



# OntOlogy Pitfall Scanner!

**OOPS! (OntOlogy Pitfall Scanner!)** helps you to detect some of the most common pitfalls appearing when developing ontologies.

To try it, enter a URI or paste an OWL document into the text field above. A list of pitfalls and the elements of your ontology where they appear will be displayed.

Scanner by URI:

Scanner by URI

Example: [http://oops.linkeddata.es/example/swc\\_2009-05-09.rdf](http://oops.linkeddata.es/example/swc_2009-05-09.rdf)

Scanner by direct input:

```
<!-- http://childhealthservicemodels.eu/asthma#creator -->

<owl:AnnotationProperty
rdf:about="http://childhealthservicemodels.eu/asthma#creator"/>
```

Scanner by RDF

☐ Uncheck this checkbox if you don't want us to keep a copy of your ontology.

[Go to advanced evaluation](#)

## Evaluation results

It is obvious that not all the pitfalls are equally important; their impact in the ontology will depend on multiple factors. For this reason, each pitfall has an importance level attached indicating how important it is. We have identified three levels:

- **Critical** 🛑 : It is crucial to correct the pitfall. Otherwise, it could affect the ontology consistency, reasoning, applicability, etc.
- **Important** ⚠️ : Though not critical for ontology function, it is important to correct this type of pitfall.
- **Minor** 🟡 : It is not really a problem, but by correcting it we will make the ontology nicer.

[\[Expand All\]](#) | [\[Collapse All\]](#)

### Results for P04: Creating unconnected ontology elements.

6 cases | Minor 🟡

Ontology elements (classes, object properties and datatype properties) are created isolated, with no relation to the rest of the ontology.

- This pitfall appears in the following elements:
  - > [http://childhealthservicemodels.eu/asthma#MOCHA-EPI\\_0000036](http://childhealthservicemodels.eu/asthma#MOCHA-EPI_0000036)
  - > [http://childhealthservicemodels.eu/asthma#MOCHA-EPI\\_0000035](http://childhealthservicemodels.eu/asthma#MOCHA-EPI_0000035)
  - > [http://childhealthservicemodels.eu/asthma#MOCHA-EPI\\_0000034](http://childhealthservicemodels.eu/asthma#MOCHA-EPI_0000034)
  - > [http://childhealthservicemodels.eu/asthma#MOCHA-EPI\\_0000033](http://childhealthservicemodels.eu/asthma#MOCHA-EPI_0000033)

### Want to help?

- [Suggest new pitfalls](#)
- [Provide feedback](#)

### Documentation:

- [Pitfall catalogue](#)
- [User guide](#)
- [Technical report](#)

### Related papers:

- [IJSWIS 2014](#)
- [EKAW 2012](#)
- [ESWC 2012 Demo](#)

- > [http://childhealthservicemodels.eu/asthma#MOCHA-ADHD\\_000061](http://childhealthservicemodels.eu/asthma#MOCHA-ADHD_000061)
- > [http://childhealthservicemodels.eu/asthma#MOCHA-EPI\\_0000037](http://childhealthservicemodels.eu/asthma#MOCHA-EPI_0000037)

**Results for P10: Missing disjointness.****ontology\* | Important** 🟡

The ontology lacks disjoint axioms between classes or between properties that should be defined as disjoint. This pitfall is related with the guidelines provided in [6], [2] and [7].

\*This pitfall applies to the ontology in general instead of specific elements.

**Results for P30: Equivalent classes not explicitly declared.****2 cases | Important** 🟡

This pitfall consists in missing the definition of equivalent classes (owl:equivalentClass) in case of duplicated concepts. When an ontology reuses terms from other ontologies, classes that have the same meaning should be defined as equivalent in order to benefit the interoperability between both ontologies.

- The following classes might be equivalent:

- > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000081](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000081), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000091](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000091)
- > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000099](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000099), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000098](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000098)

**Results for P32: Several classes with the same label.****16 cases | Minor** 🟡

Two or more classes have the same content for natural language annotations for naming, for example the rdfs:label annotation. This pitfall might involve lack of accuracy when defining terms.

- The following classes contains the same label, maybe they should be replaced by one class with several labels or might be equivalent classes:

- > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000140](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000140), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000165](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000165)
- > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000084](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000084), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000150](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000150)
- > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000089](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000089), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000083](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000083)
- > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000000](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000000), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000072](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000072)
- > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000089](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000089), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000077](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000077), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000083](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000083)
- > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000135](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000135), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000087](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000087)
- > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000089](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000089), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000089](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000089)

- [Ontoqual 2010](#)
- [CAEPIA 2009](#)

Web services:

- [REST Web Service](#)

Developed by:



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Asthma\_000077, [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000076](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000076),  
[http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000083](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000083)  
 > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000086](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000086), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000137](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000137)  
 > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000015](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000015), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000014](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000014)  
 > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000279](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000279), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000280](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000280)  
 > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000279](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000279), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000278](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000278), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000280](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000280)  
 > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000307](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000307), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000306](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000306),  
[http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000302](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000302), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000303](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000303),  
[http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000302](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000302)  
 > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000307](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000307), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000306](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000306),  
[http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000302](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000302), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000303](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000303),  
[http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000302](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000302), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000305](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000305),  
[http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000302](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000302), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000303](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000303),  
[http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000302](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000302), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000304](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000304)  
 > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000303](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000303), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000302](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000302)  
 > [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000307](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000307), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000303](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000303), [http://childhealthservicemodels.eu/asthma#MOCHA-Asthma\\_000302](http://childhealthservicemodels.eu/asthma#MOCHA-Asthma_000302)

**Results for P41: No license declared.**

**ontology\* | Important** 🚨

According to the highest importance level of pitfall found in your ontology the conformace bagde suggested is "Important pitfalls" (see below). You can use the following HTML code to insert the badge within your ontology documentation:



```
<p>
<a href="http://oops.linkeddata.es"></a>
</p>
```

#### References:

- [1] Aguado-De Cea, G., Montiel-Ponsoda, E., Poveda-Villalón, M., and Giraldo-Pasmin, O.X. (2015). Lexicalizing Ontologies: The issues behind the labels. In Multimodal communication in the 21st century: Professional and academic challenges. 33rd Conference of the Spanish Association of Applied Linguistics (AESLA), XXXIII AESLA.

- [2] Noy, N. F., McGuinness, D. L., et al. (2001). Ontology development 101: A guide to creating your first ontology.
- [3] Gómez-Pérez, A. (1999). Evaluation of Taxonomic Knowledge in Ontologies and Knowledge Bases. Proceedings of the Banff Knowledge Acquisition for Knowledge-Based Systems Workshop. Alberta, Canada.
- [4] Montiel-Ponsoda, E., Vila Suero, D., Villazón-Terrazas, B., Dunsire, G., Escolano Rodríguez, E., Gómez-Pérez, A. (2011). Style guidelines for naming and labeling ontologies in the multilingual web.
- [5] Vrandečić, D. (2010). Ontology Evaluation. PhD thesis.
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- [7] Rector, A., Drummond, N., Horridge, M., Rogers, J., Knublauch, H., Stevens, R., Wang, H., and Wroe, C. (2004). Owl pizzas: Practical experience of teaching owl-dl: Common errors & common patterns. In Engineering Knowledge in the Age of the Semantic Web, pages 63-81. Springer.
- [8] Hogan, A., Harth, A., Passant, A., Decker, S., and Polleres, A. (2010). Weaving the pedantic web. In Proceedings of the WWW2010 Workshop on Linked Data on the Web, LDOW 2010, Raleigh, USA, April 27, 2010.
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- [10] Bernes-Lee Tim. (2006). "Linked Data - Design issues". <http://www.w3.org/DesignIssues/LinkedData.html>
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- [12] Vatan, B. (2012). Is your linked data vocabulary 5-star?. [http://bvatan.blogspot.fr/2012/02/is-your-linked-data-vocabulary-5-star\\_9588.html](http://bvatan.blogspot.fr/2012/02/is-your-linked-data-vocabulary-5-star_9588.html)

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BibTex:

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  author={Poveda-Villalón, María and Gómez-Pérez, Asunción and Suárez-Figueroa, Mari Carmen},
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  number={2},
  pages={7--34},
  year={2014},
  publisher={IGI Global}
}
```

Please, help us making OOPS! better. **Feedback** is more than welcome!

In addition, you can also **suggest new pitfalls** so that they can be detected in future evaluations.

Contact email: [oops\(at\)delicias.dia.fi.upm.es](mailto:oops(at)delicias.dia.fi.upm.es). Latest revision April 2021

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