

The 'OntoSophia' ontology

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Abstract

The 'OntoSophia' ontology is written in OWL 2 DL. Its scope is to enable the formal characterisation of propositions, arguments, and quoted elements within the argumentative discussion in philosophical texts. Its structure follows the conceptual division between abstract arguments, abstract propositions and their expressions in texts, aiming to facilitate the representation of this division. This division enables to capture the cases where a restatement of an argument or proposition or a reference to the same argument or proposition occurs.

1. Introduction

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The scope of the 'OntoSophia' ontology is to enable the formal characterisation of propositions, arguments and quoted elements within the argumentative discussion in philosophical texts. Its structure follows the conceptual division between abstract arguments, abstract propositions and their expressions in texts, aiming to facilitate the representation of this division. This model enables to capture the cases where a restatement of an argument or proposition or a reference to the same argument or proposition occurs.

1.1. Namespace declarations

Table 1: Namespaces used in the document	
[Ontology NS Prefix]	<http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275>
core	<http://www.w3.org/2004/02/skos/core>
0-1	<http://xmllns.com/foaf/0.1>
4	<http://www.semanticweb.org/ioanna/ontologies/2018/4>
owl	<http://www.w3.org/2002/07/owl>
rdf	<http://www.w3.org/1999/02/22-rdf-syntax-ns>
xsd	<http://www.w3.org/2001/XMLSchema>
rdfs	<http://www.w3.org/2000/01/rdf-schema>
cito	<http://purl.org/spar/cito>
dc	<http://purl.org/dc/elements/1.1>
deo	<http://purl.org/spar/deo>

2. The 'OntoSophia' ontology: Description

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The graph illustrates the 'OntoSophia' ontology.



The 'OntoSophia' ontology graph designed in Graffoo.

3. Cross reference for The 'OntoSophia' ontology classes, properties and dataproperties

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This section provides details for each class and property defined by the 'OntoSophia' ontology.

3.1. Classes

Agent	Argument	concept	concept scheme	Definition	Discourse Element	Expression of a proposition	Expression of an argument
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[Agent](#)^c

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IRI: <http://xmllns.com/foaf/0.1/Agent>

An agent (eg. person, group, software or physical artifact), reused from FOAF:http://xmllns.com/foaf/spec/#term_Agent.

[Argument](#)^c

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IRI: <http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275#Argument>

It represents the description of an abstract statement of the reasons for and against a proposition, which has different expressions in texts.

is in domain of
[contradicts](#)^{op}, [supports](#)^{op}

is in range of
[contradicts](#)^{op}, [expresses](#)^{op}, [reusedAs](#)^{op}, [supports](#)^{op}

is disjoint with
[Proposition](#)^c

[concept](#)^c

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IRI: <http://www.w3.org/2004/02/skos/core#Concept>

Concept reused from <https://www.w3.org/2009/08/skos-reference/skos.html>.

is in domain of
[in scheme](#)^{op}

is in range of
subject

[concept scheme](#)^c

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IRI: <http://www.w3.org/2004/02/skos/core#ConceptScheme>

Reused class from the Simple Knowledge Organization System (SKOS):<https://www.w3.org/2009/08/skos-reference/skos.html>.

is in range of
[in scheme](#)^{op}

[Definition](#)^c

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IRI: <http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275#Definition>

It represents what a philosophical concept means as defined by different authors and texts.

has super-classes
[Proposition](#)^c

[Discourse Element](#)^c

[back to ToC or Class ToC](#)

IRI: <http://purl.org/spar/deo/DiscourseElement>

Reused class from the Discourse Elements Ontology (DEO) to represent the document part of the resource which carries out a rhetorical function. <https://sparontologies.github.io/deo/current/deo.html#d4e325>

is in domain of
[includes](#)^{op}

[Expression of a proposition](#)^c

[back to ToC or Class ToC](#)

IRI: <http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275#ExpressionOfAProposition>

It refers to an expression, i.e formulation of an abstract proposition in a text.

has super-classes

is in domain of
[contradicts](#)^{op}, [expresses](#)^{op}, [supports](#)^{op}

is in range of
[contradicts](#)^{op}, [includes](#)^{op}, [supports](#)^{op}

is disjoint with
[Expression of an argument](#)^c

[Expression of an argument](#)^c

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IRI: <http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275#ExpressionOfAnArgument>

It captures the expression, i.e. formulation of an abstract argument.

has super-classes

is in domain of
[contradicts](#)^{op}, [expresses](#)^{op}, [supports](#)^{op}

is in range of
[contradicts](#)^{op}, [includes](#)^{op}, [supports](#)^{op}

is disjoint with
[Expression of a proposition](#)^c

[Proposition](#)^c

[back to ToC or Class ToC](#)

IRI: <http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275#Proposition>

It refers to a statement or opinion, judgment or belief held to be true which is made justified by arguments.

has sub-classes
[Definition](#)^c

is in domain of
[contradicts](#)^{op}, [reusedAs](#)^{op}, [supports](#)^{op}

is in range of
[contradicts](#)^{op}, [expresses](#)^{op}, [supports](#)^{op}

is disjoint with
[Argument](#)^c

3.2. Object Properties

cites	contradicts	expresses	in scheme	includes	reusedAs	supports
-----------------------	-----------------------------	---------------------------	---------------------------	--------------------------	--------------------------	--------------------------

[cites](#)^{op}

[back to ToC or Object Property ToC](#)

IRI: <http://purl.org/spar/cito/cites>

Reused property from CITO (<http://purl.org/spar/cito/cites>):The citing entity cites the cited entity, either directly and explicitly (as in the reference list of a journal article), indirectly (e.g. by citing a more recent paper by the same group on the same topic), or implicitly (e.g. as in artistic quotations or parodies, or in cases of plagiarism). <https://sparontologies.github.io/cito/current/cito.html#d4e118>

[contradicts](#)^{op}

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IRI: <http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275#contradicts>

has domain
[Argument](#)^c
[Expression of a proposition](#)^c
[Expression of an argument](#)^c
[Proposition](#)^c

has range
[Argument](#)^c
[Expression of a proposition](#)^c
[Expression of an argument](#)^c
[Proposition](#)^c

[expresses](#)^{op}

[back to ToC or Object Property ToC](#)

IRI: <http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275#expresses>

has characteristics: functional

has domain
[Expression of a proposition](#)^c
[Expression of an argument](#)^c

has range
[Argument](#)^c
[Proposition](#)^c

[in scheme](#)^{op}

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IRI: <http://www.w3.org/2004/02/skos/core#inScheme>

Reused property from the Simple Knowledge Organization System (SKOS):<https://www.w3.org/2009/08/skos-reference/skos.html>.

has domain
[concept](#)^c

has range
[concept scheme](#)^c

[includes](#)^{op}

[back to ToC or Object Property ToC](#)

IRI: <http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275#includes>

has domain
[Discourse Element](#)^c

has range
[Expression of a proposition](#)^c
[Expression of an argument](#)^c

[reusedAs](#)^{op}

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IRI: <http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275#reusedAs>

The property reusedAs designates that a Proposition, once justified in the text, is subsequently used as an Argument in support/contrast of another proposition within the discussion.

has domain
[Proposition](#)^c

has range
[Argument](#)^c

[supports](#)^{op}

[back to ToC or Object Property ToC](#)

IRI: <http://www.semanticweb.org/ioanna/ontologies/2018/4/untitled-ontology-275#supports>

has domain
[Argument](#)^c
[Expression of a proposition](#)^c
[Expression of an argument](#)^c
[Proposition](#)^c

has range
[Argument](#)^c
[Expression of a proposition](#)^c
[Expression of an argument](#)^c
[Proposition](#)^c

3.3. Annotation Properties

creator	description	subject	title
-------------------------	-----------------------------	-------------------------	-----------------------

[creator](#)^{ap}

[back to ToC or Annotation Property ToC](#)

IRI: <http://purl.org/dc/elements/1.1/creator>

[description](#)^{ap}

[back to ToC or Annotation Property ToC](#)

IRI: <http://purl.org/dc/elements/1.1/description>

[subject](#)^{ap}

[back to ToC or Annotation Property ToC](#)

IRI: <http://purl.org/dc/elements/1.1/subject>

has range
[concept](#)^c

[title](#)^{ap}

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IRI: <http://purl.org/dc/elements/1.1/title>

Legend

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- ^c: Classes
- ^{op}: Object Properties
- ^{dp}: Data Properties
- ^{iri}: Named Individuals

4. Acknowledgements

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