

Multiple motivations in the denomination of concepts

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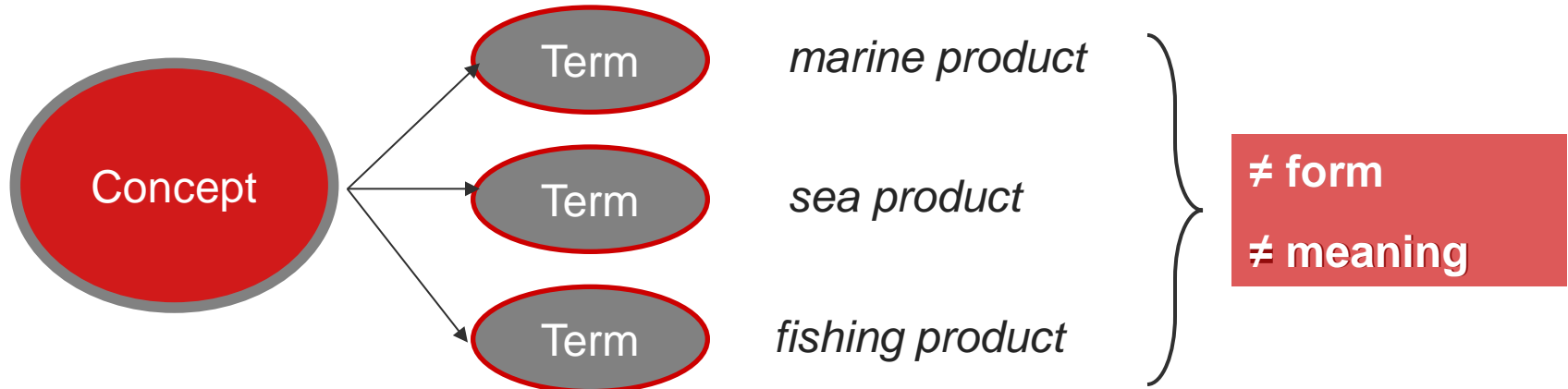
Outline

1. Introduction: denominative variation with cognitive consequences
 - Definition
 - Hypothesis
2. Theoretical considerations: flexibility of concept-term assignment
 - Specialised concepts and terms
 - Motivation of term formation
3. Analysis: multiple motivations in concept naming
 - Methodology
 - Analysis: concept of “production area” in aquaculture
4. Concluding remarks

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Denominative variation with cognitive consequences



- Different variants highlight different facets of the concept
- This affects the way the recipient understands the concept (i.e. denominative variation with cognitive consequences)

What are the motivations behind denominative variation?

Research Hypothesis

Denominative variation is not arbitrary, but motivated

“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)

Term choice is determined by conceptual characteristics and contextual features

“terminology tends towards stronger **systematization of its internal structure** [...] at the same time it tends towards using the **full flexibility of natural language**” (Kageura 2002: 15)

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Flexibility of concept-term assignment: the specialised concept

Cognitive Linguistics (Lakoff 1987)

Sociocognitive Theory of Terminology (Temmerman 2000)

- Specialised concepts are culturally, bodily and perceptually based
- They are created within a temporal and socioprofessional context
- They do not always have clear boundaries or fit a hierarchical classification
- Concepts and concept systems are flexible and multidimensional

Flexibility of concept-term assignment: the terminological units

Communicative Theory of Terminology (Cabré 1999)

“The multifaceted terminological units are at one and the same time **units of knowledge, units of language and units of communication**. Based on this approach, the description of a terminological unit must necessarily cover these three components: a cognitive component, a linguistic component and a sociocommunicative component.” (Cabré 2003:183)

- Terms are the linguistic representation of a specialized concept
- They are linguistic signs = $\frac{\text{form}}{\text{meaning}}$
- They accommodate to the specific communicative context

Flexibility of concept-term assignment : Concept-term relationship

- **Terms are motivated** by the concept

Purpose of term creation is to quickly and efficiently identify the concept (Sager 2000)

MOTIVATION	TERM	DEFINITION
morphological	<i>élevage</i>	1. <i>Action de prendre soin d'un animal et de l'élever jusqu'à ce qu'il atteigne la maturité.</i> [FAO aquac. glossary]
syntagmatic	<i>Public Maritime Domain</i>	1. <i>Seas or ocean areas owned by the state as opposed to individuals or corporations.</i>
semantic	<i>sea water</i>	1. <i>The water of the sea, or water taken from the sea.</i> [Oxford English Dictionary] 2. <i>Coastal and offshore waters in which the salinity is maximal (around 35 ppt) and not subject to significant daily and seasonal variation.</i> [FAO aquac. glossary]

Motivation of term formation

- Denominative variation: result of a **multiple motivation**
 - Different characteristics become essential depending on the situation

<i>CONCEPT DEFINITION</i>	<i>DENOMINATIVE VARIANTS</i>	<i>FACETS</i>
<p>Place where several physicochemical parameters of water are measured to monitor qualitative variations in time [Grand Dictionnaire Terminologique]</p>	point de suivi	<i>aim</i>
	point de prélèvement	<i>action</i>
	point pérenne	<i>morphology</i>
	station	<i>aim</i>

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Methodology: corpus-based analysis

- Textual Corpus (323.208 words)
 - Languages: Galician, French
 - Domain: Fishing and aquaculture
- Methodology
 1. Manual and semi-automatic detection of denominative variants
 2. Semantic analysis of denominations
 3. Context retrieval and analysis

Semantic analysis: conceptual patterns of term variation

(Kageura 2002)

PRODUCTION AREA:

“any sea, estuarine or lagoon area containing natural deposits of bivalve molluscs or sites used for cultivation from which they are taken”

DENOMINATIVE VARIANT
Área administrativa de producción
Área de explotación
Área de producción
Zona administrativa de producción
Zona de cultivo
Zona de cultivo e marisqueo
Zona de explotación
Zona de marisqueo
Zona de producción
Zona marisqueira
Zona productiva
Bassin conchylicole
Bassin de production
Espace conchylicole
Espace de culture
Site de production
Zone conchylicole
Zone d'élevage de mollusques
Zone de culture
Zone de production
Zone de production conchylicole
Zone de production de coquillage
Zone de récolte

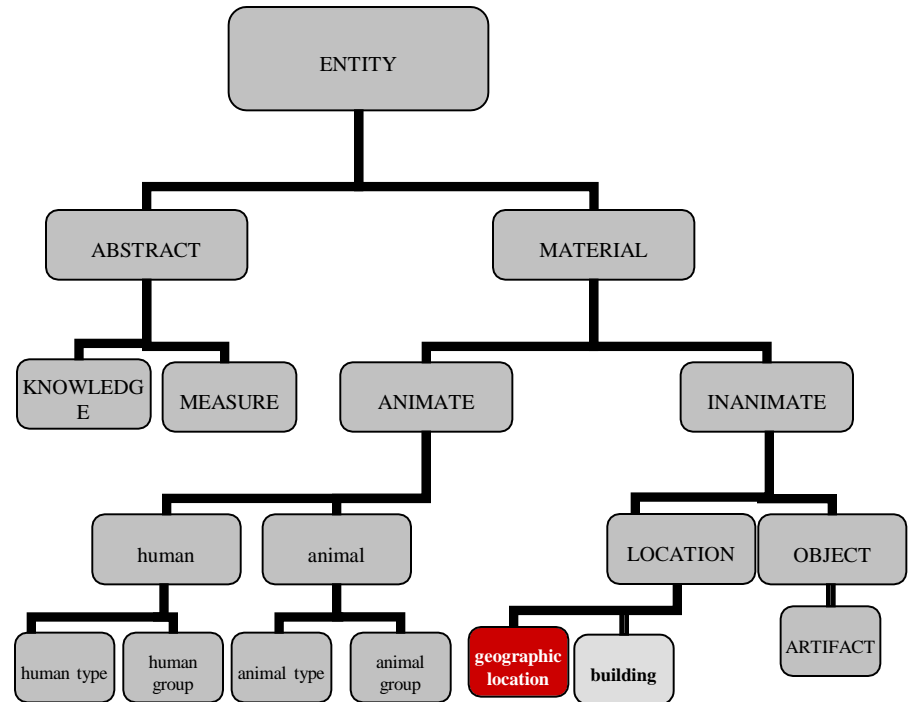
11 terms GL

12 terms FR

Semantic analysis: conceptual patterns of term variation

1. Determination of concept class within the overall conceptual system

PRODUCTION AREA: “any sea, estuarine or lagoon area containing natural deposits of bivalve molluscs or sites used for cultivation from which they are taken”



Semantic analysis: conceptual patterns of term variation

1. Ubication of concept within the overall conceptual system
2. Decomposition of terms in constituent elements

DENOMINATIVE VARIANT	HEAD	MODIFIER
Área de explotación	Área	de explotación
Área de producción	Área	de producción
Bassin conchylicole	Bassin	conchylicole
Bassin de production	Bassin	de production
Espace conchylicole	Espace	conchylicole
Espace de culture	Espace	de culture

Semantic analysis: conceptual patterns of term variation

1. Ubication of concepts within the overall conceptual system
2. Decomposition of terms in constituent elements
3. Identification of conceptual classes of constituent elements

DENOMINATIVE VARIANT	HEAD	MODIFIER
Área de explotación	GEO LOCATION	GRAL PRODUCTION
Área de producción	GEO LOCATION	GRAL PRODUCTION
Bassin conchylicole	GEO LOCATION	AQUAT PRODUCTION
Espace conchylicole	GEO LOCATION	AQUAT PRODUCTION
Espace de culture	GEO LOCATION	AGRIC PRODUCTION

Semantic analysis: conceptual patterns of term variation

1. Ubication of concepts within the overall conceptual system
2. Decomposition of terms in constituent elements
3. Identification of conceptual classes of constituent elements
4. Determination of conceptual relation between constituents

DENOMINATIVE VARIANT	HEAD	MODIFIER	INTRACONCEPTUAL RELATION
Área de explotación	GEO LOC	GRAL PROD	FUNCTIONAL RELATION
Área de producción	GEO LOC	GRAL PROD	FUNCTIONAL RELATION
Bassin conchylicole	GEO LOC	AQUAT PROD	FUNCTIONAL RELATION
Espace conchylicole	GEO LOC	AQUAT PROD	FUNCTIONAL RELATION
Espace de culture	GEO LOC	AGRIC PROD	FUNCTIONAL RELATION

Analysis: concept of « production area » in aquaculture

- Conceptual motivation → role of concept class
- Cultural motivation → role of language system
- Contextual motivation → role of sender's perspective

Analysis: concept of « production area » in aquaculture

– Conceptual motivation → role of concept class

¿Are there some patterns more salient than others?

– Cultural motivation → role of language system

– Contextual motivation → role of sender's perspective

Conceptual motivation: role of concept class in naming

"We assume the existence of regularity at the level of concept and its correspondence with linguistic representation patterns." (Kageura 2002: 36)

HEAD	MODIFIER	INTRACONC REL	Freq pattern	%
GEO LOCATION	AGRIC PROD+AQUAT PROD	FUNCTIONAL RELATION	1	0,46
GEO LOCATION	AGRIC PROD+ANIMAL	FUNCTIONAL RELATION	1	0,46
GEO LOC+BODY	GRAL PRODUCTION	FUNCTIONAL RELATION	3	1,38
GEO LOCATION	GRAL PROD+AQUAT PROD	FUNCTIONAL RELATION	6	2,75
GEO LOCATION	GRAL PROD+ANIMAL	FUNCTIONAL RELATION	9	4,13
GEO LOCATION	AGRIC PRODUCTION	FUNCTIONAL RELATION	17	7,80
GEO LOCATION	AQUAT PROD	FUNCTIONAL RELATION	30	13,76
GEO LOCATION	GRAL PRODUCTION	FUNCTIONAL RELATION	151	69,27
			218	100

Analysis: concept of « production area » in aquaculture

– Conceptual motivation → role of concept class

– Cultural motivation → role of language system

¿Are the motivations identical in French and Galician?

– Contextual motivation → role of sender's perspective

Cultural motivation: French Vs Galician naming preferences

“El término técnico no es una elaboración verbal ajena a los procesos de significación de las lenguas ordinarias y, en esa medida, resulta imposible enajenárselo a la cultura” (Lara 1999: 52)

HEAD	MODIFIER	INTRACONC REL	GALICIAN	FRENCH
GEO LOC+BODY	GRAL PRODUCTION	FUNCTIONAL REL	✓	✗
GEO LOCATION	AQUAT PROD	FUNCTIONAL REL	✓	✓
GEO LOCATION	AGRIC PRODUCTION	FUNCTIONAL REL	✓	✓
GEO LOCATION	AGRIC PROD+AQUAT PROD	FUNCTIONAL REL	✓	✗
GEO LOCATION	GRAL PRODUCTION	FUNCTIONAL REL	✓	✓
GEO LOCATION	GRAL PROD+ANIMAL	FUNCTIONAL REL	✓	✓
GEO LOCATION	AGRIC PROD+ANIMAL	FUNCTIONAL REL	✗	✓
GEO LOCATION	GRAL PROD+AQUAT PROD	FUNCTIONAL REL	✗	✓

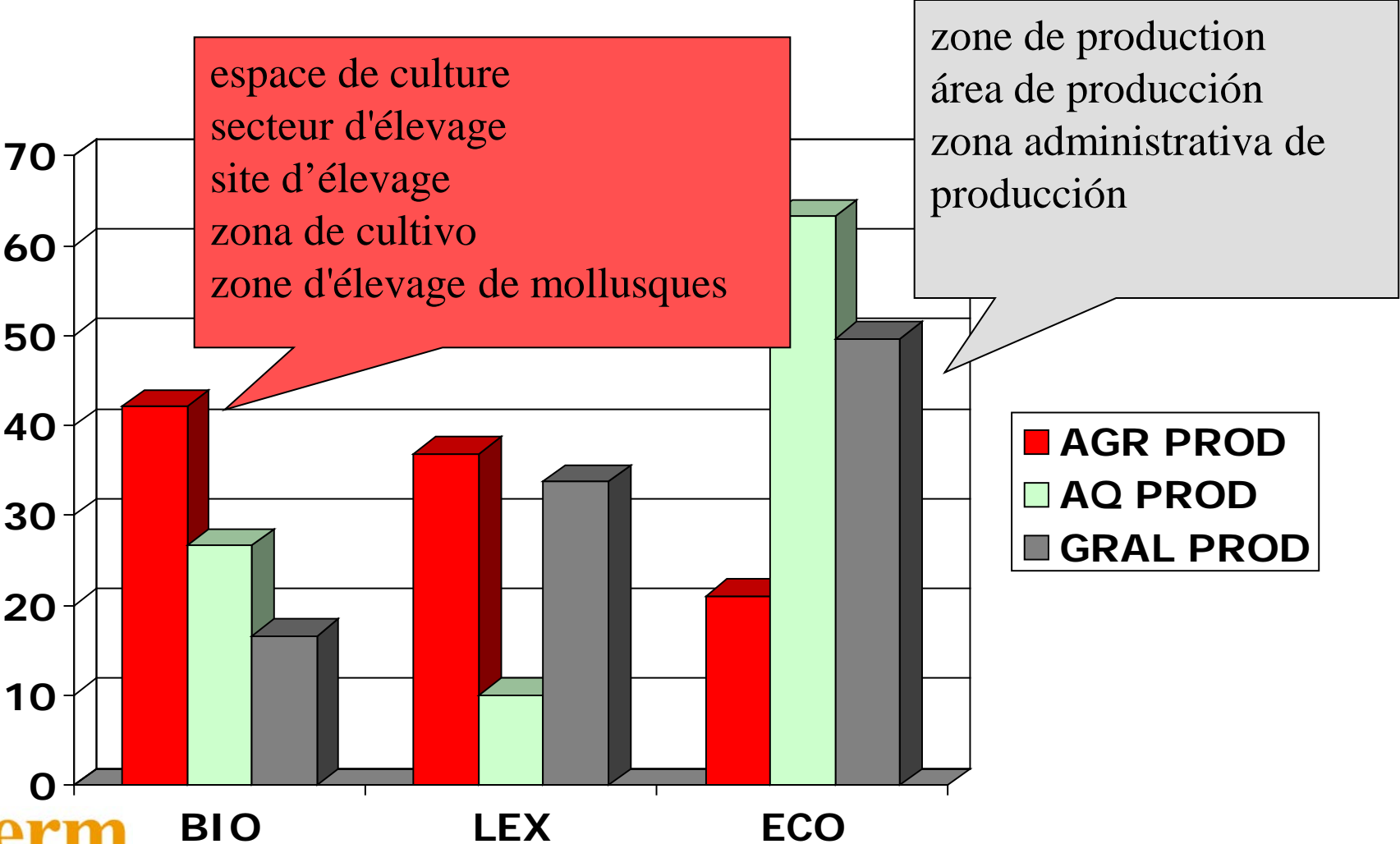
Cultural motivation: French Vs Galician naming preferences

		FRENCH	GALICIAN
HEAD	MODIFIER	“having a shell”	“from the sea / two valves”
GEO LOC	AQUAT PROD	<i>Bassin</i> conchylicole <i>Espace</i> conchylicole <i>Zone</i> conchylicole	<i>Zona</i> <i>de</i> marisqueo <i>Zona</i> marisqueira
GEO LOC	GRAL PROD +ANIMAL	<i>Zone de production de</i> coquillage	<i>zona de produccion de</i> bivalvos <i>zona de produccion de</i> moluscos bivalvos e outros invertebrados mariños

Analysis: concept of « production area » in aquaculture

- Conceptual motivation → role of concept class
- Cultural motivation → role of language system
- Contextual motivation → **role of sender's perspective**
 - ¿Do experts belonging to different subject fields make identical lexical choices?

Contextual motivation: role of perspective in naming



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Concluding remarks

- Motivation in term formation and term variation
- Step towards the understanding of term formation and term use in real communication contexts

- Need to examine a larger amount of data
- Other contextual factors involved in lexical choice
 - Text type
 - Level of specialisation
 - Purpose of the text

The multiple motivation in the denomination of concepts

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