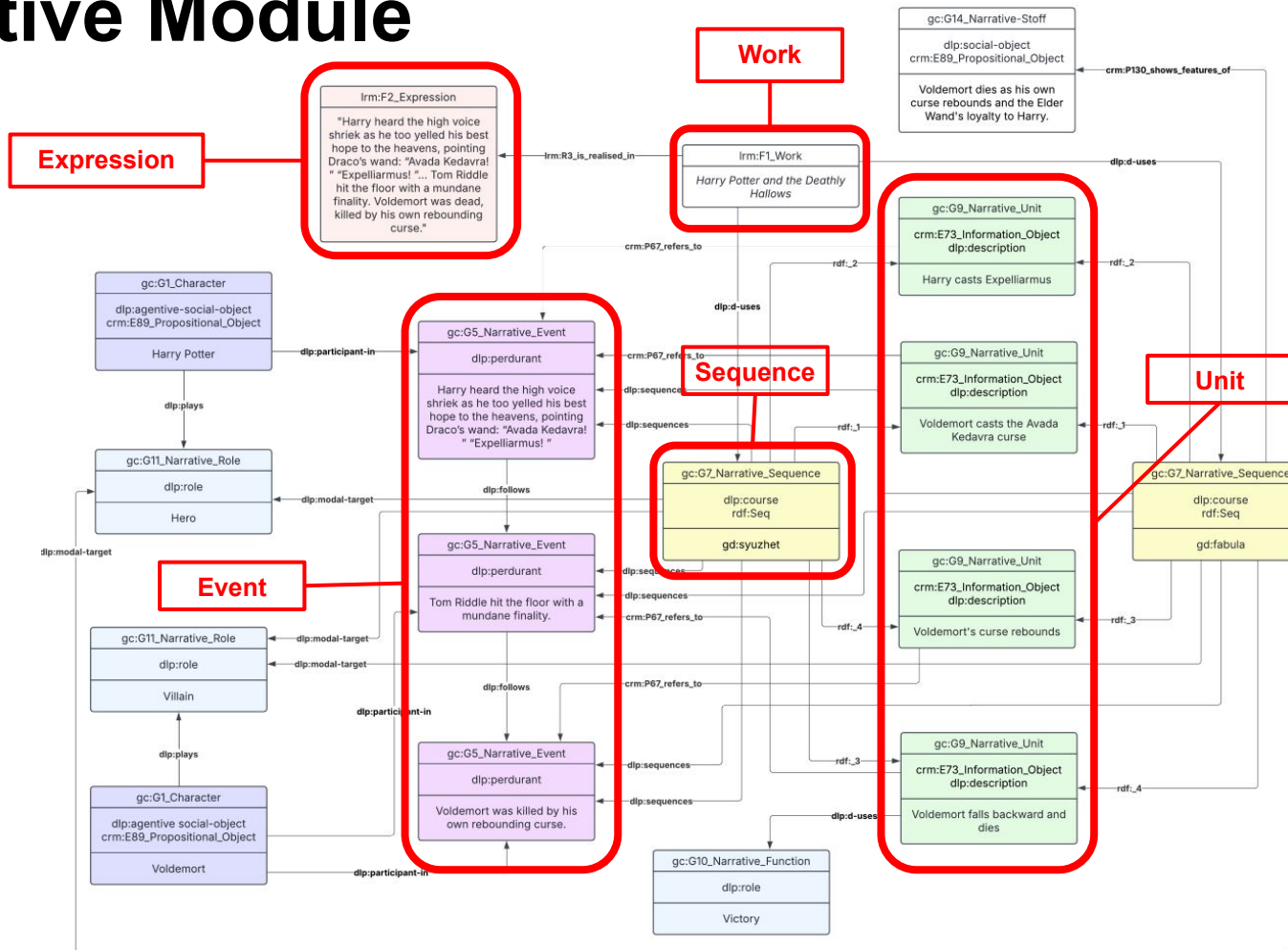
Relationships between characters

	Character 1	Character 2	Relationship	Relationship Role
0	Orpheus	Dionysus	Orpheus enemy of Dionysus	antagonistic relationship
1	Dionysus	Orpheus	Orpheus enemy of Dionysus	antagonistic relationship
2	Cinyras	Adonis	Adonis son of Cinyras	familial relationship
3	Adonis	Cinyras	Adonis son of Cinyras	familial relationship
4	Myrrha	Adonis	Adonis son of Myrrha	familial relationship
...
79	Maenads	Dionysus	Maenads followers of Dionysus	social relationship
80	Achilles	Patroclus	Patroclus closest companion of Achilles	social relationship
81	Patroclus	Achilles	Patroclus closest companion of Achilles	social relationship
82	Patroclus	Achilles	Patroclus companion of Achilles	social relationship
83	Achilles	Patroclus	Patroclus companion of Achilles	social relationship

Relationships between characters



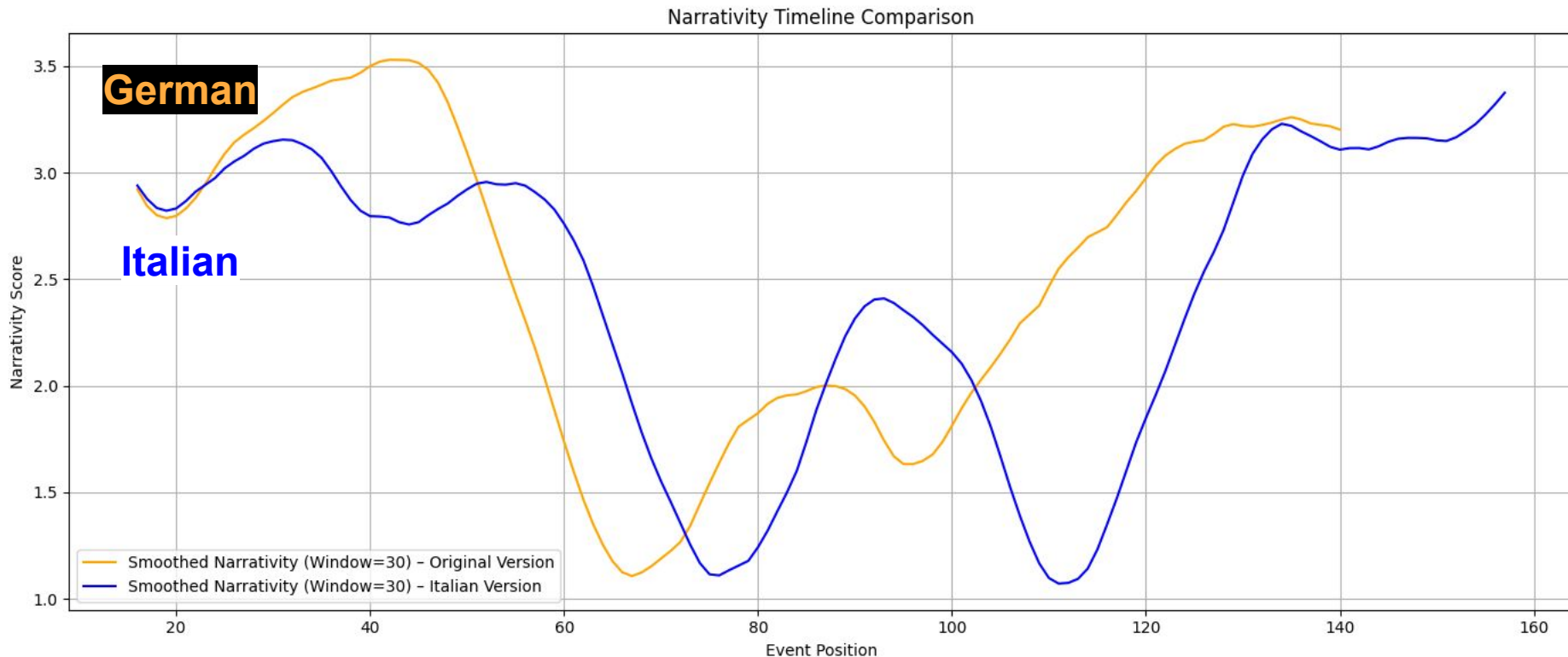
Narrative Module



finality. Voldemort was dead, killed by his own rebounding curse."



A tool to support comparative literary studies



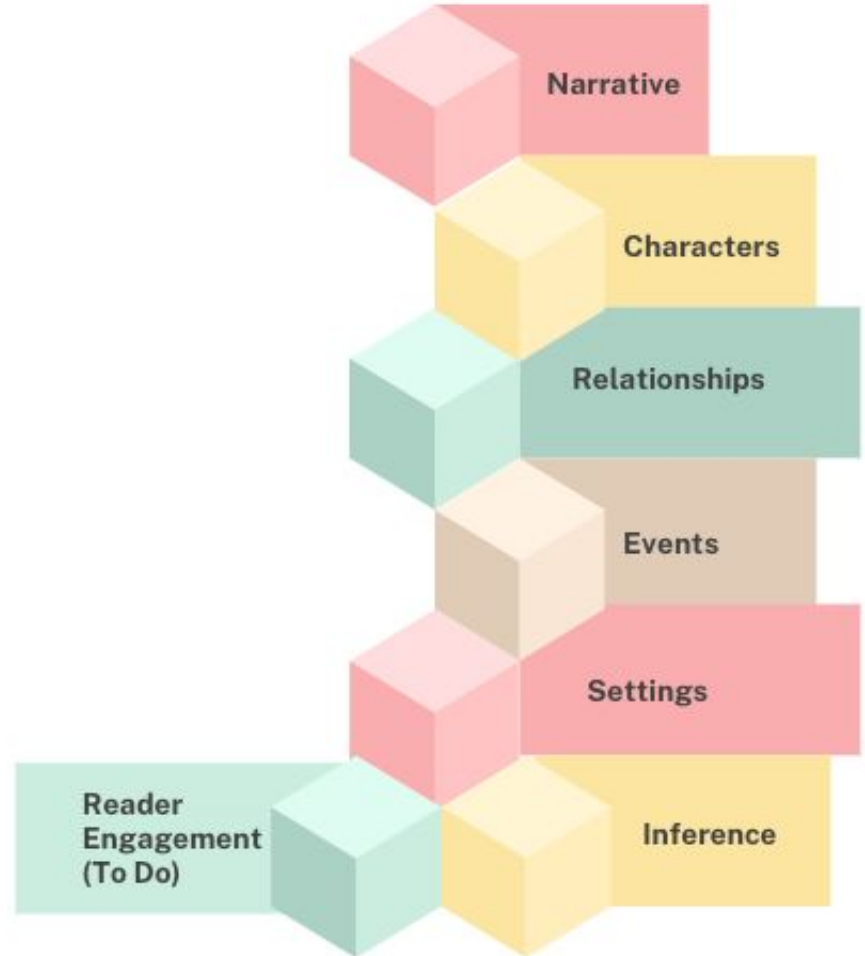
Narrative sequences (syuzhet)

GOLEM Ontology Modules

Description:

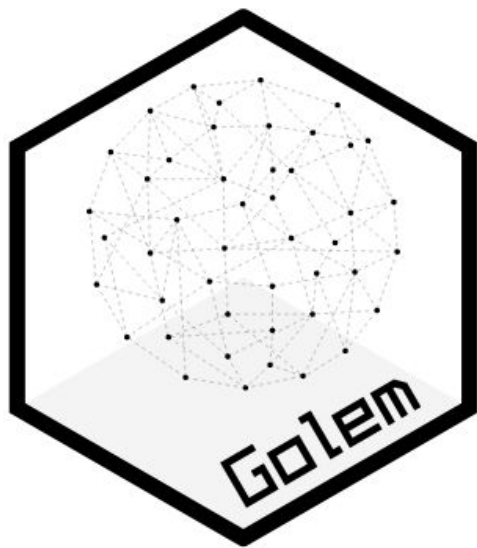
<https://ontology.golemlab.eu/>

<https://github.com/GOLEM-lab/golem-ontology/wiki>



Publications

- Pianzola, F. Cheng, L., Pannach, F., Yang, X., & Scotti, L. (2025). The GOLEM Ontology for Narrative and Fiction. *Humanities*, 14(10), 193; <https://doi.org/10.3390/h14100193>
- Yang, X., & Pianzola, F. (2025). Fans Reconstruct Heroes: Modeling Fictional Characters in Participatory Culture. *Semantic Web – Interoperability, Usability, Applicability*.
<https://www.semantic-web-journal.net/content/fans-reconstruct-heroes-modeling-fictional-characters-participatory-culture>
- Scotti, L., Pianzola, F., & Pannach, F. (2025). Grounding the development of an ontology for narrative and fiction. *Semantic Web – Interoperability, Usability, Applicability*.
<https://www.semantic-web-journal.net/content/grounding-development-ontology-narrative-and-fiction>
- Pannach, F., Cheng, L., & Pianzola, F. (2024). The GOLEM-Knowledge Graph and Search Interface: Perspectives into Narrative and Fiction. *CHR 2024: Computational Humanities Research Conference, December 4–6, 2024, Aarhus, Denmark*. CEUR Workshop Proceedings 3834:462-471.
<https://ceur-ws.org/Vol-3834/paper80.pdf>
- Pannach, F., Yang, X., Visser Solissa, N., Yu, Z., van Cranenburgh, A., van der Ree, M., & Pianzola, F. (2024). The GOLEM Triple Store: A Graph-Based Representation of Narrative and Fiction. *Semantic Methods for Events and Stories (SEMMES) Workshop*.
https://anr-kflow.github.io/semmes/papers2024/SEMMES_2024_paper_3.pdf



Thanks for your attention!

golemlab.eu

github.com/GOLEM-lab



university of
 groningen

bit.ly/golem25

