

ABSTRACT

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“Operator Movements in Embedded Clauses”

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1 Objectives and background

The syntactic structure and semantic interpretation of embedded clauses has been a topic widely discussed in recent literature. There are three distinct threads of discussion that, to the best of my knowledge, have not been brought together and treated in a systematic fashion to date: the *nominal nature of certain clauses* (the so-called “CP/DP parallelism”), the syntactic and semantic contrasts observed between *different types of object clauses* (the issues of factivity/assertion/givenness), and the idea that *temporal clauses are derived via operator movement*. In this dissertation, my main objective is to provide a comprehensive, unified and principled account of these three phenomena.

Works on CP/DP parallelism (see, for example, Abney (1987), Szabolcsi (1983, 1994), Aboh (2005), Hiraiwa (2005) a.o.) deal with analogous syntactic effects observed in the clausal and nominal domains. Discussions on this subject usually focus on external syntax, and largely ignore variation among clause types. Meanwhile, research done on the syntax of object clauses concentrates primarily on how to characterize and formalize the different classes of embedded clauses (dating back to the introduction of *factivity* into the discussion in the early 70’s, starting with Kiparsky & Kiparsky 1970, and through more recent works like Haegeman 2007, de Cuba 2007, Kallulli 2006, etc.), noting in passing that one but not the other type of object clause shows certain nominal properties.

We are led to suppose that, if there are two syntactically different kinds of object clauses with one of these being ‘nominal’ in some sense, the classic CP/DP parallelism can be interpreted in two ways. Either it is the case that one but not the other clause type shows a parallel with nominal expressions, or it may well be – as I argue in this work – that DPs are similarly split into two categories, and the CP/DP parallelism is in fact complete, with CP1 behaving analogously with DP1, and CP2 showing similarities to DP2. The question then becomes what the dividing property is for both categories, a property that is applicable to both CPs and DPs. Note that the classically used concepts of factivity, assertion, etc. will not be suitable as they do not readily translate into the nominal domain. I present an overview of reported and novel data as relates to this issue, and conclude that *the property dividing both CPs and DPs into two syntactically distinct classes is referentiality*. I present arguments that one class of object clauses (formerly referred to as factive, given or non-asserted clauses) pattern with referring expressions cross-linguistically, and referential DPs also display properties often attributed to this class of CPs (e.g. weak islandhood). While referentiality is not a concept that is commonly applied to clauses, I provide definitions to show that this makes sense semantically as well, and assuming that referentiality is the core property of one class of CPs eliminates a number of empirical difficulties faced by accounts appealing to factivity or givenness.

A seemingly unrelated issue is the derivation of temporal adverbial clauses. This topic, although dealt with in a few relatively well-known works (e.g. Geis 1970, Larson 1990, Lipták 2005, a.o.), has somehow not received much attention in the literature. One idea that has been around for a couple of decades is that some adverbial clauses are derived via operator movement, essentially

through a form of relativization. I argue that we need to distinguish *two kinds of operator movement*: long movement of a temporal operator from inside VP, and short movement of an event operator originating just outside TP. The second of these is what is referred to as “*event relativization*”, and I claim that the referential CPs discussed in the realm of object clauses are an instantiation of this derivation. The diagnostics for this derivation include islandhood and the absence of main clause phenomena such as certain kinds of topicalization, and these are shown to derive from intervention with the posited operator movement. With this, I depart from the usual assumption that the syntactic difference between object clause types comes down to complexity in the form of truncation (cf. Haegeman 2006) or extended projections of CP (cf. McCloskey 2005, de Cuba 2007 and so on). Rather, referential CPs are treated as one subclass of CPs that are derived via this short operator movement, and include also conditionals and some temporal adverbial clauses. This, naturally, has the implication that if we are to posit a structural parallel between referential CPs and DPs, referential DPs must also be derived through operator movement on their left periphery. I show that this is not far-fetched, and can be supported with extraction data suggesting that referential DPs are also subject to intervention effects rendering them weak islands for extraction.

2 Empirical coverage and methodology

Chapter 1 of my dissertation deals with object clauses. After a literature overview, I present arguments for the view that the dividing line between the two types of complement clauses is based on referentiality. I show that a diverse set of properties of referential CPs (RCP) falls out naturally if we assume that they are referring expressions, and I contrast the effects of factivity, givenness and referentiality to show that this is the correct generalization. Support for this claim comes from cross-linguistic observations regarding the parallel behavior of RCPs and referring DPs, and also from experimental prosodic data indicating that neither factivity nor givenness is reflected in syntax. I present the technicalities of the event relative analysis of RCPs, and tie this in with CP/DP parallelism and extraction issues. The main arguments here come from the realm of intervention effects, where it is shown that positing a short operator chain on the left periphery (between TP and CP) of referential object clauses can predict subtle patterns with respect to the availability of various elements (topics, foci, adverbials) in these clauses. The last section in this chapter relates the outcome to the topic of Chapter 2, namely clauses derived via operator movement (relativization) in the temporal domain.

In Chapter 2, I focus on diagnostics and syntactic/semantic effects associated with P-elements that introduce clauses derived via long operator movement and ones introducing event relatives in Hungarian. The two Ps that turn out to be the most interesting from this perspective are the suffix *-ig* ‘until/for/while’ and the postposition *óta* ‘since’. I look at the properties of *-ig* in detail, with special attention to its interaction with negation and other operators, as well as the bearings of the Hungarian facts on the ‘until-debate’. Having established the existence of two types of temporal relativization in

Hungarian, I turn to data from English to show that the two relativization strategies demonstrated for Hungarian are attested in English as well. In particular, I discuss long-distance dependencies in temporal adverbial clauses and outline the relevance of the findings of this chapter to the said construction in English, especially with respect to the role of specificity in the movement of the relative operator out of a weak island. Finally, in the last section, I tie in the results of this chapter with the outcomes of Chapter 1, and provide a paradigm of clauses derived by operator movement.

3 Results and conclusions

The main contributions of my dissertation are the following:

I. The introduction of the concept of referentiality into the discussion of the syntax and semantics of embedded clauses and CP/DP parallelism, and the elimination of lexico-semantic (factivity) and pragmatic (givenness, assertion) concepts from the syntactic analysis of object clauses.

II. A fine-tuning of operator movement analyses of the derivation of various clause types (esp. temporal and object clauses), and the identification of ways of telling apart operator chains of differing lengths and feature make-up based on intervention effects (left-peripheral elements and extraction).

III. A novel analysis of *until*-constructions that eliminates the need for the stipulation of stativizing negation, expletive negation of lexical duplication of *until*, and makes it possible to account for the seemingly special properties of *until*-phrases without any exceptional machinery.

3.1 Object clauses

With respect to the structure and interpretation of object clauses, I have argued for basic claims:

I. There are in fact two structurally different finite clauses that can serve as direct objects to verbs of attitude and saying; these two clause types are not differentiated by factivity (a semantic property) or givenness (a pragmatic concept) but by referentiality. Thus, referential CPs (or RCPs for short) denote embedded propositions without illocutionary force. Meanwhile, non-referential CPs (or NCPs) contain illocutionary force and may be matrix or embedded clauses. RCPs pattern with referring expressions in a number of ways, and the environments in which they occur cannot be correctly defined with reference to the verb selecting them as object or to the pragmatic context. Contextual givenness, a property that is often associated with what I have labeled RCP, does not correlate with syntactic structure directly, and is not a necessary correlate of referential clauses. Factivity, meanwhile, is the lexico-semantic feature of verbs that is often associated with contextual givenness of the complement clause but, once again, not in a direct way that has any effect on syntax. Factivity, givenness and referentiality are independent, with only the latter influencing syntax.

II. As for the syntactic difference that is claimed to result from the referentiality of the clause, I have argued that the referentiality of the clause is derived via operator movement, essentially a relativization operation where the relativized portion of the structure is the entire eventuality denoted by the TP. The movement of this operator creates an event relative, which is the syntactic realization of an RCP on this account. Meanwhile, the operator movement is evidenced by various intervention effects that allow us not only to seek evidence for the proposed movement, but also to characterize more precisely the feature make-up of the operator and the path of its fronting movement.

III. These results open up a new avenue in the realm of CP/DP parallelism. In particular, the often noted parallel between certain types of CPs (namely, RCPs) and certain DPs (referential DPs) turns out to be their referential property, which is derived via the same syntactic mechanism (operator movement). As such, the parallel between CP and DP has been rendered more precise, with verifiable predictions for extraction and the structure of the left periphery.

3.2 Temporal adverbial clauses

The most important contributions of this chapter are the following:

I. I argue for the existence of two different strategies for forming temporal adverbial clauses – temporal relatives, where a temporal expression from inside the adverbial clause is relativized via long operator movement, and event relatives, where the event operator moves more locally, from the TP-domain to the CP-layer. This distinction corresponds to robust syntactic effects.

II. Looking at the properties of the suffix *-ig* ‘until’ in detail has shown that, despite the dual distribution of this P (originating either inside the adverbial clause and taking a time expression as its complement, or starting out higher and connecting the matrix and embedded events), the seemingly complex pattern of Hungarian facts supports the ‘single-*until*’ line of analyses, and does not warrant the introduction of special machinery like ‘stativizing’ or ‘expletive’ negation. I have advanced a new account of *until* (cf. MacDonald & Ürögdi forthcoming) that eliminates a number of stipulations and machinery in competing analyses (e.g. Giannakidou 2002 and Mittwoch 1977, a.o.). The three-way contrast among uses of this suffix (involving no negation, predicate negation, and Neg-raising out of the adverbial clause) is shown to follow from the interaction of *-ig*, negation and focus structure.

III. Based on the observations made about Hungarian, I extend this analysis to English temporal adjunct clauses, proposing that the same temporal relative vs. event relative division can be exploited there as well to account for the availability of long-distance dependencies.

IV. Finally, I propose a parallel between event relatives in the temporal domain and other constructions disallowing the low construal but still displaying intervention effects and thus argued to feature local operator movement (i.e., event relativization), namely conditionals, causal adverbial clauses and factive complements / referential object clauses (or RCPs).

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