

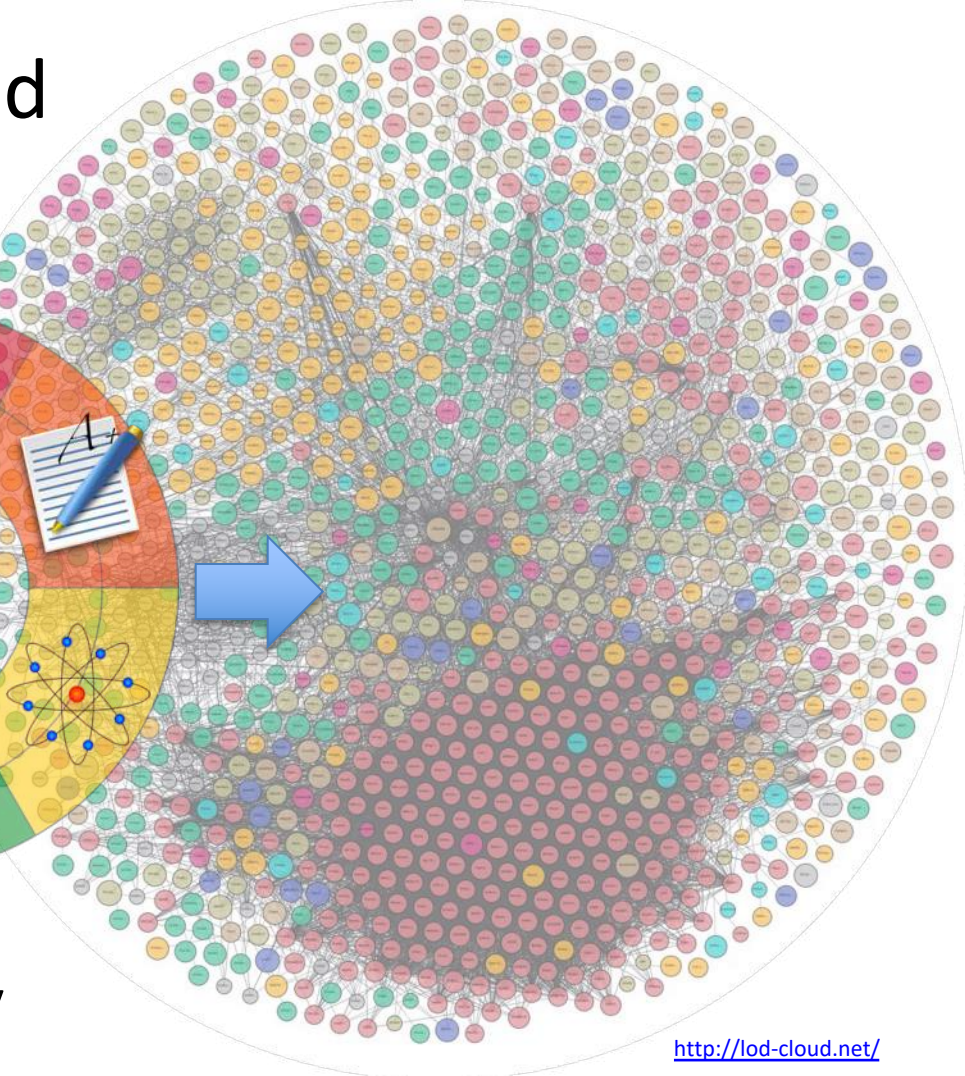
Groningen workshop “Ontologies for narrative and fiction” 3 July 2023

# **How can fiction change the world?** Towards an ontology of literary characters and their interactions

Janna Hastings

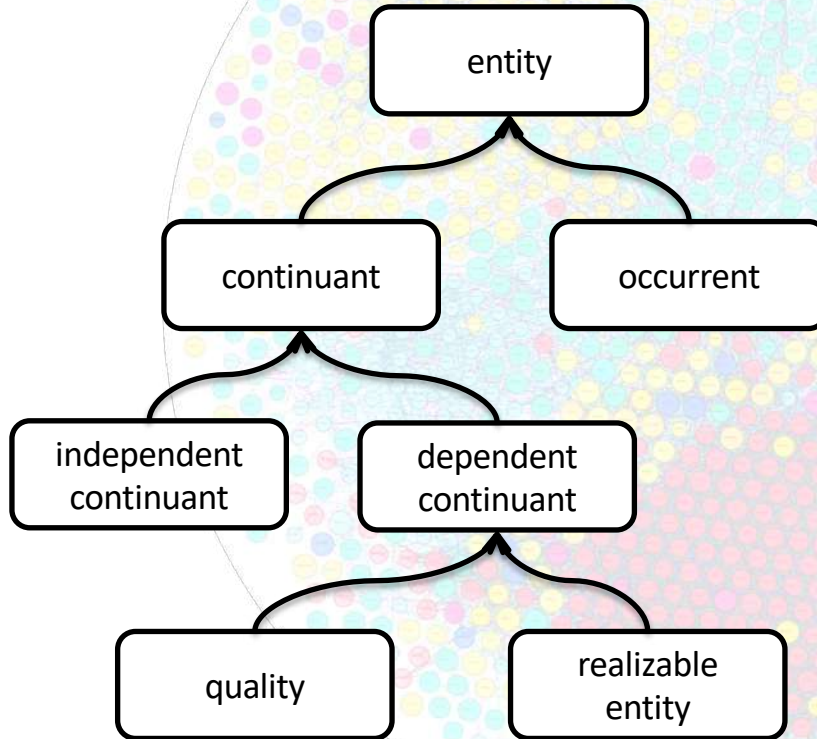
School of Medicine, University of St. Gallen  
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University of Zurich

# Background



Applied Ontology

# Basic Formal Ontology and derivative ontologies

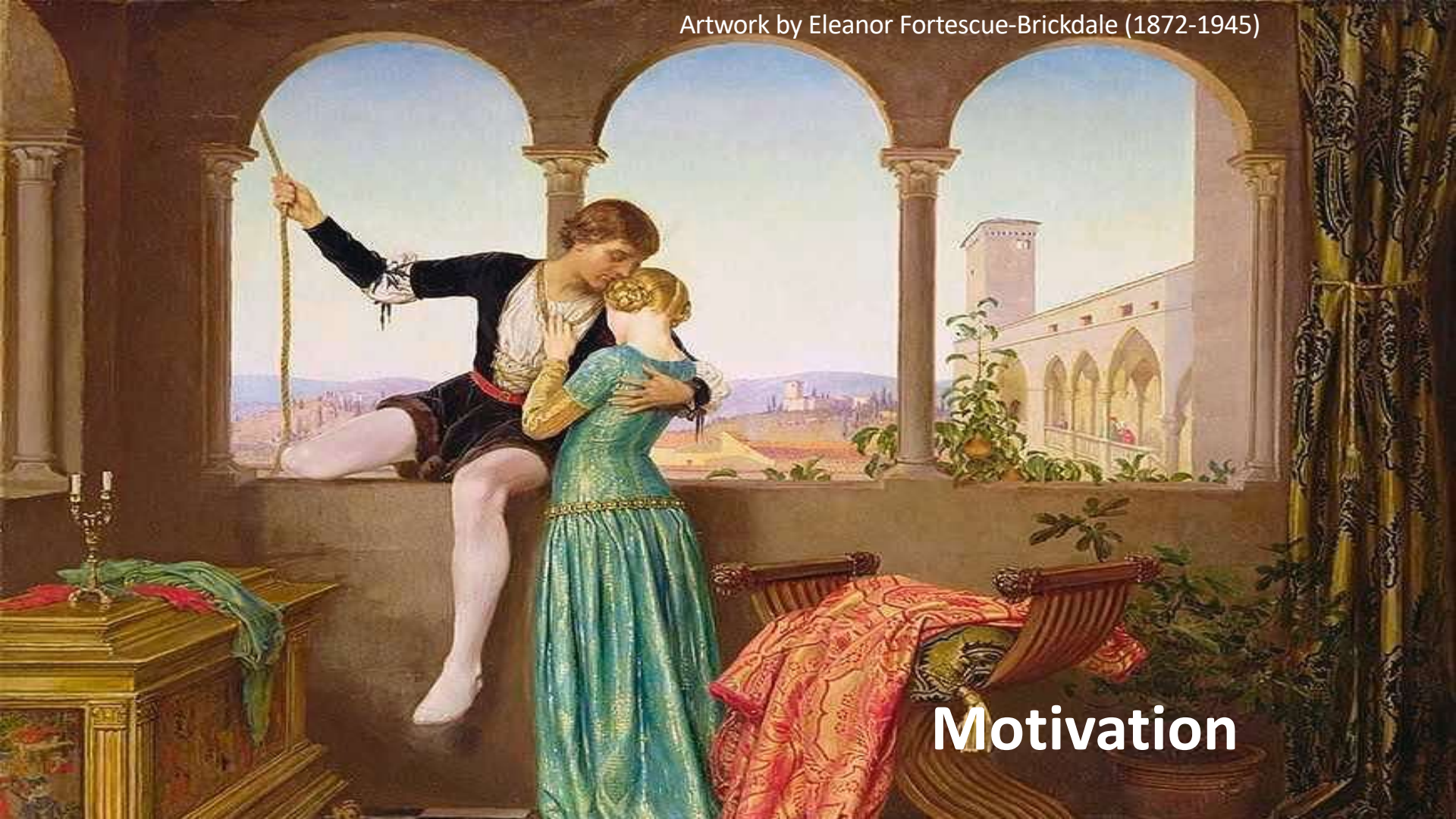


Standardised  
Shared  
Pragmatic  
Perspectivalist  
Descriptive  
Parsimonious  
Realist  
Computational





Artwork by Eleanor Fortescue-Brickdale (1872-1945)



**Motivation**

# The digital humanities

Increasingly large collections of *digital content*  
Difficult to search, difficult to retrieve



Catalogue of illuminated manuscripts



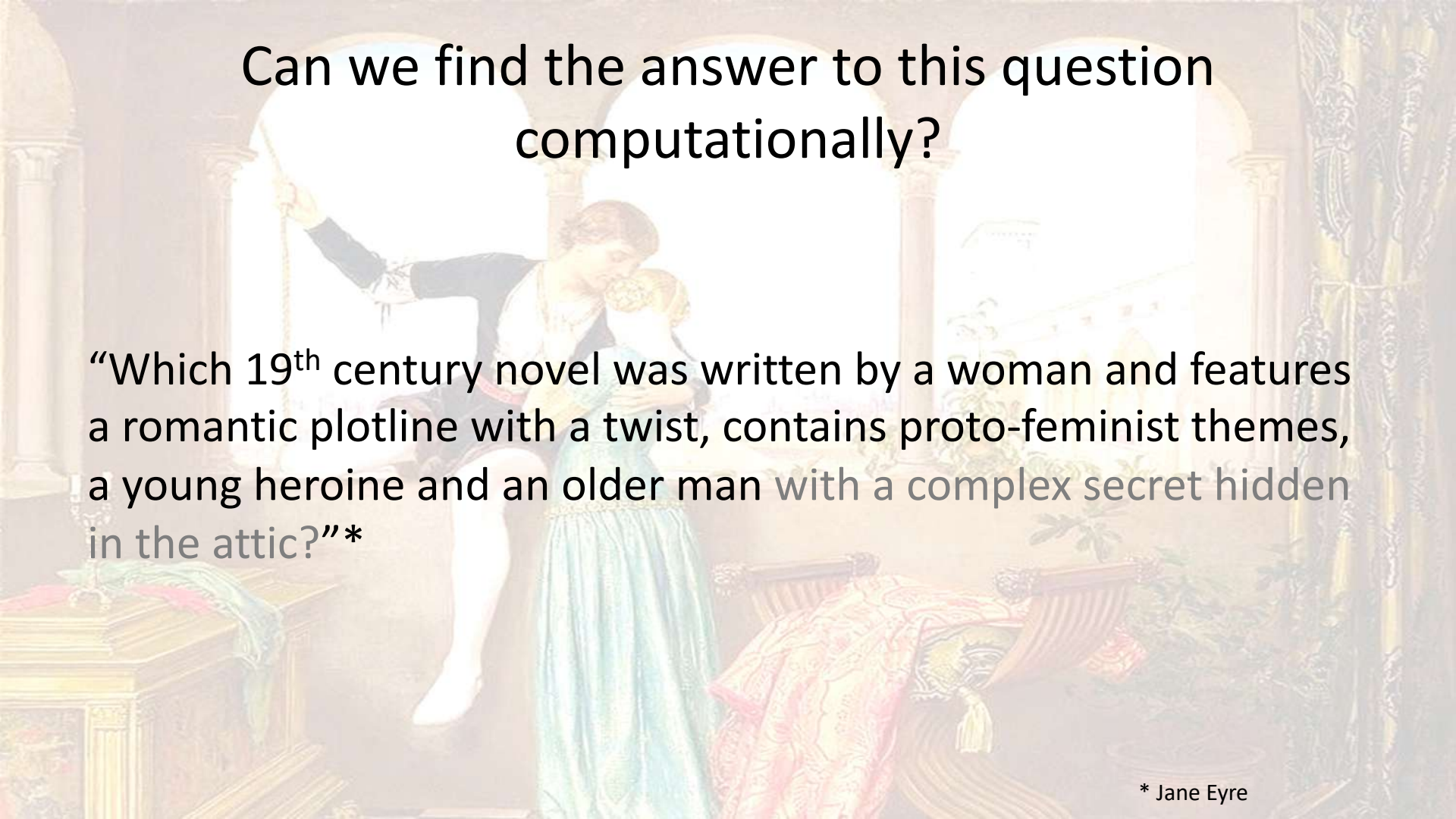
Treasures in Full



Digitised manuscripts

Complex requirements for *knowledge representation*



A painting of a woman in a blue dress holding a child, standing in a grand room with arches and columns. The scene is set in a large, ornate interior with classical architectural elements like arches and columns. The woman is holding a child, and the overall atmosphere is one of a grand, historical setting.

Can we find the answer to this question computationally?

“Which 19<sup>th</sup> century novel was written by a woman and features a romantic plotline with a twist, contains proto-feminist themes, a young heroine and an older man with a complex secret hidden in the attic?”\*

\* Jane Eyre

Which 19<sup>th</sup> century novel was written by a woman and features a romantic plotline with a twist, contains proto-feminist themes, a young heroine and an older man?



Which 19th century novel was written by a woman and features a romantic plotline

[All](#) [Images](#) [News](#) [Videos](#) [Shopping](#) [More](#) [Settings](#) [Tools](#)

About 127'000 results (0.99 seconds)


[en.wikipedia.org](#) › [wiki](#) › [Gothic\\_fiction](#) ▾

## [Gothic fiction - Wikipedia](#)

**Gothic fiction**, which is largely known by the subgenre of Gothic horror, is a genre or mode of **literature** and film that combines **fiction** and horror, death, and at times **romance**. Its origin is attributed to English **author** Horace Walpole, with his 1764 **novel** ... The genre had much success in the **19th century**, as witnessed in prose by ...

Which 19<sup>th</sup> century novel was written by a woman and features a romantic plotline with a twist, contains proto-feminist themes, a young heroine and an older man **with a complex secret hidden in the attic?**



Which 19th century novel was written by a woman and features a romantic plotline 



All



Images



Videos



News



Shopping



More

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About 58'700 results (0.74 seconds)

## Jane Eyre

Jane Eyre is the quintessential Victorian **novel**.

[www.goodreads.com › book › show › 10210.Jane\\_Eyre](https://www.goodreads.com/book/show/10210.Jane_Eyre)

[Jane Eyre by Charlotte Brontë - Goodreads](https://www.goodreads.com/book/show/10210.Jane_Eyre)

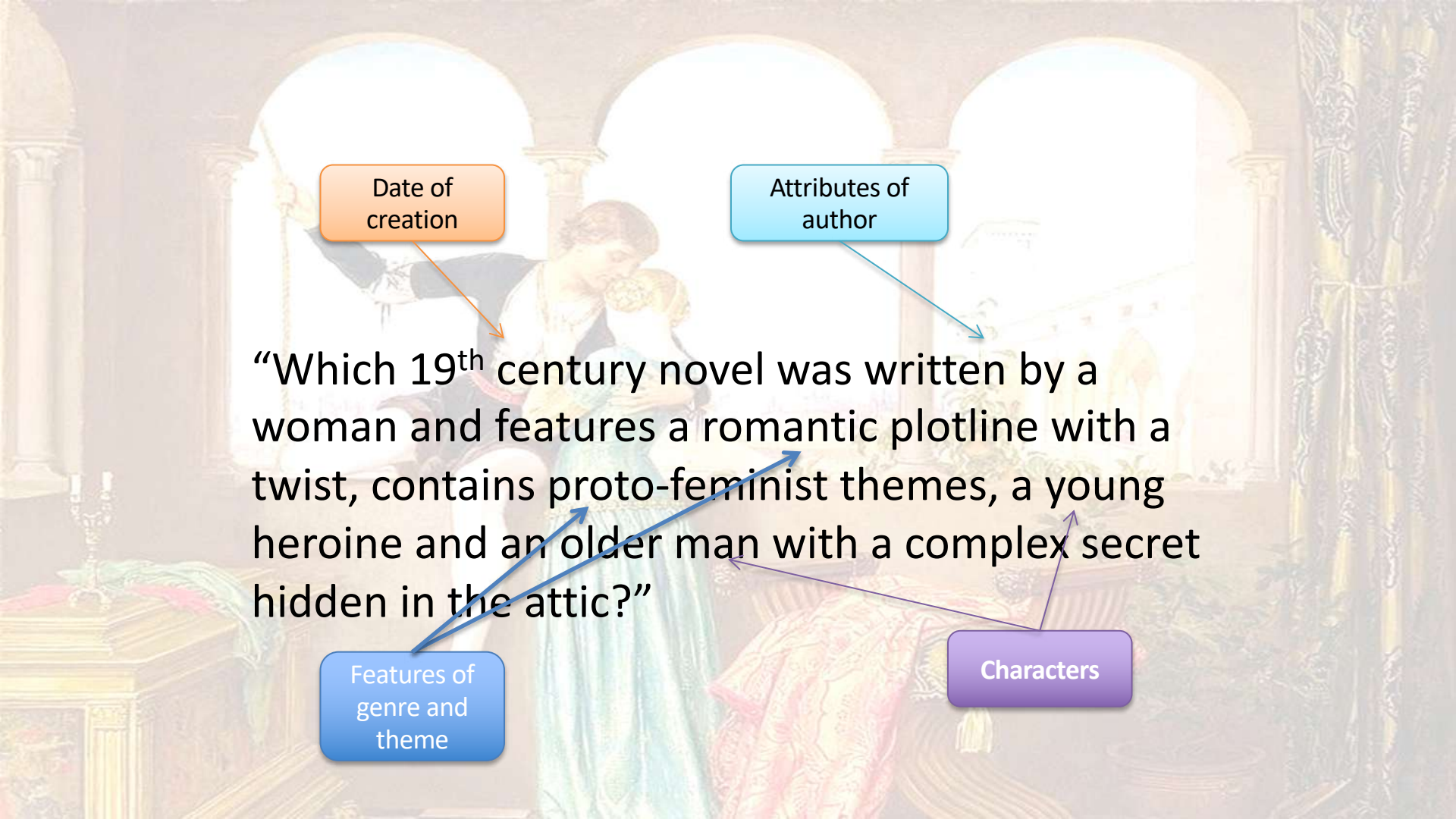


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Feedback





Date of creation

Attributes of author

“Which 19<sup>th</sup> century novel was written by a woman and features a romantic plotline with a twist, contains proto-feminist themes, a young heroine and an older man with a complex secret hidden in the attic?”

Features of genre and theme

Characters

# Elements of an ontology of literature

A romantic-style painting of a man and a woman in a grand room. The man is in a dark suit, and the woman is in a light blue dress. They are standing in a room with large arched windows, ornate columns, and a red patterned sofa. The scene is brightly lit, suggesting a sunny day outside.

- Authors, their historical lives
- The date of the publication of the work
- The publisher, location
- Genre of the work of literature
- Themes dealt with by the work
- Characters
- Settings
- Represented events and occurrences (plot)

# Unproblematic for an ontology based on BFO

- **Authors, their historical lives**
- **The date of the publication of the work**
- **The publisher, location**
- **Genre of the work of literature**
- **Themes dealt with by the work**
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# Problematic for an ontology based on BFO

- **Authors, their historical lives**
- **The date of the publication of the work**
- **The publisher, location**
- **Genre of the work of literature**
- **Themes dealt with by the work**
- **Characters**
- **Settings**
- **Represented events and occurrences (plot)**

# Problems with a naïve representation in a parallel hierarchy

Entity

Continuant

Fictional Continuant

Fictional Independent Continuant

*instance = Juliet*

Fictional Dependent Continuant

*instance = Juliet's age*

Occurrent

Fictional Occurrent

*instance = Juliet's life*

**Impractical**





**Works of fiction**



# Roman Ingarden: The Literary Work of Art

Roman Ingarden (1893-1970) was a realist phenomenologist, a student of Edmund Husserl.

His most well known work, *The Literary Work of Art*, was first published in 1931, in German. In it he argues that:

- Works of literature are not ideal objects (e.g. the number five, triangle) as they are not timeless and they can change.
- Not identical with its printed medium (or an audio version), which he calls its actualization, since there are many different variants of printing (/translation) yet a work is an individual
- Not identical with the psychological intentions or elements of consciousness of the author of the work
- Not identical with the psychological experiences or elements of consciousness of the reader of the work (which he calls its concretisations) as then every new reading would be a new work

# Roman Ingarden: The Literary Work of Art

Four strata of content of a literary work:

1. Word sounds and phonetic formations
2. Meaning units of various orders
3. Aspects and aspect continua and series
4. Represented objectivities and their vicissitudes – two sided: represented and representing.

The primary stratum is the stratum of meaning units, which provides the structural framework for the whole work.

The sentences are quasi-judgmental assertive propositions of various types distinguished from pure affirmative propositions, capable of evoking the illusion of reality.

# Roman Ingarden: The Literary Work of Art

Objects represented in a literary work are **derived purely intentional objects** projected by units of meaning.

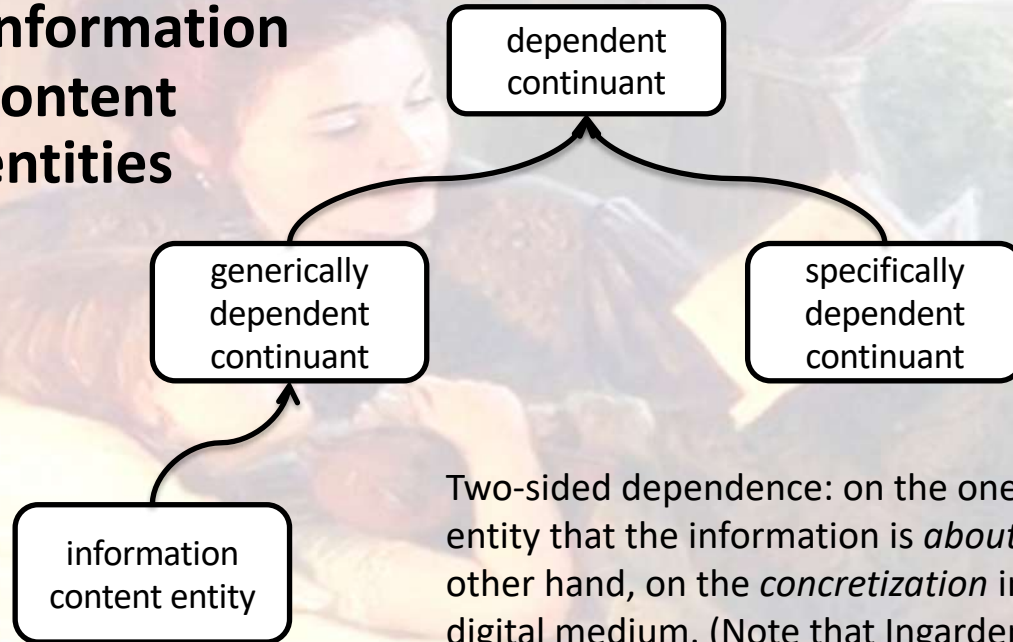
Unlike real-world individuals, intentional objects are schemata and not fully determinate with respect to their features and values (e.g. which specific shade of red?).

The stratum of aspects creates illusory appearances around the intentional objects in the reading. New literary movements arise when represented objects are expressed in new, previously unused, manifolds of aspects.



Is there something close to ‘derived purely intentional objects’ in the BFO world?

**Information  
content  
entities**



Two-sided dependence: on the one hand, on the entity that the information is *about*; on the other hand, on the *concretization* in a printed or digital medium. (Note that Ingarden calls the digital or printed medium the *actualization*.)

# The is\_about relation

*x is\_about* y means:

*x refers to or is cognitively directed towards y. Domain:* representations; **Range:** portions of reality. **Axiom:** if *x is\_about* y then y exists (veridicality).

[Aboutness: Towards Foundations for the Information Artifact Ontology](#)

[Werner Ceusters](#) & [Barry Smith](#)

In *Proceedings of the Sixth International Conference on Biomedical Ontology (ICBO)*.

CEUR vol. 1515. pp. 1-5 (2015)

# Aboutness (Ceusters and Smith, 2015)

If someone writes on a piece of paper the sentence *Barack Obama is President of Russia*, then there is an ICE [information content entity] – concretized by this written string and by any copies made thereof – which is generically dependent on the piece of paper and which is about (on the aforementioned lower level) Barack Obama, his being president, and Russia. But this ICE is not about any corresponding configuration, simply because there is no corresponding configuration. It is for this reason that the given sentence, while it is about certain entities in reality, is nonetheless not true of those entities.

[Aboutness: Towards Foundations for the Information Artifact Ontology](#)

[Werner Ceusters](#) & [Barry Smith](#)

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A woman with dark hair is sitting on a sofa, reading a book to a young child who is leaning against her. The room is warm and cozy, with a window in the background showing a house and trees. There is a vase of flowers on the windowsill and a cup of coffee on a table in the foreground.

By analogy we might introduce:

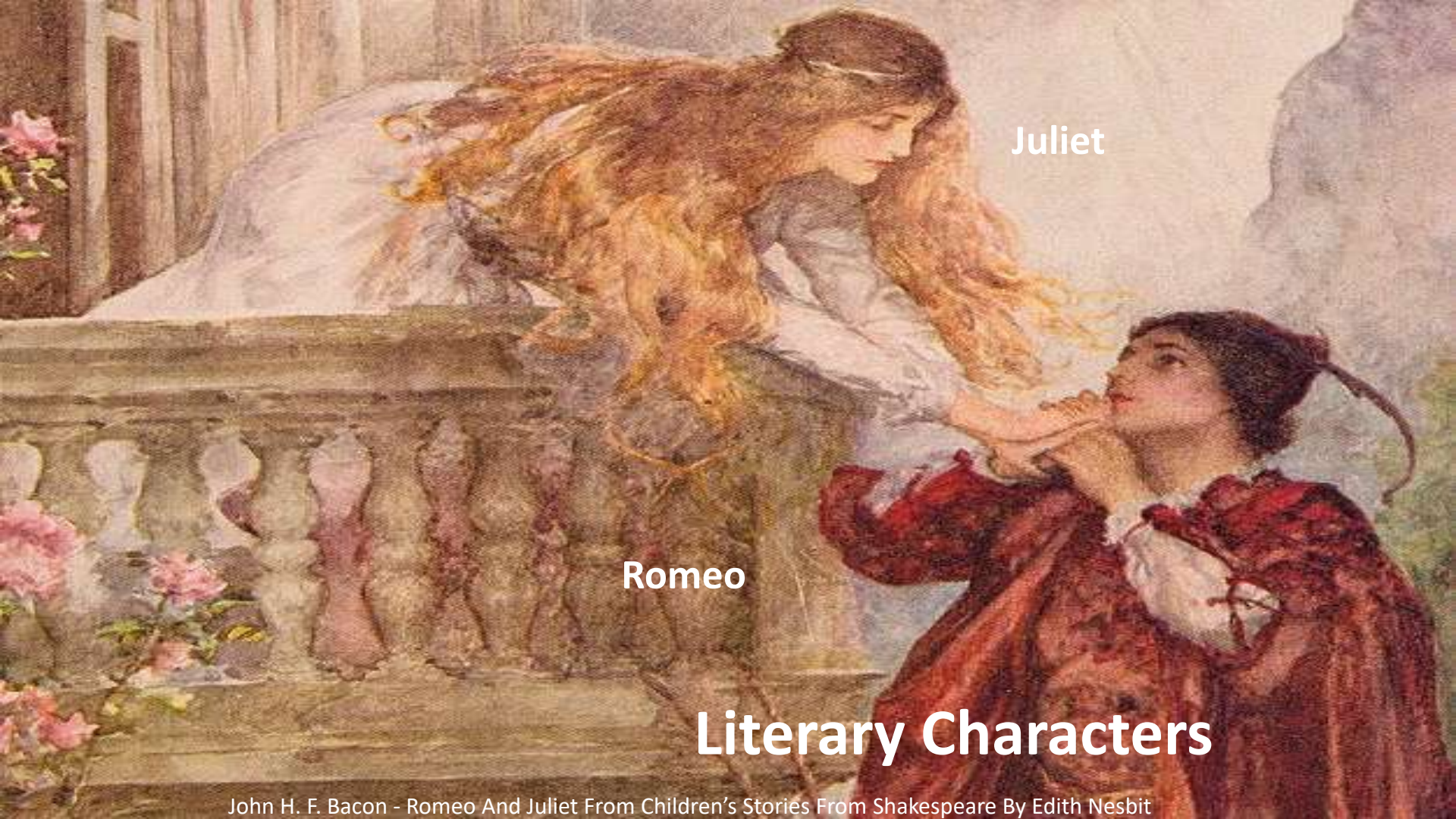
Fictional content entity

Relation:

**as\_if\_about**

A special relation, unique to fiction, for  
*appearing* to represent

For linking fictional entities to the attributes that the fictional entities *appears to have*



Juliet

Romeo

## Literary Characters

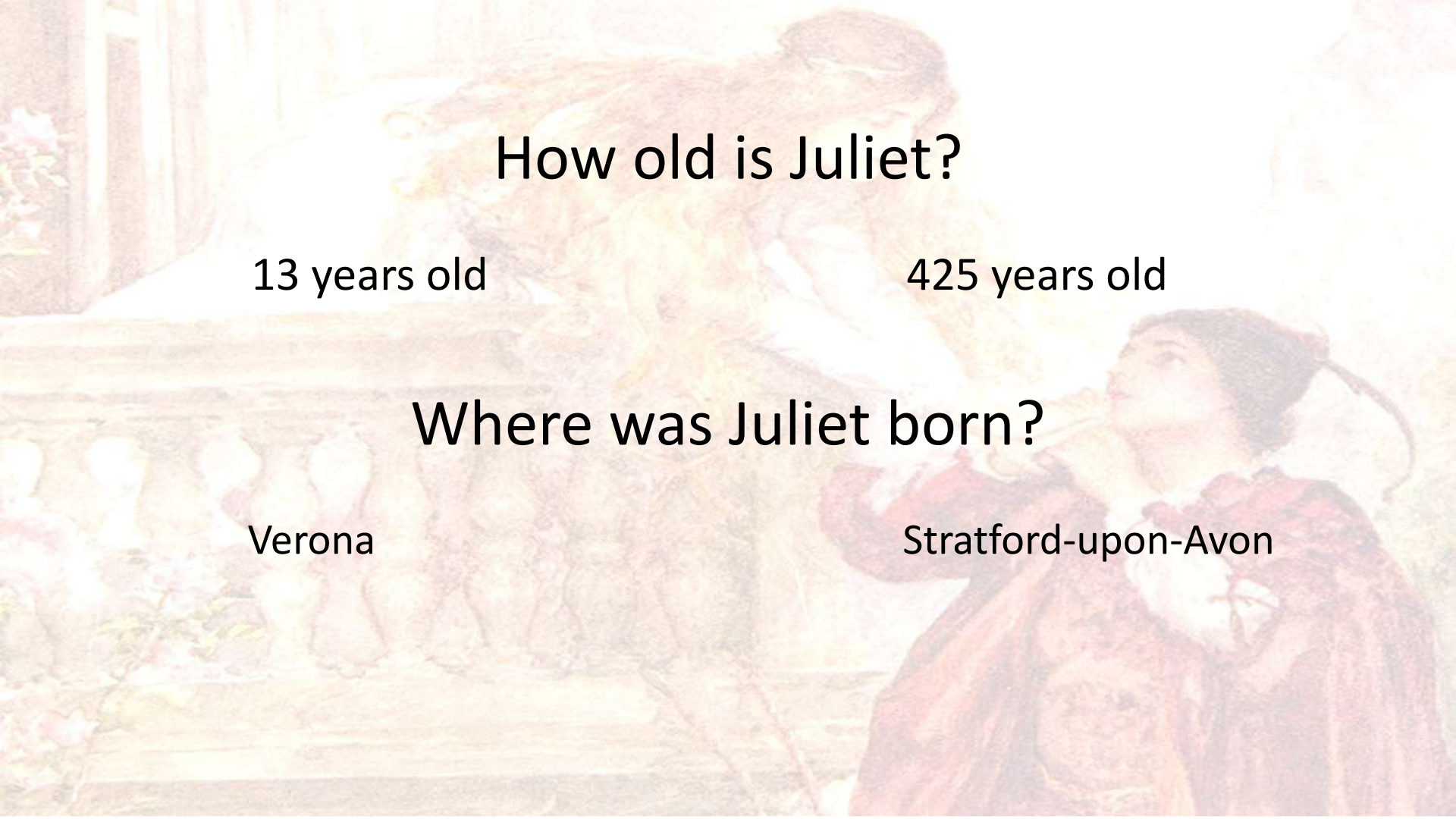




## Ingarden on Literary Characters

“The name ‘Hamlet’ intends an object that never really existed or will exist, but one which if it were to exist would belong among objects to which the existential mode of ‘reality’ applies. This places the object not in factually existing space-time reality, but in the fictional “reality” created by the sense contents of Shakespeare’s drama. “ (*The Literary Work of Art*, p. 70)





How old is Juliet?

13 years old

425 years old

Where was Juliet born?

Verona

Stratford-upon-Avon

# Attributes of fictional characters as anonymous class expressions avoiding any existential implication

**Juliet** Type *'Fictional character'*

**'Romeo and Juliet'** Type *'Work of Fiction'*

**Juliet** part\_of **'Romeo and Juliet'**

**'Romeo and Juliet'** Type (output\_of some (*Writing process*  
and has\_agent value **'William Shakespeare'**))

**Juliet** Type as\_if\_about only X

where X is defined as:

X equivalentTo (*Human* and *Female* and *13-Year-Old* and  
(spatially\_located\_in value **Verona**) and  
(temporally\_located\_in value **16thCenturyAD**))

not-some-not



# Does Juliet exist?

- Fictional realists hold that fictional entities are entities like any other, just with different properties (e.g. Meinong and neo-Meinongians: 'existence' as a property)
- Fictional anti-realists hold that fictional entities are contained only in the minds of authors and readers (e.g. Russell)
- Abstract object theorists claim that fictional entities can be construed as abstract eternal Platonic entities
- They can also be viewed as possible but nonactual objects (with fictional works delineating possible worlds)





## Kendall Walton: *Mimesis as Make Believe: On the Foundations of the Representational Arts*

- A view now widely held among philosophers is that we need not, and generally do not, *believe* in fictional stories or their characters to any degree, but neither do we engage in any act of suspending our disbelief in them.
- What we do is *imagine* them (known as the “pretend theory” of fiction)
- According to this theory, imagination makes available to us the things we might otherwise suppose are dependent on belief, notably emotional engagement

# Some objections to pretend theory

- We seem to be constrained in what kind of imagination (what imaginative content) is allowable given the written work, in ways that children's make believe does not.
- We do not seem to be in control of our experiences in response to the fiction in ways that we are typically in control of our imagination.



# The paradox of fiction as a challenge to the pretend theory of fiction

- We feel emotions in response to fiction – feeling fear when watching horror movies, feeling sadness and pity for Anna Karenina
- Pretend theories are committed to these not being real emotions
- They *feel* real
- Possible responses are to claim that real emotions do not have to have objects that we know to be real or do not have to be based on beliefs,
- Or that we do believe in the reality of Anna Karenina at least while we are reading



# Alfred Schutz (1899-1959): The phenomenology of the social world

- A theory of our knowledge of other selves (social phenomenology)
- Distinguishes:
  - Social world of contemporaries, with whom it is possible to share an intersubjective experience
    - The world of directly experienced social reality. Spatial and temporal immediacy is essential. Persons are in range of each other's direct experience. Actual simultaneity of two separate streams of consciousness. Mutual perception, orientation and action.
    - Different degrees of directness can characterize different relationships within direct experience. Conversation can be casual or intimate.
    - Transition from direct to indirect experience: recollections of direct experiences, fading into mere contemporary in absence of contact
    - As we approach the outlying world of contemporaries, our experience of others becomes more and more remote and anonymous
  - Social world of predecessors (history)
  - Social world of successors (imagined future)

# Alfred Schutz (1899-1959): The phenomenology of the social world

- Regions of contemporaries:
  - Those whom I once encountered face to face
  - Those encountered by those I am encountering
  - Those whom I will soon meet
  - Those whom I do not know as individuals but as function defined (e.g. post office employee)
  - Those I am acquainted by organization (e.g. members of parliament)
  - Collective entities which are in principle anonymous (e.g. state or nation)
  - Artifacts which bear witness to the subjective meaning-state of some unknown individual
- Along the gradient, individualities are transformed into ideal types (Weber), schemata. Repeatable, anonymous.
  - Concreteness of the ideal type is inversely related to the level of generality of the past experiences out of which it is constructed
  - Less anonymous the closer it is to the world of lived experience



# Tentatively:

Reading fiction harnesses not our *imagination* as it is typically understood, but our facility for *social cognition*

## Evaluating whether stories can promote social cognition: Introducing the Social Processes and Content Entrained by Narrative (SPaCEN) framework

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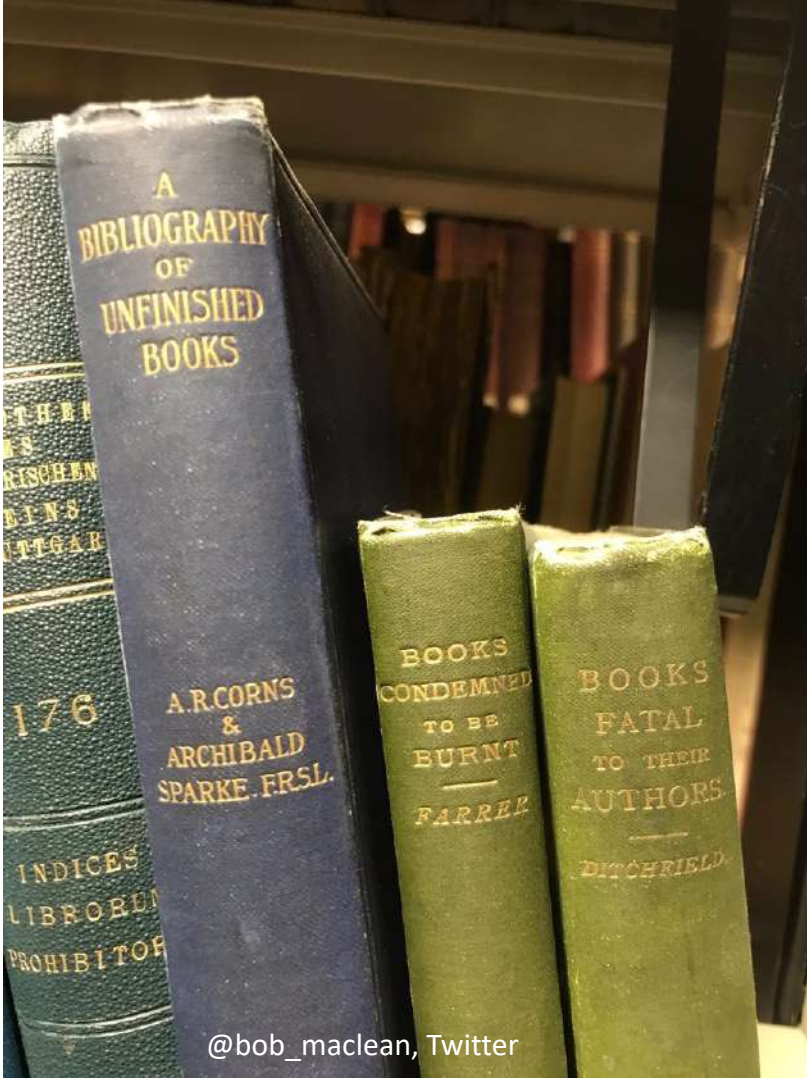
### ABSTRACT

Stories have long been theorized to influence how we perceive our social world and our peers. Empirical research on this topic has begun to grow, with many studies exploring how stories and social cognition relate, across a range of different approaches. In order to structure past work and guide future investigations, this article presents a research framework that formalizes how, when, and why engagement with stories might promote social cognition. This Social Processes and Content Entrained by Narrative (SPaCEN) framework posits that stories could bolster social cognition either through (1) frequent engagement of social-cognitive processes or (2) the presentation of explicit content about social relations and the social world. These two accounts are not mutually exclusive, and both rest on different sets of necessary tenets. An example is provided to illustrate the utility of this framework, evaluating the extant work on whether exposure to stories can improve mentalizing.

### Can stories promote social cognition?

Theorists have long posited that stories might present a powerful influence on our lives, with fictional narratives likely to affect how we think and feel about the real-world (Hakemulder, 2000; Oatley, 1999). The idea dates as far back as the time of Aristotle (350 BCE/1987), who wrote a treatise on drama in which he theorized that narratives can teach us about reality. For Aristotle, narratives were any form of language that both represents the real-world and provides an experience that mimics our actual experiences in the world. Notably, Aristotle was explicit in stating that this could occur regardless of whether the narrative has any basis in true past events (i.e., is fictional or nonfictional). For many subsequent thinkers, stories hold an attractive potential to help us better understand others, encouraging us to empathize and thereby act more morally (Hakemulder, 2000; Nussbaum, 1995). This article presents a research framework for evaluating the empirical evidence that stories might aid social cognition, which refers to the accurate processing and application of valid social information. This framework is based on two possible accounts of how such facilitation might occur: (1) stories may evoke *social processes* that are then improved through practice or (2) stories may present *social content* that is then learned and applied. Reflecting these two accounts, this framework is henceforth referred to as the Social Processes and Content Entrained by Narrative (SPaCEN) framework. The Social Process account is based on three central tenets. If social processes are improved via narrative engagement, then the following must be true: (1) stories must represent the social world, (2) social processes must be engaged by stories, and (3) these social processes must be improved by frequent engagement. Similarly, if social content is learned from narratives, then (1) stories must contain accurate social content, (2) this content must be learned during story comprehension, and (3) this content must be applied in the real-world (see Figure 1). This framework formalizes and specifies the theoretical arguments





Thank you!

Questions?