UNIVERSITY
OF TRENTO - Italy

40th Incontro di Grammatica Generativa

IGG40 Italian Generative Grammar Meeting

Trento, 13-15 February 2014

Welcome to IGG40

For 40 years, the *Incontro di Grammatica Generativa* (Generative Grammar Meeting) has been Italy's main regular venue for discussions on every aspect of generative grammar and formal linguistics.

Starting from an initial focus on syntax, recent editions of the IGG have gradually expanded to phonology, morphology, formal semantics, discourse and psycholinguistics. The IGG started bridging domains: the interface between syntax and meaning, between phonology and morphology, the relation between the grammars of first and second language learners, the study of microvariation and many other 'interface' topics. The same is happening with methodologies: talks at current IGGs have addressed the use of experimental methods to support theoretical results, the relation between grammar and parsing, the use of corpora to support judgements or provide real-life examples of rare constructions, etc.

This trend illustrates the growing importance of a multidisciplinary approach to linguistics, but also the effort it takes for practitioners who work 'at the edges' to be recognized, to agree on a common language and to converge on a shared set of research questions.

We hope that the opportunities and challenges of modern linguistics are well-represented in this edition of the conference.

The Organizers

Ermenegildo Bidese

Federica Cognola

Patrizia Cordin

Michelangelo Falco

Chiara Finocchiaro

Manuela Moroni

Francesco Vespignani

Roberto Zamparelli

Forty Years of "Incontri"

Having the honor of hosting this landmark 40th edition of the conference at the University of Trento prompted us to try to reconstruct the history of this meeting, at least in its bare essentials. This was not always an easy task, since the IGG, with a few exceptions, has left no proceedings. Some information comes from CVs of linguists; from 2006, the calls for papers can still be found in the Linguist List.

The Incontro started in 1975, from the initiative of Guglielmo Cinque, Lorenzo Renzi and Paola Benincà. It was preceded by an Incontro di Grammatica Trasformazionale (Transformational Grammar Meeting), organized by Annarita Puglielli in 1969 for the SLI (Società di Linguistica Italiana). This led to a volume, in 1971 (see a copy of the front matter, including an interesting foreword by Tullio De Mauro). The IGG (initially "Incontro *Informale* di Grammatica Generativa" 'Informal Generative Grammar Meeting') came from the need of the small Italian generative linguistic community to exchange ideas and projects. One of these projects was the creation of the *Grande Grammatica di Consultazione*, the largest linguistically-informed descriptive grammar of Italian, published in 3 volumes by Il Mulino between 1988 and 1995, with directors Antinucci and Renzi, then Salvi and Renzi.

The meeting was skipped in 1980, since most of the potential organizers were in the USA, but was held twice in 1981. The meeting had several illustrious guests: Chomsky in 1979 (part of the talks that appeared as the "Pisa lectures"), Kayne, Kenstowicz, Higginbotham, and many others.

Proceedings were published occasionally. One case was the 1985 Rome meeting, organized by Puglielli and Mereu, which appeared in *Studi di grammatica. Dall'11° Incontro di grammatica generativa*, Bagatto Editore; another volume with the proceedings of the 20th meeting, edited by Gianluigi Borgato for UNIpress came out in 1994.

The full list of the meetings, as we could reconstruct it, is the following (links from the numbers to the web pages, when they exist):

40	2014	Trento	
39	2013	Modena/Reggio Emilia	
38	2012	Verona	
37	2011	Roma La Sapienza	
36	2010	Milano&Bicocca	
35	2009	Siena	
34	2008	Padova	
33	2007	Bologna	
32	2006	Firenze	
31	2005	Roma Tre	
30	2004	Venezia	
29	2003	Urbino	
28	2002	Lecce	
27	2001	Trieste	
26	2000	Roma Tre	
25	1999	Siena	
24	1998	Verona	
23	1997	Pisa	
22	1996	Bergamo	
21	1995	Milano DIPSCO & S. Raffaele	
20	1994	Padova	
19	1993	Trento	
18	1992	Ferrara	
17	1991	Trieste	
16	1990	Pisa	
15	1989	Bologna	
14	1988	Firenze	
13	1987	Trento	
12	1986	?	
11	1985	Roma	
10	1984	Pavia	
9	1983	Venezia	
8	1982	Torino	
7+6	1981	Amelia + ??	
	1980	*no IGG held*	
5	1979	Pisa	(Chomsky)
4	1978	Padova	
3	1977	Firenze	
2	1976	Bologna	
1	1975	Padova	(org. Benincà, Cinque, Renzi)

Acknowledgments

By a long tradition, the IGG has been a conference without fees. This makes it a good 'first' conference for students of linguistics, and anybody who is fascinated by theoretical language studies but cannot quite afford to pay a high fee for what might be, after all, just a curiosity toward that most distinctive feature which makes us human—language.

Currently, many institutions for advanced learning are promoting policies for Open Access. "Open Access" is a notion typically associated with the possibility to obtain research literature and course materials from the web. We believe that at a time when many conference fees have skyrocketed, promoting a free, high-profile international conference is also a significant way to foster Open Access.

To make the IGG possible, we entirly rely on the generosity of our sponsors, who have contributed with funds and organization to the preparation of this event. Their role is simply stated: without them, there would be no IGG. We gratefully acknowledge:

- Centro Interdipartimentale Mente e Cervello (CIMeC), Università di Trento.
- Dipartimento di Psicologia e Scienze Cognitive (DiPSCO), Università di Trento.
- Dipartimento di Lettere e Filosofia, Università di Trento.
- Fondazione ONLUS Marica De Vincenzi (http://www.fondazionedevincenzi.org/)

Next, we would like to thank all the researchers who submitted their abstracts to the conference. We received about 110 submissions from many countries (see the Table below). The acceptance to the oral presentation was quite selective and, sadly, many good talks had to be excluded. Given the high number of interesting talks on experimental linguistics we decided to adopt a two-session schedule. This gave us the possibility to select 30 oral presentations, plus 20 posters.

We also want to thank the over 50 colleagues who devoted their valuable time to reviewing the submissions, as well as to the creators of the Easychair Conference System, which made submission processing easier, if not easy. Special thanks to our Scientific Committee, to Cristina Guardiano for her advice in dealing with the many facets of the organization of this conference, to Antonella Neri, for her key role in organizing the logistics, to the students and post-docs who are helping us with running the conference and with the preparation of this Book of Abstracts, and finally, to the staff of the Ufficio per la Comunicazione at the University of Trento for assistence on a number of issues, including the web page.

Last but not least, we want to thank Martin Krämer (University of Tromsø), Cecilia Poletto (Goethe Universität Frankfurt am Main) and Antonella Sorace (University of Edinburgh) for accepting to be our keynote speakers at IGG40, and Annarita Puglielli, Paola Benicà, Guglielmo Cinque e Sergio Scalise for their help in reconstructing the history of the IGG.

Submissions by country

Country	authors	submitted	accepted	Country	authors	submitted	accepted
Austria	2	1.50	0.00	Nigeria	2	1.00	0.00
Belgium	5	3.50	1.00	Norway	1	1.00	0.00
Brazil	3	1.50	0.50	Poland	2	2.00	0.00
Canada	4	3.83	1.00	Portugal	4	4.00	1.00
France	6	1.80	1.80	Romania	1	1.00	1.00
Germany	15	9.17	3.17	Slovenia	10	4.50	1.00
Hungary	1	1.00	0.00	Spain	15	10.00	2.50
India	1	1.00	0.00	Sweden	2	1.00	1.00
Israel	5	3.00	1.00	Switzerland	5	1.25	0.50
Italy	37	25.00	9.25	Turkey	1	1.00	0.00
Japan	3	3.00	0.00	United Kingdom	14	9.33	2.33
Korea, Republic of	3	2.50	0.00	United States	11	5.95	4.45
Netherlands	13	9.17	0.50				

Conference Program

Keynote lectures

Talks

Plenary Session: Thursday, 11:00 – 13:00

Plenary Session: Thursday, 14:00-16:00

Parallel Session I: Thursday, 16:20-18:20

Parallel Session II: Thursday, 16:20-18:20

Parallel Session I: Friday, 09:00-12:40

Parallel Session II: Friday, 09:00-12:40

Parallel Session I: Friday, 17:00-18:20

Parallel Session II: Friday, 17:00-18:20

Plenary Session: Saturday, 10:00-13:00

Posters

Poster Session - IGG 40

Indexes

How the lexicon and phonology change in interaction. A selective look at the history of Italian

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In this talk I discuss the influence of language acquisition and borrowing on the reorganisation of grammar and lexicon, illustrated by the development from Latin into Italian. We will have a look at the historical sequencing of the introduction of new phonological processes, palatalization, mid vowel breaking, and l-gliding, and how they conspire to create new contrasts or reintroduce contrasts that have been subject to neutralisation. Subsequent introduction of new phonological processes with a partial overlapping of targets and outputs leads to an increase in the degree of opacity in the grammar up to a peak at which speakers radically restructure both the grammar as well as underlying representations.

Optimality Theory (Prince & Smolensky 1993/2004, McCarthy & Prince 1995 et seq.) sees the differences between languages as an epiphenomenon of different constraint rankings. Likewise, the differences between historical stages of a single language have to be seen in this way (e.g., Cho 1998, Bermúdez-Otero 2006, 2007). A question not satisfactorily answered yet, though, is how one ranking turns into another, i.e., how (and why) do rankings change.

It is by now a widely held assumption that language change at least partially emerges through imperfect learning by new generations of speakers (McMahon 2000). We will have a look at the Biased Constraint Demotion Algorithm (Tesar & Smolensky, Prince & Tesar 2004 inter alia), the currently predominant approach to language learning in OT, and how this can help explain selected historical processes in Italian.

On parallel phases: the V2 constraint in the Old Italian vP and DP

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In this talk I will analyze phenomena located in three distinct areas of the syntax, i.e. the CP, the vP and the DP in Old Italian and show that they display significant similarities, which can be accounted for if we adopt the assumption that all phases are build in a parallel fashion and that the properties of functional heads triggering language variation are set independently of the phase where the functional head is realized. This will allow us a) to describe the peculiar type of V2 of Old Romance, which is not exactly the one typically found in German languages (for instance it does not obey the V2 linear restriction) but can still be captured in terms of movement of the inflected verb to the C domain. b) It can also account for cases of OV orders where all type of vP internal elements are located in a pre-participial position in constructions that are clearly no resultatives. c) It helps us to define some peculiar phenomena in the DP area, including internal PP preposition to the edge of the DP/QP/PP, pre and postnominal structural genitive and cases of prenominal adjectives that are impossible in modern Italian.

Input, timing, and outcomes in a wider model of bilingualism

Antonella Sorace

University of Edinburgh

Bilingual language acquisition is remarkable because bilingual children are always exposed both to less input, compared to monolingual children, and to different input (e.g. from non-native speakers and/or from native speakers experiencing attrition effects). While acquisition at the phonological and lexical is similar but not identical in monolinguals and bilinguals (Byers-Heinlein and Werker, 2009; Sebastian Galles, 2010), many morphosyntactic aspects of grammar are acquired without significant delays whereas other aspects follow different paths or developmental timetables in monolinguals and bilinguals (Unsworth et al 2012). The crucial difference seems to be between, on the one hand, 'core' syntactic properties that tend to be acquired early by monolingual children, are sensitive to the age of onset of bilingualism, and are relatively insensitive to input quantity and, on the other hand, properties that 'interface' with non-linguistic components which, in contrast, are typically acquired late by both monolingual and bilingual children and are significantly affected by input but not by the timing of exposure to a second language (Tsimpli, in press). Similarly, it is interface phenomena, rather than more narrowly syntactic phenomena, which present residual optionality in advanced stages of adult L2 acquisition and emerging optionality in L1 attrition. Some of these properties require rapid integration of contextual cues and efficient updating of the current production plan or interpretation and are therefore open to the influence not only of input but also variability in non-linguistic executive functions (Sorace, 2011). These convergences indicate the importance of placing bilingualism studies within a formal linguistic perspective, since this provides the tools for determining and understanding what belongs specifically to language. Interdisciplinary research on bilingualism, however, is crucial for the investigation of factors that lie outside the language domain and of how these factors interact with language in a model of bilingual development across the lifespan.

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ONSET CLUSTERS AND SONORITY: AN OPTIMALITY-THEORETIC ANALYSIS OF STANDARD GERMAN, TYROLEAN DIALECTS AND MòCHENO

Keywords: microvariation, sonority, syllable structure.

Tyrolean dialects and Mòcheno present a rather complex syllable structure not found in the corresponding standard language (Tyrolean dialects: [kf]rok, *gefragt*, 'asked'; [ks]agt, *gesagt*, 'said'; [kʃ]lofen, *geschlafen*, 'slept'; [pʃt]ellt, *bestellt*, 'booked'; Mòcheno: [tʃb]eir, *Schwur*, 'swear'; [tsb]isn, *zwischen*, 'between'; [vr]on, *fragen*, 'ask'; [tʃv]aizn se, *bekleckern*, 'to smear'). I will analyze the onset clusters of such varieties and present the first results of my PhD research project, which focuses on consonant clusters in the Germanic-Romance linguistic contact area of northern-central Italy. The analysis of such peculiarities in varieties which are in contact geographically as well as in languages which do not belong to the same family allows to detect universal aspects of the sonority scale and its language-specific realization. Furthermore, such processes turn out to be a rich soil for answering the question whether languages in contact influence each other by allowing similar consonant clusters. Georg Wenker's questionnaires (1888-1923, cf. www.diwa.info), out of which I have analyzed about 150 interviews, in which 20 items containing onset clusters occur, represent the empirical basis for the analysis of Tyrolean dialects. As regards Mòcheno, the data which I will discuss result from an interview I did last summer. On the basis of the sonority indexes (SI) proposed by Parker (2011) (which range from low vowels: SI 17, to voiceless stops: SI 1), sonority distances (SD) will be determined and consonant clusters will be analyzed from an optimality-theoretic perspective, investigating those constraints which play an important role to the issues in question. Resorting to Wiese's (1996) sonority scale for Standard German (obstruents < nasals < l < r < high vowels < vowels), two-member Standard German onset clusters[1] will be analyzed. Standard German only allows onset clusters of the type obstruent+sonorant, which present a rise in sonority. The possible combinations which result from my survey will be analyzed in terms of SD, which, for the variety in question, ranges from 8 intervals to 3 intervals, under which a cluster is considered ill-formed. Standard German, thus, does not allow any onset clusters which present less than 3 intervals between the first and the second segment, which one can express by the constraint *<3DifSon (cf. Krämer 2009). Such a constraint will then be ordered on a typical markedness scale: ...*< 3DifSon » * <4DifSon »*<5DifSon » *<6DifSon » *<7DifSon » *<8DifSon. The evaluation of the various constraints on SD along with the faithfulness constraints F (MAX-IO, DEP-IO) will enable to determine the relationship between the two groups of constraints, from which the following ranking emerges: *<3DifSon » F » *<4DifSon » *<5DifSon » *<6DifSon. In light of this, in Standard German it is better to incur a violation of the faithfulness constraints than to violate *<3DifSon. An onset cluster such as [gn] (SD: 3) will then be optimal in comparison to an onset cluster which violates *<3DifSon. The onset cluster [kf] (SD: 2) will not be allowed in Standard German since it incurs a violation of *<3DifSon. The data for Tyrolean dialects enable to detect that such varieties allow onset clusters of the type obstruent+sonorant as well as obstruent+obstruent, such as [gl]ernt, *gelernt*, 'studied', and [kf]allen, *gefallen*, 'fallen'. Such results reveal that Tyrolean dialects present a slight variation in the sonority scale (plosives < fricatives < nasals < l < r < high vowels < vowels) and turn out to be more "tolerant" than Standard German as regards sonority distances. Indeed, Tyrolean dialects allow a SD of 2 intervals, under which an onset cluster is considered ill-formed (*<2DifSon, cf. Krämer 2009). Under this perspective, it is better to violate F than the constraint on the 2 intervals: *<2DifSon » F » *<3DifSon » *<4DifSon » *<5DifSon. As for Standard German, an onset cluster such as [gn] (SD: 3) will be the winner over another onset cluster which violates F such as Ø[2].

[1] Only native words will be taken into consideration.

[2] The symbol Ø stands for any onset cluster which has undergone segment insertion, segment deletion, etc.

Likewise, an onset cluster such as [kf] (SD: 2) will be positively evaluated. However, an onset cluster such as [kp] (SD: 0) will not be allowed in Tyrolean dialects since it violates *<2DifSon. With respect to microvariation and sonority distance, Standard German and Tyrolean dialects differ slightly in constraint ranking with regard to the faithfulness constraints. Tyrolean dialects are more "tolerant" than Standard German because they allow SD 2 in comparison with 3. Mòcheno represents a particular case within my research. Indeed, the gathered data reveal that, within its onset clusters (obstruent+sonorant and obstruent+obstruent), those which have a SD below 2 intervals ([sb]: SD 1; [zv]: SD 0; [stʃ]: SD -1; [sts]: SD -1; [sp]: SD -2; [zb]: SD -2; [st]: SD -2) all contain a sibilant. Such an observation leads to various interpretations of sibilants in the varieties considered here. In Standard German, sibilants always occur in the very first position of the onset. As such, the traditional line of thought analyzes them as extrasyllabic, therefore they do not count in the determination of sonority within the onset cluster. On the other hand, a more enlightening perspective (Wiese 1991) highlights the close relationship between fricatives (sibilants) and plosives, proposing that they belong to a single constituent and occupy *one* position within the syllable – in other words, they constitute a complex segment in which the C-position is constituted by two segments. Furthermore, clusters of the type fricative (sibilant)+plosive are treated as affricates (SD: 2), the only difference lying in the sequence in which segments occur (affricates: plosive+fricative; suffricates: fricative+plosive). In Tyrolean dialects, sibilants occur onset-internally. I will discuss the various approaches to treat them, which range from extrasyllabicity (improbable) to the affricate status (not possible since there is no homorganicity), from the suffricate proposal (possible solution which, however, leaves open the question why this only occurs with [ʃ] and not with other fricatives such as [f] in [kft]) to the "wildcard" status (cf. Pascoli 2012; so far the most appropriate solution since sibilants seem not to be subject to the sonority threshold and can therefore be found also before other consonants). Various hypotheses may be formulated for Mòcheno sibilants as well. Sibilants may be considered as extrasyllabic ([sb],[zv], [sp], [zb], [stʃ], [sts]) or they may be assigned a "wildcard" status as in Tyrolean dialects. Those which occur onset-internally may occupy a single C-position. Finally, Mòcheno seems to be more "tolerant" than Standard German and Tyrolean dialects, but this question still is left open because it should be verified with onset clusters which do *not* contain any sibilants. Recently, a further hypothesis has been formulated (cf. Alber 2013). In cases such as [tʃb, tsb] and [tʃv, tsv], we would have a violation of the sonority scale if segments were treated separately from one another. If such onset clusters were considered as an affricate+plosive, this would pave the way to new interpretations. Indeed, one could say that, on the sonority scale, affricates have the same value as plosives – giving rise to a sequence plosive+plosive or plosive+fricative, which do not directly violate the sonority scale. Under such a perspective, Mòcheno would allow onset clusters of the type plosive+fricative as those for Tyrolean dialects, presenting the same sonority scale as well. If, instead, affricates containing sibilants were treated as extrasyllabic, we would incur no violations of the sonority scale and affricates would be equal to simple Standard German sibilants. However, this would not be the case if Mòcheno also presented onset clusters such as [kʃp], in which the sibilant occurs onset-internally. Such a hypothesis should then be verified.

Essential bibliography:

1) Alber, B. (2013). "Aspetti fonologici del mòcheno". In Bidese, E./Cognola, F. (eds). *Introduzione alla linguistica del mòcheno*. Turin, Rosenberg&Sellier: 1-17. **2)** Krämer, M. (2009). *The Phonology of Italian*. Oxford: OUP. **3)** Parker, S. (2011). "Sonority". In v. Oostendorp et al. (eds). *The Blackwell Companion to Phonology*. Vol. 2. Oxford, Blackwell: 1160-1184. **4)** Pascoli, M. (2012). *Consonant Clusters in Bolognese*. Paper presented for the seminars of the PhD Program in Linguistics. University of Verona. **5)** Schmidt, J. E./Herrgen, J. (2001-; eds). *Digitaler Wenker-Atlas* (*DiWA*). Processed by A. Lameli, A. Lenz, J. Nickel, R. Kehrein, K.-H.-Müller, S. Rabanus. First complete edition of Georg Wenker's "Sprachatlas des Deutschen Reichs". 1888-1923 hand drawn by E. Maurmann, G. Wenker and F. Wrede. Marburg: Forschungsinstitut für deutsche Sprache "Deutscher Sprachatlas". [available at www.diwa.info] **6)** Wiese, R. (1991). "Was ist extrasilbisch im Deutschen und warum?". In *Zeitschrift für Sprachwissenschaft* 10: 112-133. **7)** Wiese, R. (1996). *The Phonology of German*. Oxford: OUP.

(A)symmetries and phonological (under)specification in speech perception: a MMN study

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Keywords: speech perception, underspecified lexicon, mismatch negativity

Featural Underspecification assumes that predictable feature values are not present in underlying representations but assigned later in the phonological derivation in compliance with the allegedly limited memory capacities of human brain. For instance, nasal sonorants are inherently voiced, so the corresponding [+voice] feature value can be considered to be absent in the mental lexicon and to be eventually inserted throughout the derivation by referring to the [nasal] feature, which is the only information factually stored. Furthermore, it may be also assumed a non-trivial feature underspecification, i.e. linked to language-specific feature predictability: Yoruba vowel harmony, for instance, is triggered only by /a, ɛ, ɔ/ by spreading the corresponding [ATR] values, whereas the other vowels (/e, o, i, u/) remain inactive – and for this reason they are considered underspecified for [ATR].

However, the underspecification assumption has been shown to be quite problematic, because of both learning-related and theoretical issues (Stanley 1967): for example, hypothesizing all coronal consonants to be underspecified for [coronal] would be an issue for explaining late Latin backward assimilation such as /faktus/→/fatto/ 'done'. On the other hand, several EEG experiments (among the others, Eulitz & Lahiri 2004) on speech perception have been using the so-called Mismatch Negativity (MMN) component – a fronto-central negative-going deflection arising 90-250 ms post deviance onset without target-turned attention – to show the underspecified nature of phonological representations in the mental lexicon. Statistically significant variances in amplitude and latency evoked by different sounds have been explained as results of diminished cortical responses to phonologically underspecified representations of the mental lexicon (FUL model; Lahiri & Reez 2002). Therefore, speech perception would involve only memorized redundancy-free features.

This study aims at testing the FUL model on a featural contrast still not investigated in previous experiments. Drawing inspiration from recent studies (Scharinger et al. 2011; XXX 2013), it focuses on recording, filtering and analyzing the EEG signal evoked in Italian subjects by a pair of VCV syllables (/aˈta/ vs. /aˈpa/), in order to detect any physical difference in the related waveforms by focusing on MM elicitation. FUL predicts that MMN waveforms elicited by the deviant underspecified /t/ is larger than that one elicited by the deviant fully specified /p/, but our results contradict this, since no main effects were found.

As things stand, we propose a general reconsideration of the entire set of electrophysiological data on speech processing from a brand new perspective: asymmetric (within- and across-block significant responses) and symmetric (within-block significant responses only) effects on phonological contrasts may indeed be due to language-specific marked configurations, selectively *spotlighted* by attention markedness effects (Calabrese 2005); in this sense, MMN elicitation may be sensitive to feature robustness (Clements 2009). So, incoming unexpected stimuli would be analyzed via acoustic cues our auditory system is responsive to (Stevens 2002), ultimately triggering MMN and leading to attention rehearsal (Näätänen et al. 2011)

References

Calabrese (2005). *Markedness and Economy in a Derivational Model of Phonology*. Berlin: Mouton De Gruyter.

Clements, G. N. (2009). The Role of Features in Phonological Inventoris. In Raimy, E. & Cairns, C. E. (Eds.), *Contemporary Views on Architecture and Representation in Phonology*, pp. 19-73. London, UK/Cambridge, MA: The MIT Press.

Eulitz, C., & Lahiri, A. (2004). Neurobiological Evidence for Abstract Phonological Representations in the Mental Lexicon during Speech Recognition. *Journal of Cognitive Neuroscience*, 16(4), 577–583.

Lahiri, A., & Reetz, H. (2002). Underspecified Recognition. In C. Gussenhoven & N. Warner (Eds.), *Laboratory Phonology*, 7 (pp. 637–676). Berlin/New York: Mouton de Gruyter.

Calabrese (2013). Conditioned allophony in speech perception: An ERP study. *Brain and Language*, 126(3), 285-290.

Näätänen, R., Kujala, T., & Winkler, I. (2011). Auditory Processing that Leads to Conscious Perception: a Unique Window to Central Auditory Processing Opened by the Mismatch Negativity And Related Responses. *Psychophysiology*, 48(1), 4–22.

Scharinger, M., Merickel, J., Riley, J., & Idsardi, W. J. (2011). Neuromagnetic Evidence for a Featural Distinction of English Consonants: Sensor- and Source-Space Data. *Brain and Language*, 116(2), 71–82. Elsevier Inc.

Stanley, R. (1967). Redundancy Rules in Phonology. *Language*, 43(2), 393–436.

Stevens, K. N. (2002). Toward a model for lexical access based on acoustic landmarks and distinctive features. *The Journal of the Acoustical Society of America*, 111(4), 1872–1891.

The *liaison* in French IP and DP: a syntactic analysis

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Keywords: syntax-phonology interface; *liaison* in IP and DP; subject clitics

1. Possible and impossible *liaisons*

In this study I describe data concerning obligatory and impossible *liaisons* in French IP and DP.

Despite the fact that the *liaison* is traditionally associated to formal language, there are *liaisons* which are always produced (1a) and *liaisons* which are never produced (1b), regardless of the context of communication.

(1) a. le petit enfant [ləpətitãfã]
the little child

b. mauvais en maths [mɔvɛ ãmat]
bad at maths

Above all, it is important to distinguish between optional and impossible *liaisons*: although optional *liaisons* occur infrequently, they are possible (2a), what means that some conditions allowing them are at work; on the contrary, impossible *liaisons* are blocked by constraints which prevent them (2b).

(2) a. des officiers allemands [dezɔfisjezalmɑ̃]
some German officer

b. tes amies ont faim [tezami ɔ̃fɛ̃]
your friends are hungry

Phonological descriptions of the phenomenon, as those provided by Durand (1990) and Durand & Lyche (1994), are not sufficient to explain why *liaisons* are impossible in contexts like (2b).

French *liaison* is sensitive to syntax: *liaison* is blocked when morphosyntactic boundaries occur between two words. An analysis of the syntactic domains which admit or prevent *liaison* allows us to confirm abstract hypotheses on the syntactic structure of the words concerned. The advantage is not only theoretical: general rules explaining the phenomenon can be used for a more effective teaching of French as L2.

2. The *liaison* in the IP

I will first consider the *liaison* between subject and verb in French IP. On the one hand, the *liaison* is obligatory between a subject clitic and a verb (3a); on the other hand, the *liaison* is impossible between a lexical subject and a verb (3b). The following examples are partly from French native speakers and partly from a data-base of spoken French (PFC):

(3) a. elles aiment leurs enfants [ɛlzeməlœʀzɑ̃fɑ̃]
they love their children

b. jusqu'à ce que votre enfant ait l'age [...] [ʒyskasəkə votʀɑ̃fɑ̃ ɛlaʒ]
until your son have$_{3sg}$/$_{SUBJ}$ the age [PFC: ID: 243646 Loc: 75ccr1]

The analysis of the *liaison* confirms that subject clitics and lexical subjects do not occupy the same position in the derived structure. The impossibility of *liaison* between a lexical subject and a verb suggests that morphosyntactic boundaries block their phonological link. Therefore we can assume that lexical subjects are in a position higher than AgrP in the derived structure. We could formulate the hypothesis that lexical subjects are always left dislocated (cfr. Cardinaletti, 1997).

Furthermore, the investigation on the *liaison* within the IP allows us to make assumptions about the nature of subject clitics in French, which has made the object of many studies (Chomsky 1975, Rizzi 1986, Brandi & Cordin 1989, among many others). I propose to compare two different suggestions:

- Following the tripartition of pronouns proposed in Cardinaletti & Starke (1994) (clitic, weak and strong pronouns), Cardinaletti (1997) states that French subject pronouns are not clitics (*i.e.* functional heads)

but weak pronouns. According to Cardinaletti (1997) there is more than one preverbal subject position (Agr1P and Agr2P). In French, which is a non-null subject language, strong subjects occur in the higher specifier (Agr1P), whereas weak subjects occupy specAgr2P (4).

(4) $[_{Agr1P}$ {Jean/lui} $[_{Agr2P}$ {il} Vfin [...

- Culbertson (2010), instead, claims that French subject clitics are inflectional morphemes, *i.e.* heads which realise verbal features. If clitics are morphemes, I assume that they occupy Agr°, considering the extended functional domain of the verb proposed in Belletti (1990).

3. The *liaison* in the DP

As regards the DP, I will present data concerning the *liaison* between nouns and adjectives. On the one hand, the *liaison* always occurs between a prenominal adjective and a noun (5a); on the other hand, the *liaison* is rarely attested between a noun and a postnominal adjective (5b).

(5) a. de savants italiens [dəsavɑ̃zitaljɛ̃]
cultured Italians

b. des savants italiens [desavɑ̃italjɛ̃]
some Italian wise men

The obligatory *liaison* between prenominal adjectives − which are always direct modifiers in French − and the noun can be explained considering the syntactic adjacency of a direct modifier to the noun in the extended functional domain of the noun, as proposed in Cinque (1994) and Crisma (1993).

As regards postnominal adjectives − that can be both direct and indirect modifiers − some native speakers consider the *liaison* possible if the adjective is a direct modifier: only one syntactic boundary, indeed, occurs between a noun and a postnominal direct modification adjective (Cinque 1994). On the contrary, I have not found any native speakers accepting the *liaison* between a noun and an indirect modifier, which has its source in a projection higher than the functional domain of the noun. This difference could support the validity of the derivation proposed in Cinque (2010) for indirect modification adjectives.

References

Belletti, A. (1990). *Generalized Verb Movement: Aspects of Verb Syntax*. Torino: Rosenberg e Sellier.

Brandi, L. & P. Cordin (1989). "Two Italian dialects and the null subject parameter" in O. Jaeggli & K. Safir (Eds.), *The Null Subject Parameter*. Kluwer: Dordrecht, 111-142.

Cardinaletti, A. (1997). "Subjects and clause structure", in L. Haegeman (Ed.), *The New Comparative Syntax*. London: Longman, pp. 33-63.

Cardinaletti, A. & M. Starke (1994). "The typology of structural deficiency. On the three grammatical classes", *Working papers in Linguistics* 4-2, University of Venice, pp. 41-109.

Cinque, G. (1994). "On the evidence for partial N movement in the Romance DP" in G. Cinque, J. Koster, J.-Y. Pollock, L. Rizzi & R. Zanuttini (Eds.), *Paths Towards Universal Grammar. Studies in Honor of Richard S. Kayne*. Washington D.C.: Georgetown University Press, 85-110.

Cinque, G. (2010). *The syntax of adjectives: A comparative study*. Cambridge; London: MIT Press.

Crisma, P. (1993). "On Adjectives Placement in Romance and Germanic Event Nominals". *Working Papers in Linguistics* 3, 81-107.

Culbertson, J. (2010). "Convergent evidence for categorial change in French: from subject clitic to agreement marker". *Language* 86/1, 85-132.

Durand, J. (1990). *Generative and non-linear Phonology*. London, New York: Longman.

Durand, J. & C. Lyche (1994). "Phonologie multidimensionnelle et phonologie du français" in C. Lyche (Ed.), *French generative Phonology: Retropective and Perspective*. Salford (GB): Association for French Language Studies; European Studies Research Institute, 3-32.

Durand, J. & C. Lyche (2008). "French *liaison* in the light of corpus data". *Journal of French Language Studies* 18/1: 33-66.

Durand, J., B. Laks & C. Lyche (2009). "Le projet PFC: une source de données primaires structurées" in J. Durand, B. Laks & C. Lyche (Eds.), *Phonologie, variation et accents du français*. Paris: Hermès, 19-61.

Kayne, R. (1975). *French Syntax: the transformational cycle*. London: MIT Press.

Rizzi, L. (1986). "Null objects in Italian and the theory of *pro*". *Linguistic Inquiry* 17, 501-557.

CONDITIONAL INVERSION AND TYPES OF PARAMETRIC CHANGE

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Keywords: Conditional Inversion, parameters, syntactic change

Earlier work has developed the theory of parameters so as to create a four-way distinction among kinds of parameters, as in (1):

(1) For a given value v_i of a parametrically variant feature F:
- a. **Macroparameters**: all functional heads of the relevant type share v_i;
- b. **Mesoparameters**: all functional heads of a given naturally definable class, e.g. [+V], share v_i;
- c. **Microparameters**: a small sub-class of functional heads (e.g. modal auxiliaries, pronouns) shows v_i;
- d. **Nanoparameters**: one or more individual lexical items is/are specified for v_i

This taxonomy is not seen as UG-given, but is set against the general background of an emergentist view of parameters and parameter-setting which we will not elaborate on here. Following the general view of parametric change as involving reanalysis of PLD through language acquisition, macroparameters must be "easily" set; hence they resist reanalysis and are strongly conserved, while meso- and microparameters are correspondingly less salient in the PLD and hence less resistant to reanalysis and less strongly conserved. Nanoparameters are in principle still less resistant to reanalysis and therefore more prone to change; however, frequency effects may be relevant here, with high-frequency lexical items likely to retain what become, over time, irregularities. This kind of nanoparametric setting is similar to English irregular verbs in being an item-specific specification which overrides the synchronic default (presumably by disjunctive ordering of the standard kind), where the synchronic irregularity may reflect an earlier regularity (e.g. the ablaut relics in Modern English irregular verbs).

The synchronic corollary of these different kinds of parametric change is that macroparameters are frequently observed to hold across large language families in a fairly uniform way (e.g. rigid head-final order across categories in (almost) all attested Dravidian languages). Mesoparameters are characteristic of language families at the level of the main sub-groupings of Indo-European, e.g. Germanic. Microparameters characterise variation among more closely related systems, such as the individual Romance languages and dialects. Finally, nanoparameters are idiosyncratic properties of sub-systems of individual languages and dialects.

In this paper we will document a case of change from a mesoparameter to a microparameter to a nanoparameter involving inversion in conditionals in the history of English, henceforth Conditional Inversion (CI). The central aspect of this kind of inversion has not changed since Old English, in that it involves movement of T to C where C has a feature marking the clause as Irr(ealis) (e.g. *swelte ic, libbe ic* "die I, live I"—"if I live or die"). We take Irr to be one possible clause-type feature associated with C, along with Inter(rogative), Opt(ative) and others. In Old English (OE), CI was part of a general set of operations raising inflected verbs into the C-system, the verb-second (V2) system. We take V2 to involve two features of C, one triggering V/T-to-C movement and an EPP-type feature triggering XP-movement to SpecCP. CI was a V1 structure, involving only the first of these features. This feature is general to all root and some embedded Cs and holds across Germanic. As such, it is a good candidate for a mesoparameter.

What has changed since Old English is the range of elements affected by this operation, and how it relates to other forms of inversion. The loss of V2 is usually dated to the 15th century (Fischer et al. 2000), but various forms of "residual V2" in marked clause types survived, e.g. Interrogative Inversion (II). CI clearly also survived the loss of general V2:

(2) *Wist I that it were trewe .. I woulde well thynke, that .. he hanged himself* (More)

The shift from full to residual V2 is a shift from a meso- to a microparameter, in that the class of Cs attracting T was restricted. (2) features a lexical verb in C. In the Early Modern (ENE) period movement of lexical Verbs to T was lost. From this period on only auxiliaries undergo CI, again in

line with interrogative and other kinds of inversion. The shift from residual V2 to subject-aux inversion further restricts the items undergoing inversion, although the trigger for T-to-C is unchanged. What changed here is a feature of T, moving from a meso – all verbs – to a micro – just auxiliaries – value, which we will formalise. The most interesting change to affect CI has taken place quite recently, though. From the 17th to the 19th century, CI was no different from other inversions in that all auxiliaries could undergo it, including "dummy" *do*:

(3) *… for did I not consider you as my Patron …* (1664 Dryden)

Denison (1998) notes that CI applied to all auxiliaries until the mid-19th century. In contemporary English, by contrast, CI is restricted to *had*, *should* and, more marginally, *were*:

(4) a. *Had I been rich, everything would have been ok.*
b. *Should he do that, everything will be ok.*
c. *?Were I/he to do that, …*
d. **Did I do that, everything would be ok.*

This situation looks like a nanoparameter, as it affects one modal (*should*), and specific forms of *have* and *be* (the latter in certain contexts only, in that predicative *be* is worse than (4d)). Meanwhile, II has remained productive for all auxiliaries. Optative inversion, however, was first limited to *may* and has now become formulaic (*May you rot!* but **May you eat!*).

We analyse these developments as schematised in (5):

(5)

OE/ME to ca.1450:	C [±Verid] attracts v/V;
	C [+Verid] is [+EPP], C [-Verid] is [-EPP].
ME from 1450; conservative ENE:	C [-Verid] attracts T; T attracts v/V
Innovative ENE, NE to ca.1850:	C [-Verid] attracts T; T no longer attracts V
1850-present:	C [Irr, Past] attracts T (CI)
	C [Interr] attracts T (II)
	(C [Optative] attracts T; T has [Opt]) (OI)

Here [±Verid] is formal feature encoding veridicality, defined as in (6) (Giannakidou 1998):

(6) A propositional operator *F* is veridical iff *Fp* entails *p*: $Fp \rightarrow p$; otherwise *F* is nonveridical.

The [Verid] feature has sub-features [Irr, Inter, Opt]. These differentially attract T in contemporary English. Moreover, in contemporary English T productively bears [Irr] and [Interr] (or [Pol(arity)]; cf. Duffield 2013) and so can be attracted by C bearing either of these features: [Inter] C can attract any auxiliary; but only *had, should* and (one kind of) *were* are [Irr, Past] and so able to be attracted by C[Irr]. Hence we see the change to a nanoparametric property, and more generally, the break-up of the formerly productive residual V2 into three sub-operations involving more specific features.

The change from full to residual V2 has taken place in a number of Romance varieties (French, various Northern Italian dialects). In some Northern Italian varieties, mostly in the North West, II and CI have also been lost altogether, as in advanced varieties of English. What seems to be unique to English is the loss of V/v-to-T movement and the concomitant restriction of all forms of inversion to auxiliaries, as well as the more recent restriction of CI to a small subset of auxiliaries. The inversion operation itself, though, has not changed at all; what has changed are the classes of features which trigger T-to-C movement and the classes able to be triggered in a given clause type.

We conclude by considering in more detail how an emergentist (1)-style parametric taxonomy allows us to understand how systems may become gradually more marked, in the sense of requiring more specific triggers for operations, until a feature (class) ceases to act as a trigger, and the system radically simplifies. Unlike many minimalist approaches to diachronic change, then, ours does not predict that change will always lead to simplification or that change will be uniformly simplifying or complexifying.

Finite raising and wh-agreement

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Keywords: raising, subject extraction, wh-agreement.

In this paper we examine attested English data which are standardly considered unacceptable but are occasionally produced by native speakers. The data might at first sight be characterized as syntactic blends (Coppock 2010). Using a cartographic approach, and adopting Rizzi's (2006) Subject Criterion, we will analyse these data in terms of inter speaker-variability in the interaction between subject extraction and T-agreement (cf. Kayne 1995).

1. Finite raising in English: the data In English, a contrast can be observed between subject-to-subject raising out of a non-finite clause (1a), which is entirely acceptable, and (1b), which involves A-movement out of a finite clause and is strongly unacceptable:

(1) a. John$_i$ seems to t$_i$ read a book. b. *John$_i$ seems (that) t$_i$ reads a book.

The deviance of (1b) is standardly captured in terms of a ban on 'Improper Movement', i.e. the descriptive generalization which rules out movement from an A' to a A-position. However, apparent instances of raising out of a finite clause are attested in English. Such examples are also judged as relatively acceptable by some native speakers:

(2) a. % There were no signs of violence and a postmortem examination is due to take place tomorrow [Tuesday], <u>which is hoped may provide further information</u>. (<u>*Guardian*</u>)
b. %The Department for Constitutional Affairs announced that it intends to simplify the rules for Conditional Fee Arrangements (CFAs) ("No Win No Fee") <u>which were hoped would promote access to justice</u>. (Minutes - Nottinghamshire County Council)

At first sight such examples could be seen as blends combining the 'upper layer' of a raising pattern with a *wh* subject (3a) with a 'lower layer' (3b) of A' subject extraction:

(3) a. <u>which is hoped</u> to provide more information
b. which it is hoped <u>will provide more information</u>

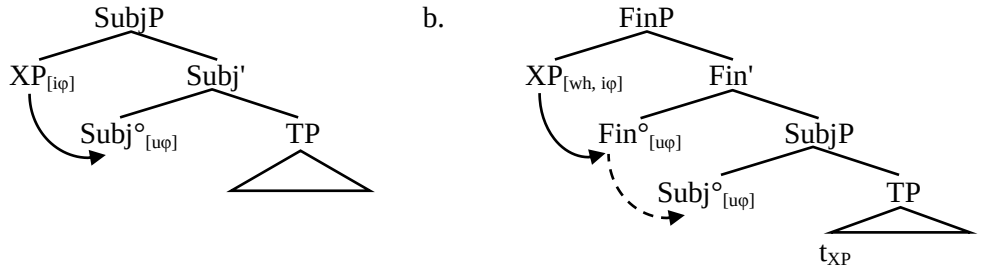
We argue that to account for the data in (2) no recourse to extragrammatical devices is required. Instead, we postulate that the grammars of some English speakers allow for a form of *wh*-agreement. We first argue against an analysis in terms of a matrix null expletive subject *it*. Rather, we propose that in (2) matrix T 'exceptionally' agrees with the *wh*-subject of the embedded clause at the point when the latter is still located on the embedded clause edge. This *wh*-agreement blocks insertion of an expletive subject in the matrix clause, which has consequences for the way in which the Subject Criterion (Rizzi 2006 [R2006]) is satisfied in the higher clause. We then relate the availability of *wh*-agreement to the functional architecture of the lower CP (cf. Kayne 1995 for other instances of variation in subject agreement). The proposal crucially sets *wh*-subject questions apart (cf. McCloskey 2000 for Hiberno English) and is based on hypotheses elaborated in R2006 and Rizzi & Shlonsky (2006, 2007) [R&S2006, 2007].

2. SubjP and the Subject Criterion Crucial for our analysis is the hypothesis that the topmost projection of the finite IP domain is SubjP, which is associated with the Subject Criterion (R 2006; R&S 2006, 2007), i.e. the requirement that Subj° be c-commanded by clausemate licensor. SubjP is distinct from TP, the locus for subject-verb agreement. In the canonical case, the Subject Criterion is satisfied by a DP in Spec,SubjP. Given Criterial Freezing (R2006), this DP is frozen in place, giving rise to well known subject-object asymmetries ('*that*-trace effects') illustrated in French (4a,b), where subject extraction requires the special complementizer *qui* (4c).

(4) a. *Qui$_i$ crois-tu que [$_{SubjP}$ t$_i$ est venu]? (Who do you think came?)
b. Que$_i$ crois-tu que Jean a fait t$_i$? (What do you think (that) John did?)
c. Qui crois tu qui est venu? (Who do you think came?)

3. 'Expletive Fin' as an escape hatch for subject extraction (R&S 2006) Apart from insertion of a (lexical/contentful or expletive) DP in Spec,SubjP (5a), an alternative way of satisfying the Subject Criterion involves merging the next higher functional head, namely a special type of Fin°, associated with a set of φ-features (like French *qui* in (4c)). The φ-features of Fin° are in turn in need of independent licensing by a local c-commanding XP (5b). SpecFinP is a non-criterial A position, and hence all subjects that move there will be A' moved further. SpecFinP thus effectively constitutes an escape hatch for subject extraction. We will refer to R&S's mechanism of satisfying criterial requirements by merging such functional heads as 'delayed satisfaction' (cf. the dotted arrows in (5b) and (6)).

(5)a. b.



4. T-agreement with embedded FinP Returning to the data in (2), the following observations constitute the starting point of our analysis. (i) Examples like (2) are only attested with *wh*-subjects; analogous examples with pronominal subjects are rejected by native speakers. Hence data like (2) cannot be construed as evidence for generalized finite raising. (ii) The moved *wh* constituent triggers agreement in both the lower and the higher clause. It follows that matrix T must agree with the moved constituent, and (from (i)) that agreement must be restricted to *wh*-constituents. Our hypothesis is that the 'exceptional' agreement between T and the *wh*-element is only available in some speakers' grammars and is at the core of the derivation of the attested examples in that it blocks insertion of an *it*-expletive as the matrix subject. Concretely, in examples as (2), lower clause subject *wh*-extraction proceeds as in 'regular' cases of subject *wh*-extraction (R2006, R&S 2006, 2007): the *wh* subject in the lower clause moves as represented for XP in (5b). The difference between the generally acceptable patterns and those in (2) will be related to locality: agreement between matrix T and XP is not standard because SpecFinP is not normally accessible to T. In (2),T can 'exceptionally' probe and agree with XP in SpecFinP. We will formalize this distinction between the two systems in terms of the phasal status of FinP in relation to the architecture of the left periphery. More specifically, we suggest that the embedded clause is a bare FinP (non-phasal) in (2) and an extended FinP (phasal) in the standard cases (3b).

5. Finite raising under A'-movement The later stage of the derivation proceeds as follows (cf. (6)). SpecFinP is not a halting place for a moved constituent: the *wh*-feature on XP in FinP in (5b) drives further movement to the higher layer. Moreover, A-movement beyond the finite clause being impossible ('Improper Movement', cf. R&S2006), the *wh*-subject cannot move to SpecTP/SpecSubjP/SpecFinP (all three A-positions) to satisfy the Subject Criterion. Finally, as discussed, expletive insertion is blocked as a result of the *wh*-agreement of T. In the matrix clause the Subject Criterion is also satisfied through 'delayed satisfaction' via expletive Fin°.

(6) $[_{FocP}$ wh$_{[i\varphi]}$ $[_{Foc°}$ CRIT $[_{FinP}$ Fin°$_{[u\varphi]}$ $[_{SubjP}$ CRIT $[_{TP}$ T°$_{[u\varphi]}$ ...$[_{FinP}$ ~~wh~~$_{[i\varphi]}$ $[_{Fin°}$ $_{[u\varphi]}$ $[_{SubjP}$ CRIT $[_{TP}$...~~wh~~$_{[i\varphi]}$ ...

References (selected) Coppock, E. 2010. Parallel grammatical encoding in sentence production. *Language and Cognitive Processes* 25. Kayne, R. 1995. Agreement and verb morphology in three varieties on English. In *Studies in comparative Germanic syntax*. Rizzi, L. 2006. On the form of chains. In *Wh-movement: moving on*. Rizzi, L. & U. Shlonsky. 2006. Satisfying the Subject Criterion by a non subject. In *Phases of interpretation*. id. 2007. Strategies of subject extraction. In *Interfaces + Recursion = Language?*

Why a bed can be slept in. On the passive of prepositional verbs in English.

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Keywords: *Prepositional verbs, English, Applicative construction, passive.*

Prepositional verbs in English (laugh at, sleep in, tamper with, etc.) allow for a passive construction (the so-called prepositional passive) which differs from that of a canonical passive w.r.t. the position where the subject NP is extracted from:

1) a [$_{TP}$ John$_i$ was [$_{vP/VP}$ laughed [$_{PP}$ at [$_{DP}$ t$_i$]]]]
b [$_{TP}$ John$_i$ was [$_{vP/VP}$ hit [$_{DP}$ t$_i$]]]

If all prepositional objects (PO) could be extracted, no restriction on passivization would be expected: on the contrary, many restrictions are found.

2) a John slept near this bed
b *This bed was slept near (by John)
c John comes from Chicago
d *Chicago is come from (by John)
e The garden swarms with bees
f *Bees are swarmed with (by the garden)

In the late seventies much literature tackled this issue invoking reanalysis of [VP [PP]] into [V-P] (Riemsdijk 1978; Hornstein & Weinberg 1981 a.o.). More recent approaches have concentrated on the properties of the subject and the prepositional object to account for passivization, like Castillo (2008) who has capitalized on the features of arguments according to scales of animacy whereas others like Klingvall (2012) has taken prepositional passives to be a type of topicalization structures.
In this paper, I put forward to concentrate on the properties of the Ps which I take to be central in determining whether a prepositional verb is passivizable. In particular, the Ps involved in these constructions are "less innocent" than they appear as they instantiate a functional head inside *v*P (*v*P's inner structure has already been taken to display an articulated hierarchy, see Ramchand 2012; Harley 2013 among many others).
As for this FP, I assume it encodes an Applicative head along the lines of Marantz (1993). To assume such a projection easily accounts for the properties of P which resembles more a verbal prefix than a "real" P selected by the V (exactly like Ps incorporated onto the verb in African languages, see Baker 1988).
This hypothesis obviously affects the PO too, which must end up in a dedicated projection, P failing to assign case to it. I argue that this position – higher than VP but lower than ApplP – is the aspectual head encoding the aktionsart of the verb which can represent a position for the base-merge of the "prepositional" object. The fact that PO shows up in Spec,AspP also ensures it represents a viable goal for higher probes (namely T in passivization). On the contrary, POs merged in the complement of "real" PPs are not viable goals for T and hence passivization is ruled out: this is the case of the prepositional verbs whose Ps do not enter the applicative construction (mostly unaccusative verbs taking a P complement) as under (4).

3) [VoiceP V^0 [ApplP P [AspP NP Asp [~~V~~]]]] **Passive OK**
P heads the Applicative Projection inside *v*P. V^0 moves past Asp^0 to Voice^0 where it ends up being adjacent to the applicative head. (Spec,AspP accessible for high probes (T) → passivization OK).

4) [VoiceP [*v*P ([AspP) [VP [PP [NP]]]] **Passive ***
No ApplP; the PO is selected by P; PO not viable as goal for high probes.

Verbs like (3): deal with, sleep in, break into, talk about, etc.
Verbs like (4): come from, go at, swarm with, differ, in, etc.

References:

Baker, Mark C. 1988. *Incorporation: a theory of grammatical function changing.* The University of Chicago Press. ♦ Castillo Concha. The class of prepositional passivizable verbs in English, *Acta Linguistica Hafniensia* 42.2,143-174. ♦ Harley, Heidi, 2013. External arguments and the Mirror Principle: On the distinctness of Voice and v. *Lingua* 125: 34-57 ♦ Hornstein, Norbert, and Amy Weinberg. 1981. Case theory and preposition stranding, *Linguistic Inquiry* 12:55–91. ♦ Klingvall, Eva. 2012. Topics in pseudo-passives. *Working Papers in Scandinavian Syntax* 90 (2012) 53–80. ♦ Marantz, Alec. 1993. Implications of asymmetries in double object construction. *Theoretical aspects of Bantu Grammar*. Ed. S. Mchombo, Stanford, CSLI Publications. ♦ Ramchand Gillian. 2008. *Verb Meaning and the Lexicon*. Cambridge University Press ♦ Riemsdijk, Henk van. 1978. *A case study in syntactic markedness: The binding nature of prepositional phrases*. Dordrecht: Foris Publications.

Weak definites, expletive definites and bare nominals in Romance

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1. Romance languages have been argued to allow bare nominals (BNs) only in predicate position (Chierchia 1998), but the data in (1)-(3) show explicitly that the generalization that a determiner is required for argumenthood when common count nous are predicative does not hold in a Romance language such as Brazilian Portuguese (BrP) (Schmitt & Munn 1999, among others).

(1) Pedro limpou (*o*) *banheiro* todos os dias. [strong DP]
Pedro cleaned the bathroom all the days
'Pedro cleaned the bathroom everyday.'

(2) Pedro vai ler (*o*) *jornal*. [weak definite]
Pedro goes read the newspaper
'Pedro is going to read the newspaper.

(3) Os meninos lavaram (*o*) *rosto* esta manhã. [expletive, inalienable possession]
the boys washed the face this morning
'The boys washed their faces this morning.'

2. Since in BrP it is possible to have a null determiner in all examples (1)-(3), it is our aim in this paper to answer the following questions: (a) Why should a language with null Ds also have semantically weak and expletive determiners? (b) Where do we draw the line between weak definites and expletives? (c) What is the meaning of the DP containing weak and expletive determiners and how is this meaning composed with the verb?

3. Previous work on similar data focus on the semantics of weak definites (Carlson & Sussman 2005, Carlson et al. 2006), on the syntax of expletives (Vergnaud & Zubizarretta 1992), on a unified semantics for weak definites, expletive determiners and complex NPs involving a genitive phrase (Beyssade 2012), and also on the DP/NP structure of nominal expressions in BrP (Cyrino & Espinal 2013).

4. In this paper we want to account for a triple distinction: (i) weak definites, which are always DPs in the Romance languages we will deal with (BrP, Catalan, Spanish), contain either overt or null Ds, and denote kinds of events (Schwartz 2013); (ii) expletive definites, which are also DPs that contain either overt and null Ds, denote a HAVE-relational function between a possessor argument and a possessee (V&Z 1992); and (iii) complements of prepositions. For the latter, we make a distinction between BrP and the other Romance languages under study. In BrP when the complement of a preposition is a DP with an overt D, a weak definite interpretation is obtained, no matter whether the noun is animate or inanimate (4a); when the complement of the preposition is a DP with a null determiner (notice: **n'aula*), then an indefinite reading arises obligatorily (4b). The alternation *na aula/em aula* encodes different meanings. When there is no alternation (4c) an incorporated meaning for the BN arises (Espinal 2010, Espinal & Mateu 2011).

(4) a. Pedro foi *na aula*/ *no médico*. [weak definite]
Pedro went in.the class/ in.the doctor
'Pedro went to school/to the doctor.'

b. Pedro foi *em aula* (de francês)/ *em medico* (caro). [only indefinite]
Pedro went in class of French in doctor expensive
'Pedro went to a (French) class/to an (expensive) doctor.'

c. Pedro está *em casa*. [incorporated]
Pedro is in home
'Pedro is at home.

For Catalan and Spanish (5), we will claim that objects of prepositions are either NPs, semantically incorporated into the predicate, or weak DPs. They both denote kinds of events at the VP level.

(5) a. Anar *a escola*. [Cat]
go to school
b. Ir *a la escuela*. [Spa]
go to the school

5. For BrP we will contrast (2)-(4) with the long weak definite in (6). In the latter, the D cannot be null and the definite restriction of the DP in italics correlates with the indefiniteness of the complement (Poesio 1994).

(6) A vila está localizada *na encosta* de *uma montanha*.
the village is located in.the side of a mountain
'The village is located on the side of a mountain.'

6. In order to answer the questions in 2 and the problems in 4 and 5, we will first argue for a full DP structure in Romance relying on the assumption that if a language has determiners (for canonical argumenthood), it also has null determiners (Ghomeshi et al. 2009), and if a language has expletive and weak determiners, it must have obligatory determiners; therefore, optional determiners must be interpreted. We propose that null determiners can be strong or weak/expletive.
Second, we will argue that there is not a complete parallel between weak and expletive definites, because although there are some similarities between these expressions, some differences should also be pointed out (cf. Aguilar-Guevara & Zwarts 2010). Similarities: they are subject to lexical restrictions, they only occur in object position, they are morphosyntactically specified for gender and number, they show sloppy identity in elliptical contexts, they show the same restrictions in discourse relationships, they have narrow scope, and they violate the uniqueness presupposition. Differences: only weak definites are morphosyntactically defective, weak definites are built with unaccusatives and causative transitives while expletives occur with transitive verbs, only in weak definites the denotation of the noun is not restricted to the property denoted by the noun but it can denote any property in the same lexical field, only weak definites allow an enriched meaning, and only expletives allow a dependent reading.
Third, in contrast to V&Z (1992) who propose that definite DPs with expletive determiners denote types, A-G & Z (2010), who argue that weak definites denote kinds, and Beyssade (2012), who unifies the semantics of weak expressions into types, in this paper we will argue that: (i) types should not be identified with kinds: nouns contained in weak definite expressions, in the complement position of an expletive determiner, and in long weak definites always denote *properties*, rather than kinds or individual objects (Espinal 2013); (ii) weak definites transfer the iota operator encoded by the definite article to the closest VP, and thus denote *kinds of events* (Schwartz 2013); (iii) expletive determiners and long weak definites introduce a R_{HAVE} *relation* between two nominal expressions (Le Bruyn et al. 2013); (iv) objects of prepositions will trigger either an existential operator over individual entities (*ir em missa, ir em médico*), a iota operator over events (*ir na missa, ir no médico*), or an operation of semantic incorporation. Finally, we will argue that the non-uniqueness presupposition of weak and expletive definites is linked to the fact that in the former case the meaning of the iota operator is semantically transferred to the VP level, and in the latter case, the non-uniqueness is dependent on the existence of a R_{HAVE} on the variable that the iota operator binds.

Selected References

Aguilar-Guevara, A. & J. Zwarts (2010). Weak definites and reference to kinds. *Proceedings of SALT* 20: 1-15.
Beyssade, C. (2012). Reabilitando a pressuposição de unicidade. *Revista da ABRALIN* 12(1): 125-147.
Cyrino, S. & M.T. Espinal (2013). Bare nominals in Brazilian Portuguese: more on the DP/NP analysis. To appear in *Natural Language & Linguistic Theory.*
Schwartz, F. (2013). How weak and how definite are weak definites? To appear in A. Aguilar-Guevara, B. Le Bruyn & J. Zwarts (eds.), *Weak referentiality*, Amsterdam: John Benjamins.
Vergnaud, J.R. & M.L. Zubizarreta (1992). The definite determiner and the inalienable constructions in French and in English. *Linguistic Inquiry* 23(4): 595-652.

Towards a Principled Explanation of the WCO Effect

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Key words: Weak crossover, parallel merge, the LCA, linearization, principled explanation.

The Problem: Postal (1993) observes that WCO effects seem to be absent in French, as in (1), from Martinon (1927:220). The pronominal subject of the relative clause in (1) is interpreted as a bound-variable, despite being in a WCO configuration with respect to the relative operator. The same is true of Spanish, as shown in (2). There are reasons to believe that the WCO effect is not entirely absent in these contexts. In Spanish, for instance, replacing *su madre* 'his mother' with *la madre de el* 'the mother of him' seems to trigger a WCO violation: the sentence is acceptable only if *él* 'him' is not bound by the relative operator, as shown in (3). The generalization for Spanish seems to be that pronouns of the possessive type do not trigger WCO, whereas non-possessive pronouns do. This is also true of Quebec French, where both types of pronouns may co-occur in what look like doubled possessive DPs, as in (4). The pronoun doubling the possessive DP must have the same interpretation as the possessive pronoun. (4a) shows that a possessive pronoun can be bound by a crossing *wh*-phrase if it is not doubled by a non-possessive pronoun. (4b) shows that a possessive pronoun can be doubled if it is not bound by the crossing *wh*-phrase. Thus, it is the presence of the non-possessive pronoun in (4a) that seems to yield the WCO effect when the possessive DP is simultaneously doubled and bound by an operator. These facts are intriguing and, at present, there is no theory of WCO capable of explaining them.

Proposal: I argue that WCO is a phenomenon of the syntax-phonology interface. In particular, I argue that in the bound-variable interpretation of a determiner pronoun, the NP complement of the pronoun is a copy of the NP part of the antecedent that binds it. The copy of the antecedent NP is merged with the pronoun before any strong phase head is merged in a process similar to sideward movement (Nuñez 2001) or parallel merge (Citko 2005). For instance the derivation of *Which man1 does his1 mother love t ?* can go through the stage in (5a) in which Merge applies in parallel to the pairs <*which, man*> and <*he, man*> before merging the phase head corresponding to *love*, hence no violation of cyclicity or the extension condition ensues. Since the NP part of the pronominal DP is a copy of the NP of the antecedent DP, a PF-interface strategy will delete the complement of the pronoun in order to avoid a potential violation of Kayne's 1994 LCA (cf. Citko 2005), when the chains are finally linearized. This is shown in (5b) (deleted copies indicated with strikethrough font). But although the complement of the determiner pronoun in (5b) is deleted, its ϕ-features are spelled-out in the phonological realization of the pronoun. This entails that the ϕ-features of the NP of the antecedent DP are phonologically realized in two different syntactic positions: at the site of the antecedent and at the site of the pronoun. I argue that the phonology sees such a situation as a violation of the LCA, but that the violation is only detectable by the phonology if the pronoun is spelled out in the same cycle as one of the copies of the antecedent (cf. Agüero-Bautista 2012). I argue that this is what WCO is: a violation of the LCA.

Empirical coverage Unlike previous proposals, this analysis can explain why *él* 'him' in (3), but not *su* 'his' in (2), triggers a WCO violation. Since *él* is a determiner, it must have an NP complement, and under the bound variable interpretation it is parallel-merged with the same NP of its antecedent. Although the complement of *él* is ultimately deleted in the phonology, the fact that the pronoun itself is pronounced constitutes an LCA violation with respect to the phonological realization of the ϕ-features of its antecedent's NP. Possessive *su*, on the other hand, seems to be an adjective. It is clearly related to Italian possessive adjectives like *suo* 'his/her' which can be preceded by definite articles (*la sua mama* 'his mother') and in some dialects of Spanish *su* can indeed be preceded by articles (Picallo and Rigau 1999). But adjectives do not take NP complements, hence *su* cannot be parallel-merged with the NP of its antecedent. Thus, no violation of the LCA is incurred when a possessive adjective like *su* is bound by an antecedent DP since the ϕ-features of the antecedent's NP are not spelled out in the position of the possessive pronoun. The acceptability of the French example in (1) follows from the same analysis under the assumption that *sa* 'his' is also an adjective. The current analysis also predicts that null pronouns should not trigger a WCO violation, since their lack of a phonetic matrix prevents them from ever violating the LCA. The absence of the WCO effect in languages with null possessive pronouns (e.g, Hungarian, Kiss 1987) and Lakota (Van Valin 1987)

confirms the prediction. As noticed by one reviewer, this analysis applies mutatis mutandis to the PRO-gate phenomenon discussed by Higginbotham (1980). His observation is that a null PRO can be bound by a crossing *wh*-phrase without triggering a WCO violation. This is a natural expectation of the current analysis since the realization of a null element cannot possibly instantiate a violation of the LCA.

Conceptual advantage: the present analysis explains WCO as a violation resulting from the way the computational system maps representation to the phonological interface. The phenomenon is viewed as a side effect of language design. No principle specific to binding is involved; hence the analysis helps achieve the minimalist goal of simplifying UG.

(1) Un homme$_1$ à qui sa$_1$ jambe fait mal t$_1$ ('A man whose leg hurts').
A man to whom$_1$ his$_1$ leg makes pain

(2) Ningún niño$_1$ a quien$_1$ su$_1$ madre haya maltratado será aceptado sin examen psicológico.
No child$_1$ to whom$_1$ his$_1$ mother has mistreated will-be accepted without exam psychological.
'No child to whom his mother has mistreated will be accepted without a psychological exam'

(3) Ningún niño$_1$ a quien$_1$ la madre de él$_{*1/2}$ haya maltratado será aceptado sin examen psicológico.
No child$_1$ to whom$_1$ the mother of him$_{1/2}$ has mistreated will-be accepted without exam psychological.
'No child to whom his mother has mistreated will be accepted without a psychological exam'

(4) a. Quel caractère biblique$_1$ penses-tu que sa$_1$ femme (*à lui$_1$) a trahi t$_1$?
*Which character biblical$_1$ think-you that his$_1$ wife (*of him$_1$) has betrayed t$_1$*
b. Quel caractère biblique$_1$ penses-tu que sa$_2$ femme (à lui$_2$) a trahi t$_1$?

(5) Some derivational steps for the sentence ***Which man does his mother love t*** ?
a. Merge (<which, man>), Merge (<he, man>)
b. [Which man does he ~~man~~'s mother love ~~which man~~]

Selected References

Agüero-Bautista, Calixto. Team Weak Crossover. *Linguistic Inquiry* 43: 1-41.
Citko, Barbara. On the nature of Merge: External Merge, Internal Merge and Parallel Merge. *Linguistic Inquiry* 36: 475-496.
Higginbotham, James. 1980. Pronouns and bound variables. *Linguistic Inquiry* 11:679–708.
Kayne, Richard S. 1994. *The antisymmetry of syntax*. Cambridge, Mass.: MIT Press.
Postal, Paul. 1993. Remarks on weak crossover effects. Linguistic Inquiry 24: 539-556.
Van Valin, Robert D. 1987. The role of government in the grammar of head-marking languages. *International Journal of American Linguistics* 53: 371-397.

Imposters and other monstrosities

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Keywords: *imposters, complex indices, person features, assignment manipulation, monster operators*

In this talk I argue for a class of silent operators that manipulate the assignment function with respect to which an utterance is evaluated. These operators either make pronouns with specific person features undefined (*"imposter operators"*) or change referential values of pronouns with specific person features in their scope (a kind of *monster operators*, cf. Sudo 2012), thus making it possible to have **a unified analysis of pronominal indexical shifting** (see, e.g., Schlenker 2003, Anand and Nevins 2004, Deal 2013, Munro et al. 2012, Shklovsky and Sudo to appear) **and "homogeneity" effects with "imposters"** (Collins and Postal 2012).

Person features

Following Minor 2011 and Sudo 2012 (cf. also Wechsler and Zlatić 2003), I view person features as parts of complex referential indices represented as a pair of a natural number and a person feature (an analysis initially intended for fake indexicals).

(1) a. $[\![\mathrm{I}_{<i,①>}]\!]^g = g(<i,①>)$ b. $[\![\mathrm{you}_{<i,②>}]\!]^g = g(<i,②>)$ c. $[\![\mathrm{she}_{<i,③>}]\!]^g = g(<i,③>)$

Person features constrain the assignment function in a particular way.

(2) *Admissibility Condition for Assignment Functions* (after Sudo 2012)
An utterance of a sentence is felicitously evaluated with respect to the speaker *x*, possible world *w* and assignment function *g,* only if for all $i \in \mathbb{N}$,
a. $g(<i,①>)$ is the individual s_c that *x* identifies as himself/herself in *w*;
b. $g(<i,②>)$ is the individual h_c that *x* identifies as his/her addressee in *w*.

3rd person features are used elsewhere.

(3) *Elsewhere 3rd person* (cf. e.g. Schlenker 2003)
For all $i, j, k \in \mathbb{N}$, a complex index with the 3rd person feature $<i,③>$ is not licensed in a position P of a sentence S, if there is an alternative sentence S', different from S at most in that $<i,③>$ in P is replaced by $<i,①>$ or $<i,②>$, such that $[\![\mathrm{S}]\!]^g = [\![\mathrm{S'}]\!]^g$.

Imposter operators

In the presence of "imposters", it becomes possible for 3rd person pronouns to refer to spekers/addressees.

(4) *Your faithful servant's*$_i$ collegues consider *him*$_i$ incompetent.

I argue that this is possible because those pronouns are used in environments that preclude the use of corresponding 1st/2nd person pronouns, and thus (3) is satisfied. These environments are created by silent operators Op_S and Op_H that make 1st or 2nd person indices undefined.

(5) a. $[\![\mathrm{Op_S}\ \varphi]\!]^g = [\![\varphi]\!]^{g'}$, where *g'* differs from *g* at most in that for all $i \in \mathbb{N}$, $g'(<i,①>)$ is undefined.
b. $[\![\mathrm{Op_H}\ \varphi]\!]^g = [\![\varphi]\!]^{g'}$, where *g'* differs from *g* at most in that for all $i \in \mathbb{N}$, $g'(<i,②>)$ is undefined.

The operator $\mathrm{Op_S}$ has to have a speaker-imposter like *your faithful servant* in its scope, while the operator $\mathrm{Op_H}$ has to have a hearer-imposter like *sweetheart* in its scope. One benefit of having such operators is that it allows us to straightforwardly capture "homogeneity" effects from Collins and Postal 2012: they observe that if there is a constituent that contains two coreferent pronouns but doesn't contain an imposter, the pronouns have to agree in their person features.

(6) a. *Your faithful servant*$_i$'s colleagues agree that *my*$_i$ result supports *my*$_i$ conclusion.
b. *Your faithful servant*$_i$'s colleagues agree that *his*$_i$ result supports *his*$_i$ conclusion.
c. * *Your faithful servant*$_i$'s colleagues agree that *my*$_i$ result supports *his*$_i$ conclusion.
d. * *Your faithful servant*$_i$'s colleagues agree that *his*$_i$ result supports *my*$_i$ conclusion.

In our system this result follows, since for a 3rd pronoun like *his* to referring to the speaker of the utterance to be licenced, it has to be in the scope of the operator $\mathrm{Op_S}$, together with a speaker-imposter

like *your faithful servant.* But that means that there would be no way to interpret any (potentially) coreferent 1st person pronoun in the syntactic domain that includes the imposter and the coreferent 3rd person pronoun. The prediction is stronger than Collins and Postal's generalization: it must say that **a minimal constituent that includes an imposter and a coreferent 3rd person pronoun cannot include any coreferent non-3rd person pronouns.** The prediction is borne out.

(6) e. *His*$_i$ colleagues agree that Op$_S$ [*his*$_i$ results support *YFS*$_i$'s conclusion].
f. *My*$_i$ colleagues agree that Op$_S$ [*his*$_i$ results support *YFS*$_i$'s conclusion].
g. * Op$_S$ [*His* colleagues agree that *my*$_i$ results support *YFS*$_i$'s conclusion].

Further Predictions

Note that in principle 1st person pronouns can be c-commanded by Op$_S$, but only **as long as they are all semantically bound within its scope.** Thus, the following example only allows for the bound interpretation of *my*.

(7) Only I$_{<7,①>}$ Op$_S$ $\lambda_{<8,①>}$ $t_{<8,①>}$ think that *YFS* should introduce *his*$_{<9,③>}$ friend to my$_{<8,①>}$ parents.

The 1st person feature of *my* won't be "visible" for Op$_S$, since by the rule of Predicate Abstraction (Heim and Kratzer 1998), the index of *my* will be replaced by a bound variable. Similarly, it is predicted that if *de se* attitudes involve movement of a *de se* pronoun binding its trace and other *de se* pronouns (Percus and Sauerland 2003a,b), it will be possible, in certain environments, for 1st person pronouns to be *de se,* while 3rd person pronouns will be *de re*.

(8) Last night I dreamt that I was Brigitte Bardot and yours truly$_{*BB}$ was showing me$_{BB}$ his$_{*BB}$ pictures of me$_{BB}$.

Last night I$_{<7,①>}$ dreamt that [I* [Op$_S$ [$\lambda_{<8,①>}$ t$_{<8,①>}$ was Brigitte Bardot and YFS was showing me$_{<8,①>}$ his$_{<9,③>}$ pictures of me$_{<8,①>}$]]].

In fact, this is the only possible interpretation of the sentence (8). It is apparently not possible for the imposter to undergo "de se movement", and 1st person pronouns cannot be interpreted de re in the scope of OpS.

Assignment manipulation beyond imposters

The "imposter operators" are not unique silent assignment-manipulating operators to be found in language. Another kind of an operator would change the values of the assignment function based on person features rather then making them undefined. This operator was proposed in Sudo 2012 for indexical shifting in Uyghur, but the analysis potentially extends to other languages. The operator takes a context variable (provided by the attitude verb) and a proposition and manipulates the assignment function in such a way that the 1st and 2nd person pronouns in its scope start to refer to the speaker of the embedded context (the attitude holder) or her addressee:

(9) $[\![[[\mathrm{Op}_M\ i_k]\ \varphi\ ]]\!]^g = [\![\varphi]\!]^{g'}$
where g' differs from g at most in that for all $i \in \mathbb{N}$,
a. $g'(<i,①>) = s_{g(ik)}$
b. $g'(<i,②>) = h_{g(ik)}$ (Sudo 2012:242)

The logic of this kind of a monster operator is not so distinct from the logic of imposter operators. In each case the assignment function is manipulated in a certain domain, and in each case it is indices with particular person features that are manipulated.

References

Collins, C. & P. Postal. 2012. *Imposters: A study in pronominal agreement*. MIT Press.
Minor, S. 2011. Complex Indices and a Blocking Account of the Sequence of Tenses. Ms, CASTL, Tromsø.
Percus, O. and U. Sauerland. 2003a. On the LFs of attitude reports. In *Proceedings of SuB7*.
Percus, O. and U. Sauerland. 2003b. Pronoun movement in dream reports. In *Proceedings of NELS 33.*
Schlenker, P. 2003. A plea for monsters. *L&P* 26:29–120.
Sudo, Y. 2012. *On the semantics of phi features on pronouns*. MIT dissertation.

The production and the comprehension of direct object clitics in Italian monolingual preschool children

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Keywords: clitics, short-term memory, acquisition

The production of direct object clitic pronouns (DO-cl) has been extensively investigated in children. Their comprehension has been less investigated and mainly by means of metalinguistic tasks. In contrast to previous studies, we investigated their comprehension adopting a non-metalinguistic task. We also studied their production by means of an elicitation task. Moreover, children were administrated a digit span task as a measure of their short-term memory resources. The aim of our study was twofold. First, we aimed at studying how young children make use of the clitic morphology in order to identify the clitic referent; second, we aimed at investigating if memory impacts on DO-cl production and comprehension. We tested 60 preschool Italian monolingual children: twenty 3yrs old, twenty 4yrs, twenty 5yrs. In the comprehension task children were presented a teddy bear named *Bruno* (a puppet) and told that he needed their help in learning the color names. After that, children heard a lead-in sentence describing a transitive event while watching a picture representing it, involving two characters of different gender with clothing in different colors. Names with different gender were used to describe the characters (see table1). Afterwards, they were presented a DO-cl sentence containing a DO-cl agreeing in gender with one of the names introduced in the lead-in sentence. The sentence told that the teddy bear was watching one of the characters, the one denoted by the DO-cl. Next, children had to answer a question asking what color the clothing of the character watched by the teddy bear was. A correct naming of the color was considered as a correct comprehension of the clitics. Children color knowledge was verified in a familiarization task. We tested the comprehension of 3rd singular DO-cl in 4 conditions depending on the clitic gender (masculine/feminine) and on the grammatical function of the antecedent (subject/object), as summarized in table1. We tested 6 item for condition.

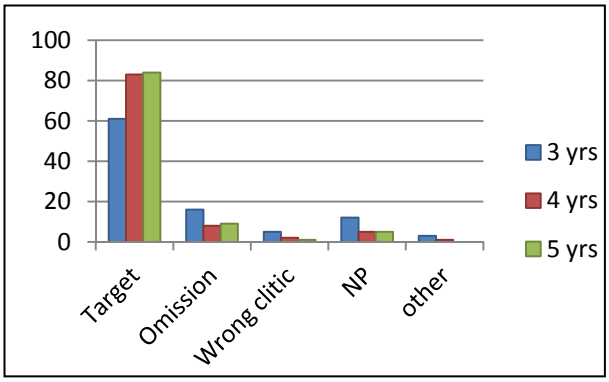
Cond	Lead-in sentence	DO_cl sentence	Question
SM	Il nonno rincorre la maestra The^{m} grandpa^{m} chases the^{f} teacher^{f} *The grandpa is chasing the teacher*	Bruno lo guarda Bruno DO-cl^{m} watches *Bruno is watching him*	Di che colore ha le scarpe? Of what color has the shoes? *What color is his/her shoes?*
OF	Il nonno rincorre la maestra The^{m} grandpa^{m} chases the^{f} teacher^{f} *The grandpa is chasing the teacher*	Bruno la guarda Bruno DO-cl^{f} watches *Bruno is watching her*	
OM	La maestra rincorre il nonno The^{f} teacher^{f} chases the^{m} grandpa^{m} *The teacher is chasing the grandpa*	Bruno lo guarda Bruno DO-cl^{m} watches *Bruno is watching him*	
SF	La maestra rincorre il nonno The^{f} teacher^{f} chases the^{m} grandpa^{m} *The teacher is chasing the grandpa*	Bruno la guarda Bruno DO-cl^{f} watches *Bruno is watching her*	

Table 1. example of a tested sentence in different conditions

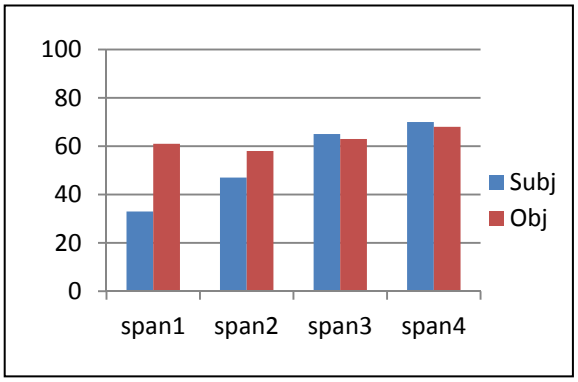
Production was tested in an elicitation task where children were required to produce a sentence containing a DO-cl. In the digit span test children were required to repeat lists of

digits of increasing length. Children were additionally tested in a non-word repetition test (PRCR-2, Cornoldi & MT 1992) and in the non verbal IQ Raven's test (Raven, et al 1998)

RESULTS. All children had a nonverbal IQ >85 at Raven's test and age appropriate scores at the PRCR-2 test. D-span distribution is represented in table2. Accuracy at DO-cl comprehension and production is represented in figure1, 2 and 3. Data were analyzed using repeated measure logistic regression analyses (Baayen 2008). Concerning DO-cl production, we found an effect of AGE ($p<0.05$): 3yrs old different from 4 and 5 yrs old. Contrary to 4 and 5 yrs olds, younger children tended to omit the clitic or substitute it with a full NP. Concerning DO-cl comprehension, we found an effect of AGE ($p<0.05$) with 3yrs old different from 4 and 5 yrs old, an effect of D-span ($p<0.001$), an effect of grammatical function of the clitic antecedent ($p<0.001$) and an interaction between D-span and grammatical function ($p<0.001$). No correlation between production and comprehension data.



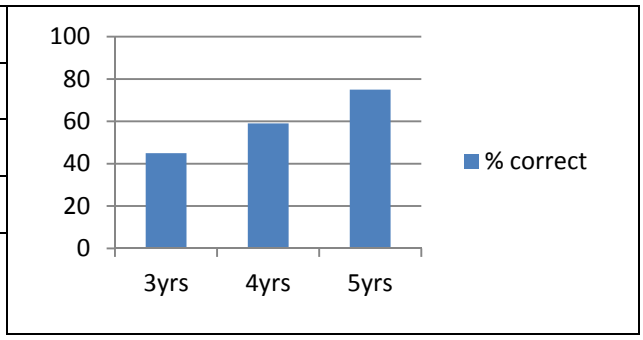
Picture1. Accuracy in DO-cl production



Picture2. Span X Accuracy X sub/obj in DO-cl

Age	D-span Mean
3 yrs	2,25
4 yrs	2,60
5 yrs	3,68

Table2: age X D-span



Picture3. Age X Accuracy in DO-cl

DISCUSSION:

Our data suggest that DO-cl production is problematic for 3yrs old children and that the problem lies presumably on the fact that DO-cl are prosodically weak elements realizing an object in an uncanonical preverbal position, as suggested in the literature (Bortolini et al., 2006, Chillier-Zesiger et al 2006, Arosio et al 2014). Concerning the comprehension of DO-cl, our data show a developmental trend in the overall comprehension and that short term memory resources impact on the use of the clitic morphology for identifying the clitic referent. In fact, while children with higher d-span scores make use of the clitic gender morphology to identify the clitic referent in both context where the clitic denotation has been previously introduced by a subject NP or an object NP, children with lower d-span scores tend to identify the clitic denotation as anaphoric to the object NP of a previous sentence, following a parallel function strategy in pronoun assignment (Grober, Beardsley & Caramazza, 1978; Maratos 1973; Sheldon, 1974; Wykes 1980).

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The role of the dorsal striatum in selection: converging evidence from language

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The cortex employs the basal ganglia to modulate and select the information flow in attention, action and cognition (1). In addition, studies on patients with basal ganglia lesions suggest that these structures also play a role in language processing (2). However, it is not known whether these structures hold a role in language-specific processes, or whether they contribute to language processing through their role in domain-general cognitive functions.

We claim that the basal ganglia are recruited during linguistic processing for processes equivalent to the ones they are responsible for outside the linguistic domain. We focus on the striatum, the main input structure of the basal ganglia, since its role in motor and cognitive processes other than language is well studied, and it has been shown to be recruited during a variety of linguistic tasks.

Data from neurobiology and cognitive neuroscience converge in considering the striatum a key player in the mechanisms of choice. We can distinguish two stages in decision-making: first, values are assigned to the stimuli under consideration, then these values are compared to make a choice (5). Neurophysiological and fMRI studies in decision neuroscience have shown that the ventro-medial prefrontal cortex (vmPFC) and the central orbital cortices compute value signals. The dorsal striatum on the other hand is the structure used during the decision process to select among the competing alternatives, based on the estimated value signals.

A problem strikingly similar to the one of *value assignment* and *selection* is at the core of the theory of grammar. Optimality Theory (OT) developed from the observation that optimization is a general organizing principle of neural computation, which translates naturally into a theory of grammar. OT assumes a grammatical architecture that divides speech production into two components. One component evaluates possible outputs in terms of their faithfulness to the input and structural well-formedness. The other selects an output based on a language-specific prioritization of constraints. While the computations of the evaluation component are specific to language, the operations of the selection component are similar to extra-linguistic selection operations.

Here we investigate the hypothesis that the striatum is involved in the selection of linguistic choices, as it is involved in the selection of motor and other choices. To address this role of the striatum in language processing we tested the effect of damage to this structure on the selection of linguistic alternatives. We turned to a model of striatal dysfunction, Huntington's Disease (HD), an inherited neurodegenerative disorder with primary neuronal dysfunction and death in the striatum (6). We tested 42 early manifest and pre-manifest patients and compared their performance to that of 42 matched healthy controls.

The grammar of French provides a good case to test linguistic selection: the alternation between the feminine and the masculine forms of the adjective. In French adjectives take on different forms depending on their gender; there are four patterns of alternation ((i) final C deletion – petite, petit; (ii) nasal – coquine, coquina; (iii) no change – normale, normale; (iv) Use *–if* – vive, vif). These four patterns are regular and instantiated by a large number of items in the lexicon of French. This allows investigating the role of the dorsal striatum in grammatical evaluation and selection processes without the confound factor of the regularity. We employed an elicitation task, in which participants were given the feminine form of an adjective, and had to produce the corresponding masculine form (e.g. Elle est petite, il est …? → *petit,* 'she is small-fem, he is …?'). The task requires grammatical knowledge about the four patterns and about their respective values in different linguistic contexts (*evaluation*). It also requires selecting among these patterns, to produce the one with the highest well-formedness score (*selection*). Test items consisted of nonce adjectives, to decrease reliance on stored lexical representations, and encourage the use of abstract, generative processes.

HD patients are worse than controls at the task (respectively 76.4% and 89.9% correct, [F(1, 58)=4.77 and P<0.05]). However, the distribution of responses of HD patients and controls suggests that they make the same types of responses, but more noisily, **Fig. 1**.

Our behavioral data was then used for a computational analysis. We modeled the French adjective system within Maximum Entropy Harmonic Grammar, a log-linear model with the OT framework, and trained our model on the data from our population of healthy controls. The computational model was then 'impaired' in two ways to test our hypothesis. One method simulated a *grammatical deficit*, introducing noise in the constraint-based *evaluation* process. The other one simulates a *selection deficit* by selectively attenuating the signaling of the possible outcomes, which increases choice randomness in the *selection* process. We show that the model with the selection deficit better predicts the HD data than the grammatical deficit (compare a log probability assigned to the HD data of respectively –4330.0 and –4736.6). These results show that within language processing, the striatum is involved in the selection of alternatives, as it is involved in the selection of alternatives in the motor domain and in other cognitive domains in which mechanisms of choice are recruited.

Finally, to show that indeed the observed selection deficit was related to striatal dysfunction, we conducted a VBM analysis investigating the relationship between grey matter volume in the striatum and linguistic performance. Our imaging results reveal that in early manifest HD, volume of the dorsal striatum indeed correlates with the behavioral task, **Fig. 2**.

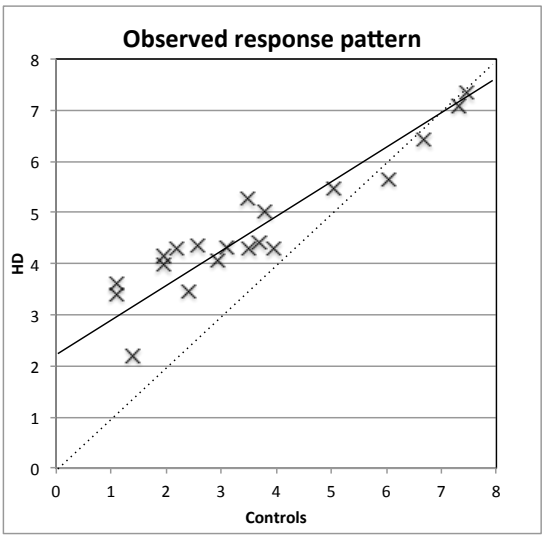

Fig. 1 Scatterplot representing the linear relationship between the log frequency of HD patients' responses and the responses of controls for the same input-output pair. The dotted line represents the x=y line as a reference, the solid line the fit of the data.

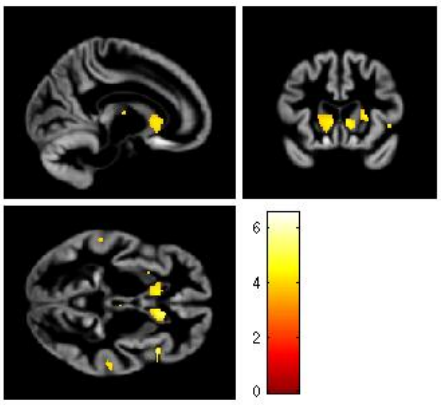

Fig. 2 Positive correlation between accuracy in the language task and regional grey matter volumes in HD patients. Bilateral areas in the anterior striatum are involved, in particular the ventral part of the head of both caudate nuclei, but also both anterior putamen. P<0.001, uncorrected for multiple comparisons; cluster size > 20 voxels. Clusters are plotted onto an average template of the HD patient population built with the TOM8 toolbox.

Selected references

(1) Bar-Gad, I., Morris, G., Bergman, H., 2003. Information processing, dimensionality reduction and reinforcement learning in the basal ganglia. Prog. Neurobiol. 71, 439–473.
(2) Ullman, M.T., Corkin, S, Coppola, M, Hickok, G, Growdon, JH, Koroshetz, WJ, et al. (1997). A Neural Dissociation within Language: Evidence that the Mental Dictionary Is Part of Declarative Memory, and that Grammatical Rules Are Processed by the Procedural System. J of Cognitive Neuroscience, 9, 266-276.
(3) Kotz SA, Frisch S, von Cramon DY, Friederici AD. Syntactic language processing: ERP lesion data on the role of the basal ganglia. J Int Neuropsychol Soc 2003; 9: 1053–60.
(4) Kable JW, Glimcher PW (2009) The neurobiology of decision: consensus and controversy. Neuron 63:733–745. CrossRef Medline
(5) Tabrizi, S.J., Langbehn, D.R., Leavitt, B.R., Roos, R.A., Durr, A., Craufurd, D., Kennard, C., Hicks, S.L., et al.; TRACK-HD investigators. (2009). Biological and clinical manifestations of Huntington's disease in the longitudinal TRACK-HD study: cross-sectional analysis of baseline data. Lancet Neurol. 8, 791–801.

Lexical and morphosyntactic minimal pairs: Evidence for different processing

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Key words: lexical access, verb inflection, minimal pairs

Abstract

Minimal pairs are defined as pair of words in a particular language which differ in only one phonological element and have a different meaning (Roach, 2000). In many languages bound morphemes used to mark inflection generate minimal pairs. These sets are referred to as "morphosyntactic minimal pairs" (Law and Strange, 2010), indicating a set of at least two inflected forms of a verb that differ in only one phoneme which is, at the same time, a bound morpheme. In Italian, for instance, the mini-paradigms acquired during infancy are typically morphosyntactic minimal pairs (mangio/mangia/mangi), as showed in different terms by the work of Guasti (2009).

In English, the present third person singular morpheme -s and the past tense morpheme -ed generate in most cases minimal pairs, such as "asks / asked". Several authors (Stemberger and MacWhinney, 1986, Bertram et al, 2000) have argued that inflected forms may be stored in the lexicon as units, i.e. together with the bound morpheme. In the last years the idea that inflected units are stored in the lexicon gained popularity also in the theory of language acquisition, with a growing number of researchers arguing that the application of inflection rules is the result of a generalization we operate over a large number of stored inflected forms (Tomasello, 2006, Diessel, 2012).

If inflected forms are stored as units in the lexicon, discriminating lexical minimal pairs and morphosyntactic minimal pairs should not be different processes. Elements should be stored similarly in the lexicon, and then compared phonologically when the subject is presented with a minimal pair. Given that, we expect the discrimination between lexical and morphosyntactic minimal pairs to be different only if we assume that the processing of bound morphemes is in some way different from the processing of a normal phoneme.

In this study we addressed this question presenting 20 monolingual native speakers of English with lexical and morphosyntactic minimal pairs (30 per condition, frequency differences not significant), and with pairs of identical words (leading, thus, to 120 trials). Participants were asked to press "white" if words were different and "black" if words were identical. Conditions were matched on word length. Results show that subjects are significantly faster in discriminating words generating a lexical minimal pair, such as "back / badge" than words generating a morphosyntactic minimal pair, such as "asks / asked", $t(19) = -4.486$, $p < .001$. The result shows that more complex operations take place for the processing of inflected verbs, suggesting that verbs are decomposed in root and affix in order to be analysed (Pinker and Ullman, 2001). Alternative possible explanations for the result are discussed.

References:

Bertram, R. , Schreuder, R. , Baayen, R. H. , (2000) The balance of storage and computation in morphological processing: The role of word formation type, affixal homonymy, and productivity, *Journal of Experimental Psychology: Learning, Memory, and Cognition*, Vol 26(2), Mar, 489-511.

Diessel (2012), Construction Grammar and first language acquisition, in The Oxford Handbook of Construction grammar, *Oxford University Press*

Guasti M. T. (2009), Language Acquisition, the growth of grammar, *MIT press*

Law F. and Strange W. (2010), Perception of Canadian French word-final vowels in lexical and morphosyntactic minimal pairs by English learners of French, *Journal of the Acoustical Society of America* (128), p 2488.

Pinker S. and Ullman M. T. (2001), The past and future of past tense, *Trends in Cognitive Science*, 6,11, 456-463.

Roach, P. (2000), English Phonetics and Phonology, *Cambridge University Press*

Stemberger J. P. and MacWhinney B. (1986), Frequency and the lexical storage of regularly inflected forms, *Memory & Cognition*, 14 (1), 17-26.

Tomasello M. (2006), First stepts toward a usage-based theory of language acquisition, *Cognitive Linguistics*, (11), 1-2, 61-82.

On the parallelism between syntactic structure and metrical structure

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key words: phases, syntax-prosody-interface, Head final filter

The paper investigates the presence/absence of head final effects (HF-effects) in the verbal and nominal domain in English and German. I will argue that HF-effects are due to a weight-sensitive mapping between syntactic structure and prosodic structure and propose the condition in (1).

(1) Weight condition: In a weight-sensitive phase, a specifier that constitutes a heavy syntactic phrase must be mapped onto a strong branch in prosodic structure

HF-effects appear in the sentential domain in English. Adjuncts that can occur between the subject and the vP obey restrictions which are absent in OV-languages (cf. Haider 2000), as is illustrated by the contrasts in (2). HF-effects also appear in the nominal domain both in English and in German, as is illustrated in (3).

(2) a. John (more) often (* than Peter) read the book
b. John (very) carefully read the book
c. *John with care read the book
d. Hans hat öfter (als der Peter) das Buch gelesen
John has more-often (than Peter) the book read
e. Hans hat das Buch (sehr) sorgfältig gelesen
John has the book (very) carefully read
f. Hans hat das Buch mit großer Sorgfalt gelesen
John has the book with great care read

(3) a. a [AP proud] man
b. * a [AP proud [of his children]] man
c. *ein [stolzer auf seine Kinder] Mann
a proud of his children man
d. weil er [stolz auf seine Kinder] ist
since he proud of his children is

What the data in (1-2) show is that the head of the adjunct must not have material to its right in head-initial structures, while no such restriction seems to apply in head final structures (cf. the minimal contrast in (3cd) in German). The contrast in (3ab) was first discussed by Emonds (1976) and Williams (1982). Williams (1982) proposed a condition which requires that the head of a prenominal modifier be adjacent to the (modified) noun. A generalized version of this condition that also captures the data in (2) is given in (4). Note that the traditional term pre-modifier in (4) is to be identified with a left-hand adjunct in modern terminology.

(4) Generalized Head Final Filter (HFF):
A pre-modifier must be head final

While the HFF covers a great number of empirical facts (cf. Escribano 2009) and thus constitutes a valid empirical generalization, its status as a genuine syntactic condition is problematic for the following reasons.

First note that the HFF does not apply to subjects (that is, to the specifier of T) as in (5a), intonationally detached DP and PP frames (cf. 5b), which are traditionally analysed as adjuncts to CP/IP, and specifiers of functional heads in the C-domain (cf. 5c). This raises the question of why the condition should apply to adjuncts in the I-domain but not to adjuncts in the C-domain and furthermore, why it should apply to adjuncts but not to specifiers in the I-domain.

(5) a. [Students [of linguistics]] read Chomsky a lot
b. [On [Tuesday evening]] I will take out Mary for dinner
c. [In [which city]] did John meet Mary?

Secondly note that in Cinque's (1999) approach to modification, the HFF cannot be stated anymore as a genuine syntactic generalization that is based on the specific syntactic configuration of adjunction. If

we get rid of adjunction, a problem arises for the statement of the HFF, since specifiers of functional projections are generally not subject to (4), as we have seen above.

Thirdly note that within current minimalist theory, the HFF is best treated as a bare output condition at the PF interface, since order and adjacency are taken to be irrelevant to narrow syntax. On the other hand, it is clear that the condition, as it is stated in (4), cannot be a genuine PF-constraint either, since the structural difference between specifiers and modifiers is no longer visible at PF. Therefore, I conclude that the HFF is in need of a deeper explanation.

Alternatively, I will argue that the HFF can be reduced to a metrical condition on a phase-based mapping between syntax and prosody that requires heavy syntactic phrases to occupy a dominant position in prosodic structure. HF-effects in English disappear, if the adjunct is epenthetic, constituting a separate intonational domain, as is indicated by the comma intonation in (6bc). Note that (6c) involves an elliptical construction with a clear prosodic boundary between negation and verb (as is indicated by the stress on the negation).

(6) a. * John more often than Peter visited Mary
b. John, more often than Peter, visited Mary
c. John, more often than not, visited Mary

The observation that the HF-effects are ameliorated if adjunct and verb are mapped into separate intonational phrases clearly speaks in favor of a condition that applies in the formation of prosodic constituents.

I will discuss weight-effects in foot construction systems at the world-level (Halle & Vergnaud 1987). Foot construction systems may be quantity-insensitive, quantity-sensitive or quantity-determined. In a quantity-sensitive system, a heavy syllable cannot occupy a weak branch in a prosodic word. If weight-effects appear in the formation of feet and prosodic words, it is conceivable that similar effects appear in the formation of phonological phrases and intonational phrases at the sentence level. Given that syntactic phrases are standardly mapped onto phonological phrases, I argue that HF-effects can be reduced to the parallelism between the metrical structure of syllables and the X'-structure of syntactic phrases: a syllable counts as heavy if it is bimoraic, a syntactic phrase counts as heavy if it has both its head and complement filled.

The metrical evaluation of a binary branching asymmetric tree, in which the left branch counts as weak and the right branch counts as strong, directly explains why heavy syntactic phrases must be spelled-out on a right branch in syntactic structure to appear on a strong branch in prosodic structure. I will outline the tenets of a stress-first based system of the interface between syntax and PF, in which syntactic structure is mapped via phase based rules of prosodic domain formation and metrical trees onto a bracketed metrical grid representation.

In particular, I argue that the complex condition in (1) is operationalized in two steps at the interface. I assume that during the stage of the mapping of syntactic structure onto prosodic constituents both syntactic structure and phases are visible. Metrical values are assigned to prosodic constituents obeying the condition in (7) and a universally valid and uniform weight condition for the word and sentence level applies during the mapping procedure, as specified in (8).

(7) A phonological phrase that corresponds to a heavy syntactic phrase in a weight-sensitive phase is assigned the metrical value H
(8) A prosodic constituent assigned the metrical value H must be mapped onto a strong branch in prosodic structure

Whether a phase is weight-sensitive or not is a language-specific property. I propose a typology of phases and subphases, based on predication domains and their extended projections, that distinguishes between the C-domain, the I-domain and the v-domain. While the C-domain, as the domain of the LF-related interface to information structure (cf. Rizzi 1997) is generally weight-insensitive, the English I-domain is weight-sensitive, while the German I-domain is weight-insensitive. However, I will argue that the German v-domain is weight-sensitive, accounting for the order in the verb-cluster and for the obligatory extraposition of CP-complements. Finally, I discuss why subjects in English are exempt from the weight condition and the reasons why the German I-domain is necessarily weight-insensitive.

The Structure Dependence Principle and bare phrase structure

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We shall focus on the following plausible constraint on possible grammars:

The Structure Dependence Principle (SDP)
Syntactic operations are defined on hierarchical representations

According to Chomsky (2010, 2013) and Berwick *et al.* (2011), the SDP suggests that linear order is a reflex of the sensory-motor system and plays no role in syntax and semantics. Chomsky (2010) claims that "the best explanation for the choice of structural rather than linear distance would be that linear order is simply not available to the operations of the I-language –that it is a secondary phenomenon imposed by the sensory motor system (p. 11)", and Berwick *et al.* (2011) state that "linear order seems to be a reflex of the sensory-motor system, and so unavailable to the syntax and semantics we describe there (p. 1217)". According to this position, the syntactic and semantic components have *hierarchy* and *structure*, but not *linear order*.

In the view we have just sketched the use of the expressions *order*, *linear* and *linear order* differs from their technical meaning: they refer exclusively to the precedence or temporal relationship among terminals, which is indeed an order. However, it is clear that there are order relations that are not precedence or temporal relations. For instance, the "greater than" ($>$) and "the greater than or equal to" ($\geq$) relations are linear orders in $\mathbb{N}$, although they do not involve a precedence or temporal relationship.

We emphasize this elementary but important terminological issue, because, as would become clear in our presentation, it is not merely a particular informal use that innocuously differs from the technical use, but rather the source of obscurity about an aspect of the theory of grammar that has a prominent place in current generative linguistics, namely how abstract hierarchical representations are assigned a precedence/temporal relationship. This aspect is usually called (again misleadingly) *the linearization problem.*

In our work we follow Fortuny & Coromina's (2009) formal definition of the syntactic procedure in terms of the nesting machine $\mathcal{N}$ that capitalizes on the foundational set-theoretical concept of *nest* (Kuratowski (1921)): a nest is a set whose elements are sets linearly ordered by inclusion.

We shall study in a precise way the following well-known contrast:

(1) a. Is the man who is coming tall?
b. *Is the man who coming is tall?

Let the alphabet for the generation of (1) be the set A of minimal syntactic categories, each viewed as a singleton whose single element is a primitive element, also called a terminal,

$$A = \{\{the\}, \{tall\}, \{talking\}, \{man\}, \{who\}, \{is\}\}.$$

The nesting machine $\mathcal{N}$ selects at step s_0 the element $\{tall\}$ of A and forms the occurrence $\{tall_0\}$, which we may refer to as the M_0. At step s_1 it selects the element $\{is\}$ of A, forms the occurrence $\{is_1\}$ and merges it with M_0.

$$s_0 : \{tall_0\} = M_0$$
$$s_1 : M_0 \cup \{is_1\} = \{tall_0\} \cup \{is_1\} = \{tall_0, is_1\} = M_1.$$

In the derivation we are studying there are so far two constituents, each of which is a nest, i.e, a linear order:

$$C_0 = \{M_0\} = \{\{tall_0\}\}$$
$$C_1 = \{M_0, M_1\} = \{\{tall_0\}, \{tall_0, is_1\}\},$$

A further interesting consequence of introducing nests into syntactic theory is that the precedence/temporal ordering among the terminals of an expression is straightforwardly obtained from the hierarchical or nested representation, since a nest is a linear order (Kuratowski 1921). Given the constituent C_1, the set of terminals is $M_1 = \{tall_0, is_1\}$. Since C_1 is a nest saturated of M_1, it can be interpreted as the ordering $< is_1, tall_0 >$.

It is now crucial to observe that the next element to be introduced in the nesting derivation of (1) is not a terminal, but a complex syntactic object:

(2) [the [man [who [is [talking]]]]]

We shall thus allow $\mathcal{N}$ to be compounded of multiple derivational spaces (cfr. Zwart 2009), labeled as D_1, D_2, ..., D_n. Let $M_1^1 = \{tall, is_1^1\}$ be the output of $\mathcal{N}$ at the s_1 of D_1, and assume that the constituent depicted in (2) is generated at a further derivational space D_2:

$$\begin{aligned} s_0 &: \{talking\} = M_0^2 \\ s_1 &: \{talking, is_1^2\} = M_1^2 \\ s_2 &: \{talking, is_1^2, who\} = M_2^2 \\ s_3 &: \{talking, is_1^2, who, man\} = M_3^2 \\ s_4 &: \{talking, is_1^2, who, man, the\} = M_4^2, \end{aligned}$$

thereby generating the constituent

$$\begin{aligned} C_4^2 = \{ & \{talking\}, \{talking, is_1^2\}, \{talking, is_1^2, who\}, \{talking, is_1^2, who, man\}, \\ & \{talking, is_1^2, who, man, the\} \}. \end{aligned}$$

At this point D_2 must feed the main derivational space D_1, which means that the final outcome C_4^2 of D_2 is introduced into D_1. Accordingly, $\mathcal{N}$ takes as input $\{C_4^2\}$, forms the set $\left\{C_5^{2/1}\right\}$ and performs

$$s_5 \{tall_0^1, is_1^1\} \cup \left\{C_5^{2/1}\right\} = \left\{tall_0^1, is_1^1, C_5^{2/1}\right\} = M_5^1)$$

thereby generating the final constituent

$$C_5^1 = \{M_0^1, M_1^1, M_5^1\}.$$

Given the contrast (1) we must now define the (syntactic) domain for internal merge operations in such a way that the occurrence is_1^1 can be fronted to form the appropriate question, but not the occurrence is_1^2.

> **Local definition of domain**. Given a set M_j^i, $\{x\}$ belongs to the domain of M_j^i ($\Delta(M_j^i)$) iff one of the following conditions is fulfilled: (a) x is a constituent generated at D_i at some step previous to s_j (or in other words, x belongs to the set $\mathcal{C}_{j-1}^i$ of constituents), or (b) x is an element of M_j^i.

Accordingly, the domain of $M_5^1 = \left\{tall, is_1^1, C_5^{2/1}\right\}$ is the set

$$\Delta(M_5^1) = \mathcal{C}_{5-1}^1 \cup M_5^1 = \left\{C_0^1, C_1^1, C_2^1, C_3^1, C_4^1, tall, is_1^1, C_5^{2/1}\right\}.$$

Given that $\{is_1^1\} \in \Delta(M_5^1)$ and that $\{is_1^2\} \notin \Delta(M_5^1)$, we can perform at s_6 of D_1 the operation (1) but not the operation (2).

$$M_5^1 \cup \{is_1^1\} \tag{1}$$

$$M_5^1 \cup \{is_1^2\} \tag{2}$$

This accounts for the grammaticality contrast illustrated in (1). The empirical observation behind the SDP reveals that the syntactic domain of a set M_5^1 cannot be the linear order C_5^1, but the set $\Delta(M_5^1)$. The SDP does not indicate that linear order is irrelevant for the syntactic component, but rather that the domain for internal merge operations is not a linear order of occurrences but a set of syntactic categories defined in such a way that it bans internal merge operations to cross derivational spaces. If this remark is neglected, then we prevent ourselves from grounding several basic syntactic notions on a single general concept, namely that of order.

References: Berwick, R. *et al.* (2011). Poverty of the stimulus revisited, *Cognitive Science*. Chomsky, N. (2010). Povery of stimulus: unfinished business. Chomsky, N. (2013). Poverty of stimulus, *Lingua*. Fortuny, J. & Corominas, B. (2009). Some formal considerations on the generation of hierarchically structured expressions. *Catalan Journal of Linguistics*. Kuratowski, K. (1921). Sur la notion de l'ordre dans la thorie des ensembles, *Fundamenta mathematicae*. Zwart, J-W. 2009. Prospects for top-down derivation, *Catalan Journal of Linguistics*.

Conjunct Extraposition in German

Imke Driemel

Keywords *coordination, multiple dominance, bare argument ellipsis*

Introduction Conjunct Extraposition (CE) refers to a discontinuous coordinate structure in which the last conjunct and the coordinator occur at the end of the sentence. CE can be observed in German [1] and in English [2], shown in (1)a. and (2). In German CE can co-occur with singular as well as plural agreement. Additional movement of the remaining conjunct to Spec,CP leads to ungrammaticality, see (1)b.

(1) a. Gestern ist/sind Hans angekommen und Bernd.
yesterday be.SG/be.PL Hans arrived and Bernd
b. *Hans sind gestern angekommen und Bernd.
c. *Und Bernd ist/sind Hans gestern angekommen.
'Yesterday Hans arrived, and Bernd.'

(2) John bought a book yesterday, and a newspaper.

Under a movement approach the plural agreement is caused by the direct coordination of the two conjuncts, of which one moves to the right periphery. But the difference to (1)b. is left unexplained since syntactic requirements such as the *Strict Cycle Condition* [3] or the minimalist *bottom-up* principle [4] predict (1)a. and b. to have the same grammatical status. Furthermore, this analysis has to explain why the *Coordinate Structure Constraint* (CSC) [5] can be violated and why this violation is only allowed for rightward and not for leftward movement, see (1)c. This proposal argues for a *Bare Argument Ellipsis* (BAE) approach which assumes an underlying bi-clausal structure with subsequent deletion of the redundant material on PF. The plural agreement on the verb in (1) is caused by *Multiple Dominance* (MD) in the sense that the verb is shared between the two conjuncts and subsequently needs to move out in order to be linearized [6], see figure 1.

A hybrid MD/BAE approach to CE in German The plural agreement on the verb is triggered by two disjoint subjects leading to a number feature which is the *cumulative* result of the number features of the single constituents [7]. Cumulative agreement in T is triggered as soon as there is more than one controller which satisfies the agreement conditions. The ungrammaticality of (1)c. is due to the coordinate structure itself. Adopting a standard approach for coordination in which the coordinator is the head of a functional projection [8] the coordinator and the last conjunct cannot topicalize because they constitute an intermediate projection. The ungrammaticality of (1)b. is due to a violation of the CSC since the subject is only moved out of one conjunct into Spec,CP. T-to-C movement does not constitute a CSC violation because T is shared and hence part of both conjuncts, therefore (1)a. is grammatical. Furthermore, the theory predicts that cumulative agreement is excluded in embedded clauses since they show SOV word order in German. This is shown in (3).

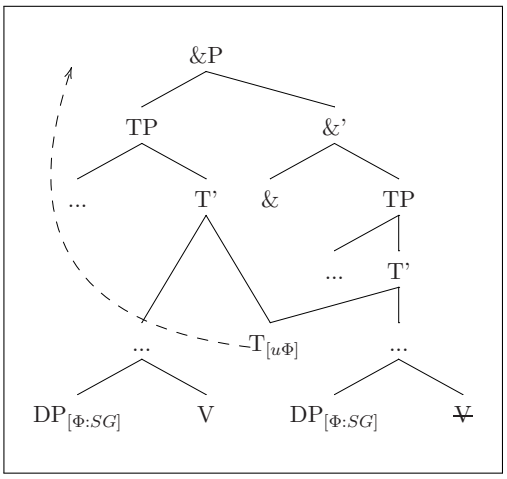

FIGURE 1

(3) * ... dass Hans seiner Mutter gratulierten und Bernd
that Hans his mother congratulated and Bernd
'... that Hans and Bernd congratulated his mother'

Further Evidence The MD/BAE approach provides an explanation for certain binding properties of the possessive pronoun inside and outside the split-up coordination, shown in (4). If the possessive is not moved out of the coordinate structure it cannot be shared, hence it is only bound by one subject in each conjunct respectively and cannot provide the cumulative bound reading, see (4)a. If the possessive is moved it can be shared, therefore the cumulative bound reading is possible, shown in (4)b.

(4) a. *Gestern haben nur Hans$_i$ ihre$_{i+j}$ Mutter angerufen und Bernd$_j$.
yesterday have.PL only Hans POSS.PL mother called and Bernd
b. Ihre$_{i+j}$ Mutter haben gestern nur der Hans$_i$ angerufen und der Bernd$_j$.
'Yesterday only Hans and Bernd called their mother.'

More evidence comes from the unavailability of *reciprocal* verbs inside the coordinate structure. Since collective predicates can only be licensed by a plural individual, the reciprocal verb needs to be shared by both conjuncts which is only an option if it moves out of the coordination, shown in (5).

(5) a. *Gestern sind Hans aneinander geraten und Bernd.
yesterday be.PL Hans with.one.another tangle and Bernd.
b. Aneinander geraten sind Hans gestern und Bernd.
'Yesterday Hans and Bernd tangled with one another.'

In terms of object sharing additional semantic effects can be shown with respect to *sloppy identity*, *relational* adjectives, and the cumulative interpretation of quantifiers.

Conclusion The MD/BAE approach can explain the whole data set on CE presented here with a consistent bi-clausal structure account. It acts in accordance with the CSC and can provide an explanation for the above mentioned semantic effects. The intuitive idea that whenever conjuncts show some sort of interaction they do in fact share parts of their structures is taken into account by the integration of MD into the theory of BAE.

[1] Martin Prinzhorn and Viola Schmitt. Discontinuous DP-coordination in German. *Linguistic Variation Yearbook*, pages 161–200, 2010.

[2] Alan Munn. *Topics in the Syntax and Semantics of Coordinate Structures*. PhD thesis, University of Maryland, 1993.

[3] Noam Chomsky. Conditions on Transformations. In Stephen R. Anderson and Paul Kiparsky, editors, *A Festschrift for Morris Halle*, pages 232–286. Holt, 1973.

[4] Noam Chomsky. *The Minimalist Program*. The MIT Press, Cambridge, Massachusetts, 1995.

[5] John Ross. *Constraints on Variables in Syntax*. PhD thesis, Massachusetts Institute of Technology, 1967.

[6] Barbara Citko. On the Nature of Merge: External Merge, Internal Merge, and Parallel Merge. *Linguistic Inquiry*, 36:475–496, 2005.

[7] Patrick Grosz. Movement and Agreement in Right-Node Raising Constructions. MIT Generals Paper in Syntax, 2009.

[8] Niina Ning Zhang. *Coordination in Syntax*. Cambridge University Press, Cambridge, 2009.

Putting 'contrast' on the Table

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Keywords: information structure, contrast, focus, inquisitive semantics, structured meaning.

1. Introduction Across the literature on information structure, it has been claimed that contrast is an autonomous informational component on par with topic and focus. Its function is to generate a membership set (w.r.t. the denotation of the contrastive constituent) becoming available to semantic interpretation as some sort of quantificational domain (see, e.g., Neeleman/van de Koot 2008), as shown in (1') with *John* (j) contrastive.

(1) I invited $[\text{John}]_{C}$. (1') [λx.(invited (I,x)](j)

If this was the case, however, the semantics of contrast would be exactly the same as what has been claimed to be the semantics of focus (see e.g., Krifka 2001) and economy considerations would then lead us to reduce one to the other. On a different analysis, Büring (2003) elaborates two independent semantics for focus and contrastive topic (CT) respectively. However, some Italian data (see (1')-(1'')) show that the notion of contrast cannot be reduced to that of CT: not all contrastive constituents can be clitic left dislocated, as shown by the marginality of (1'') (CTs are marked by means of CLLD).

(Ha invitato i suoi amici alla festa? 'Did he invite his friends to the party?')

(1') Ha invitato $[\text{Marco}]_{C}$, anche se non è un vero e proprio amico.
'He invited Marco, even if he is not a true friend'

(1'') ?? $[\text{Marco}]_{CT}$ l'ha invitato, anche se non è un vero e proprio amico.

The aim of the paper is to show that focus and contrast contribute to the interpretation of a sentence in different ways and to propose a model of information structure recognizing the semantic import of both these informational notions.

2. The data a) A sentence can contain both a focused and a contrastive constituent (see (2)):

(2) A: Quando porteranno i meloni? B: I meloni non so, ma porteranno $[\text{le mele}]_{C}[\text{domani}]_{F}$.

(A: When will they bring the melons? B: I don't know…but they will bring the apples tomorrow)

b) In Italian, semantic interpretations can appear recursively throughout the sentence (see 3B). Crucially, this is not the case of focus constituents, as witnessed by the impossibility to have (non-echo) double *wh*-questions (see (4) and Calabrese 1984).

(3) A: Il nonno ha lasciato la scacchiera ai suoi nipoti?
(Did the grandpa leave the chessboard to his grandchildren?)
B: Non so, ma ha lasciato $[\text{l'orologio}]_{C}[\text{ai suoi cugini}]_{C}$.
(I don't know, but he left the clock to his cousins)

(4) * Che cosa ha lasciato il nonno a chi? (What did the grandpa leave to whom?)

c) Contrastive constituents are not necessarily D-linked. For example, *German* in (5B) is not part of the set of Romance languages. On the contrary, foci are required to belong to a given contextually relevant set, as witnessed by the infelicity of (6B).

(5) A: Parla qualche lingua romanza? B: Hm, non so. Parla $[\text{tedesco}]_{C}$.
(A: Does he speak any Romance language? B: Hm, I don't know. He speaks German.)

(6) A: Quali lingue romanze parla? ?? B: Parla $[\text{tedesco}]_{F}$.
(A: Which Romance language does he speak? B: He speaks German).

Noteworthy, (5B) is associated with a sense of uncertainty and non-finality (see also Büring 2003 on German and Tomioka 2010 on Japanese).

d) Contrast can target constituents (as *an* in the German sentence (7)) that can never be foci according to the question/answer test (see Analysis).

(7) An hat er das Licht gemacht (nicht aus) (taken from Steube 2001)

e) Contrastive interpretations can target constituents that are part of entailments, presuppositions or implicatures, as happens in (8), adapted from Bianchi (2012).

(8) Mi sorprende che Gianni sia andato a Londra.

(I am surprised that Gianni went to London).

Hm, è stato ***a Berlino***. Non so se è andato anche a Londra.

(he was ***in Berlin***. I don't know if he went to London as well).

These data suggest that focus and contrast are two distinct informational notions that cannot be reduced to each other. The next analysis aims to: i) define their specific semantics; ii) account for the interpretive effects triggered by contrast, e.g., the non-finality effect (see (c)) and the association with the non-asserted part of the sentence (see (e)).

Analysis. According to the Structured Meaning account of the question-answer relation (see, e.g., Krifka 2001), a sentence (structured into a background and a focus) is a felicitous answer to a question (structured into a background and a restriction) iff i) the background of the former is identical to the background of the latter; ii) the denotation of the focus in the answer belongs to the set denoted by the restriction of the question.

A: Who came to the party? < λx[CAME(x, party)], PERSON>

B: $[\text{John}]_F$ came. <λx[CAME(x, party)], JOHN>

The analysis assumes the discourse structure introduced in Farkas/Bruce (2010). I propose that the items are added to the different context components in the form of structured meanings, as indicated in the representation below. If the question (2A) is added to the Table, it is considered as 'at issue' in the given conversation and projects a set of possible common grounds obtained by adding to the common ground *s1* each contextually possible answer to the question (here the domain is restricted to the temporal intervals *today* and *tomorrow*). The same reasoning applies if the discourse context is updated with the polar question (5A), provided that the possible answers to the question are the propositional operators *yes* and *no*[1].

A	***Table***	**B**
	(2A) < λx [bring (they, the melons, in x)], {today,tomorrow}>	
Common Ground s_1	***Projected Set*** ps_1 = {s_1 **U** <λx [bring (they, the melons, in x)], **today**>, s_2 **U** <λx [bring (they, the melons, in x)], **tomorrow**>}	

A	***Table***	**B**
	< λf [f (speak (he, RL))], {λp[p], λp[~p]} >	
Common Ground s_1	***Projected Set*** ps_1 = {s_1 **U** < λf[f(speak(he, RL)], **λp[p]** >, s_2 **U** < λf[f(speak(he,RL)], **λp[~p]**>}	

The function of contrast is to define a set of alternatives w.r.t. the background of the item in the Table, as indicated in (9) and (10), corresponding to (2B) and (5B) respectively:

(9) {λx [bring (they, y, in x) | y = $\text{ALT}_{\text{Table}}$ (the melons)]}

(10) {λf [f (speak (he,y) | y = $\text{ALT}_{\text{Table}}$ (RL)}

Contrast has the function of operating within the background, which is different from focus by definition. Therefore, the outlined proposal keeps the semantic contribution of contrast distinct from that of focus. From the pragmatic point of view, the abovementioned non-finality effect is due to the markedness of the 'contrastive' move: the speaker is not able to commit himself to any of the common ground in the projected set. Finally, I propose to enrich the structure of the Table, including presuppositions, entailments and implicatures, in line with Geurts (1998). This would account for e).

Consequences. Crucially, the proposal implies that not all pitch-accented constituents be focused (see, e.g., Rooth 1996): contrastive constituents can be pitch-accented as well.

References **Bianchi, V.** 2012. On focus movement in Italian. In: *Information Structure and Agreement*. John Benjamins, Amsterdam/Philadelphia, pp. 193-216. **Büring, D.** 2003. On D-trees, beans and B-accents, *Linguistics and Philosophy* 26, 511-545. **Calabrese, A.** 1984. Multiple questions and focus in Italian. In: *Sentential Complementation*, 67-74. Dordrecht: Foris. **Farkas, D.F., Bruce K. B.** 2010. On reacting to assertions and polar questions, *Journal of Semantics* 27(1), 81-118. **Krifka, M.** 2001. For a structured meaning account of questions and answers. In: *Audiatur Vox Sapientia*, Akademie Verlag, Berlin, 287-319. **Neeleman A./H. van de Koot** 2008. Dutch scrambling and the nature of discourse templates, *Journal of Comparative Germanic Linguistics* 11, 137-189. **Rooth M**. 1992. A theory of focus interpretation, *Natural Language Semantics* 1, 75-116. **Steube, A.** Correction by contrastive focus, ZAS Papers in Linguistics 3. **Tomioka S.** 2010. Contrastive topics operate on speech acts, In: *Information Structure: Theoretical, Typological and Experimental Perspectives*, OUP, 115-138.

[1] Within this model, it seems plausible to argue that also declarative sentences uttered in out-of-the-blue contexts enter into the Table as structured meanings. Bruce/Farkas (2010) claim that these initiating declarative sentences project confirmation (see also Roberts 1996). Therefore, I propose to represent them as < λf [f (P)],{λp[p]}>, in compliance with the Tables given above. Interestingly, this 'positive' truth-conditional operator is expressed syntactically in some languages (see, e.g., *que* in Spanish – Demonte/Fernandez-Soriano (2012)).

Focus Fronting as an Exclamative Marker

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Keywords: focus fronting, exclamative sentences, mirative focus, adjectives

Introduction. Recent studies of the Romance left-periphery have acknowledged a type of focus fronting which is neither contrastive nor informational, but rather affective, often correlated with surprise – hence the name 'mirative focus' or 'evaluative focus' (see Ambar 1999, Brunetti 2009, Cruschina 2011, Paoli 2009, Frascarelli & Ramaglia 2013). I will show that in Romanian we must distinguish two types of affective focus fronting. In the first type (see (1)), the fronted element is a nominal phrase which has a qualitative or quantitative adjective in the first position, which bears the main stress of the sentence (I will call this the AN-type); in the second type (see (2)), a DP or PP is fronted:

(1) a. FRUMOASĂ rochie a cumpărat!
beautiful dress has bought 'What a beautiful dress (s)he bought!'
b. MULTE case a construit!
many houses has built '(How) many houses (s)he built!'

(2) Un IAHT şi-a cumpărat! / Cu IAHTUL a venit!
a yacht REFL.3.DAT-has bought with yacht-the has come

I will show that the first type represents in fact an exclamative sentence type, unlike the second one, which is found in declaratives.

Evidence: (i) Exclamative sentences are distinguished from declarative sentences which bear some affective prosodic or lexical marking by the fact that their propositional content is presupposed (Zanuttini & Portner 2003, Michaelis 2001, Elliot 1974, Grimshaw 1979). Therefore, exclamatives cannot appear in answers to questions or be introduced by 'did you hear?' (because their propositional content cannot represent new information). According to this test, the AN-fronting constructions qualify as exclamatives (see (3)a), unlike DP-fronting sentences, which qualify as declaratives (see (3)b):

(3) Context: Ai auzit (ce-a mai făcut Maria)? / Ce şi-a cumpărat Maria?
'Did you hear (about Maria)? / What did Maria buy?'
a.# FRUMOS iaht şi-a cumpărat! b. Un IAHT şi-a cumpărat!
beautiful yacht REFL.3.DAT-has bought a yacht REFL.3.DAT-has bought
'# (What a) nice yacht she bought!' 'She bought a yacht!'

(ii) The AN fronting construction is compatible with a spurious use of the clitic adverb *mai*, which is only found in exclamative sentences (in other sentences, *mai* has a (usually temporal) additive interpretation – 'again', 'still', 'also', see Donazzan & Mardale 2010)

(4) a. FRUMOS iaht şi-a **mai** cumpărat!
beautiful yacht REFL.3.DAT-has *mai* bought
= What a nice yacht (s)he bought!
b. Un IAHT şi-a mai cumpărat!
≠ (S)he bought a yacht!
= (S)he **also** bought a yacht!

This test shows that, besides AN-constituents, exclamative focus fronting can also involve scalar adverbs:

(5) REPEDE mai scrie!
fast *mai* writes 'How fast he's writing' , ≠ 'He's still writing fast'

(iii) The AN construction is correlated to a special internal syntax of the fronted constituent, which is not the case for any other focus fronting construction: the adjective must be in the initial position and no determiner is allowed; if the constituent is not fronted, the examples are normally ungrammatical with quality adjectives (see (6)a; the reason is that Romanian allows bare count singulars under very restricted conditions, see Dobrovie-Sorin, Bleam and Espinal 2006; even when they are allowed, bare count singulars are non-specific and therefore disallow prenominal quality As, which are appositive and therefore require specificity, see Cornilescu & Dinu 2012; (6)c-d shows AN-fronting with verbs

which do not allow bare count singulars at all; (6)b shows the lack of contrast between the inverted and the basic order in the case of DP-fronting).

(6) a. *Şi-a cumpărat FRUMOS iaht! b. Şi-a cumpărat un IAHT!
3.REFL.DAT-has bought beautiful yacht 3REFL.DAT-has bought a yacht
c. GREA problemă au rezolvat! d. * Au rezolvat problemă (grea)
hard problem have.3PL solved have.3PL solved problem (tough)

This indicates that in AN-fronting, a formal feature is present which triggers A-fronting inside the nominal phrase and at the same time requires fronting of the A+N constituent to the left periphery of the clause. I take this feature to be [excl].

(iv) Like with wh-exclamatives, the fronted constituent of the AN-construction can appear alone, as a non-verbal exclamative sentence:

(7) a. FRUMOS iaht! b. Ce iaht!
beautiful yacht what yacht 'What a yacht!'

(v) A further argument in favor of a formal feature involved in both fronting operations (inside the nominal and in the sentence) is the possibility to use an exclamative word in the position of the A: this is the case of *halal*, a depreciatory particle which is used either alone (as an interjection) or in the AN-fronting construction and its non-verbal version (it is excluded from non-exclamative sentences, see (8)b):

(8) a. HALAL maşină (şi-a cumpărat)!
halal car REFL.3.DAT-has bought 'What a bad car (s)he bought!'
b. * Şi-a cumpărat {halal maşină / (o) maşină halal }!

The restriction of *halal* to these environments can be explained if *halal* is lexically marked [excl]. This item must be distinguished from affectively marked adjectives such as *ditamai* ('huge, very big'), which can appear in any sentence types.

Syntactic analysis: as indicated under (iii) above, a formal feature [excl] is responsible for both A-fronting inside the nominal and movement of this constituent to the left periphery. Since the fronted constituents always contain a scalar element and the affective component involves evaluation of the (high) degree of this element, I assume that the [excl] feature is borne by a Deg head. The exclamative DegP raises to SpecDP, a position which makes the [excl]-feature accessible to checking at the sentence level (notice that wh-exclamatives also require a wh-word in DP-initial position, e.g. *Ce frumos iaht şi-a cumpărat!* 'What a nice yacht (s)he bought!'). This explains the incompatibility with determiners. The projection of the DP-level is shown by the fact that fronted AN-constituents do not obey the constraints on bare singulars (see (iii) above). The entire DP is moved to the sentence periphery by pied-piping (like in *wh*-exclamatives). Since in Romanian there is no evidence for a higher position of fronted operators in exclamatives than in interrogatives, the landing site can be assumed to be SpecFoc/Wh in Rizzi's hierarchy. Evidence for a position lower than Force comes from the fact that the complementizer *că* can appear before the fronted element (e.g. *Că mare casă şi-a cumpărat!* 'that big house REFL.DAT-has bought').

References: Ambar, M. 1999, Aspects of the Syntax of Focus in Portuguese, in G. Rebuschi, L. Tuller (eds.), *The Grammar of Focus*, Amsterdam: John Benjamins, 23-54; **Brunetti**, L. 2009, On the pragmatic of post-focal material in Italian, in D. Apothéloz et al. (eds.), *Les linguistiques du détachement,* Bern: Peter Lang, 151-162; **Cornilescu**, A., **Dinu**, A., Adjectives and specificity, talk given at the *Workshop on Specificity*, Univ. of Bucharest; **Cruschina**, S. 2011, Fronting, dislocation and the syntactic role of discourse-related features, *Linguistic variation Yearbook*, 1-34; **Dobrovie-Sorin**, C., **Bleam**, T. & **Espinal**, M.T. 2006, Bare nouns, number and types of incorporation, in L. Tasmowski & S. Vogeleer (eds.), *Non-definiteness and plurality*, 51-79, Amsterdam, Philadelphia: John Benjamins; **Elliott**, D. 1971, *The Grammar of Emotive and Exclamatory Sentences in English*, Doctoral dissertation, The Ohio State University, Columbus, Ohio; **Frascarelli**, M., **Ramaglia**, F. 2013, Optionality in Contrast, talk given at *IGG 39*; **Grimshaw**, J. 1979. Complement selection and the lexicon, *Linguistic Inquiry* 10.2.279–326; **Michaelis**, L. 2001, Exclamative constructions, in Martin Haspelmath et al. (eds.): *Language Typology and Language Universals*. Berlin: De Gruyter, 1038-1050; **Paoli**, S. 2009, Contrastiveness and new information: A new view on Focus, *Rivista di Grammatica Generativa* 34, 137-161; **Zanuttini**, R., **Portner**, P. 2003, Exclamative Clauses: at the Syntax-Semantics Interface *Language* 79(1): 39-81.

Attrition at the interfaces in bilectal acquisition (Italian/Gallipolino)

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Keywords: Attrition; bilectal acquisition; Italian/Gallipolino; Interface Hypothesis

First language (L1) attrition has been studied predominantly in terms of a change in the L1 caused by a second language (L2) that has become the primary, i.e. most frequently used language (e.g. Seliger 1991; Sorace 2000, 2011; Tsimpli *et al.* 2003; Montrul 2008; Rothman 2009). In the present study, language attrition is, for the first time, investigated in a bilectal context, where the dialect can be considered the L1 and the standard variety another L1 or an L2. Specifically, we look at simultaneous and early sequential speakers of Gallipolino and standard Italian, who have moved from Salento to Northern Italy after puberty, and for whom standard Italian has become the primary language. The aim of this study is to find out whether bilectal speakers are affected by attrition in the same way as (late bilingual) L2 speakers, and whether there are differences between simultaneous and subsequent bilectal speakers.

Gallipolino is a dialect spoken in Gallipoli (LE). A prominent feature in this dialect is the lack of infinitives in clauses embedded under the complementizer *ku*. As shown in (1a-b), after desiderative verbs (e.g. want, wish, hope), Italian uses finite subordinate clauses when the subjects in the main and subordinate clauses are not coreferential, and nonfinite subordinate clauses under coreferentiality (2a-b).

(1) a. Marco vuole che Maria vada al mercato.
Marco wants COMP Maria go-SUB-3ps to+DET market
'Marco wants that Maria goes to the market.'
b. *Marco vuole Maria di andare al mercato.
Marco wants Maria COMP go-INF to+DET market
'Marco wants Maria to go to the market.'

(2) a. *Marco$_i$ vuole che (lui$_i$) vada al mercato.
Marco$_i$ wants COMP he$_i$ go-SUB-3ps to+DET market
'Marco$_i$ wants that (he$_{*i/j}$) goes to the market.'
b. Marco vuole andare al mercato.
Marco wants go-INF to+DET market
'Marco$_i$ wants to go to the market.'

Gallipolino, by contrast, allows only finite subordinate clauses in all corresponding constructions. Even though infinitival constructions exist in this dialect, they cannot occur as complements of desiderative verbs (3c).

(3) a. 'U Pici ole la Cia ku bbascia alla chiazza.
DET Pici wants DET Cia COMP go-SUB-3ps to+DET market
'Luigi wants Lucia to go to the market.'
b. 'U Pici ole ku bbascia alla chiazza.
DET Pici wants COMP go-SUB-3ps to+DET market
'Luigi wants to go to the market.'
c. *'U Pici ole scire alla chiazza.
DET Pici wants go-INF to+DET market
'Luigi wants to go to the market.'

The examples show that both varieties make use of finite constructions with non-coreferential subordination (1a, 3a), but in the case of coreferentiality (2b, 3b), *ku*-constructions in Gallipolino have no structural counterpart in Italian. Summarizing, correct use of the complementizer system in the two

varieties requires taking into account the type of verb and pronominal reference. In other words, speakers must create a link between a syntactic phenomenon at the left periphery and lexical as well as semantic knowledge.

There is consensus in research on bilingualism that interfaces are particularly vulnerable (Müller & Hulk 2001, Sorace & Filiaci 2006, Sorace 2011). According to Müller & Hulk (2001), partial overlap in syntax and an interaction between syntax and pragmatics in the left periphery of the clause are jointly necessary for cross-linguistic influence (CLI) in bilingual first language acquisition. As for the *direction* of CLI, it is generally assumed that the language with fewer syntactic options (the subset: here Gallipolino, which has only finite constructions) influences the language with more syntactic options (the superset: here Italian, which has finite and nonfinite constructions). Accordingly, Gallipolino, representing the subset, should not be influenced by Italian. However, it has recently been argued that directionality in CLI is not subject to the same principles in bilingual children and adults (Anderssen & Westergaard 2012). If this is correct, the Gallipolian *ku*-construction may exhibit optionality (due to CLI from Italian), even though Gallipolino represents the subset.

To test these assumptions, a bi-modal acceptability judgment task with 40 items (20 test sentences and 20 control sentences and distractors) has been administered to 14 adult L1 speakers of Gallipolino who had left their home town to live in the North (test group) as well as 6 adult L1 speakers of Gallipolino who continued to live in Gallipoli (control group). Speakers in the test group acquired Gallipolino as their L1 at home, and Italian either simultaneously (n=5) or subsequently (n=9). The prediction was that, under attrition, *ku*-sentences with finite complements, such as (3b), would not always be accepted, and that manipulated sentences complemented by infinitival clauses, such as (3c), would be deemed grammatical. The results show that most speakers accept ungrammatical sentences of the type in (3c), which can be taken to indicate that their grammars have undergone changes. Interestingly, there were significant differences between simultaneous and sequential bilinguals, the latter performing significantly worse. The results match recent claims in research on heritage bilinguals, according to which simultaneous bilinguals are more at risk than subsequent bilinguals since they have been in contact with the dominant majority language for the longest possible time (Montrul 2008).

References

Anderssen, M. & Westergaard, M. 2012. Vulnerable domains in Norwegian heritage language: Word order and definiteness within the DP? Paper at the 3rd Workshop on Immigrant Languages in America, Pennsylvania State University.

Montrul, S. 2008. *Incomplete Acquisition in Bilingualism*. Amsterdam: John Benjamins.

Müller, N. & Hulk, A. 2001. Crosslinguistic influence in bilingual language acquisition: Italian and French as recipient languages. *Bilingualism: Language and Cognition* 4, 1-21.

Rothman, J. 2009. Pragmatic deficits with syntactic consequences?: L2 pronominal subjects and the syntax-pragmatics interface. *Journal of Pragmatics* 41, 951-973.

Seliger, H. 1991. Language attrition, reduced redundancy, and creativity. In H.W. Seliger & R. Vago (eds), *First Language Attrition*, pp. 227-240. Cambridge: CUP.

Sorace, A. 2000. Differential effects of attrition in the L1 syntax of near native L2 speakers. In S.C. Howell et al. (eds), *24th BUCLD Proceedings* (pp. 719-725). Somerville: Cascadilla.

Sorace, A. & Filiaci, F. 2006. Anaphora resolution in near-native speakers of Italian. *Second Language Research* 22, 339-368.

Sorace, A. 2011. Pinning down the concept of “interface” in bilingualism. *Linguistic Approaches to Bilingualism* 1, 1-33.

Tsimpli, I. & Sorace, A., Heycock, C, Filiaci, F. & Bouba, M. 2003. Subjects in L1 attrition: Evidence from Greek and Italian near-native speakers of English. In B. Beachley *et al.* (eds), *27th BUCLD Proceedings* (pp. 787-797). Somerville: Cascadilla.

Need optionality be residual? The syntax-information structure interface in L2 Spanish

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The current study tests the predictions of the Interface Hypothesis (IH, e.g. Sorace & Filiaci 2006, Sorace 2011) at the syntax-information structure interface by replicating previous methodologies in Hertel (2003), Lozano (2006), and Domínguez & Arche (2008), which returned conflicting results with respect to focus-related learner competencies. In order to address previous findings of unexpected preferences for VS word order with unergative predicates among second-language learners and native groups alike, the current methodology examined intuitions and preferences for SV and VS with unaccusative predicates and transitive predicates utilizing a contextualized Appropriateness Judgment Task (AJT) and a contextualized Word Order Preference Task (WPT). Both tasks were completed using Internet based modules, and were accompanied by a brief linguistic history questionnaire and a standardized proficiency test. The AJT elicited all-focus replies and subject narrow-focus replies with transitive and unaccusative predicates, while the WPT elicited narrow-focus replies and contrastive focus replies for subjects and direct objects of transitive predicates. The AJT utilized a 4-point Likert scale, which included an "I don't know" option, while the WPT utilized preference options designed to uncover optionality by including an option "Sentence A and B are equally preferable". For all-focus replies with transitive predicates, SV was the predicted word order preference, while the predicted order for unaccusative predicates was VS, following Perlmutter (1978). Contexts were followed by paired SV and VS replies with accompanying audio following recommendations in Kitagawa & Fodor (2006). Following Zubizarreta's (1998) reformulation of Chomsky & Halle's (1968) Nuclear Stress Rule, for subject narrow-focus contexts (1), V(O)S (1a) is the predicted word order reply preference for both predicate types. SV(O) word order replies (1b) with English-type prosodic stress on the subject (1c) are proposed to force a contrastive reading on the subject. Participant groups examined include a very advanced learner group consisting of Spanish professors, instructors, and graduate students (AG, N=13), and native speaker controls (NS, N=20) from Spain, Peru, and Argentina.

AG group results on the AJT suggest native-like judgments – with the notable exception of SV replies to all-focus questions with unaccusative predicates ($p = 0.006$). This instability is unexpected if L2 acquisition of narrow syntax is uncontroversial, as predicted by early versions of the IH. On the WPT, AG group preferences were native-like for object narrow-focus, object contrastive focus, and subject narrow-focus contexts. For subject contrastive focus contexts AG performed native-like, with the exception of the preference indicating that both SV and VS orders were equally acceptable – the preferred reply of the NS control group (Figure 1). While on the one hand, this result is indicative of interface instability and optionality on the part of the learners, it is also strongly suggestive of optionality among native speakers. SV preference for Spanish subject narrow-focus is well-attested (Leal-Méndez & Slabakova 2011, Hoot 2012, Gupton & Leal-Méndez 2013), suggesting the need for a re-examination of Zubizarreta (1998).

Post-hoc analysis of NS linguistic history questionnaires indicated two NS groups: one that had spent less than one year outside of the home environment (NS1) and another that had spent more (NS2). Results suggest that AG grammars converge with the NS2 group (Figure 2), which has had greater contact with English, thus highlighting the fallacy of comparing bilingual learner groups to monolingual native speakers (e.g. Bley-Vroman 1983, Ortega 2013). Assuming native speakers to be a monolithic, monolingual mass ignores the diverse input that emerging bilinguals are exposed to. These results indicate that future studies of the interfaces need to account for both linguistic and extralinguistic factors among native speaker groups.

Examples and figures

1. *Who ate the apple?*
   a. Comió la manzana Juan.
   b. Juan comió la manzana.
   c. John ate the apple.

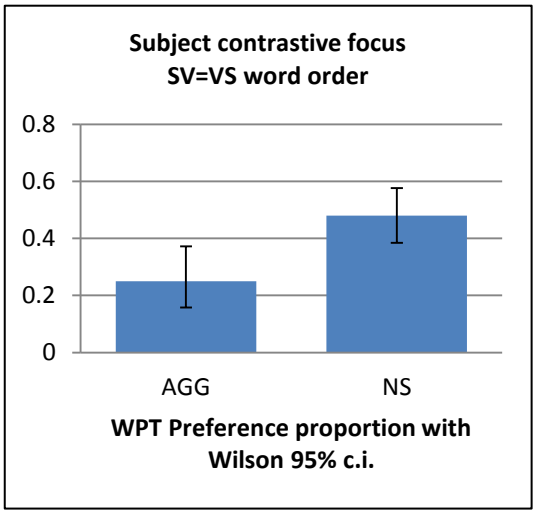

Figure 1.

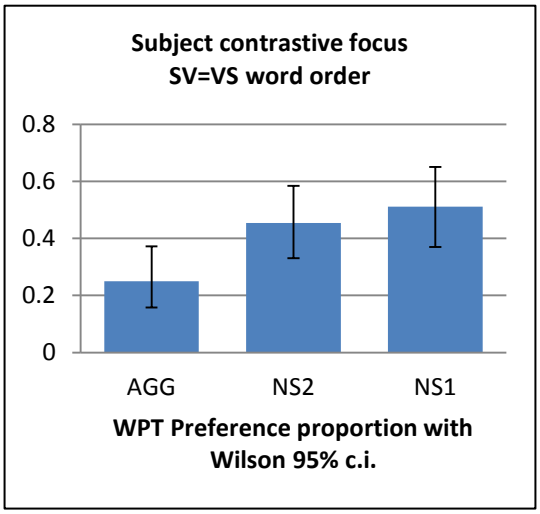

Figure 2.

Selected references

Bley-Vroman, Robert. 1983. The comparative fallacy in interlanguage studies: The case of systematicity. *Language Learning* 33, 1–17.

Domínguez, Laura & María J. Arche. 2008. Optionality in L2 grammars: the acquisition of SV/VS contrast in Spanish. *BUCLD 32 Proceedings*, 96-107. Somerville, MA: Cascadilla Press.

Gupton, Timothy & Tania Leal Méndez. 2013. Experimental Methodologies: Two Case Studies Investigating the Syntax-Discourse Interface. *Studies in Hispanic & Lusophone Linguistics* 6(1), 139-164.

Hertel, Tammy. 2003. Lexical and discourse factors in the second language acquisition of Spanish word order. *Second Language Research* 19(4), 273-304.

Hoot, Bradley. 2012. Presentational Focus in Heritage and Monolingual Spanish. Chicago: University of Illinois dissertation.

Lozano, Cristobal. 2006. Focus and Split intransitivity: the acquisition of Word order alternations in non-native Spanish. *Second Language Research* 22(2), 145-187.

Ortega, Lourdes. 2013. SLA for the 21st Century: Disciplinary Progress, Transdisciplinary Relevance, and the Bi/multilingual Turn. *Language Learning* 63(1), 1-24.

Perlmutter, David. 1978. Impersonal Passives and the Unaccusative Hypothesis. *Proceedings of the 4th Annual Meeting of the Berkeley Linguistics Society*, 157-190.

Sorace, Antonella and Francesca Filiaci. 2006. Anaphora resolution in near-native speakers of Italian. *Second Language Research* 22. 339-368.

Sorace, Antonella. 2011. Pinning down the concept of "interface" in bilingualism. *Linguistic Approaches to Bilingualism* 1(1), 1-34.

Zubizarreta, María Luisa. 1998. *Prosody, focus, and word order*. Cambridge: MIT Press.

Intervention effects and the acquisition of Chinese relative clauses

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Key words: Chinese relative clauses, intervention, comprehension pattern

Introduction. It is well documented that subject relative clauses (RCs) elicit better performance than object RCs in children speaking a variety of head-initial languages (e.g., Catalan, English, French, Hebrew and Italian) and some authors claim that the difficulty of object RCs lies in the structural similarity between the A'-moved element (relative head) and the intervening subject (Friedmann et al., 2009), as illustrates in (1).

(1) D NP …… D NP …… <D NP>
[+R, +NP] [+NP]

Previous studies on comprehension of RCs in Chinese, a language with head-final RCs, are mixed, e.g., a subject preference in Lee (1992) and no preference in Su (2006). Given some methodological limitations of the act-out task and weaknesses in the experimental materials used in these studies, it is difficult to interpret their contrasting results.

In the current study, we attempt to overcome the problems in the previous studies by using a different methodology, by controlling the material and by testing a broader age range. We aim at disentangling whether the subject vs. object RC asymmetry holds for Chinese and in so doing we consider whether and to what degree structural intervention affects Chinese RCs acquisition. Second, we wish to investigate if and to what extent this asymmetry emerges during development and how it is manifested in different age groups of children, to provide a useful insight on the discussion regarding cross-linguistic acquisition of RCs. Third, we aim at establishing whether the head-final status impacts on Chinese acquisition of RC.

Method. 120 children (aged 3;0-8;11, 20 per age group) and 20 adults participated in the study. We used a character-sentence matching task to test the comprehension of subject RCs (2a) and object RCs (2b); the answer was judged correct if the correct character (out of 4) was pointed at, and the others were coded as Errors (i.e., Embedded Error, Reversal Error and Other Error).

(2) a. Na yi-ge shi da xiaogou de xiaomao?
which one-CL is hit dog DE cat
'Which one is the cat that hits the dog?'
b. Na yi-ge shi waipo hua de xiaohai?
which one-CL is grandma paint DE child
'Which one is the child that the grandma paints?'

Results. There were four main findings. First, the comprehension of subject RCs was much more accurate than that of object RCs ($\chi^2(1) = 50.41$, $p < .001$; Wald $Z = 16.88$, $p < .001$), as in many other early languages (see Contemori & Belletti, 2013, and reference in). Importantly, the subject/object asymmetry was observed from age three to age seven; children at eight years of age performed at ceiling (subject RCs, 100%; object RCs, 96%).

Second, the rates of accurate responses increased across age groups ($\chi^2(5) = 145.78$, $p < .001$). Significant differences were observed between age three and age six (Wald $Z = 4.08$, $p < .001$), between age four and age six (Wald $Z = 3.08$, $p < .01$), between age five and age six (Wald $Z = 2.37$, $p < .05$), between age six and age seven (Wald $Z = 2.22$, $p < .05$) and between age seven and age eight (Wald $Z = 6.01$, $p < .001$).

Third, subject RCs in Chinese were also difficult to comprehend up to six years of age and elicited a variety of errors, inconsistent with observations from languages with head-initial RCs (e.g., Hebrew, Italian and Catalan). It is important to note that Hebrew, Italian and Catalan children performed over 90% correctly at age six, while their Chinese peers only performed 76.3% correctly.

Children did not show a tendency to make a specific mistake when they failed to understand subject RCs, and this was true at least from three to five years of age: proportions of Embedded Errors, Reversal Error and Other Error did not differ from each other (all $p > .21$).

Forth, the error pattern in the responses to object RCs differed from the pattern found in the aforementioned languages: Embedded Error (i.e., the 'agent' interpretation), rather than Reversal Error (i.e., the 'reversed' interpretation), was the most common. For instance, five-year-olds were much more likely to make an Embedded Error as compared to a Reversal Error (73% vs. 4%). The statistical analysis revealed that Embedded Error was significantly more common than Reversal Error in comprehending object RCs at age three (Wald Z = -2.25, $p < .05$), at age four (Wald Z = - 3.59, $p < .001$), at age five (Wald Z = -7.10, $p < .001$) and at age six (Wald Z = -5.24, $p < .001$).

Discussion. The contrasting results between subject and object RCs suggest that the mastery of object RCs emerges later than that of subject RCs. Chinese object RCs are more taxing than subject RCs, given that they violate a strict form of locality. The subject of the RC intervenes in the connection between the head of the RC and its copy in the hierarchical structure of object RCs. In contrast, there is no structural intervener between the head of the RC and its copy in the hierarchical structure of subject RCs. Following Friedmann et al. (2009), we maintain that structural intervention of the DP subject is at the root of the miscomprehension of object RCs.

Interestingly, we observed difficulties in Chinese subject RCs by children up to six years of age, while this is not so in head-initial languages. As stated in the literature (Arnon, 2005), the errors reflect different sources of difficulty. The Embedded Error and the Other Error seem to reflect children's confusion about the syntactic role of the relative head. They indicate that children are not sensitive to the fact that the RC adds information to the relative head and they only use the information in the embedded clause to select the referent of the head NP. In contrast, the Reversal Error seems to reflect a misunderstanding of the thematic assignment. The result in our experiment that all the error types were equally distributed in the subject RCs leads us to conjecture that also linear intervention is taxing for Chinese children. Consider subject RC (2a), the object of the RC (*xiaogou* 'dog') linearly intervenes between the head of the RC (*xiaomao* 'cat') and its copy. Our proposal that linear intervention may also affect children's comprehension is in line with findings from Franck et al. (2006).

Additional evidence for the role played by linear intervention in the early stages of development comes from the error analysis of object RCs. The fact that the error pattern is different in Chinese from the other languages may indicate that children are really misinterpreting the RC as the main clause, as this comes before the relative head. Based on these observations, we tentatively suggest that the linear intervention seems to play some role depending on the shape of the RC, but to a lesser extent than structural intervention.

References

Arnon, I. (2005). Relative clause acquisition in Hebrew: Towards a processing-oriented account. In A. Brugos, M. R. Clark-Cotton & S. Ha (eds.), *Proceedings of the Twenty-ninth Boston University Conference on Language Development*, 37-48. Somerville, MA: Cascadilla Press.

Contemori, C., & Belletti, A. (2013). Relatives and passive object relatives in Italian-speaking children and adults: Intervention in production and comprehension. *Applied Psycholinguistics, FirstView articles*, 1-33.

Franck, J., Lassi, G., Frauenfelder, U. H., & Rizzi, L. (2006). Agreement and movement: A syntactic analysis of attraction. *Cognition, 101*, 173-216.

Friedmann, N., Belletti, A., & Rizzi, L. (2009). Relativized relatives: Types of intervention in the acquisition of A-bar dependencies. *Lingua, 119*, 67-88.

New insights into intervention effects: an empirical investigation on Relativized Minimality

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Keywords: intervention effects; Relativized Minimality; D-linking

Building on featural Relativized Minimality (fRM, Rizzi 2001), Friedmann et al. (2009) hypothesize that a local relation between an extracted element and its trace is disrupted by an intervening element as a function of the feature overlap between the intervener and the extracted element: interference should be (i) maximal whenever the featural specification of the intervener completely overlaps the featural specification of the extracted element (feature identity), and (ii) moderate whenever the featural specification of the intervener only partially overlaps the featural specification of the extracted element (feature inclusion). However, prediction (i) was questioned by the observation that the extraction of a Discourse-linked (Pesetsky, 1987) wh-phrase over another D-linked wh-phrase is acceptable (e.g., *Which problem* did you wonder *which student* solved?), more so than the extraction of a bare wh-phrase over another bare wh-phrase (e.g., *What* did you wonder *who* solved?). Featural RM also predicts that a configuration of feature inclusion in such cases of extraction (e.g., *Which problem* did you wonder *who* solved?) should give rise to higher acceptability rates than both D-linked and Bare Identity. We explored the predictions of fRM with three acceptability judgement experiments on French indirect questions in a 2x2x2 design manipulating: (a) Extraction of a wh-phrase over another wh-phrase (Extraction vs. No Extraction), (b) D-linking of the first wh-phrase, Wh1 (D-linked vs. Non D-linked), and (c) D-linking of the second wh-phrase, Wh2 (D-linked vs. Non D-linked), as shown in Table 1.

Table1. English translation of French sentences in the 8 experimental conditions.

Wh1	Wh2	No Extraction	Extraction	
Non D-linked	Non D-linked	Who wonders who solved this problem?	What do you wonder who solved?	Bare Identity
Non D-linked	D-linked	Who wonders which student solved this problem?	What do you wonder which student solved?	Inverse Inclusion
D-linked	Non D-linked	Which professor wonders who solved this problem?	Which problem do you wonder who solved?	Inclusion
D-linked	D-linked	Which professor wonders which student solved this problem?	Which problem do you wonder which student solved?	D-linked Identity

Experiment 1 tested 40 participants' acceptability judgements of 32 sentences on a 7-point Likert scale. Experiment 2 tested 20 participants on 320 sentences on a binary scale. Experiment 3 tested 49 participants with the same materials and procedure as Experiment 1 except that sentences were preceded by a context story, so as to investigate the role of context in the processing of D-linking. In order to control for biases in participants' use of the scale, participants' ratings for Experiments 1 and 3 were *z*-score transformed, while an arcsine transformation was applied for participants' ratings in Experiment 2. Finally, in order to partial out any influence from variables other than extraction in the assessment of the role of D-linking in extraction, we corrected the ratings of sentences with extraction by the ratings of the corresponding sentences without extraction.

Results from the three experiments are highly consistent. A main effect of extraction was found, with dramatic sentence degradation in sentences with extraction. A main effect of Wh1 revealed that acceptability scores improve when Wh1 is D-linked. Tests on interactions showed a significant interaction between Wh1 and Wh2 attesting that when Wh1 is D-linked, higher ratings were found when Wh2 is also D-linked, while no effect of Wh2 was observed when Wh1 was non D-linked. No

effect of context was found, suggesting that the ameliorative effect of D-linking in the extraction condition is due to the presence of a lexical restriction rather than an interpretive property like D-linking (as in Friedmann et al., 2009). Finally, comparisons on the individual structures revealed that, among the Extraction conditions corrected for baseline, D-linked Identity is the most acceptable condition, followed by Inclusion, which is in turns more acceptable than Bare Identity and Inverse Inclusion that were similarly rated. Figure 1 from Experiment 1, representative for the three experiments, illustrates the results.

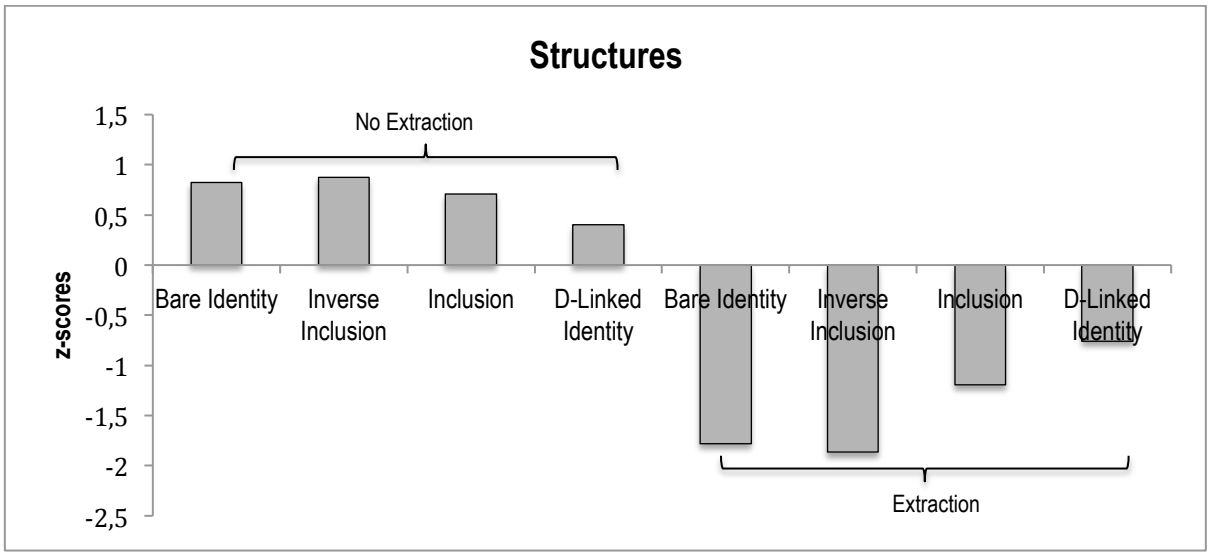

Fig. 1. Z-scores distribution on individual structures for Experiment 1. The first four structures represent the No Extraction conditions, whereas the last four represent the Extraction conditions corrected for baseline.

In the discussion, we address the consequences of these results for different approaches to intervention effects, and the potential relevance of content-addressable models of memory for language comprehension (e.g., McElree et al., 2003).

References

Friedmann, N., Belletti, A., Rizzi, L. (2009). Relativized relatives. Types of intervention in the acquisition of A-bar dependencies. *Lingua, 119*, 67-88.

McElree, B., Foraker, S., Dyer, L. (2003). Memory structures that subserve sentence comprehension. *Journal of Memory and Language, 48*, 67-91.

Pesetsky, D. (1987). Wh-in-Situ: Movement and Unselective Binding. In Eric J. Reuland & Alice G. B. ter Meulen (Eds.), *The Representation of (In)definiteness*, MIT Press: Cambridge, Mass.

Rizzi, L. (2001). Relativized Minimality Effects. In M. Baltin & C. Collins (Eds.), *Handbook of Contemporary Syntactic Theory*, Blackwell, Oxford, 89-110.

What memory retrieval tells us about intervention effects

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Keywords: locality, intervention, object relatives, top-down derivation, memory-based dependencies.

The proposal, in a nutshell. Intervention effects in Object-headed Relative Clauses of the kind discussed in Friedmann et al. (2009) can be rephrased within a top-down, left-right grammatical model (Chesi 2012, 2014) which implements non-local (filler-gap, filler-first, Fodor 1978) dependencies by means of a (last-in-first-out) memory buffer regulated by a cue-based retrieval mechanism (McElree et al. 2004, Van Dyke et al. 2006).

Background. It has been experimentally tested that both in understanding and in producing Subject vs. Object RCs, adults and children show an asymmetric performance, with Subject RCs (S-RCs), (1a), generally easier to process than Object RCs (O-RCs) (1b) (Kung & Just 1991: self-paced reading; Warner & Marastos 1978: probe-task; Just et al. 1996: brain activity, a.o.; see Arosio et al. 2011, Contemori & Belletti 2013 for a review):

(1) a. The banker [that _ praised the barber] climbed the mountain (Gordon et al. 2001)
b. The banker [that the barber praised _] climbed the mountain

Critical data. O-RC difficulty can be mitigated by varying the type of RC subject:

(1) b'. The banker that *Ben* *praised* _ climbed the mountain (Gordon et al. 2001)
b". The banker that *you* *praised* _ climbed the mountain

Self-paced reading experiments show that the critical verb region ("praised") is read faster when a pronoun (*P*) is processed in the RC subject position, (1b"), slower when it is a proper name (*N*), (1b'), and even slower when it is a definite description (*D*), (1b). All the possible combinations of *D/N/P* in head and RC subject position have been tested by Warren & Gibson (2005), with the following results:[1]

condition	*D-D*	*D-N*	*D-P*	*N-D*	*N-N*	*N-P*	*P-D*	*P-N*	*P-P*
r.t.(SE) ms	365(19)	319(12)	306(14)	348(18)	347(21)	291(14)	348(18)	311(15)	291(13)

Table 1. reading time (r.t.) and Standard Errors (SE) at verb segment (RC_head-RC_subject).

Memory-load accounts (Gibson 1998, Warren & Gibson, 2002, 2005 a.o.) explain (part of) these contrasts by postulating an "integration cost" (Gibson 1998) associated to new discourse referents: since pronouns do not introduce new discourse referents and names are referentially lighter than full *D*s (Warren & Gibson 2005), memory-load accounts predict faster reading time at the RC verb when the subject is a pronoun and slightly longer reading time when it is a proper name. However, this account incorrectly predicts faster reading time for the *N-N* condition ('it was Patricia who Dan *avoided* at the party') than for the *D-D* condition ("it was the lawyer who the businessman *avoided* at the party), but no significant difference emerges.

Intervention-based account. The intervention-based accounts (Gordon et al. 2001, Friedmann et al. 2009, Belletti & Rizzi 2013 a.o.) explain the symmetry in the *D-D* and *N-N* matching conditions in terms of featural similarity. Friedmann et al. (2009) assume that whenever movement-related features are shared between a filler, *X*, (e.g. the RC head) and a structural intervener, *Z*, (e.g. the RC subject), the relation between *X* and its gap, *Y*, gets disrupted in a way that is proportional to the kind (and number) of features involved. Assuming that the 'lexical restriction' (Friedmann et al. 2009:72) is expressed by distinct features in definite descriptions, *proper names* and *pronoun* (*N* for common nouns, *Nprop* for proper names, and null *N* for pronouns), the intervention-based accounts predict that the matching conditions, *D-D* and *N-N*, are comparable, and the *P-P* condition is easier, since *N* is null. Notice, however, that the crucial assumption that only features triggering movement cause intervention (Friedmann et al. 2009:83) forces the lexical restriction, that is internal to the DP, to have a fundamental role in movement and this might be incompatible with standard bottom-up, feature-

[1] Sample item: 'it was D/N/P who D/N/P *avoided* at the party'; where, D = 'the lawyer'/'the businessman'; N = 'Patricia'/'Dan'; P = 'you'/'we'); reading times are provided by Warren p.c. (cf. Warren & Gibson 2005:360).

driven movement (but see Belletti & Rizzi 2013 for a relevant proposal compatible with the bottom-up perspective). Moreover, other asymmetries remain unexplained, e.g. the *D-P* vs. *P-D* condition.

Intervention-based account in memory retrieval terms. These problems dissolve if we adopt a top-down, left-right derivational view of movement (Chesi 2012, 2014) that is directly relevant also in processing, since it can precisely predict delays in self-paced reading depending on what happens and when. That is, in a (top-down, left-right) raising derivation of an O-RC, the RC head must be first merged in CP, then, its argumental features are stored in a memory buffer, waiting to be later re-merged in a properly selected position (i.e. the RC lexical verb). In the meanwhile, the RC subject is processed and is stored in memory, as well, waiting to be re-merged in an appropriate lexically selected position. Only when the RC verbal head is processed, its selectional requirements trigger the remerge of both the RC subject (this happen first, because of the last-in-first-out nature of the memory buffer) and the RC head (as direct object). Rephrasing the intervention-based account, I assume that the complexity of this computation is proportional to the number and kind of features that are stored in memory while the relevant arguments are retrieved to fill the selected positions. The proposed complexity metric takes into account the retrieval cost associated to memory access, depending on the number of items stored (*m*), the number of features characterizing the argument to be retrieved that are non-distinct in memory (*nF*) (i.e. also present in other objects in memory), mitigated by the number of distinct cued features (*dF*) (i.e. agreement and case features probed by the verb). This is the proposed "Feature-based Retrieval Cost" (C_{FRC}):

(2) $C_{FRC}(x) = \prod_{i=1}^{m_x} \frac{(1+nF_i)^{m_i}}{(1+dF_i)}$ (i.e. the product of the costs of any item retrieved at *x*)

Assume the following feature specifications: *D* = {+D, +num, N}, *N* = {+D, +num, N_{prop}} (with N vs. N_{prop} distinctiveness counting half, since expression of subcategorization) and *P* = {+D, +case, +pers, +num}. We already obtain a good fit in the most significant conditions:

condition	*D-D*	*D-N*	*D-P*	*N-D*	*N-N*	*N-P*	*P-D*	*P-N*	*P-P*
r.t.(SE) ms	365(19)	319(12)	306(14)	348(18)	347(21)	291(14)	348(18)	311(15)	291(13)
C_{FRC}(*avoided*)	16	12,25	3	12,25	16	3	9	9	1

In details, in the *D-D* matching condition (e.g. "it was the lawyer$_{\{+D,\ +num_sing,\ N\}}$ who the businessman$_{\{+D,\ +num_sing,\ N\}}$ *avoided…*"), the C_{FRC} at *avoided* is 16·1: 16 for retrieving "the businessmen", since *nF*=3, *m*=2 (because two *D*s are in memory at that retrieval time), and *dF*=0 (because no feature is cued by the verb distinguishing one *D* from the other); 1 for retrieving "the lawyer", since *nF*=0, *m*=1 and *dF*=0. The same C_{FRC}(*avoided*) = 16 applies to the *N-N* condition at the same region (e.g. "it was Dan$_{\{+D,\ +num_sing,\ Nprop\}}$ who Patricia$_{\{+D,\ +num_sing,\ Nprop\}}$ *avoided...*"). On the other hand, we expect a C_{FRC}(*avoided*) = 1 for the *P-P* condition (e.g. "it was you$_{\{+D,\ +pers_II,\ +num_sing,\ +case\}}$ who we$_{\{+D,\ +pers_I,\ +num_plur,\ +case_nom\}}$ *avoided...*"): for the subject pronoun, *nF*=1, *m*=2 and *dF*=3 (since number, person and case mismatches are always present and cued by the verb), while *nF*=0, *m*=1 and *dF*=0 for the object pronoun. Also for the *D-N* (3) and *D-P* conditions (4), the C_{FRC} makes coherent predictions (in both cases, object retrieval has always a cost of 1, since *nF*=0, *m*=1, *dF*=0):

(3) *N* retrieval at the RC verb: *nF*=2.5, *m*=2, *dF*=0 (N_{pro} vs. N counts as half)
C_{FRC}(*avoided*) (*D-N* condition) = 12,25

(4) *P* retrieval at the RC verb: *nF*=2, *m*=2, *dF*=2 (person and case are cued)
C_{FRC}(*avoided*) (*D-P* condition) = 3

Selected References:

Arosio, Guasti & Stucchi (2011) *Journal of Psycholinguist Research.* 40(2): 137-154.
Belletti & Rizzi (2013) Intervention in grammar and processing. In *From Grammar to Meaning*. CUP.
Chesi (2012) *Competence & Computation.* Unipress.
Chesi (2014) *Journal of Psycholinguistic Research*. (forthcoming)
Contemori & Belletti (2013) *Applied Psycholinguistics.* (2013): 1-33.
Friedmann, Belletti & Rizzi (2009) *Lingua.* 119.1: 67-88.
Van Dyke & Mc Elree (2006) *Journal of Memory and Language*. 55(2): 157-166.
Warren & Gibson (2005) *Language and Cognitive Processes*. 20: 751-767

Voice* in Old Italian

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Keywords: *Diachronic morpho-syntax, argument structure, Old Italian*

Old Italian (OI) displays some (morpho)syntactic properties that have been lost in Modern Italian (MI): Stylistic Fronting (SF), (1); more widespread clitic climbing (wCC) than in MI, (2); OV order, (3), and VP-ellipsis (VPE), (4). In this paper, we offer a unified account for the productivity of these phenomena, both at the synchronic and at the diachronic level.

(1) *Fu lli contato come* ***nodrito*** *era stato* <~~*nodrito*~~>
Was DAT;3SG told how educated (he) was been
"It was told him how he had been educated" [N, 5, 28]

(2) *Propuosi**le** di dire…*
Proposed-to.her of say.INF
"He decided to tell her.." [VN, 7, 10]

(3) *Ch'egli avea* ***il maleficio*** *commesso*
that he had.3sg the crime committed
"That he committed the crime" [Poletto, in press, FR 31]

(4) Q. *…Che voi non siete* ***partito*** *di Sardigna?*
That you not are left of Sardinia
A. *…Sì sono…* → *Sì* <~~*partito*~~> *sono*
Yes am [N, 77, 31-37]

In this paper, we argue that these phenomena are a direct manifestation of the fact that OI is characterized by active/inactive alignment (Ledgeway 2012 and ref. therein). These facts can be thus understood as consequences of the same syntactic property.

With SF, past participles, infinitival and predicative elements (a.o. lexical items) front to a pre-finite V position, if there is no External Argument (EA) in [Spec, IP]. In non-root clauses, SF concerns prevalently verbal elements (Franco 2009: 76 and ff.). From a corpus analysis, it further emerges that non-root SF is only attested with predicative elements corresponding to unaccusative achievements, passivized transitives achievements and (result) states, see (1). All these frontable components share an inactive semantics and lack an agentive EA. This suggests that these structures are syntactically inactive (in the sense of Alexiadou & Anagnostopoulou 1999 *et seq*.) and lack thus VoiceP, as [Spec, VoiceP] is the *Merge*-site of the agentive EA (Kratzer 1996, Alexiadou, Anagnostopoulou & Schafer 2006 *et seq*.). Conversely, we will claim that inactive constructions project up to InnerAspectP (InAspP), where predicate semantics is encoded (i.e. event, *e*, or state, *s*, cf. Travis 2010:270, a.o.).

From this perspective, the proposal is that all the OI properties illustrated in (1)-(4) depend on a parametrization of VoiceP. Specifically, OI marks the active/inactive distinction in the syntax, by projecting a strong (*) Voice in active structures (* in the sense of Chomsky 1995, Biberauer & Richards 2006, Biberauer, Holmberg, Roberts & Sheenan 2009 *et seq.*), which requires the *Merge* of an agentive EA or other lexical material. We capitalize on Poletto's (2006) intuition that OI phase-edges show parallelisms in their syntactic properties and assume that in V2 languages like OI, agreement is licensed configurationally, rather than being long-distance (cf. Baker 2008, Sigurðsson 2011). In active structures, the presence of Voice* creates a phase-boundary that blocks agreement between InAsp and OutAsp, projected in the IP. On the contrary, inactive structures have no phase boundaries blocking probing operations from the higher functional domain: this is morpho-syntactically visible, as shown by agreement marking on the participle. From this perspective, SF results from a probing operation by the closest phase head, i.e. Fin*, into its syntactic complement. Because in inactive constructions there is no Voice*, Fin* can probe InAsp, which is A-moved to

satisfy the interpretive requirement for a "subject-of-predication" (Venier 2002). InAspP is a good candidate to fulfill this requirement, since it codifies "*what* the speaker talks about" (Bache 1995:74). SF is thus a way of anchoring this semantic content (e.g. result state) to the context.

We further argue that movement through Voice*P permits scrambling of (direct) objects and adjunct to a pre-non-finite V position, giving rise to OV orders (Poletto, *supra*), as well as to a wCC. In the case of wCC, Voice* probes clitic movement to the phase-edge. From this position, clitics are visible to their landing, structurally higher inflectional head. In a similar fashion, objects may move via Voice*P, where they become visible to inflection and trigger agreement on past participles, as, in this case, OutAsp-InAsp agreement is no longer blocked by intervening Voice*. Moreover, both objects and adjuncts/adverbials may scramble to a functional position in IP (Poletto in press) once they are made visible on Voice*P.

The parametrization of Voice* also extends to cover cases of VPE in OI, which is generally licensed in answers to Y/N questions, (4). VPE in active constructions is licensed by the presence of Voice* which imposes spell-out (or ellipsis) of its complement. By contrast, in inactive constructions, VPE is in fact fronting to [Spec,FinP], followed by "topic"-drop. The VPE in (4) is thus a case of drop of the stylistically fronted predicate *partito* (=left). Notice that the fact that the lexical predicate is generally fronted to a pre-finite V position is independently attested for answers (cf. *Domandoti onde se' e di che condizione [….] Messere […]* ***mercatante*** *sono molto ricco__* = "I ask you where you come from and what your status is…Lord…I am a very rich merchant", N, VII, 16-18).

This proposal generates a number of borne-out predictions and is further supported by diachronic facts as well as by the synchronic Romance variation.

At the diachronic level, Latin data seem to confirm the hypothesis. The active/inactive alignment is pervasive in the Latin verbal system. A different morphological realization distinguishes active structures with an agentive sentential subject (transitives, *e.g. neco* "I murder"/*necavi* "I murdered/have murdered") from inactive ones (deponents, e.g. *miror* "I am astonished"/*miratus sum* "I was/have been astonished"; passives *necor* "I am murdered"/*necatus sum* "I was/have been murdered") (La Fauci 1988, 1997 *et seq*., Ledgeway 2012). Notice that also apparently active deponents like *loquor*, "I talk", *sequor*, "I follow" and *ulciscor* "I revenge" have been shown to be, in fact, inactive, on a par with the other predicates bearing *–r* morphology (Gianollo 2010). In support of our analysis of OI comes a relevant diachronic correspondence: most OI inactive predicates with SF descend etymologically from Latin inactive (-*r*) structures: 1) spontaneous events (unacc. Achievements, *e.g.* Lat. *morior*: OI *morire* "to die"), 2) impersonals (e.g. Lat. *dicitur*: OI *è detto* "one says", 3) resultant states, 4) passives. The active/inactive morpho-phonological distinction reflects structural differences concerning the organization of arguments within the verbal domain: this is visible in the distinct syntactic behavior of these constructions (Kallulli 2013, Migliori, forth. *contra* Embick 1997, 2000 *et al*.). Latin exhibits thus the same properties that were detected in OI and that we attribute to an active/inactive alignment: VPE; SOV-order, argument/predicate fronting (under slightly different conditions though, cf. Ledgeway 2012, whereas CC is not testable, as Latin lacks clitics). We accordingly propose that Latin has Voice* as well.

At the synchronic level, the predictions of our hypothesis can be tested by looking at cross-linguistic variation. A first possibility consists of a system in which agreement is morphologically realized but Voice, if projected, is not strong. In this case, Voice is not expected to block agreement. Under our analysis, consequences for the lack of Voice* would be: 1) absence of SF; 2) no VPE; 3) no OV and 4) more restrictive conditions for CC. We show that this is exactly what we find in MI. In MI, agreement in presence of Voice is nonetheless realized, as shown by the split intransitivity alternation (S_O *vs*. S_A). Another possibility is represented by a system with weak Voice and without morpho-phonological realization: this is the case of Modern Spanish and Modern Rumanian.

All these diachronic and synchronic data support the hypothesis of a diachronic change in the featural specification of Voice: Voice* > Voice from Latin to Modern Romance.

Grammar and processing: The case of wh-questions in LIS

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This talk discusses wh-questions in complex constructions in Italian sign language (LIS), showing that:

i. Processing factors constraint matrix wh-constructions,
ii) left-adjoined CPs (e.g. topicalized CPs, if-clauses, (cor)relatives, etc.) are island,
iii) right-adjoined sentential complements are "mild" islands,
iv) right-adjoined sentential adjuncts (e.g. reason-clauses) are "mild" islands.

Background. LIS is a relatively well-behaved head-final language (Cecchetto et al. 2006): object DPs are preverbal, modals are postverbal and negation is postverbal *and* postmodal (cf. (1)).

(1) GIANNI CONTRACT SIGN CAN NOT 'Gianni cannot sign the contract'

Two key factors characterize the macroscopic syntactic structure of LIS: **A)** The position of sentential complements (Geraci et al. 2008), and **B)** the position of wh-items in direct questions (Cecchetto et al. 2009).

A) Differently from DPs, fully sentential complements are normally not allowed in center embedded position (cf. (2)a-b vs. (2)c). Complements of control verbs are fully acceptable in center embedded position, as in (3). (**NB**: relevant non-manual components are indicated when relevant for the discussion by a line above the glosses):

(2) a. GIANNI SAY PIERO MILK BUY 'Gianni said that Piero bought the milk'
b. PIERO MILK BUY GIANNI SAY 'Gianni said that Piero bought the milk'
c. * GIANNI PIERO MILK BUY SAY

(3) GIANNI [PRO MILK BUY] FORGET 'Gianni forgot to buy the milk'

B) Wh-phrases are consistently found in clause-final position, (cf. (4)). Other options are marked and not relevant for the present discussion (see Cecchetto et al. 2009 and Branchini et al. 2013 for discussion).

(4) a. t_{who} CAR STEAL **WHO** 'Who stole the car?'
b. GIANNI t_{what} STEAL **WHAT** 'What did Gianni steal?'

Wh-extraction out of sentential complements is only possible in control constructions, as in (5):

(5) a. GIANNI [PRO t_{what} BUY] FORGET **WHAT** 'What did Gianni forget to buy?'
b. * GIANNI SAY PIERO t_{what} BUY **WHAT**
c. * PIERO t_{what} BUY GIANNI SAY **WHAT**

Geraci et al. (2008) explain the facts in (2)-(3) by appealing to both processing and structural facts. Fully sentential complements are banned from center embedded position because of working memory limitations. The ban for center embedding is a more general property of human language. However, while spoken languages normally tolerate at least one level of center embedding, LIS does not tolerate any. The grammar of LIS copes with this processing limitation by removing the offending CPs from the center embedded position. This is done either by fronting the CP to a sentence initial topic position or to a sentence final position. Wh-extraction out of CPs in these positions (cf. (5)b-c) is prohibited because they are treated as syntactic adjunct, therefore subject to some version of the adjunct island constraint. Control constructions are allowed in center embedded position because of their special syntactic status (no tense and null subject). Wh-movement is possible in this construction because the complement sits in its canonical position (cf. (5)a).

New findings and accounts. *i. Processing factors constraint wh-constructions*. **Data**: For some verbs like 'THINK', the topic position is not available to host the sentential complement in declarative clauses (cf. (6)b). However, a wh-question on the matrix subject makes that position readily available as the preferred option (cf. (7)a vs. (7)b):

(6) a. GIANNI THINK PIERO MILK BUY 'Gianni thinks that Piero bought the milk'
topic_____
b. * PIERO MILK BUY GIANNI THINK

(7) a. ?? t_{who} THINK PIERO MILK BUY **WHO** 'Who thinks that Piero bought the milk?'
topic_____
b. PIERO MILK BUY t_{who} THINK **WHO** 'Who thinks that Piero bought the milk?'

Analysis: The postverbal complement intervenes between the subject and the target position of wh-movement, incrementing the linear distance (and possibly the hierarchical distance, see Santoro and Geraci 2013) between the gap and its filler. To reduce this distance, the complement is displaced to the otherwise unavailable topic position (see Richards 2006 for a similar idea to account for wh-questions in Basque).

ii. left-adjoined CPs are island. Consistently with their syntactic status, wh-extraction is generally impossible out left-adjoined CPs, cf. (8). Differently from (5)c and (8), extraction is possible out of topicalized complements of control constructions (cf. (9)).

(8) a. * (*IF) t_{who} ARRIVE LATE, GIANNI BIER PAY **WHO** (if-clause)

b. * BOY t_{who} KISS PE HAPPY **WHO** (correlative)

c. * BECAUSE t_{who} LATE (PE) ANGRY **WHO** (fronted reason-clause)

(9) [$_{CP1}$ [$_{CP2}$ PRO t_{what} BUY] GIANNI t_{CP2} FORGET **WHAT**] 'What did Gianni forgot to buy?'

Analysis: at least two analyses are possible: A) wh-movement occurs after topicalization. The contrast between (5)c and (9) is explained in terms of the special status of control CPs. Other CPs are stronger island. B) wh-movement occurs before topicalization in (9), when the complement sits in canonical position. Notice that this imposes a different derivation for (5)c (e.g. base generation in topic, as in Geraci et al. 2008).

iii) right-adjoined sentential complements are "mild" islands. **Data**: The postverbal position is available to host sentential complements only if the matrix verb may introduce role shift (the mechanism used by signers to "take on a role of a character in a discourse", Sandler and Lillo-Marin 2006), which is marked by a special body posture and facial expressions (cf. (10)a-b vs. c). Within this class, some verb also allows a non shifted version (cf. (11)a-c vs. b). Crucially, wh-extraction is possible out of non shifted complements only in d-linked contexts (cf. (12)):

(10) a. GIANNI THINK <role shift_____> PIERO MILK BUY 'Gianni thought that Piero bought the milk'

b. GIANNI IMAGINE <role shift_____> PIERO MILK BUY 'Gianni imagined that Piero bought the milk'

c. * GIANNI FORGOT <role shift_____> PIERO MILK BUY

(11) a. * GIANNI THINK PIERO MILK BUY

b. GIANNI IMAGINE PIERO MILK BUY 'Gianni imagined that Piero bought the milk'

c. * GIANNI FORGOT PIERO MILK BUY

(12) a. GIANNI IMAGINE t_{who} ARRIVE LATE **WHO *(IX)** 'Who of them does Gianni imagine is arriving late?'

b. * GIANNI IMAGINE <role shift_____> t_{who} ARRIVE LATE **WHO IX**

Analysis: Even if the complement originates in the canonical position (Geraci et al 2008), role shift induces a strong island effect. This might also be connected with the status of role shifted clauses (quotation vs. indirect discourse). D-linking helps by-passing the islandhood status of fully sentential complements.

iv) right-adjoined sentential adjuncts are "mild" islands. **Data**: much like left-adjoined complement CPs, wh-phrases are normally not allowed to move out of right-adjoined CPs. However, extraction is possible if two conditions are met: the verb of the subordinate clause is an agreeing verb (ARRIVE vs. SLEEP), and the body shifts toward the location in space marked by the agreeing verb:

(13) a. GIANNI NERVOUS BECAUSE t_{who} ARRIVE LATE **WHO** (who is such that Gianni is nervous because he arrives late)

b. * GIANNI NERVOUS BECAUSE t_{who} ARRIVE LATE **WHO** _____body shift

b. * GIANNI ANGRY BECAUSE t_{who} SLEEP **WHO** _____body shift

Analysis: Adjunct island effects can be circumvented in LIS if information about the gap position is marked by manual and non-manual morphology. These markers have no effect on fronted CPs (cf. (8)c vs. (13)) because the distance between the gap and the filler would be too large. This option is not available with role-shifted CPs because body shift is already marking the shifted character; while it is not necessary with non-shifted right-adjoined complement CPs.

Conclusions. These new facts show that the pattern of wh-extraction in LIS is much more intricate than previously described and requires partial revision of previous analyses. Processing factors are crucial in determining which configuration allows wh-extraction and improve acceptability: the (linearly and hierarchically) shorter the wh-movement, the better the sentence. Linguistic factors are also active: the combination of manual and non-manual agreement licenses wh-movement; while role shift is a blocking factor.

References: Branchini, Geraci, Cecchetto, Donati and Cardinaletti. 2013, Wh-duplication in Italian Sign Language, *SLLS* 16:2. Cecchetto, Carlo, Carlo Geraci & Sandro Zucchi. 2006. Strategies of relativization in Italian Sign Language. *NLLT*. 945–975. Cecchetto, Carlo, Carlo Geraci & Sandro Zucchi. 2009. Another way to mark syntactic dependencies The case for right peripheral specifiers in sign languages. Language 85(2). 278–320. Geraci, Carlo, Carlo Cecchetto & Sandro Zucchi. 2008. Sentential Complementation in Italian Sign Language. In Michael Grosvald & Dionne Soares (eds.), *Proceedings of the thirty-eight Western Conference On Linguistics*, 46–58. Richards, Norvin. 2006. Beyond Strength and Weakness. MS. Sandler, Wendy & Diane Lillo-Martin. 2006. *Sign Language and Linguistic Universals*. CUP.

Native and non-native processing of antecedent contained deletions

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Antecedent-contained deletion (ACD) structures contain elliptical gaps that are contained within their own antecedent, resulting in a recursive loop as illustrated in (1):

(1) The scout was taught to [$_{VPi}$ catch every/the snake that John did [__]$_i$ in the outback]

The covert movement operation of Quantifier Raising (QR) (May 1977) is thought to help prevent interpretation ('infinite regress') problems from arising when trying to reconstruct the elided VP at the point of the gap. In sentences like (1), QR serves to raise the quantified phrase (QP) *every snake that John did/was* (but not its definite counterpart, *the snake that John did*) out of the VP containing it, thereby removing the gap from within its antecedent.

Using eyetracking-while-reading, the present study investigates whether encountering a quantified (as opposed to an unquantified DP) object facilitates the processing of a VP gap further downstream, as was previously observed in a self-paced reading study by Hackl et al. (2012). We presented 32 native and 32 German non-native speakers of English with 24 sentences such as (1) and (2), manipulating both the determiner (*every snake* vs. *the snake*) and the auxiliary preceding the gap so as to alter antecedent size (*was* vs. *did*) in a 2x2 design.

(2) The scout was [$_{VPi}$ taught to catch every/the snake that John was [__]$_i$ in the outback]

The QR account predicts that gap processing should be facilitated in the QP relative to the DP conditions, modulated by antecedent size if QR preferentially applies locally. From the point of view of anaphoric or "pointing" approaches to VP ellipsis (e.g. Culicover & Jackendoff 2005, Martin & McElree 2008), neither the antecedent's quantificational status nor its size should affect processing difficulty at the gap. Similar predictions also follow from theories which posit that any covert representation of the antecedent VP is removed from both syntactic and semantic representations prior to spell-out (Baltin 2012). Perhaps the most common approach to ellipsis, though, assumes that there is a full but phonologically silent copy of the antecedent present at elliptical gaps (e.g. Ross 1969, Lasnik 2001, Merchant 2001, 2008 among many others). Such accounts predict full reactivation of the antecedent VP at the gap site. This means we should see a main effect of Antecedent Size, but independent of the object DP's quantificational status. See Phillips & Parker (in press) for a more detailed review of the psycholinguistic predictions for different approaches to ellipsis.

While both groups took longer to read quantified than unquantified object noun phrases when these were initially encountered, only the native speakers also showed significant effects of quantification at and following the gap region, along with effects of Antecedent Size. Unlike what was found by Hackl et al. (2012), coming across the VP gap initially triggered longer reading times for the quantified conditions at the region following the gap (e.g. *in the outback*). The expected QP facilitation effect was restricted to the native speakers' rereading times. Here we found a Quantification by Antecedent Size interaction [F_1=5.76,p<.05; F_2=5.61,p<.05], with the longest reading times seen in the "long VP, unquantified" condition. Interestingly, the same pattern was found for rereading times at the region containing the antecedent verb(s) (e.g. *The scout was taught to catch*), with a significant Quantification by Antecedent Size interaction [F_1= 4.827, p =.029; F_2= 4.71, p<.05]. This suggests that QR not only facilitated the reactivation of the antecedent, but also the backwards search and identification of it.

The non-native group, in contrast, only showed main effects of Antecedent Size at and following the gap region, as well as during their rereading of the antecedent itself (*every/the snake that*), with the

long VP conditions in (2) eliciting longer reading times, and triggering more regressive eye movements from the gap site, compared to the short VP conditions in (1). No main effects of, or interactions with, quantification were observed.

Taken together, our results indicate that ACD resolution is affected by the quantificational status of the antecedent VP's object in native but not in non-native sentence processing. The native speakers' reading-time patterns are consistent with a QR account and suggest that QR is triggered, or reconfirmed, when the VP gap is encountered. The non-native group's pattern, on the other hand, indicates that more complex VPs are more difficult to reconstruct than simpler ones, as was also the case for the native speakers. The observed complexity effects are unexpected from the point of view of non-reconstruction approaches to VP ellipsis (e.g. Martin & McElree 2008, Baltin 2012) but are consistent with full reconstruction accounts (e.g. Merchant 2001, 2008 among others). Taken together, our results suggest that more than one possible ACD resolution mechanism is available in principle, affecting not only reconstruction processing at the gap site, but also the regressive search and identification of the antecedent in real-time. Only the native speakers make use of a QR-based strategy, however.

References

Baltin, M. (2012). Deletion versus pro-forms: An overly simple dichotomy. *Natural Language and Linguistic Theory* 30, 381-423.

Culicover, P. & R. Jackendoff. (2005). *Simpler Syntax.* Oxford, UK: Oxford University Press.

Hackl, M. et al. (2012). Quantification and ACD. Evidence from real-time sentence processing. *Journal of Semantics,* doi:10.1093/jos/ffr009

Lasnik, H. (2001). When can you save a structure by destroying it? In M. Kim & U. Strauss (eds.).*Proceedings of the North East Linguistic Society* 31. Amherst, MA:GLSA,301-20.

Martin, A. E. & McElree, B. (2008). A content-addressable pointer mechanism underlies comprehension of verb-phrase ellipsis. *Journal of Memory and Language* 58, 879-906.

May, R. (1977). The Grammar of Quantification. PhD Dissertation. MIT, Cambridge, MA.

Merchant,J.(2001).The syntax of silence: Sluicing, islands, and identifying in ellipsis. Oxford, UK: Oxford University Press.

Merchant, J. (2008). Variable island repair under ellipsis. In. K. Johnson (ed.). *Topics in ellipsis*. Cambridge, UK: Cambridge University Press.

Phillips, C. & D. Parker. (In press). The psycholinguistics of ellipsis. *Lingua.*

Ross, J. R.(1969). Guess who? In R. I. Binnick, A. Davidson, G. M. Green, & J. L. Morgan (eds.). *Proceedings of the fifth annual meeting of the Chicago Linguistics Society*. Chicago: University of Chicago Press, 252-286.

Attachment preferences in full vs. reduced relative clauses in Slovenian

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Cross-linguistic variation in attachment preferences in relative clauses (1), in particular, with respect to attaching a relative clause either to a local (low-attachment, LA) or a non-local (high-attachment, HA) head noun, present a well known and widely investigated challenge to the universality of parsing principles such as Late Closure (Frazier 1978). At the same time, reduced relative clauses, best known in the psycholinguistic literature on garden-path effects, have received relatively little attention in the context of investigations of attachment preferences. Comparison between full and reduced relatives across languages as well as within a single language is beneficial in a number of respects that can highlight the core properties of the human syntactic parser.

The present study investigates the attachment preferences in full as opposed to reduced relative clauses in Slovenian. Our main objectives were 1) to establish the pattern of attachment preferences for this language in both off-line and online experimental tasks; 2) to re-examine the role of the complementizer in determining the attachment site, in light of recent theories that treat it as a significant factor in attachment preferences; and 3) to evaluate the recent proposal that the choice of a non-local noun in HA languages may be due to a syntactic confound, a "pseudorelative" construction whose syntactic properties resemble that of a small clause (see below).

Experiment 1 is an offline study intended to establish the pattern of attachment preferences in Slovenian full relatives. We used the methodology of untimed questionnaire similar to the one used, e.g. in Sekerina (1997) for Russian. Subjects (N=99, all native speakers of Slovenian), were presented sentences like (2) where both attachment possibilities are grammatically available, followed by two unambiguous partial paraphrases corresponding to HA and LA of the relative clause. Subjects had to evaluate the availability of both interpretations for the sentence on a scale from 0-3, with 0 representing the unavailability of an interpretation, and 3 the most readily available interpretation. 8 target sentences were randomly mixed with 16 filler ambiguous sentences. Results: by comparing the mean scores, we found a robust preference for HA over LA (means: HA=2.39, LA=1.83; $t(1581)=11.27$, $p< 0.0001$). This places Slovenian on a par with other HA languages such as Spanish, Russian, and Croatian.

Prediction 1: Hemforth et al (2000) attribute a key role in determining the attachment site to the complementizer. They report that in German, RCs as in (3a) are resolved toward HA, while in their counterparts involving a prepositional phrase as in (3b), LA is preferred. On the basis of this finding, Hemforth et al. propose the anaphoric resolution hypothesis, according to which the presence of a relative pronoun initiates a search for an appropriate discourse referent to which the pronoun points, which is usually the non-local noun due to its high prominence. This account predicts, among other things, that *reduced relative clauses, with the relative pronoun absent, should behave similarly to constructions with PPs, i.e. elicit LA*, in accord with Late Closure.

Prediction 2: Grillo and Costa (2013) argue that in the languages and structures with HA preference, a parser can be "garden-path" led into analyzing a relative clause as a string-identical construction called "pseudorelative" (4). In particular, both kinds of clauses involve the same complementizer roughly meaning "that". These authors argue that once this confound is controlled for, the LA predicted by the likes of Late Closure, reemerges. This claim can be directly tested on Slovenian, which uses the invariant relative complementizer "ki" designated for full relative clauses only, hence relative clauses in this language can never be mistaken for any alternative construction. Grillo and Costa's account predicts, all else equal, that *full relative clauses in Slovenian should tend to LA, in the absence of the confound.* Experiments 2 and 3 test these two predictions for Slovenian.

Experiment 2 is an online 2x2 study crossing factors Complementizerhood (yes, no) and Attachment (high, low). 20 target items (preceded by 4 practice sentences) were tested in the versions that included either a full (+comp) or reduced (-comp) relative clause, avoiding potential morphological disambiguation cues. Subjects (N=37, different from Exp.1) read the sentences in the self-paced mode. Each target sentence was followed by a question highlighting either the HA or LA reading of the respective clause, yielding the total of 4 conditions (see (5)). Subjects were told to respond to the question as fast as possible (cutoff at 5 sec). Positive responses and response times were recorded. The target items were interspersed with 50 filler items, each followed by a comprehension question. Only subjects showing at least 80% accuracy rate on filler

comprehension questions were retained. Results: 1) Subjects interpreted target sentences with either HA or LA option essentially at chance level (51% and 48% positive responses for full relatives, and 56% and 43% for reduced relatives, respectively); 2) The presence of complementizer did not affect the attachment preference (no interaction: Pearson χ^2 (1) = 1.393, NS); 3) rANOVA conducted on response times showed both the main effect of Complementizerhood (F(1, 184)=5.53, p=0.02) and the main effect of Attachment (F(1, 184)=28.8, p<0.0001), but no interaction between them (F(1, 184)=0.23, NS), consistent with 2).

This experiment registered sensitivity to global ambiguity, but not initial preference for one or the other attachment option. To address the preference issue, Experiment 3 was conducted under the same evaluation methodology used in Experiment 1, with a crucial difference: each target item was tested in two conditions: one involving a full, the other a reduced relative clause, counterbalanced in the usual way. 12 target items were supplemented with 24 filler items, constituting overall 36 test items. Results: Subjects' (N=48, different from Exp1. and Exp.2) evaluation judgments show a clear preference for HA over LA in both full relatives (means: HA=2.46, LA=1,27; t(567)=13.32, p < 0.0001) and reduced relatives (means: HA=2.43, LA=1.29; t(572)=12.88, p < 0.0001).

Overall, our results a) establish Slovenian as a HA language; b) argue against the "pseudorelative" hypothesis; c) argue against the hypotheses that associate the attachment preference with the formal/semantic properties of the complementizer. In contrast, they are compatible with the proposals that account for HA in terms unrelated to complementizerhood (e.g. Implicit Prosody, Fodor 2002). To the extent that a reduced relative clause is a shorter version of the corresponding full relative, our results also show that the length of attachment may not necessarily be among the decisive factors for attachment preferences.

(1) Someone shot the servant of the actress who was standing on the balcony.

(2) Znanec od sodelavca, ki stanuje v sosednji ulici, je izgubil službo. /Slovenian/
acquaintance of colleague who lives in neighbouring street is lost job
"An/The acquaintance of a/the colleague who lives in the next street lost his job."

a. Sodelavčev znanec, ki stanuje v sosednji ulici, je izgubil službo. (0-3)
colleague's acquaintance who lives in neigbouring street is lost job

b. Znanec od tistega sodelavca, ki stanuje v sosednji ulici, je izgubil službo. (0-3)
acquaintance of this colleague, who lives in neibouring street, is lost job

(3) a. The daughter of the teacher who came from Germany met John.
b. The daughter of the teacher from Germany met John.

(4) Ho visto Gianni che correva (lit. "I saw John that ran") /Italian/

(5) Target: Prijatelja od sodelavca, {ki je bil pozvan / pozvanega} na sodišče, ne mara nihče. /Slov./
friend of colleague who is been called / called to court, not likes nobody
"Nobody likes the friend of the colleague who was summoned / summoned to the court."

Question: Ali je bil {prijatelj od sodelavca / sodelavec} pozvan na sodišče?
Q is been friend of colleague / colleague called to court
"Was the friend of the colleague / the colleague summoned to the court?"

References:

Fodor, J. D. (2002). Prosodic disambiguation in silent reading. In M. Hirotani (Ed.), Proceedings of the North East Linguistic Society. GLSA, University of Massachusetts, Amherst.

Frazier, L. (1978). *On comprehending sentences: Syntactic parsing strategies.* Ph.D. thesis. UConn.

Grillo, N., & Costa, J. (2013). A novel argument for the universality of parsing principles. Submitted to *Cognition.*

Hemforth, B., Konieczny, L., & Scheepers, C. (2000). Syntactic attachment and anaphor resolution: Two sides of relative clause attachment. In M. Crocker, M. Pickering, & C. Clifton (Eds.), *Architectures and Mechanisms for Language Processing* (pp. 259–281). Cambridge: Cambridge University Press.

Sekerina, I. (1997). The Late Closure Principle vs. the Balance Principle. In P. Costa (Ed.), *Proceedings of FDSL 2*. University of Potsdam, Germany.

Lexicon-syntax interface and subject drop
A longitudinal study on Child Italian

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Keywords: L1 acquisition / Null subjects / Verb classes / Subject Position / l-syntax

The l-syntax structure of a verb determines the clausal configuration in which a verb can appear in. That is, the verb class determines a cluster of syntactic behaviors such as the auxiliary selection in compound tensed forms: unaccusatives selects essere (to be) while unergatives and transitives avere to have. The relations holding within the elements of the lexical VP influence the derivation through the higher clausal functional projections and determine the overt syntax of a sentence [2]. The main purpose of this study is to investigate whether the l-syntax truly influences the higher syntactic derivation in children's spontaneous speech and at which stage this phenomenon takes place in the acquisition of Italian. We provide in this respect:

- The distribution of overt null/subject along verb classes.
- Since Italian is a *pro-drop* language we further investigate the position of overt subject in order to determine if a relation holds between the *loci* of generation at l-syntax and overt clausal syntax.

Overt subject distribution in children?s speech is used here as a test of the l-syntax employed in child grammar: the hypothesis we make is that systematic behavior found in Italian children?s production, such as the different distribution of overt subjects with different verb classes [3] is a sign of early recognition of verb classes. Given the traditional definition of syntactic verb classes [5] in (1)

(1) a. **Transitive Verbs**: NP[VP V NP/CP]
b. **Unergative Verb**: : NP[VP V]
c. **Unaccusative Verbs**: ___ [VP V NP/CP]

We argue that the loci of generation of the argument(s) in (1) strongly influence the syntactic properties of each verb. We then performed a longitudinal analysis of a corpora of the productions four Italian children aged between the 18 months and the 36 months (Calambrone , Diana Martina, Raffaello, Rosa CHILDES database [4]) and consisted in 17573 sentences. The utterances with verbal constructions were 4377. We also performed an analysis of on adults? spontaneous speech: the adults? corpus consisted of 2088 sentences produced by the children?s parents or caregivers for the transcription of 10 files chosen randomly in the whole corpus. The children showed systematically different syntactic behavior linked to the subject depending on the different verb classes [3].

Table 1: Overt Subject Distribution along Verb Classes (Percentage)

	Verb Classes		
Children	Unaccusatives	Unergatives	Transitives
Diana	36%	22%	26%
Martina	41%	25%	32%
Raffaello	37%	23%	15%
Rosa	32%	30%	19%
Children (tot.)	36%	25%	22%
Adults	41%	40%	20%

The data suggests that: 1) in Child Italian there is an higher omission of the subjects than in adult?s speech; 2) there is an early omission linked to the difference between external arguments (in transitives and unergatives) and internal arguments (unaccusatives); 3) a similarity with the different characteristics of early subject omission in no

pro-drop language [6]; 4) we need to perform further considerations on the pragmatic use of overt subjects in adult speech and discourse pragmatics [7] and l-syntax of verbs. The analysis of overt subject position seems to confirm a lexical pattern as table 2 shows.

Table 2: Overt Subject Distribution along Verb Classes (Percentage)

Children	Verb Classes					
	Unaccusatives		Unergatives		Transitives	
	Preverbal Position	Postverbal Position	Preverbal Position	Postverbal Position	Preverbal Position	Postverbal Position
Diana	31%	69&	60%	40%	73%	27%
Martina	32%	68%	80%	20%	75%	25%
Raffaello	35 %	65 %	95%	5%	67%	33%
Rosa	37%	63%	73%	27%	74%	26%
Children (tot.)	34%	66%	79%	21%	72%	28%
Adults	43%	57%	83%	17%	63%	37%

Unaccusatives show a preferential postverbal subject. This pattern of behavior was found in all the children, in the same proportions. Children show a different syntactic behavior with different verbal classes. The data suggests: 1) both children and adults have a preference in use post verbal subjects with internal arguments, 2) the same pattern is at work in other romance languages [1], 3) at clausal syntactic level it seems that subjects of unaccusatives check their features in a different syntactic position (such as AGROP) depending on the loci of generation of the subjects, 4) children seem to be aware of the difference between verb classes.

We conclude that an ergativity pattern is at work on subject production in Child Italian as also found in more general terms in deaf children [8]. The ergativity pattern seems to be more pervasive than discourse pragmatic in the very early stages due to the lexical characteristics of first unaccusatives: we found also in the corpus that unaccusatives are mainly change of state and change of location verbs. These findings and consequent considerations suggest a maturational account of higher clausal projections in Child Italian that is strongly influenced by interface effects of the l-syntax at work form the very early stage of Italian spontaneous speech.

References

[1] Bel, A. 2006,"The syntax of subjects in the acquisition of Spanish and Catalan", Probus, 15. 1?26

[2] Chomsky, N 1998 , Minimalist Inquiries, MIT Web Publishing.

[3] Lorusso,P. Caprin, C & M.T.Guasti, 2005 , "Overt Subject Distribution in early Italian Children", in BUCLD web proceedings

[4] MacWhinney B, & C.Snow 1990, "The Child Language Data Exchange System: An Update", Journal of Child Language, 17, 457.452

[5] Perlmutter,D. 1978, "Impersonal Passives and the Unaccusative", Berkeley Linguistic Society IV , 157-189.Berkley: University of California.

[6] Rizzi, L., 2000. "Remarks on Early Null Subjects", in M.A. Friedeman & L.Rizzi, (eds). The Acquisition of Syntax (pp.84-104). London: Longman.

[7] Serratrice L. ,2005, "The role of discourse pragmatics in the acquisition of subjects in Italian. Applied", Psycholinguistics, 26, 437-462.

[8] Zheng, M. & Goldin-Meadow, S. 2002, "Thought before language: How deaf and hearing children express motion events across Cultures?. Cognition, 85, 145-175.

Little v in code-switching and some creole reverberations.

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keywords: functional categories; language contact; verbal syntax.

It has been observed that many code-switching pairs include a L1 light verb that selects for a phrase that includes a verb and complement in the L2. Although it has sometimes been suggested that this light verb is an auxiliary introduced in the structure to support inflectional features, some evidence clearly indicates that the light verb is in fact an item independent from the TMA inflection (German/Spanish: González-Vilbazo 2005, Bhojpuri/Mauritian Creole: Domingue 1971, Turkish/Norwegian: Türker 1993), as in (1) where the light verb co-occurs with an auxiliary bearing the inflection. We take it that this is generally the case.

González-Vilbazo and López (2011, 2012), using almost exclusively German/Spanish data, argue that the light verb should be identified with the *little v* functional category proposed by Chomsky (1995) and Marantz (1997). In this paper, we intend to investigate the consequences of investigating light verbs as instances of little v, with special interest on code-switching involving a creole language.

Chomsky proposes that little v is in charge of introducing the external argument and assigning accusative case. As a direct consequence, little v is closely related to voice (Kratzer 1996) and transitivity (Harley 1995) In Marantz's work, the little v becomes a central concept of morphosyntax: the complement of a little v is a categoriless root, syntactic categories come about by means of incorporating the root into little v. Little v plays a role in *aktionsart* or "inner aspect", since it is included as part of the phrase structure of little v (cf. Ramchand 2008, Travis 2010). Finally, González-Vilbazo and López (2012) additionally argue that little v determines the VO/OV order of its complement (among other features that we do not discuss here).

The assumption that the light verb of code-switching is indeed an instance of little v arises some expectations:

1. We should find data in which little v determines the word order of its complement. This prediction can be tested in languages in which the light verb and its lexical complement come from languages with different word orders. In fact, this expectation is fulfilled (Bhojpuri/Mauritian Creole, Tamil/English: Annamalai 1971).
2. We should find instances in which the system of case marking on the object, and even its morphology, should depend on the light verb. This is found in Dutch/Turkish (Backus 1996), as in (2), and has also been documented for Tamil/English, Hindi/English, and Panjabi/English. Relatedly, English/Tamil also provides evidence that the light verb even affects the subcategorization of the verb's complements (Sankoff, Poplack & Vanniarajan 1990).
3. We should find instances in which the morphology of the light verb itself is altered according to transitivity, voice or aktionsart. Again, these expectations are all fulfilled. Transitivity splits are found in Navajo/English and Popoloca/Spanish (Muysken 2000). Voice splits are found in Greek/English (Tamis 1996). Stativity splits are found in Panjabi/English (Romaine 1989).
4. Finally, we should find evidence that the properties of TMA play no role in any of the properties listed in 1-3. In fact, whenever we find data in which the TMA system can clearly be separated from the light verb, we find total independence.

This leads us to the second part of this paper. We believe that this research project can shed new light onto the clause structure of creole languages. Received opinion has it that the structure of a creole clause involves a TMA auxiliary of independent creation followed by a verb in the lexifier language. If this is the case, creolization involves separating morphosyntactic features in two classes: the syntactic feature that categorizes a root comes from the lexifier language while all other features are the product of the creole process.

We argue, however, that *all* the morphosyntactic properties come from creolization. What appears as a "verb" in the structure is actually a bare root (which may or may not bear some

default morphology), while categorization depends on a little v that incorporates into the TMA system.

Evidence for this claim comes from Sranan/Dutch code switching (Bolle 1994). In this code-switching variety, we find instances in which the auxiliary comes from Sranan and the verb and object come from Dutch. However, the word order is VO, as in Sranan, and not OV, like in Dutch, as in (3). Since we are certain that the TMA features play no role in VO/OV order (see above) we are led to the conclusion that the VO order is the consequence of a little v (as in German/Spanish, Bhojpuri/Mauritian Creole, and Tamil/English code switching), which does not surface because it is incorporated into the TMA auxiliary.

Examples

(1)	Ham	**diblee**	**plant**	karat	hain			[Bhojpuri/**Mauritian Creole**
	1sg	wheat	plant	do	PRES.PR			
	'I am planting wheat.'							
(2)	bir	sürü	**taal**-lari			**beheersen**	yap-iyor-ken	[Turkish/**Dutch**
	one	many	language-PL.ACC			know	do-PROG.3sg-while	
	'while he knows many languages.'							
(3)	Now	kawna	ben	**besta**	**altijd**.			[Sranan/**Dutch**
	now	kawna	PST	exist	always			
	'Now, kawna has always existed.'							

References

Annamalai, E. (1971) Lexical insertion in a mixed language. *Papers from the Seventh Regional Meeting*, Chicago Linguistic Society, 20-27. **Backus**, Ad (1996) *Two in one*. PhD., University of Tilburg. **Bolle**, Jette (1994) Sranan Tongo – Nederlands. Code-wisseling en ontlening. MA Thesis, University of Amsterdam. **Chomsky**, Noam (1995) *The minimalist program*. Cambridge (Mass.), MIT Press. **Domingue**, Nicole (1971) *Bhojpuri and creole in Mauritius*. PhD., University of Texas. **González-Vilbazo**, Kay (2005) *Die Syntax des Code-Switching. Esplugisch: Sprachwechsel an der Deutschen Schule Barcelona*. PhD., Universität zu Köln. **González-Vilbazo**, Kay, & Luis **López** (2011) Some properties of light verbs in code-switching. *Lingua* 121, p. 832-850. **González-Vilbazo**, Kay, & Luis **López** (2012) Little v and Parametric Variation. *Natural Language and Linguistic Theory* 30.1, 33-77. **Harley**, Heidi (1995) *Subjects, Events and Licensing*. PhD., MIT. **Kratzer**, Angelika (1996) Severing the external argument from its verb. In Johan Rooryck & Annie Zaring (eds.) *Phrase structure and the lexicon*, 109 – 137. Dordrecht, Kluwer. **Muysken**, Pieter (2000) *Bilingual Speech*. Cambridge, CUP. **Ramchand**, Gillian (2008) *Verb Meaning and the Lexicon*. Cambridge, CUP. **Romaine**, Suzanne (1989) *Bilingualism*. Oxford, Blackwell. **Sankoff**, D., S. **Poplack** & S. **Vanniarajan** (1990) The case of nonce loan in Tamil, *Language Variation and Change* 2, 71-101. **Tamis**, A. (1996) *The state of modern Greek language as spoken in Victoria*. PhD., University of Melbourne. **Travis**, Lisa (2010) *Inner Aspect*. Dordrecht, Kluwer.

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Acquiring verbal idiosyncrasy in heritage Greek

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Deponent verbs in Modern Greek represent a mismatch between morphology and semantics/syntax. They bear a morphology, namely the non-active form (NACT), which seems not to share the typical semantic function of NACT (passive, reflexive/ reciprocal, anticausative reading) as well as its typical syntactic property (intransitivity) (Embick, 2000; Zombolou & Alexiadou, 2013 and, references therein; cf. example 1).

Deponent verbs thus being heavily idiosyncratic verbs are interesting to investigate from the point of view of language acquisition in the context of Greek bilingual heritage speakers of second generation. The question is whether deponents are fully acquired during childhood - and therefore they do not represent a case for Incomplete Acquisition - or whether they undergo changes during adulthood - and therefore they represent a case of Attrition. Furthermore, it is interesting to see whether, if changes are observed, these are due to structural influence from the majority language (Language Interference) or whether these are due to reanalysis/overregularization of the Greek grammar (Benmamoun et al., 2010; Montrul, 2013; Polinsky, 2011; Schmid, 2011; Thomason, 2001 and, references therein).

To this purpose, we investigated the spontaneous speech (autobiographical interviews 45–60 min. in length and of approx. 4,000 words spoken by each participant) of ten bilingual heritage speakers of Greek living in Argentina (aged av. 45;7) and, ten bilingual heritage speakers of Greek living in Australia (aged av. 38;3), both second generation immigrants. We found that the majority of the participants of both communities (63%, $p < 0,01$) changed the morphology of deponents by using the active (ACT) instead of the NACT, as exemplified in (2-3). Figure 1 illustrates the overall results while figure 2 illustrates the results for the two communities separately.

Interpreting these findings, we excluded language interference from the majority languages. Spanish inherent reflexives qualify as the morpho-syntactic counterparts of Greek deponents and therefore loss of deponency is not expected. Although English does not show verbal deponency in its grammar, the fact that the same change was found in two different communities, Argentina and Australia, with two typologically different languages suggests that this change occurred regardless the contact language (cf. Benmamoun et al., 2010).

We then compared the adult heritage data with L1-Greek children and one heritage German-Greek child. The comparison showed that adult Greek HSs in Argentina and Australia are attriters due to reanalysis/overregularization of the Greek grammar. Greek heritage speakers might have acquired deponents during childhood but they ‘restored’ mismatches between morphology and semantics/syntax in their language by overapplying the active form to the non-canonical deponent verbs requiring the non-active form. Similar changes with deponents in Greek spoken currently within Greece’s geographical borders (e.g. Zombolou & Alexiadou, 2013) provide further support for our conclusion.

This study supports the hypothesis that heavily lexicalized items, such as deponent verbs, are one of the first linguistic elements to be attrited and/or linguistic elements which are acquired early in life, such as heavily lexicalized elements, are hardly subject to incomplete/divergent acquisition.

Keywords: Heritage Greek, Deponent verbs & Acquisition

Examples

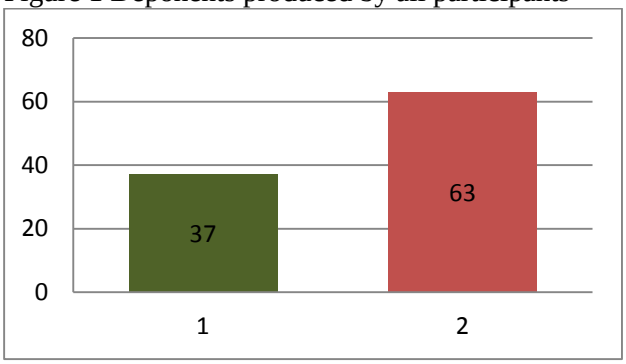
(1) I Anna hiristike sosta to provlima
the anna.SG.NOM handle.NACT.PAST.3SG well.ADV the problem.SG.ACC
'Anna handled the problem well.'

(2) ≠Onirevo (= onirevome) ta pragmata tu panepistimiu
dream.ACT.PRES.1SG the thing.PL.ACC the university.SG.GEN
'I am dreaming of the university things.' (Spanish-Greek, 22 years)

(3) ≠Emis ekmetalevome (= ekmetalevomaste) tis mikres hores
we exploit.ACT.PRES.1SG the small countries.PL.ACC
'We exploit the small countries.' (English-Greek, 35 years)

Figures

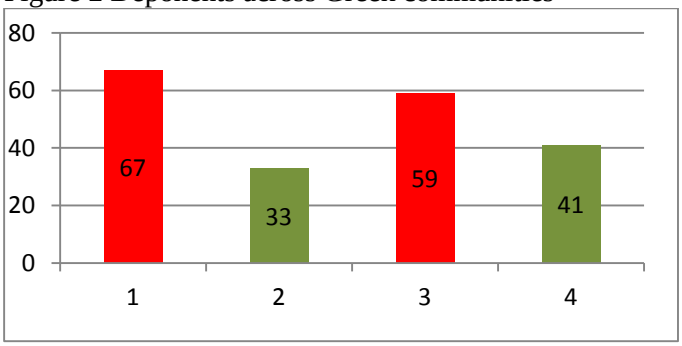
Figure 1 Deponents produced by all participants



1 Deponents produced by the non-active form (NACT)

2 Deponents produced by the active form (ACT)

Figure 2 Deponents across Greek communities



1 Greeks in Argentina: Target-deviant deponents
2 Greeks in Argentina: Target-like deponents
3 Greeks in Australia: Target-deviant deponents
4 Greeks in Australia: Target-like deponents

References

Embick, D. 2000. Features, syntax, and categories in the Latin Perfect. *Linguistic Inquiry* 31:185-230.

Benmamoun, E., Montrul, S. & M. Polinsky. 2010. White Paper: Prolegomena to Heritage Linguistics. Harvard University.

Montrul, S. 2013. Incomplete L1 acquisition IN Julia Herschensohn & Martha Young-Scholten, *The Cambridge Handbook of Second Language Acquisition. Cambridge Universisty Press*

Polinsky, M. 2011. Reanalysis in adult heritage language. *Studies in Second Language Acquisition*, 2011, 3:305-328.

Schmid, M. 2011. *Language Attrition.* Cambridge University Press.

Thomason, S. G. 2001. *Language Contact: An Introduction*. Edinburgh & Washington, DC: Edinburgh University Press & Georgetown University Press.

Zombolou, K. and A. Alexiadou. 2013. The canonical function of deponent verbs in Greek. In Franz Rainer, Wolfgang U. Dressler, Francesco Gardani & Hans Christian Luschützky (eds.), *Morphology and Meaning. Selected papers from the 15th International Morphology Meeting*, Vienna, February 2012. John Benjamins.

On the relation between language acquisition, language contact and language change. The view from Mòcheno.

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Keywords: pro-drop, subject pronouns, V2, triglossia

1. Intro.

In cases of attrition between a non-null-subject language (English) and a null-subject language (Italian), Sorace/Filiaci (2006) and Belletti/Bennati/Sorace (2007) show that near-native L2 Italian speakers do not have problems with the interpretation of null-subjects. However, they tend to over-extend the scope of overt subject pronouns, thus creating optionality in contexts where the target language does not allow for it, as in (1):

(1) a. Perché Giovanna$_j$ non è venuta?
b. Perché lei$_j$ / pro$_j$ non ha trovato un taxi

Effects similar to (1) are also reported for Spanish-Italian bilingual speakers (Serratrice et al 2009). No such effects are found when the null-subject language is the speaker's third language (cf. Sorace 2011 and references cited there).

In this talk, we examine the syntax of subject pronouns in pre-school children of the Fersina valley, a speech island in Trentino, where three languages – (regional) Italian, Trentino dialect and the German dialect Mòcheno – are in contact in a situation of triglossia. The three languages in contact strongly differ from each other with respect to the null-subject parameter. Mòcheno is particularly interesting because it instantiates the opposite case to (1), since i) it is a non-null subject language, in which two different subject pronominal forms can be optionally used in the presence of a topical antecedent in main declarative clauses, and ii) it is in contact with two null-subject languages, one of which displays subject clitics (Trentino). The first goal of the talk is to answer the question of whether the optionality in the use of the two subject pronominal forms in main declarative clauses is lost in bilingual children, in particular whether a language can reduce some of its syntactic possibilities under the pressure of contact, as a consequence of universal mechanisms connected to bilingualism as in (1). The second goal is to elaborate on this finding and to address the question of what the implications for the theories of language change are. In particular, what the mechanisms through which acquisition affects languages change are. Finally, Mòcheno can contribute to our understanding of the "weight" of contact languages in triglossia contexts.

2. The data

2.1 Subject pronouns in the target language

We show that all Mòcheno varieties have three classes of subject pronouns – strong, weak and clitic (cf. Cardinaletti/Starke 1999) – with different pragmatic and syntactic properties. Strong pronouns are always preverbal and have specialised for the expression of focussed subjects; weak and clitic forms must be used when the subject pronoun refers back to a topical antecedent. As shown in (2), the only difference between weak *de* and clitic *se* is their syntactic position: the weak form must be preverbal (2b), whereas the clitic is obligatorily enclitic (2c). The choice of (2b) or (2c) is fully optional.

(2) a. Babai ist de Maria net kemmen?, "Why did Mary not come?"
b. Hait de/(*se)=hòt koa zait, "Today she has no time" (she = weak/*clitic)
c. Hait (*se)=hòt=se/(*de) koa zait "Today has she no time" (she = clitic/*weak)

In interrogative clauses, weak pronouns are ruled out, and only clitics are allowed (3).

(3) Bos (*de) hòt=se/(*de) gatun?"What (*she-weak) has-she(clitic)/(*weak) done?"

As shown in (4), weak or clitic are obligatory in Mòcheno (no pro-drop).

(4) *Hait ____ hòt a puach kaft “Today has a book bought”

Such distribution of subject pronouns is fully absent from both Italian and Trentino dialect. Italian is a pro-drop language (cf. Rizzi 1982), whereas Trentino i) has subject clitics, which are though ii) proclitic in declarative clauses and enclitic in interrogative clauses (cf. Brandi/Cordin 1981, Poletto 2000).

2.2. The study

We considered all children attending the kindergarten of the valley in school year 2009-2010. We collected semi-spontaneous speech in the three varieties and we elicited interrogative clauses in Mòcheno (cf. Thornton 1995, Crain/Thornton 1998). Relying on several diagnostics (MLU, syntactic complexity, type of code-mixing, language preference, lexical choice, cf. Lanza 2000, Bernardini/Schlyter 2004, Muysken 2000 a.o.), we show that all children have Mòcheno as their weaker, and Italian as their stronger, language. Trentino is weaker than Italian but stronger than Mòcheno. We show that children have reached different levels of proficiency in Mòcheno, irrespectively of their age. *With respect to the realization of subject pronouns*: <u>In declarative clauses</u>, which are characterised by optionality, subject pronouns are coherent with the target language in all children; strong pronouns: preverbal 4/4; weak pronouns: preverbal 21/21; clitics: postverbal 11/11. Children with lower proficiency produce no subject clitics, but only preverbal weak forms. Subjects are always produced by all children (no pro-drop). In <u>Interrogatives</u>, where no optionality is possible, all children produce the clitic form coherently with the target language.

2.3. Results

<u>Bilingualism and optionality</u>: a) the optionality found in main declarative clauses of the target language gets lost in some children's production, and one strategy available to the adults (preverbal weak form) is overgeneralised; b) where optionality is not available (interrogative clauses), children produce the clitic forms. Therefore, our study suggests that bilingualism does not only create optionality, as in (1), but also eliminates it.

<u>Language change:</u> a) the loss of optionality is not found in the production of all children, but only in that of children with a reduced input. Therefore, it cannot be concluded that the loss of optionality automatically follows from universal mechanisms of bilingualism. However, if the language acquisition gaps are not filled, language change in future speakers can take place as a consequence of incomplete acquisition (cf. non-target production of young fluent speakers of the locality of S.Francesco who produce preverbal weak subject pronouns in main interrogative clauses).

<u>Role of the three languages:</u> a) the word order overgeneralised in main declarative clauses by the children with the lower proficiency linearly resembles the order clitic+finite verb found in the Trentino dialect; b) in wh-interrogative clauses Mòcheno and Trentino coincide (clitic obligatorily enclitic); c) no effect of standard Italian on children's production in Mòcheno. Therefore: the Trentino dialect seems to influence Mòcheno in the children with the lower proficiency, and to possibly drive language change in the syntax of subjects. This is somehow surprising given the fact that Italian is the strong language for all children and is the language used in the kindergarden, in TV etc. The role of Trentino might be accounted for by Sorace's (2011) hypothesis that in bilingualism “the language that instantiates the less restrictive option” affects the other languages, and not the other way around. Therefore, from the Mòcheno perspective, it is the Trentino dialect and not Italian that instantiates the “less restrictive option” in the syntax of subject pronouns, because i) it displays subject clitics, ii) whose distribution is straightforward (no optionality).

Partial references: Belletti/Bennati/-Sorace (2007) Theoretical and developmental issues in the syntax of subjects: evidence from near-native Italian. NLLT 25; **Bernardini/Schlyter (2004)** Growing syntactic structure and code-mixing in the weaker language: The Ivy Hypothesis. *Bilingualism: Language and Cognition* 7. **Brandi/Cordin (1981)**, Dialetti e italiano. Un confronto sul parametro del soggetto nullo. *Rivista di Grammatica Generativa.* 6; **Rizzi (1982)**, *Issues in Italian Syntax.* **Sorace (2011)**, Pinning down the concept of interface in bilingualism. LAB 1:1.

Indefinite Polarity Questions (IPQs) in Spanish and Korean

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keywords: *Indefinites, Variation in Wh-Questions, Remnant Movement.*

In this paper we provide a new account for IPQs in Spanish and Korean and highlight the relevance of such a construction to uncover the source of variation between *wh*-movement and *wh*-in situ languages.

If in Polar Questions it is asked whether or not a proposition is true (A: "Is this wall red?" B: "yes/no"), in what we dub IPQs it is also asked which specific value can adopt the Indefinite phrase contained in such a question. This is exemplified in (1A-B) for Spanish and (1A'-B') for Korean. IPQs seem to displays a mixed status between Polar- and *Wh*-Questions. In fact, (1A') can be interpreted as a wh-question if the indefinite receives a high-pitch accent (2), inasmuch as Korean, unlike Spanish or English, lacks an independent morphological class of *wh*-pronouns. Despite this notable difference, we will show that the syntactic restrictions affecting IPQs in both languages (Korean and Spanish) are the same, what makes IPQs a priceless construction to uncover the source of variation between *wh*-movement languages like Spanish and *wh*-in situ languages as Korean.

(1) A: ¿Has comprado algún libro?
"Have you bought some book?"

A': Ne-nun etten$^{\textbf{Low}}$ chayk-ul sa-ess-ni?
you-Top some book-Acc buy-Past-Q

B: Sí, el Quijote/No, ninguno.
"Yes, the Quijote/No, none"

B': Ung, Kijote/Ani, amwukutto.
yes Quijote no none

(2) A: Ne-nun etten$^{\textbf{High}}$ chayk-ul sa-ess-ni?
you-Top what book-Acc buy-Past-Q
'what did you buy?'

B: Unehack chayk dwu-kwon
linguistic book two-Cl.
'Two linguistic books'

An unnoticed property of IPQs is that these constructions become ungrammatical if the Indefinite is located either in a Strong (3a-c) or a Weak Island (3d).

(3) a. * ¿Conoces al cliente que encargó algún libro? [Complex NP-Island]
'Do you know the client that ordered some book?'

b.* ¿Compraste el libro y alguna revista? [Coordinate Structure Constraint]
'Did you buy the book and some journal?'

c.* ¿Sabías que [comprar algún tipo de libro] era ilegal? [Subject Island]
'Do you know that to buy some kind of book was illegal?'

d.$^{??}$¿Sabes cómo conseguir algún libro? [Wh-Island]
'Do you know how to get some book?'

The same holds for Korean (4).

(4) a. *Ne-nun [[$_{RC}$ etten$^{\textbf{Low}}$ chayk-ul chumwunha-un] kokyek-lul] al-ni?
you-Top some book-Acc order-Rel client-Acc know-Q

b. *Ne-nun [chayk-kwa etten$^{\textbf{Low}}$ chapci-lul] sa-ess-ni?
you-Top book-and some journal-Acc buy-Past-Q

c. *Ne-nun [etten$^{\textbf{Low}}$ chongryu-uy chayk-ul sa-nun-kut-i] pulpup-inci al-ass-ni?
you-Top some kind-Gen book-Acc buy-Top-Nml-Nom illegal-Cop know-Past-Q

d.*Ne-nun [ettekey etten$^{\textbf{Low}}$ chayk-ul kuha-nunci] an-ni?
You-Top how some book-Acc get-Q know-Q

The contrast between (3b) and (5a) for Spanish and that of (4b) and (5b) for Korean show that there is a connection between the matrix interrogative Complementizer and the Indefinite; that is, if the root clause is declarative, no Island violation arises.

(5) a. He comprado la revista y algún libro.
I've bought the journal and some book'

b. Na-nun [chayk-kwa etten chapci-lul] sa-ess-ta.
I-Top book-and some journal-Acc buy-Past-Decl.

Furthermore, if the Indefinite Phrase is not in an Island, regardless of the depth of embedding of the indefinite, the IPQ is well formed.

(6) a. ¿Dijiste que Juan compraría algún libro?
'Did you say that John will buy some book?'

b. Ne-nun [Juan-i etten^{Low} chayk-ul sa-l-kke-lako] malha-ess-ni?
you-Top Juan-Nom some book-Acc buy-Fut-Prop-C say-Past-Q

According to the data previously mentioned, it turn out to be clear that the Indefinite has to be licensed in Polar Questions and that such a licensing is restricted by Islands (3)-(4). We propose that the Indefinite has to move to the Spec of ΣP (Laka 1990) of the matrix clause, followed by remnant movement of the complement of Σ^o. This accounts for the surface order and explains why the sentence became ungrammatical whenever the Indefinite is located in an island configuration.

(7) a. $[_{\Sigma P}\ \Sigma^o\ [_{TP}\ T^o\ [_{vP} \ldots QP \ldots]]]$ → *Movement of the Indefinite (QP).*
b. $[_{XP}\ X^o\ [_{\Sigma P}\ QP\ \Sigma^o\ [_{TP}\ T^o\ [_{vP} \ldots t_{QP} \ldots]]]]$ → *Remnant movement of TP*
c. $[_{XP}\ [_{TP} \ldots t_{QP} \ldots\ ]\ X^o\ [_{\Sigma P}\ QP\ \Sigma^o\ t_{TP}\ ]]$

A similar account has been proposed for Directive Questions in Basque Spanish by Irurtzun (2013). According to Irurtzun (2013), the indefinite "un café" in (8) carries a $_{[FOC]}$ feature and is fronted to the Spec of ΣP, whose Σ head carries also a $_{[FOC]}$ feature. Irurtzun (2013) claims that (8) has to be considered a Split Focus construction. In fact, the Split Focus analysis seems to provide an appropriate semantic account for IPQs, given that these constructions are neither purely Polar nor Wh-questions, but a mixture of both.

(8) a. Un café, me pones? *Basque Spanish* (Irurtzun 2013)
b. $[_{\Sigma P}$ un café$_{[FOC]}$ $[_{\Sigma'}\ \Sigma^o_{[FOC]}\ [_{TP}\ T^o\ [_{vP} \ldots t_{\text{un café}} \ldots]]]]$

A micro-parametric difference between Central and Basque Spanish would consist on that further remnant movement is required in Central, but not in Basque Spanish, whenever an Indefinite is focalized (at least for some indefinites, see below the lexical decomposition of "alg-un(o)" in Spanish).

Korean evidence is a little bit more complex, but it seems to fit with the general picture we propose. Although the Indefinite can be scrambled to a sentence initial position, the IPQ reading is lost. (9) can only be interpreted as a wh-question (9a) or as Polar Question wherein the indefinite is void of existential force (9b), lending indirect evidence that further remnant movement is required in

Relating Cognitive Impairment and Syntactic Competence:
Relative Clauses in Alzheimer´s Disease

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The present work aims at contributing to the debate on the asymmetry between Subject and Object relative clauses by investigating the linguistic deficit in patients affected by Alzheimer´s Disease (PADs). In turn, the understanding of the linguistic deficit in PADs is enlarged by providing a precise empirical description of a manifested syntactic impairment in terms of sensibility to feature manipulation within a *Relativized Minimality* account. Moreover, this is the first study to address the issue of a syntactic deficit correlating with the severity of the disease. Experimental data on the comprehension of relative clauses will be provided in order to answer the following research questions: (Q1) Do PADs present a syntactic deficit? (Q2) If so, how can the syntactic deficit be accounted for? (Q3) Does the level of dementia trigger different performance effects?

With respect to the linguistic impairment, previous research either denied the syntactic deficit in PADs (Schwarz, Marin, Saffran, 1979), or recognized the deficit and attributed it to a over-sensitivity to a general syntactic complexity (Waters, Rochon, Caplan, 1998; Small *et alii*, 2000). Here, syntactic complexity is further investigated within a *Relativized Minimality* account for the subject/object asymmetry observed in relative clauses (Friedmann, Belletti, Rizzi, 2009): Object relatives entail A´-movement of the Obj-DP from its internal relativization site towards the left periphery of the clause, moving across the Subj-DP. This is, in terms of locality, problematic, as intervening effects are triggered by the fact that the two DPs (subject and object) display the same features, except for the [+Rel] Operator. On the contrary, no locality effects arise in case of subject relatives, as no DP can intervene between the subject and its target position.

In the present study, subject and object relatives are structurally manipulated in order to assess patients´ reactivity to different featural configurations and identify which factors can reduce the risk for intervention in object relatives. I will display results from a sentence-to-picture matching task, a revised version of BAMBI (Friedmann, Novrogrodsky, 2002); in this, 30 Italian-speaking PADs subdivided into 3 groups according to their level of dementia (Group PAD1=MMSE between 27 and 22; PAD2=MMSE between 21 and 19; PAD3=MMSE between 12 to 18) are tested on the comprehension of subject and object relative clauses; their performance is then compared to the one of healthy controls, displaying similar characteristics for age and level of education. Participants listen to 48 trials, which are equally distributed across six experimental conditions: examples for each condition, as well as the corresponding percentages of accuracy for the three groups of PADs and their healthy controls, are displayed below in TABLE1:

	PAD1 (8)	**PAD2** (13)	**PAD3** (9)	**Contr** (7)
Simple SVO structures *Il cane morde il gatto* "The dog bites the cat"	90.6%	85.5%	73.6%	100%
Subject Relatives *Mostrami il cane che morde il gatto* "Show me the dog that bites the cat"	82.8%	81.7%	56.9%	98.6%
Object Relatives with a Resumptive Clitic *Mostrami il cane che il gatto lo morde* "Show me the dog that the cat bites *it*"	87.5%	62.5%	55.5%	98.5%
Object Relatives with a Demonstrative Pronoun in the Head *Mostrami quello che il gatto morde* "Show me the one that the cat bites"	84.3%	75.9%	62.5%	99.1%
Passive Object Relatives *Mostrami il cane che è morso dal gatto* "Show me the dog that is bitten by the cat"	71.8%	62.5%	54.1%	97.1%
Objec Relatives *Mostrami il cane che il gatto morde* "Show me the dog that the cat bite"	70.3%	64.4%	58.3%	94.3%

TABLE 1: percentages of accuracy in the six experimental conditions for PADs and the control group

While controls´ performance is almost at ceiling in all conditions, PADs display a remarkable impairment, whose severity increases and whose patterns change according to the level of dementia. PADs in PAD1 perform well on simple SVOs structure (90.62%), Subject Relatives (82.81%), Object relatives with a clitic resumptive pronoun (87.50%) and Object relatives with a demonstrative pronoun in the head (84.37%), but are more impaired on Object relatives (70.31%) and Object relatives with a passive voice (71.87%). The results actually suggest that their syntactic competence is impaired when extracting the object from its internal position and moving it across the Subj-DP to the CP-layer where its target position is. However, the object extraction operation can considerably be facilitated either by a resumptive pronoun in the relative clause or by neutralizing the risk for intervention by increasing the structural dissimilarities between the DPs involved, as in the case of Object Relatives with a demonstrative pronoun in the head, where the moved object, unlike the potential intervener, has no lexical restriction. Crucially, in Passive object relatives, no facilitating effects are found when the Obj-DP first moves along with the VP out of its original position in order to derive a passive structure and only successively rises to the relative head position (cf. the *smuggling* hypothesis for passives, Collins 2005). When the cognitive deficit becomes more severe, as in the case of patients in Group PAD2, the performance changes: patients perform better in all conditions in which the first overt full DP coincides with the Agent *theta*-role, namely simple SVO structures (85.57%), Subject relatives (81.73%) and Object relatives with a demonstrative pronoun in the head (75.96%). The performance on Object relatives (64.42%), Passive object relatives (62.50%) and Object relatives with a resumptive clitic (62.50%) is much lower. This difference can be argued to stem from a cognitive-saving strategy which leads to build the shortest possible movement chain, namely by applying a canonical *theta*-roles schema in which the highest DP in derivation is automatically assigned the Agent *theta*-role. Eventually, following the disease´s trend for progressive impairment, syntactic and parsing abilities are reduced to a minimum, as confirmed by the data from the most severe patients (Group PAD3), who perform at chance level on most conditions, except for simple SVO structures (73.61%) and Object relatives with a demonstrative pronoun in the head (62.50%) .

Formal accounts for the asymmetry between subject and object relatives, like the Relativized Minimality one, have long been compared and opposed to processing-based models focusing on the computational costs in terms of, for example, working memory and information integration (see for example the *Minimal Chain Principle*, De Vincenzi 1991, and the input-constrained hypothesis, Kidd *et alii* 2007). Ultimately, I would like to claim that, the two views could be reconciled under the hypothesis that both components play a role in the computation of relative clauses and their incidence is constrained by the general speaker's cognitive conditions: fine-grained morpho-syntactic factors would account for the general asymmetry between Subject and Object extractions in the performance of healthy and mild impaired speakers (as well as for Broca´s aphasics, as revealed in Grillo 2009) challenged by different extraction sites and featural configurations; while, in more cognitively impaired speakers, the need for keeping parsing costs low would induce the emergence of parsing strategy devoted to building the shortest possible chain for the elements.

Selected References:

BELLETTI A. (2009). "Notes on Passive Object Relatives", to appear in P. Svenonius ed., *Functional Structure from Top to Toe*, OUP.

COLLINS C. (2005). "A *smuggling* approach to the passive in English", *Syntax*, 8, 81-120.

DE VINCENZI M. (1991). *Syntactic parsing strategies in Italian: the Minimal Chain Principle*. Vol.12. Springer.

FRIEDMANN N., BELLETTI A., RIZZI L. (2009). "Relativized Relatives: Types of intervention in the acquisition of A-bar dependencies", *Lingua*, 119 (1), 67-88.

FRIEDMANN N., NOVOGRODSKY R. (2002). *BAMBI: Battery for assessment of syntactic abilities in children*, Tel Aviv University.

GRILLO N. (2009). "Generalized Minimality: Features impoverishment and comprehension deficit in Agrammatism". Lingua, 119, 1426-1443.

SCHWARZ M.F., MARIN O.S.M. , SAFFRAN E.M. (1979). "Dissociations of language function in dementia: A case study", *Brain and Language*, 7, 277-306.

SMALL J. A., KEMPER S., LYONS K. (2000). "Sentence repetition and processing resources in Alzheimer's disease", *Brain and Language*, 75, 232-258.

WATERS G. S., ROCHON E., CAPLAN D. (1998). "Task demands and sentence comprehension in patients with Dementia of the Alzheimer's type", *Brain and Language*, 62, 361-397.

Perceptive gerunds and infinitives in Ladin: apparently predicative, but true monoclausal constructions

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Keywords: Perceptive constructions, non-inflected verb forms, Ladin

1. In this paper, I analyse gerunds and infinitives in the perceptive construction of Ladin, a Romance minority language spoken in the Dolomite Alps; whereas these verb forms are analysed as predicative constructions in other Romance languages, like Spanish or Portuguese, their differing behaviour in Ladin suggests to compare them to the bare infinitive constructions in Italian and Spanish. Furthermore, I propose that these constructions have a monoclausal structure.

2. In Romance languages, perception verbs select two types of sentential complements: bare infinitives (BIs), when the focus of the perception is on an event (1), and predicative constructions, when someone or something is perceived while involved in an action. Pseudo-relatives (PRs), gerunds and predicative infinitives (PIs) are all instances of predicative constructions (2):

(1) Ho visto Maria *mangiare la mela* (Italian: bare infinitive)
I.have seen Maria eat the apple 'I saw Maria eat the apple'

(2) a. Ho visto Maria *che mangiava la mela* (Italian: PR)
I.have seen Maria that ate the apple 'I saw Maria eating the apple'

b. Vi a María *comiendo la manzana* (Spanish: gerund)
I.saw to Maria eating the apple 'I saw Maria eating the apple'

c. Vi a Maria *a comer a maçã* (Portuguese: prep. inf.)
I.saw the Maria to eat the apple 'I saw Maria eating the apple'

The constructions in (2) can be used in other predicative contexts (3) and behave syntactically in the same way, e.g. they require obligatorily the expression of their subject (4); in both cases, the BI has a different behaviour (5-6):

(3) a. Con Anna *che piange,* non possiamo uscire (Italian)
b. Con Ana *llorando,* no podemos salir (Spanish)
c. Com a Ana *a chorar,* não podemos sair. (Portugues)
With A. [that cries/crying/to cry], not we.can go.out 'With Anna crying, we can't go out'

(4) a. #Sento pro *che canta* una canzone (Italian)
b. *Oigo pro *cantando* una canción (Spanish)
c. *Ouve pro *a cantar* uma canção (Portugues)
I.hear pro [that sings/singing/to sing] a song

(5) *Con Maria *piangere,* non possiamo uscire (Italian)
With Maria cry.INF, not we.can go.out

(6) Sento *cantare* una canzone (Italian)
I.hear sing.INF a song 'I hear a song to be sung'

3. In Ladin, the situation is quite complex: while PRs are always grammatical (7), Northern Ladin varieties like Gardenese admit also gerunds (8); on the other hand, the Southern variety of Fodom allows PIs (9). Finally, BIs are marginal or even ungrammatical (10):

(7) Veighe la Maria *che mangia l pom* (Fodom: PR)
I.see the Maria that eats the apple 'I see Maria eating the apple'

(8) Vëije Maria *maian l mëil* (Gardenese: gerund)
I.see Maria eating the apple 'I see Maria eat the apple'

(9) Veighe la Maria *a se mangé l pom* (Fodom: PI)
I.see the Maria to herself eat the apple 'I see Maria eat the apple'

(10) */??Vëije Maria *maié l mëil* (Gardenese: BI)
I.see Maria eat the apple

4. However, Ladin gerunds and PIs differ in several respects from the correspondent Spanish and Portuguese constructions, whereas they behave exactly like BIs (cfr. 11-12 with 3-6):

(11) *Con la Maria *a braglé*, no podon partì (Fodom)
With the Maria to cry, not we.can leave

(12) Aude pro *ciantan na ciantia* (Gardenese)
I.hear pro singing a song 'I hear a song to be sung'

5. In previous work, I proposed that Spanish gerunds and Portuguese PIs have a predicative structure, i.e. a Small Clause (SC). As Cinque (1992) proposes for PRs, I claim that these constructions all have a threefold structure: depending on the syntactic context, the semantic subject may be part of the SC (13 a-b) or not (13 c); in the former case, the SC can be a CP (13a) or a DP (13b); the following examples are a simplified representation (cfr. also Di Tullio 1998 for Spanish). Consider that in the case of PIs, the preposition *a* corresponds to the complementizer *che* of PRs:

(13) a. Vi [$_{SC/CP}$ a María *comiendo/a comer*]
b. Vi [$_{SC/DP}$ a María$_i$ [$_{FP}$ PRO$_i$ *comiendo/a comer*] [$_{NP}$ ~~María~~$_i$]]
c. Vi [a Maria$_i$] [$_{SC}$ PRO$_i$ *comiendo/a comer*]

However, this analysis does not apply to Ladin, where gerunds and PIs have a 'BI-like' structure: this unexpected mismatch could be due to the fact that BIs do not exist in Ladin, so these originally predicative constructions could have shifted to the other pole of the opposition discussed in (1-2) to fill a 'gap' in the system, and now describe the perception of an event. BIs have a smaller structure than predicative constructions, since they do not permit negation or modal verbs (cfr. also Belletti 1990):

(14) a. *Vedo Marco *non dormire* (cfr.: Vedo Marco che non dorme)
I.see Marco not sleep I.see Marco that not sleeps (i.e. not sleeping)
b. *Vedo Anna *voler intervenire* (cfr.: Vedo Anna che vuole intervenire ma non può)
I.see Anna want intervene I.see Anna that wants intervene but not can

BIs are usually divided into monoclausal and biclausal (15a-b), but I suggest that they always enter a monoclausal structure; according to Cinque (2006), I represent it as a FP inside TP. This analysis holds both for Italian BIs and for Ladin gerunds and PIs; in this last case, the preposition *a* is just an infinitival marker (16):

(15) a. Gli ho visto mangiare la torta (Italian)
Him.DAT I.have seen eat the cake
b. L'ho visto mangiare la torta
Him.ACC I.have seen eat the cake 'I have seen him eat the cake'
(16) [$_{CP}$...[$_{FP}$...[$_{PercP}$V$_{perc}$ [$_{FP}$...[$_{FP}$ Maria mangiare/maian/a mangé [$_{VP}$ ~~Maria mangiare/m./a m.~~]]]]]]

To further support this claim, it is necessary to explain cases of biclausality like (15 b), where it seems that there are two direct objects: one object of the perception verb and one of the infinitive. However, I think that these two elements have a different status, as data from Gardenese show: in that variety it is possible to cliticize only the high object, but not the low one (16.). Curiously enough, in Sicilian there is an opposite restriction, because only the low object can cliticize (17). Finally, in Italian both objects can be cliticized, but several speakers do not accept a double cliticization (18):

(16) Vëije Maria *(*la) maian* (Gardenese)
I.see Maria (*it) eating
(17) (??*A)* vitti *mangiari u cavaddru* (Sicilian)
Her.ACC I.saw eat the horse
(18) ?*L'*ho visto *farlo* (it.)

6. If there were two direct objects, we could not explain these restrictions. So, the analysis of the cliticization offers us a first hint for a unique interpretation of all instances of BIs, since even apparent biclausal sentences may be only a superficial divergence of monoclausal structures. This result constitutes an important advantage of my proposal, since it permits to interpret perception verbs in a way similar to functional verbs, which have a single structure, but with just optional 'restructuring' effects. Moreover, the existence of just one structure obeys economy principles. In this paper, the data from less studied languages like Ladin open new perspectives and lead us to reconsider the interpretation of the almost pan-Romance bare infinitives.

Literature: Belletti, A. (1990). *Generalized Verb Movement. Aspects of Verb Syntax.* Torino: Rosenberg&Sellier. **Casalicchio**, J. (2013). *Pseudorelative, gerundi e infiniti nelle varietà romanze. Affinità (solo) superficiali e corrispondenze strutturali.* München: Lincom. **Cinque**, G. (1992). 'The pseudo-relative and acc-ing constructions after verbs of perception' *Working Papers in Linguistics – University of Venice* 2: 1-31. **Cinque**, Guglielmo (2006). *Restructuring and Functional Heads. The Cartography of Syntactic Structures*. New York: Oxford University Press. **Di Tullio**, Ángela L. (1998). 'Complementos no flexivos de verbos de percepción física en español' *Verba* 25, 197-221.

Nominal gender and agreement relation outside the DP domain in code-switching: looking at relative operators and past participle agreement

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Key Words: Code-switching, agreement, relative clauses, past particle, gender feature.

In this talk we are going to discuss data from an ongoing pilot project aiming to test the ability of nominal gender to be "infinitely reusable as an 'active goal'" by the operation Agree (Carstens 2010) in code-switching (CS) sentences.
CS is basically a performance phenomenon. However it can not simply be classified as a special type of speech-error uttered by bilinguals. Bilinguals are able to judge the grammaticality of a mixed sentence and the source of their knowledge should not be ascribed to what has been called "third grammar" (a sort of collection of ad-hoc constraints governing CS) but to the I-Language of the bilingual speaker (MacSwan 1999 and subsequent work).
Our project will address two central issues in CS grammatical theories, more precisely: a) the role played by "performance/processing factors" in some asymmetries found in CS data (Chan 2008), and b) the subtle distinction between borrowing and code-switching (cf. Poplack and Meechan 1995 and Myers-Scotton 1993).
Data will be obtained through judgement grammaticality tasks administered to a group of adult Italian-German bilingual speakers, who already master agreement issues in both languages.
First of all, we will test whether adult bilingual speakers accept mixed sentences like the following relative clauses in German, whose antecedent is a mixed DP (1), or an Italian DP (2). Notice that the DPs involved have a different gender feature in the two languages:

(1) a. Der luna, die/den ich gestern gesehen habe
b. La Mond, die/den ich gestern gesehen habe
" the moon(mix), which(f/m) I have seen yesterday"

(2) La luna, die/den ich gestern gesehen habe
" the moon(f), which(f/m) I have seen yesterday"

Relative clauses are particularly interesting, in that they are often difficult to process for monolingual speakers, especially as concerns object relative clauses (Friedmann, Belletti and Rizzi 2009).
Since code-switching is strictly linked to processing factors, we expect we will find an analogous asymmetry also in bilingual speakers. In particular, we will verify if any differences emerge between subject (cf. (3)-(4) below) and object (cf. (1)-(2) above) relative clauses, in the availability of code-switching, as well as in the possible switching points and agreement patterns between the relative operator and the DP:

(3) a. Der sedia, der/die kaputt gegangen ist
b. La sedia, der/die kaputt gegangen ist
"the chair(mix), which (m/f) has broken"

(4) c. La Stuhl, der/die kaputt gegangen ist
"the chair (f), which (m/f) has broken"

In Italian, the most frequently used subject/object relative operator, *che*, does not bear gender features. This is the reason why, in order to verify any preference in agreement patterns in this language, we have administered our speakers a different type of clause, namely a passive clause, where the past participle must agree in gender (and number) with the syntactic subject.
Crucially, they are called to judge acceptability of a sentence like (5) below, where the subject of the Italian passive clause is a mixed DP, or (6), whose subject is a German DP:

(5) a. Der sedia è stata/stato riparata/riparato

b. La Stuhl è stata/stato riparata/riparato
"the chair(mix) has been(f/m) repaired(f/m)"

(6) Der Stuhl è stata/stato riparata/riparato
"the chair (m) has been(f/m) repaired(f/m)"

In particular, if speakers accept sentences like "La luna(f), den(m) ich gestern gesehen habe", or "Der stuhl(m) è stata(f) riparata(f)", where, respectively, the relative operator and the past participle have a different gender feature with respect to the entire DP (more precisely, the gender of the equivalent DP in the other language), we will prove that analogical gender (Poplack et al. 1982), which is often observed in children code-mixing (see among others Liceras et al. 2008), cannot simply be analysed in terms of temporary borrowing, in that it also affects constituents (like the relative operator or the past participle) which are outside the DP domain.

References

Carsten, V. (2010). "Implications of the grammatical gender for the theory of uninterpretable features", in M. Patnam (ed.), *Exploring Cash-Proof Grammars*, Amsterdam: John Benjamins, 31-57.
Chan, B. (2003). *Aspects of the Syntax, the Pragmatics, and the Production of Code-Switching: Cantonese and English*. Berkeley Insights in Linguistics and semiotics, vol. 51. New York: Lang.
Friedmann, N., Belletti, A. And Rizzi, L. (2009). "Relativized relatives: Types of intervention in the acquisition of A-bar dependencies", *Lingua* 119, 67-88.
Liceras, J.M., Fernández, R., Perales, S., Pérez-Tattam, R., Spradlin, K. T. (2008). "Gender and gender agreement in bilingual native and non-native grammars: A view from child and adult functional-lexical mixings", *Lingua* 118, 827-851.
MacSwan, J. (1999). *A Minimalist Approach to Intrasentential Code Switching*. New York: Garland.
Myers-Scotton, C. (1993). *Duelling languages: Grammatical structure in code-switching*. Oxford: Clarendon Press.
Poplack, S and Meechan, M. (1995). "Patterns of language mixture: nominal structure in Wolof-French and Fongbe-French bilingual discourse", in Milroy and Muysken (ed.) *One speaker, two languages, cross-disciplinary perspectives on code-switching*, Cambridge University Press,199-232.
Poplack, S., Pausada, A. and Sankoff, D. (1982). "Competing influences on gender assignment: variable process, stable outcome". *Lingua* 57, 1-28.

"Not all" comes for free

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Keywords: semantics, pragmatics, scalar implicatures, eye-tracking

The steps involved in the computation and processing of generalized conversational implicatures (Grice, 1959) are debated amongst theoretical linguists (a.o. Levinson, 2000; Sauerland, 2004; Chierchia, 2006; Geurts, 2010) and psycholinguists. Part of this debate focuses on the cost of enriching the logical "at least" meaning of "some" with the pragmatic "some but not all" meaning. Most reaction/reading time studies showed evidence for a cognitive cost for this enrichment (Bott & Noveck, 2004; Bott et al., 2012; Breheny et al., 2006). As for the incremental processing of scalar terms, evidence is controversial: Huang & Snedeker (2009) found that "some" requires additional processing time than "all", while no delay was found by Grodner et al. (2010) and Degen & Tanenhaus, 2013.
Our study. Using a Visual-World paradigm, we tested Italian V(O)S sentences like (1)

(1) Adesso invece fanno il poliziotto <u>alcuni dei/tutti</u> i pentagoni/triangoli
[lit:*now are policeman some of/all of the pentagons/triangles*]

in a situation in which all the pentagons (but only some of the triangles) are policemen (Fig. 1B) in 3 conditions: <u>underinformative-some</u> (some-pentagons-are-policeman) that is logically true but pragmatically false by virtue of the Scalar Implicature "some but not all"; <u>all-true</u> (all-pentagons-are-policeman); <u>all-false</u> (all-triangles-are-policeman). A lead-in sentence was provided before to make the post-verbal subject felicitous (Fig. 1A). A truth-value judgment was required and anticipatory eye movements were measured at the onset of the quantifier towards the notALL target (the triangles) compared to the ALL target (the pentagons). The display arrangement and the sentential word order allowed for early and rapid anticipation at the quantifier region: differently from previous study, the quantifier followed the predicate and the contrast set for deriving the some-but-not-all inference was self evident within a single quadrant, and did not require to consider the other quadrants nor the initial object distribution.

Results. Of the 22 participants, 16 mostly rejected (>75%) underinformative-some (pragmatic responders); 5 mostly accepted them (logic responders) and 1 provided inconsistent answers (excluded). Eye movement data were submitted to a series of logistic regression models (Jaeger, 2008) in which the likelihood of looking at the target quadrant notALL vs. ALL (e.g. triangles/pentagons) was modelled as a function of the experimental condition in different time regions (predicate/quantifier/post-verbal NP). A statistical difference is found in the quantifier region in pragmatic-responders for "some" (solid line, Fig.2A) compared to the other conditions ($z= 2.387$, $p=.0171$): pragmatic-responders looked more to the notALL quadrant when hearing "some", while logic responders patterned alike in all conditions (always looking more to the ALL quadrant, Fig. 2B). RT analyses did not show any difference bw. responder types: with a power level of > .99 (even when conservatively assuming extremely small effect sizes ($d=.01$), Cohen, 1988) we can safely reject the alternative explanation that pragmatic responders are slower than logic responders.

Conclusions. We show evidence for rapid, cost-free integration of pragmatic-some. We argue that this is due to the fact that the enriched some-but-not-all interpretation was made all the more salient in our study, being the scalar quantifier in a focus position and being the contrast set for interpreting some pragmatically within the same quadrant (some-but-not-all the triangles), making the scalar alternatives readily available for interpretation. This possibility was allowed by Italian V(O)S order. Theoretical and methodological implications of our findings will be discussed.

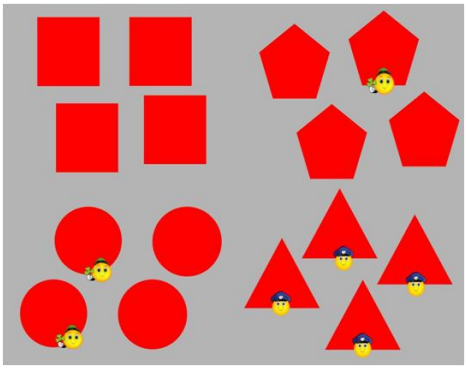


Fig A
Lead-in SVO sentence:
Qui due cerchi fanno il poliziotto
Here two circles are policemen

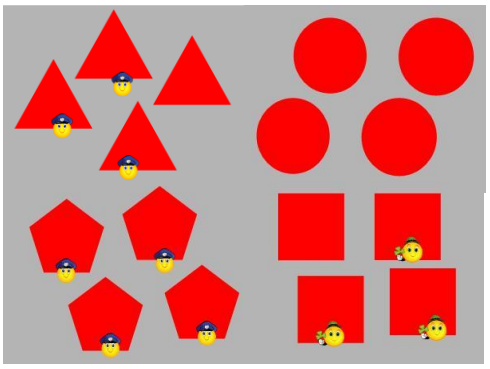
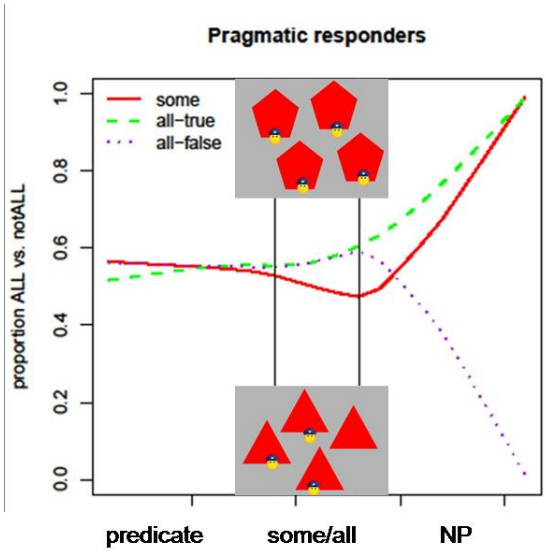


Fig 1B
Critical VOS sentence:
Adesso invece fanno il poliziotto alcuni dei/tutti i triangoli
now instead are policemen some of/all the pentagons/triangles



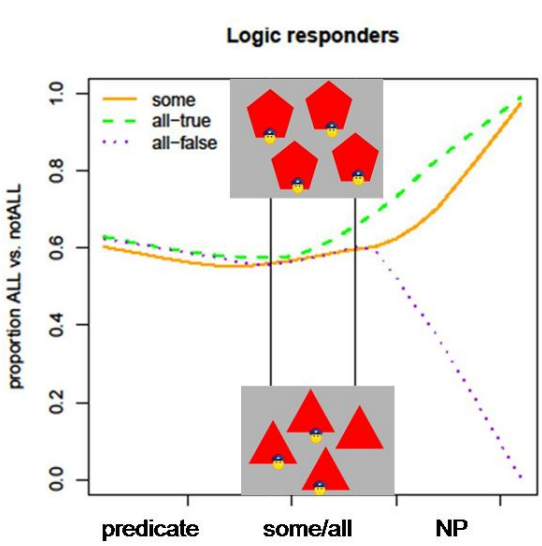


Fig. 2A **Fig. 2B**
Eye-movement patterns towards the notALL (bottom)/ALL quadrant (top) of pragmatic responders (2A) and logic responders (2B) across conditions (some/all-true/all-false)

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Task

Noun phrases made of a noun and an adjective appear on the screen one at a time. One of the two words lacks the ending morpheme. (e.g. COLP_ GROSSO) The participants are asked to complete the word by pressing a key to insert –a or another to press –o. Response times are taken for each answer. Participants: 24 neurologically unimpaired subjects, aged 22 to 34, with 13 to 18 years of education.

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1) 24 nouns like CUGINO – CUGINA (12 masculine + 12 matched feminine) in which Gender is contextually assigned; in these the semantic feature of the sex of the referent corresponds to the gender opposition, overtly marked on the morpheme (o=masculine / a=feminine).
2) 24 nouns like COLPO-COLPA (12 masculine + 12 matched feminine) in which the same morphophonological opposition does not correspond to a semantic opposition.
3) 96 filler nouns (48 masculine, 24 of which animate; 48 feminine, 24 of which animate). In 64 of these, the ending does not show the correspondence o=masculine / a=feminine.

Conditions

The two *kinds* of nouns appear in four different conditions. The variables are:

1) *Position*: noun – adjective vs adjective – noun
2) *Class*: completion takes place on the noun vs on the adjective

The experimental conditions are thus eight:

COLPO GROSS_	GROSS_ COLPO	CAVALLO GROSS_	GROSS_ CAVALLO
COLP_ GROSSO	GROSSO COLP_	CAVALL_ GROSSO	GROSSO CAVALL_

Results

Accuracy. The ANOVA within subjects reveals main effects of *Class* (F =18,144 p<.001): the adjectives (0,987) are completed more accurately than nouns (0,944).

Interactions: *Kind x Class* (F= 26,270; p<.0001) If the completion is required on the noun, the accuracy on nouns with the contextual gender is higher (0,975) than on nouns with an inherent gender (0,912). If the completion is required on the adjective, the accuracy is higher on nouns whose Gender is inherent (0,993) than in those with a contextual gender (0,981).

RTs. With respect to the response times, there are significant effects of *Class* (F=19,9; p<.001): the adjectives are completed faster than nouns; and of *Kind* (F=16,9 p<.001): nouns with a contextual gender are completed faster than nouns with an inherent gender.

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Position x Class (F=6,10; p<.027) If the noun precedes the adjective, the adjective is completed faster than the noun. If the noun follows the adjective, the difference is not significant.

Discussions

The fact that the adjective is completed more accurately and quickly than the noun may depend on the fact that such an operation consists in copying into the higher DP positions the features that have already processed in the noun; conversely, when the noun has to be completed, the features cannot be simply copied and pasted to the noun, but the noun has to undergo the whole processing *da capo* before rising to the DP to check the agreement in a proper position.

The difference of RTs between the two *kinds* of nouns seem to match with theories that propose that there could be two types of gender (Di Domenico 1997; Atkinson 2012; Franzon 2013): one set by the lexicon and thus inherent on the nouns, and a variable one assigned in syntax on the basis of the referential context. More in detail, the difference could stem from the operations that take place in the syntactic projection where the Gender is assigned. The condition in which it is variable and interpretable, and directly assigned in syntax on the basis of the referential context, (like in *cugino-cugina*) seems to require less processing costs. In the nouns like *colpo- colpa*, the Gender may be processed in the same syntactic projection, but its value cannot change, being specified in a lexical property of the noun. Although this latter condition is much more common, it seems to require more processing costs.

References

Alexiadou, A. (2004) Inflection class, gender and DP internal structure. In G. Muller et al. (eds.) Exploration in Nominal Inflection. Mouton de Gruyter, 21-50.

Atkinson E. (2012) Gender Features on N and on the root: an account of Gender in French. Talk at LSRL 42,Cedar City

De Vincenzi M. (1999) Differences between the morphology of gender and number: evidence from establishing coreferences, *Journal of Psycholinguistic research*, 28 (5) 537-553

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Di Domenico E. (1997) *Per una teoria del genere grammaticale*. Padova, Unipress

Franzon F., Bertocci D., Semenza C. (2013) Encoding gender between syntax and the lexicon. An aphasia case study provides new insight on inflectional noun morphology. Talk at *Morphology and its interfaces*, Lille

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Japanese *Wh*-Scope Marking as Clitic Left Dislocation

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keywords: *wh*-scope marking, clitic left dislocation, antisymmetry

This paper shows that Japanese has a so-called "*wh*-scope marking (WSM)" construction and that it poses a recalcitrant problem with the Direct Dependency approach, which the German WSM question does not have. Although the Direct Dependency approach may correctly derive the properties of the German WSM construction, it runs into problems in the case of Japanese. I propose that the Japanese WSM construction should be analyzed as involving a clitic-doubling structure; that is, unlike the German counterpart, the *wh*-scope marker must be cliticized onto the matrix verb. In addition, scope properties of this construction lend some support to Kayne's (1994) analysis of Japanese *wh*-questions according to which Japanese does not really have *wh*-in-situ, but overt *wh*-movement mediated by pied-piping of the larger clause.

In Japanese, the scope of a *wh*-phrase is usually marked by a question particle such as *ka* (in an embedded clause) or *no* (in a matrix clause). In addition to the long-distance *wh*-question (1b), we have another question-forming strategy as in (2b):

(1) a. anata-wa John-ga dare-o aisiteiru ka sitteiru.
you-Top John-Nom who-Acc love Q know
'You know who John loves.'
b. anata-wa John-ga dare-o aisiteiru to omotteiru no?
you-Top John-Nom who-Acc love COMP think Q
'Who do you think that John loves?'
c. *anata-wa John-ga dare-o aisiteiru ka omotteiru.
you-Top John-Nom who-Acc love Q think
'You think who John loves.'

(2) a. *anata-wa John-ga dare-o aisiteriu to doo omotteiru no?
you-Top John-Nom who-Acc love COMP WH think Q
'Who do you think that John loves?'
b. anata-wa John-ga dare-o aisiteiru ka doo omotteiru no?
you-Top John-Nom who-Acc love Q WH think Q
'Who do you think that John loves?'

The sentence in (2b) consists of two clauses each containing a *wh*-phrase. A characteristic of this type of question is that its felicitous answer involves supplying the value for the *wh*-phrase *dare* like (1b). The contrast in (3) indicates that this type of question is not a sequence of questions or some kind of integrated parenthetical constructions.

(3) a. John-wa dare-o aisiteiru no? Anata-wa doo omou no?
John-Top who-Acc love Q you-Top WH think Q
'What do you think? Who does John love?'
b. *anata-wa John-ga dare-o aisiteiru no doo omotteiru no?
you-Top John-Nom who-Acc love Q WH think Q
'Who do you think that John loves?'

What is interesting here is that although the verb *omou* cannot take a question complement (1c), the sentence (2b) requires a question as an embedded clause. In fact, if the embedded complementizer is changed into a declarative complementizer *to,* the sentence is degraded as illustrated in (2a). This reminds us of the obligatoriness of partial *wh*-movement in German as in (4):

(4) a. *Was glaubst du dass sie wann gekommen ist?
WH think you that she when come is
b. Was glaubst du wann sie gekommen ist?
WH think you when she come is

These considerations indicate that sentences like (2b) belong to the same type of questions called "*wh*-scope marking" or "partial *wh*-movement" constructions. Other properties concerning WSM constructions such as "anti-locality", the incompatibility with verbs selecting a question, and "negative-island" effect corroborate this point.

What makes Japanese WSM questions unique is the word order difference between Japanese and German. While the scope-marker follows its associated clause in the former, the order is reversed in the latter. In fact, if the scope-marker *doo* is preposed to the left of its associate CP, the sentence is

degraded, as indicated in (5):

(5) *anata-wa doo [John-ga dare-o aisiteiru ka] omotteiru no?
you-Top WH John-Nom who-Acc love Q think Q
intended: 'Who do you think that John loves?'

This means that the contentful *wh*-phrase must appear outside the c-command domain of the *wh*-scope marker. Therefore the direct link between the scope marker and the contentful *wh*-phrase seems to be irrelevant for the acceptability of Japanese WSM construction. This constitutes the most recalcitrant problem with the Direct Dependency approach. I propose instead that this difference is the result of clitic nature of the Japanese *wh*-scope marker. Supporting evidence comes from the fact that separating the scope marker from the matrix verb degrades the sentence (6):

(6) ?*anata-wa Mary-ga dare-ni atta ka doo kinoo omotta no?
you-TOP Mary-NOM who-DAT met Q WH yesterday thought Q
'Who did you think yesterday that Mary met?'

Moreover, this analysis opens up the possibility that the WSM structure involves a so-called "Big" DP or "*Wh*-doubling" as in (7) (Poletto and Pollock (2004)) and that its derivation proceeds in the same way as that of the "Clitic Left Dislocation construction," as shown in (8):

(7) $[_{wh}$ $[_{cl}$ doo] $[_{CP}$ ...wh-phrase...]]
(8) a. $[_{VP}$ omotteiru $[_{wh}$ doo $[_{CP}$ John-ga nani-o yonda ka]]]
b. $[_{VP}$ doo_i + omotteiru $[_{wh}$ t_i $[_{CP}$ John-ga nani-o yonda ka]]]
c. $[_{CP}$ $[_{wh}$ t_i $[_{CP}$ John-ga nani-o yonda ka]$_j$ $[_{VP}$ doo_i + omotteiru t_j]]]

In Japanese, like Bangla (Simpson and Bhattacharya (2003)), the complement clause must be to the left of the matrix verb in order for the *wh*-phrase contained in that complement clause to obtain wide scope reading (9a, b):

(9) a. John-ga $[_{CP}$ Mary-ga nani-o yonda to] omotteiru no?
John-NOM Mary-NOM what-ACC read COMP thinks Q
'What does John think Mary read?'
b. *John-ga omotteiru no, $[_{CP}$ Mary-ga nani-o yonda to]
John-NOM thinks Q Mary-NOM what-ACC read COMP

Interestingly, converting the sentence in (9b) into the WSM question by adding a scope marker enables the embedded *wh*-phrase to take wide scope reading, as in (10):

(10) John-wa doo omotteiru no, $[_{CP}$ Mary-ga nani-o yonda ka]
John-TOP WH thinks Q Mary-NOM what-ACC read Q
'What does John think Mary read?'

Abstracting away the pragmatic effect of right dislocation, the structure of (10) patterns with the German WSM construction (4b). From this perspective, we can wrap up differences between German and Japanese in the following way. In both languages, there are two ways of expressing wide scope reading of embedded *wh*-items: one is the *wh*-movement, and the other is the *wh*-scope marking. Long-distance *wh*-movement in German and *wh*-in-situ in Japanese do not reflect the availability of movement operation but are the result of differing instantiations of a parameter that specifies the possible size of checking phrases; only a *wh*-phrase in German, while the whole CP containing a *wh*-phrase in Japanese. If this consideration is on the right track, then it lends a support for Kayne's Antisymmetry approach. In the case of WSM questions, differences can be attributed to the nature of the *wh*-scope marker (clitics in Japanese) and the availability of additional operation that derives the "Left Dislocation" structure in Japanese.

References

Kayne, Richard. 1994. *The Antisymmetry of Syntax*. Cambridge, Mass: MIT Press.
Lutz, Uli, Gereon Müller and Arnim von Stechow. 2000. *Wh-Scope Marking*. Amsterdam and Philadelphia: John Benjamins.
Poletto, Cecilia and Jean-Yves Pollock. 2004. "On Wh-clitic, Wh-doubling in French and some North Eastern Italian Dialects," *Probus* 16.2, 241-272.
Simpson, Andrew and Tanmoy Bhattacharya. 2003. "Obligatory Overt *Wh*-Movement in a *Wh*-in-situ Language," *Linguistic Inquiry* 34.1, 127-142.

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NON-CANONICAL BUT STILL STRUCTURAL

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Keywords: inherent Case, markedness, argument structure, Finnish, Inuktitut

The data. In many morphologically rich languages, case marking on internal arguments can 'alternate' between the accusative/absolutive (*strong* Case, following de Hoop 1996) and a non-canonical/*weak* variant (instrumental, dative, genitive, ablative, etc.). These configurations are supplemented by instances in which certain classes of verbs only allow non-canonical case (also labeled deviant, oblique, inherent, quirky, lexical, etc.). The latter option is seen in example (2a) from Icelandic, with the verb *lokuðum* requiring the dative on its internal argument (Andrews 1982, Anderson 1990, Barðal 1993, Maling 2002, Maling and Thráinsson 1995, Sigurðsson 1989, 2012, Svenonius 2002, 2005, a.o.). Typical examples of 'alternations' are the accusative/partitive in Finnish, related to the contrast telic vs. atelic in the verbal and the nominal domain (Kiparsky 1998, 2001, Vainikka 1989, de Hoop 1996, Ramchand 2008, etc.).

(1) *Finnish: atelic vs. telic*

a)	Anne	rakensi	***taloa***.	b)	Anne	rakensi	***talon***.
	Anne	built	house.PART.		Anne	built	house.ACC.
	'Anne was building a/the house.'				'Anne built a/the house.'		

With few notable exceptions (de Hoop 1996, Svenonius 2005, Sigurðsson 2012), *weak* Case is generally analyzed as an instance of inherent, lexically-specified Case. The main motivation is that *weak* Case licensing is insensitive to argument structure altering phenomena (Kuryłowicz 1949, Chomsky 1981, etc.). As shown in (2b), the Icelandic dative is preserved under passivization (as opposed to the accusative which becomes a nominative). However, what is almost ignored in the literature is the observation that non-canonical Case *can* be affected by argument structure altering processes, other than the 'passive'. This can be seen in examples (2c, d) from Icelandic, a nominative-accusative language, in which the 'inherent' dative surfaces as a nominative in middles (anticausatives) and so-called 'stative passives'. The examples in (3a-c) in turn come from Inuktitut, an ergative language. What (3a-3b) show is that in the antipassive structure (3b) an internal argument in the regular transitive (3a) is 'demoted' to status that requires inherent Case marking (see Johns 1999, or Bittner 2005 for an inherent Case analysis of – *mik*). However, when an additional stativizer component is added to the antipassive, the inherent –*mik* must switch to the absolutive (instead of being preserved).

(2) *Icelandic – quirky Case selecting predicates*

a) Við lokuðum ***gluggunum***.
We.NOM. closed.1.PL windows.the.DAT.
'We closed the windows.'

b) **<u>Gluggunum</u>** var lokað.
Windows.the.DAT. was.DFT. closed.DFT.
'The windows were closed.' *Regular passive*

c) **Gluggarnir** lokuðust.
Windows.the.NOM. closed.3PL.MIDDLE.
'The windows closed.' *Anticausative* (middle)

d) **Gluggarnir** voru lengi lokaðir.
Windows.the.NOM. were.3.PL. long closed.NOM.M.PL.
'The windows were closed for a long time.' *Stative passive* (Sigurðsson 2012)

(3) *Inuktitut – quirky Case on internal arguments*

a) Piita-up naalauti surak-taa.
Peter-ERG. radio.ABS. break-PART.3.SG/3.SG.
'Peter is breaking the radio.'

b) Piita surak-*si-juq* ***naalauti-mik***
Peter.ABS. break-AP.-PART.3SG. radio-*mik*.
'Peter is breaking a radio.' *Antipassive*

c) **Naalauti** surak-**si-tau**-juq Piita-mut
radio.ABS. break-AP.-STAT.-PART.3.SG Peter-ALL.
'The/A radio is being smashed by Peter.'
Stative antipassive (Spreng 2012)

Similar alternations have been attested in other genetically unrelated NOM-ACC. or ERG. languages (see more in Blake 2000, Fox and Hopper 1994, Freidin and Sprouse 1991, etc.). **The problem and its answer**. Given that *both* 'structural' and oblique Case can be affected by (distinct) argument structure altering processes, an account which defines the latter as a lexical process cannot be correct. Hence two basic questions need an answer: a) why are obliques sensitive to operations constructing middles, anticausatives, statives but not normally the "bare passive"? b) what Case theory mechanics can capture

these alternations? It is argued in this paper that a decompositional approach to Case features and grammatical operations (Hoffman 1991, Arad 2000, Embick 1998, Pylkkänen 2000, 2001, etc.), coupled with dependency-based implementations of features (Biberauer 2008 et subseq.) under markedness theory can not only derive the facts in a straightforward manner but also cover a broader empirical domain. Two major intuitions are put to work: a) structural operations like passive/antipassive, anticausative, stative (anti) passive have a common core, namely a functional head which existentially binds the external/internal argument variable or removes DO semantics. If no other functional projection is added the configuration that corresponds to the 'passive/antipassive' is obtained (see Bach 1980, Roberts 1987, Baker et al. 1989, Bruening 2001 for passives, and Bittner 1987, Spreng 2011, a.o. for antipassives). Anticausatives and stative passives require additional components (Kalluli 2013, Svenonius 2005, a.o): a supplementary *cause* event (for anticausatives), a resultative projection for stative passives and stative antipassives (Nedjalkov 1988), a reflexive head (for middle reflexives), generic operators (for generic middles), various other types of stativizers, etc. Hence, the operation taxonomically called *passive* is simpler in that it involves less structure. One important generalization is the following: *if additional structure is added on top of the operation corresponding to the* '*passive*', *inherent Case on internal arguments can be altered*. What are the roots of this generalization? Another intuition prevalent in the literature is that configurations corresponding to the accusative (versus obliques) are aspectually simpler (hence morphologically simpler). For example, Hopper and Thompson (1984), de Hoop (1996), as well as Kratzer (2004), or Richardson (2010) a.o. connect the accusative to Aktionsart or grammatical aspect specifications pertaining to boundedness, telicity, perfectivity. From a markedness perspective, typological works along the lines of Comrie (1987) also emphasize the observation that these aspectual structures tend to be grammatically and morphologically simpler or default (i.e., it is 'easier' to construct the perfective than the imperfective, imperfectives are assembled from perfectives, atelicity from telicity, etc.). Oblique cases on internal arguments are rather seen with imperfective, atelic, unbound (etc.) aspectual specifications (de Hoop 1996 for a cross-linguistic picture, Richardson 2010 for a Slavic representation, Barðal 2001 for Icelandic, etc.). The application of the simpler operation ('passive') affects the accusative as the latter is not as featurally complex as the obliques (case systems show that obliques are often morphologically constructed from accusative stems, and not the other way around, Caha 2010). Moreover, the 'passive' (corresponding to the simplest argument structure alternation process) affects telicity, perfectiveness and boundedness in various ways (Hopper and Traugott 1984, etc.). As the features corresponding to obliques are more complex they remain immune to structurally simpler operations, and they might already correspond to atelic/imperfective (etc.) structures to begin with, etc.; i.e. they are too complex for the 'passive'. However, when further projections are added on top of the 'passive' structure, they *can* be affected. This intuitively corresponds to mechanics seen outside language per se: simple operations are not powerful enough for complex entities. The mechanics proposed here can unify inherent Case internal arguments with inherent Case external arguments: for example Basque ergatives which have been claimed to have a structural layer (Rezac et al. 2013) plus additional components. The current implementation avoids some of the problems alternative analyses have; for example Svenonius (2005) assumes that obliques are determined lower in the decomposed verbal structure, just like the middle is lower in the structure than the passive. But such implementation cannot be extended to Inuktitut or to other languages in which accusatives are *not* higher than obliques (de Hoop 1996). In Alexiadou et al. (2013) a prepositional head which optionally incorporates into V is responsible for oblique case removal in some instances; such analyses are also hard to extend to languages like Inuktitut.

Selected references: Alexiadou, Artemis et al. 2013. Opaque and transparent datives and how they behave in passives. *Journal of comparative Germanic syntax;* de Hoop, Helen. 1996. *Case configuration and noun phrase interpretation*. Garland, New York; Kratzer, Angelika. 2004. Telicity and the meaning of objective case. In Gueron, Jacqueline and Jacqueline Lecarme (eds.), *The syntax of time*; Spreng, Bettina. 2011. *Viewpoint aspect in Inuktitut: the syntax and semantics of antipassives*. Doctoral dissertation. University of Toronto; Svenonius, Peter. 2002. Icelandic Case and the structure of events. *Journal of Comparative Germanic syntax*.

A counter-example to Merchant's Sluicing-COMP generalization

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Merchant (2001) gives the generalization in (1), according to which, in sluicing, C is always null. We want to discuss Slovenian sluicing data, which could be argued to violate this generalization. They all involve a particle that can appear after the *wh*-word in sluicing. One such case is given in (2).

(1) "***Sluicing-COMP generalization***
In sluicing, no non-operator material may appear in COMP." (Merchant 2001, p. 62)

(2) a. *Peter je videl nekoga. Koga pa <je videl>?*
Peter aux saw someone. Who PTCL aux saw
'Peter saw someone. Who <did he see>?'

b. *Peter je videl nekoga. Koga že <je videl>?*
Peter aux saw someone. Who PTCL aux saw
'Peter saw someone. Please tell me again, who <did he see>?'

c. *Peter je videl Janeza. Koga še <je videl>?*
Peter aux saw Janez. Who PTCL aux saw
'Peter saw someone. Who else <did he see>?'

While (2c) seem to involve a DP internal particle as is the case with English *else*, this is less obviously so in (2a) and (2b). Interestingly, even (2c) is not so obviously comparable to the English case. As shown in (3), the sluiced reply in (2c) can be rephrased also in a way, where *še* does not seem to be part of the nominal phrase containing the wh-word.

(3) a. *Peter je videl Janeza. Koga druzga *(še)*?
Peter aux saw Janez. Who else PTCL
'Peter saw someone. Who else?'

b. *Peter je videl Janeza. Koga druzga je še videl*?
Peter aux saw Janez. Who else aux PTCL see
'Peter saw someone. Who else did he see?'

c. * *Peter je videl Janeza. Koga še druzga*?
Peter aux saw Janez. Who PTCL else

d. ?? *Peter je videl Janeza. Koga druzga še je videl*?
Peter aux saw Janez. Who else PTCL AUX saw
'Peter saw someone. Who else did he see?'

Given that the auxiliary *je* is a second position clitic, which are placed strictly after the first syntactic constituent in Slovenian and unlike in SerboCroatian do not split constituents (Golden and Sheppard 2000, Marušič 2008), (3b) can be taken to show that *še* is not part of the same syntactic constituent as the *wh*-word. And if it is not part of the same constituent, than the most natural position for it, is in the head of the CP hosting the wh-word. Same is true of the other particles as shown in (4). In non-sluiced replies the particle more naturally follows the clitic than precedes it.

(4) a. *Peter je videl nekoga iz službe. Koga iz službe je že videl*?
Peter aux saw someone from work. Who from work aux PTCL saw
'Peter saw someone from work. Tell me again, who from work did he see?'

b. *Peter je videl nekoga iz službe. Koga iz službe je pa videl*?
Peter aux saw someone from work. Who from work aux PTCL saw
'Peter saw someone from work. And who is this guy from work that he saw?'

On the other hand, in complex d-linked wh-phrases, the above mentioned particles can also split the constituent, and given that they don't split the constituent together with the auxiliary clitics, they could only be located inside the complex wh-phrase.

(5) a. *Vid je videl nekega Petroveg prijatelja. Katerega že Petrovega prijatelja*?
Vid aux saw some Peter's friend Which PTCL Peter's friend
'Vid saw some friend of Peter's. Which friend of Peter's?'
b. *Katerega že Petrovega prijatelja je Vid videl*?
Which PTCL Peter's friend aux Vid saw
'Which friend of Peter's did Vid see?'

Given this conflicting evidence, a natural conclusion would be that there are actually two types of particles with two positions, one inside and one outside the wh-phrase, as argued by Kašpar (2013) for a similar particle found in Czech non-sluiced questions.

A further argument can be made showing there are actually two positions for these particles. Multiple wh-questions can also come with a particle like *že* in (6a-b). The particle can either follow the first or the second wh-word in questions with multiple fronting, (6a-b). But when one of the wh-words remains in situ, the particle cannot follow it. Note that in Slovenian multiple-wh-questions not all w-words need to front (cf. Mišmaš 2013).

(6) a. *Koga je pa s čim Helena včeraj tepla na dvorišču*?
who aux PTCL with what Helena yesterday beat on yard
'Who did Helena yesterday beat with what on the yard?'
b. *Koga je s čim pa Helena včeraj tepla na dvorišču*?

(7) a. *Koga je pa Helena včeraj s čim tepla na dvorišču*?
who aux PTCL Helena yesterday with what beat on yard
'Who did Helena yesterday beat with what on the yard?'
b. * *Koga je Helena včeraj s čim pa tepla na dvorišču*?
c. * *S čim je Helena včeraj koga pa tepla na dvorišču*?

So given that the in-situ wh-words cannot be followed by a particle, we can assume these particles are not part of the wh-phrases but are rather generated directly in the left periphery.in C. (7b-c) improve if the wh-phrase is complex and the particle "splits" it. This suggests that the particles splitting the wh-phrases are located internally to the wh-phrase.

(8) a. ? *Koga je Helena včeraj tepla s katero pa od njenih lesenih palc*?
who aux Helena yesterday beat with which PTCL of her wooden sticks
b. ? *S čim je Helena včeraj tepla katerega pa od njenih prijateljev*?
with what aux Helena yesterday beat who PTCL of her friends

We argue the particles *pa/še/že* can be either internal to the complex wh-word or else merged into the C. When located in C, they obviously violate Merchant's (2001) ***Sluicing-COMP generalization.*** This generalization might be saved if we assume Rizzi's expanded left periphery and position these particles in a position different from the phrase hosting the wh-word, but with more structure in the left periphery, it is also not so obvious what the generalization actually states, whether it is only the head hosting the wh-words that need to be empty or the entire left periphery, and related to this is the question what exactly gets deleted.

Golden, M. & M. Milojević Sheppard. 2000. Slovene pronominal clitics. In Beukema, F. H. & M. den Dikken. *Clitic phenomena in European languages.* J. Benjamins. 191-208.
Kašpar, J. 2013. On pied-piping and feature percolation. Talk at *FDSL 10*, Leipzig, 7/12/2013
Marušič, F. 2008. Slovenian Clitics Have No Unique Syntactic Position. In *Formal Approaches to Slavic Linguistics* (Vol. 16, pp. 266-281).
Merchant, J. 2001, *The Syntax of Silence: Sluicing, Islands, and the Theory of Ellipsis*. Oxford: OUP.
Mišmaš, P. 2013. Multiple wh-fronting in Slovenian. To appear in *Wiener Linguistische Gazette*.
Rizzi, L. 1997. The fine structure of the left periphery. *Elements of grammar*. Springer Netherlands, 1997. 281-337.

Microparametric variation among Romance languages: the L2 acquisition of Spanish locative and existential constructions by Catalan and Italian speakers

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Keywords: definiteness effect, L2 Spanish, existentials, locatives, copula selection

Selection of copula verbs in Spanish is a classic challenging area for L2 learners. Even so, it has received moderate attention on SLA research, and most of the studies have focused on the acquisition of the semantic and pragmatic distinctions between *ser* and *estar*, particularly when combined with adjectives (Bruhn de Garavito & Valenzuela, 2006; Geeslin, 2002; 2003; Schmitt & Miller, 2007; among others). These studies explored the acquisition of semantic features such as aspect, temporality or genericity. The present study goes beyond the alternation between *ser* and *estar* + adjective by looking at the selection of copula verbs to express location, and existentials.

Following Freeze (1992), I assume a universal locative paradigm with three surface structures that imply the use of three different verbs in Spanish: *estar* for the predicate locative when the subject is an object, such as in *El libro está encima de la mesa* (The book is on the table) and *ser* when it is an event: *El congreso es en Trento* (The conference is in Trento); the existential with *haber*, such as in *Hay un libro encima de la mesa* (There is a book on the table); and the possessive or 'have' using *tener: La mesa tiene un libro encima* (The book has a book*)*.

Three microparametric differences among Spanish, Italian, and Catalan are investigated, which regulate (a) the distribution of *ser* vs. *estar* in locatives (the '*eventivenes' effect)*, (b) the distribution of *haber* vs. *estar* (the *definiteness effect*, Milsark, 1977)*,* and (c) the use of clitics in locatives. Standard Catalan uses the verb ésser for locatives and *haver* for existentials; the verb *estar* as a locative is a recent innovation in bilingual varieties. Standard Italian, on the other hand, only has one verb to express the existence or location of a THEME, the verb *essere*, although *stare* is sometimes used for location, especially in the Southern varieties. Catalan, as well as Italian present obligatory locative clitics (*hi/ci*) in the subject position for existential sentences: **(Hi) ha molts nens aquí/ *(Ci) sono molti ragazzi qui* (There are many kids here)*;* Spanish does not have a locative clitic, and if it does, it is empty (Longa, Lorenzo & Rigau, 1998). Catalan and Italian, unlike Spanish, do not obey the definiteness restriction in existential constructions and allow definite DPs as THEMES in presentational sentences: *Hi ha en Joan a la porta / C'è Giovanni alla porta / *Hay Juan en la puerta.* Given these differences, we question whether L2 speakers of Spanish are able to fully acquire the distribution of *estar* in locative predicates and observe the restriction on definite DPs in Spanish existential constructions. Furthermore, we wonder how the bilingual mind will restructure her clitic system into a reduced morphological paradigm with no partitive or locative clitics.

The present study analyzes the expression of L2 Spanish existential and locative constructions in 20 native speakers of Catalan, 34 native speakers of Italian (from Rome), and 20 monolingual Spanish speakers with two main tasks, an Acceptability Judgment Task (AJT) and an elicited oral production task (OPT). The web-based AJT included 45 target items -in a total of 110 sentences-, which tested *ser* and *estar* in locative structures (1), and the definiteness effect with *haber* and *estar* in simple (2) and relative clause sentences (3). Participants had to judge these sentences in a scale from 0 to 100 in a slider bar, where 0 meant 'sounds bad', and 100 meant 'sounds natural'. The OPT consisted of a 'Spot the Difference Task', with 5 pairs of very similar pictures that participants had to describe localizing the differences between the two pictures (see appendix B).

Results indicated that Catalan speakers used significantly less *estar* to express location than native speakers, showing that this verb develops later than *ser* as previously reported (VanPatten, 1985, 1987), and as predicted by recent analyses of the copular *ser/estar* (Brucart, 2012; Gallego & Uriagereka, 2011). However, Italian speakers overgeneralized

estar to presentational uses, and localize *events*, when *ser* or *haber* are required in Spanish. Finally, Italian speakers of intermediate proficiency, and some Catalan speakers continued using *ser* to localize objects. More interestingly, both L2 groups accepted definite DPs in presentational sentences, violating the *definiteness effect*, displaying problems when assembling semantic features into specific lexical pieces. L2 learners did not use more full DPs to make up for their clitic system, with no significant differences in that respect. These results will be discussed within the debate on dissociation between acquisition of syntax and acquisition of semantics, and the *feature assembly* or *feature matching* hypothesis (Lardiere, 2008, 2009; Slabakova, 2009).

Appendix: Target Sentences in the AJT

(1) a. **Ser / Estar with Objects*
El libro *es / está encima de la mesa.
The book *SER / ESTAR on-top of the table
'The book is on the table.'

b. *Ser/ * Estar with Events*
La reunión es / *está en el hotel Majestic.
The meeting BE/ ESTA in the hotel Majestic
'The meeting is in the hotel Majestic.'

(2) *Haber with *definites and indefinites.*
Hay *las / unas llaves encima de la mesa.
HAVE the/ some keys on-top of the table
'There are the / some keys on the table.'

(3) *Estar with definites and ??indefinites*
El / ??un libro está encima de la mesa.
The / a book ESTAR on-top of the table
'The/ a book is on the table.'

(4) *Relative Clauses: ?Haber / Estar with definite antecedents*
Las llaves que ?hay / están en la puerta son mías.
The keys that HAVE / ESTAR on the door are mine.
'The keys that are at the door are mine.'

Appendix B: Picture Description Task

Picture A / *Abans* ('Before') **Picture B / *Ara*** ('Now')

Keywords: Musical Syntax, Internal Merge, Music and Language.

Internal Merge in Music: a Proposal for a Generative Syntax of Tonal Music

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In this work I argue in favor of the existence of the Internal Merge in music. This is theoretically necessary in order to explain both the structure of some harmonic sequences (e.g. half or deceptive cadences) and the listener's comprehension processes underlying them. This idea is an independent and original contribution to the thesis that "all formal differences between language and music are a consequence of differences in their fundamental building blocks. In all other respects, language and music are identical" (Katz-Pesetsky 2009).
Assuming that the harmonic structure is a subsystem in which the Western tonal music requires a hierarchical and recursive organization, and that this could be an homology with the generative grammar to a structural level (and potentially also to a cognitive level), it will be argued that, with the introduction of the concept of movement in music, it is possible to formulate a theory which is more explanatory adequate and that allows us to highlight an important analogy between musical and linguistic syntax.
The reasons that justify the existence of movement in music are:
1. the fact that the listener, even after a cadence (i.e. a progression of (at least) two chords that concludes a phrase, section, or piece of music) in a key different from the original one, does not lose sight of the tonality of the entire piece; 2. the link between the dominant region and the later tonic, that creates a sense of repose or resolution; 3. cases of half cadence, in which the listener perceives that the dominant should resolve on the (absent) later tonic (see figure 1a).

Both music and language are systems governed by syntactic rules that allow the generation and comprehension of new sentences. The term *syntax* as applied to music has been established in: on the one hand, musical analysis, with respect to the Schenkerian analysis; on the other hand, generative linguistics, within which *A Generative Theory of Tonal Music* (*GTTM*, 1983), by F. Lerdahl and R. Jackendoff, represents the first systematic attempt to unify the two methods. A more recent application of generative grammar to music is exemplified by J. Katz and D. Pesetsky (2009). These scholars discuss similarities between linguistic and musical syntax, formulating a strong thesis of identity between them. The aim of that work is to show that the syntactic phenomenon of Internal Merge can be observed also in music, especially in the cadence, but only in the form of vacuous movement (see Figure 1b). This statement partly contrasts with the stance of Rohrmeier (2011) who, denying the possibility of tracing an equivalent of syntactic movement in music, presents a generative account of diatonic harmonic progressions and suggests a set of phrase-structure grammar rules (that are explicitly designed to be computationally implementable and testable). Rohrmeier's whole theory is grounded on two principles: the dependency principle and the functional heads principle. Starting from these, he proposes a formalism divided into four levels (phrase level, functional level, scale degree level and surface level) and based on functional theories of harmony drawing upon the Riemannian tradition.
Although Rohrmeier's paper has provided a great contribution to the theorization of a generative syntax of tonal harmonic progressions, some aspects of his proposal can be challenged, in order to improve the explanatory power of that theory.
We start from the fact that a formal grammar is defined by a quadruple: a terminal vocabulary V_T (V_T example: {t, d, s}[1]); a non-terminal vocabulary V_N (V_N example: {TR, DR, SR}[2]); an axiom or a start symbol $\in V_N$, and a set of rewrite rules $\phi \rightarrow \psi$. In its most general form, the left part and the right part of the rewrite rules are any strings built on the two vocabularies, with the only restriction that the left

[1] t=tonic; d=dominant; s=subdominant.
[2] TR=tonic region; DR=dominant region; SR=subdominant region.

side must contain at least one symbol of V_N. If we set the limitation, as proposed by the same Rohrmeier, that the left part of the rule consists of a single non-terminal symbol, the derivation can be expressed in a tree form. Our proposal is to implement a further restriction: the rules 4 and 5 (*TR* → *DR* t; *DR* → *SR* d) must contain only non-terminal nodes. Because there is no (theoretical or empirical) reason why TR and DR must necessarily lead to terminal nodes *t* and *d* respectively, rather than being (potentially) reiterated, we rewrite the two rules as follows: 4N) *TR* → *DR TR*; 5N) *DR* → *SR DR*. For a reformulation of Rohrmeier's theory, we have to implement another change, eliminating the rule 6 (*TR* → *TR DR*). This modification is motivated by two reasons: rule 6 is contrary to the rule 4N (the two rules express a relation of dominance between the same non-terminal node and two identical non-terminal nodes, but with different linear order) and rule 6 can be obtained by a transformation of rule 4N, without the need to have two different rules for the manifestation of two cases which derive from one another[3]. In the same way as the sentences of a language can be transformed into new sentences with the transformational rules, the musical phrases can be transformed into new phrases with similar rules.
The proposed changes in the rewrite rules lead to a representation of harmonic structure that takes into greater account the expectations and the judgments of the listener (e.g. justifying the fact that the half cadence sounds incomplete, calling for continuation). With the hypothesis of the existence of the (not only vacuous) movement in music we explain this kind of listener's expectations. It is identified with a movement of tonic from the position of the complement of the final constituent TR in the head of the initial constituent (see figure 1c).

This proposal reconciles the vision of Katz and Pesetsky (2009), identifying the movement in the cadence, with the set of phrase-structure grammar rules of Rohrmeier (2011), and it provides a contribution to the field of generative syntax of tonal music.

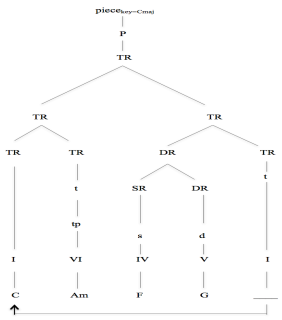

Figure 1a.
An example of the application of the theory on the half cadence

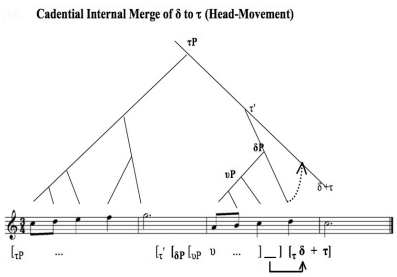

Figure 1b.
Katz – Pesetsky (2009). Cadential Internal Merge of dominant to tonic

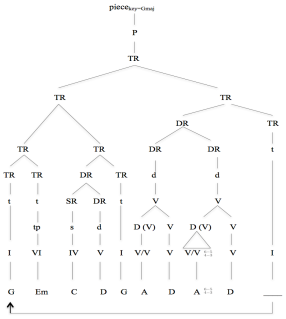

Figure 1c.
An example of syntactic movement of tonic

References

Besson, M. – Schön, D. (2001), "Comparison between Language and Music", Annals NYAS, 930: 232-258.

Chesi, C. (2012), "Competenza e Performance: una distinzione cognitivamente obsoleta", in Sistemi Intelligenti / a. XXiV, n. 2, pp. 241-258.

Chomsky, N. (1957), *Syntactic Structures*, Mouton & Co., The Hague-Paris.

Chomsky n. (1973), *Conditions on transformations*, in S.R. Anderson e P. Kiparsky, *A festschrift for Morris Halle*, New York, Holt, Rinehart and Winston.

De Haas, B. et al. (2009), "Modeling Harmonic Similarity Using a Generative Grammar of Tonal Harmony", in Goto et al. (eds.), *ISMIR*, pp. 549–554.

Katz, J. – Pesetsky, D. (2009), "The Identity Thesis for Language and Music", MIT, lingBuzz/000959.

Lerdahl, F. – Jackendoff, R. (1983), *A Generative Theory of Tonal Music*, MIT Press.

Moro, A. (2008), *The Boundaries of Babel. The Brain and the Enigma of Impossible Languages*. MIT Press.

Pesetsky, D. (2012), "Phrasal Movement and its Discontents: Diseases and Diagnostics", lingbuzz/001446.

Rohrmeier, M. (2011), "Towards a generative syntax of tonal harmony", J. of Mathematics and Music, 5, 35-53.

Rohrmeier, M. et al. (2011), "Incidental and online learning of melodic structure", Consciousness and Cognition, 20, 214-222.

[3] In fact, to improve the descriptive adequacy of a theory, the rewrite rules grammar are enriched with the "transformations" (Chomsky 1957, 1973): a sentence like "John eats an apple" and one as "An apple is eaten by John" seem to have a common origin which must be captured, resulting from a transformation of the passive form by the active structure (Chesi 2012).

Unifying Radical pro-drop phenomena

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Keywords: radical pro-drop, agreement marking, agglutinative morphology

The problem. Several studies have shown that radical pro-drop phenomena, that is, the non-expression of subjects, objects and possessors, co-relate with two apparently independent facts: lack of verbal agreement (Huang (1984), Speas (1994), Saito (2007) or Roberts and Holmberg (2010)) and agglutinative morphology on pronouns (Neeleman and Szendrői's (2007)). This has been observed in cross-linguistically unrelated languages like Chinese, Japanese, Malayalam, Turkish, Korean or Hindi/Urdu. It would be desirable to find an explanation of the relation between these observations.

Proposal. Drawing on data of unrelated languages, such as Romance languages, Germanic languages, Japanese or Malayalam, we propose that these facts are indeed all related and can be derived from a single property of those languages, namely, that they lack true referential pronouns,[1] making use of regular NPs instead, which implies a defective structure in terms of ϕ-features. Assuming that allows an elegant account of why radical pro-drop is found along agglutinative morphology and no verbal agreement.

A. The agglutinative morphology of referential pronouns. Neeleman and Szendrői (2007) show how all languages with radical pro-drop have agglutinative morphology on pronouns (that is, pronouns consist in invariable stems which combine with Case/Number affixes). If we take these pronouns (like the ones in Japanese, Turkish, etc.) to be NPs this observation is naturally derived, on the basis that it is cross-linguistically observed that nominal stems can be more easily segmented from their Case/Number morphology than fusional referential pronouns (like in Latin or Icelandic).

B. The lack of agreement marking. First, it is observed that radical pro-drop languages have no verbal agreement (unlike non-radical pro-drop languages, like Romance varieties). Second, NPs can only agree in the third person (we shall leave apart for now cases of differential agreement like 'you linguists'). Therefore, if all referential pronouns in the relevant languages are actually NPs, then it is expected that the only kind of person agreement they can enter into is third person agreement. Having just one type of agreement is the same as not having agreement at all, because any change in verbal arguments do not trigger changes in verbal morphology.

The radical pro-drop phenomenon itself is a result of lacking true referential pronouns to fulfill argumental roles. When languages like Japanese, Korean or Malayalam resort to omit an argument, they can simply drop the DP. When languages with non-radical pro-drop omit the full expression of an argument, they will still have clitics/verbal agreement.

Predictions. If the relevant languages do not have referential pronouns but NPs, it is expected that their " false pronouns" will admit the kind of modification regular NPs admit. We shall show this with Japanese and Malayalam, in contrast to Spanish, a non-radical pro-drop language with true referential pronouns. In particular, we will show that false pronouns in Japanese and Malayalam can productively a) be modified by adjectives, b) be modified by relative clauses, c) be modified by prepositional phrases, and d) co-appear with demonstratives, unlike true pronouns in Spanish.

Note that some non-radical pro-drop languages allow structures of the kind "He who...", "Lui quello...". It seems that these are not counterexamples to our proposal. In the first place it is relevant that these structures are only allowed for third-person pronouns (unlike Japanese

[1] We consider referential pronouns to include personal pronouns, argumental pronouns and possessors. We shall consider clitics to be instances of verbal agreement, following Roberts (2010).

or Malayalam, which admit such modification for all persons). In the second place, sentences with these structures are interpreted generically, which points to their non-referentiality.

Extending the proposal. If the proposal is on the right track, differences between radical pro-drop languages and not radical pro-drop languages are expected to extend beyond the narrow range of phenomena related to nominal modification pointed out above. Indeed, the main insight of the present study can correctly derive and predict the following phenomena:

1.Person-Case Constraint (PCC). If the PCC is dependent on ϕ-features (for instance, because it is due to a Probe's inability to check the same ϕ-feature twice) and languages of the category under scrutiny have a defective ϕ-feature structure, we can predict that these languages should not present PCC effects. We will show that neither Japanese nor Malayalam show PCC effects.

2.Directionality of events. In languages with a pronoun system of the Indo-European kind, the directionality of verbal events can be codified by means of those pronouns (in addition to verbal agreement). Radical Pro-Drop languages not having access to pronouns can codify event directionality either by making a explicit use of their false pronouns or by alternative strategies. In Japanese, the verbs *ageru* and *kureru* both mean 'to give', but they are intrinsically directional: *ageru* can only mean 'I give (to somebody)' and *kureru* can only mean 'Somedy gives (to me)'. Due to that they can be used as auxiliary verbs to provide such directionality to otherwise directionless events. In Malayalam the very same strategy is used to encode event directionality with another pair of verbs *thannu* and *koduthu* which also mean 'to give' with inherent directionality.

3.Weather verbs. Weather verbs are prototypically impersonal in Indo-European languages and as a result, non-pro-drop languages like English need to make use of an expletive whereas null-subject languages like Catalan mark third-person agreement on the verb. However, for languages without pronouns or verbal agreement, the expression of this kind of impersonality might need a different strategy. This is in fact the case for Japanese, Chinese and Malayalam. Instead of verbs like to rain or to snow, they use a generic verb *to fall (from the sky)* the subject of which is the thing that falls.

Conclusions. This analysis allows to unify three phenomena (agglutinative morphology on 'pronouns', lack of verbal agreement and radical pro-drop) in virtue of a single property: traditionally classified radical pro-drop languages do not have referential pronouns. Lexical items analyzed as pronouns in these languages can have a generic or deictic content but behave like nouns from a purely syntactic point of view. Apart from the typological predictions this claim makes, the present proposal is able to predict apparently unrelated phenomena found along radical pro-drop: the lack of PCC effects, the use of auxiliary verbs to encode the directionality of events and the use of a generic verb *to fall* in sentences with weather meanings.

References. Huang (1984) On the distribution and reference of empty pronouns, *Linguistic Inquiry*; Neeleman and Szendrői (2007) Radical Pro Drop and the Morphology of Pronouns, *Linguistic Inquiry*; Roberts (2010) Agreement and Head Movement: Clitics, Incorporation and Defective Goals, *MIT Press*; Roberts and Holmberg (2010) Introduction: parameters in the minimalist theory, *Parametric Variation: Null Subjects in Minimalist Theory*; Saito (2007) Notes on East Asian argument ellipsis, *Ms. Nanzan University and University of Connecticut*; Speas (1994) Null arguments in a theory of economy of projection, *University of Massachusetts occasional papers in linguisitics.*

On Object Drop-Related Problems for the Manner/Result Division and Related Assumptions

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Keywords: missing/null objects, manner and result encoding, lexical saturation/arbitrarisation

1. Background: The distinction between verbs encoding manner (e.g. *scrub, sweep*) and verbs encoding result (e.g. *break, kill*) is relevant to object drop in that typically verbs belonging to the former but not the latter group are licensed with unspecified null objects (e.g., *Kim scrubbed all morning* vs. **The toddler broke*; cf., a.o., Beavers and Koontz-Garboden (BKG) 2012 and Rappaport Hovav and Levin (RHL) 1998, 2010 for discussion). RHL (1998: 109) propose the predicate decomposition of the manner and the result roots shown in (1)-(2), with the difference between transitive verbs of the two types being that the participant expressed by the object is licensed by the root (the constant in their terms) in the case of manner verbs, but it is associated with a variable in the event template of result roots (cf. y in (2)). Manner verbs are thus taken to be mono-eventive, whereas result verbs are bi-eventive, their event structure templates encoding a causing activity and a change of state. The assumptions that each participant associated with a variable in the event structure template must be realised syntactically (the Argument Realisation Condition, cf. RHL 1998: 113) and that the only condition on the realisation of participants licensed by the root is that they be recoverable are taken to account for the object drop asymmetry.

(1) [x ACT<MANNER>]

(2) [[x ACT] CAUSE [y BECOME<RESULT-STATE>]]

This contribution shows that such an approach to the relation between the manner/result division and missing objects is not adequate on empirical grounds and suggests an alternative explanation of the data.

2. Empirical problem: The manner/result distinction is also characterised in terms of the distinction between non-core and core transitive verbs, with the verb *eat* frequently used to exemplify the former group and the verb *break* the latter. Non-core transitive (*NCT*) verbs have been taken to be mono-eventive, whereas core transitive (*CT*) verbs have been taken to be bi-eventive. The behaviour of the two classes is distinguished, e.g., by the effect of reduplication on the improvement of object drop in an eventive construal observed only in the former case ((3) quoted here from Alexiadou et al. 2013: 5-6):

(3) a. John ate and ate and ate. *(NCT)* b. *John broke and broke and broke. *(CT)*

However, in contrast to the verb *eat*, verbs expressing the manner of eating cannot be used with null objects (cf. (4) from Rice 1988: 203; cf. also García Velasco and Portero Muñoz 2002), which is unexpected on RHL's (1998) analysis, predicting that manner verbs should make object drop possible:

(4) a. Celia ate. b. *Celia nibbled/bit/chewed/devoured/ingested/munched/gobbled.

3. Present analysis: Firstly, I show that the manner-of-eating verbs encode both manner and result, rather than just manner (cf. BKG 2012 for such a conclusion with respect to verbs of manner of killing) and that the verb *eat* is a result verb. In particular, *eat* and the manner-of-eating verbs pass the diagnostics for manner verbs, which have been observed to require animate subjects (cf. (5a)) and trigger unacceptability of the denial of action (cf. (5b)), as well as the diagnostics for result verbs, which are incompatible with the denial of result (cf. (6)) (cf. Beavers 2011 and BKG 2012 for a discussion of the diagnostics):

(5) a. #The spoon ate/bit/gobbled the cake. b. #Celia ate/gobbled the cake, but didn't move a muscle.

(6) #Celia ate/bit/gobbled the cake, but nothing is different about it.

Even though the manner component is clearly present in the manner-of-eating verbs, the verb *eat* seems neutral with respect to manner. I suggest that the reason why it passes the manner tests is not that it lexically

encodes the manner component, but rather that, in line with the analysis in Jackendoff (1990), in this case the Agent also provides the Path/Goal for movement of the thing eaten (Theme).

Given these facts, I conclude despite the commonly held assumption that *eat* is a result and not a manner verb. I suggest further that the division of verbs into ones which make object drop possible and ones which block it does not parallel the division into mono-eventive and bi-eventive schemas and cannot be treated as evidence supporting the analysis which treats manner verbs as mono-eventive and result verbs as bi-eventive. This is in line with Neeleman and van de Koot's (2012) approach to causative verbs as encoding a crucial contributing factor (CCF) and an end state/resultant activity rather than the notion of causation (contra (2)). I thus adopt the (mono-eventive) lexical semantic representation of causative/result verbs in (7) (cf. Neeleman and van de Koot 2012: 23), which captures the requirement that the argument referring to the entity undergoing the change of state be syntactically represented, assuming linking rules proposed within the Theta System (cf. Reinhart 2002):

(7) $\lambda y\ \lambda x\ [[_e\ x\ [_s\ .\ .\ .\ y\ .\ .\ .\ ]]\ \&\ x = CCF]$

This analysis derives the behaviour of the manner-of-eating verbs in that they are predicted to be ungrammatical with object drop. To account for the exceptional ability of the verb *eat* to appear without an object, I propose that the lexical information encoded in the verb specifies that it can undergo lexical saturation/arbitrarisation, resulting in the internal argument being existentially closed.[1] Even though proposals employing lexical saturation suggest that it is inherently linked to the saturated argument being interpreted as [+human] (cf. Marelj 2004 and Rizzi 1986), I show that this is neither the case for verbs such as *eat*, nor for the types of structures for which it has originally been proposed (e.g., *This sign cautions against avalanches*) and suggest that an argument saturated in the lexicon receives its final interpretation at the C-I interface.

4. Consequences and conclusion: The following tentative generalisations relating object drop to the manner and result components can be proposed: (i) manner verbs make object drop possible (unless the object is animate); (ii) manner+result verbs (e.g. manner-of-eating/drinking verbs) do not make object drop possible; (iii) result verbs do not make object drop possible unless the Agent provides the Path/Goal at the same time, triggering result construal. Furthermore, the research reported here provides additional data which show that some roots encode both manner and result (cf. BKG 2012 and Husband forthcoming). This categorisation makes it possible to account for the previously unexplained behaviour of the manner-of-eating/drinking verbs. Adopting Neeleman and van de Koot's mono-eventive representation of causative verbs makes it possible to capture the resistance of result verbs to object drop, without relying on the bi-eventive analysis of result verbs and the link between the number of encoded events and object drop, a desirable result given that some manner verbs (*pet, stroke, caress*; cf. Goldberg 2005) show otherwise unexpected behaviour in that they have to be analysed as mono-eventive also in accordance with (1)-(2), but they block object drop. Additionally, the discussion offered here sheds light on the interpretive phenomena guiding the process of determining the content of an argument which has undergone lexical saturation.

References

Alexiadou, A., Schäfer F., Spathas, G. (2013). Delimiting Voice in Germanic. CGS Workshop 28 handout, ULeipzig, Oct. 3-5, 2013. • Beavers, J. 2011. On affectedness. *NLLT* 29: 335–370. • Beavers, J., Koontz-Garboden, A. (2012). Manner and result in the roots of verbal meaning. *LI* 43: 331–369. • García Velasco, D., Portero Muñoz, C. (2002). Understood objects in Functional Grammar. *Working Papers in FG* 76: 1–24. • Goldberg, A. E. (2005). Constructions, lexical semantics, and the Correspondence Principle. In Erteschik-Shir, E., Rapoport, T. (eds.). 215–236. • Husband, E. M. (forthcoming). Rescuing manner/result complementarity from certain death. In *Proceedings of the 47th Annual CLS*. • Jackendoff, R. (1990). Semantic structures. Cambridge, MA. • Koot, H. van de, Neeleman, A. (2012). The linguistic expression of causation. In Everaert, M., Siloni, T., Marelj, M. (eds.). 20–51. • Marelj, M. (2004). *Middles and argument structure across languages*. Utrecht. • Rappaport Hovav, M., Levin, B. (1998). Building verb meanings. In Butt, M., Geuder, W. (eds.). 97–134. • Rappaport Hovav, M., Levin, B. (2010). Reflections on manner/result complementarity. In Rappaport Hovav, M., Doron, E., Sichel, I. (eds.). 21–38. • Rice, S. (1988). Unlikely lexical entries. In *Proceedings of the Fourteenth Annual Meeting of the BLS*. 202–212. • Rizzi, L. (1986). Null objects in Italian and the theory of *pro*. *LI* 17: 501–557. • Reinhart, T. (2002). The Theta System. *Theoretical Ling* 28: 229–290.

[1] The verb *drink* and the manner-of-drinking verbs behave in parallel with *eat* and the manner-of-eating verbs.

Adverb (and participle) agreement in Northern Calabria dialects

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Status quaestionis. In modern dialects of southern Italy (SIDs) manner adverbs form a syncretic class with adjectives, with the exception of a few lexicalized forms belonging not exclusively to the manner class (e.g. *sulamente*, *veramente*, *malamente* etc). South of the isogloss Gaeta-Rieti-Teramo (Rohlfs 1969 §887), the adverbs of the syncretic type exhibit productive patterns of agreement with an associated nominal, therefore challenging the widely accepted view that the absence of agreement is one of the significant cross-linguistic characteristics of adverbial category opposing them to adjectives (Alexiadou 1997, a.o.). Ledgeway (2011) argues that the distributional patterns of agreement found among SIDs undergo specific structural constraints, ultimately manifesting a structural and semantic active/stative split.

Data. In a handful of SIDs of North-Western Calabria, the adjectives performing adverbial function give rise to structural-semantic minimal pairs, such as:

1. a) *mamma ha còtta a carna bòna*
   mum has cooked$_{F.SG}$ the meat$_{F.SG}$ good$_{F.SG}$
   'Mum has cooked some good meat'
   b) *mamma ha còtta bòna a carna*
   mum has cooked$_{F.SG}$ good$_{F.SG}$ the pasta$_{F.SG}$
   'Mum has cooked the meat very well'

In the dialects under examination (Buonvicino (Bv), Orsomarso (Or), S. Maria del Cedro (SM), Verbicaro (Ve)), adjectival adverbs display the agreement patterns in (A), (B), (C), disambiguated also by means of morphological use of metaphonetic diphthongs.
In these varieties the adjectival adverbs:

A) may agree with objects of transitive configurations (1), except within perfective constructions wherein past participle and adverb must agree with the object (2,3):

1. *pattə pittə brutta/bruttə sa cammərа* (SM)
   father-your paints ugly$_{F.SG/M.SG}$ this room$_{F.SG}$
   'Your father is painting this room badly'
2. *pattə ha còta/*cutə pulita/*-ə l'acina*
   father-your has harvested$_{F.SG/*M.SG}$ neat$_{F.SG/*MSG}$ the grapes$_{F.SG}$
   'Your father accurately harvested the grapes'

B) must agree with the subject of unaccusatives (1,2,3), including reflexives (4) and passives (5):

1. *Maria ha caduta sbèrna/*-ə* (Ve)
   Mum has fallen $_{F.SG/*M.SG}$ inadvertently $_{F.SG/*M.SG}$
2. *Maria sta bòna/*buənə*
   Maria is good$_{F.SG/*M.SG}$
   'Maria is fine'

3. *Rita campədə affritta/-*ə*
   Rita lives poor$_{F.SG/*M.SG}$
   'Rita lives piteously'

4. *Maria s'ha bəstuta/*-ə brutta/*-ə* (SM)
   Maria self= has dressed$_{F.SG/*M.SG}$ badly$_{F.SG/*M.SG}$
   'Maria has dressed badly'

5. *r'àcina non ha stata/*-ə còta/*cutə bòna/*bunə* (Or)
   the grapes$_{FSG}$ not has been$_{FSG/*MSG}$ harvested$_{FSG/*MSG}$ well$_{FSG/*MSG}$
   'The grapes haven't been harvested properly'

C) may agree with the subject of unergatives:

1. *quidda quatrara ha zumbwatə buənə* (Ve)
   that girl has jumped$_{M.SG}$ good$_{M.SG}$
   'That girl jumped technically well'
2. *a quatrara ha zumbwata tutta ppu ščwantə*
   the girl has jumped all$_{FSG}$ due-to-the scare
   'The girl jumped out of fear'

3. *Maria ha mangiatə bunə* (SM)
   Maria has eaten good$_{MSG}$
   'Maria ate well'

4. *Maria ha mangiata bòna e tuttə*
   Maria has eaten good$_{F.SG}$ and everything
   'Maria has completely finished eating (she's full)'

Analysis. Evidence in (A) witnesses that in transitives perfective forms select obligatory adverbial agreement with the object. Similarly, in (B) the adverb systematically agrees with subjects of unaccusatives. The optionality in (C) is only apparent, as in the constructions in (C 2,4) the subject does not perform an agentive function and rather acts as an undergoer of an externally triggered action (C,2) or a state (C,4). Conversely, in (C 1,3) the subject initiates the action, to some extend. This suggests that in (C 2,4) the verbs function as unaccusative and the adverb agreement, altogether with the participle, signals an active *vs* a stative interpretation, as also argued by Ledgeway for other SIDs (2011).
Proposal. In order to account for the above data, I will propose a structural analysis following from the underlying resultative requirement that the agreeing adverbs might satisfy. If we assume that the adverbs are generated in a low area of VP, they might locally agree with the object, as also Ledgeway (2011) suggested on the base of the placement of *à-la*-Cinque (1999) object-oriented adverbs.
The transitive patterns in (A) are particularly revealing, as the adverbs agreeing with the object predicate the condition reached by the undergoer after the conclusion/accomplishment of the action.
Furthermore, the adverb agreement in transitives parallels a peculiar behaviour of the past participle (PPt) agreement. In (A,2) the PPt agrees with the object, whereas in transitive configurations normally it does not. The same pattern is exhibited in ungergatives (C 2,4).
Finally, a further characteristic of such adverbs is noteworthy. The pre-participial position of agreeing adverbs formed from the roots *bon-* and *mal-* mirrors the placement of the corresponding adjectives. Namely, the adjectives formed from the same roots may surface in an exceptional pre-nominal position, which is mostly unavailable for the adjectives in SIDs, overwhelmingly occurring postnominally. This correspondence provides more pieces of evidence to the alleged categorial similarity between adverbs and adjectives.
In order to account for the variation in adverbial agreement patterns and their interaction with the PPt agreement, I will propose a structural configuration based on D'Alessandro-Roberts's (2008) analysis. I will first assume that the agreeing adverbs generate as adjuncts in two different positions of the structure: in VP and, higher, in *v*P. In a phase-based approach, the two resulting configurations can account for the different patterns of agreement productively performed in the varieties under examination. The default M.SG setting in (C 1,3) is a clear proof that the agreement phenomenon under examination is due to structural proximity with the closest DP.

References. -ALEXIADOU, A., 1997. *Adverb placement*. Amsterdam, Benjamins. -CINQUE, G. 1999. *Adverbs and functional heads*. Oxford, OUP. -D'ALESSANDRO, R., ROBERTS, I., 2008. Movement and agreement in Italian past participles and defective phases. *Linguistic Inquiry* 39, 3, 477-491. -LEDGEWAY, A., 2011. 'Adverb agreement and split intransitivity: evidence from southern Italy'. *Archivio Glottologico Italiano* 1, 31-66. -ROHLFS, G., 1969. *Grammatica storica della lingua italiana e dei suoi dialetti*. Torino, Einaudi.

DP-internal discourse particles, illocutionary force, and specificity

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Keywords: discourse particles, adjectives, DP syntax

Summary In this paper, we provide a split-DP analysis for the occurrence of German discourse particles inside the nominal domain. We account for the interaction between the functional make-up of the DP, the presence of discourse particles, and specificity. Our approach also sheds light on parallels between the sentential and nominal domain regarding their information structural and illocutionary properties.

Discourse particles and Force Discourse particles, e.g. German *denn* (lit. 'then') or *bloß* (lit. 'only'), are geared to certain clause types (declarative, polar interrogative, *wh*-interrogative, exclamative, imperative etc.) and arise mainly in root clauses, where they are invariably stuck in a pre-VP/*v*P position. They make a semantic contribution by co-determining the illocutionary force of an utterance.

(1) $[_{\text{ForceP/FinP}}$ Force°/Fin° $[_{(\text{TopP})}$ … [**Prt°** [(AdvP*) $[_{\text{VP/}v\text{P}}$ …]]]]]

Although particles are sensitive to sentence types and utterance contexts, they can appear at an arbitrary distance from Force°. In contrast to approaches assuming LF-movement of the particle (or feature movement), Bayer and Obenauer (2011) demonstrate how discourse particles obtain access to the force system of the clause by virtue of probe-goal agreement.

DP-internal discourse particles Certain particles, e.g. *wohl* (lit. 'well') or *ja* (lit. 'yes'), can occur within complex DPs.

(2) *Gestern habe ich* [*meinen ja schwerkranken Nachbarn*] *getroffen.*
Yesterday have I my JA seriously.sick neighbor met
'Yesterday, I met my seriously sick neighbor.'

In (2), the particle *ja* does not take scope over the VP/*v*P of the clause. Rather, the particle only scopes over a propositional part expressed within the DP. That is, by adding *ja* to the utterance, the speaker indicates that he thinks that at the time of utterance he needs to make salient the uncontroversial fact that his neighbor is very sick (the propositional content *p* expressed within the DP). Crucially, the speaker does not indicate that he thinks that it is uncontroversial that he has met his neighbor. Note further that *ja* can also be used when the DP is part of an interrogative (3a), although it is a well-known observation that *ja*, as a particle scoping over VP/*v*P, cannot occur in interrogative clauses (3b).

(3) a. *Warum hat* $[_{\text{DP}}$ *dieser ja schwerkranke Mann*] *keine Jacke an?*
Why has this JA seriously.sick man no jacket on
'Why does this seriously sick man not wear a jacket?'
b. **Warum hat dieser schwerkranke Mann ja keine Jacke an?*

Importantly, discourse particles can only occur in DPs where the adjective, according to many approaches (e.g. Kayne 1994: ch. 8), originates in the predicate position of a reduced relative clause which is itself a complement of D. In other words, discourse particles are not licensed in constructions containing non-intersective adjectives (direct modification adjectives according to Cinque 2010; cf. **diese ja angebliche Krankheit* – 'this JA alleged sickness').

DP-internal discourse particles and specificity As for relative clauses, discourse particles cannot be found in clauses with a restrictive interpretation (4a), whereas they are possible in appositive ones (4b). However, adopting a more fine-grained typology of relative clauses (Wiltschko 2013), we notice that discourse particles can also occur in relative clauses that rely on unique or generic reference and, at the same time, cannot be analyzed as appositive relative clauses (4c).

(4) a. (Zimmermann 2004: 284)
**Die Firma sucht einen Angestellten, der ja immer pünktlich ist.*
The firm looks-for an employee who JA always punctual is
'The firm is looking for an employee who is always punctual.'

b. (Thurmair 1989: 80)
Autos, die ja laut sind, sollten […]
cars which JA loud are should
'Cars, which are loud, should […]' (= All cars are generally loud.)

c. *Mit Herrn K. bekommt die Firma einen Angestellten, der ja immer pünktlich ist.*
With Mr. K. gets the firm an employee who JA always punctual is
'With Mr. K, the firm gets an employee who is always punctual.'

The denotation of specific referents seems to be a major licensing criterion for DP-internal discourse particles. We searched the DWDS corpus ('Digital Dictionary of the German Language', cf. Klein and Geyken 2010) for the occurrence of such structures and found that only 5.8% of all relevant findings were indefinite DPs, most of which are preceded in the discourse by a unique or generic entity, as demonstrated by the original corpus example in (5), contextually referring to 'Jazz'.

(5) *eine ja nicht immer einfache Musik*
a JA not always easy music
'a music which is not always easy'
(*Die Zeit*, 27.01.2006; http://www.zeit.de/online/2006/20/alpenjazz, 13.12.2013)

DP-internal discourse particles and Force We claim that the predicational structure expressed within the DP should be situated in a functional structure comparable to the one required by discourse particles at the level of CP. We assume that the particle is invariably stuck in a particle-specific position (cf. (1) above). Notice now that material can intervene between D and Prt, as shown in (6b).

(6) a. *dieser ja im letzten Jahr schwerkranke Mann*
this JA in.the last year seriously.sick man
b. *dieser im letzten Jahr ja schwerkranke Mann*

We demonstrate information structural differences between (6a) and (6b), and we argue that, analogous to the situation in CPs, constituents can move from within the lexical layer across the particle to an information structural Ā-position, labelled TopP in (7).

(7) $[_{AP}\ [_{TopP}\ [\ \textit{im}\ \ \textit{letzten}\ \ \textit{Jahr}]_i\ [_{PrtP}\textit{ja}\ [_{lexical\ layer}\ t_i\ [_A\ \textit{schwerkrank}\ ]]]]]$
in.the last year JA seriously.sick

With regard to the head noun and Agreement morphology, the AP thus derived may enter the derivation of the DP in the same way as simple APs. As mentioned above, discourse particles within AP are sensitive to different referential modes expressed in the D position just as discourse particles at the level of CP are sensitive to the Force of the clause. Since the referential mode of D is independent of the discourse particle, but reference-sensitive Prts are likely to have a feature related to reference, we adopt the feature-sharing version of Agree formulated by Pesetsky and Torrego (2007) to account for the connection between D and Prt. As for the Force domain at the level of CP, DP-internal discourse particles do not depend on a particular sentence type at the level of CP, but their interpretive impact nevertheless connects to the speaker of the utterance. We therefore suggest that DP-internal discourse particles in German provide further evidence for splitting Force into a 'clause-typing' domain and a 'speaker attitude' projection that encodes the speaker's relation to propositional contents of the utterance (Haegeman 2010).

References Bayer, Josef and Hans-Georg Obenauer. 2011. Discourse particles, clause structure, and question types. The Linguistic Review 28, 449–491. **Cinque, Guglielmo.** 2010. The Syntax of Adjectives. Cambridge, Mass.: MIT Press. **Haegeman, Liliane.** 2010. West Flemish verb-based discourse markers and the articulation of the speech act layer. Ms., Ghent University. **Kayne, Richard.** 1994. The Antisymmetry of Syntax. Cambridge, Mass.: MIT Press. **Klein, Wolfgang and Alexander Geyken.** 2010. Das Digitale Wörterbuch der Deutschen Sprache (DWDS). Lexicographica: International Annual for Lexicography 26, 79–96. **Pesetsky, David and Esther Torrego.** 2007. The syntax of valuation and the interpretability of features. In Simin Karimi, Vida Samiian and Wendy K. Wilkins (eds.), Phrasal and Clausal Architecture: Syntactic Derivation and Interpretation, 262–294. Amsterdam: Benjamins. **Thurmair, Maria.** 1989. Modalpartikeln und ihre Kombinationen. Tübingen: Niemeyer. **Wiltschko, Martina.** 2013. Descriptive relative clauses in Austro-Bavarian German. Canadian Journal of Linguistics 58, 157–189. **Zimmermann, Malte.** 2004. Zum 'wohl': Diskurspartikeln als Satzmodifikatoren. Linguistische Berichte 199, 253–286.

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