Symmetry and asymmetry in the Hebrew copula construction

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1 Overview

The copula construction in Hebrew has received much attention in the linguistic literature. Nevertheless, one non-canonical variant has been largely neglected. In this variant the copula, flanked by two NPs, exhibits agreement with the post-copular NP, contrary to the canonical variant, where the agreement controller is the initial NP. This construction, often referred to in the literature as 'copula inversion', poses challenges to the notion of *subject* and its relation to agreement in various and diverse languages.

This study proposes that two mechanisms are responsible for the licensing of the Hebrew NP-NP copula construction. First, alongside the general argument realization principle, a copula-specific rule reverses the mapping of ARG-ST members to VALENCE categories and allows for both NPs to function as either subject or complement. Second, copula inversion is argued to be an instance of a general V2 construction in Hebrew, where a clause-initial constituent triggers subject–verb inversion. Fronting a focused non-subject element expresses *contrastive focus*, whereas a discourse-new subject is inverted to express *presentational focus*. The two mechanisms account for the apparent symmetry between the two NPs. Nevertheless, there is no symmetry with respect to semantics; each NP maintains its semantic function as subject or predicate regardless of its linear position or syntactic role.

2 Background

The standard data items which appear in the literature on the Hebrew copula construction are given in 1.

(1) *dani   (hu)   more   / nexmad   / ba-xacer.*
    Danny (Pron.3SM) teacher.SM / teacher.SM / in.the-yard
    'Danny is a teacher/nice/in the yard.'

The predicates consist of NPs, AdjPs, and PPs. The copula linking the subject and the predicate is homophonous with the 3rd person pronoun (hence the gloss) and agrees with the subject. The pronominal copula is only used in present tense, and is sometimes optional. In past and future tense an inflected form of the verb *haya* 'be' is obligatorily used. The present tense form of *haya* is missing from the paradigm.

(2) *dina hayta/tihiye   mora   / nexmada   / ba-xacer.*
    Dina was.3SF/will.be.3SF teacher.SF / teacher.SF / in.the-yard
    'Dina was/will be a teacher/nice/in the yard.'

AdjP predicates obligatorily exhibit number–gender agreement with their subjects (1 & 2). With NP predicates, however, agreement is not imposed by the grammar. Rather, the agreement between the animate subject and NP predicate *more/mora* 'teacher' in 1 & 2 is due to sortal restrictions. This point is often overlooked, due to the preponderance of examples with animate (human) subjects in the literature. In 3, for example, there are agreement mismatches between the subject and two alternative predicates.

(3) *ha-sfarim   ha-'ele   hem   matana/matanot   mi-xaveray.*
    the-books.PM the-these.PM Pron.3PM present.SF/presents.PF from-my.friends
    'These books are a present/presents from my friends.'

The focus of this paper is on a different agreement domain, namely the agreement properties exhibited by the pronominal and verbal copulas. In an overwhelming majority of cases the copula agrees with the subject (e.g., 1-3). Yet there are instances where the post-copular NP controls the agreement (4).[1]

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[1] The two NPs appear in square brackets, with the agreement controller in boldface and the head of the other NP underlined.

(4) *[merivot beyn axim] hi [derex me'ula lehitkonen la-xayim].*
   fights.PF between siblings.PM Pron.3SF way.SF excellent.SF to.prepare to.the-life
   'Fights between siblings are an excellent way to prepare for life.'

This construction, often referred to in the literature as 'copula inversion', challenges the notion of *subject* and its relation to agreement: Is the post-copular NP the subject or is there non-subject agreement? As I explore this issue I refer to the two constituents by using the linear terms *NP1* and *NP2*.

3   Copula inversion

Hebrew non-canonical copula constructions   Doron (1983) in her comprehensive analysis of verb-less predicates in Hebrew discusses a number of non-canonical copula constructions. One construction is the predicate-first construction, which is the mirror image of the canonical 1.

(5) *nexmad/more hu dani.*
   nice/teacher Pron.3SM Danny
   'Danny is nice/a teacher.'   Doron (1983, ex. 51)

In Doron's (1983) (transformational) system, this construction is derived by the predicate moving to adjoin INFL and the subject moving to an appositive (A') position (to satisfy the θ-criterion). Importantly, the agreement controller is the post-copular NP subject.

In addition, Doron (1983), citing Rubinstein (1968, p.137), discusses cases where the copula exhibits variable agreement. As an illustration of the two agreement options, she provides the following example (due to Emmon Bach).

(6) *[ma še-dekart katav] hu/hi [ha-hoxaxa le-kiyumo].*
   what that-Descartes wrote Pron.3SM/Pron.3SF the-proof.SF to-his.existence
   'What Descartes wrote was the proof of his existence.'   Doron (1983, ex. 43)

She claims that with NP1-agreement the sentence has a specificational reading (i.e., 'what Descartes wrote proves his existence'), whereas with NP2-agreement there is only an identity reading. More generally, Doron (1983, p.91) suggests that "AGR in nominal sentences agrees with the subject or the predicate, depending on which is 'more referring'". Nevertheless, she does not provide an analysis of the NP-2 agreement variant.[2]

Copula inversion in Catalan   Alsina & Vigo (2014) focus on copula inversion and non-subject agreement in Catalan and related languages (e.g., Spanish and Italian) and provide the following examples.

(7)   a. *[Els **impostos**] són [el problema].*
        the.PL taxes.PL be.PRES.3P the.SG problem.SG
        'The taxes are the problem.'

      b. *[el problema] són [els **impostos**].*
        the.SG problem.SG be.PRES.3P the.PL taxes.PL
        'The problem is taxes.'

      c. **[el **problema**] és [els impostos].*
        the.SG problem.SG be.PRES.3S the.PL taxes.PL

      d. **[Els impostos] és [el **problema**].*
        the.PL taxes.PL be.PRES.3S the.SG problem.SG   *Alsina & Vigo (2014, exx. 1 & 2)*

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[2]Hebrew has an additional pronominal copula, *ze*, which alternates between exhibiting agreement with NP2 or appearing in default form (Sichel, 1997, among others). A discussion of this construction is omitted due to space limitations.

As is illustrated by these examples, agreement remains with the plural NP regardless of its position. More generally, Alsina & Vigo (2014) propose that agreement in Catalan is not subject–verb agreement, but rather agreement between the verb and an argument which is coreferential with the subject and is positioned highest in a Person-Number Hierarchy. This argument may coincide with the subject, but not necessarily, as is the case in (7b), where the subject is NP1 and the agreement controller is NP2.

Reversed Equative *be* in English   Post-copular agreement is also found in English. Kay & Michaelis (2017a,b) discuss the Reversed Equative *be* construction where plural NP2s (optionally) control the agreement properties of the copula.

(8)   a.   [My biggest <u>worry</u>] are [the injury **risks**].   K&M (2017b, ex. 0.6)

    b.   [My worst <u>nightmare</u>] were [the **soups** she would make for dinner].

Kay & Michaelis (2017a,b) argue that this construction is a subtype of the more general Split Subject construction, which is characterized by having subject properties split across two arguments: the Agreement Source (NP2 in this case), which is also the discourse-pragmatic focus, and the External Argument (NP1). The splitting of subject properties is similar in spirit to the analysis proposed by Alsina & Vigo (2014), yet the data is not identical. In English, NP1-agreement is always possible, whereas NP2-agreement is restricted to cases where NP1 is singular and NP2 is plural. Thus, the English counterpart of the ungrammatical Catalan example 7c is grammatical, but not 7d.

4   Copula inversion in Hebrew: The data

The discussions of the Hebrew copula construction in the literature are mostly based on made-up examples (e.g., 1-3). A corpus investigation revealed a much richer dataset with a non-negligible number of non-canonical constructions.[3] Nevertheless, it is important to emphasize that NP2-agreement is the more marked variant; in each of the following examples an NP1-agreeing copula is the unmarked option.

    The English Reversed Equative *be* and the Romance copula inversion were found to be sensitive to the *number* feature of the NPs. Hebrew, however, exhibits more variability; NP2-agreement occurs with plural NPs (9), but also with singular NPs, where NP1 is plural (4). All four agreement options illustrated in 7 for Catalan are possible in Hebrew.

(9)   *[<u>ha-tokfan</u>]*   *hem*   *[**mimšelet** yisra'el **u-mimšal** xamas **ve-šutafav***
    the-aggressor.SM Pron.3PM government Israel   and-regime Hammas and-its.partners.PM
    be-aza] *ve'ilu* *[<u>ha-korban</u>]* *hem*   *[**tošavey**   *aza* **ve-tošavey**   *medinat*
    in-Gaza whereas the-victim.SM Pron.3PM inhabitants.PM Gaza and-inhabitants.PM state
    yisra'el].
    Israel

    'The aggressor is the Israeli government and the Hamas regime and its partners in Gaza, whereas the victim is the inhabitants of Gaza and the inhabitants of the state of Israel.'

    The choice between the two agreement patterns is attributed by Doron (1983) to semantics. She predicts that NP2-agreement occurs when NP2 is the more referring argument. This is indeed the case with 10, but not with 11, where NP2 is predicational. Thus, we find NP2-agreement with both specificational and predicational sentences.

(10)   *[<u>dugma</u>   le-tocar   šel ha-tkufa] hu   [**beyt**   akiva be-rexov hercel].*
    example.SF of-product.SM of the-era.SF Pron.3SM house.CS.SM Akiva in-street Herzl
    'An example of a product of this era is Akiva House on Herzl Street.'

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(11) *omnam naxon ha-davar ki* [*ha-xumca ha-hiyaluronit*] *hu* [***mucar** ha-mešameš*
     indeed true the-thing that the-acid.SF the-hyaluronic.SM Pron.3SM product.SM that-used.SM
     ke-xomer miluy...].
     as-substance filling
     'Indeed it is true that hyaluronic acid is used as a filling substance...'

Syntactically, the NP-NP copula clause exhibits full symmetry: each NP can appear in either position and the copula can agree with either NP. This is not the case with the NPs' semantic roles: regardless of word order, it is always the same NP that is the predicate of the other.[4] Evidence for this is found in the *consider*-like Hebrew construction (12a). The order of the complements of *ro'im* 'see' in 12a is fixed: the semantic subject must precede the semantic predicate. In 12b, which occurs a few words later, the same predicate (*šoreš ha-be'aya* 'the root of the problem') precedes its subject, yet the order can also be reversed. The 'consider' test applied to the rest of the NP2-agreement examples presented here reveals that NP1 is the semantic subject in 4 & 11 and the semantic predicate in 9, 10 & 12b.

(12) a. *aval anaxnu lo ro'im ba-*[*mitnaxalim*] [*et šoreš ha-be'aya*]...
        but we not see in.the-settlers ACC root the-problem...
        'But we don't consider the settlers the root of the problem... '
     b. ...[*šoreš ha-be'aya*] *hem* [***gufey** ha-šilton ha-yisra'elim še-menahalim*
        root.CS.SM the-problem Pron.3PM bodies.PM the-regime the-israeli that-maintain
        et ha-mediniyut ha-zu].
        ACC the-policy the-this
        '...The root of the problem is the Israeli governing bodies who maintain this policy.'

5 Triggered inversion and copula clauses: The analysis

I propose that NP2-agreement clauses are instances of *triggered inversion* (Shlonsky & Doron, 1992), in which, similarly to V2 constructions in other languages, a clause-initial constituent triggers subject–verb inversion. Consequently, unlike the analyses proposed for English and Catalan above, in Hebrew the controller of the agreement is the subject, regardless of its position. In clauses with NP2-agreement NP1 is a fronted complement (i.e., the trigger), and NP2 is the inverted subject.

Since the basic word order in Hebrew clauses is SVO, this is a marked construction, often motivated by information structure considerations. Indeed, in isolation, NP2-agreement clauses do not always sound perfectly grammatical. Some speakers would even label them as performance errors or instances of extra-grammatical "attraction". Yet, these clauses appear in written (possibly proofread and/or edited) texts of diverse registers. Moreover, in many cases of NP2-agreement the distance and material between the head of NP1 and the copula are not substantial enough to cause distraction or accidental mismatches. Finally, an examination of the contexts in which copula inversion appears suggests that it is motivated by information structure considerations.

I identify two types of information structures: *contrastive focus* and *presentational focus*. An example of contrastive focus is 9. The sentence clearly contrasts the aggressor with the victim. The contrast is expressed by fronting the NPs denoting each "role" to their respective clause-initial position and inverting the subject and copula, which maintain their agreement relationship. Presentational focus is encoded according to the principle of "new information comes last". In 10 the subject, Akiva House, is *discourse-new* and, as such, is inverted with the copula and expressed after the *discourse-old* predicate. Similarly, the inverted subject in 12b constitutes the new information. In the full paper I show that triggered inversion with NP2-agreement also occurs with AdjP and (non-agreeing) PP predicates.

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[4]Equative sentences with two referential NPs (e.g., *Cicero is Tully* or *Danny is Mr. Cohen*) are not easy to find in a corpus.

In order to account for the different variants of the copula construction I distinguish between syntactic and semantic predication by allowing NPs which are the semantic predicates to function as the syntactic subjects (e.g., 4 & 11).[5] This, I suggest, is due to the special status of NPs, which are compatible with the two functions. In formal HPSG terms, a lexical rule reverses the "default" mapping between ARG-ST and VALENCE list members (13). Moreover, unlike the "standard" HPSG raising analysis of the copula, predication in this case is only semantic. The semantic predicate does not select the semantic subject as its syntactic subject and does not "pass" this requirement to the copula.

(13)   Argument realization of copula inversion

$$\begin{bmatrix} \text{VAL} & \begin{bmatrix} \text{SUBJ} \left\langle \boxed{2} \right\rangle \\ \text{COMPS} \left\langle \boxed{1} \right\rangle \end{bmatrix} \\ \text{ARG-ST} \left\langle \boxed{1}\text{NP}\begin{bmatrix} \text{INDEX} \boxed{3} \end{bmatrix}, \boxed{2}\text{NP}\begin{bmatrix} \text{CAT} \mid \text{HEAD} \mid \text{PRED} + \\ \text{CONT} \mid \text{RELS} \left\langle \begin{bmatrix} \text{ARG1} \boxed{3} \end{bmatrix} \right\rangle \end{bmatrix} \right\rangle \end{bmatrix}$$

In the full version of the paper I show how all other aspects of this construction (e.g., subject–verb agreement, triggered inversion) fall out from general principles and constructions in the Hebrew grammar.

In summary, triggered inversion coupled with two alternative mappings of argument structure elements account for the different variations of the copula construction and capture the syntactic symmetry and semantic asymmetry between the two NPs. Moreover, an information-structure account explicates the motivation behind these variations.

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[5]This analysis is not compatible with a previous HPSG analysis of nonverbal predicates in Hebrew (Haugereid et al., 2013).