TABU DAG

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Book of Abstracts

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Language and persuasion: little words that make a BIG difference in persuasion-in-interaction

Dr. Bogdana-Raluca Huma

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Abstract

Across the social sciences, there is a wealth of research on the role that language plays in persuasion. Most studies have been conducted in experimental settings and have focused on identifying the effects that particular linguistic choices have on how persuasive messages are understood, processed, and ultimately complied with. As such, language is reduced to a set of inputs for individual cognitive processes and persuasion constitutes the outcome thereof. These conceptions of language and persuasion are at odds with insights from studies of naturally occurring language-in-use. Conversation analysis (CA) and discursive psychology (DP) have shown that, in interaction, language is treated by interactants as social action. Moreover, the sequential properties of language-in-use, such as rendering particular responsive actions conditionally relevant or preferred/dispreferred, lend themselves as means towards persuasive outcomes.

There is a growing body of CA/DP research that investigates how aspects of sequence organisation (Humă et al., 2019, 2020), turn design (Llewellyn, 2015), and lexical choice (Sikveland & Stokoe, 2016, 2020) are implicated in persuasion. The present study contributes to this body of work by zooming in on two configurations for formatting requests in sales interactions: *when* formulated sales requests such as 'But initially: wha- *when* would be a good time to cal- come down to see yourselves about this.' and *if* formulated sales requests such as '#U::h I >w's jus' really seein'< *if* we could come down and have a chat to you about Yeltel.'. Using CA and DP to analyse a corpus of 150 telephone calls between salespeople prospective customers, I will attempt to argue that choosing the former configuration instead of the latter is more conducive for persuasion. In explicating these findings in terms of the opportunities afforded by the two configurations to produce a rejection of the request, this study strengthens the claim that, in social interaction, persuasion is mainly realised through the architecture of possibilities for action and not through the effects of language-in-use on individual minds.

Bio

I am an Assistant Professor in the department of Language, Literature, and Communication at the Vrije Universiteit Amsterdam. My research focuses on how language is used in everyday domestic and institutional interactions with a view to developing practical applications and communication training. Drawing on a range of interactional methods – discursive psychology, conversation analysis, ethnomethodology, and membership categorisation analysis – I have examined, for example, how first impressions authenticate assessments, how

persuasion and resistance are practically accomplished in sales calls, and how accusations of mansplaining are constructed and dealt with across different institutional settings.

The contribution of 'new speakers' to language revitalisation

Prof. Dr. Michael Hornsby

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Abstract

The term 'new speaker' is most comfortably located within minority language sociolinguistics, but its use has extended more generally to critical sociolinguistics. The paradigm is used as a framework to engage with debates around language, ownership, authenticity and legitimacy. In many minority language communities, particularly in the context of European minority languages, there are now significant numbers of new speakers who are acquiring the language outside of the home or community, as a second or third language. It is in these contexts where this profile of speaker has become widespread and where research on new speakers of minority languages has emerged. Such research is surveyed in this paper and suggestions are made on how the concept can be used to help us understand better the processes of revitalization many minority languages in Europe and beyond are undergoing.

Bio

Michael Hornsby (PhD, DLitt) is currently head of the Centre for Celtic Studies, Faculty of English, at Adam Mickiewicz University, Poznań, Poland. Michael researches minority language sociolinguistics and has written on Breton, Welsh, Lemko and Yiddish, particularly how these languages are being restored and transformed as a result of language revitalization. His current work focuses on community-building among new speaker groups in Lower Lusatia (Germany) and Upper Brittany (France).

Keynote session 3

The melodic mind: Neural bases of speech prosody and music

PD Dr. Daniela Sammler
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Abstract

Language is a multi-faceted faculty that is supported by parallel but interdependent neural networks. Recent years have seen the rise of neural language models that account for this network organization and describe dorsal and ventral streams in the left hemisphere to underlie core linguistic abilities such as phonology, syntax

and semantics. However, much subtlety and complexity of meaning in language is conveyed by the manner of saying—by speech prosody. Early studies with neurological patients suggest that prosodic processing—like music—is a partially right-hemispheric faculty and involves fronto-temporal brain regions that are often thought of as anatomical and functional homologues of left-hemispheric language areas. What is, however, lagging is a network-approach to prosody, hence, leaving fundamental questions unresolved regarding the manner in which the neural language system (i) supports prosodic comprehension, (ii) interfaces prosody with segmental (e.g., syntactic) information, and (iii) how it overlaps with music.

Here, I will present a series of neuroimaging, brain stimulation and lesion studies that reveal intra- and interhemispheric pathways at the basis of prosody perception in speech. The first half of the talk will demonstrate dual (intrahemispheric) processing streams for prosody built on complementary mechanisms that parallel the established left-hemispheric multi-stream architecture of language processing, but with rightward asymmetry. The second half of the talk will argue that the corpus callosum provides the crucial (interhemispheric) brain basis for the online interaction between prosodic and syntactic information during auditory language comprehension. Finally, links to music perception and the benefits of musical training for prosody and language processing will be discussed.

Bio

Daniela Sammler is Head of the Neurocognition of Music and Language research group at the Max Planck Institute for Empirical Aesthetics. After completing her PhD on the neural similarities of music and language at the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig in 2008, she spent post-doctoral residencies in Paris, Glasgow, and Sydney, and used an Otto Hahn Award of the Max Planck Society to establish her own independent research group in 2013. Her work describes the neural bases and links between language and music at various cognitive levels, from the perception of simple harmonic and speech-melodic relations to complex social interactions.

Keynote session 4

Computational modeling of non-native phonetic learning and spoken word processing
Dr. Yevgen Matusevych

CLE and ILCC, University of Edinburgh

Abstract

With the recent rise of deep neural networks for machine learning, these types of models are increasingly being applied to human language acquisition and processing. Interestingly, much less computational modeling work has been conducted to study these processes in bilingual or non-native speakers. In this talk, I present two case studies on native and non-native phonetic learning and spoken word processing in infants and adults. I show how neural networks trained on unsegmented speech data can help us to evaluate and scrutinize

linguistic theories in this domain. At the same time, I also highlight potential difficulties associated with the use of such models, in particular their lack of explicit discrete representations.

In the first study, I consider cross-linguistic data from infants' phone discrimination to test several models. The results show that some of them make better models of infant phonetic learning, but also reveal that the existing data may be compatible with more than one theory. In the second study, I test one of the more successful models on data from non-native adult speakers and show that this model can correctly predict behavioral patterns commonly explained by lexical phonology, even though the model is not equipped with explicit knowledge about lexical phonology. I argue that it may be difficult to make clear-cut conclusions about the model's representations and discuss implications for linguistic theories and computational modeling practices.

Bio

Yevgen Matusevych is a Research Associate at the Centre of Language Evolution and the Institute for Language, Cognition, and Computation at the University of Edinburgh. He obtained his PhD at Tilburg University and then was a postdoctoral researcher at the University of Toronto. He is interested in developing computational models of bilingual and non-native language learning, to understand how linguistic representations from multiple languages interact in the human mind and in the commonly used machine learning architectures. His research spans across several linguistic domains, from speech perception and lexical-semantic organization to morphology and grammar.

Parallel Sessions

Parallel Sessions

Parallel session 1

Qualitative and quantitative analyses of early vocal productions of 6-months old infants with high-likelihood of ASD

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Background: The estimates of recurrence of autism within siblings ranges from 10 to 25% and the probability that they have a history of language delays is three to four times higher than siblings of non-autistic children, viz. with a low likelihood of autism; LL-ASD. Beyond investigations into early markers of ASD, conducting observations of HL-ASD infants could also help delineate early signs of atypical language development. Canonical babbling, emerging around 6-months old represent the first typical pre-speech-language milestones. At that young age, this mix of early vocalizations and canonical babbling can be regarded as the pre-linguistic output made available for researchers.

Objectives: The present study, tested if at 6 months, significant differences already emerging between infants with higher likelihood of ASD and infants with lower risk of autism in term of amount total of productions and of type of productions, as well as consonant and vocalic inventories.

Methods: This corpus is part of the sample of a longitudinal study following infants between 6 and 36-months with HL and LL of ASD (n=84). The sample of the present study is composed of 11 HL-ASD and 17 LL-ASD. Manual transcription of infants' productions was made on a daylong recording at 6-months, at home.

Results: Results showed no significant effect of group on total production neither interaction between group and type of production. In term total volubility per phone, no significant group differences were found either.

Conclusions: Preliminary results shown that quantitative and qualitative differences of infant's productions of both groups are not evidenced by these analyses at 6-months old. Further analyses will focus on acoustics analyses and the relation between early vocal productions and VABS-II scores and later MB-CDI scores.

Describing (pre)linguistic oral productions in young autistic children: a cluster analysis

Pauline Maes, Marielle Weyland & Mikhail Kissine
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Autistic children's language acquisition trajectories are marked by severe delays and great heterogeneity both in the time of language emergence and the rate of language growth. As speech emergence is likely to happen after age 3 and early vocalizations have been found to be linked to expressive language in autism, we used hierarchical data clustering to delineate different profiles of oral productions patterns obtained from transcribed naturalistic speech samples of 59 3- to 5-year-old autistic children. We then described those profiles in terms of concurrent psychometric and demographic measures and later language level. The analysis yielded a clustering solution of five clusters. Based on their patterns of oral productions, two clusters (1 and

4), with overall high cognitive abilities and mild autistic symptomatology, were identified as verbal. Cluster 1 mainly used phrase speech. Cluster 4 mainly produced isolated words. Likewise, three clusters (2, 3, 5), with low cognitive abilities and severe autistic symptomatology, were identified as preverbal. Cluster 2 was almost silent. Cluster 3 used a fair amount of preverbal and syllabic productions. Cluster 5 used a lot of syllabic productions, especially. Age was not related to cluster membership suggesting that younger children were not more likely to be in the preverbal stage, and older children in the verbal stage. Finally, children in cluster 4 were the only ones to display a significant increase in expressive vocabulary between the time of the study and one year poststudy, suggesting that their language was developing. Those results suggest that traditional binary divisions of verbal vs. nonverbal children are insufficient to describe comprehensively the complexity of early expressive language in autism.

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Investigating the effect of neurotype-matching on communication efficiency and first impressions of verbal interactions

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Interaction difficulties in autism have traditionally been conceptualized as specific to autistic individuals but recent studies suggest that they are a two-sided problem (1). This bidirectional problem is reflected in studies showing that non-autistic (NA) individuals form less favorable impressions of autistic (ASD) individuals than of

their NA peers, resulting in greater reluctance to interact with them (2,3) and that mixed-neurotype dyads (ASD-NA) experience more misunderstandings than same-neurotype dyads (ASD-ASD & NA-NA; 4,5). In this study, we investigate communication efficiency and first impressions of verbal interactions using an online version of the Director Task (DT), across three dyad types (ASD-ASD, NA-NA & ASD- NA).

In the DT, dyads need to organize unlexicalized images in a specific order across several turns. To do so, they need to create novel referential expressions for these images. Expression length (in words) reflects the extent

to which the speaker believes the addressee knows the established expressions (6–8). Dyad members communicate about these images across several rounds, prompting them to negotiate shorter descriptions and therefore taking less time to complete a round. The DT thus provides objective measures of conversation outcome which can then be related to more subjective measures (ratings). Following the DT, dyad partners engaged in an unstructured, get-to-know-you task. Afterwards, they rated each other's discourse abilities (ex., coherence), interaction quality & likelihood to hang out.

This study is on-going and preliminary results suggest turn duration decreases for all dyads. Furthermore, during the DT, perceived discourse coherence, fluidity, efficiency, and interaction quality does not differ across dyads. However, during the get-to-know-you task, same-NT dyad members rated their partner as more coherent and efficient and the interaction less strange than members of same-ASD and mixed dyads. Finally, mixed dyads members rated it less likely to hang out with their partner than those of same-neurotype dyads.

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Restrictions on aspectual reduplication in Sign Language of the Netherlands (NGT)

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This research focuses on aspectual reduplication in NGT, since two previous studies on this topic present conflicting results. One study [1] finds phonological restrictions on habitual and continuative marking: verbs with hand-internal movement or body contact cannot be inflected. Yet, another study [2] reports that there are no phonological restrictions and that all verbs can be reduplicated.

The present study comprehensively investigates habitual, continuative, and iterative marking in NGT. A novel elicitation task was developed, which elicited aspectual marking on NGT verbs with different phonological features from six deaf, native signers. Table 1 presents the results.

Type	N	Predicate reduplicated
Continuative	33	8 (24%)
Habitual	38	8 (21%)
Iterative	52	37 (71%)
Table 1. Aspectual reduplication in NGT		

Clearly, reduplication is optional for all aspect types. Further, the previously identified phonological restrictions hold to some extent for habituals and continuatives: internal movement in the form of handshape change indeed blocks reduplication. The other restriction, body contact, however, requires adaptation: only contact with the trunk blocks reduplication, while reduplication is possible when another body part is contacted. For example, MELT, a body-anchored predicate involving contact with the non-dominant hand, allows reduplication (1). In contrast, HUG, which contacts the trunk (2), cannot be reduplicated.

(1)   (2)

Yet, all types of predicates can undergo reduplication for iterative aspect. Strikingly, the movement cycles in iterative reduplication are separated by means of pauses, which is not the case for the other two aspects. This strongly suggests that only reduplication without pauses between cycles is phonologically restricted. Our study

thus sheds a different light on previous findings, indicating that restrictions on reduplication may be a consequence of the inflectional morpheme rather than of phonological features alone. Importantly, we find that these observations also hold for semi-spontaneous naturalistic data from the Corpus NGT [3].

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Where to look when someone is choking? A corpus study of elements and genre patterns used in choking posters

Nina Van der Velden
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This talk will present results from a multimodal corpus analysis of 28 visuo-verbal posters that instruct people how to save a life when someone is choking (Van der Velden, 2022). Such emergencies often happen when one least expects them, and bystanders should be able to get the information they need in order to help as soon as possible. For this reason, many public places present a poster at a visible place to show the procedure. Interestingly, there are no specific layout requirements for these posters and there exists a large variety of poster designs around the world.

The talk will demonstrate how the various layout strategies of those instructional posters can be analysed with the help of a multilevel stand-off annotation scheme and asks: *"What are the significant elements and their correlations in the layout of choking posters and which genre patterns exist in these posters?"* The scheme is based on the GeM model (Bateman, 2008) and includes a textual, graphical and diagrammatical annotation layer, which all contain multiple sub-layers such as font differentiation, step indicators and arrows. The main aim is to identify all occurring units within posters, such as headlines and sentences as well as colour and pictograms, and to analyse the 'genre patterns' used in these posters, i.e. the relationships between these elements and the unfolding communicative structures.

After showcasing some posters, the talk will present the results of the study. These show that while the posters are mostly visually-based, textual elements still occur more often. Genre patterns can mostly be found in the body: in headings, multiple paragraphs, additional drawings and the usage of frames and boxes. The study makes an important contribution to the current trend of pursuing multimodal empirical analyses and provides important insights in visual design strategies and layout as a semiotic mode.

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Online Perception of Covid-19 Vaccines: Sentiment Analysis of Twitter posts

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During the Covid-19 pandemic, divergence in opinions and feelings emerged in the population around the world, especially after the rollout of vaccination campaigns in early 2021. Online discourse soon became polarized, as groups of people expressed strong criticism towards the vaccines. This proved to be a serious challenge for the success of vaccination campaigns, as it affected vaccine hesitancy. Using Twitter's Application Programming Interface (API) to collect data and create a corpus of tweets, this paper studied the words that are associated with vaccines and performed a sentiment analysis to answer the questions "How do adjectives related to Covid vaccines compare to random tweets? What sentiments are linked to Covid vaccines at the beginning of 2022?"

Building from previous research, the data collection took place over the course of three weeks (25 January to 15 February 2022) focusing on tweets written in English and characterized by four vaccine-related hashtags: #CovidVaccines, #Vaccines, #Vaccine, #COVIDvaccines". The dataset was compared to a group of random tweets in English of similar size. The dataset was prepared for analysis using corpus linguistics techniques in RStudio (tidytext, stringr and dplyr) to obtain unigrams. The analysis showed a weak but significant correlation ($r = 0.325$, $p < .001$) in the frequency of words in the two corpora. This similarity was also reflected in the sentiment values, analyzed through the AFINN sentiment lexicon. Positive and negative terms were similar across the two groups, whereas the words with a neutral sentiment (between -3 and +3) were different. It was noted that the vaccine corpus included context-specific terminology related to the pandemic ('shot', 'medical', 'variant'), as opposed to the control group which included abstract words not related to any topic in particular.

Nothing but the truth: a Systematic Review on Methods to Reduce Social Desirability Bias in Questionnaires

Emma Zaal, John Hoeks and Yfke Ongena

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Interactions about behaviors and cognitions are inevitably affected by Social Desirability Bias (SDB) - presenting a better version of yourself by providing biased self-reports. This phenomenon creates serious problems for communication research that uses interviews and surveys. SDB can significantly affect study outcomes by making respondents' self-reported behavior and cognitions diverge towards perceived social norms. For instance, people have a tendency to overreport healthy behavior such as exercising and to underreport unhealthy behavior like substance use. SDB also increases occurrences of non-response (leaving questions unanswered) which reduces data quality. It is generally recognized that SDB is a serious concern that needs to be dealt with urgently. However, to date we are still in the early stages of unraveling the mechanisms underlying SDB and the complex interplay between characteristics that play a role in it. For instance, we currently do not know what the most optimal ways are to reduce SDB in research using questionnaires.

Therefore, a systematic review was carried out that collected and investigated experimental studies published from 2017-2021 on SDB reduction in questionnaires. The review provides a general overview of methods that are used to reduce SDB, including the most promising methods currently known. The overview includes recommendations based on the specific topic under discussion (e.g., exercising and alcohol consumption), question wording manipulations that steer respondents away from SDB (e.g., forgiving wording, indirect questioning), and context features (e.g., mode of administration) associated with reducing SDB. In addition, we address theoretical and practical knowledge gaps that still exist in relation to reducing SDB. Lastly, we will give recommendations on what types of studies are still needed to further knowledge on reducing the impact of SDB.

Assessing the transformational claim of Translanguaging: Theory and implementation

M. Rafael Salaberry

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Both the implementation of language policies (at an institutional level) and the promotion of multilingual practices (at an individual level) are affected by educational frameworks and pedagogical practices (e.g., DeGraff & Stump, 2018; Makoni & Pennycook, 2007; Mendoza, 2021; Pennycook, 2002). In this regard, heteroglossic perspectives on language use (e.g., translanguaging, polylanguaging) have had enormous influence in the contexts of bilingual and multilingual education (e.g., Blackledge & Creese, 2014; García & Kleyn, 2016; Møller, 2019). However, there have been numerous critiques of heteroglossic approaches and of translanguaging, in particular.

Among the most vocal critics of translanguaging, Jaspers (2018, 2019), has called for undoing translanguaging approaches, basing his critique on two major claims. First, he argues that the combined focus on non-standard repertoires (primarily home languages) and the standard variety of language (majority language) creates a paradoxical situation that cannot be resolved by the educational system. Second, because of the previous constraint, Jaspers claims that the intended goal of promoting heteroglossic perspectives on language (and the displacement of a monoglossic one) should not be a responsibility assigned to teachers and students, but rather this major societal goal should be pursued by non-educational governmental institutions and the public at large.

In the present paper, I argue that both of Jasper's critiques are unfounded. First, I substantiate that heteroglossic approaches, by definition, constitute an integrated view of language practices oriented toward the development of both fixed and fluid components of the construct of language use. Second, and more importantly, the intended change in perspective (from a monoglossic to a heteroglossic one) must be pursued by both educational institutions as a well as non-educational ones, because the development of literacy represents a critical entry point towards the development of metalinguistic and metadiscursive awareness that is necessary to develop a heteroglossic perspective.

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The construction of a dynamic Corpus for the investigation of the US foreign Policy on the East Mediterranean through Greek Online Media

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The East Mediterranean area has been drawing global attention for many decades now. Its geographical placement, connecting the continents of Europe, Africa and Asia, as well as the presence of natural resources in between its borders, such as oil and natural gas, have been the main factors for the interest many countries have shown to this region (Litsas & Tziampiris, 2019: 56; Marshall 2019: 200). This research is part of a project on the foreign policy of the USA over the East Mediterranean through Greek online media during Barack Obama's (2009-2017) and Donald Trump's (2017-2021) Presidential terms ("Presidents", n.d.). This specific period was chosen since Obama has been the first African-American President and his election drew worldwide attention, enhancing the global focus, among other topics, on his country's foreign policy ("Barack Obama", n.d.). We also harvest online articles published during the consequent period of Trump's Presidency, in order to compare the reception by the Greek media of the two Presidents' points of view on the East Mediterranean. In this current study, we construct a dynamic corpus in order to investigate the amount and type of interest shown by Greek online news media to the US foreign policy covering the East Mediterranean, with the intention of enriching the aforementioned corpus with future research material (Goutsos & Fragkaki, 2015: 10). We, therefore, explore the number of articles published online covering the period of Obama's Presidency as well as the number of articles covering the period of Trump's Presidency, we encounter the construction of the dynamic corpus and we proceed to comparisons on the language material collected for those two periods for the extraction and analysis of linguistic, political and communication information.

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"I would rephrase this" Conversation analytic research into how students respond to 'I would' in combination with advice within academic feedback conversations

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Feedback is an indispensable part of education. When properly applied, teachers can motivate students and help them develop their knowledge, skills and behavior by giving them insight into their strengths, weaknesses

and how to improve (Mainhard et al., 2009; Vehviläinen, 2012). A specific activity within the feedback conversation is giving advice (Vehvilaïnen, 2012). A teacher can express his advice in different ways. For example, the teacher can formulate the advice as an objective standard ("You should always do it this way"), but it can also be formulated based on personal preference ("I would do it this way (if I were you)"). An English-language corpus of academic feedback conversations between teacher and students shows that the teacher's personal preference in the form of 'I would' regularly emerges. Although more research has been conducted on giving and receiving advice in feedback conversations within education (e.g., Waring, 2007; Vehviläinen, 2009; Park, 2014; West, 2021), little is known about how students respond to specific practices, such as advice formulated from personal preference, in which the teacher involves himself. This conversation analytic study therefore looked at the provision of advice by two teachers during academic feedback conversations with two groups of five to six students. The focus was specifically on moments when the teacher expressed 'I would' in combination with advice. In this presentation, the eight different forms of response to this form of advice will be discussed.

Influence of language on concept formation and perception in a brain-constrained deep neural network model

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Whether language influences perception and thought remains a subject of intense debate (1, 2). We address this question in a brain-constrained neurocomputational model (3) of fronto-occipital (extrasylvian) and fronto-temporal (perisylvian) cortex including spiking neurons. The unsupervised neural network was simultaneously presented with word forms (phonological patterns, "labels") in perisylvian areas and semantic grounding information (sensory-motor patterns, "percepts") in extrasylvian areas representing either concrete or abstract concepts. Following the approach used in a previous simulation (4), each to-be-learned concept was modeled as a triplet of partly overlapping percepts; the models were trained under two conditions: each instance of a perceptual triplet (patterns in extrasylvian areas) was repeatedly paired with patterns in perisylvian areas consisting of either (a) a corresponding word form (label condition), or (b) noise (no-label condition).

We quantified the emergence of neuronal representations for the conceptually-related percepts using dissimilarity (Euclidean distance) of neuronal activation vectors during perceptual stimulation. Category learning was measured as the difference between within- and between- concept dissimilarity values (DissimDiff) of perceptual activation patterns.

Results

A repeated-measures ANOVA with factors SemanticType (concrete/abstract) and Labelling showed main effects of both SemanticType and Label, and a significant interaction. We also quantified the "label effect" in percentage change from NoLabel to Label conditions, separately for between- and within-category dissimilarities. This showed that the label effect was mainly driven by changes in between-category dissimilarity, was significantly larger for abstract than concrete concepts, and became even larger in the "deeper" layers of the model.

Conclusion

Providing a referential verbal label during the acquisition of a new concept significantly improves the cortex' ability to develop distinct semantic-category representations from partly-overlapping (and non-overlapping) perceptual instances. Crucially, this effect is most pronounced in higher- order semantic-hub areas of the network. These results provide the first neurocomputational evidence for a "Whorfian" effect of language on perception and concept formation.

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Bilingual experience and resting-state brain activity in adulthood

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A growing body of research shows bilingual experience to affect neurocognition, although results vary across studies (e.g., Lehtonen et al., 2018). Some of this variability stems from how bilingualism is represented. Bilingualism studies have historically examined bilingualism as a binary variable. However, bilinguals are a heterogenous group and differ in their bilingual experiences: bilinguals may differ from one another, for example, regarding their language use (Luk, 2015). A recent movement has started to operationalize bilingualism as a spectrum in which various experiential factors play an important role in determining specific neurocognitive outcomes (e.g. DeLuca et al., 2019).

The present study adopts these individual differences approach, investigating the effect of various bilingual experiences on resting-state electroencephalogram (EEG) brain activity. Previous research has shown that bilinguals differ from monolinguals in terms of resting-state (EEG) brain activity. Bilinguals were found to exhibit greater resting-state brain coherence in alpha and beta frequency bands compared to monolinguals (Bice et al., 2020). Additionally, Pereira Soares and colleagues (2021) found evidence for bilingual experiences (e.g., non- societal language use at home) to affect resting-state brain coherence in younger adults. These studies suggest that bilingual experiences impact the brain's resting-state activity.

The current, ongoing study thus examines the effect of various bilingual experience factors (e.g., intensity of engagement) on resting-state (EEG) brain coherence in (older) adults (>45 years-old) and crucially in conjunction with several other lifestyle factors related to neural plasticity in aging. Based on previous studies, we predict a positive correlation between intensity of (bilingual) language engagement and resting-state brain coherence in adults (>45 years-old) across different frequency bands.

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Processing polysemy: evidence from eye movements and pupil dilations

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In human languages, lexical ambiguity, the phenomenon of a single word having various senses, is pervasive. Polysemy, a subdivision of lexical ambiguity, refers to associating one linguistic form with more than one meaning (Cruse, 2000) and can be regular or irregular, involving different associations between meanings (Carston, 2021). This thesis will use eye-tracking methodology to investigate the processing of irregular cases of polysemy and, more specifically, cross-categorial denominal verbs, verbs that come from nouns through what is often called 'conversion' (e.g., button a coat).

Various studies (Frazier and Rayner, 1990; Frisson and Pickering, 1999; Pickering and Frisson, 2001) have used eye-tracking during sentence reading to investigate the processing of ambiguous verbs showing that readers use contextual information in the early stages of resolving meaning ambiguities, in contrast with findings concerning the processing of nouns (e.g., Rayner and Duffy, 1986). In addition, previous research has shown that pupil dilation measures reliably reflect cognitive effort in language processing (Vogelzang et al., 2016; Engelhardt et al., 2010). In a new study by Vogelzang and colleagues (in prep.), longer reading times were found for the critical denominal verb condition compared to the noun condition Thus, we expect the current eye-tracking study to reveal important insights into denominal verbs' processing. We will look at the eye-tracking data of 30 monolingual British English speakers performing a sentence judgement task, and our hypotheses would, thus, be longer first-pass fixations and larger pupil dilations for the denominal verb condition.

Furthermore, when faced with a cross-categorial polysemous word, readers should be flexible to grasp the new senses of words through pragmatic inference (Carston, 2021). The processing strategy would require cognitive flexibility; the ability humans have to adjust their responses and representations to new and unforeseen circumstances in the environment (Tsimpli et al., 2020). In a secondary analysis, we will also investigate possible links between cognitive flexibility and the processing of polysemous denominal verbs.

The real-time resolution of quantifier scope ambiguity: A visual world study[1]

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[1] Authors' note: This study is preregistered: https://osf.io/75juf

The sentence *All of the wolves spotted a log* is scopally ambiguous: *All* can take wide scope (resulting in the *universal-wide* interpretation, in which all wolves spotted different logs) or *a* can take wide scope (resulting in the *existential-wide* interpretation, in which the same log is spotted by all wolves). The interpretation of these sentences is guided by lexical information: *Each* has a stronger tendency to take wide scope than *all* (e.g., Feiman & Snedeker, 2016; Ioup, 1975). But how does quantifier- specific information guide scope ambiguity resolution in real-time language processing? When are quantifier-specific biases integrated in the sentence's interpretation in comprehension?

We introduce a novel (web-based) experimental paradigm to test these questions. Participants listen to a doubly-quantified sentence while looking at a display with four items (Figure 1, cf., Huettig, Rommers & Meyers, 2011). Two of these items depict different multitudes of the sentence's theme (the *multiple -theme* vs. the *single-theme* picture). The participant's task is to select the items that match their interpretation of the sentence: The multiple-theme picture reflects the universal-wide interpretation, and the single-theme picture reflects the existential-wide interpretation. Eye-movements are recorded (using the participant's webcam) to gain insight in the real-time interpretation of the sentences (cf. Huang & Snedeker, 2009; Thothatiri & Snedeker, 2008).

The universal quantifier in the subject phrase is varies between *each* and *all*, which is manipulated between participants ({*Each/All*} *of the wolves spotted a log*). Preliminary data (*n* = 12 out of 48) reveals more multiple-theme selections in the *each* than in the *all* condition (Figure 2; replicating Feiman & Snedeker, 2016; Ioup, 1975). Moreover, participants (descriptively) look more at the multiple-theme picture shortly before and during the onset of the verb in the *each* than in the *all* condition (Figure 3). Listeners thus integrate quantifier-specific information incrementally in sentence interpretation: They use lexical information to predict the scope of the sentence constituents before the onset of a second quantifier (cf., Altmann & Kamide, 1999, Fodor, 1982, *inter alia*). This fits a hypothesis in which different sources of information that guide ambiguity resolution are processed in parallel (e.g., McRae & Matsuki, 2013).

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Figure 1. Example display of a critical trial. This display is paired with the sentence *{All/Each} of the wolves spotted a log.* The top-left item displays the agent of the sentence, the top-right item is a distraction agent item, the bottom-right picture is the *single-theme* picture, and the bottom-left picture is the *multiple-theme* picture. The green circle in the center of the screen denotes that the auditory stimulus is playing. The purpose of this circle was to centralize looks before the sentence onset.
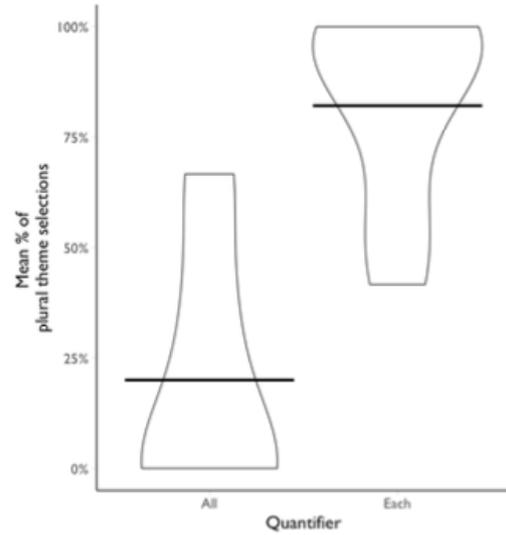
Figure 2. Proportion of plural theme selections in the *all* and the *each* conditions of 12 participants (7 in the *each* condition, and 5 in the *all* condition). The data suggest that participants select the plural theme picture more often in the *each* condition than in the *all* condition, which indicates a higher proportion of universal-wide interpretations in the *each* condition. The black bars represent the mean, and the outline of the blobs represent the density of the data.
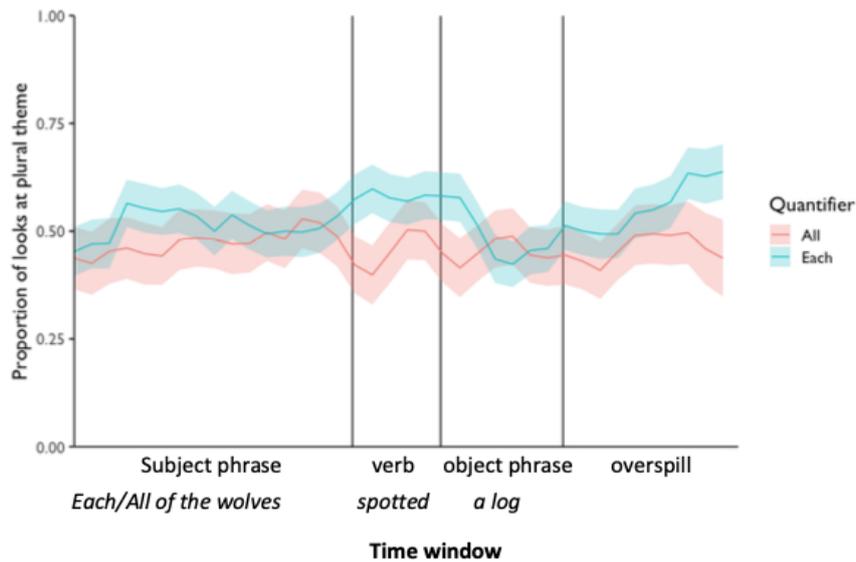
Figure 3. Time course of the looks at the plural theme of 12 participants (7 in the *each* condition, and 5 in the *all* condition). Descriptively, participants tend to look more at the plural theme before and during the verb in the *each* condition compared to the *all* condition.

Sociolinguistic variation in auxiliary selection in a dialect of eastern Campania

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The intent of my proposal is to focus on the verbal structures and in particular the auxiliaries used in the municipality of San Nicola Baronia (that has never been considered in dialectological or sociolinguistic studies on the Campania region). This dialect is traditionally characterized by a free auxiliary choice for some verbs, in particular most movement verbs (*andare* 'to go', *muovere* 'to move'...) and for all reflexive verbs.

1. Agg/so jut a lu giardin 'I went to the garden'
2. S'è/ha mbriacat 'He got drunk'

The sociolinguistic survey of the data of San Nicola Baronia (Avellino) collected between December 2020 and February 2021 confirmed this setting in the grammar of the generation over-65. In younger generations free choice of auxiliary is still allowed for reflexive verbs although there is a strong tendency to conform to the use of the auxiliary in the national standard language, Italian. In contrast with non-reflexive verbs (movement verbs) the middle bracket (30-65) has a strong preference for the auxiliary used in Italian while the younger generation (18-30) has completely adopted the Italian setting.

One of the possible reasons for the presence of the auxiliary as the standard in the younger generation is related to university attendance. The 18-30 bracket has a higher percentage of graduates (or those enrolled in degree courses) than the over 65s. For the use of auxiliaries with reflexive verbs, however, other studies will follow.

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Dialectal effects on the perception of Dutch vowels by Standard Modern Greek and Cypriot Greek speakers

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Although the perception of nonnative sounds has been investigated in a great body of studies, the effect of first language (L1) dialect has not received much scientific attention. The aim of this study is to investigate the classification of Dutch vowels in the native categories of Standard Modern Greek (SMG) speakers and speakers of a regional Greek dialect, namely Cypriot Greek (CG). The experimental protocol was based on a production study in which 12 SMG and 12 CG speakers produced their L1 vowels. The output was sent to Praat to measure

vowels' midpoint F1 and F2 values and duration. Data from 20 Dutch speakers were taken from van der Harst (2011). Two native discriminant analysis models were trained on F1, F2, and duration of the 5 SMG and CG vowels /i e a o u/ and the measurements of Dutch vowels /ɪ ɛ ʏ ɑ ɔ i y a u e o ø/ were supplied to the trained native models. The results demonstrated that most Dutch vowels were classified as optimal instances (i.e., /ɪ ɛ ɔ i a u o/) or instances with the highest probability (i.e., /ʏ ɑ e/) in the same vowels in the two varieties as a consequence of the proximity of their vowel systems. However, Dutch vowels /ø/ and /y/ had different classification patterns in the two varieties, allowing different degrees of potential discrimination accuracy of specific Dutch contrasts by SMG and CG speakers. The results yielded that Greek speakers may encounter significant difficulties in discriminating several Dutch vowel contrasts due to differences in the structures of the vowel systems and the acoustic dissimilarity between particular Greek and Dutch vowels. Also, the perception of nonnative sounds is subject to L1 dialectal influence and even slight acoustic differences between speakers' L1 dialects can affect this perception.

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To Kill a Mockingbird and Its Reach to Bosnian/Croatian/Serbian Culture

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This paper deals with the translation analysis of the novel To Kill a Mockingbird from English to Bosnian/Croatian/Serbian language. The analysis focuses on the culture-specific items of the source culture and their transfer to Bosnian/Croatian/Serbian culture. We conduct a qualitative research and explore what kind of translation resulted from certain translation strategies, and how each of these translations contributes to transferring culture- specific items.

The peculiarities of the American Southern culture are not so well-known in our region (consisting of Bosnia and Herzegovina, Republic of Croatia and Republic of Serbia), and this is why certain aspects of the novel may inevitably be lost in translation. How well do we really then understand this highly popular novel? How well have the translators managed to bring the source culture to the readers? And how much have we really asked these questions? It seems that no one has actually ever analyzed the strategies used by these three translators nor made a comparative analysis.

Pointing out successful strategies of the translators does not only showcase their individual works and skills, but it also helps us learn how we can approach certain problematic linguistic elements. On the other hand, explaining why certain strategies have not been successful in conveying culture-specific items helps readers see what they have been missing out from the novel, but even more importantly, it helps translators to focus on these items and understand the importance of finding new and better translation strategies.

In this paper we will show the three translations, analyze their translation strategies, discuss why these strategies may or may not be successful and see how challenging tackling culture-specific items can be, especially when it comes to the culture-specific items of the Southern American culture.

Towards the syntactic function of the particle expressing negation in Svan

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There is a still difference of opinion about the relationship between Kartvelian languages(Georgian, Mingrelian-Laz an Svan) in scientific literature. Some unite them in the Iberian-Caucasian language family, while others consider them as an independent language family. Georgian is the state language, while Svan and Megrelian-Laz are tribal (family function) languages, which are derived from the dialects of one common root language.

The Svan language is rich in particles **expressing negation** and the negative pronouns, negative adverbs and conjunctions derived from these particles. Language uses negative particles to express impossibility of action. **deš || mädš** "no, not, nothing"; negative pronouns: **dešiär || därdmoš** "nobody;" **deššama || dēsamamoš || mangwešmoš** "nothing"; **desiammoš || dēmismoš** "nothing" and negative adverbs: **dēmemoš || demegmoš** "nowhere"; **demxenmoš || dēmxenmoš** "from nowhere"; **dēmčiqsmoš** "never"; **demžimoš** "noway"...
In the report we will focus on the particle **moš,** which plays an important role in terms of expression of **negation** in the sentence.

It should be noted that in terms of the expression of the particle of impossibility, Cholur shows the scantest picture, the form **deš** expresses the particle "**no, not**" (the particle **doš** is seldom confirmed in the speech of the Upper Cholur), as for other means of expressing this function (in all dialects of Svan, including Cholur), they are produced by adding the particle **moš** to pronouns and negative adverbs expressing categorical negation: **dēsmamoš** "nothing", **därdmoš** "nobody"; **dēmemoš** "nowhere"; **demxenmoš** "from nowhere"; **demžimoš** "nothing" and so on.

> Loxwbina čĩte lĩzi laqäbd, mare ču **dēme moš** ləmsķäbwin (upper Bal) "He started to go everywhere to escape, but he could stop nowhere"...

Research has shown that the mentioned particle expressing negation does not always have the function of expressing the impossibility of action, it gives the sentence different semantic nuances, which will be discussed in detail in the report.

Ellipsis is not driven by syntax is driven by syntax

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The *move & delete approach* (MDA) claims that elliptical fragments must move from a deletion domain which *unselectively* elides.[1,2] We offer an alternative explanation: Fragments, we claim, can originate from *all* propositions which serve as coherent, *at-issue* answers in a discourse. Only the licensing of *un*elided materials involves syntax.

According to the MDA, materials that cannot move fail to serve as fragments – e.g., material inside the relative clause (RC) island in (1). However, various problems have been pointed out for the MDA.[3-7]

We show: Continuative relative clauses make assertion-level contributions to the discourse, and thus allow for fragment formation unproblematically (2), as can restrictive RCs, iff their propositions are *at-issue* (3). Furthermore, focus particles can associate with foci inside RC propositions – which then reconstruct (4). We thus assume that syntactic islands play no role for the question of proposition reconstruction under ellipsis. However, for the licensing of *un*elided materials, syntactic factors matter – and only elements that have been used *verbatim* in the context can be used to license fragment materials[8] which is also reflected in performance issues, as we show.[9]

1. A: Would John hire a man who tries to repair cars with a hammer?
   B: *No, [a screw driver]$_{i, Foc}$ [$_{deletion}$ ~~John would hire a man~~ [$_{RC}$ ~~who tries to fix cars with~~ $_{ti}$]]
1. A: John told the news to Tom in the morning, [who promptly passed it on to Mary later]$_{RC}$.
   B: No, ~~Tom passed the news on~~ to Susy.
1. A: So you say they had cars in the GDR, [whose bodies were made from carbon]$_{RC}$?
   B: No, ~~the car bodies were made from~~ cardboard.
1. A: Mary only kisses people [who nobody else can find attractive]$_{RC}$.
   B: Or, let's say, only [their mothers]$_{Foc}$ ~~can find them attractive~~.

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The Interaction of Semantics and Syntax in Synthetic and Analytic Genitive Constructions in Jordanian Arabic

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This paper seeks to understand the structural patterns and restrictions of semantically distinct genitive constructions (iDaafa) in dialectal Arabic. The genitive construct is one of the most distinctive features of Arabic and while formal Arabic has a preference towards more synthetic genitive constructions, dialectal

Arabics employ both analytic and synthetic constructions in a patterned manner. The goal of this paper is to analyze the patterns of various semantic expressions (possession, classificatory naming, partitives, human relationships, position-orientation, formal names, containment, quality specification, and other association) in synthetic and analytic genitive constructions in colloquial Jordanian Arabic and identify the reasons behind the patterns to identify the correlation between semantic function and iDaafa type. The analysis will be guided by an acceptability judgment test of native speakers given the analytic and periphrastic versions of the genitive construction. This will further our understanding of the interaction between semantics and syntax and underscore the complexity within dialectal Arabic.

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Parallel session 7

Children and Language mixing: developmental, psycholinguistic and sociolinguistic aspects

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Whilst bilingualism is often seen as an advantage for children, language mixing provokes some concern among parents and teachers. Language mixing in children is often taken as a signal of low linguistic proficiency. This leads parents to avoid language mixing and 'cleanly' stick to one language when talking to their children. However, this restriction does not appear to be feasible in real life: even parents who report that they do not mix, show some degree of mixing (Bail et. al., 2014). The few studies that have investigated parental language mixing report inconsistent findings regarding its effect on the language development of children (Bail. et. al., 2014, Byers-Heinlein, 2013). This current research will provide a clear understanding of the exact impact of parental language mixing. Currently used methods to measure language mixing involve different questionnaires. This research will first validate those questionnaires by comparing them to naturalistic audio recordings. We also use a newly developed questionnaire that is aimed to serve as a general language exposure tool throughout the whole field, called Q-BEx (De Cat. et. al., 2022). In total, data will be gathered by means of parental reports, questionnaires, home recordings of bilingual families, linguistic proficiency tests, measures of social and cognitive skills and experimental mixing tasks. These data provide us with insight in the actual language mixing in bilingual homes and the social, linguistic, and cognitive factors at play. This study is part of a larger project which also investigates the language mixing behavior of the children themselves, and the influence of language mixing on children with a language impairment.

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Social desirability in the area of sustainability

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Social desirability bias (SDB) can affect research using self-reports (e.g., questionnaires) that are the most prevalent way to study environmentally conscious choices and motivations. Factors that have been suggested to play a role are the topic and the source of the message. The main focus of this study was to investigate if there is an interaction between the topic and the characteristics of the source that could lead to socially

desirable answers on the participant's behavioural attitude and intention. This study investigated two sustainability topics: veganism and the use of plastic-free soap bars. The tendency to provide socially desirable answers was manipulated by using three different characters 'interacting' with the participants: a vegan person (possibly inducing socially desirable responding towards veganism), person working as a sales manager in a soap bar company (possibly inducing socially desirable responding towards the use of plastic-free soap bars) and a student. There was a marginally significant interaction effect for the topic and the characteristics of the source on the behavioural attitude. The respondents who were presented with a vegan person showed a more positive attitude towards veganism and more negative towards plastic-free soap bars compared to respondents who were presented with another character (sales manager or a student). The opposite occurred when this person was sales manager of the soap bar company. The source of the message may thus play a role when SDB occurs. This implies that there may be a way to activate and control SDB. However, still more research is needed to understand better and apply this concept in self-reports regarding sustainability issues.

Expressing volition, imposition and latent intentions through causatives
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The present paper discusses the phenomenon called causation and the structures that are often referred to as causatives. The paper researches the issue of causatives and conducts comparative and historical analysis in expressing causative structures and linguistic units in English, Georgian, Russian and German languages.

In the Georgian language there are two interesting verbal structures that express the meaning of 1) one agent causing something happen by obliging another agent to perform the action (through either orders, volition or authority). The meaning roughly corresponds to the English equivalents of causatives (e.g. *I had my car fixed yesterday*); 2) one agent causing something happen through his / her involuntary action (i.e. without intentionally wishing the action to happen). There is no English verbal equivalent of this form. It can be only expressed by the explanatory sentence to convey the meaning (e.g. *I ate the whole cake by accident*, meaning I did not want it to happen but I was so hungry or so absent-minded that I did not notice when the action happened, how it happened, and do not remember the moment when the whole cake disappeared).

The way different languages express the idea of voluntary (intentional) and involuntary (unintentional) imposition of one's will and desire over others (e.g. *I had my car fixed*) is also connected with temporal sequencing of actions, i.e. which action follows which action and whether this sequencing systematically repeats. In this case, causatives can be used to express the idea of causation, while in the absence of *systematicity only* correlation can be stated.

The latter issue of temporal sequencing of actions serves the purpose of typological analysis of predication in different languages (Georgian, English, German and Russian in this case that could be expanded to other languages) in stating causation, imposition and temporal order of actions.

Another interesting finding of the research is the fact that in Georgian causatives are associated with the valency of the verb, while in English they are expressed through syntactic constructions. For example, Georgian

gavak'etebine is expressed through syntactic structure in English: I made him do it. Whereas, the Russian language uses an extra verb *zast'avil* to express the same idea.

Further interesting point is the expression of causative versus inchoative meanings in English and Georgian. To illustrate the point, the following example could be used. In English the verb *darken* could be either causative or inchoative depending whether the verb is transitive or intransitive, i.e. 'I darkened the room by moving curtains over the windows' [where *darken* is transitive and causative], and 'As the day drew to the close, it *darkened*' [where *darken* is intransitive and inchoative]. While in English the verbal structure in both cases is the same, in Georgian the difference is expressed through suffixation, i.e. *davabnele* [causative meaning] and *dabnelda* [inchoative meaning]. In the same way, Russian uses suffixation to express the different meanings, i.e. *zat'emnel* [causative meaning] and *st'emnelo* [inchoative meaning].

The verbs *let, allow, permit* in English, lassen in German and *p'ozvolil* in Russian present further interesting point for cross linguistic corpus analysis, since they can be expressed through suffixation in Georgian, e.g. '*He let us go*' in English, '*On p'ozvolil nam uit'i'*' in Russian, '*Er ließ uns gehen*' in German, is expressed through one verb with suffixation in Georgian, *'gagvišva'*.

As a final point, causative often express (or imply), latent desires and intentions that cause certain actions, results or states of affairs in an indirect way. The paper analyses cross- language data to illustrate this point [i.e. working with a number of foreigners, I happen to have mastered English, *šemomesčavla* – causative form in Georgian].

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Use of connectives in patients with schizophrenia-spectrum disorders

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Background: Incoherent speech is a core diagnostic symptom of schizophrenia-spectrum disorders (SSD) that can be studied using semantic space models. Since linguistic connectives signal relations between words, they might represent hotspots to detect aberrant coherence in speech. Therefore, we investigated whether focusing on connectives can improve the assessment of incoherent speech in SSD.

Methods: Connectives and their surrounding words were extracted from transcripts of spontaneous speech of 50 SSD patients and 50 healthy controls. Differences between groups in proportion of five types of connectives were assessed using generalized logistic models, and connectives similarity measures were analyzed through non-parametric multivariate analysis of variance. Using word2vec, two different cosine similarities were calculated: between connectives and their surrounding words (connectives-related measures), and between the remaining free-of-connectives word pairs (thematic-related measures). These features were evaluated in classification tasks to differentiate between groups.

Results: SSD patients used less contingency (e.g., because) (p = 0.008) and multiclass connectives (e.g., as) (p < .001) than healthy controls. SSD patients had higher minimum similarity of temporality connectives (e.g., after) (adj-p < .001), and narrower range (adj-p = .002) and lower maximum similarity of expansion connectives (e.g., and) (adj-p = .002). Using connectives measures alone, SSD patients and controls could be distinguished with 83.5% accuracy. By adding thematic-related measures, accuracy increased up to 89.1%.

Discussion: Our results show that SSD speech can be distinguished from speech of healthy controls with high accuracy, based solely on connectives measures. We conclude that including connectives could strengthen computational models to categorize SSD.

A systematic Review: Idiom Comprehension in Aphasia: The Effects of Stimuli and Task Type

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Introduction
Idioms are a complex form of figurative language. The role of idiom semantic dimensions has been put under scrutiny when investigating the way idioms are processed in the brain. Supporting evidence is drawn from studies examining subjects suffering from aphasia, typically caused by lesions to a complex language network involving mainly the Left Hemisphere (LH) of the brain. Patients with aphasia show selective impairment in idiom comprehension, implying that there are types of idioms which do not depend solely on the LH of the

brain. However, recent literature does not agree whether such preference exists, and if the types of idioms and tasks employed have a crucial role.

Aims

This study investigates idiom comprehension in aphasia and seeks to explore (1) the effect of idiomatic stimuli in terms of their semantic dimensions on the patients' language performance 2) the effect of the tasks employed on the patients' language outcomes.

Methods

A systematic review was done following the PRISMA approach. Starting from an initial find of n =451, after applying inclusion and exclusion criteria, 15 articles were retained for further analysis. Relevant information that was extracted included differences and similarities across studies, especially focusing on patients' characteristics, types of stimuli, types of tasks employed and language outcomes.

Results

Results indicated that studies in idiom comprehension in aphasia are characterized by great heterogeneity regarding the experimental task and the type of idiomatic stimuli employed. Heterogeneity in these key aspects, results in unclear interpretation of idiom comprehension patterns in aphasia across studies. Moreover, patient profiles were occasionally incomplete and more importantly, language outcomes were reported after treating patients with aphasia as one homogenous group irrespective of their aphasic syndrome. Last, this review proposes recommendations for future research, focusing on patient profiles, experimental tasks, experimental stimuli, and the interpretation of language outcomes.

Language outcomes in children who underwent surgery for a posterior fossa tumour: A systematic review of the literature

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Introduction: Following surgical resection, children with a posterior fossa tumour may have spoken or written language impairments, such as word-finding and reading difficulties. The present systematic review synthesised the literature regarding the expressive and receptive postoperative language outcomes in this clinical population. Furthermore, the influence of several mediators (e.g., tumour location, cerebellar mutism) and the administered assessment tools were investigated.

Methods: A comprehensive literature search was conducted, including studies with participants who underwent posterior fossa surgery during childhood (< 18 years) and were at least two years old at the time of the postoperative language assessment. Included studies were narratively synthesised and language outcomes were organised per level of language processing (e.g., phonology, morphosyntax).

Results: A total of 70 studies met the inclusion criteria. A preliminary narrative synthesis of 20 studies indicated that lexical-semantics (e.g., naming) and phonology (e.g., forward digit span) were assessed in most of the studies in contrast to, for example, pragmatics and morphosyntax. Across assessments, the proportion of studies reporting impairments was highest for pragmatics (66%), phonology (64%) and literacy (62.5%).

Lexical-semantics (38%) and morphosyntax (42%), on the other hand, seemed to be preserved in the majority of the included studies. Nonetheless, a large interindividual heterogeneity in language outcomes was observed. Final results will be available by June.

Discussion: The preliminary results suggest a broad spectrum of language impairments in children who underwent posterior fossa surgery, making a comprehensive postoperative language assessment necessary. Several issues were identified: for example, a preoperative language assessment was missing in more than 90% of the included studies and several aspects of language, such as pragmatics and verb processing, were rarely assessed. Further research is necessary, targeting these gaps in assessment by focusing, among others, more deeply on morphosyntax (e.g., by evaluating sentence production).

Scalar adjectives, modality and desirability

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According to some theories in linguistics (Horn,1972), scalar terms like "some" in the scale <some, all> could be interpreted as pragmatic inferences, where this weak quantifier is intended to pragmatically mean "not all", even when its semantics is logically equivalent to "some and possibly all". Additionally, the uniformity assumption states that all Horn Scales give rise to these pragmatic scalar implicatures if the context allows it (Horn, 1992). According to this view, this should also be the case of gradable adjectives, where the use of a weaker adjective like "good" could be interpreted as "not perfect". In order to test this hypothesis we conducted an experimental study in Spanish, which showed that this posture does not always follow, since scalar adjective terms could be interpreted both pragmatically and semantically. These interpretations were also driven by the use of some epistemic modal operators of possibility or necessity, where the use of a modal expression in Spanish such as "es posible que…" (might) or "es seguro que…" (certain) could make listeners derive different readings of the scalar terms. Nevertheless, not all the scales tested in this study were interpreted as pragmatic inferences, adding up to previous evidence against the uniformity assumption (Gil, 2019; Zevakhina, 2012; Van Tiel et al., 2016). Participants in our study failed to derive the pragmatic readings in some of the scales tested, which suggests that a variety of adjectival scalar terms are not always interpreted as part of such a scale, since hearers do not always derive the implicature.

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What can or may bridge root and epistemic modality?

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In his 2012 speech and paper, Mikhail Kotin introduced the concept of verisimile Modalität. It labels a possibility of an event which can be actualized only in specific circumstances, under the influence of factors that are external to both the event participant and to the speaker. It is contrasted with dispositional modality,

which expresses the event participant's physical ability to perform an action or one's potential volition to act. Kotin (2012: 141) exemplified his idea with the following sentence:

Bei dieser Temperatur **kann der Brennstoff explodieren**.

[The **fuel can explode** at this temperature.]

Kotin maintains that this modal meaning acts as a bridge between root and epistemic modality. In the proposed paper, we will make an attempt to verify his claim by investigating the conversational backgrounds (Kratzer 1991) whose evaluation results in the expressed modal force of possibility.

The paper puts forward an empirical development of Mikhail Kotin's idea of verisimile Modalität with authentic language samples excerpted from The Corpus of Contemporary American English. The paper opens with terminological remarks suggesting and motivating our choice of verisimilar modality as an English translation of Kotin's German term. Then, the study adapts the model of the semantic field of modal expressions (Kratzer 1991), which introduces the concept of conversational backgrounds. First, the study identifies the English modals that can be the potential exponents of this type of modal reading, with reference to the expressed modal force. Then, the focus is shifted to establishing the and their sequencing in this modal meaning. They are further used in our attempts to identify the suggested bridge between the circumstantial and epistemic conversational backgrounds - a dichotomy which corresponds to the root and epistemic modal flavors (Kratzer 1991: 650). Finally, we will refer the findings to modality-aspect convergence patterns proposed by Abraham (2008: 6).

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Parallel session 10

Exploring both internal and external factors and pragmatics of monkey communication

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The evolution of human language has been unknown for decades and thus researchers have started to study primate linguistics with the hope of understanding how human language evolved. Rich data in primatology has made it possible for linguists to apply the theories of contemporary linguistics in explaining monkey communication. However, it is still debatable whether only the environmental factors can determine the monkey calls. In this article, we review recent studies and suggest that both internal and external factors should be considered while doing experiments. We also emphasize studying pragmatic enrichment for both humans and monkeys to understand whether it works in the same way in these two species.

Cross-situational word learning and numerical development

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Several accounts of numerical development argue that productive linguistic rules are central to the development of exact number meanings (Schneider et al., 2020; Spelke, 2017; Yang, 2016). Although these accounts explain the trajectories of numerical acquisition in different languages, they do not address how exactly children acquire the words and linguistic structures that are necessary for numerical development. We hypothesize that statistical learning — a mechanism that has been argued to play a role in the acquisition of all levels of language (e.g., Erickson & Thiessen, 2015)— may contribute to numerical development via language. More specifically, we explore the possibility that number words are learned through cross-situational statistics (Smith & Yu, 2008). To this end, we designed a novel cross-situational number word-learning task. During the (self-paced) exposure phase, participants listen to phrases containing pseudo-numerals (ordinals and cardinals) which describe pictures of animals. The pseudo-ordinals are derived from the cardinals with a suffix. As the context in the task is ambiguous – the pseudo-words could refer to several aspects of the picture – participants need exposure to multiple stimuli to infer the meanings of the pseudo-words. Learning is assessed through an online measure (reaction times during the self-paced exposure phase) and two offline measures (a two-alternative forced choice task and a Give Me task at the end of the experiment). The offline tasks assesses participants' knowledge of the learned pseudo-numerals as well as their understanding of novel but regularly derived pseudo-ordinals. In this presentation, we will reflect on the results of our pilot with monolingual typically developing kindergartners (4-6 years old) and what these results could tell us about the potential role of cross-situational word learning in numerical acquisition. We also discuss our predictions for future research involving children with Developmental Language Disorder.

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The Structural Differences of SAY Verbs and Temporal Modification

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This paper attempts to account for ambiguity in high/low construal that appears in company with the derivation of temporal adverbial clauses.

(1) I saw Puffy in Canary Wharf when she said that she would leave.
- o High construal: at the time that Puffy made the statement
- o Low construal: at the time of Puffy's presumed departure

(2) I saw Puffy in Canary Wharf when she exclaimed that she would leave.
- o High construal: at the time that Puffy made the exclamation
- o *Low construal: at the time of puffy's presumed departure

When can relate to either say or leave in (1), whereas it can only relate to exclaim in (2). Traditional ideas with respect to this contrast hinge on operator movement and island conditions (cf. Haegeman 2012). That is, when can undergo short or long movement respectively to give rise to high or low construal, and exclaim poses some island constraint on its clausal complement, thus disallowing the long movement of when.

This paper proposes a different analysis based on the syntax and semantics of SAY verbs (cf. Grimshaw 2015, Major 2021): the ambiguity in (1) is in fact caused by two different lexical items of say, namely the event say (1a) and the stative say (1b). Structural distinctions demonstrate that there is an one-on-one correlation between the eventive/stative say and high/low construal. That only high construal is available in (2) can be explained as exclaim only has the eventive interpretation. By assuming that the derivation of temporal adverbial clauses requires an agreement between a Probe on C and a Goal on SpecAspP, this paper further argues that the distribution of AspP in the eventive say is different from that in the stative say, thereby leading to distinct readings of when in two positions.

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An analysis of animate collective nouns

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+Proposal: animate collective nouns in Spanish (*población* 'population', *equipo* 'team', etc.) are the 'phrasal spell-out' (Caha 2021, a.o.) of partitive structures (following Pérez-Jiménez & Demonte 2017) with a null group noun [*group*] head merged to a root determining the specific lexical item to be spelled-out. The null noun selects a partitive complement with a null *pro*. Partitive semantics requires that *pro* to be plural. (1) illustrates this with *equipo*.

1.
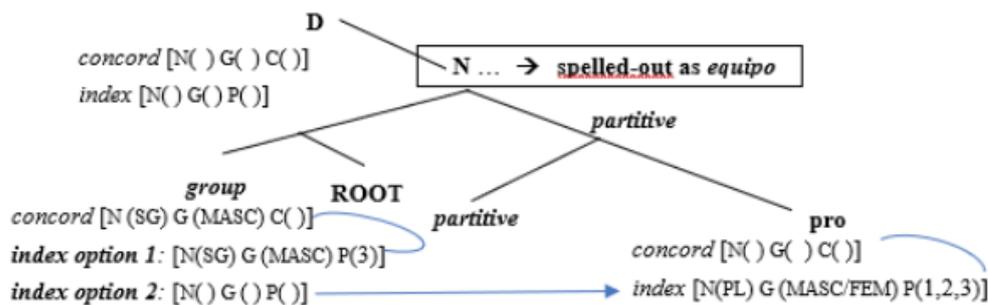
Moreover, we follow Wechsler & Zlatić (2000), a.o., in proposing that nominal elements have both *concord* (readable at PF) and *index* (readable at LF) phi features. What characterizes the null noun *group* is that its index features can be specified in two ways: a) as identical to the *concord* features, b) as unvalued, thus taking their value from the index bundle of *pro*.

+Agreement. This proposal accounts for the double pattern of verbal agreement animate collective nouns give rise to when they are subjects: Vsg./Vpl., (2). Plural agreement is considered non-standard, but an extensive corpus study shows that it is well documented in all Spanish varieties (examples from Spanish Web 2018 corpus, Sketch Engine). It also accounts for the different possibilities of gender agreement with secondary predicates when the verb exhibits plural agreement (3).

2. a. La plantilla$_{SG}$ sufre$_{3.SG}$ algunas bajas notorias. (Spain)

the$_{FEM.SG}$ staff$_{FEM.SG}$ suffers$_{3.SG}$ some notable absences. (Spain)

b. Casi toda la plantilla$_{SG}$ han$_{3.PL}$ presentado unos cuestionarios anónimos. (Spain)

almost all $_{FEM.SG}$ the$_{FEM.SG}$ staff$_{FEM.SG}$ have$_{3.PL}$ submitted anonymous questionnaires.

3. a. Todo el equipo estamos muy satisfechos con el máster. (Spain)

all$_{MASC.SG}$ the$_{MASC.SG}$ team$_{MASC.SG}$ are$_{1.PL}$ very satisfied$_{MASC.PL}$ with the master.

b. Todo el equipo estamos muy emocionadas con esta novedad. (Spain)

all$_{MASC.SG}$ the$_{MASC.SG}$ team$_{MASC.SG}$ are$_{1.PL}$ very excited$_{FEM.PL}$ with this new issue.

This proposal also accounts for the collective / distributive readings of these nouns in each pattern of agreement.

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Subject-object asymmetries and the development of relative clauses between Late Middle English and Early Modern English

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My talk presents the results of a corpus study on the Wycliffe Bible (earlier version) and the King James Bible, examining the distribution of the pronouns *who(m)/which* and the complementiser *that* in relative clauses with a personal referent. *Wh*-pronouns started to occur in headed relative clauses in Middle English; they increased in frequency in the subsequent centuries especially in the standard variety (van Gelderen 2004, 2009; Romaine 1982). The clear distinction between *who(m)* for personal and *which* for nonpersonal referents is a later development; Johansson (2017) argues that *who(m)* in headed relative clauses started with cases where the referents were deities, the development largely taking place in Early Modern English.

My corpus data indicate that the decisive factor in Late Middle English was probably not the subcategory of the referent but rather the function of the gap (subject vs. non-subject). In both translations, *wh*-pronouns are preferred in object relative clauses, while *that* is preferred in subject relative clauses: the differences are significant (P<0.05), the chi-square tests carried out on a representative sample indicating that we are dealing with dependent variables. The specific referent (deity vs. non-deity) does not play a role in either case. Crucially, the overall distribution in subject relative clauses shows no significant difference between the two translations, while the differences in object relative clauses are significant: in the King James Bible, (i) the proportion of *that*-relatives is lower, and (ii) the proportion of *which* is higher. While (i) is expected based on the overall development of *wh*-relatives in English, (ii) is not. I argue that the differences indicate the establishment of a differentiation between subject vs. non-subject relative clauses, whereby the primary *wh*-marker was still taken to be *which* in Early Modern English. The differentiation started in the more marked functions (non-subjects).

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Comparative Reconstruction Probabilistically: The Role of Semantic Change

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Comparative reconstruction has always been one of the key endeavors of linguistics, and yet there exists no widely accepted method for evaluating its applications (Michalove, 1998). Previous quantitative approaches to evaluation measure language similarity as a proxy for reconstruction likelihood, either through pairwise phonological distance (Holman et al., 2011; Downey et al., 2008) or through the proportion of cognacy (Chang et al., 2015; Atkinson & Gray, 2003). As such, most researchers agree that, while these frameworks are useful when manual reconstruction is not feasible, traditional methods are still the gold standard (Kiparsky, 2015; Bostoen, 2007).

I present a quantitative framework that is an extension of comparative reconstruction rather than an alternative to it. The reconstruction itself, as a list of transformations (sound changes, semantic changes, etc.) is given as input; the output is the probability that a random wordlist merits a reconstruction from the parent wordlist of equal or lesser magnitude as the child wordlist. The goal is for such a framework to act as an objective and accessible platform for comparative reconstruction debate, as well as extend the scope of historical linguistics further into the past by introducing novel methodology.

The framework can also yield arguments about language change and comparative methodology more generally. For example, it can be shown that increasing the incidence of semantic change has a comparatively small effect on the likelihood that the reconstruction can be evidenced by chance. In most cases, even if every word in the data has undergone semantic change it is still possible for the reconstruction to exhibit patterns not attributable to chance. This conclusion is largely in contrast to the conservative attitude toward semantic over-permissiveness in the reconstruction literature (Swadesh, 1955; Ringe, 1999; Vovin, 2009).

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Multilectal literacy: Applying a Norwegian concept in a Frisian-Dutch context

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Norwegian has two written standard varieties: approximately 85% of Norwegians use Bokmål, and the remaining 15% use Nynorsk. The standards differ in lexicon, morphosyntax and 'phonology' (as conveyed in spelling), but are mutually intelligible. An analysis of school results shows that Nynorsk students outperform Bokmål students. This may be because the Nynorsk students develop reading and writing skills in both varieties — they become 'bilectally literate' — due to exposure to Bokmål outside of school. The reverse is much less the case for Bokmål students. In addition, some students are also literate in their own (non-codified) dialect. Based on this evidence, Norwegian researchers have proposed the "Multilectal Literacy Enhancement Crux" (M-LEX): active literacy skills in closely related varieties may under certain circumstances enhance academic achievement.

This hypothesis is tested in the project "Multilectal Literacy in Education (MultiLit)" by studying the acquisition, processing and use of closely related written varieties with psycholinguistic and sociolinguistic experiments. A crucial part of the project is the comparison between multilectal literacy in Norway and the Netherlands, particularly in Fryslân. There are clear parallels: a closely related stronger (Dutch) and weaker (Frisian) standard variety and frequent use of non-standard varieties in informal contexts. But there are also differences: Nynorsk enjoys much stronger support by the government and the education system than Frisian, and Frisian and Dutch are two separate languages rather than two varieties of the same language. Fryslân is therefore an important testing ground for the validity of the Multilectal Literacy Enhancement Crux.

With this poster we present the studies planned in Fryslân as part of the MultiLit project, namely:
- a production and interference experiment with written and spoken prompts
- an analysis of informal writing (chats) by secondary school students
- psycholinguistic experiments with monolingual and bilingual input

Order Iconicity Principle in Temporal Interpretation of Russian Perfective Participial and Converbial Clauses

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Pragmatic factors frequently aect the interpretation of grammatical constructions, and category of relative tense is no exception. As has been previously shown for coordinate structures with perfective verbs (e.g., Paducheva, 1996; Krakovskij, 2009) and to a lesser extent for dependent temporal clauses (Clark & Clark, 1968; Sasanuma & Kamio, 1976; Natsopoulos et al., 1991; Jansen, 2008), correspondence between the temporal sequence of events and the order of mentioning the predicates is preferred and facilitates the interpretation (Order Iconicity Principle - OIP). This interpretational bias is an implicature based on the maxim of manner (Grice, 1975).

Similar but weaker pattern was registered for a non-nite construction - Russian perfective converbs (Prigorkina, 2021). Despite conicting views in the literature, whether this form has posteriority taxis meaning apart from anteriority (Weiss, 1995; Birzer, 2010; Krave, 2010; Bikkulova, 2011), results of timed acceptability judgment task revealed a signicant OIP eect and a non-decisive role of supporting lexical and contextual cues (event coherence, Fedorova, 2005; deexion, Lehmann, 1998). Posteriority interpretation was equally acceptable with more conventional anteriority interpretation in postposition without contextual\lexical strengthening.

To see if the same eects also hold for perfective past participles, similarly agreed to denote anteriority and doubted to denote posteriority (Krapivina, 2009; Say, 2014), we employ self-paced reading and acceptability judgment tasks. Acceptability judgements and response latencies are to provide on-line and o-line measurements of temporal interpretation diculty\plausibility, while comparison of participial and converbial constructions would bring more clarity into the status of posteriority interpretation: an inherent taxis meaning or an OIP implicature. We expect perfective participles to show a positive OIP Eect, but smaller than for converbs due to the dierences in syntactic and discourse properties (niteness scale, adverbial vs. attribute function, extent of preservation of the verb dynamics and absolute tense category; Vjal'sova, 2008; Krapivina, 2009; Say, 2020).

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Phonetic- phonological changes of borrowed vocabulary in Svan[2]

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Historical-etymological research of the Svan vocabulary clearly reveals the common Kartvelian lexical fund, as well as lexemes borrowed from Georgian and Zan languages in the later period. At the same time, there are numerous borrowings from different Western and Eastern languages (Greek, Turkish, Persian, Arabic, Ossetian, North-Caucasian, Russian etc.) which have entered into Svan chiefly via Georgian and Mingrelian (e.g.: agwisṭo < Georgian agvisto < Latin augustus "saint, divine, great"; barak < Georgian baraka < Arabic

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baraq; ḳalmax/w "fish" < Georgian kalmakh-i; mäjdan "the door of balcony" < Georgian moedan-i < Persian maydān and etc.). On the other hand, Svan has a function of mediator between Kartvelian and Caucasian (namely, Abkhazian-Adigheian) languages, as well as Kartvelian and Iranian (Ossetian-Alanic) languages. It should also be mentioned that major portion of borrowings are altered both phonetically and semantically. All this complicates the etymological analysis of certain lexical units.

As research has shown, borrowed Svan vocabulary includes many examples of North Caucasian (Kabardian, Circassian, Abkhazian, Ossetian ...), Western European (Greek, Latin), Russian and Eastern (Turkish, Persian, Arabic, Armenian) languages, which is due to certain contacts in time an space. Alongside, of course, there are borrowings related to Kartvelian languages (Georgian, Mingrelian, Laz), the common Kartvelian data of which is not always easy to separate.

This paper presents general conclusions on all aspects related to words borrowing as from Georgian- Zan, as well as from North Caucasus, Western European, Russian and Eastern languages (directly or indirectly), to determine the ways and chronology of borrowing, which is very important and interesting to present a general picture of the development of Svan phonological and lexical systems.

Transitivity Analysis: The role of types of processes in online tourism promotional materials from Bosnia and Herzegovina

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To attract attention and persuade readers to convert into customers, tourism promotional materials must be carefully crafted – in terms of both language choices and appealing visual content. Extensive research has been done to identify the "eye-catching" and "emotion-triggering" keywords (predominantly adjectives, as well as nouns and verbs) that frequently appear in tourism promotional materials, but this paper will take on a different approach to further contribute to the existing body of knowledge regarding the effectiveness of online tourism brochures.

The paper relies on Systemic Functional Grammar (Halliday and Matthiessen, 1994), or more precisely the Transitivity Analysis (representation of reality and human experience through identifying processes, actors, and circumstances in clauses) which is applied to a sample of text – an online tourism brochure from Bosnia and Herzegovina translated to English. Upon examining which of the 6 possible processes (material, mental, relational, verbal, behavioral, existential) are dominant in the selected text, the author elaborates how such transitivity patterns support the function and generic structure of the genre of commercial website tourism promotional texts (Bhatia, 1993, Biber and Conrad (2009), Maci (2007), Calvi (2010), Francesconi (2014), Manca (2016)).

The analysis shows that the most common types of processes found in the corpus are material, mental and relational processes. These transitivity patterns are in accordance with the aim and function of tourism promotional texts (Dann, G.M.S. (1996)) which is to attract attention and persuade the readers to visit the destination. In other words, the participant roles of Actor (material process), Senser (mental process), and Carrier (relational process) allow for the readers to be pulled into the narrative, i.e. they help to achieve a more immersive and authentic reading experience which enables the readers to "visit" the promoted destination prior to actually traveling to it.

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Direct kind predication and Transitivity

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Introduction. Why are kind-referring bare plurals worse as direct objects (DOs) compared to definite singulars?

(1) Pollutants are decimating {?squids, the squid}. (Lyons 1999:§4,fn.8)

Topicality. Krifka (2003:§4.4) proposes that bare NPs can be kind-referring only as topics, and

(1) is because the DO is not a regular topic position. This misses that kind-referring bare singu-

lars are not degraded as DOs.

(2) The Americans invented chewing gum. (Krifka et al. 1995:ex.112a). We found that among minimal pairs of bare singulars and plurals, the preference for the singular was significantly greater with kind-level verbs (criminalize) compared to instance-level verbs (catalogue). It is unclear how topicality would account for (3a).

(3) a. The UN criminalized {torture, ?tortures}. b. The UN catalogued {torture, tortures}.

Null determiners. Of 29 speakers of local/regional varieties of Dutch/Frisian in Oosterhof (2008:§5.5), 8 rated (5a) at least 3/5 and (4b) with the definite plural DO as better than the bare version by at least 2 points.

(4) a. Telefoons zijn uitgevonden door een Schot.

   telephones are invented by a Scotsman

  b. Die Schotse leraar heeft #(de) telefoons uitgevonden.

   that Scottish teacher has (the) telephones invented.

Under Oosterhof, (4) results from the language having the null determiner 0[+R, +count, +pl] which cannot be governed by V(erb). English being the same predicts squids in (1) to be ungrammatical, which is at odds with "I find [squids] less good than [the squid], but not impossible." (Lyons 1999:§4,fn.8)

Transitivity. Under Hopper & Thompson (1980), totally affected DOs are markers of high Transitivity in increasing the likelihood of a clause being foregrounded. We propose that kindreferring DOs are such markers, e.g. the squid kind is totally affected by the decimation action in (1). Plural and non-definite DOs increase the likelihood of backgrounding (ibid.), so the degradation in (1) is due to this clash.

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Compound-internal anaphora: evidence from acceptability judgements on Italian argumental compounds

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The particular properties of argumental compounds in Italian pose interesting theoretical challenges. Investigations of possible syntactic operations within this type of complex words have resulted in conflicting conclusions: these constructions, where an argumental relation ties the two elements of the compound, show features that make them more accessible to syntax than other types of compounds, challenging the notion of argumental compounds as morphological objects. However, while their permeability to syntax is highly documented, the acceptability of pronominal reference is debated. Often based on their theoretical assumptions, some researchers exclude the possibility that pronouns can refer to the non-head of the compound (i.e., the argument element), while others do not.

The present study aims to experimentally determine the degree of acceptability of compound- internal pronominal reference. Three different types of Italian argumental compounds have been investigated: those with Verb$_{PREDICATE}$ + Noun$_{ARGUMENT}$ structure (1.a); those with Noun$_{PREDICATE}$ + Noun$_{ARGUMENT}$ structure (1.b); and those with Noun$_{ARGUMENT}$ + Noun$_{PREDICATE}$ structure.

1   a.   apri.scatole

             open.$_{VSM}$.cans.$_{F.PL}$

             'can opener'

     b.   trasporto   latte

             transportation.$_{M.NMZ}$ milk.$_{M}$

             'milk transportation'

     c.   autonoleggio

             car.$_{F.SING.PL}$.rental.$_{M.NMZ}$

             'car rental'

The referential expressions are represented by null subject pronouns and direct object pronouns. One hundred and forty Italian native speakers had to rate on a Likert scale from 1 to 5 the acceptability of 30 sentences containing compound-internal anaphora to VN compounds (5 with null pronouns; 5 with overt pronouns), NN$_{ARGUMENT}$ compounds (5 with null pronouns; 5 with overt pronouns), N$_{ARGUMENT}$N compounds (5 with null pronouns; 5 with overt pronouns), plus 20 distractors (10 grammatical and 10 ungrammatical).

Drawing on the results of the acceptability judgement task performed by the informants, we show that Italian argumental compounds allow pronominal reference to the argument element depending on the compound structure and referential expression. The position of the head plays a decisive role, and while compound-internal anaphora is accepted with left-headed compounds (i.e. Noun<small>PREDICATE</small> + Noun<small>ARGUMENT</small>) and, to a minor extent, with V+N compounds, the same is not true with right-headed compounds (i.e. Noun<small>ARGUMENT</small> + Noun<small>PREDICATE</small>). Moreover, it has been found that left-headed compounds allow null-subject anaphora to a greater extent. An experimental approach made it possible to single out detailed variables that would not have otherwise been possible to observe. These results provide new evidence on compound- internal pronominal reference and give important insights into the processing of constructions such as argumental compounds.

To be Nominal or Verbal, that is the Question: An Analysis of the Clausal Structure of Zero Copula Sentences in Jordanian Arabic

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This study investigates the debate surrounding the nominal versus verbal syntactic classification of clausal structures containing the zero copula in Jordanian Arabic (JA). The debate "generally centers around the issue of whether they are full clauses with the same set of functional and lexical categories as the copular constructions containing verbal copulas in the past tense, or the future tense, or whether they are small clauses consisting of a projection of the main predicates with no verbal or functional projections above it" (Benmamoun 2009). Thus, this paper attempts to either affirm or dispute zero copula, present tense sentences as being nominal sentences, rather than verbal sentences. Using a descriptive, qualitative analysis, this paper examines tense and movement in present and past tense sentences, Wh-questions, Yes/No questions, and negation to determine the nature of zero copula clausal sentences.

The study reveals a number of prominent findings. First, regarding tense and zero copula clausal constructions, the present tense copula in JA is implicitly an AUX, yet the lexical category of the null copula has more nominal-like tendencies. Past tense copulas do feature overt person agreement, functioning more as an explicit verb. Second, zero copulas do not move from V to T, yet both overt, present and past tense verbs do exhibit this movement. Also, the insertion of a copular pronoun between the subject and predicate in present tense sentences seems to function as a verb. Yet, the negator used does not typically occur with verbs. Thus, the findings from this study strongly support the clausal structural of zero copula sentence as having more nominal tendencies than verbal, which is starkly contrasted with past tense copula constructions. This study is significant in that it contributes to the limited research conducted on zero copula and clausal structure classification in JA.

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