Term choice in an interdisciplinary domain: from cognitive variability to terminological variation

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Outline

1. Introduction: variation in Terminology research

2. Theoretical considerations: categorisation and expression of specialised knowledge

3. Methodology: corpus-based study of synonymy in interdisciplinary domain

4. Results: domain of specialisation and term choice

5. Concluding remarks

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Variation in Terminology Research

- ## Prescriptive perspective (Wüster 1979; Felber 1984)
  - Standardization of terminology in international context
  - Variation hampers specialised communication

  "Variation is a perturbation of the terminological unit" (Wüster, 1979/1998:150)

- ## Descriptive perspective (Cabré 1999; Temmerman 2000; Gaudin 2003; Diki-Kidiri 2008)
  - Description of special language in a diversity of contexts
  - Variation exists and can be functional

Research Hypothesis

Term variation is the manifestation of the dynamicity of categorisation and structuring of specialised knowledge

"we believe that variation is not a random act of defiance or carelessness, but rather one which is well-motivated and useful in expert discourse" (Bowker 1998: 487)

The sender's domain of specialisation imposes a perspective on categorisation and term choice

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Conceptual categorisation and structuring

- Categorisation is a complex and dynamic process *(Lakoff 1987; Temmerman 2000)*
  - Diversity of cognitive operations, concepts, concept systems
  - Concepts and conceptual structures are flexible and multidimensional
  - Domains of knowledge are interdisciplinary

- Categorisation is situated in a socio-temporal context *(Gaudin 2003; Diki-Kidiri 2008)*
  - Special knowledge is a social construction
  - Differences among language communities, social groups, schools of thought, etc.

- Language and cognition are interrelated *(Temmerman 2000; Cabré 2008)*
  - Language plays a role in concept formation and structuring

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Expression of specialised concepts

- Terms are natural language units *(Cabré 1999)*
  - Cognitive, linguistic and communicative component

- Term formation is motivated *(Kocourek 1991; Radden & Panther 2004)*
  - Conscious activity, aiming at identifying the concept
  - Mechanisms of term formation *(mariscador, criée, dominio público marítimo-terrestre)*

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Cognitive motivations of term variation

- Term variation: result of multiple motivations

  – Variability of cognitive processes → the same reality may be perceived differently

  – Variety of contexts → essential characteristics may vary according to the situation

Place where several physicochemical parameters of water are measured to monitor qualitative variations in time (GDT)

point pérenne   *point de suivi*   *point de prélèvement*

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Methodology: Corpus compilation and analysis

Textual corpus (288054 words)
• Domain: Fishing and aquaculture • Languages: Galician, French • Disciplines: Biology, Economics, Law

Terminological corpus (95 concepts, 946 terms, 8148 contexts)
• Importance in the conceptual structure • Denominative diversity (9.9 terms/concept)

Analysis
• Cognitive-semantic analysis of denominations • Distribution among subcorpora

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Results: domain of specialisation and term choice

- Terminological overlapping

- Conceptually-motivated patterns of term variation

Terminological overlapping

□ BIO ■ BIO/ECO □ BIO/LEX □ BIO/ECO/LEX

28%
34%
7%
31%
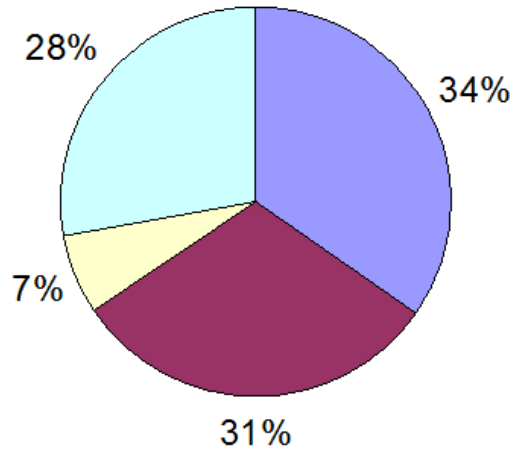
subcorpus BIO
(62 co, 253 ter)

□ LEX ■ BIO/LEX □ ECO/LEX □ BIO/ECO/LEX

32%
31%
8%
29%
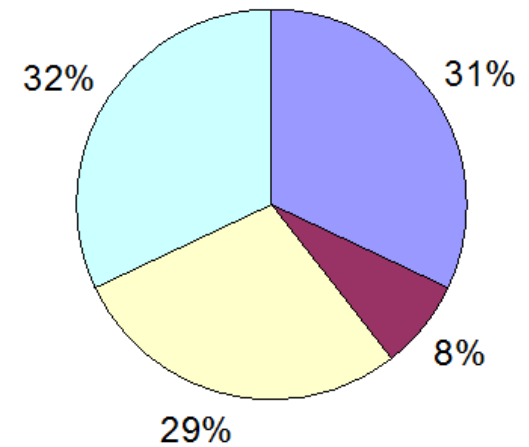
subcorpus LEX
(62 co, 220 ter)

subcorpus ECO
(62 co, 495 ter)

14%
13%
57%
16%
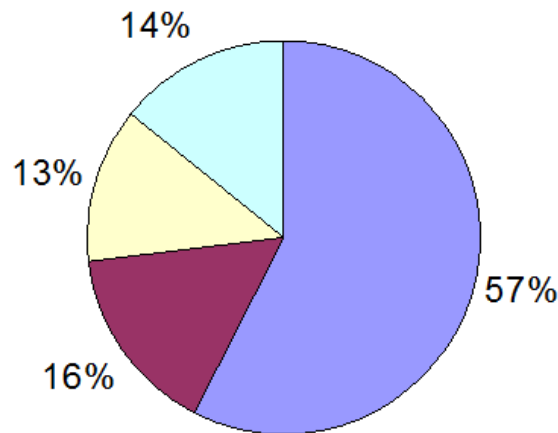
□ ECO ■ BIO/ECO □ ECO/LEX □ BIO/ECO/LEX

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Terminological overlapping
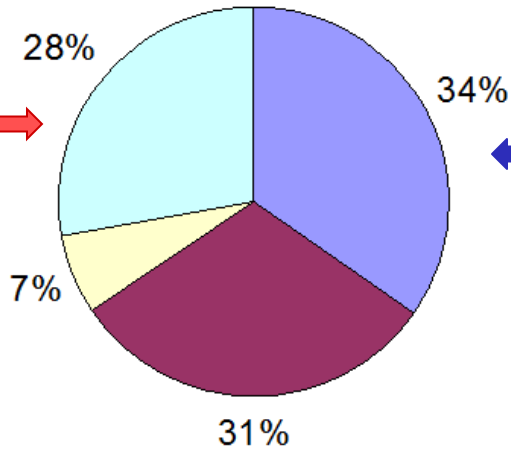
subcorpus BIO
(62 co, 253 ter)

subcorpus ECO
(62 co, 495 ter)

subcorpus LEX
(62 co, 220 ter)

Subset of terms shared by three corpora

SHARED TERMS
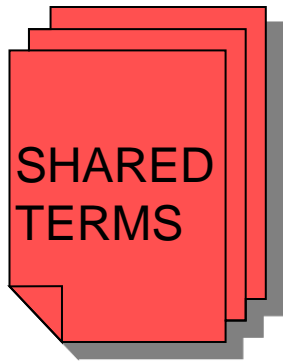
- Short (61.5 % simple, 37% two-morpheme)
- More frequent (41.46 oc/term)
- Central to fishing terminology *(pesca, port, lonxa)*
- Basic-level terms *(pescador, mariscador)*
- Perspectively neutral

SUBJECT FIELD	TERM CHOICE	CONTEXTS
BIOLOGY	*banco*	"Paralelamente recóllese unha mostra de sedimento en cada **banco** para a realización da análise granulométrico estrutural do tipo de fondo e contido total en materia orgánica." (10G)
ECONOMICS	*banco*	"Captura máxima permitida ó titular dun permiso de explotación (persoa ou embarcación) duna especie ou especies mariñas determinadas nunha zona ou **banco** en particular e por un período determinado de tempo." (1GI)
LAW	*banco*	"Sen embargo, poderían terse obtido cifras máis elevadas xa que determinados **bancos** foron explotados antes da realización das mostraxes" (1GII)

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Subset of terms exclusive to each corpora

BIO

ECO

LEX
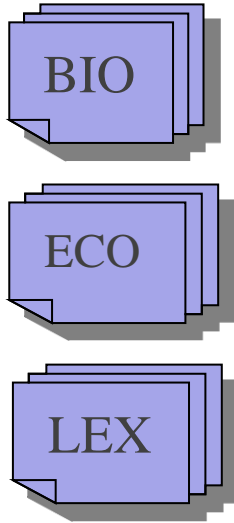
- **Longer** (8.6 % simple, 58% two-morpheme…)
- Less **frequent** (3.49 oc/term)
- **Generic** terms (producteur, *professionnel*)
- **Lexically unstable, context-dependent** *(unité, lonxa de contratación)*
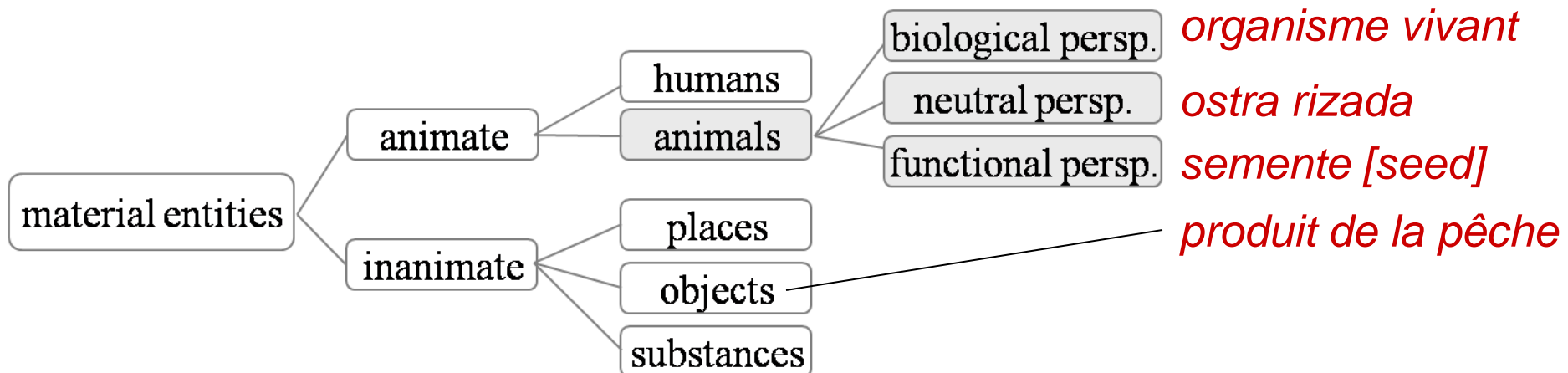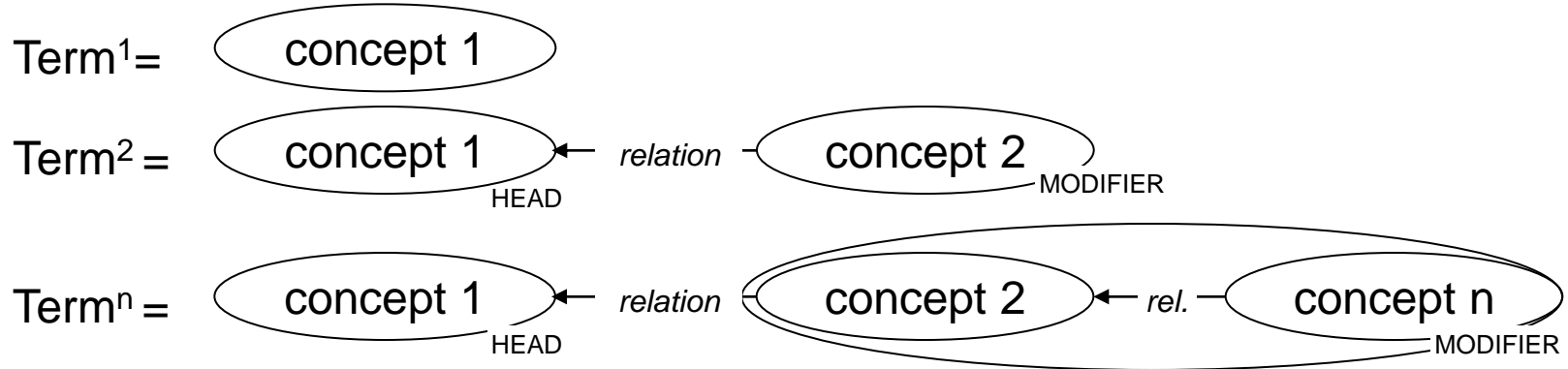- **Uncommon** conceptual patterns *(explotación directa de productos do mar)*

SUBJECT FIELD	TERM CHOICE	CONTEXTS
BIOLOGY	*banco* ***gisement naturel***	"La zone peut n'être exploitée qu'une partie de l'année (cas notamment des **gisements naturels** classés"(14F)
ECONOMICS	*banco* ***banco de marisqueo***	"A confraría de Muxía é a que maior número de **bancos de marisqueo** presenta. [...] »(1GII)
LAW	*banco* ***banc naturel de mollusques bivalves***	"Toute partie de territoire maritime, lagunaire ou d'estuaire où se trouvent soit des **bancs naturels de mollusques bivalves** soit des sites employés pour la culture" (2F)

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Results: domain of specialisation and term choice

- Terminological overlapping
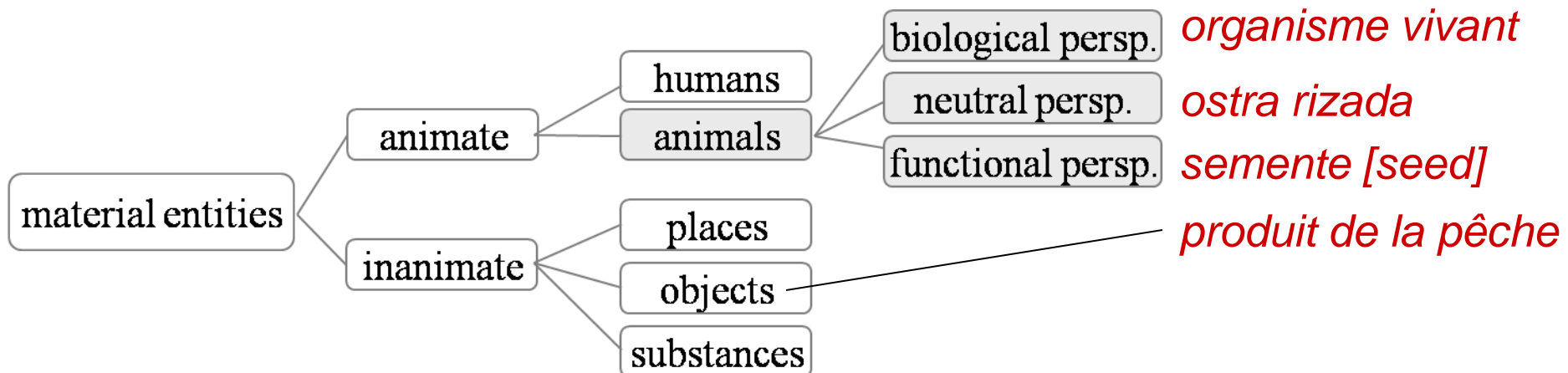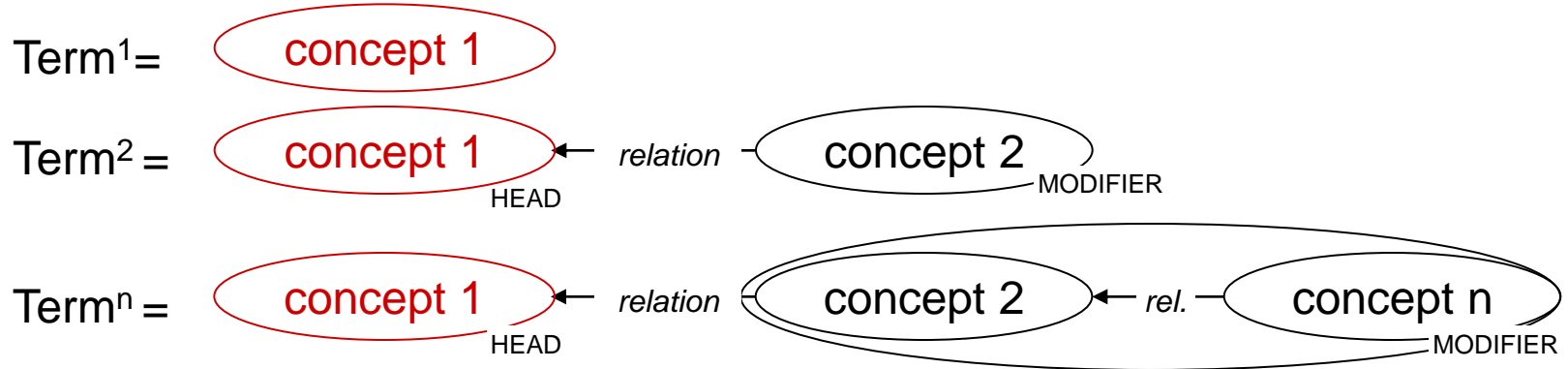
- Conceptually-motivated patterns of term variation

Analysis of conceptually motivated patterns of terms
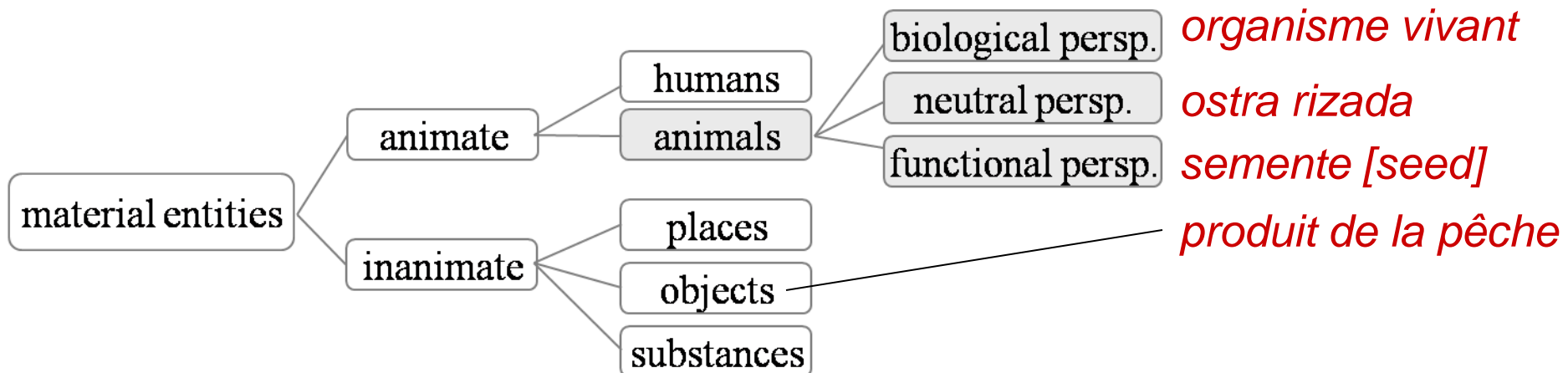
Describe conceptual information displayed by term variants

Term[1]= (concept 1)

Term[2] = (concept 1) ← *relation* (concept 2)
HEAD   MODIFIER

Term[n] = (concept 1) ← *relation* (concept 2) ← *rel.* (concept n)
HEAD   MODIFIER

material entities
- animate
  - humans
  - animals
    - biological persp. — *organisme vivant*
    - neutral persp. — *ostra rizada*
    - functional persp. — *semente [seed]*
- inanimate
  - places
  - objects — *produit de la pêche*
  - substances

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Analysis of conceptually motivated patterns of terms

Describe conceptual information displayed by term variants

$Term^1 =$ (concept 1)

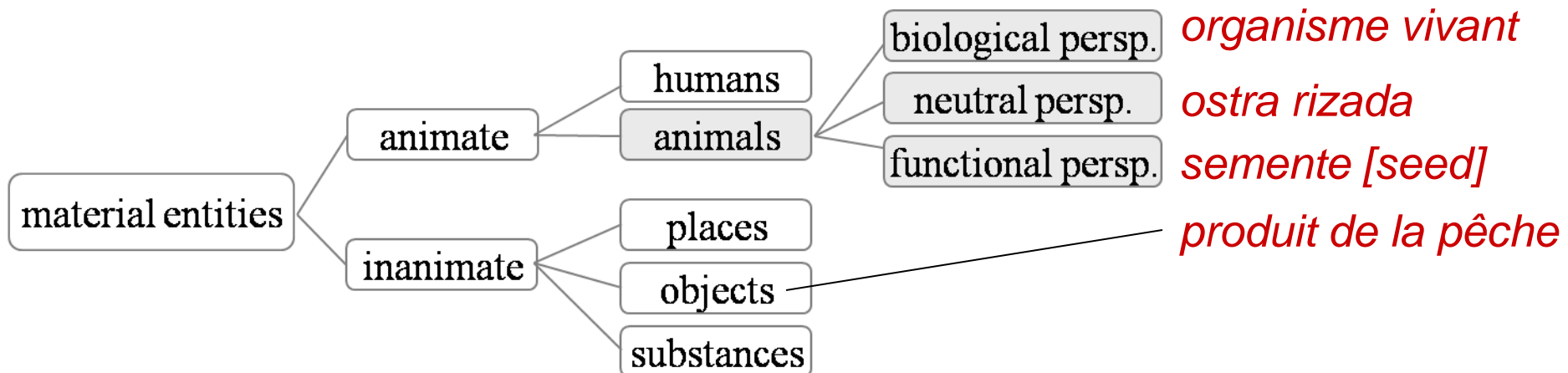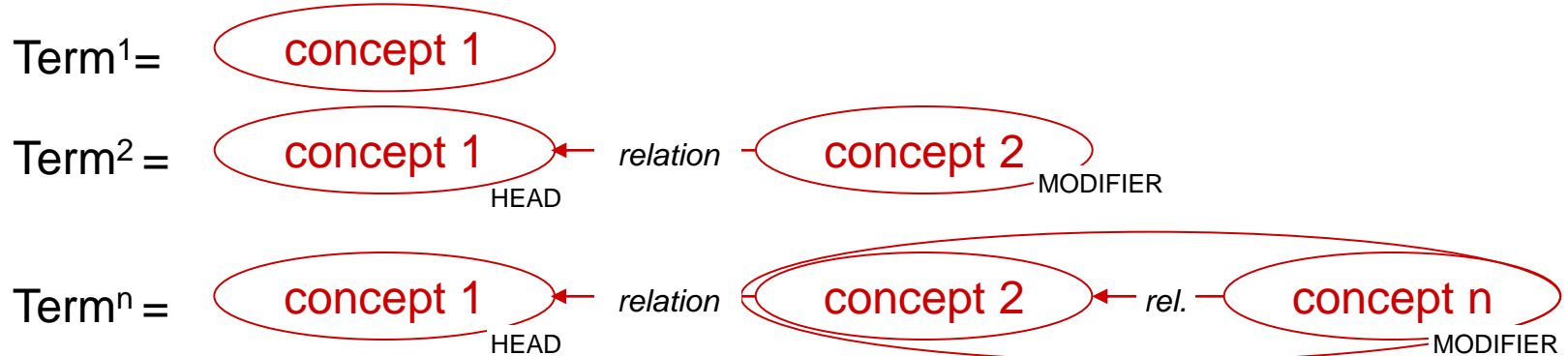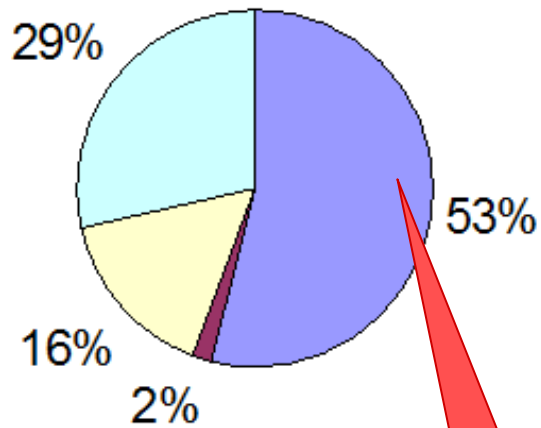$Term^2 =$ (concept 1) ← *relation* (concept 2)
                   HEAD   MODIFIER

$Term^n =$ (concept 1) ← *relation* (concept 2) ← *rel.* (concept n)
                   HEAD   MODIFIER

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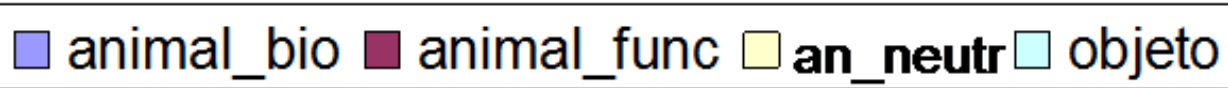 - places
  - objects — *produit de la pêche*
  - substances

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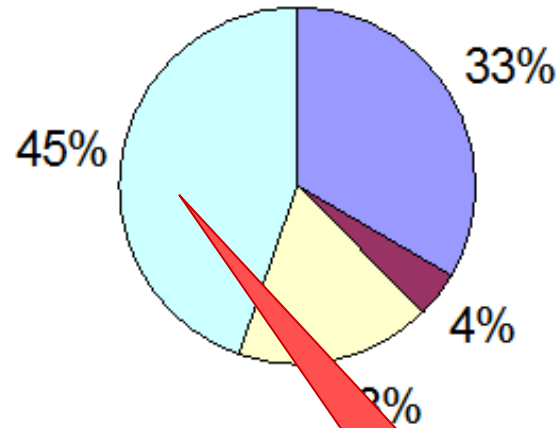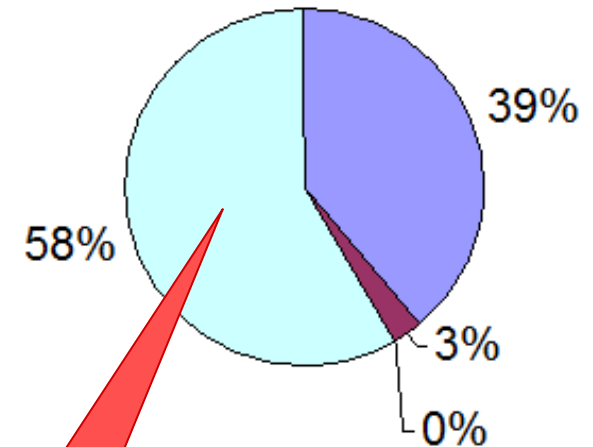Term^2 = (concept 1) HEAD ← *relation* — (concept 2) MODIFIER

Term^n = (concept 1) HEAD ← *relation* — (concept 2) ← *rel.* — (concept n) MODIFIER

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Categorial choices (concepts in head position)
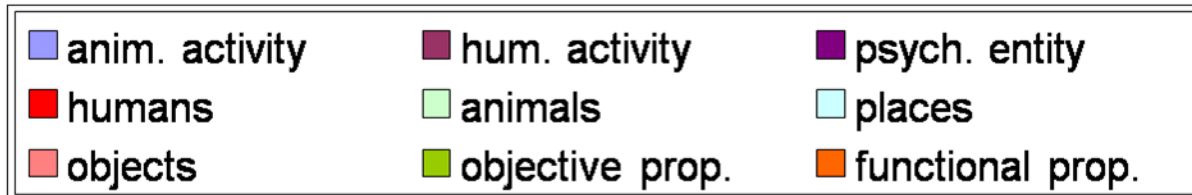
Categorial choices (concepts in head position)

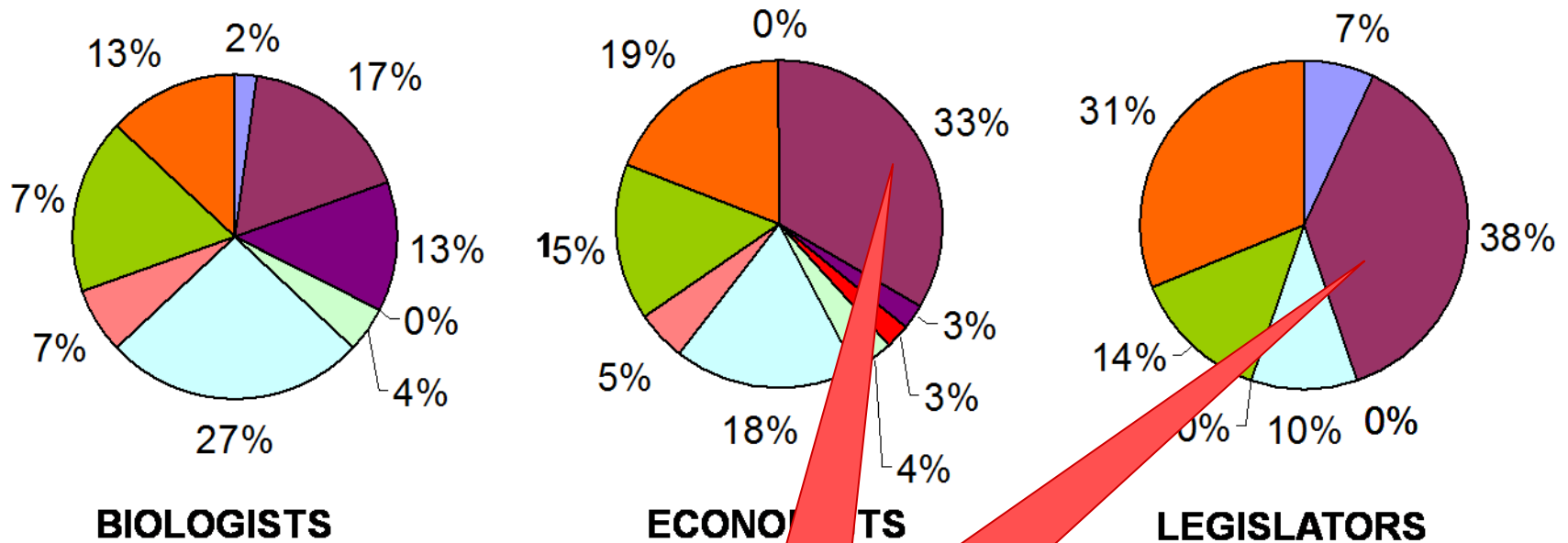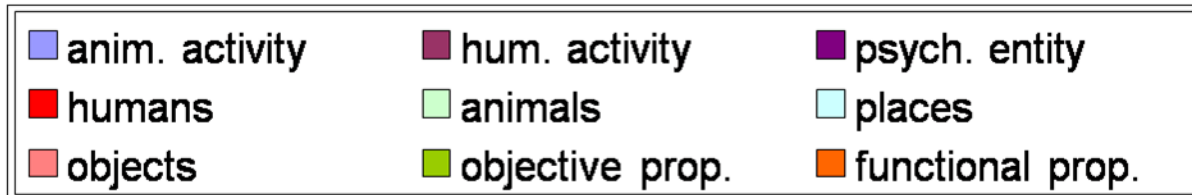# Distinctive dimensions (concepts in modifier position)
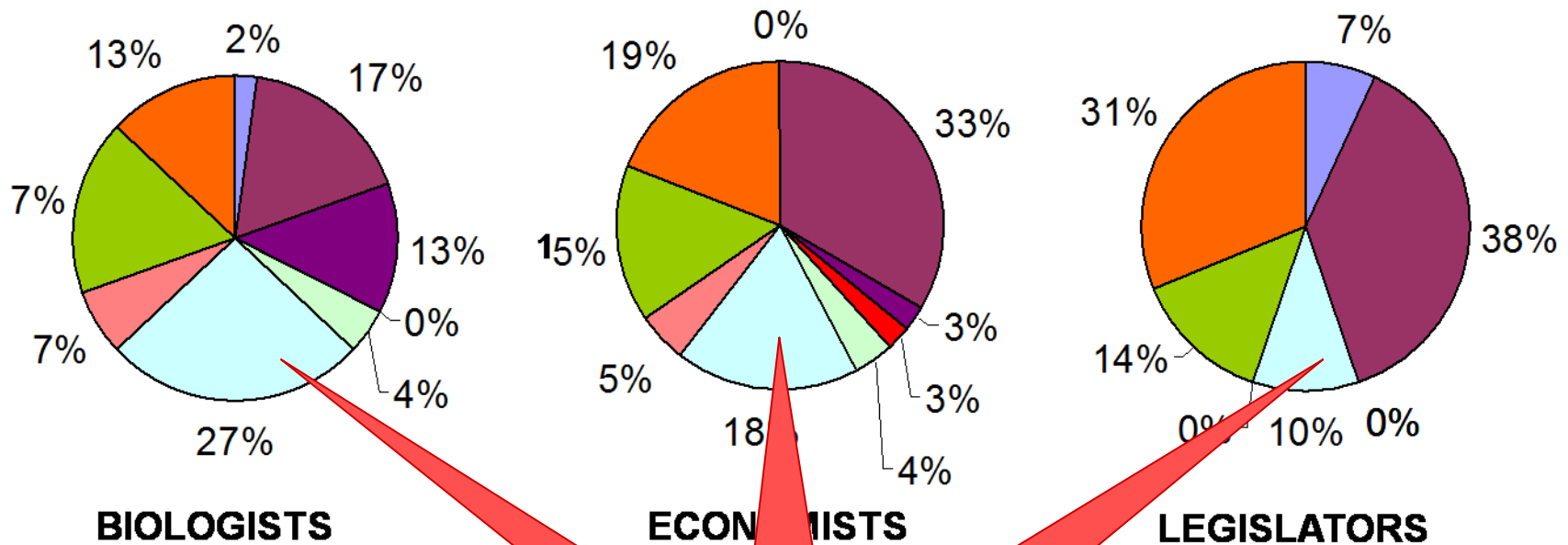
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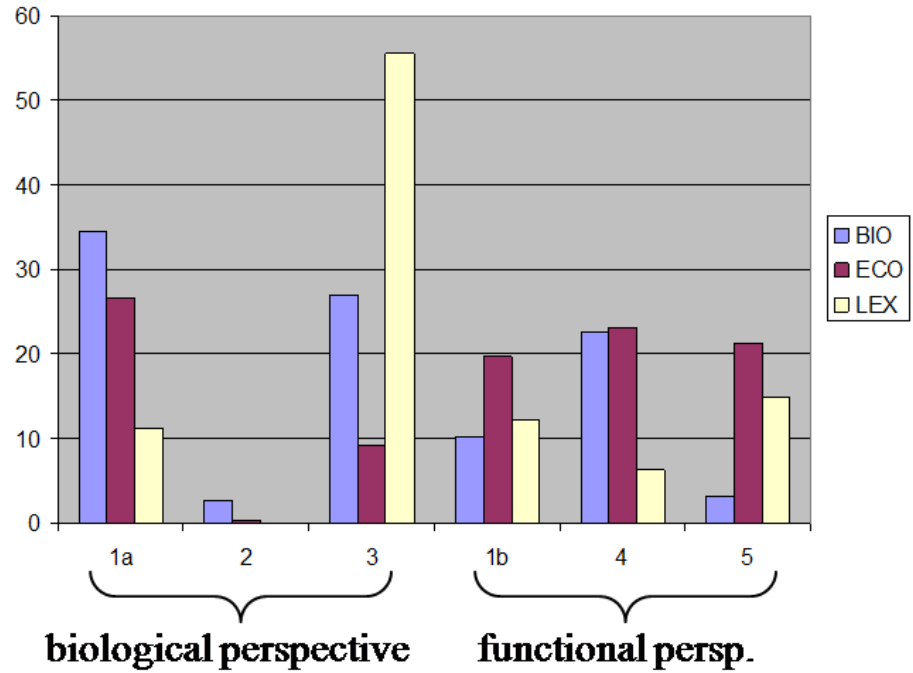

BIOLOGISTS

ECONOMISTS

LEGISLATORS

especie comercializábel

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Conceptually motivated patterns of terms

Terminological corpus
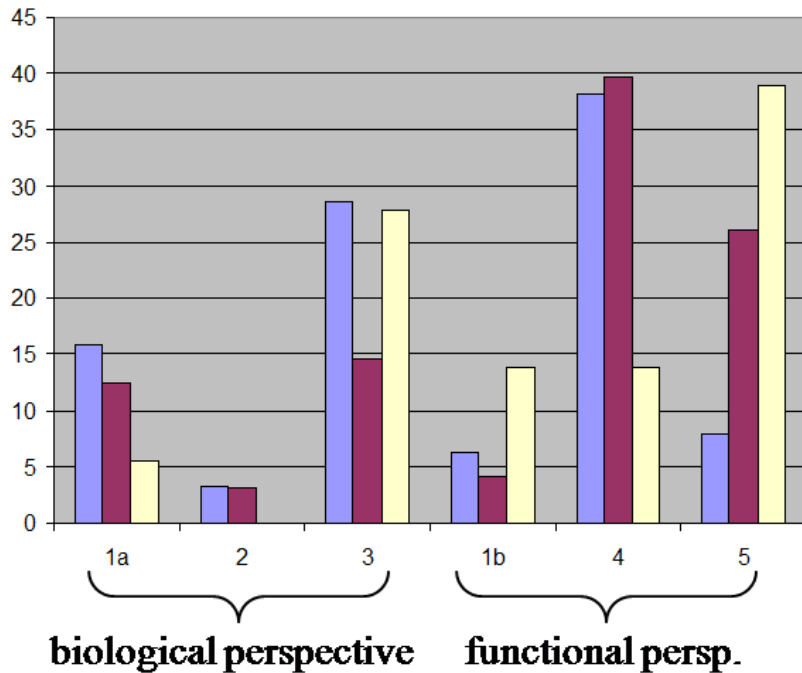
Textual corpus
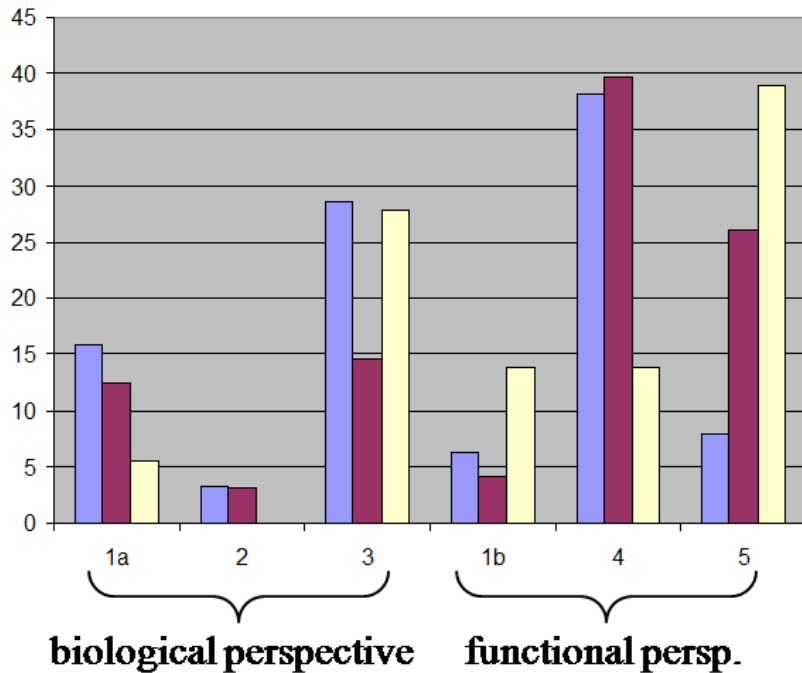

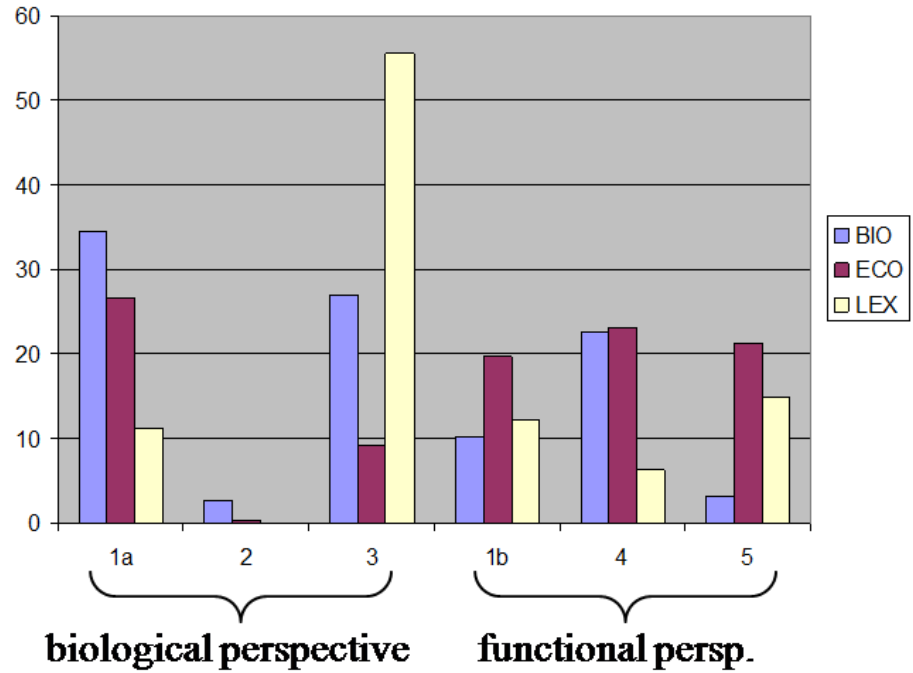1a) ANIM (*molusco*)
2)   ANIM + ANIM (*huître Crassostrea Gigas)*
3)   ANIM + PROPERTY (*molusco bivalvo*)

Conceptually motivated patterns of terms

Terminological corpus

Textual corpus

1b) OBJ (*ressource*)
4)   OBJ + ACTIVITY (*recurso de pesca*)
5)   OBJ + LOCATION (*alimento do mar*)

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Concluding remarks

- Differences in the choice of terminology among groups of experts

  ➢ Common choices: perspectively neutral, basic-level
  ➢ Differential choices: peripheral perspectives related to the expert's domain of specialisation

- Particularities of each domain (eg. transversality of law subcorpus)

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