INTRODUCTION

Non-canonical control in a cross-linguistic perspective

Introduction to the volume

Jutta M. Hartmann1, Anne Mucha2 and Beata Trawiński2
1Universität Bielefeld / 2Leibniz-Institut für Deutsche Sprache, Mannheim

1. Issues in non-canonical control

Control, typically defined as a specific referential dependency between the null-subject of a non-finite embedded clause and a nominal co-dependent of the matrix predicate, has been subject to extensive research in the last 50 years. Most researchers in this field of study agree that a distinction between Obligatory Control (OC) and Non-Obligatory Control (NOC) is relevant to the typology of control phenomena. Based on this division, the canonical case of OC is a referential dependency between a unique nominal argument of a clause-embedding predicate and the null-subject of an infinitival complement of this predicate, as illustrated in (1).

(1) a. John, tried [PRO to bake a cake].
   b. Mary, persuaded John, [PRO /* to bake a cake].
      (Stiebels 2007: 1)

The canonical case of NOC shows up with null-subjects of non-finite adjunct (2a) or subject clauses (2b). In this case, the referent(s) of the null-subject need not be identified with the referent of any dependents of the matrix predicate.

(2) a. There will be no progress [without PRO investing economic and human resources].
   b. Clearly, [PRO confessing my crime] was not something they anticipated.
      (Landau 2013: 232)

While the division between OC and NOC is relatively uncontroversial, there is still less agreement as to the precise nature of these two control types and, as a result, their analysis.

The canonical cases of control have been the starting point for a number of different accounts (we roughly follow and amend Landau’s 2013 division here). OC has been in the focus of syntactic analyses in terms of agreement (Landau...
2000 et seq.) or movement (Hornstein 1999, 2001, 2003; Polinsky & Potsdam 2002; Boeckx & Hornstein 2003, 2004, 2006; Hornstein & Polinsky 2010), or various combinations of these (see among others Sheehan 2014; Fischer 2018). Other theories account for OC in terms of (syntactic) anaphora or variable binding (e.g. Manzini 1983; Bouchard 1984; Koster 1984; Borer 1989; Wurmbrand 2002; Landau 2015), or more generally account for it in semantic-pragmatic terms (e.g. Jackendoff 1972, 1974; Bresnan 1982; Růžička 1983; Chierchia 1984, 1989; Farkas 1988; Sag & Pollard 1991; Culicover & Jackendoff 2001; Jackendoff & Culicover 2003; Culicover & Jackendoff 2005; Pearson 2016).

Canonical cases of NOC have been considered in terms of logophoricity (Kuno 1975; Williams 1992; Landau 2000, recently McFadden & Sundaresan 2018) or pronominal reference (e.g. Bresnan 1982; Manzini 1983; Sag & Pollard 1991). While the canonical cases of OC or NOC usually are in the center of the individual analyses, it is often not straightforward how to extend them to non-canonical control phenomena.

In light of this ongoing discussion, this volume provides a cross-linguistic perspective on control phenomena with a focus on the non-canonical cases in order to make a step forward in the analysis of control. We take non-canonical control to be instantiated in cases (i) which show NOC or No Control (NC) in complement clauses, or (ii) which show OC in subject or adjunct clauses, (iii) in which the controlled subject is not in an infinitival clause or (iv) in which there is no unique controller in OC (partial control, split control, other types of controllers).

The contributions to this volume address central questions in the study of control from the perspective of such non-canonical cases. Major concerns in any analysis of control are the restrictions on the selection of the controller, the properties of the constituent hosting the controlled subject, as well as the syntactic and lexical properties of the matrix predicate. From a cross-linguistic perspective, the volume addresses variation regarding the contribution of these components of control and how they interact with general properties of individual languages. Insights into the correct empirical generalizations with regard to these properties provide the basis for further development of current control theories. In particular, cross-linguistic investigations have added valuable insights to the overall picture, as it has been shown that the concept of finiteness and the covertness of the embedded subject are not as closely linked as early analyses of control suggested (see Landau 2013 for an overview). Against this background, this volume collects studies considering a wide range of languages, namely English, German, Norwegian, Spanish, Portuguese, Romanian, Modern Greek, Hungarian, Japanese and Korean, addressing empirical and theoretical issues that pertain to questions such as the following:
1. **In which languages and/or contexts do we find Non-Obligatory Control or No Control in complement clauses, and how should these cases be accounted for?**

One such language is Korean, as discussed in the contribution by Lee & Berger (this volume). They show that OC in object control configurations is blocked when the complement clause moves or when the embedded subject is overt (or both), and they provide a derivational analysis of the observed split between OC and NC in these complements of logophoric object control verbs.

Another example is (European) Portuguese, focused on in Barbosa (this volume). Barbosa argues that inflected infinitival complements of desideratives, commissives, and of certain object control verbs in European Portuguese are not instances of OC. Instead, they are argued to contain *pro* and are shown to be subject to the same mechanisms that are responsible for the interpretation of *pro* in finite clauses. Barbosa proposes to account for inflected infinitives in terms of bare TP projections.

2. **How does possible overtness of the embedded subject interact with Obligatory Control, Non-Obligatory Control or No Control properties of the relevant structures?**

In Korean, for instance, overt realization of the embedded subject can bleed OC, thus giving rise to unexpected instances of NC in complement clauses. At the same time, anti-author restrictions are upheld as these are part of the meaning of the embedding complementizer (see Lee & Berger, this volume).

While the overt embedded subject leads to NC in Korean, this doesn’t necessarily have to be the case. Szécsényi (this volume) shows that OC needs to be maintained even with an overt embedded subject in Hungarian postverbal-only focus constructions. In this case, the overtness is conditioned by information structure: the embedded subject must be overtly realized because it is focused. Szécsényi relates these seemingly monoclausal focus constructions to modal existential *wh*-constructions (MECs). In consideration of the specific syntactic properties of Hungarian as well as relevant cross-linguistic insights (e.g. Šimík 2011, 2013; Burukina 2020), Szécsényi argues for an analysis in which both of these constructions have a biclausal structure underlingly, involving control and covert modality.

3. **In which languages and/or contexts do we find Obligatory Control in adjunct or subject clauses, or in non-clausal structures (e.g. nominals and gerunds) ?**

Spoken Spanish, focused on in Herbeck (this volume), provides interesting evidence for the role of morphosyntactic aspects and pragmatic factors such as topicality in establishing control relations in infinitival adjunct clauses. The corpus data discussed by Herbeck yield no clear picture as far as the canonical criteria for distinguishing between predicative versus logophoric control or between PRO and *pro* are concerned. According to Herbeck, the control
properties of null and overt subjects in these structures should be treated in terms of scalar preferences rather than binary distinctions.

Obligatory Control in English adjunct clauses is addressed by Gerard (this volume) from the perspective of first language acquisition. Gerard’s contribution expands our questions concerning OC in adjunct clauses by asking what kind of evidence a child needs to acquire this specific instance of non-canonical control and whether or not this evidence is available in the linguistic input, as well as by exploring broader implications on the role of Universal Grammar in language acquisition.

Another case of non-canonical adjunct control is discussed in Fischer & Høyem (this volume). They propose for a range of different adjunct clauses that we do find OC in adjuncts. These cases are non-canonical in two respects: first, we observe OC in adjuncts, second, the controller is not a nominal co-argument, but actually the event argument itself.

4. How should non-canonical controllers or control interpretations such as, e.g., backward control, partial control and split control be accounted for?

Alexiadou & Anagnostopoulou (this volume) discuss and reevaluate the evidence for backward control in Greek. They argue that what we observe in these cases is a long-distance relationship, namely long-distance agree (=LDA). They carefully distinguish two types of LDA, obligatory LDA that relates an uninterpretable embedded T to a higher T and optional LDA, which relates two T-heads over a phase-boundary. As a result, these cases of LDA can only be considered cases of backward control in those analyses in which control is based on Agree.

A second case of such non-canonical cases is partial control. Partial control, discussed extensively in Landau (2000) and much subsequent work, refers to a configuration in which the controlled embedded subject (PRO) denotes a set of individuals of which the individual denoted by the controller is a proper subset. To illustrate, such a reading seems to be available for all the sentences in (3) (taken from Pearson 2016: 692), i.e. the understood subject of the respective complement clauses includes the matrix subject John, but the two are not necessarily identical.

(3) a. John wanted to assemble in the hall.
   b. John expected to go on vacation together.
   c. John voted to work on the problem as a team.

Matsuda (this volume) challenges the traditional notion that partial control depends on the lexical semantics of the embedding predicate and proposes an analysis that derives these non-canonical control interpretations from the internal structure of the embedded PRO.
5. **Which properties of (non-)canonical OC, NOC or NC configurations are due to the controller, the constituent hosting the controlled subject or the matrix predicate? Which properties are derived from the interaction of different components and how?**

Matsuda (this volume) investigates in detail how the force of the complement clause (marked overtly in Japanese), the properties of the matrix predicate, and the properties of the controlled subject interact to give rise to non-canonical control interpretations. The Japanese data discussed by Matsuda suggest that the connection between the semantics of the matrix predicate and the range of possible interpretations of OC PRO is not as tight as is often assumed.

Lee & Berger (this volume) investigate how properties of the embedded subject (overt or covert realization) as well as syntactic movement of the infinitival complement clause affect the interpretation of the embedded subject in Korean, including discussion of the role of complementizers in control constructions in the language. While the former obstruct a control relationship, the anti-author requirement of a complementizer remains stable.

Giurgea & Cotfas (this volume) discuss OC phenomena in reflexive-based passives (so called se-passives) in Romanian. They show that se-passives with OC predicates take clausal complements which must also contain a se-passive. This observation applies both to infinitival and subjunctive complements. Giurgea & Cotfas suggest that in these constructions, control with implicit agents of passives takes place. They argue that Romanian se-passives are constructions in between typical actives and typical passives: additionally to a nominative theme, they also have a projected external argument to be controlled, whose features must match with the controller.

Finally, the generalizations about the status of inflected infinitival complements in European Portuguese as structures containing pro rather than being an instance of OC apply to specific classes of attitude verbs such as desideratives, commissives, and object control verbs such as persuadir ‘persuade’ and convencer ‘convince’ (Barbosa, this volume). As pointed out by Barbosa, it remains an open question whether these generalizations hold for inflected infinitives in non-attitude complements. Thus, the role of the matrix predicate for the licensing of OC (versus NC) in inflected infinitival complements is still subject to future research.
2. Overview of the book

Part I. Non-canonical control in complement clauses

Based on evidence from different languages, the contributions in Part I discuss non-canonical control in complement clauses. One such case can be observed when the overt nominal is found in the embedded clause, and we find some type of long-distance agree or backwards control (A. Alexiadou & E. Anagnostopoulou, K. Szécsényi). The availability/obligatoriness of OC, NOC or NC in complement clauses can be influenced by features of the embedded clause such as type of infinitive (P. Barbosa) or type of complementizer (H. Lee & M. Berger; A. Matsuda). It can also be induced by the matrix verb (P. Barbosa; H. Lee & M. Berger) or depend on the syntactic position of the complement clause (H. Lee & M. Berger). Additionally, M. Cotfas & I. Giurgea document a novel restriction to agent controllers in Romanian. With these perspectives, the outlined contributions broaden the empirical basis for the discussion of control relations in complement clauses, discuss the parameters of cross-linguistic variation and further specify the role of lexical properties (both of verbs and complementizers) in OC. They provide different perspectives on how these aspects should be implemented in a theory of control as a syntactic, semantic and/or pragmatic phenomenon.

Artemis Alexiadou & Elena Anagnostopoulou: Backward control, long distance agree, nominative case and TP/CP transparency

The paper by A. Alexiadou & E. Anagnostopoulou discusses issues in backward control. They argue that a nominative noun phrase can be licensed in-situ in an embedded clause (backward raising and backward control) when the matrix T and the embedded T enter an agree relationship with each other and the embedded nominative. They find two types of such a relationship: one obligatory that licenses uninterpretable embedded T and one optional that can cross a CP boundary. This paper contributes to the discussion of the limitations of backward control, a configuration which has been central to the discussion of the movement theory of control.

Pilar Barbosa: Alleged obligatorily controlled inflected infinitives

P. Barbosa discusses inflected and non-inflected infinitives in European Portuguese and addresses the question of whether or not these two types of infinitival complements can be considered as instances of OC. Adopting the semantic approach to control put forward by Jackendoff & Culicover (2003), she argues that structures with inflected infinitives should be analyzed in terms of (accidental) coreference governed by pragmatic factors rather than by OC. She follows Jackendoff & Culicover (2003) in assuming that OC verbs require volitional actions as their
infinitival arguments and proposes that inflected infinitival complements denote situations, which may include actions. The semantic restrictions on inflected infinitival complements and their subjects are related to coercion into volitional actions. Under Barbosa’s approach, the positing of two species of OC (OC in inflected infinitives and OC in non-inflected infinitives) appears superfluous.

**Ion Giurgea & Maria Aurelia Cotfas: Agent control in passives in Romanian**

The contribution by I. Giurgea & M. A. Cotfas is devoted to control by the agent of se-passives in Romanian. Se-passives require an obligatory repetition of se on the embedded verb, both in infinitive and in subjunctive complements. The authors argue that those structures in Romanian do involve control, which in turn implies that they must involve an external argument position within the embedded clause that can be controlled. Giurgea & Cotfas propose that control with those double se-configurations is licensed by feature matching rather than feature valuation: the null external argument of the matrix verb (PRO) and the projected external argument of the embedded verb (also PRO) are assumed to be generated in the same position and bear the same features ([+3Person, +Arb]).

**Hyunjung Lee & Mike Berger: On the obligatory versus no control split in Korean**

The contribution by H. Lee & M. Berger discusses factors that license No Control (NC) in complement clauses in Korean. The authors show that, while canonical object control configurations have the expected Obligatory Control properties, OC can be bled by scrambling of the infinitival clause and/or overt realization of the embedded subject. In both of these cases, the embedded subject can be interpreted de re and can refer freely, with the restriction that it cannot be interpreted as referring to the author, i.e. the attitude holder realized as the matrix subject. Lee & Berger contrast these observations with subject control cases where the above mentioned factors cannot bleed OC; obligatory subject control is retained both with scrambling and overt infinitival subjects. The authors propose an analysis with two main ingredients: (i) the different complementizers occurring in object and subject control cases impose semantic restrictions on the interpretation of the embedded subjects, and (ii) embedded subjects can be merged as minimal pronouns (in the sense of Kratzer 2009 a.o.) that end up as pro or PRO depending on the syntactic configuration, or as overt pronouns with inherent φ-features.

**Asako Matsuda: Control from inside: Evidence from Japanese**

A. Matsuda investigates how the availability of non-canonical control interpretations such as partial control and split control depends on the (modal) properties of the complement clause. Based on evidence from Japanese, the author proposes that the modality of control complements restricts the range of interpretative options
for obligatorily controlled PRO. Under Matsuda’s analysis, the modal suffixes in the Japanese complement clauses realize indexical agreement between the complementizer and different representations of speech act participants in the complement clause. The embedded PARTICIPANT DP ultimately serves as the controller and restricts the interpretation of the covert embedded subject (=PRO) from inside the complement clause. The study thus contributes new insights on how properties of the embedded constituent condition the availability of non-canonical control interpretations.

Krisztina Szécsényi: Control and covert modality in Hungarian: MECs and postverbal-only focus constructions
K. Szécsényi considers the interaction of control, syntactic structure and focus in modal constructions in Hungarian. She observes for a subset of apparently mono-clausal structures with postverbal-only focus that the modal interpretation and the unexpected post-verbal focus position should be explained by analyzing these structures as bi-clausal, in parallel to modal existential wh-constructions (MECs). The paper adopts an implementation in which the embedded verb is base-generated in an embedded reduced clause, but moves and adjoins to a modal head in the matrix clause. Both constructions – the Hungarian modal construction and the MECs more generally – are analyzed in terms of Obligatory Control, but since the embedded subject is focused in postverbal-only focus constructions, it must be realized overtly.

Part II. Non-canonical control in adjunct clauses

The papers in the second part address non-canonical control in adjunct and subject clauses. They range from the analysis of a specific subtype of control (event control in the contribution by S. Fischer & I. F. Høyem), the acquisition of OC (and also NOC) in adjuncts (J. Gerard) to the role of factors in the availability of OC, NOC and NC with adjuncts such as the type of introducing complementizer, the availability of pro-agreement on the embedded T and information structure (P. Herbeck). The study of OC into adjuncts helps to tease apart the configurational aspects from the selectional properties, as well as the role of the availability of overt arguments in configurations that allow for or require control.

Silke Fischer & Inghild Flaate Høyem: Event control
S. Fischer & I. F. Høyem address Obligatory Control in adjuncts, and concentrate on a special subtype, namely event control, which has received little attention in the research literature so far. The paper addresses first the conditions under which
event control can be established in English, German and Norwegian. Event control means that the PRO subject in the adjunct clause receives its interpretation from the event argument in the matrix clause. They show that this type of control should be classified as Obligatory Control and provide an analysis in a hybrid theory of control (Fischer 2018).

Juliana Gerard: Adjunct control and the poverty of the stimulus: availability vs. evidence

J. Gerard considers Obligatory Control in non-finite adjunct clauses from the perspective of first language acquisition. Based on relevant corpus data, the author discusses whether and how the structural features of OC in adjuncts (i.e. high attachment of the adjunct clause and c-command by the controller) could be acquired from the linguistic input. The conclusion of the study is that adequate evidence for these features is unavailable in the input and that therefore the features must be innate. In consequence, only features that vary cross-linguistically, such as complementizer form or the language-specific realization of finiteness, are needed from the input.

Peter Herbeck: The (null) subject of adjunct infinitives in spoken Spanish

Infinitive adjunct clauses in Spanish are addressed in the contribution by P. Herbeck. In particular, the paper seeks to explore the nature of null and overt subjects and the mechanisms determining control in those structures. Based on the results of a corpus study, Herbeck shows that the subjects of adjunct infinitives in spoken Spanish do not match in an obvious way the division between predicative versus logophoric control, and therefore cannot be handled in terms of the PRO / pro distinction. He argues that control in this configuration is rather a scalar phenomenon at the syntax-pragmatics interface and subject to preferences.

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