

Infinitives and Control in Syrian Arabic*
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The present work aims at suggesting an analysis of control constructions in a language that does not have infinitival forms in the Roman or Germanic sense. More specifically, we will show how a configuration of control is obtained in Syrian Arabic¹ (SA), a language possessing only inflected verbal forms. By doing this we wish to locate SA in the general discussion on the nature of control constructions. We will concern ourselves in particular with two questions: (i) how many types of control are there? (ii) is it necessary to postulate the existence of PRO? As for the first question, we will rely on the analyses of Wurmbrand (1998) and Landau (1999). They both identify two types of control: obligatory vs. variable control (Wurmbrand) and exhaustive vs. partial control (Landau). We will show that these analyses cannot be applied directly to SA since the syntax of this language manifests only one type of control. As for the second question, we hope to show, in the spirit of Borer (1989), that our analysis can dispense with postulating the existence of PRO.

1. Syntactic representation of control: how many types of control are there?

1.1 Wurmbrand (1998)

Wurmbrand divides the control constructions into two types. In the first, the matrix verb selects a VP (verbs of the type *try*); in the second, the matrix verb selects a CP (verbs of the type *decide*).

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|--------|---------------------------------|--------------------|
| (1) a. | John tried to go to Kamchatka | [infinitive in VP] |
| b. | John decided to go to Kamchatka | [infinitive in CP] |

(1a) is an example of semantic or obligatory control while (1b) is an example of syntactic or variable control. In order to back this partition up, she shows, namely for German, Japanese and English, that the clauses containing an infinitive VP are mono-clausal and as a consequence, that matrix verbs in these constructions are restructuring verbs. This implies that these clauses do not contain CP material:

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|--------|---|
| (2) a. | *John tried that he visit(s) his sister |
| b. | John decided that he would visit his sister |

A second implication is that the infinitival verb does not contain temporal information (is not specified for tense), the source for this information is associated exclusively with the matrix verb:

- | | |
|--------|--|
| (3) a. | # John tried to visit his sister in two months |
| b. | John decided to visit his sister in two months |

Third, there is no position in which nominative case can be assigned in the embedded clause, thus the licenser of this case is done only by the matrix verb. Wurmbrand

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¹We deal here only with the Damascus dialect.

illustrates this with the following example from German:

- (4) a. ...[der Lastwagen und der Traktor] zu reparieren versucht wurden/*wurde
 ...[the truck and the tractor]-NOM to fix try were/*was
 '...someone tried to fix the truck and the tractor'.
 b. ?...mir [die Briefe]_i auf Anhieb t_i zu entziffern gelungen sind
 ... I-DAT [the letters]-NOM immediatly to decode succeed were
 '...I succeeded in deciphering the letters right away'

in (4a), the verb of the matrix clause is in the passive and the direct object in the embedded clause moves to the matrix clause to receive nominative case from the matrix verb. The same is not possible with verbs of the type decide in (4b).

finally, in sentences of obligatory control, the embedded clause does not contain a subject position, thus there is no reason to consider the existence of PRO.

- (5) *...{sich} der Fisch {sich} vorzustellen versucht wurde
 ...{ANAPHOR} *the fish*-NOM {ANAPHOR} imagine try was
 '...someone tried to imagine himself the fish'

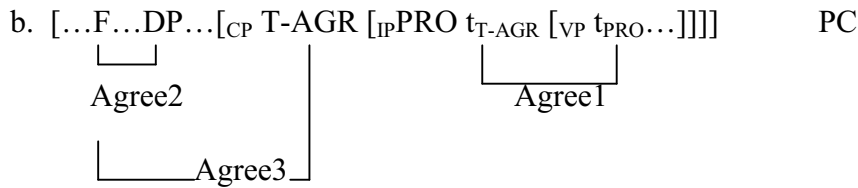
in (5), the presence of the anaphors makes the sentence agrammatical since there is no antecedent (PRO) that can license them.

This analysis indicated that the obligatory control constructions are interpreted as raising constructions. This is a natural conclusion if we consider, as does Wurmbrand, the infinitives not to have a temporal interpretation contra Stowell (1982). Through these four tests, Wurmbrand shows the existence of two types of control configurations.

1.2 Landau (1999)

Landau (1999) refines Wurmbrand's analysis in showing that the distinction between obligatory control and variable control infinitives is not so simple. He suggests a re-division: cases of obligatory control can be further divided into two groups: exhaustive control (EC), where the subject of the matrix clause is identical to the subject of the embedded clause, and partial control (PC), where the subject of the matrix clause is contained in the underlying subject of the infinitival clause and thus controls it partially. For the two cases, Landau proposes the same number of projections, contrary to Wurmbrand. The only difference between the two types of control is that the infinitival form in the partial control constructions reaches a higher position than an exhaustive control infinitive. In other words, what he suggests is that the embedded part in the case of PC is marked [+T] and this is why movement is available, while the embedded part in the EC configuration is [-T] and no movement is involved. Landau presents the two cases:

- (6) a. [...F...DP...[CP[IP PRO T-AGR [VP t_{PRO}...]]]] EC
-
- The diagram illustrates three agreement paths in the structure [...F...DP...[CP[IP PRO T-AGR [VP t_{PRO}...]]]]:
- Agree1:** A bracket connects T-AGR in the IP to t_{PRO} in the VP.
 - Agree2:** A bracket connects F in the CP to DP in the CP.
 - Agree3:** A bracket connects F in the CP to t_{PRO} in the VP.



This analysis consists in establishing three relations of agreement in both types of control. The first agreement relation (AGREE1) is established between T-AGR and the trace of PRO in the embedded clause; the PRO moves further to SpecTP; the second relation of agreement (AGREE2) is established between the controller DP the functional head F² in the matrix clause; and finally, the third agreement relation (AGREE3) holds between F and PRO in the case of EC and between F and T-AGR in the case of PC. In the case of PC, T-AGR [+T] moves to C, and from there it is accessible to matching its features with F. in the case of EC, where T-AGR is [-T] this movement is blocked for economy reasons.

Landau relies in his analysis on the existence of feature he calls semantic number. He explains that PRO cannot inherit this feature but AGR can, and this is the source for the difference of interpretation between PC and EC.

To sum up, both authors think there are two types of control, each with its own syntactic representation.

1.3 Application of the analyses to Syrian Arabic.

The sentences in (7) show that the SA data does not match Wurmbrand's analysis. It seems that for her two types there are the same number of projections and that a CP can be present in both cases of control:

- (7) a. Haawal Sami (?inno) y-zuur ??xt-o
 try-3s.m.PF Sami (COMP) visit-3s.m.IMPF his sister-ACC
 'Sami tried to visit his sister'
- b. qarrar Sami (?inno) y-zuur ??xt-o
 decide-3s.m.PF Sami (COMP) visit-3s.m.IMPF his sister-ACC
 'Sami decided to visit his sister'

The embedded clauses contain a position in which accusative case can be assigned; and as SA is a pro-drop language, we can postulate the existence of a subject position. The only test from Wurmbrand's analysis that can be applied to SA is that of the temporal interpretation. This test shows that a temporal interpretation is missing in the cases of obligatory control (with try):

- (8) a. #Haawal Sami (?inno) y-zuur ??xt-o xilaal šahr-een
 try-3s.m.PF Sami (COMP) visit-3s.m.IMPF his sister-ACC Prep month-dual
 'Sami tried to visit his sister in two months'
- b. qarrar Sami (?inno) y-zuur ??xt-o xilaal
 šahr-een
 decide-3s.m.PF Sami (COMP) visit-3s.m.IMPF his sister-ACC Prep month-dual

²F represents T in case of subject control and v in case of object control or an applicative head if the controller.

‘Sami decided to visit his sister in two months’

Landau's analysis seems to be better suited for the SA data, since it takes into consideration that there is the same number of projections in the two types of clauses, and that the difference is [$\pm T$] in the embedded part. The tense properties of embedded clauses in SA will be presented in the next section.

2. Minimal conditions for obtaining a control configuration or, what is a control infinitive?

After this brief presentation of the two analyses of control, the question at hand is to determine what an infinitive is exactly or, what is a non-finite verb? Let us compare the SA parallels to sentences of exhaustive and partial control:

- (9) a. Haawal Sami (?inno) y?nšor l-ktaab
try-3s.m.PF Sami (COMP) publish-3s.m.IMPF the book
‘Sami tried to publish the book’
b. fakkar Sami (?inno) našar/raH y?nšor l-ktaab
believe-3s.m.PF Sami (COMP) publish-3s.m.PF/FUT the book
‘Sami believed that he has published/will publish the book’

the tense of the embedded part in the case of partial control (9b) is either the perfective (past) or the future, while in the exhaustive control (9a) only the imperfective form³ is allowed. This form has a Tense/Agreement affix but it is a dependent form since it cannot appear in matrix clauses without being accompanied by a particle (created from an impoverished verbal form) designating the future or the present progressive:

- (10) a. *y?ktob Sami ?r-risaale
write-3s.m.IMPF Sami the letter
‘Sami writes the letter’
b. ‘am/raH-y?ktob Sami ?r-risaale
PROG/FUT-write-3s.m.IMPF Sami the letter
‘Sami is writing/will write the letter’

These particles never appear in the embedded part of an exhaustive control construction:

- (11) Haawal Sami (?inno) *‘am/*raH y-zuur ??xt-o
try-3s.m.PF Sami (COMP) PROG/FUT visit-3s.m.IMPF his sister
‘Sami tried to visit his sister’

Observe that the only constraint that characterizes a control clause (vs. an independent clause) is the absence of the tense particles and as a consequence of nominative case. In this way we join Manzini & Roussou (1998) in defining the minimal condition for a context of control as the failure to assign nominative case. Thus the fact that a verbal form is spelled-out with inflectional affixes is not relevant in itself for the

³We use the term imperfective in the traditional sense of the word and not in the aspectual one.

context of control. The property at stake is the capacity of a verbal form to assign or not the nominative case.

3. The analysis

Landau's analysis is more suited to SA data since he assumes the same number of projections for all types of control constructions and since this way, there are two positions available for the embedded verb. SA clauses have the following form in (12) and (13):

- (12) [...F...DP...[_{CP} ?inno [_{TP} [_T T [_{XP} *pro* [_X V_{IMPF} [_{VP} ...]]]]] [+EC]
 (13) [...F...DP...[_{CP} ?inno [_{TP} *pro*/DP [_T T-V [_{XP} t_{pro}/DP [_X t_V [_{VP} ...]]]]] [-EC]

In (12), the representation of the EC clause in SA, the *imperfective* verb is found in an intermediate position between VP and T°. It can, thanks to its morphology, identify a *pro* but it cannot assign nominative case to it (this description corresponds to Landau's AGREE1 in (6)). AGREE2 is established between DP and F in the matrix - this does not diverge from the original analysis; finally, the actual control relation is established between F and *pro*. In (13), the representation of PC, the verb can climb to T° and assign nominative to an overt DP or license *pro*. Thus, the difference between the case of exhaustive control in (12) and the case of partial control in (13) depends on the position the embedded verb can reach: X° for the dependent form and T° for the independent one. This way, finiteness in SA is a property attributed to an entire clause and not to an isolated form. This goes back to the definition of control in section 2, finiteness of a verb does not depend on morphological affixes but on the position in which it is found and depends on whether from this position nominative case can be assigned or not. We wish to make clear that the verbal form in X° is not a bare form⁴ and thus it cannot be analyzed in V. We associate the presence of temporal/modal⁵ information on the fact that the *imperfective* has an inflection affix which implies that this form has its place in the functional domain.

Our analysis diverges from Landau's in two points. First, we do not need to assume the existence of PRO. In the spirit of Borer (1989), we assume that the empty category in a context of control is pronominal and that an anaphoric AGR is responsible for the co-reference with the controller. SA is a pro-drop language and as such, its inflected forms are capable of identifying a *pro*; if these inflected forms are found in a context of control, why should it be necessary to assume the existence of a different kind of an empty category? Furthermore, the PRO theorem holds that PRO should not be governed, however, in SA clauses the empty category is governed by two governors: by the inflection mark on the embedded verb and by the complementizer that can always be present.

Our second divergence from Landau's analysis consists in saying that the case of SA shows that a relation of control can be obtained through a filled complementizer position. Observe first that the presence of the complementizer ?*inno* does not induce to a violation of the ECP, like it is the case with *that* in English:

⁴SA has a real bare form, the *Masdar*, which is considered as the manifestation of the event and as such inserted in V.

⁵Stowell (1982) suggests that an embedded non-finite proposition contains an hypothetical future Time interpretation with respect to the Time of the matrix. We assume that the prefix of the *imperfective* form is the realization of this temporal interpretation in the embedded clause. Note that in Hebrew, the same prefix designates the future.

- (14) ?aya b?nt ?aal Sami (?inno) t baa'?t ?l-f?staan ?
 which girl say-3s.m.PF Sami (COMP) buy-3s.f.PF the dress ?
 'Which girl Sami said bought the dress ?'

furthermore, ?inno is a complementizer that can be suffixed with agreement morphemes corresponding to the phi-features of the subject of the embedded clause:

- (15) a. Haawal?t Mouna (?inno/?inna) t?nšor l-ktaab
 try-3s.f.PF Mouna (COMP-3s.m/3s.f) publish-3s.f.IMPF the book
 'Mouna tried to publish the book'
 b. fakkar Sami (?inno/?inna) našr?t Mouna l-ktaab
 believe-3s.m.PF Sami (COMP-3s.m/3s.f) publish-3s.f.PF the book
 'Sami thought that Mouna published the book'

this way, the filled C is not a blocking category, but a position that can participate in the anaphoric AGR chain and thus the presence of ?inno is not linked in a direct way to control.

According to our analysis, there is one type of control represented in the syntax of SA: exhaustive control (to remind the reader: where the controller controls entirely the underlying subject of the embedded clause and only it); and thus Landau's partial control and Wurmbrand's variable control have one and the same syntactic representation that equals the representation of embedded clauses without control.

4. Conclusion

Our starting point was showing that the SA data - a language without infinitival verb forms in the Romance or Germanic sense of the word - do not correspond entirely to two analyses of control infinitives proposed in Wurmbrand (1998) and in Landau (1999). The issue here was to determine which mechanism is used in order to obtain a context of control in SA. In order to determine this, we first identified the domain of control as a domain in which nominative case cannot be assigned. This implies that the inflectional prefixes used in SA in the context of control do not determine finiteness and do not assign nominative case. This state of affairs is contrary to the case of Italian where finite and non-finite verbs occupy the same position and are distinguished by their morphology. Thus in the case studied here, it is not in the morphologic level that finiteness is determined but in the syntactic one. Our analysis illustrates that a verbal form can reach one of two projections: X° (V<X<T) that is the site of the imperfective (devoid of particles), and T° that is the landing site of the independent forms capable of assigning nominative case. This implies that C does not always have to select a TP.

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