

Shipping forecasts as examples of controlled languages - A cross-linguistic (NL, FR, GE) and cross-medial analysis (print, radio)

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Structure

1. Contextualization
2. Research questions
3. Theoretical and methodological frameworks
4. Exemplification on a trilingual data set
5. Outlook

1. Contextualization

- TIL research lab (uB) working in the field of specialized communication studies (Schubert 2011, Gautier 2014, 2019)
- Previous work on sensory-related discourses (taste, olfaction)
- Focus on the perceptual dimension of many sensory discourses with a phenomenological approach (Bach 2022a, b)
- New extension: weather discourses (Vince Liégeois' PhD thesis)

1. Contextualization

- Weather as “phenomenon” with several linguistically relevant dimensions (in analogy to Bach 2022b) :
 - Scientific dimension, linked to many disciplinary fields => science communication and “traditional” LSP research
 - Emotional dimension, linked to conceptualization dynamics and one’s own “weather experience”
 - Discourse dimension, linked to text types varying from “formal” ones (weather forecasts from weather services) to colloquial interactions (speaking about weather)

1. Contextualization

- Focus here on **shipping forecasts** as a subtype of weather forecasts
 - Narrow field of application characterized through restrictions: restricted geographic areas, restricted weather phenomena, restricted specialized milieus (fishermen, military forces, sailors)
 - Emergence of a “fishing forecast style” known outside of the concerned milieus, especially through the radio programs dedicated to these forecasts

<https://anchor.fm/random-shipping-forecast/episodes/Tuesday--April-20th-2021-evb5dn>

1. Contextualization

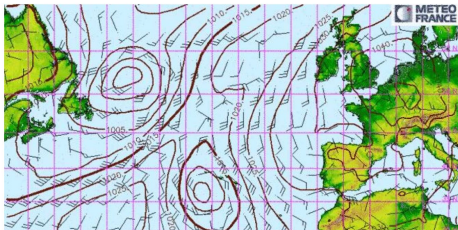
- End of the French radio programme in Dec. 2016 became a “national event”, most media speaking of the “poetic” dimension of shipping forecasts

France Inter met fin aux ondes longues et dit bon vent à sa météo marine

A partir du 1er janvier, la station va cesser d'émettre sur les grandes ondes, marquant la fin de la fameuse météo marine.

Le Monde

Publié le 28 décembre 2016 à 15h49 · Mis à jour le 30 décembre 2016 à 09h59 · Lecture 3 min.



Une carte de météo marine de Météo France du 28 décembre 2016. METEO FRANCE

C'est la fin d'une ère d'un peu plus de cent ans. A partir

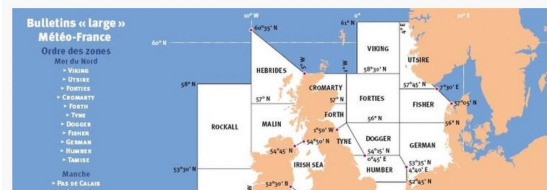
Les plus lus

- 1 Chelsea Manning « Maintenant, déc est considéré con criminel »
- 2 Guerre en Ukrai des explosions e; Kharkiv et 13 mo

Accueil / Société

Fisher France Inter dit bon vent à sa météo marine

Le 1er janvier 2017, France Inter cessera d'émettre sur les grandes ondes (162 kHz), et la météo marine diffusée uniquement sur ce type de fréquence, disparaît. Fini les bulletins émaillés de Cromarty, Circéo, Iroise, ou Pazenn : la fin d'un voyage sonore et poétique.



🏠 • Médias

RIP la météo marine !

Après Bowie, Mohamed Ali ou Carrie Fisher, c'est la météo marine et les grandes ondes de France Inter qui passent de vie à trépas en 2016. La fin d'un monde.

Source AFP

1. Contextualization

- Specificities:
 - Cross-medial existence: print (originally as telex), radio, web
 - Need for immediate and direct comprehensibility in all media
 - "High pressure" of the conceptual structure of field, as reflected in the underlying ontology (Velu, Tanghavelu 2022)
 - Morphosyntactic mapping

Table 1: Top-level concept and sub-concept information of the developed OWO ontology

Top-level concepts	Respective sub-concepts
GEO_LOCATION	Latitude, longitude
DATE	Instances, date, year
TIME	Interval, hours, minutes, seconds
WEATHER_ATTRIBUTES	Fog, Aerosol_Optical_Thickness, Cloud_Cover, Precipitation_Rate, Relative_Humidity, Wind_Speed, Wind_Direction, Wind_Gust, Barometric_Pressure, Atmospheric_Pressure, Sea_Surface_Temperature, Air_Temperature, Conductivity, Solar_Irradiance, UV_Index
WEATHER_CONDITION	Good, bad, severe
WEATHER_PHENOMENON	Cyclone, storm, water spout, marine heat waves

Table 2: Weather attributes involved in each phenomenon

Weather phenomenon	Weather attributes
Cyclone	Barometric_Pressure, Relative_Humidity, Wind_Speed, Precipitation_Rate, Sea_Surface_Temperature
Storm	Barometric_Pressure, Precipitation_Rate, Wind_Speed, Cloud_Cover
Water Spout	Relative_Humidity, Wind_Speed, Air_Temperature, Water_Temperature
Marine Heat Waves	Relative_Humidity, Sea_Surface_Temperature, Water_Temperature_100 m, Water_Temperature_200 m, Cloud_Cover, Precipitation_Rate

2. Research questions

- Which theoretical and methodological frameworks to capture these specificities within LSP-research?
- Does a homogenous cross-linguistically fixed text type exist?
- If yes, how can it be modeled?

3. Theoretical and methodological frameworks

- The specialized field as a starting point within the framework of situated linguistic research (Condamines/Narcy-Combes 2015, Gautier 2019), including an ethnographic approach (Wozniak 2019)

field/domain => conceptual structure/ontologies



community of practice and knowledge => linguistic and non-linguistic components



discourse => text and interaction types



corpus => data basis

3. Theoretical and methodological frameworks

- Weather-linguistics as part of *Ecology of language* (implemented for sensory linguistics, Cahuana/Gautier/Méric 2020)

The International Ecolinguistics Association is a network of more than 1000 researchers from around the world who share ideas, opinions and articles about ecolinguistics. Ecolinguistics explores the role of language in the life-sustaining interactions of humans, other species and the physical environment. The first aim is to develop linguistic theories which see humans not only as part of society, but also as part of the larger ecosystems that life depends on. The second aim is to show how linguistics can be used to address key ecological issues, from climate change and biodiversity loss to environmental justice. If you would like to join us then please click join in the top menu.

- Two ecological dimensions:
 - Link between **language(s) and natural environment** as the ontology is nature-bound
 - Heterogeneity within the community of practice and knowledge, esp. role of dialects, jargons, substandard
- => VS **shipping forecasts as highly homogeneous texts with no place for variation**

3. Theoretical and methodological frameworks

- Choice of controlled language approach :

Controlled language is a subset of natural language with a restricted grammar and vocabulary that reduces or eliminates ambiguity and complexity. (Bussey 2020)

- Main features: recurrence, reproducibility & predictability
- Pattern-based approach combining:
 - lexico-grammatical features
 - semantic stability
 - functional validity

4. Exemplification on a trilingual data set

- Brief characterization of the data

- "Print texts": FR, GE, NL

Nordseeküste:

Ostfriesische Küste:

Südwest bis West um 4, nord- bis nordostdrehend, etwas abnehmend, anfangs diesig mit Nebelfeldern.

Elbmündung:

Südwest bis West um 4, nord- bis nordostdrehend, etwas abnehmend, anfangs diesig mit Nebelfeldern.

Helgoland:

Südwest bis West 4 bis 5, norddrehend, später abnehmend 3, See 2 Meter.

Nordfriesische Küste:

Südwest bis West 4 bis 5, norddrehend, später abnehmend 3, See 2 Meter.

Elbe von Hamburg bis Cuxhaven:

Südwest 2 bis 3, vorübergehend 4, norddrehend, anfangs diesig mit Nebelfeldern.

- Transcripts of radio broadcasts: FR (Radio 5 Bretagne), GE (NDR)



4. Exemplification on a trilingual data set

- Lexico-grammatical features:

FR/<Dépression 1007 hPa au large d'Ouessant>, se creuse et se décale <vers le sud-est>, prévue <1001 hPa sur les Pays de la Loire ce soir>. Elle se comble <sur le centre de la France demain dimanche>. <Dorsale atlantique se renforçant à l'arrière>

GE/<Ostfriesische Küste> <Südwest bis West um 4>, <nord- bis nordost >-drehend, etwas abnehmend, <anfangs diesig mit Nebelfeldern>.

NL/ <Duitse Bocht> <noord tot noordwest 4-5>, <ruimend noordoost 3-4>, <zicht goed>

- <> : paratactic concatenation of conceptual segments linking different information categories: <phenomenon> + <measure> + <localisation> + <time period>
- few verbs, all of them verbs of movement, typically restricted to French
- typical use of past and present participles

4. Exemplification on a trilingual data set

- Semantic stability:
 - Direct reflect of the underlying ontology (=> can then be taken as the basis of the lexico-grammatical patterns)
 - Can be conceptualized linguistically as a "frame" derived the general "weather frame"

FEs:

Core:

Place [P]

Semantic Type: Locative_relation

This FE identifies the **Place** where the weather occurs.

Time [T]

Semantic Type: Time

Non-Core:

This FE identifies the **Time** when the weather occurs.

Specification [Spec]

This FE identifies a further **Specification** of the weather conditions.
An **icy STORM** hit the Northeast last night.

* <Place>: maintained, closed list of sea zones

* <Time>: maintained

* <Specification>: compulsory element

* <Phenomenon>

=> postulating a complex slot: <Phenomenon +
ication>

* <Movement>_{<place>}/_{<time>}<evolution> of the phenomenon

4. Exemplification on a trilingual data set

- Functional validity
 - High degree of isomorphy between semantic content and its “morpho-syntactic encapsulation”
 - A kind of direct, but linguistically unmarked verbalization of the entire ontology (concepts / relations)
 - Enables an automatic comprehension for the intended audience?

5. Outlook

- A first approach to a neglected dimension of weather linguistics
- Very productive for cognitive approaches: ontologies, frames, and formulaic language (patterns, constructions)
- Real challenge for NLP (and NLP research)
- Very interesting ecological, sociological and sociolinguistic dimension to be studied further

Thank you for your attention!

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