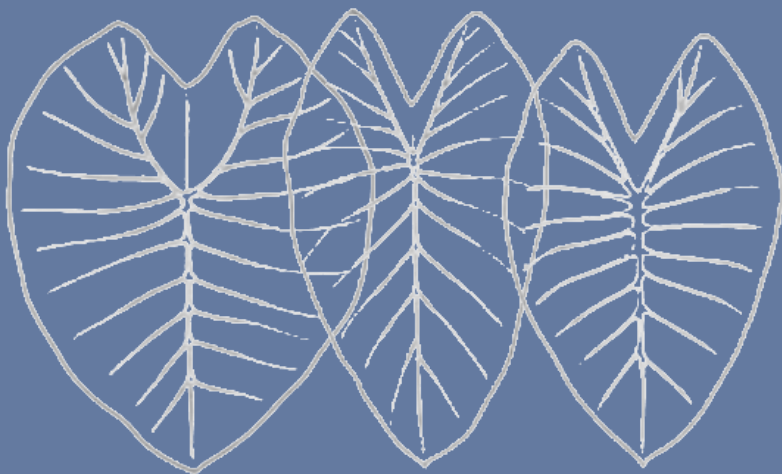# Proceedings of TripleAFLA

9th TripleA workshop for semantic fieldworkers
29th annual meeting of the Austronesian Formal Linguistics Association

Edited by Vera Hohaus, Jens Hopperdietzel & Siena Weingartz

Preface

The **TripleAFLA** conference was hosted by the Department of Linguistics and English Language at the University of Manchester between the 28th June and the 1st July 2022. The conference was a joint event combining the 9th TripleA workshop for semantic fieldworkers and the 29th annual meeting of the Austronesian Formal Linguistics Association (AFLA).

The programme included 22 talks selected by reviewed abstract, of which eight are featured as papers in this volume. Invited talks at the conference were from Sasha Calhoun (Victoria University of Wellington), Tingchun Chen, (National Tsing Hua University, Hsinchu), Joash Gambarage (University of British Columbia, Vancouver), Paloma Jeretič (Leibniz-Zentrum für Allgemeine Sprach-wissenschaft, Berlin), Manfred Krifka (Leibniz-Zentrum für Allgemeine Sprachwissenschaft, Humboldt-Universität zu Berlin), and Luisa Martí (Queen Mary University of London).

We are grateful to the reviewers listed below for their time and feedback.

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A UNIFIED SEMANTICS FOR *KAMAN* IN HIJAZI ARABIC*

Shatha Alahmadi
The University of Manchester
shatha.alahmadi@postgrad.manchester.ac.uk

This paper explores the semantic interpretations available for the focus particle *kaman* in Hijazi Arabic- namely, additive, scalar, and repetitive. The paper argues that the different interpretations do not represent a case of lexical ambiguity. Instead, a unified analysis is available, under which *kaman* is always an additive focus particle.

1.   Introduction

This paper discusses the semantic properties of the Hijazi Arabic (HA, henceforth) particle *kaman*.[1] It focuses on the multiple interpretations this particle can receive; namely, an additive interpretation equivalent to *also*, a scalar interpretation equivalent to *even*, and a repetitive interpretation equivalent to *again*.[2] The paper argues for a unified analysis of *kaman* as a focus-sensitive particle with an additive presupposition. The analysis can account for the additive, scalar, and repetitive interpretations.[3]

The Puzzle. While *kaman* is standardly perceived by HA native speakers as the translational equivalent of English *also/too*, it might sometimes seem ambiguous between an additive, scalar, and repetitive interpretation. Consider example (1), where *kaman* can be translated to 'also' (interpretation A; additive), 'even' (interpretation S; scalar), and 'again' (interpretation R; repetitive).[4] This ambiguity is resolved when each of these interpretations is given the appropriate context, as seen in contexts A, S, and R below.

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[1]Most of the data and discussion in this paper is based on Alahmadi (to appear). This paper, however, additionally presents a formal semantic analysis of the phenomenon under discussion.
[2]There is another quantity-related interpretation (equivalent to English *more*) which we leave for further research.
[3]Note that the scalar and repetitive meanings are not solely expressed by *kaman* in HA. There are specialized lexical items for them; namely, *hatta* 'even' and *marrah thanyah* 'again'.
[4]Abbreviations used in glosses are 1,2,3 = 1st, 2nd, 3rd person, FEM = feminine grammatical gender, IMP = imperative, INT = intensifier, IPFV = imperfective, NEG = negation, PFV = past perfective, PL = plural, and SG = singular. Note that, in the examples throughout this paper, prosodic prominence is indicated by capital letters, and semantic focus and its scope is indicated by the square brackets and subscript *F*.

(1)   *Sarah   tabax-at   kaman*.
        NAME   cook.PFV.3SG-FEM   KAMAN
        Interpretation A: 'Sarah also cooked$_F$.'
        Interpretation S: 'Sarah even cooked$_F$.'
        Interpretation R: 'Sarah cooked again.'

        Context A: In preparation for tonight's family gathering, Sarah set the table, and...

        Context S: Sarah doesn't help much around the house, and her parents have come to expect that she doesn't. But today, she wanted to do something nice for them on their anniversary, so she not only cleaned her room and set the table...

        Context R: On Monday, Sarah cooked a meal for her parents. The next day, Sarah's parents walk into the house and find dinner served on the table. Sarah's father, correctly assuming that it was Sarah's doing, observes...

The puzzle in (1) raises two questions: 1) Is *kaman* lexically ambiguous, or is a unified semantic analysis available? 2) How does the availability of the interpretations interact with focus and context? Previewing of the answer to the first question, I will argue that *kaman* is not lexically ambiguous, and that a unified analysis is available where *kaman* is always an additive focus particle that presupposes that there is at least one contextually salient alternative proposition that is true. Regarding the second question, I will suggest that the interpretation of *kaman* is focus-sensitive, and additional contextual properties of the focus alternatives determine the available interpretation.

The plot for this paper is as follows: Section 2.1 provides background on HA. Section 2.2 gives an overview of focus marking in HA. Section 2.3 provides background on the semantics of focus. Section 3 presents data of *kaman* as an additive focus particle[5] and proposes a uniform analysis for *kaman*. Section 4 presents data on the scalar interpretation of *kaman* and extends the uniform analysis to this interpretation. Section 5 presents data on the repetitive interpretation and extends the analysis to this interpretation as well. The paper ends with concluding remarks in Section 6.

2.   Background
2.1.   Hijazi Arabic

HA is an Afro-Asiatic, Semitic language (ISO 639-3 code: acw), spoken by an estimated 10,300,00 users in the Hijaz region in Saudi Arabia. It is an agglutinative language. It is also a null-subject language where subjects can be omitted for information-structural reasons (Alzaidi 2014). The primary word order is SV(O), but other common word orders are VSO, VOS, and VO (Sieny 1978; Alzaidi 2014). HA is an under-researched language, with very little theoretical research in linguistics (but see Sieny 1978 and Alzaidi 2014, for instance). This paper presents the first study on the grammar of alternatives in HA and the syntax and semantics of its focus-sensitive particles.

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[5]The origin of the HA data is naturally occurring data in addition to introspection data from the author who is a native speaker of the language. Introspection was guided by elicitation methodology for fieldwork on meaning, and included acceptability judgements in contexts and translations (Matthewson 2004, 2011).

2.2. Focus Marking and Prosodic Prominence in Hijazi Arabic

Semantic focus-marking (short F-marking)[6] is indicated by prosodic prominence in HA, and can be controlled for by question-answer congruence (see also Alzaidi 2014; Alzaidi et al. 2019). In examples (2-4) below (modelled after Alzaidi 2014), the scope of semantic focus in the answers is congruent to the questions. For instance, in the constituent question in (2), the scope of focus in the answer covers only the prosodically prominent constituent *Lina* as it is the most congruent part of the answer to the question. However, the scope of focus is not always identical to the prosodically prominent constituent. In (3) and (4), for instance, the scope of focus in the answers to the corresponding questions is broad; we have a predicate focus structure in (3) and an all-sentence focus structure in (4). In this case, the scope of focus is the entire predicate in (3) and the entire sentence in (4) whereas prosodic prominence is realized only sentence-finally on the object *Lina* for both examples (see also Selkirk 1995).

(2) *Meen Ahmad mar?*   —   *Ahmad mar* [*LINA*]$_F$.
     who NAME visited   NAME visited NAME
     'Whom did Ahmad visit?'   'Ahmad visited Lina.'

(3) *Eiʃ sawwa Ahmad?*   —   *Ahmad* [*mar LINA*]$_F$.
     what did NAME   NAME visited NAME
     'What did Ahmad do?'   'Ahmad visited Lina.'

(4) *Eiʃ sar?*   —   [*Ahmad mar LINA*]$_F$.
     what happened   NAME visited NAME
     'What happened?'   Ahmad visited Lina.'

As seen in this section, focus is realized prosodically in HA. In Section 2.3 below, we discuss some background on the semantic interpretation of focus.

2.3. The Semantics of Focus

The semantics of focus is interpreted via the grammar of alternatives (Rooth 1985, 1992, 2016; Beaver and Clark 2008; Beck 2016; Howell et al. 2022). There are three components in the grammar of alternatives: focus marking, context dependency, and focus-sensitive operators, which we will briefly review in this section.

Focus-Marking. F-marking on a constituent triggers alternatives that are considered as substitutions to that constituent. In order to use these alternatives in the interpretation of un utterance, we follow Rooth (1985, 1992) in adding a new tier of interpretation, the alternative-semantic tier. A focused constituent now has two types of semantic values: an ordinary semantic value and an alternative semantic value. The ordinary semantic value is the value that the constituent gets even when it is not focused. The alternative semantic value is the set of all alternatives (triggered by F-marking) that are of the same semantic type of the constituent. For instance, F-marking on *Amira* in (5a) generates alternatives of type D_e. Thus, the alternative

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[6]Focus here is taken to be a syntactic feature that signals to the semantics the presence of alternatives.

semantic value of *AMIRA* is the domain of entities, (5b). At the propositional level, the ordinary value of (5a) is the proposition 'that Amira smiled'; its alternative value is the set of propositions of the form x smiled, where $x \in D_e$, as shown in (5c).

(5)   a.   [*AMIRA*]$_F$ *smiled*.
             Alternatives to the focused constituent [AMIRA]$_F$: {Amira, Lina, Ahmad, …}
        b.   Two tiers of interpretation: [[[*AMIRA*]$_F$]]$_{ORD}$ = Amira   [[[*AMIRA*]$_F$]]$_{ALT}$ = D_e
        c.   [[[*AMIRA*]$_F$ *smiled*]]$_{ORD}$ = that Amira smiled
             [[[*AMIRA*]$_F$ *smiled*]]$_{ALT}$ = that x smiled: $x \in D_e$

The alternatives triggered by focus need to be contextually restricted so that they can be relevant to the interpretation of an utterance. This can be achieved by context dependency, which we will discuss next.

Context Dependency. The set of alternatives generated by F-marking is infinite; it includes everything of the same semantic type of the focused constituent. In order to restrict this set to only the contextually relevant alternatives that we would need for the interpretation of the sentence, Rooth (1985, 1992) introduces the so-called squiggle operator ~ and the covert free variable C at Logical Form. The interpretation of ~ plus C restricts the alternatives and models their context dependency. C represents the set of relevant alternatives in the context, and the squiggle (defined in (6) below) evaluates the alternatives generated by focus in relation to their context-dependency. The squiggle presupposes that the ordinary value of C is a subset of the alternative value of the proposition. This way, we do not have to deal with the infinite set of alternatives generated by focus; we only have to consider the salient alternatives in the context, as seen in (7).

(6)   The squiggle (simplified):
        If α is a tree [β [~ C]], then [[α]]$^g{}_{ORD}$ is defined only if [[C]]$^g{}_{ORD} \subseteq$ [[β]]$^g{}_{ALT}$.

(7)   a.   <u>Context</u>: Discussing how Amira and her two sisters, Sarah and Lina, reacted…
             O*nly [AMIRA]*$_F$ *smiled*
        b.   The contextually salient alternatives:
             {that AMIRA smiled, that SARAH smiled, that LINA smiled}

The focused constituent and the contextually salient alternatives (as seen in 7, for instance) interact with focus-sensitive operators, which is the third component of the semantics of focus.

Focus-Sensitive Operators. Focus-sensitive operators are expressions that associate with the focused constituent in an utterance and interact with the alternatives involved in its interpretation (Rooth 1985, 1992; Beaver and Clark 2008; Beck 2016, among others). Examples of these expressions in English are *only*, *also*, *too*, and *even*. In (8a), the focus-sensitive particle *only* associates with the focused constituent *Sarah,* giving us the interpretation that Amira did not introduce Lina to anyone but Sarah. In (8b), on the other hand, with focus placement now on *Lina*, *only* associates with *Lina*, resulting in a different interpretation; namely, that Amira did not introduce anyone but Lina to Sarah.

(8)　　a.　*Amira only introduced Lina to [Sarah]*_F.

(8)　　a.　*Amira only introduced Lina to [Sarah]*F.
'Amira introduced Lina to Sarah.
Amira did not introduce Lina to any of the other contextually salient individuals.'

　　　b.　*Amira only introduced [Lina]F to Sarah*.
'Amira introduced Lina to Sarah.
Amira did not introduce any of the other contextually salient individuals to Sarah.'

In this section, we briefly reviewed the three ingredients used in the interpretation of focus; focus marking, context dependency, and focus-sensitive operators. These components will be implemented in the analysis of the focus particle *kaman* in this paper.

3.　　KAMAN — An Additive Focus Particle

Kaman is an additive focus particle equivalent to English *also/too*. In this baseline additive interpretation, *kaman* shares the same semantics as English *also/too* (König 1991; Krifka 1999; Forker 2015, among others). That is, *kaman* associates with the focused constituent and the set of contextually salient alternative propositions. It asserts its prejacent and presupposes that there is at least one alternative proposition in the context (besides the prejacent) that is true. For instance, in (9), *kaman* associates with *Sarah* and the contextually salient alternatives *Huda* and *Nora*. It asserts the proposition 'that Sarah brought coffee' and presupposes the existence of at least one contextually salient alternative to Sarah of which it is true that they also brought coffee. In this example, the contextually salient alternative proposition is 'that Nora brought coffee'.

(9)　　Context: A group of friends are at a gathering. Sarah arrived and brought coffee with her. A few minutes later, Nora arrived and also brought coffee. Huda tells Nora:

[*SARAH*]F　*kaman*　　*dʒab-at*　　　　　*gahwa*.
NAME　　　KAMAN　　bring.PFV.3SG-FEM　coffee
'[Sarah]F also brought coffee.'

We will discuss the focus sensitivity and additivity of *kaman* in more detail later in this section, but now we will briefly highlight some syntactic properties of *kaman* that are essential for the discussions of the data throughout the paper.

Remarks about the Syntax. *Kaman* is syntactically variable; it can modify all major syntactic phrases such as Noun Phrases (10a), Verb Phrases (10b), and Prepositional Phrases (10c).

(10)　　a.　Context: Nora bought coffee, and…
[*SARAH*]F　*kaman*　　*iʃtara-at*　　　　*gahwa*.
NAME　　　KAMAN　　buy.PFV.3SG-FEM　coffee
'[Sarah]F also bought coffee.'

　　　b.　Context: Sarah made coffee, and…
Sarah　　　*kaman*　　[*IʃTARA-AT*]F　　*gahwa*.
NAME　　　KAMAN　　buy.PFV.3SG-FEM　coffee
'Sarah also [bought]F coffee.'

    c.   Context: Sarah bought coffee for Lina, and…

Sarah	*kaman*	*iftara-at*	*gahwa*	[*L-NORA*]$_F$.
NAME	KAMAN	buy.PFV.3SG-FEM	coffee	to-NAME

'Sarah also bought coffee for [Nora]$_F$.'

Kaman is also positionally flexible. As seen in (11), *kaman* follows the focused constituent (11a), precedes it (11b), or occurs sentence-finally, at a distance from it (11c).

(11)   Context: Nora bought coffee, and…

    a.

[*SARAH*]$_F$	*kaman*	*iftara-at*	*gahwa*.
NAME	KAMAN	buy.PFV.3SG-FEM	coffee

'[Sarah]$_F$ also bought coffee.'

    b.

Kaman	[*SARAH*]$_F$	*iftara-at*	*gahwa*.
KAMAN	NAME	buy.PFV.3SG-FEM	coffee

'[Sarah]$_F$ also bought coffee.'

    c.

[*SARAH*]$_F$	*iftara-at*	*gahwa*	*kaman*.
NAME	buy.PFV.3SG-FEM	coffee	KAMAN

'[Sarah]$_F$ also bought coffee.'

Having briefly looked at some syntactic properties of *kaman*, we go back now to the semantic properties of *kaman* mentioned at the beginning of this section; focus sensitivity and additivity.

Focus Sensitivity. *Kaman* is a focus-sensitive particle. That is, the interpretation of *kaman* depends on focus placement. For instance, in (12), *kaman* associates with the focused constituent *Sarah* and gives us the interpretation that somebody else, besides Sarah, travelled to Spain. In (13), on the other hand, *kaman* associates with the focused constituent *isbania* 'Spain' and gives us the interpretation that Sarah travelled somewhere else, besides Spain.

    The association between *kaman* and focus placement must be compatible with the context for the utterance to be felicitous. For instance, (14) is infelicitous because the focus on *isbania* 'Spain' is incompatible with the context. In (14), we are (implicitly) asking about the individuals who travelled to Spain; therefore, we expect focus placement to be on the subject *Sarah* in order for the utterance to be congruent to the context. That way, when *kaman* associates with focused *Sarah*, it will associate with the appropriate alternatives needed for this context (i.e. alternative individuals, e.g. Nada). However, with focus being incorrectly placed on *isbania* 'Spain' (as seen in 14), *kaman* is forced to associate with *isbania* 'Spain' and the alternatives generated with it (i.e. alternative places, e.g. Italy) which are the wrong alternatives for the interpretation of (14).

(12)   Context: A group of friends are discussing who of their classmates has travelled to Spain in the summer. Nada travelled to Spain, and…

[*SARAH*]$_F$	*kaman*	*safar-at*	*isbania*.
NAME	KAMAN	travel.PFV.3SG-FEM	Spain

'[Sarah]$_F$ also travelled to Spain (as did somebody besides Sarah).'

(13)   Context: A group of friends are discussing the places their friend Sarah has visited during
         the summer. Sarah travelled to Italy, and…
         Sarah   *kaman*   *safar-at*   [*ISBANIA*]_F.
         NAME   KAMAN   travel.PFV.3SG-FEM   Spain
         'Sarah also travelled to [Spain]_F (along with another country).'

(14)   Context: A group of friends are discussing who of their classmates has travelled to Spain
         in the summer. Nada travelled to Spain, and…
         # Sarah   *kaman*   *safar-at*   [*ISBANIA*]_F.
           NAME   KAMAN   travel.PFV.3SG-FEM   Spain
           'Sarah also travelled to [Spain]_F (along with another country).'

As seen in the examples discussed so far in this section, when *kaman* associates with a focused constituent in an utterance, it indicates that there is a salient alternative in the context that is also true to the utterance. This additive meaning component comes from the additive presupposition of *kaman*, which we will discuss in more detail now.

The Additive Presupposition. The only meaning contribution *kaman* makes to the utterance is the additive presupposition that *kaman* gives rise to. In an utterance with *kaman*, *kaman* presupposes that there is at least one alternative proposition, to the prejacent, that is also true. For example, in (15), *kaman* asserts that Sarah laughed, and presupposes that somebody else, besides Sarah, laughed. This presupposition must be met in order for (15) to be felicitous. For instance, (15) is acceptable in context (16a) because in addition to Sarah, Huda also laughed. However, (15) is not acceptable in (16b) because, even though the additive presupposition was met, the proposition 'that Sarah laughed' is false. In context (16c), where no one laughed, (15) is undefined because the additive presupposition of *kaman* is not met.

(15)   [*SARAH*]_F *kaman*   *dˤiħk-at*.
         NAME   KAMAN   laugh.PFV.3SG-FEM
         '[Sarah]_F also laughed.'

         Assertion: 'Sarah laughed.'
         Presupposition: 'Somebody besides Sarah laughed.'

(16)   a.   Context: Huda and Sarah watching a comedy show together.
                A funny scene, and both
                break out in laughter. Huda laughed and…
         b.   Context: Huda and Sarah watching a comedy show together.
                A funny scene, but only Huda breaks out in laughter.
         c.   Context: Huda and Sarah watching a comedy show together.
                A funny scene, but none of the girls laugh.

Further evidence that the additive meaning of *kaman* is a presupposition is the ability of the presupposition to project even when it is targeted by linguistic operations such as negation, questions, attitude verbs, and conditionals (see also Karttunen 1973; Kadmon 2001; Chierchia & McConnell-Ginet 2000 as well as Hohaus & Bowler, 2022). The additive presupposition in (15)

above projects despite negation (17a), polar questions (17b), attitude verb *ʔ-ʃuk* 'doubt' (17c), and conditional sentences (17d). In (17a-d), the assertion, but not the presupposition, is affected.

(17) a. *Mu   sˤaħ innu* [*Sarah*]ₚ *kaman   dˤiħk-at.*
          NEG true that   Sarah   KAMAN laugh.PFV.3SG
          'It is not true that [Sarah]ₚ laughed, too.'

     b. [*Sarah*]ₚ *kaman   dˤiħk-at?*
          NAME   KAMAN laugh.PFV.3SG-FEM
          'Did [Sarah]ₚ laugh, too?'

     c. *ʔ-ʃuk   innu* [*Sarah*]ₚ *kaman   dˤiħk-at.*
          1SG-doubt.IPFV.1SG that   NAME   KAMAN laugh.PFV.3SG-FEM
          Sarah   ʕadatan ma   ti-dˤħak   ʕla ʔshyaa zai kiða.
          Sarah   usually NEG FEM-laugh.IPFV on   things like this
          'I doubt that [Sarah]ₚ laughed, too. Sarah usually doesn't laugh about these things.'

     d. *Law* [*Sarah*]ₚ *kaman   dihk-at,*
          if   NAME   KAMAN laugh.PFV.3SG-FEM
          ʔkeed   al-nukta   ħilw-a.
          indeed the-joke.FEM beautiful-FEM
          'If [Sarah]ₚ also laughed, the joke must have been good.'

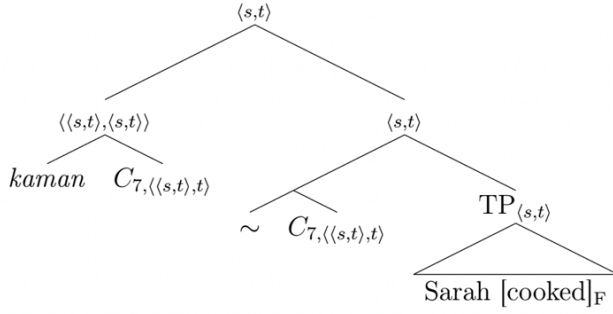   ⇢ **Presupposition:** 'Someone who isn't Sarah laughed.'

As seen in this section so far, *kaman* is a focus-sensitive particle with an additive presupposition. These two semantic features of *kaman* are the key components of the unified semantic analysis we propose for *kaman* in this paper, which we will discuss next.

A Unified Analysis for KAMAN. This section proposes a uniform analysis of *kaman* as a focus-sensitive particle with an additive presupposition. The analysis is in line with the semantic analysis proposed for English additive focus particles (for instance, König 1991; Rooth 1992; Krifka 1999; Forker 2015; among many others). Building specifically on work by Rooth (1992), Beaver and Clark (2008), and Beck (2016), I analyse *kaman* as a propositional additive focus particle. *Kaman*, quantifying over the entire proposition, associates with C (= the set of contextually salient alternative propositions) and presupposes that there is at least one alternative proposition in C, different from the prejacent, that is true. And it asserts the prejacent. This is captured in the lexical entry of *kaman* in (18) below.

(18) [[*kaman*ₕᵢⱼₐᵤᵢ Aᵣₐᵦᵢ꜀]] = [[*also*ₑₙ𝓰ₗᵢₛₕ]] =
      [$\lambda C: C \in D_{<<s,t>,t>}$. [$\lambda p: p \in D_{<s,t>}$. [$\lambda w: w \in D_s$ & $\exists q[q \in C$ & $q \neq p$ & $q(w)=1]$. $p(w)=1$]]]

We will now apply this lexical entry to the interpretation of *kaman* in example (1) in the additive context A, from the puzzle in Section 1. The example in (1) in context A has the Logical Form in (19). F-marking on *cooked* triggers type alternatives, as seen in the alternative semantic value of *cooked* in (20b). The ordinary value of *cooked* is its lexical entry in (20a). Moving higher up to the TP node, [[*Sarah* [*cooked*]ₚ]] has the ordinary value that S cooked, in (21a); and its alternative value is (21b), which is the set of propositions of the form Sarah V'd where V is of type $_{<e,<s,t>>}$.

(19)   Simplified Logical Form:

(20)   Alternatives to the verb triggered by F-marking:
   a. $[[\text{[cooked]}_F]]_{ORD} = [\lambda x : x \in D_e. [\lambda w : w \in D_s. \text{ x cooked in w}]]$
   b. $[[\text{[cooked]}_F]]_{ALT} = D_{<e,<s,t>>} = \{ [[\text{ cooked }]]_{ORD}, [[\text{ set the table }]]_{ORD}, [[\text{ danced }]]_{ORD}, \ldots \}$

(21)   Alternative propositions derived from F-marking:
   a. $[[\text{ Sarah [cooked]}_F]]_{ORD} = [\lambda w : w \in D_s. \text{ S cooked in w}]$
   b. $[[\text{ Sarah [cooked]}_F]]_{ALT} = \{ p \in D_{<s,t>} : \exists V \in D_{<e,<s,t>>} [p = [\lambda w : w \in D_s. \text{ V(S)(w)=1}]] \}$
           $= \{ \text{that S cooked, that S set the table, that S danced,} \ldots \}$

The truth conditions of (19) are spelled out in (22a) below. There are two definedness conditions to (19), as seen in (22b). The squiggle presupposes that the ordinary value of the contextually salient set of alternatives (i.e. $g(7,<<s,t>,t>)$) is a subset of the alternative semantic value of [[*Sarah [cooked]*$_F$]]. *Kaman* presupposes that there is an alternative proposition q in the contextually salient set of alternatives $g(7,<<s,t>,t>)$, and q isn't the prejacent that Sarah cooked, and q is true. Finally, the value of $g(7,<<s,t>,t>)$[7] is given in (23). This part of the analysis is crucial as it shows the contextually salient alternatives that are under consideration for the interpretation of sentence (1) in context A, which are the propositions 'that Sarah cooked' and 'that Sarah set the table'.

(22)   a.   Truth conditions:
              $[[(19)]]^g(w@) = 1$ iff $[[\text{cooked}]](S)(w@) = 1$
                                            iff S cooked in w@   with w@ the actual world
        b.   Definedness conditions from KAMAN and the squiggle operator:
              $[[(19)]]^g(w@)$ is defined iff
              $g(7,<<s,t>,t>) \subseteq \{ p \in D_{<s,t>} : \exists V \in D_{<e,<s,t>>} [p = [\lambda w : w \in D_s. \text{ V(S)(w)=1}]] \}$ and
              $\exists q[q \in g(7,<<s,t>,t>) \ \& \ q \neq [\lambda w : w \in D_s. \text{ S cooked in w}] \ \& \ q(w@) = 1]$

(23)   The salient alternatives in this context:
        $g(7,<<s,t>,t>) = \{ \text{that Sarah cooked, that Sarah set the table} \}$

The uniform analysis of *kaman* as an additive focus particle, presented in this section, will also be extended to the scalar and repetitive interpretations in Sections 4 and 5 below.

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[7] Received by the Variable Assignment Function g, and the interpretation principle Proform & Traces (see also Heim and Kratzer 1998, pp. 129, 213 as well as von Fintel and Heim 2011, pp. 5-11).

4.   The Scalar Interpretation

Kaman is interpreted as scalar *even* when the contextually salient alternatives are ranked on an expectation or likelihood scale in the context, and the prejacent is ranked lower than the alternatives. Whenever this contextual property is met, *kaman* is interpreted as scalar. For instance, in (24), Amal glossed the examples even though it was not expected of her to do so. Hence, the proposition 'that Amal glossed the examples' is the least expected among the contextually salient alternative propositions 'that Amal wrote the examples' and 'that Amal translated the examples'.

(24)   Context: For their translation course, the students have to do an assignment where they provide examples from any language on a particular topic and translate them. Glossing the examples is not mandatory. Amal, talking to her friend about the assignment: "The assignment was very easy to do. It didn't take much time. Writing the examples and translating them only took two hours to do, and…"

[*sawweet   GLOSSING*]_F *kaman!*
do.PFV.1SG glossing   KAMAN
'I even [did glossing]_F!'

Similarly, in (25), the proposition 'that the channel has playlists' is the least expected among the (contextually implied) alternative proposition 'that the channel has clear lessons'. This idea of the prejacent of *kaman* being the least likely among the alternative propositions in the context is what gives rise to the scalar interpretation (see also Faller 2020).

(25)   Context: Amal and Huda are both Linguistics students. They were searching for YouTube channels that explain Linguistics easily and clearly, but all the channels they found so far were not very clear in terms of presenting and explaining content. But then Amal finds a good channel that makes clear Linguistics lessons videos and sends the link to Huda. Huda checks the channel then says…

Marra ħilw-a!   *W   fee-ha*   [*PLAYLISTS*]_F *kaman!*
INT   beautiful-FEM and in-it   playlists   KAMAN
'So good! It even has [playlists]_F!'

Extending the Analysis. As seen in (24) and (25), the scalar interpretation arises when the alternative propositions in context are ordered on an expectation scale and ranked higher than the prejacent. If this property is met in a context, *kaman* is interpreted as scalar. Therefore, I suggest that the scalar interpretation is not represented by a different lexical item with scalarity encoded in its lexical entry. Instead, it is represented by the same additive, focus-sensitive *kaman*, but the only difference here is that the salient alternatives are ordered on an expectation scale in the context. That is, when the alternatives are contextually ordered in terms of expectation, we get the scalar interpretation. When the alternatives are unordered, we get the baseline additive interpretation.

We will now extend the uniform analysis of *kaman* to the scalar interpretation. We analyze example (1) in context S (scalar) from the puzzle in Section 1. The analysis of sentence (1) in context S is the same as the analysis presented for sentence (1) in context A above (19-22), except for one difference. The salient alternatives that are involved in the interpretation here are

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additionally ordered on an expectation scale in the context. On this scale, the prejacent 'that Sarah cooked' is the lowest ranked proposition, as seen in (26).

(26) a.   Contextually salient alternative propositions in this context:
            {that Sarah cleaned her room, that Sarah set the table, that Sarah cooked}
      b.   Expectation-based ranking of these alternatives:
            that Sarah cleaned her room, that Sarah set the table $>_{EXPECTATION}$ that Sarah cooked

Now that we have extended the uniform analysis of *kaman* to the scalar interpretation, we will move to the repetitive interpretation in Section 5 below. We will first discuss some data then we will extend the uniform analysis to the repetitive interpretation as well.

5.   The Repetitive Interpretation

Kaman is interpreted as repetitive when the contextually relevant alternatives are temporal in nature. That is, when the context and utterance involve a repetition of an event at two different time intervals, *kaman* is naturally interpreted as *again*. In (27) for instance, the context shows that Huda called her sister at 8pm, and the utterance shows that Huda called her sister again at 8.30pm.

(27) Context: Sarah invited her family (her parents, and her younger sister Huda) for dinner at
            7pm at her house. It's 8pm and they still haven't arrived yet. Sarah called Huda to ask why
            they're late. Huda tells her parents that Sarah called. Thirty minutes later, Sarah called
            Huda again. Huda says to her parents:

      Sarah   ittasˤal-at   KAMAN.
      NAME   call.PFV.3SG-FEM KAMAN
      'Sarah called again.'

Similarly, (28) also involves the idea of repeating an event. Clearly, there is a timeline in both examples such that the event first happens at some point in the context of the utterance, then happens (or, may happen, in the case of (28)) again at a later point.

(28) Context: Sarah and Ahmad invited their new neighbors for dinner at their house. Everyone
            had a great time. At the end of the night, as the neighbors were leaving and everyone was
            standing at the front door of the house, Sarah told their neighbors that she really enjoyed
            spending time with them tonight, and she told them…

      Taʕal-u   la-na   KAMAN!
      come.IMP-PL to-us   KAMAN
      'Visit (us) again!'

Even though this repetitive interpretation of an additive particle like *kaman* might seem unusual at first, it is not completely ruled out for other additives across languages. Consider example (29) below from Beck (2006) on how a stressed *also* gives almost the same meaning as a stressed *again*. Beck (2006, p. 310) suggests that "they both seem to have an associate (possibly invisible)". Beck explains further how in (29a), *also* associates with *the fall of 1997*, and this gives us the interpretation that besides the the fall of 1997, there is an alternative time in which they were on

the Axalp. Similarly, (29b) gives almost the same interpretation (with the additional chronological restriction imposed by *again* that the alternative time was earlier than fall of 1997).

(29)   a.   *In the fall of 1997, they were ALSO on the Axalp*.
        b.   *In the fall of 1997, they were on the Axalp AGAIN*.
            (Beck 2006, p. 310, no. (97))

Taking (29a) into account, a repetitive interpretation for English *also* is possible; however, it seems to be necessary that the temporal expressions are explicitly mentioned in the utterance (e.g. *the fall of 1997*). In contrast, with HA *kaman*, the repetitive interpretation can appear even if the temporal alternatives are only implied by the context, as seen earlier in (27) and (28). This option is not available for English *also* or *too*, as seen in (30) below, for the same context of (27).

(30)   a.   *# Sarah called, TOO*.
        b.   *# Sarah ALSO called*.

But to what extent is this option unavailable in English? Consider example (31) below where a prosodically focused *also* (in a question-answer pair where the temporal expressions *today* and *yesterday* are mentioned in the questions but not the answers) does give a repetitive interpretation.

(31)   A: *Where did you go yesterday?*
        B: *I went to the GYM.*
        A: And today?
        B: *I ALSO went to the gym.*

It seems that this option is not entirely ruled out for English but is clearly more restricted than it is in HA. In English, it seems that in order for the repetitive interpretation of *also* to surface, the temporal expressions should be explicitly mentioned in the utterance. However, based on the acceptability of (31), there could be other specific syntactic, semantic, or pragmatic environments where this type of constructions is possible. This is an important question for further research on *also* (and possibly other additives across languages), but the focus of this paper is on *kaman*.

      We have so far seen data on the repetitive interpretation of *kaman* and looked at counter examples with English *also*. The contexts where *kaman* was interpreted as *again* (i.e. (27) and (28)) involved a repetition of an event. This temporal contextual element, even though it counts as the primary trigger for the repetitive interpretation of *kaman*, is not the only requirement for this interpretation. It is further restricted by a prosodic and a syntactic constraint.

      With regard to the prosodic constraint, *kaman*, in its repetitive interpretation, is the most prosodically prominent element in the utterance (as seen in (27) and (28)). Recall that these examples did not have overt temporal expressions. If there were overt temporal expressions, prosodic prominence would instead fall on the temporal expressions, not on *kaman* (32).

(32)   *Sarah   ittasˤal-at*   [*AMS*]$_\text{F}$, *w ittasˤal-at*   [*AL-YOOM*]$_\text{F}$ *kaman*.
         NAME call.PFV.3SG-FEM yesterday, and call.PFV.3SG-FEM today   KAMAN
         'Sarah called [yesterday]$_\text{F}$, and she called again [today]$_\text{F}$.'

I speculate that prosodic prominence falls on *kaman* as a rescue strategy due to the absence of an overt temporal expression. The rescue strategy is meant in the sense that if prosodic prominence falls on any other element in the prejacent (e.g. the subject *Sarah* or the verb *ittasˤal-at* 'called' in (27)), it would generate unintended alternatives (in this case alternatives of type D_e to *Sarah*, or type $D_{<e,<s,t>>}$ to *ittasˤal-at* 'called'). Thus, with no overt temporal expressions to bear the prosodic prominence, and with avoiding generating unintended alternatives for other elements in the prejacent, prosodic prominence falls on *kaman* as a rescue strategy (see also Féry 2009).

As for the syntactic constraint, *kaman* is always realized sentence-finally in its repetitive interpretation. This restriction does not exist when there are overt temporal expressions in the utterance as in (33) below. In (33), with the overt *ams* 'yesterday' and *al-yoom* 'today', *kaman* is free to occur in multiple positions in the sentence.

(33) a. *Sarah   ittasˤal-at*   [AMS]$_F$, *w   ittasˤal-at*   [AL-YOOM]$_F$ *kaman*.
          NAME call.PFV.3SG-FEM yesterday, and call.PFV.3SG-FEM today   kaman
          'Sarah called [yesterday]$_F$, and she called again [today]$_F$.'

      b. *Sarah   ittasˤal-at*   [AMS]$_F$, *w   kaman ittasˤal-at*   [AL-YOOM]$_F$.
          NAME call.PFV.3SG-FEM yesterday, and kaman call.PFV.3SG-FEM today
          'Sarah called [yesterday]$_F$, and she called again [today]$_F$.'

In line with the speculation discussed for the prosodic constraint earlier, I speculate that due to the absence of a morphologically overt temporal expression in the utterance, *kaman* (as a rescue strategy) bears the prosodic prominence and moves sentence-finally so that the prosodic stress gets licensed or justified as sentence-final prosodic prominence. It is common across languages, including HA, that the sentence-final position allows for variable focus domain (see example (4) in Section 2.2 earlier). That is, when the focus is not on a single syntactic element, and is, instead, on the entire sentence, the entire sentence is in semantic focus, but only the last element in the sentence bears the prosodic prominence. However, this is not exactly the case for *kaman* here. It is not that the entire sentence is in focus and therefore prosodic prominence goes sentence finally. It is that the temporal element that should be in focus is not concretely signaled out in the sentence (i.e. it is covert), hence, prosodic prominence falls sentence-finally (on *kaman*) because the sentence-final position seems to allow for such cases.

Extending the Analysis. As seen in the data in this section, the repetitive interpretation of *kaman* is only available when the alternatives generated by F-marking and context are temporal in nature and satisfy the presupposition of English *again*, seen in (34) below (see, for instance, von Stechow 1996; Beck 2005, 2006). When this property is met in a context, *kaman* is interpreted as repetitive. If the alternatives were not temporal, we would get the baseline additive interpretation of *kaman*.
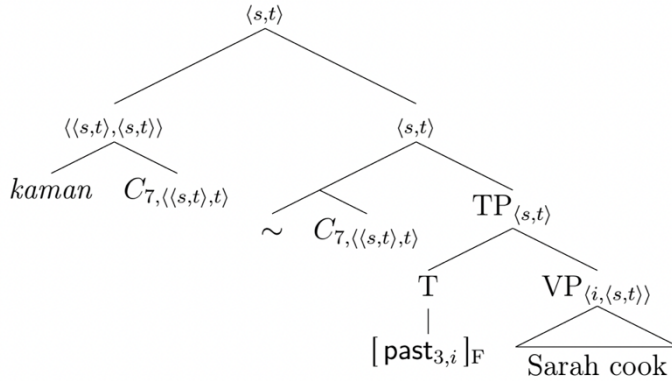
(34)   [[*again*]] = [λp:p∈$D_{<i,<s,t>>}$. [λt:t∈$D_{<i,<s,t>>}$. [λw:w∈D_s
        & ∃t'<<t: p(t')(w)=1. p(t)(w)=1]]]

As discussed earlier, this interpretation can be available even when there are no overt temporal expressions explicitly mentioned in the sentence, as seen in example (1), context R in the puzzle in Section 1. The critical question here is: What generates the temporal alternatives needed for the interpretation of this type of utterances? Context R of example (1) clearly shows that there is an event (i.e. Sarah cooking a meal) that happened at two time intervals (i.e. on Monday, and the next

day), hence, we need temporal alternatives for the interpretation of this utterance. Since we do not have overt temporal expressions to bear the focus feature (and hence generates the temporal alternatives we need), I propose that focus marking goes on tense, at Logical Form, modelled as a covert temporal proform (see Partee 1973, Kratzer 1998) with a past presupposition.

Sentence (1) in context R (in the puzzle in Section 1) has the Logical Form in (35) below. F-marking goes on the past tense proform, $[past_{3,i}]_F$. The ordinary value of the proform is a contextually salient past time interval (i.e. $g(3,i)$) that is before the utterance time (36a). The alternative semantic value of the proform (generated by F-marking) is the set of all past time intervals that are before the utterance time (36b). Moving higher up to the TP node, the ordinary value of $[[[_{TP} [past_{3,i}]_F$ Sarah cook$]]]^g$ is that S cooked at a contextually salient past time (37a). The alternative value of the proposition is the set of propositions of the form 'S cooked at t' such that t is an element of the domain of past time intervals (37b).

(35)   Simplified Logical Form: [8]

(36)   The past tense and the temporal alternatives triggered by F-marking:
   a. $[[[past_{3,i}]_F]]^g{}_{ORD}$ = g(3,i), a contextually salient time interval
       $[[[past_{3,i}]_F]]^g{}_{ORD}$ is defined iff g(3,i) << t*, with t* the utterance time
   b. $[[[past_{3,i}]_F]]^g{}_{ALT}$ = {t∈D_i: t << t*} = PAST, the set of past time intervals

(37)   Alternative propositions derived from F-marking:
   a. $[[[_{TP} [past_{3,i}]_F$ Sarah cook$]]]^g{}_{ORD}$
       = [λt:t∈D_i. [λw:w∈D_s. S cooked at t in w]] ($[[[past_{3,i}]_F]]^g{}_{ORD}$)
       = [λw:w∈D_s. S cooked at g(3,i) in w]
       ≈ that S cooked at a contextually salient past time
   b. $[[[_{TP} [past_{3,i}]_F$ Sarah cook$]]]^g{}_{ALT}$
       = {p∈$D_{<s,t>}$: ∃t∈PAST [p= [λw:w∈D_s. S cooked at t in w]]}
       = {that S cooked at t: t∈PAST}
       ≈ {that S cooked TODAY, that S cooked YESTERDAY,
       that S cooked THIS SUNDAY, …}

The truth conditions of (35) are spelled out in (38a). (35) has three definedness conditions, as seen in (38b). The past tense requires that the contextually salient time is before the utterance time. The squiggle requires that the ordinary value of the contextually salient set of alternatives (i.e.

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[8]We abstract away from the aspectual contribution of the past perfective.

g(7,<<s,t>,t>)) is a subset of the alternative semantic value of $[[[_{TP} [past_{3,i}]_F$ Sarah cook]]]^g . The additive presupposition of *kaman* requires that there is an alternative proposition q in the contextually salient set of alternatives g(7,<<s,t>,t>), and q isn't the prejacent 'that Sarah cooked at a salient past time', and q is true. Finally, the ordinary value of the proform (i.e. a salient past time interval) as well as its contextually salient alternatives (i.e. other contextually salient past time intervals) give us the temporal alternatives seen in the last line of (38b). Crucially, these temporal alternatives are what gives rise to the repetitive interpretation of *kaman*.

(38) a. Truth conditions:
          $[[(35)]]^g(w@) = 1$ iff $[[cooked]](S)(g(3,i))(w@) = 1$
                          iff S cooked at g(3,i) in w@
                          with g(3,i) a contextually salient time and w@ the actual world
      b. Definedness conditions from the past tense, KAMAN, and the squiggle operator:
          $[[(35)]]^g(w@)$ is defined iff g(3,i) << t* and
          $g(7,<<s,t>,t>) \subseteq \{p \in D_{<s,t>}: \exists t \in PAST [p= [\lambda w:w \in D_s.$ S cooked at t in w]]\}$ and
          $\exists q[q \in g(7,<<s,t>,t>) \& q \neq [\lambda w:w \in D_s.$ S cooked at g(3,i) in w] $\& q(w@) = 1]$

          – with g(3,i) a salient past time interval in this context
          – with g(7,<<s,t>,t>), the salient alternatives in this context:
          {that Sarah cooked on Monday, that Sarah cooked today}

As seen in the formal analysis throughout Sections 3 to 5, the uniform analysis of *kaman*, as an additive focus particle, accounts for the different interpretations; additive, scalar, and repetitive.

6.   Concluding Remarks

The paper discussed the different semantic interpretations of *kaman* in HA and proposed a unified analysis for *kaman* (as an additive focus-sensitive particle) that accounts for the different interpretations. In all of its interpretations, *kaman* is an additive particle that associates with the set of contextually salient propositions and presupposes that there is an alternative proposition in the context (different from the prejacent) that is true. Additional properties of the contextual alternatives are what gives rise to the different interpretations of *kaman*. If the alternatives were ordered on an expectation scale in the context, the scalar interpretation surfaces. If the alternatives were temporal in nature, the repetitive interpretation becomes available. Lastly, if the alternatives were neither temporal, nor ordered on a scale, we get the baseline additive interpretation.

        Two questions are identified for further investigation. The first question is how available is F-marking on covert elements at Logical Form (such as temporal proforms) across different focus-related phenomena and different languages? The second question is to what extent is the repetitive interpretation (un)available for additive particles across languages? It seems that, in English for instance, this interpretation is not completely ruled out, but is clearly more restricted than in HA which might be attributed to the different typological properties of both languages.

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