

unified approach for publishing regional and historical language resources on the linked data framework

thierry declerck, eveline wandl-vogt, karlheinzmörth + claudia resch
ICLTT @ austrian academy of sciences @ vienna. AT
deutsches forschungszentrum für künstliche intelligenz @ saarbrücken. DE
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outline

- frame conditions I: dialectal / historical resources
- frame conditions II: dictionary vs thesaurus / semantic networks
- encoding of the entries in LOD compliant languages
 - SKOS vs SKOSXL
 - NLP processing
 - LOD compliant encoding of definitions
- cross-linking of senses
added value: additional senses, multilinguality
- conclusion:
encoding textual information related to dictionary entries
- follow up challenges

dictionary 1
 dictionary of bavarian dialects in austria (WBÖ; 1963-)

Puss, Puss(e)lein

M. (jedoch meist neutr.Dem.), Kuß („Busserl“), Gebäck, PflN s-,mbair. m. SI, Egerl. nur als → (Zwick[er])- , Simmersdf. Igl.; Schallw., vgl. KLUGE²⁰ 114; frühnd. *buß* M. Kuß GÖTZE Frühnd.Gl. 44; s.a. KRANZMAYER Kennw. 10; entl. ins Magy. als *puszi* Kuß u. *puszedli* Gebäck KOBILAROV-GÖTZE 355f., ins Slow. als *púšek* Kuß PLETERŠNIK 2,366 u. ins Kā.Slow. als *pushei* Kuß GUTSMANN Dt.-Wind.Wb. 261. — Bayer.Wb. 1,295, Schwäb. Wb. 1,1558.

Bed.: 1 **Kuß** im gesamten Verbr.Geb. (meist als 1. od. 2. Dem.), Syn. → (Fotz)pemperer,

2. Kl. süßes **Gebäck**

m. flacher kreisförmiger Unterseite u. gewölbter Oberseite ugs. (meist 2., seltener 1. Dem.), s.a. EBNER² 51; rundes Nußgebäck auf Kirchtagen Gott.Wb. 1,91 (2.Dem.);

meanings are indicated in **austrian** or **standard german**

dictionary 2

dictionary of viennese dialect 1998 [WrWb 1998])

Bussal, Bussi, Bussl, das,

1) Kuss (Syn.: *Schmåtss*);

2) kleines Süßgebäck; Pl. *Bussaln*; viele

Komp. wie *Nussbussal* usw. –

Etym.: bair.-österr. Schallwort *Puss* Kuss.

meanings are indicated in standard german

dictionary 3

VICAV DAMASCUS lexicon (2013-)

```
<entry xml:id="baab_001">
  <form type="lemma">
    <orth xml:lang="ar-apc-x-damascus-
vicav">bāb</orth>
  </form>
  <gramGrp>
    <gram type="pos">noun</gram>
    <gram type="root" xml:lang="ar-apc-
x-damascus-vicav">bwb</gram>
  </gramGrp>
  <form type="inflected" ana="#n_pl">
    <orth xml:lang="ar-apc-x-damascus-
vicav">bwāb</orth>
  </form>
```

```
<sense>
  <cit type="translation" xml:lang="en">
    <quote>door</quote>
  </cit>
  <cit type="translation" xml:lang="en">
    <quote>gate</quote>
  </cit>
  <cit type="translation" xml:lang="en">
    <quote>city gate</quote>
  </cit>
  <cit type="translation" xml:lang="de">
    <quote>Tür</quote>
  </cit>
  <cit type="translation" xml:lang="de">
    <quote>Tor</quote>
  </cit>
  <cit type="translation" xml:lang="de">
    <quote>Stadtter</quote>
  </cit>
</sense>
</entry>
```

meanings are encoded as TEI senses | translations

dictionary 4

VICAV CAIRO lexicon (2013-)

```

<entry xml:id="bab_001">
  <form type="lemma">
    <orth xml:lang="ar-arz-x-cairo-
arabic">/>باب</orth>
    <orth xml:lang="ar-arz-x-cairo-
vicav">bāb</orth>
  </form>

  <gramGrp>
    <gram type="pos">noun</gram>
    <gram type="root" xml:lang="ar-arz-x-cairo-
vicav">bwb</gram>
  </gramGrp>

  <form type="inflected" ana="#n_pl">
    <orth xml:lang="ar-arz-x-cairo-
arabic">/>ابواب</orth>
    <orth xml:lang="ar-arz-x-cairo-
vicav">ʔabwāb</orth>
  </form>

```

....

```

<sense>
  <cit type="translation" xml:lang="en">
    <quote>door</quote>
  </cit>
  <cit type="translation" xml:lang="en">
    <quote>gate</quote>
  </cit>
  <cit type="translation" xml:lang="en">
    <quote>gateway</quote>
  </cit>

  <cit type="translation" xml:lang="de">
    <quote>Tür</quote>
  </cit>
  <cit type="translation" xml:lang="de">
    <quote>Tor</quote>
  </cit>
</sense>
</entry>

```

meanings are encoded as TEI senses | translations

definition for work 

dictionary versus thesaurus / semantic network

Collection of words in one
or more specific
languages
listed alphabetically,
which provides the
meanings, definitions,
etymologies and
pronunciations of words.

A book that lists words
grouped together
according to
similarity of meanings
or synonyms and
sometimes antonyms.

We consider the type of access as discriminant for encoding a
resource as a skos:Collection or as a skos:ConceptScheme.



LOD

proposal for encoding entries of non standard dictionaries

- goal: publish on LOD
- need: model the data appropriate representation languages + models: OWL RDF(s), SKOS, lemon etc.
- side-effect of higher digital dignity: enrichment, added value, reusability
 - » interoperability : example: shared senses
 - » multilinguality



example: WBÖ
dictionary class and WBÖ as an instance

```
icltt:Dictionary
  rdf:type owl:Class ;
  rdfs:comment "Modeling
    the ICLTT
    dictionaries"@en ;
  rdfs:label
    "Wörterbuch"@de ,
    "Dictionary"@en ;
  rdfs:subClassOf owl:Thing .
```

```
icltt:wboe
  rdf:type icltt:Dictionary ,
    skos:Collection ;
  rdfs:comment "OEAW
    Dictionary for
    Bavarian"@en ;
  rdfs:label "Wörterbuch der
    bairischen Mundarten in
    Österreich"@de ,
    „Dictionary of Bavarian
    dialects of Austria"@en ;
  icltt:hasLanguage icltt:bar ;
  skos:member
    icltt:concept_puss .
```



example: WBÖ

WBÖ entries as subClass of skos:Concept and use of skosxl

icltt:Entry

```
rdf:type owl:Class ;  
rdfs:label "Entry"^^xsd:string ;  
rdfs:subClassOf  
    skos:Concept .
```

icltt:concept_puss

```
rdf:type icltt:Entry ;  
rdfs:label "puss"^^xsd:string ;  
skosxl:prefLabel  
    icltt:entry_puss .
```

icltt:entry_puss

```
rdf:type icltt:Lemma ;  
icltt:hasPos icltt:noun ;  
.....  
.....  
skosxl:literalForm "Puss"@bar .
```

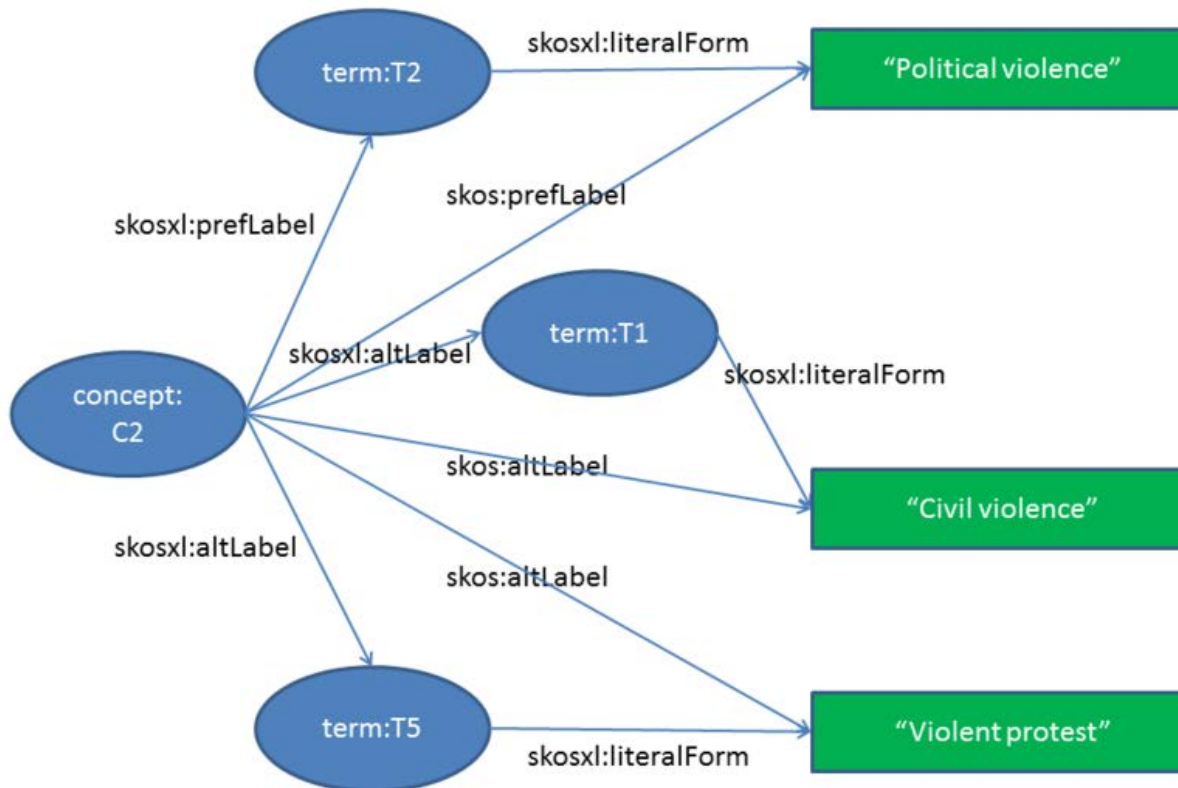


representation language why SKOS-XL?

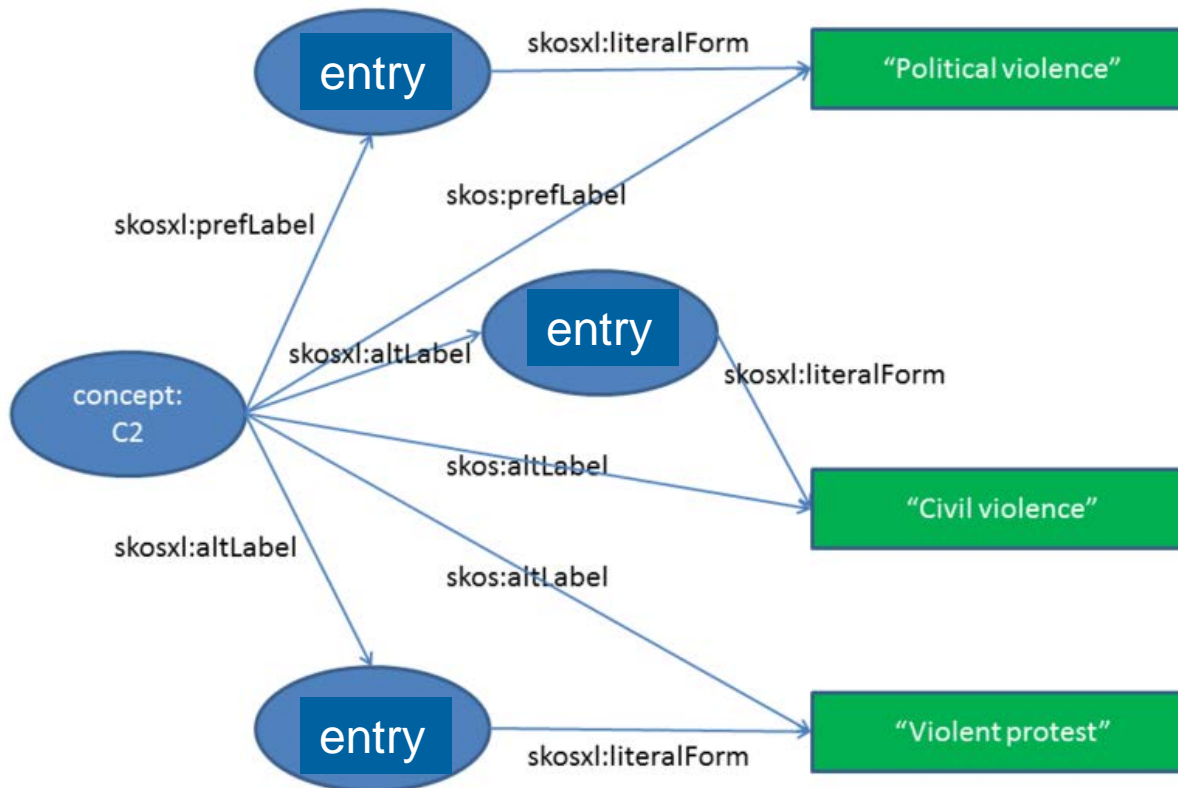
SKOS-XL labels do not take
as a value a literal but a
possibly complex) object.
The literal (as used in
`rdfs:label` or `skos:label`) is
then encoded in
`skosxl:literalForm`

```
iclitt:entry_puss  
  rdf:type iclitt:Lemma ;  
  iclitt:hasPos iclitt:noun ;  
  ....  
  ....  
  skosxl:literalForm  
    "Puss"@bar .
```

graphical view skos:Label vs skosxl:Label



graphical view skos:Label vs skosxl:Label





encoding of senses skos:ConceptScheme + lemon

i *Lemon* =
Lexicon Model in Ontologies
lemon encodes senses of entries as
links to ontology elements.

We still have an intermediate
„concept“ (SKOS)
for introducing senses.

```
icltt:Senses_ICLTT
```

```
  rdf:type skos:ConceptScheme ;  
  rdfs:comment "Senses that are used in  
               ICLTT dictionnaires"@en ;  
  rdfs:label "Senses"@en .
```

```
icltt:Sense rdf:type owl:Class ;  
  rdfs:label "Sense"@en ;  
  rdfs:subClassOf skos:Concept ;  
  owl:equivalentClass lemon:LexicalSense .
```

```
icltt:kuss
```

```
  rdf:type icltt:Sense ;  
  rdfs:label "kiss"@en , "Kuss"@de ;  
  skos:inScheme icltt:Senses_ICLTT ;  
  skosxl:prefLabel icltt:sense_kuss .
```



encoding of senses skos:prefLabel + standard headwords

icltt:sense_süß

```
rdf:type icltt:headword ;  
icltt:hasPos icltt:adj ;  
skosxl:literalForm "süß"@de .
```

icltt:sense_kuss

```
rdf:type icltt:headword ;  
icltt:hasPos icltt:noun ;  
skosxl:literalForm "Kuss"@de .
```

icltt:sense_gebäck

```
rdf:type icltt:headword ;  
icltt:hasPos icltt:noun ;  
skosxl:literalForm "Gebäck"@de .
```

connecting senses to standard german need of NLP

- WBÖ:
(NP süßes (**ADJ, lemma = süß, MOD**) Gebäck (**N, lemma = Gebäck, HEAD**)) - *sweet pastry*
- WrWb:
(NP (kleines (ADJ, lemma = klein, MOD) Süßgebäck (N, compound: süß (**ADJ, lemma = süß, MOD**) + Gebäck (**N, lemma = Gebäck, HEAD**)), **HEAD**)) - *small sweet pastry*

connecting senses to standard german need of NLP

- WBÖ:
(NP süßes (**ADJ**, lemma = süß, **MOD**) Gebäck (**N**, lemma = Gebäck, **HEAD**)) - *sweet pastry*
 - WrWb:
(NP (kleines (ADJ, lemma = klein, MOD) Süßgebäck (N, compound: süß (**ADJ**, lemma = süß, **MOD**) + Gebäck (**N**, lemma = Gebäck, **HEAD**)), **HEAD**)) - *small sweet pastry*
1. *lemma reduction*
 2. *POS tagging*
 3. *chunking and dependency structures help in discovering shared senses*

hierarchical relations

decomposition of complex strings

lemon:decomposition

rdfs:domain lemon:LexicalSense ;
rdfs:range iclitt:Sense .

iclitt:Component1

rdf:type owl:Class ;
rdfs:label ""^xsd:string ;
rdfs:subClassOf iclitt:CompoundSense .

iclitt:Component2

rdf:type owl:Class ;
rdfs:label ""^xsd:string ;
rdfs:subClassOf iclitt:CompoundSense .

iclitt:süß

rdf:type lemon:LexicalSense ,
iclitt:Component1 ; ...

skos:exactMatch

<<http://wiktionary.dbpedia.org/resource/süß-German-Adjective-1de>> ; ...

skosxl:prefLabel iclitt:sense_süß .

iclitt:gebäck

rdf:type lemon:LexicalSense ,
iclitt:Component2 ; ...

skos:exactMatch

<<http://wiktionary.dbpedia.org/resource/Gebäck-German-Noun-1de>> ; ...

skos:narrower iclitt:süß_gebäck ;

skosxl:prefLabel iclitt:sense_gebäck .



example: DBpedia instantiation of wiktionary
various senses for süß | sweet

Content-Length: 25242

About: <http://wiktionary.dbpedia.org/resource/süß>

An Entity of Type : [LexicalEntry](#), from Named Graph : <http://wiktionary.dbpedia.org>, within Data Space : <http://wiktionary.dbpedia.org>

Property	Value
http://usefulinc.com/ns/doap#creator	<ul style="list-style-type: none">■ http://fr.wiktionary.org/w/index.php?title=süß&action=history■ http://de.wiktionary.org/w/index.php?title=süß&action=history■ http://en.wiktionary.org/w/index.php?title=süß&action=history
http://wiktionary.dbpedia.org/terms/hasLangUsage	<ul style="list-style-type: none">■ dbpedia-en:süß-German■ dbpedia-en:süß-German■ dbpedia-en:süß-German
http://www.monnet-project.eu/lemon#sense	<ul style="list-style-type: none">■ dbpedia-en:süß-German-Adjective-3fr■ dbpedia-en:süß-German-Adjective-1fr■ dbpedia-en:süß-German-Adjective-2fr■ dbpedia-en:süß-German-Adjective-1de■ dbpedia-en:süß-German-Adjective-3de■ dbpedia-en:süß-German-Adjective-2de■ dbpedia-en:süß-German-Adjective-1en■ dbpedia-en:süß-German-Adjective-2en
rdf:type	<ul style="list-style-type: none">■ http://wiktionary.dbpedia.org/terms/LexicalEntity■ http://wiktionary.dbpedia.org/terms/LexicalEntity■ http://wiktionary.dbpedia.org/terms/LexicalEntity■ http://www.monnet-project.eu/lemon#LexicalEntry■ http://www.monnet-project.eu/lemon#LexicalEntry■ http://www.monnet-project.eu/lemon#LexicalEntry
rdfs:label	<ul style="list-style-type: none">■ süß■ süß■ süß
rdfs:seeAlso	<ul style="list-style-type: none">■ http://eu.wiktionary.org/wiki/süß



example: DBpedia instantiation of wiktionary
specific sense for süß | sweet

Content-Length: 16272

About: <http://wiktionary.dbpedia.org/resource/süß-German-Adjective-1en>

An Entity of Type : [LexicalSense](#), from Named Graph : <http://wiktionary.dbpedia.org>, within Data Space : wiktionary.dbpedia.org

Property	Value
dc:language	■ http://wiktionary.dbpedia.org/terms/German
http://wiktionary.dbpedia.org/terms/hasAntonym	■ dbpedia-en:sauer
http://wiktionary.dbpedia.org/terms/hasEtymology	■ From , akin to Old Saxon swōti
http://wiktionary.dbpedia.org/terms/hasMeaning	■ sweet
http://wiktionary.dbpedia.org/terms/hasPoS	■ http://wiktionary.dbpedia.org/terms/Adjective
rdf:type	■ http://www.monnet-project.eu/lemon#LexicalSense ■ http://wiktionary.dbpedia.org/terms/Sense
rdfs:label	■ süß
rdfs:seeAlso	■ http://eu.wiktionary.org/wiki/süß ■ http://fj.wiktionary.org/wiki/süß ■ http://fi.wiktionary.org/wiki/süß ■ http://io.wiktionary.org/wiki/süß ■ http://cs.wiktionary.org/wiki/süß



example: DBpedia instantiation of wiktionary additional multilingual equivalents

Content-Length: 47808

About: <http://wiktionary.dbpedia.org/resource/sweet-English-Adjective-1en>

An Entity of Type : [LexicalSense](#), from Named Graph : <http://wiktionary.dbpedia.org>, within Data Space : wiktionary.dbpedia.org

Property	Value
dc:language	■ http://wiktionary.dbpedia.org/terms/English
http://wiktionary.dbpedia.org/terms/hasAntonym	■ dbpedia-en:bitter ■ dbpedia-en:salty ■ dbpedia-en:sour
http://wiktionary.dbpedia.org/terms/hasEtymology	■ Via swete, sweete, from swete.
http://wiktionary.dbpedia.org/terms/hasMeaning	■ Having a pleasant taste, especially one relating to the basic taste sensation
http://wiktionary.dbpedia.org/terms/hasPoS	■ http://wiktionary.dbpedia.org/terms/Adjective
http://wiktionary.dbpedia.org/terms/hasTranslation	■ dbpedia-en:dolce-Italian ■ dbpedia-en:doux-French ■ dbpedia-en:dulce-Spanish ■ dbpedia-en:doce-Portuguese ■ dbpedia-en:татлы-Tatar ■ dbpedia-en:dolĉa-Esperanto ■ dbpedia-en:сладкий-Russian ■ dbpedia-en:sladký-Slovak ■ dbpedia-en:sladký-Czech ■ dbpedia-en:солодкий-Ukrainian ■ dbpedia-en:lecker-German ■ dbpedia-en:zoet-Dutch ■ dbpedia-en:süß-German ■ dbpedia-en:suavis-Latin ■ dbpedia-en:ëmbël-Albanian



example: DBpedia instantiation of wiktionary various senses for gebäck | bakery

Content-Length: 24051

About: <http://wiktionary.dbpedia.org/resource/Gebäck>

An Entity of Type : [LexicalEntry](#), from Named Graph : <http://wiktionary.dbpedia.org>, within Data Space : wiktionary.dbpedia.org

Property	Value
http://usefulinc.com/ns/foaf#creator	<ul style="list-style-type: none">■ http://ru.wiktionary.org/w/index.php?title=Gebäck&action=history■ http://fr.wiktionary.org/w/index.php?title=Gebäck&action=history■ http://de.wiktionary.org/w/index.php?title=Gebäck&action=history■ http://en.wiktionary.org/w/index.php?title=Gebäck&action=history
http://wiktionary.dbpedia.org/terms/hasLangUsage	<ul style="list-style-type: none">■ dbpedia-en:Gebäck-German■ dbpedia-en:Gebäck-German■ dbpedia-en:Gebäck-German■ dbpedia-en:Gebäck-German
http://www.monnet-project.eu/lemon#sense	<ul style="list-style-type: none">■ dbpedia-en:Gebäck-German-Noun■ dbpedia-en:Gebäck-German-Noun-1fr■ dbpedia-en:Gebäck-German-Noun-1de■ dbpedia-en:Gebäck-German-Noun-1en
rdf:type	<ul style="list-style-type: none">■ http://wiktionary.dbpedia.org/terms/LexicalEntity■ http://wiktionary.dbpedia.org/terms/LexicalEntity■ http://wiktionary.dbpedia.org/terms/LexicalEntity■ http://wiktionary.dbpedia.org/terms/LexicalEntity■ http://www.monnet-project.eu/lemon#LexicalEntry■ http://www.monnet-project.eu/lemon#LexicalEntry■ http://www.monnet-project.eu/lemon#LexicalEntry■ http://www.monnet-project.eu/lemon#LexicalEntry
rdfs:label	<ul style="list-style-type: none">■ Gebäck



example: DBpedia instantiation of wiktionary
specific sense for gebäck | bakery
with multilingual equivalents

Content-Length: 15267

About: <http://wiktionary.dbpedia.org/resource/Gebäck-German-Noun-1de>



An Entity of Type : [LexicalSense](#), from Named Graph : <http://wiktionary.dbpedia.org>, within Data Space : wiktionary.dbpedia.org

Property	Value
dc:language	■ http://wiktionary.dbpedia.org/terms/German
http://wiktionary.dbpedia.org/terms/hasEtymology	■ [1] Kollektivum zu "backen"
http://wiktionary.dbpedia.org/terms/hasMeaning	■ Speisen auf Mehlbasis, welche auf einem Backblech oder in einer Form in einem Ofen oder in Fett in einer Pfanne eine ausreichend lange Zeit ausgebacken wurden.
http://wiktionary.dbpedia.org/terms/hasPoS	■ http://wiktionary.dbpedia.org/terms/Noun
http://wiktionary.dbpedia.org/terms/hasTranslation	■ dbpedia-en:печенье-Russian ■ dbpedia-en:выпечка-Russian ■ dbpedia-en:pâtisserie-French ■ dbpedia-en:coca-Catalan ■ dbpedia-en:pastry-English ■ dbpedia-en:reposteria-Spanish ■ dbpedia-en:pastries-English ■ dbpedia-en:côca-Occitanpost1500 ■ dbpedia-en:bakverk-Swedish ■ dbpedia-en:pastissos-Catalan ■ dbpedia-en:sætabrauð-Icelandic
rdf:type	■ http://www.monnet-project.eu/lemon#LexicalSense ■ http://wiktionary.dbpedia.org/terms/Sense
rdfs:label	■ Gebäck
rdfs:seeAlso	■ http://de.wiktionary.org/wiki/Gebäck



example: DBpedia instantiation of wiktionary
specific sense for gebäck | bakery
with multilingual equivalents

Content-Length: 23005

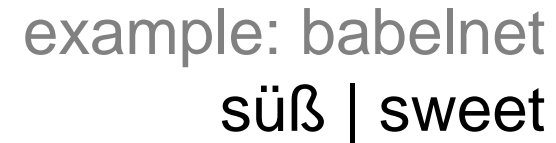
About: <http://wiktionary.dbpedia.org/resource/pastry-English-Noun-1en>






































An Entity of Type : [LexicalSense](#), from Named Graph : <http://wiktionary.dbpedia.org>, within Data Space : <http://wiktionary.dbpedia.org>

Property	Value
dc:language	■ http://wiktionary.dbpedia.org/terms/English
http://wiktionary.dbpedia.org/terms/hasEtymology	■ , or pastaierie.
http://wiktionary.dbpedia.org/terms/hasMeaning	■ A baked food group which contains items made from flour and fat pastes such as pie crust; also tarts, bear claws, Napoleons, puff pastries, etc.
http://wiktionary.dbpedia.org/terms/hasPoS	■ http://wiktionary.dbpedia.org/terms/Noun
http://wiktionary.dbpedia.org/terms/hasTranslation	■ dbpedia-en:Gebäck-German ■ dbpedia-en:pâtisserie-French ■ dbpedia-en:pastel-Spanish ■ dbpedia-en:kue-Indonesian ■ dbpedia-en:菓子-Japanese ■ dbpedia-en:gebak-Dutch ■ dbpedia-en:pastelería-Spanish ■ dbpedia-en:pasticceria-Italian ■ dbpedia-en:pastissos-Catalan ■ dbpedia-en:点心-Chinese ■ dbpedia-en:빵과자-Korean ■ dbpedia-en:페이스트리-Korean ■ dbpedia-en:شیرینی-Persian ■ dbpedia-en:farunajo-Esperanto ■ dbpedia-en:Feingebäck-German ■ dbpedia-en:baksturvara-Faroese ■ dbpedia-en:кондитерские_изделия-Russian

OAW
Österreichische Akademie
der Wissenschaften



Meaning: sweet ¹ • ID: bn:00111540a • Type: Concept	[details] [explore]
Senses:	
  sweet ¹	
  スイート, スウィート, 甘々, 甘い, 甘口, 甘甘,  dulce	
  sweet,  حلو,  doux, sucré,  süß,  γλυκός,  γλυκό,  मीठा,  dolce,  甘い,  сладкий,  dulce, suave	
  甜,  süß,  γλυκό,  मिठाई,  dolce,  甘い,  dulce	
Glosses:	
  having or denoting the characteristic taste of sugar	
  The basic taste sensation of sweetness, associated with sugars.	
  Qui a le gout caractéristique du sucre ou du miel.	
  Den für Zucker oder Honig typischen Geschmack aufweisend.	
  Que tiene el sabor característico del azúcar o la miel.	

II linking to the LOD



example: babelnet
gebäck | bakery

Noun

Meaning: pastry² • ID: bn:00060958n • Type: Concept [\[details\]](#) [\[explore\]](#)

Senses:

- pastry²
- 菓子, pastas, reposteria
- Pastry, 糕点, Pâtisserie, Gebäck, מגדנות, Pasticceria, ペイストリー, Печенье, Reposteria
- Pastry case, Pastries, 糕餅, 酥皮糕點, 糕點, 糕, Patisseries, Patisserie, Pâtissier, Pâtissière, Pâtisseries, קונדיטוריה, קונדיטורים, Pasticcere, ペストリー, Сухое печенье, Печенье, Pasteleria, Reposteria, Confiteria, Pasteleria
- المعجنات, 糕点, pâtisserie, pâtisseries, gebäck, γλυκά, מאפים, पेस्ट्री, dolci, pasteles

Glosses:

- any of various baked foods made of dough or batter
- Pastry is the name given to various kinds of baked products made from ingredients such as flour, sugar, milk, butter, shortening, baking powder, and/or eggs.
- La pâtisserie désigne à la fois certaines préparations culinaires sucrées à base de pâte, l'art de leur confection, la boutique où se vendent ces préparations faites par un pâtissier, ainsi que l'industrie de préparation et de vente de ces produits : gâteaux et tartes notamment.
- Als Gebäck werden in der Alltagssprache Backwaren aus Teig bezeichnet, die auf einem Backblech oder in einer Form im Ofen gebacken werden oder in Fett ausgebacken werden.
- מגדנות, או בשמה הלועזי קונדיטוריה, היא ענף בתחום הקולינריה העוסק בדברי מאפה מתוקים ובמנות אחרונות.
- La pasticceria è una parte dell'arte culinaria, dedicata esclusivamente alla preparazione di alimenti dolci quali paste farcite, pasticcini, torte, biscotti, praline, cioccolatini, canditi e simili.
- Печенье — небольшое кондитерское изделие, выпеченное из теста.
- La repostería, confitería o pastelería es el arte de preparar o decorar pasteles u otros postres dulces como bizcochos, tartas o tortas.

II linking to the LOD



example: babelnet towards babelflv disambiguation

Noun (results from automatic translations)

Meaning: buttocks¹ • ID: bn:00005913n • Type: Concept [\[details\]](#) [\[explore\]](#)

Senses:

- 🇬🇧 buttocks¹, nates¹, arse¹, butt⁴, backside², bum⁴, buns¹, can⁴, fundament², hindquarters¹, hind end¹, keister¹, posterior¹, prat¹, rear⁴, rear end¹, rump³, stern³, seat², tail⁴, tail end³, tooshie¹, tush¹, bottom³, behind¹, derriere¹, fanny¹, ass¹
- 🇮🇹 culo, deretano, di dietro, didietro, popò, posteriore, sedere, 🇯🇵 おいど, お尻, どんしつ, ヒップ, 尻, 尻臀, 御尻, 御居処, 臀, 臀部, 🇪🇸 ancas, ano, as de oros, asentaderas, asiento, cachas, cachetes, cola, culo, fin, fondo, glúteos, grupa, nalga, nalgas, ocóte, pandero, pompis, posaderas, posas, posterior, rulé, suelo, tras, trasero, traste, tuje
- 🇬🇧 Buttocks, 🇸🇦 ألية, 🇨🇳 臀, 🇫🇷 Fesse, 🇩🇪 Gesäß, 🇮🇱 עגבות, 🇮🇳 नितम्ब, 🇮🇹 Natiche, 🇯🇵 尻, 🇷🇺 Ягодицы, 🇪🇸 Nalga
- 🇬🇧 Hiney, Human ass, Bare bum, Tooshie, Butt cheek, Tuch, Derierre, Dairy aire, Tuches, Buttox, Nates, Asscheeks, Derrière, Hindquarters, Badonkadonk, Buttcheeks, Ass cheeks, Butt cheeks, Keaster, Derriere, Keister, Buttcheek, Gluteal region, Ass (insult), Fourth point of contact, Buttuks, Dairy air, 🇸🇦 أُرْداف, رَدَف, الأُرْداف, الية, الألية, أليه, 🇨🇳 屁屁, 尻, 臀部, 屁股, 肱, 🇫🇷 Fesses, Fessière, Fessières, 🇩🇪 Arschbacke, Allerwertester, Hinterteil, Gluteus, Regio glutealis, Füdli, Gesäss, Steiß, Arsch, Sitzfleisch, Podex, Fudi, Clunium, Nates, Glutealregion, Hintern, 🇮🇱 טוכס, תחת, תחת אחרים, שכן, אחרים, 🇮🇹 Deretano, Sedere, Chiappe, Natica, Fondoschiena, 🇯🇵 臀部, ケツ, おしり, けつ, シリ, しり, 殿部, 臀, お尻, 🇷🇺 Ягодица, 🇪🇸 Pompas, Gluteo, Glúteos, Gluteos, Traseros, Culo (anatomía), Culo (anatomia), Trasero, Pompis, Glúteo, Nalgas
- 🇬🇧 behind, can, hindquarters, seat, tail, fundament, stern, bum, tail end, fanny, nates, butt, bottom, rump, prat, backside, tooshie, keister, rear end, arse, buns, rear, tush, posterior, hind end, ass, derriere, buttocks, 🇨🇳 屁股, 臀部, 🇫🇷 cul, miches, lune, fessier, postérieur, séant, derrière, pleine lune, fesses, foundé, 🇩🇪 Hintern, Pöker, Po, Podex, Vollmond, Popo, Sitzfleisch, Kacker, Gesäß, Arsch, Mond, Pöter,



conclusion motivation + results

- motivation:
improving access to non-standard dictionaries
- steps
 - 1) cross-linking entries
on the base of definitions / senses
 - 2) cross-linking to the LOD
on the base of detected senses
- Developing a model and testing it on several different types of non-standard dictionaries
(regional, historical, traditional, edictionaries)

conclusion further work

1. cleaning the model ,
(better re-use of existing models for the semantic
representation of lexical data)
2. Further automatize part of the process for linking to senses in
the LOD
3. Discuss issues and joint solutions with similar projects
4. Discuss and define how to encode the textual information
associated with the entries and senses
(e.g. examples of usage)
5. ...

thank you!

unified approach
for publishing regional and historical language
resources on the linked data framework

thierry.declerck@dfki.de
eveline.wandl-vogt | karlheinz.moerth | claudia.resch@oeaw.ac.at

connected projects: WBÖ | VICAV | ABACUS