Different *again*

Pritty Patel-Grosz
University of Oslo

Sigrid Beck
University of Tübingen

Abstract One of the open questions in the literature on *again*-type elements (such as English *again* and German *wieder* 'again') is how to derive their different readings. Specifically, we can differentiate between a repetitive reading (e.g., some activity happens that has happened before) and a restitutive reading (e.g., some activity that has not happened before restores an earlier state). One controversial question is whether these two readings involve lexical ambiguity of 'again' (the *lexical ambiguity analysis*) or whether they can be derived from one lexical entry of 'again' by assuming different structural configurations (the *scope analysis*). We investigate Kutchi Gujarati *pacho* 'again' and show that this *again*-type element has, in fact, three readings, which are best accounted for by combining both the lexical ambiguity analysis and the scope analysis within the same language. Moreover, Kutchi Gujarati is a language in which word order closely reflects information structure. This allows us to investigate the information-structural effects that are associated with different readings of *pacho* 'again', such as the "all-given" status of utterances with repetitive *pacho*, and the corresponding surface word orders.

Keywords: again, restitutive, counterdirectional, repetitive, information structure

1 Introduction

English sentences with the event-modifying adverb *again* give rise to ambiguity between a so-called *repetitive* reading and a so-called *restitutive* reading (cf. McCawley 1968, Dowty 1979, von Stechow 1996, Fabricius-Hansen 2001, Jäger & Blutner 2000, Beck 2005, Beck & Gergel 2015, among many

others). In Section 2 we introduce the semantic analyses of *again* and in Section 3, we recapitulate a series of observations from Kutchi Gujarati (originally discussed in Patel-Grosz & Beck 2014), which shed new light on the most suitable analysis of *again*-type elements (such as English *again* and German *wieder* 'again').[1] Unlike *again* in present day English and German *wieder* 'again', Kutchi Gujarati *pacho* 'again' gives rise to three distinct interpretations: the repetitive ('the same eventuality has occurred before'), the restitutive ('the result state of this event has held before') and the counterdirectional ('the reverse of this event has happened before'). In order to account for the three readings of *pacho* 'again', we propose that both the scope analysis (e.g., von Stechow 1996), and the lexical ambiguity analysis (e.g., Fabricius-Hansen 2001) must apply. Crucially, the semantic properties of Kutchi Gujarati *pacho* have consequences in the syntax: depending on the intended reading, *pacho* appears to surface in a different position in the syntactic structure. This gives rise to a puzzle, since Kutchi Gujarati repetitive *pacho* appears to occur in a lower syntactic position than Kutchi Gujarati counterdirectional/restitutive *pacho*, which is the opposite of what we find in languages such as German (*wieder* 'again'; von Stechow 1996). In Section 4 of this paper, we argue that the divergent surface positions of *pacho* are a consequence of the information-structural properties of Kutchi Gujarati clause structure, and its connection to the presuppositional properties of *pacho*. Specifically, we argue that *pacho* itself occupies a fixed position at the left edge of the VP, with other material moving to higher positions or remaining in lower positions, depending on the information structure. Section 5 concludes the paper.

2   The three conceivable readings of *again*

It is well-known (an early reference is McCawley 1968) that sentences containing *again* are ambiguous concerning the presupposition that it triggers; this is illustrated in (1)–(3). (See also Beck 2005 for a crosslinguistic discussion and Tovena & Donazzan 2008 for a broader perspective on "adverbs of repetition".) The data in (2) and (3) illustrate the contexts that give rise to the so-called *repetitive* and *restitutive/counterdirectional* readings. In its repetitive reading in (2), *again* expresses that an event has occurred in the preceding context that is parallel to the event described in the modified proposition,

---

1 Kutchi Gujarati is an Indo-Aryan language most closely related to Standard Gujarati and Marwari, which originates in the Kutch region in the Indian state of Gujarat.

that is, an event of Leo jumping up. This is made explicit by the context in (2a), and a paraphrase of the repetitive reading is provided in (2c). The example in (3) illustrates the restitutive reading of *again*. Unlike the repetitive reading, the restitutive reading does not presuppose that the same type of event has occurred before. Here, the presupposition of *again* is that the result state of the described event (Leo being in an "up" state) holds at an earlier time interval in the preceding context. In other words, there was an earlier point in time where Leo was standing. For reasons that we will see later, this restitutive reading is sometimes also called a counterdirectional reading. We will henceforth occasionally use the label *non-repetitive reading* to subsume both of these terms.

(1)   Leo jumped up again.

(2)   a.   *Context:* The bell rang, and Leo jumped up. [...] There was a knock on the door.
       b.   He jumped up again.
       c.   *repetitive reading:* 'Leo jumped up, and he had jumped up before.'

(3)   a.   *Context:* Leo slowly sat down in his favourite armchair. There was a knock on the door.
       b.   He jumped up again.
       c.   *restitutive/counterdir. reading:*   'Leo jumped up, and he had been up before.'

Repetitive *again* adds the presupposition to the modified (prejacent) proposition that what is described in the sentence has occurred before. The analysis of the repetitive reading of (1), given in (4), is generally accepted and uncontroversial.

(4)   (2b) is defined only if Leo had *jumped*   *repetitive presupposition*
       up before. If defined, then (2b) asserts that Leo jumped up.

By contrast, no consensus has been reached regarding the correct analysis of non-repetitive *again*. There are two dominant proposals in the literature, the so-called *lexical ambiguity analysis* and the *structural ambiguity analysis/ scope analysis*. The lexical ambiguity analysis of the non-repetitive reading assumes the paraphrase in (5a), and the scope analysis proposes the one in (5b). It is controversial which analysis is correct, and thus, which paraphrase is most adequate.

(5) a. (3b) is defined only if Leo had *sat*   *counterdir. presupposition*
         down before. If defined, then (3b) asserts that Leo jumped up.

     b. (3b) is defined only if Leo had *been*   *restitutive presupposition*
         up before. If defined, then (3b) asserts that Leo jumped up.

Let us consider the two analyses in more detail. The *lexical ambiguity analysis* (as represented by Fabricius-Hansen 2001; see also Kamp & Rossdeutscher 1994; Jäger & Blutner 2000; and Pedersen 2015) proposes that *again* is lexically ambiguous between a repetitive meaning, (6a), and a counterdirectional meaning, (6b). From such a perspective, the second lexical entry of *again* presupposes a preceding event that is the reverse of the described event, for instance in our example in (1), a *sitting down* event. Under such a view, the presupposition of non-repetitive *again* is *counterdirectional*, as illustrated in (5a). In this type of approach, *again* always modifies a VP, which denotes an event description of type $<v,t>$ (where v is the semantic type of eventualities, i.e., states and events, and t is the semantic type of truth values). Repetitive *again*, in (6a), triggers the presupposition that the same type of event has occurred earlier in the context. By contrast, counterdirectional *again*, in (6b), triggers the presupposition that the reverse has happened before. In (6b), the variable P_C stands for a contextually given predicate of type $<v,t>$ that qualifies as the reversal of the event description P. Informally, it is plausible that *jump up* qualifies as a reversal of *sit down*. Similarly, *return to Boston* may qualify as a reversal of *leave Boston*. The core idea driving this analysis is that counterdirectional readings are only possible with predicates that have a salient counterdirectional counterpart, that is, if the predicate P that the VP denotes is a predicate like *sit down*, or *open*, then there is a natural reverse, which is *get up*, or *close*, respectively. We will come back to the possible range of *P-to-P_C* pairings in Section 3.2 and draw empirical generalisations.

(6) a. $[\![\textit{again}_{\text{rep}}]\!] = \lambda P_{\langle v,t \rangle}. \lambda e: \exists e'[\tau(e') < \tau(e) \, \& \, P(e')] \, . \, P(e)$
         'Such an event (i.e., a P event) has happened before.'

     b. $[\![\textit{again}_{\text{ctrdir}}]\!] = \lambda P_{\langle v,t \rangle}. \lambda e: \exists e'[\tau(e') < \tau(e) \, \& \, P_C(e')] \, . \, P(e)$
         'The reverse (i.e., a P_C event) has happened before.'

The analyses in (7) and (8) show that the scope of repetitive *again* and counterdirectional *again* is identical: both are VP modifiers, taking the VP denotation in (7b) and (8b) as their argument. The presuppositions are given in (7c), where a preceding event of the same type is presupposed, and in (8c), where a preceding event of the reverse type is presupposed.

(7)   a. [$_{VP}$ [$_{VP}$ Leo jump up] again$_{rep}$]   *repetitive,* cf. (4)

         b. ⟦ [$_{VP}$ Leo jump up] ⟧ $= \lambda e.\mathrm{jump\_up}(e)(L)$

         c. ⟦ [$_{VP}$ [$_{VP}$ Leo jump up] again$_{rep}$] ⟧ $=$
             $\lambda e: \exists e'[\tau(e') < \tau(e)\ \&\ \mathrm{jump\_up}(e')(L)]\ .\ \mathrm{jump\_up}(e)(L)$
             'Once more, Leo jumped up.'

(8)   a. [$_{VP}$ [$_{VP}$ Leo jump up] again$_{ctrdir}$]   *counterdirectional,* cf. (5a)

         b. ⟦ [$_{VP}$ Leo jump up] ⟧ $= \lambda e.\mathrm{jump\_up}(e)(L)$

         c. ⟦ [$_{VP}$ [$_{VP}$ Leo jump up] again$_{ctrdir}$] ⟧ $=$
             $\lambda e: \exists e'[\tau(e') < \tau(e)\ \&\ \mathrm{sit\_down}(e')(L)]\ .\ \mathrm{jump\_up}(e)(L)$
             'Leo jumped back up.'

The opposing view, the so-called *structural ambiguity analysis* (or *scope analysis*), represented by von Stechow 1996 (see also, e.g., Paslawska 1998, Beck 2005, Bale 2005, and Alexiadou, Anagnostopoulou & Schäfer 2015), argues that *again* can modify different constituents in the clause. Predicates are decomposed into CAUSING events and RESULT STATES, and *again* can modify either. Such decomposition can be used to account for the restitutive presupposition, which we have illustrated in (5b), as follows. In contrast to the lexical ambiguity analysis, which assumes two lexical entries for *again*, the structural ambiguity analysis claims that *again* only has the repetitive meaning in (6a). The repetitive / restitutive readings surface depending on which constituent *again* modifies. For example, *again* can modify the entire VP as shown in (9a), which gives rise to a repetitive reading; alternatively, *again* can modify a subconstituent of the VP, illustrated in (10a), which is analysed as a small clause that denotes the result state only. The example in (9b) is equivalent to (7c), with the only difference that the predicate is decomposed in (9b), denoting a jumping event that causes a result state of being up. By contrast, in (10b), *again* gives rise to the presupposition that the result state of *jumping up* was instantiated before.

(9)   a. [$_{VP}$ [$_{VP}$ Leo jump [$_{SC}$ PRO$_{Leo}$ up]] [again$_{rep}$]]   *repetitive* cf. (4)
                   | |
             activity (causes) result state

         b. ⟦(9a)⟧ $=$
             $\lambda e: \exists e_3\ [\tau(e_3) < \tau(e)\ \&\ \mathrm{jump}(e_3)(L)\ \&\ \exists e_4[\text{CAUSE}(e_4)(e_3)\ \&\ \text{BECOME}(e_4)$
                        $(\lambda e_5.\ \mathrm{up}(e_5)(L))]].\ \mathrm{jump}(e)(L)\ \&\ \exists e_1\ [\text{CAUSE}(e_1)(e)$
                                 $\&\ \text{BECOME}(e_1)(\lambda e_2.\ \mathrm{up}(e_2)(L))]$
             'Once more, Leo's jumping causes Leo to come to be up.'

(10)   a.   [$_{VP}$ Leo jump [$_{SC}$ [$_{SC}$ PRO$_{Leo}$ up] [again$_{rep}$]]]]   *restitutive* cf. (5b)

                  | |

              activity (causes) result state

   b.   ⟦(10a)⟧ =

$$\lambda e: \exists e_3 \,[\tau(e_3) < \tau(e) \,\&\, up(e_3)(L)].\; jump(e)(L) \,\&\, \exists e_1[\textsc{cause}(e_1)(e) \\ \&\, \textsc{become}(e_1)(\lambda e_2.\, up(e_2)(L))]$$

       'Leo's jumping causes Leo to once more be up.'

The two accounts give rise to different and, as we will see, testable predictions. The lexical ambiguity account of Fabricius-Hansen (2001) predicts that an ambiguity is possible when a predicate can be connected to a salient counterdirectional predicate. By contrast, the structural ambiguity account of von Stechow (1996), predicts that an ambiguity is possible when a predicate has a result state; put differently, restitutive readings should only occur with *achievement* and *accomplishment* predicates, and they should not occur with *activity* predicates. A problem in evaluating the two accounts for a given *again*-type element arises from the observation that the two non-repetitive readings predicted largely describe the same situations. This is illustrated in (11). In this example, we start with a state of Leo being up, followed by an event of Leo sitting down. Once Leo jumps up, this can be construed both as Leo restoring the original state of being up, which is captured by the scope analysis, or as Leo carrying out the reverse of a preceding sitting down event, which is captured by the lexical ambiguity analysis. Predicates like 'jump up' thus do not allow us to tease apart the two analyses. However, as we will see, there are predicates that do allow us to tease them apart.

(11)   ...... /////////////// —————————- ////////////// ———->

       Leo up   ↑   Leo not up   ↑   Leo up

              Leo sits down   Leo jumps up

    'Leo jumped up again.'

The goal of this paper is to show that Kutchi Gujarati *pacho* 'again' actually requires both analyses to apply. They derive distinct readings, namely a designated restitutive reading and a designated counterdirectional reading, which the language allows us to distinguish empirically. Our goal is to make a cross-linguistic argument that both approaches are needed in natural language semantics, and there is no *a priori* reason to reject one of them. The strategy that we pursue for Kutchi Gujarati is to look specifically at non-directional predicates with a result state (which may allow for a resti-

tutive reading, but not for a counterdirectional reading) and at directional predicates without a result state (which may allow for a counterdirectional reading, but not for a restitutive reading). In addition, we investigate directed creation predicates for which the two readings come apart.

In this vein, Beck & Gergel (2015) propose that directional predicates that lack a result state, such as *calling someone*, may involve counterdirectionality in the absence of a result state, as illustrated in (12). In example (12), we have an event of Anne calling Leo, which can be construed as the reverse of an event of Leo calling Anne. Yet, neither event has a result state.

(12)   ...... \\\\\\\\\\\\\\\\\————————- //////////////////———->
           Leo calls Anne   Anne calls Leo

Beck & Gergel demonstrate that the counterpart of *again* in Middle English and Early Modern English is acceptable with such predicates on a counterdirectional reading, as shown in (13). In (13b-ii), the Early Modern English version of *she wrote again to him* translates to *she wrote back to him* in Present Day English, which instantiates the type of counterdirectionality that we have illustrated in (12). Beck & Gergel take this to be evidence for a truly counterdirectional *again* in Middle English and Early Modern English. Such readings are no longer present in Present Day English, indicating that *again* in Present Day English lacks a counterdirectional reading.[2]

(13)   a.   counterdirectional adverb (Middle English):
             (i)   Huanne he *þerin   geþ*: ...huan he *comþ ayen*:...
                    when   he therein goes: ...when he comes again:...
                    (CMAYENBI,56.1024)
                    = 'he returns'
             (ii)   quene Gwenyvere *had hym in grete favoure*...
                    queen Gwenyvere had him in great favour...
                    (CMMALORY,180.2412)
                    and so *he loved the quene agayne* aboven all other ladyes
                    and so he loved the queen again   above   all other ladies
                    dayes of his lyff,
                    days of his life,
                    = 'he returned her love/he loved her back'

---

2 The examples in (13) are cited from Beck & Gergel (2015) who retrieved them from the Penn-Helsinki Corpora of Historical English (CMAYENBI, CMMALORY), Kroch & Taylor (2000), and from the Parsed Corpus of Early English Correspondence (PCEEC-OSBORNE, PCEEC-MORE), Taylor et al. (2006). The capital letters are the standard token IDs for the respective source texts.

b. counterdirectional adverb (Early Modern English):
  (i) Tis like people that talk in theire sleep ,
    nothing interupts them but *talking to them again* […]
    (Dorothy Osborne, 17th c., PCEEC-OSBORNE,37.017.774)
    = 'but replying to them/but talking back to them'
  (ii) that lyke as the French King byfore wrote and bosted vn to
    his mother that he had of his awne mynd passed in to Italy,
    so is it lykly that she shall haue shortly cause to *wryte agayn*
    to hym that it had to be mych bettre and more wisedome for
    hym to abide at home […]
    (Thomas More, 16th c., PCEEC-MORE,313.020.266)
    = 'to write back to him'

In Section 3, we present data[3] to illustrate that there are languages that synchronically have an element like *again* that also allows for the readings in (13), unlike Present Day English. One language of this type is Kutchi Gujarati, which is the language that we focus on.

Before presenting these data, we point out a simplification in our discussion. Our analysis takes the presupposition that *again* triggers to be existential concerning a temporally earlier event (i.e., ∃e'[τ(e') < τ(e)…in (14), repeated from (6a)).

(14) $⟦again_{rep}⟧ = \lambda P_{⟨v,t⟩}. \lambda e: \exists e'[\tau(e') < \tau(e) \& P(e')] . P(e)$
    'Such an event (i.e., a *P* event) has happened before.'

First, there is a lively discussion in the literature arguing that the earlier event e' is not existentially bound but rather a free variable, referring to a salient earlier event (Heim 1990, who attributes the observation to a 1989 draft version of Kripke 2009, via Soames 1989). We simplify here and stick to the analysis in (14) since the point is orthogonal to our concerns.

Second, there is the issue of how the interpretations of the VPs in (7), (8), (9) and (10) feed into further compositional interpretation. We assume that such VP denotations are the input to Aspect, which existentially binds the event variable. This is illustrated in (15), (16) (for perfective Aspect).

(15) $⟦Asp_{perf}⟧ = \lambda P_{⟨v,t⟩}. \lambda t. \exists e[\tau(e) \subseteq t \& P(e)]$

(16)   a. John sneezed.
    b. $[_{AspP} \text{ perf } [_{VP} \text{ John sneeze}]]$
    c. $⟦ [_{VP} \text{ John sneeze }] ⟧ = \lambda e. \text{ J sneeze in e}$
    d. $⟦ [_{AspP} \text{ perf } [_{VP} \text{ John sneeze}]] ⟧ = \lambda t. \exists e[\tau(e) \subseteq t \& \text{ J sneeze in e}]$

---

3 These data were first reported in Patel-Grosz & Beck 2014.

When the VP contains *again*, this raises an interesting issue about presupposition projection, illustrated in (17). How does Aspect combine with the partial function in (17c)? In other words, how does *again*'s presupposition project when we move beyond the domain of events? To address this issue, we assume the presupposition in (17) to project existentially, as in (17d); for expository ease, we use the abbreviation *PSP* for 'presupposition' (here and throughout the paper).[4]

(17)   a.   John sneezed again.
          b. $[_{\text{AspP}}$ perf $[_{\text{VP}}$ John sneeze again]]
          c. $[\![\ [_{\text{VP}}$ John sneeze again $]\ ]\!] = \lambda e: \exists e'[\tau(e')<\tau(e)$ & J sneeze in e'].
                                            J sneeze in e
          d. $[\![\ [_{\text{AspP}}$ perf $[_{\text{VP}}$ John sneeze again]] $]\!] =$
                            $\lambda t. \exists e \ \exists e'[\tau(e')<\tau(e)$ & $\tau(e) \subseteq t$ & J sneeze in e'].
                            $\exists e[\tau(e) \subseteq t$ & J sneeze in e]
             PSP: There is an earlier sneezing by John.

In our framework, one way to predict the existential presupposition is the revised semantics for Aspect given in (18), which takes into account possible presuppositions of the VP.

(18) $[\![\text{Asp}_{\text{perf}}]\!] = \lambda P_{\langle v,t\rangle}. \lambda t: \exists e[\tau(e) \subseteq t$ & P(e) is defined] $. \exists e[\tau(e) \subseteq t$ & P(e)]

---

[4] Note that this rendering gives rise to a minor technical concern, which is outside of the scope of this paper, but which can be outlined as follows. (We are grateful to Kjell Johan Sæbø, via Judith Tonhauser, p.c., for pointing this out). Both the presupposition and the assertion introduce an event e, each of which is existentially quantified. We could make this explicit by restating (17d) as in (i.), where the event e in the presupposition is labelled e_{psp} and the event e in the assertion is labelled e_{ass}.

    i. $\lambda t: \exists e_{\text{psp}} \exists e' [\tau(e') < \tau(e_{\text{psp}})$ & $\tau(e_{\text{psp}}) \subseteq t$ & J sneeze in e']. $\exists e_{\text{ass}} [\tau(e_{\text{ass}}) \subseteq t$
                                                      & J sneeze in $e_{\text{ass}}]$

As shown in (i.), the run times of both events, $\tau(e_{\text{psp}})$ and $\tau(e_{\text{ass}})$, respectively, are included in the reference time t. Furthermore, the presupposition in (i.) requires the event e' to temporally precede e_{psp} in the presupposition, but it does not require e' to temporally precede the reference time t. One could thus imagine a scenario where an extended t is long enough to subsume not only the run time of e_{psp} and e_{ass}, but also the run time of e'. Such a scenario (where $\tau(e') \subseteq t$) would allow for situations where the run time of e_{psp} starts after the run time of e_{ass}. As a consequence, e' could then temporally overlap or even follow e_{ass}, which is clearly an unintended consequence. One possible way to address this issue would be to posit a constraint on e' (e.g., $\tau(e') \not\subseteq t$) such that the reference time t must exclude $\tau(e')$. As this issue is orthogonal to the focus of our paper, we leave it open for future research.

The interpretation (17d) can be embedded under further operators, for example negation (19). Negation is a hole for presupposition projection, and we expect the presupposition to project.

(19)   a.   John didn't sneeze again.
       b.   PSP: There is an earlier sneezing by John.

There is some interesting discussion of presupposition projection in the case of *again* in the literature, for example Sæbø 1993, Kamp & Rossdeutscher 1994, Huitink 2003, van der Sandt & Huitink 2003 (albeit adopting a different semantic framework and a different framework for presupposition), also Beck 2006, 2007. Since this is not our topic in this paper, we stick to presentations like (6)–(10) and refer the interested reader to the literature cited.

3   Main empirial claims: The three readings of Kutchi Gujarati *pacho* 'again'

It can be shown that *pacho* 'again' in Kutchi Gujarati (an Indo-Aryan language) permits three distinct readings, which correspond to the three readings in (4), (5a) and (5b). It follows from our empirical findings that the lexical ambiguity and structural ambiguity analyses cannot be competitors in this language. If we were to adopt only the scope analysis, for example, it would capture only a part of the empirical landscape, namely the repetitive and the restitutive readings; adopting the lexical ambiguity approach in addition to the scope analysis allows us to explain the distinct counterdirectional reading that is present in the language, indicating that both analyses apply in a single language.

To distinguish the three readings of *pacho* 'again', we adopt the following methodology. First, we focus on predicates that lack a result state as well as a direction (such as *Bhujma che* 'is in Bhuj') in order to illustrate the repetitive reading of *pacho* 'again'. Subsequently, we show that a designated counterdirectional reading (often translating to 'back' in Present Day English) is possible with predicates that have a direction but no result state (such as *phone kar* '[to] phone [someone]'). Correspondingly, a designated restitutive reading is possible with predicates that have a result state but no direction (such as *dhaja kotar* 'crochet a flag'). In addition to investigating these predicates in combination with *pacho* 'again', we study predicates that permit all three readings (e.g., *kagar lakh* 'write a letter') and construct contexts that tease apart one reading from the other; these examples will make a particularly crucial contribution in that they exhibit word order effects associated with

the intended reading. In Section 3.1, we outline our empirical findings and Section 3.2 shows how the two analyses can be applied to the Kutchi Gujarati data. Section 3.3 discusses counterdirectionality and Section 3.4 provides an interim summary.

A note on our data: We collected data from native speaker consultants in controlled elicitation (the first author being a native speaker herself). Our consultants are from different locations within the Kutch district of Gujarat State, India, including its capital city Bhuj, and the port city Mandvi; they currently reside in London, UK. Per data point we consulted a minimum of 5 consultants.[5]

3.1 Introducing Kutchi Gujarati *pacho* as an element akin to English *again*

In what follows, we will see that the word *pacho* 'again' seems to be the Kutchi Gujarati counterpart (and translation) of English *again*; however, as we will see, *pacho* has more readings than English *again*, which is crucial to our understanding of *again*-type elements. To introduce Kutchi Gujarati *pacho*, let us start with an unambiguous example. In (20) and (21), the predicate denotes an undirected activity (*nach-* 'dance' in (20)), or a state (*Bhuj-ma ch-* 'be in Bhuj' in (21)). As indicated, the word *pacho* corresponds to English *again*. In these examples, we do not expect the restitutive readings to arise, since they lack a result state. In addition, we also do not expect a counterdirectional reading to arise, since these predicates are undirected. Ambiguity thus does not play a role in these examples.

As shown in (20a) vs. (20b), *pacho* exhibits agreement with an argument of the verb, which we gloss over, as it does not seem to affect its interpretation; we will use the masculine singular form *pacho* 'again' when referring to the adverb in the prose (also to avoid confusion with *pache* 'then', see Section 4.3.4). Other forms are *pachi* (feminine singular), *pachu* (neuter singular), and *pacha* (plural).

(20)   a.   Valji *pach-o*   nach-y-o
            Valji again-M.SG dance-PFV-M.SG
            'Valji (MASC) danced again.'
       b.   Reena *pach-i*   nach-i
            Reena again-F.SG dance-PFV.F.SG
            'Valji (FEM) danced again.'

---

(21)   John Bhuj-ma *pach-o*   ch-e
        John Bhuj-in   again-M.SG be-PRES.3.SG
        'John is in Bhuj again.'

The contribution of *again* is standardly analysed as a presupposition (see above). This is confirmed for *pacho* by the question test in (22) and the negation test in (23). The question in (22) is only appropriate if Valji danced earlier; it inquires if Valji danced at the time under discussion (the topic time, Klein 1994). Similarly, (23) is only appropriate if Valji danced earlier; the utterance asserts that Valji did not dance at the topic time.

(22)   Valji *pach-o*   nach-y-o?
        Valji again-M.SG dance-PFV-M.SG
        'Did Valji dance again?' (*presupposes*: Valji has danced before.)

(23)   Valji *pach-o*   nach-y-o   nath-o
        Valji again-M.SG dance-PFV-M.SG not-M.SG
        'Valji did not dance again.' (*presupposes*: Valji has danced before.)

We can observe these presuppositions at work in a context in which it is not part of the common ground that Valji has danced before. In example (24), both with and without the negation *natho* 'not', the inclusion of *pacho* 'again' gives rise to a presupposition violation, which we indicate by means of the hash mark. B now has the choice to accommodate that Valji has danced before (which may be difficult in this context), or to protest by virtue of a *Hey-Wait-a-Minute!* type expression, see Shanon 1976 and von Fintel 2004. (Note that, in this context, the question (22) would be equally deviant, prompting some reaction or other on B's part.) In a minimally different context, where both A and B attended the first day, the statements in (24) would be perfectly appropriate, and no presupposition violation would occur.

(24)   Context: A and B have known Valji for years, and neither of them has
        ever seen him dance. They are currently at a three-day event. B could
        not attend the first day, but A was there and saw Valji dance for the
        very first time ever. On the third day, A tells B:
    #Valji *pach-o*   nach-y-o   (nath-o)
        Valji again-M.SG dance-PFV-M.SG not-M.SG
        'Valji danced again.' ('Valji did not dance again.')
        (*violated repetitive presupposition*: Valji has danced before.)

Given that *again* in other languages gives rise to readings other than the repetitive, the question arises of whether *pacho* has additional non-repetitive readings. Looking at (25), we can see that *pacho* has a counterdirectional reading, which, as we will see, must be distinguished, not only from its repetitive reading, but also from its restitutive reading. This reading is the counterdirectional reading that we find with *agayne/ayen* 'again' in Middle English and Early Modern English, cf. (13). The predicate in (25) is a directed predicate without a result state, similar to, for example, (13b-i). In (25a), Valji receives a call from a woman who he does not know and who he has never called before. When he calls her back, we can describe this by means of (25b). The acceptability of (25b) in the context described in (25a) shows that a counterdirectional reading is available for *pacho*. As shown in (25c), negation does not affect the inference that the woman has phoned Valji before, that is, the contribution of counterdirectional *pacho* 'again' is presuppositional (see (23)).

(25)   a.   *Counterdirectional context*:
              A woman phoned Valji and left a message for him. He does not
              know the woman or her number. Valji phoned the woman back.
        b.   Valji *pach-i*   baiman-ne   phone kar-i   *(only) counterdir.*
              Valji again-F.SG woman-ACC phone do-PFV.F.SG
              'Valji phoned the woman back.' (*lit.*: 'Valji phoned the woman
              again.')
        c.   Valji *pach-i*   baiman-ne   phone kar-i   nath-i
              Valji again-F.SG woman-ACC phone do-PFV.F.SG not-F.SG
              'Valji didn't phone the woman back.' (*presupposes*: She has phoned
              him before.)

The reader should be aware that word order disambiguates in Kutchi Gujarati (we come back to this in Section 4). In (25b), *pacho* surfaces between the subject and the direct object. If we construct a parallel sentence in a repetitive context, as in (26b), *pacho* follows both the subject and the direct object. (In Section 4, we argue that the position of *pacho* is, in fact, fixed whereas the positions of the subject and the direct object are variable.) The example in (25b) is only acceptable in the counterdirectional context (25a), and not in the repetitive context in (26a). Conversely, (26b) is only possible in context (26a), and not in the context (25a).

(26) a. *Repetitive context*:
          Valji phoned a woman, but could not reach her. Valji phoned the
          woman again.
      b. Valji baiman-ne   *pach-i*   phone kar-i   *(only) repetitive*
          Valji woman-ACC again-F.SG phone do-PFV.F.SG
          lit.: 'Valji phoned the woman again.'

As in the case of repetitive *pacho*, we can observe the presupposition of coun-
terdirectional *pacho* at work in a context in which it is not presupposed that
Valji had ever been phoned by the woman that he phones. We illustrate this in
(27); note that a repetitive presupposition would be satisfied in this example,
as it is common knowledge that Valji had called Reena before. By contrast,
a counterdirectional presupposition is violated, regardless of whether the
sentence is negated or not. Again, B has the option of accommodating the
counterdirectional presupposition (which may be difficult in this case) or of
protesting by virtue of a *Hey-Wait-a-Minute!* type expression. As above, in
a minimally different context, where both A and B were there when Reena
called on the first day, the statements in (27) would be perfectly appropriate,
and no presupposition violation would occur.

(27) Context: A and B have known Valji and Reena for years. Both of them
      know that Valji often calls Reena, but they believe that Reena has
      never called Valji. They are currently staying at Valji's house for three
      days. B had gone out on the first day, but A was there and saw Reena
      call Valji for the very first time ever. On the second day, A tells B:
      #Valji *pach-i*   Reena-ne   phone kar-i   (nath-i)
      Valji again-F.SG Reena-ACC phone do-PFV.F.SG not-F.SG
      'Valji phoned Reena back.' ('Valji didn't phone Reena back.')
      (*violated counterdirectional presupposition*: Reena has earlier phoned
      Valji.)

In order to test for a distinct restitutive reading in Kutchi Gujarati, we look
at creation predicates where a directional interpretation is implausible (cf.
(28)–(29)). In both (28) and (29) something that was first destroyed is later
re-created; so, for instance, (28) is decomposed into *John's baking caused [a
result state of a cake existing (on the table)]*, while (29) is decomposed into
Sandy's crocheting caused [a result state of Pat having a flag] (cf. Beck &
Johnson 2004 for result states of creation verbs). Kutchi Gujarati *pacho* is
possible in both examples, yielding a reading where only the pre-existence of

the result state is presupposed. This corroborates a view where three distinct readings of sentences with *pacho* are possible.

(28)   *Restitutive context:*
       John walked into the living room. There was a cake on the table. He thought it was a prop and put his finger in it. The cake was destroyed. John baked a cake again.

       pach-o   John cake banav-y-o   *restitutive*
       again-M.SG John cake baked-PFV-M.SG
       'John baked a cake again.'

(29)   *Restitutive context:*
       Pat has a tree house. It had a flag, but last week's storm tore the flag off and destroyed it. Pat was very sad, but then her neighbour Sandy crocheted Pat a flag again.

       pach-u   Sandy Pat-maate dhaja kotar-y-u   *restitutive*
       again-N.SG Sandy Pat-for   flag   crochet-PFV-N.SG
       'Sandy crocheted a flag for Pat again.'

Further evidence for a non-counterdirectional restitutive reading can be found by combining *pacho* with a predicate that allows us to test for all three readings. We illustrate with the English example in (30). (30) clearly has a repetitive reading, (31a). A predicate of *writing someone a letter* is directed, thus a counterdirectional reading as in (31b) is conceivable. (Recall that, in contrast to (31a) and (31c), the reading in (31b) is not a possible interpretation of (30) in Present Day English.) At the same time, there is a result state of the recipient having a letter, therefore we would expect a restitutive reading in (31c) to be possible as well. This restitutive reading may be the most difficult to conceptualise, but it derives from the following logic: in (9b), we decomposed *Leo jumped up* into *Leo's jumping caused* [*a result state of Leo being up*]. Similarly, we now propose that *Valji wrote Maya a letter* can be decomposed into *Valji's writing caused* [*a result state of Maya having a letter*]. If *pacho* modifies a result-state denoting constituent, this gives us the reading in (31c). We constructed the three contexts in (32b)–(32d) for (32a). What is important here, is that the counterdirectional context in (32c) only verifies a counterdirectional presupposition, while the restitutive context in (32d) only verifies a restitutive presupposition. Finally, the repetitive context in (32b) verifies a repetitive presupposition.

(30)   He wrote her a letter again.

(31)   a.   Once more, he wrote her a letter.   *repetitive*
        b.   She had written to him, and he wrote a letter back to her.
                                                                 counterdir.
        c.   His writing caused her to come to once more have a letter.
                                                                 restitutive

(32)   a.   'Valji wrote Maya a letter again.'
        b.   *Repetitive context, verifies repetitive PSP*, cf. (31a):
              Valji and Maya have been pen pals for years. They write to each
              other almost every week.
        c.   *Counterdirectional context, verifies counterdirectional PSP only*, cf.
              (31b):
              Maya met Valji at a film festival last week. She was very attracted
              to him. After hesitating for a few days, she wrote him a letter.
              Valji got it on Wednesday.
        d.   *Restitutive context, verifies restitutive PSP only*, cf. (31c):
              Maya is Valji's little sister. Yesterday, she used a letter from Aunt
              Jaya to play post office, pretending to send and receive it all day
              long. She accidentally dropped the letter into the fire. It was de-
              stroyed. Maya was very disappointed.

Recall that in Kutchi Gujarati, word order plays a role when testing for avail-
able interpretations. The three contexts in (32b)–(32d) are conceivable con-
texts for the Kutchi Gujarati translations of English (32a) that we now dis-
cuss. The examples in (33)–(35) show that Kutchi Gujarati *pacho* is possible
in all three of these contexts, with varying word order. The sentence in (33),
with sentence-initial *pacho* is acceptable in the counterdirectional and resti-
tutive contexts, but not in the repetitive context. Moreover, the sentence in
(34) is only acceptable in the counterdirectional context, and (35) is only ac-
ceptable in the repetitive context. We can conclude that all three readings
are possible for *pacho* 'again'. First, if *pacho* only had a repetitive reading,
then (34) should not be possible in the counterdirectional context. Second,
the observation that (33) is possible in the restitutive context (32d) shows us
that an additional restitutive reading is possible, and this restitutive reading
is distinct from a counterdirectional reading, in context (32c). If *pacho* only
had a repetitive reading and a counterdirectional reading, then (33) should
not be possible in the restitutive context (32d).

(33) *pach-o*   Valji Maya-ne   kagar lakh-y-o   *restitutive or ctrdir.*
     again-M.SG Valji Maya-DAT letter wrote-PFV-M.SG
     'Valji wrote another letter for Maya.'
     (= he brought one into existence again, (32d))
     'Valji wrote a letter to Maya in return.' (= he wrote back, (32c))
     → acceptable in *Counterdirectional & Restitutive contexts*,
        but not acceptable in *Repetitive context*

(34) Valji *pach-o*   Maya-ne   kagar lakh-y-o   *counterdirectional*
     Valji again-M.SG Maya-DAT letter wrote-PFV-M.SG
     'Valji wrote a letter to Maya in return.' (= he wrote back, (32c))
     → acceptable in *Counterdirectional context*,
        but not acceptable in *Repetitive & Restitutive contexts*

(35) Valji Maya-ne   *pach-o*   kagar lakh-y-o   *repetitive*
     Valji Maya-DAT again-M.SG letter wrote-PFV-M.SG
     'Once more, Valji wrote a letter to Maya.'
     (= once more, he wrote, (32b))
     → acceptable in *Repetitive context*,
        but not acceptable in *Counterdirectional & Restitutive contexts*

The data show that Kutchi Gujarati *pacho* permits three distinct readings: a repetitive reading, a counterdirectional reading and a restitutive reading. It should be said that of course, in some examples, the restitutive and counterdirectional readings may simply end up indistinguishable, as with *dharvajo kol-* 'open the door' in (36). While *kagar lakh* 'write a letter' in (33)–(35) permits us to differentiate between 'reversing the direction of who writes to whom' (in the counterfactual reading) and 'making someone have a letter again' (in the restitutive reading), such a difference is not possible with *dharvajo kol-* 'open the door'. A restitutive reading would involve 'restoring a state of the door being open', whereas a counterdirectional reading may, at best, involve 'reversing an event of the door closing'; these generally describe the same situation. In Kutchi Gujarati (just like in Middle English and Early Modern English, but not Present Day English), (36a)–(36b) would thus involve a vacuous ambiguity (two distinct analyses that yield meanings that are verified by identical situations/contexts). Note that we are not concerned with the difference between (36a)–(36b) and (36c) at this point, which have been established by the discussion of (20)–(35); the difference between (36a)–(36b) and (36c) boils down to the observation that (36c) requires a previous event in which Reena opened the door, which is what is missing in (36a)–(36b).

(36)   a.   Context: On the first day of the semester, Reena enters the seminar room. She has never taken a class in this seminar room before. When she arrives, the door is open; after she sits down, the wind closes the door. Reena gets up and reopens the door.

          pach-o   Reena dharvajo kol-y-o   *restitutive ≈ ctrdir*
          again-M.SG Reena door   open-PFV-M.SG
          'Reena opened the door, which had been open before.'

        b.   Context: same as (36a)

          Reena *pach-o*   dharvajo kol-y-o   *restitutive ≈ ctrdir*
          Reena again-M.SG door   open-PFV-M.SG
          'Reena opened the door, which had been open before.'

        c.   Context: Reena sits in a seminar room that is too hot. To let some fresh air in, she opens the door. Someone arrives and closes the door. Once more, she gets up and opens the door.

          Reena dharvajo *pach-o*   kol-y-o   *repetitive only*
          Reena door   again-M.SG open-PFV-M.SG
          'Reena opened the door, which she had opened before.'

3.2 Applying the analyses to the three uses of Kutchi Gujarati *pacho*

Based on the empirical findings above, we propose that the existence of three distinct readings is best captured if we allow both the lexical ambiguity and the scope analysis to apply in a single language. In terms of Fabricius-Hansen's (2001) lexical ambiguity analysis, we can assume two lexical entries for *pacho*, in (37) and (38). In addition, repetitive *pacho* in (37) can vary in scope, that is, it can attach either to VP, as in (39b), or to a subconstituent that denotes a result state, as in (39a). LFs are sketched according to the analysis in Beck & Johnson 2004. We discuss the relation of the LFs to the surface word order in Section 4. (39b) and (39c) differ from each other in that the former contains repetitive *pacho* and the latter counterdirectional *pacho*.[6]

---

6 The fourth logical possibility, that is, counterdirectional *pacho* attaching to a result state denoting small clause, is independently ruled out, since states are not directed. Therefore, they plausibly have no direction that could be reversed, parallel to example (21).

(37) $[\![pacho_{\text{rep}}]\!] = \lambda P . \lambda e : \exists e'[\tau(e') < \tau(e) \;\&\; P(e')] . P(e)$
'This has happened before.' (cf. (39a) and (39b))

(38) $[\![pacho_{\text{ctrdir}}]\!] = \lambda P . \lambda e : \exists e'[\tau(e') < \tau(e) \;\&\; P_C(e')] . P(e)$
'The reverse has happened before.' (cf. (39c))

(39)   a.   *pach-o*   Valji Maya-ne   kagar lakh-y-o   *restitutive*
            again-M.SG Valji Maya-DAT letter write-PFV-M.SG
            Sketch of Logical Form:
            [VP Valji write (CAUSES) [SC *pacho*rep [SC Maya HAVE a letter]]]
            'Valji's writing causes Maya to come to once more have a letter.'

       b.   Valji Maya-ne   *pach-o*   kagar lakh-y-o   *repetitive*
            Valji Maya-DAT again-M.SG letter write-PFV-M.SG
            Sketch of Logical Form:
            [VP *pacho*rep [VP Valji write (CAUSES) [SC Maya HAVE a letter]]]
            'Once more, Valji's writing causes Maya to come to have a letter.'

       c.   {*pach-o*}   Valji {*pach-o*}   Maya-ne   kagar   *counterdirectional*
            again-M.SG Valji again-M.SG Maya-DAT letter
            lakh-y-o
            write-PFV-M.SG
            Sketch of Logical Form:
            [VP *pacho*ctrdir [VP Valji write (CAUSES) [SC Maya HAVE a letter]]]
            'Valji wrote Maya a letter in return.'

Kutchi Gujarati confirms a possibility conjectured by Beck & Gergel (2015), namely that the lexical and the structural analysis of *again*-type elements may coexist simultaneously in a language. Beck & Gergel propose this as part of the diachronic trajectory of English *again*. Kutchi Gujarati allows us to elicit the relevant three-way ambiguity from present day speakers, lending independent plausibility to their analysis.

3.3 Counterdirectionality

An interesting question for the counterdirectional analysis of *again*-type elements is when exactly a predicate makes a counterdirectional predicate available and what that predicate is. This is a more general question which should have repercussions for the analysis of further elements like *back, (in) return* or the prefix *re-* as in *reopen* as well as prepositions like *against*.[7] The semantic foundation of such an analysis is going to be a detailed understanding of paths (Cresswell 1978, Krifka 1998, von Stechow 2006, Beck & Gergel 2015). We will mostly leave this project for another occasion. But Kutchi Gujarati offers us the opportunity of using *pacho* as a probe into this issue. This section offers a brief empirical discussion.[8] What can be said at this point is the following. In earlier stages of English, we find counterdirectional readings with predicates such as 'come', as in Middle English *comþ ayen* 'come back (*lit.* come again)', (13a-i). We also find counterdirectional readings with predicates such as 'love', as in Middle English *he loved the quene agayne* 'he loved the queen back (*lit.* he loved the queen again)', (13a-ii). These two types of predicates are quite different: on the one hand, *come* is an intransitive predicate that has a motion from a source to a goal (i.e., directionality) as part of its meaning; on the other hand, *love* is a transitive predicate that encodes a binary relation between a lover and a beloved. Correspondingly, counterdirectionality has different intuitive effects in the two cases. If a predicate P encodes α *moving from β to γ*, then the counterdirectional predicate P_C amounts to α *moving from γ to β* (i.e., source-goal reversal). By contrast, if a predicate P encodes α *doing ϵ to β* (or, in the case of 'love', α *feeling ϵ with respect to β*), then the counterdirectional predicate P_C amounts to β *doing ϵ to α* (i.e., subject/object-role reversal). In this connection, we can make two

---

7 The relevant reading of the preposition *against* that we are concerned with is its 'towards' reading, as illustrated by the example in (i.), discussed in the OED Online entry for "against, *prep.*, *conj.*, *adv.*, and *n.*", accessible online at http://www.oed.com/view/Entry/3754 (last accessed on 22 September 2017).

    i. At Corrigan's Cross I met Mrs Leary coming against me.
       (Patrick Boyle. 1969. *All looks Yellow to the Jaundiced Eye.* London: MacGibbon & Kee.)

Intuitively, this reading can be connected to a counterdirectional relation between *come against (towards) x* and *move away from x*, much in line with the counterdirectionality that we are discussing.

8 We are grateful to Danny Fox (p.c.) for pointing this out to us, and to Roger Schwarzschild (p.c.) for suggesting to use Kutchi Gujarati as a testing ground.

relevant observations. First, as shown in (40), these are also same contexts that allow for the counterdirectional adverb *back* in Present Day English.

(40) a. *source-goal reversal*
          First, he goes away. Then, he comes *back*. (see (13a-i))
      b. *subject/object-role reversal*
          She loves him. And he loves her *back*. (see (13a-ii))

Second, counterdirectional *pacho* 'again' in Kutchi Gujarati is also possible in these two types of contexts. Example (41a) illustrates a case of *source-goal reversal*; *pacho* 'again' modifies a predicate P of *John moving from β (= within the park) to γ (=outside of the park)* and presupposes that a predicate P_C of *John moving from γ (=outside of the park) to β (= within the park)* held at an earlier point in time. Similarly, example (41b) illustrates a case of *subject/object-role reversal*; *pacho* 'again' modifies a predicate P of *α (= Bill) spraying β (= John) with sticky soda* and presupposes that a predicate P_C of *β (= John) spraying α (= Bill) with sticky soda* held at an earlier point in time. Finally, (41c) shows that *subject/object-role reversal* only applies to direct objects. Here, *Bill made a sandwich for John* fails to license counterdirectional *pacho* 'again' in a context in which, previously, *John made a sandwich for Bill*. In other words, a predicate P_C cannot be derived from a predicate P by swapping the subject with an optional beneficiary.

(41) a. John park-ma ato   maate g-y-o   *source-goal reversal*
          John park-in   walk for   go-PFV-M.SG
          pache John *pach-o*   park-ma thi   aav-y-o
          then   John again-M.SG park-in   from come-PFV-M.SG
          'John walked into the park. Then John came back out of the park.'

      b. John Bill-ne   chikru soda-thi   chant-y-u *subject/object-reversal*
          John Bill-ACC sticky soda-with spray-PFV-N.SG
          Bill *pach-o*   John-ne   chant-y-o   chikru soda-thi
          Bill again-M.SG John-ACC spray-PFV-M.SG sticky soda-with
          'John sprayed Bill with the sticky soda. Bill sprayed John back with the same sticky soda.'

    c.   John Bill maate sandwich banav-i   *no counterdirectionality*
           John Bill for   sandwich make-PFV-F.SG

           pache Bill (# *pach-i*)   John maate (# *pach-i*)   sandwich
           then Bill   again-F.SG John for   again-F.SG sandwich

           banav-i
           make-PFV.F.SG
           'John fixed a sandwich for Bill. Then Bill fixed a sandwich for John in turn.'

Descriptively, counterdirectional readings thus require either a source-goal reversal or a subject/object-role reversal and we expect that all predicates that allow either of these can combine with counterdirectional *pacho* 'again' (and its Middle English/Early Modern English counterparts), as long as the context is suitable. It is an open question why these are the relevant instances of reversal that seem to matter for grammatical encoding of counterdirectionality. See Krifka 1998 for a generalized notion of a path that could account for the reversal of direction involved in (40b), (41b), and Beck & Gergel 2015 for a discussion of the diachronic development.

3.4 Interim summary

To summarise this section, sentences with *pacho* can have three distinct readings. States and non-directed activities ('dance', 'be in Bhuj') only have the repetitive reading, whereas direction predicates ('to phone') can also have counterdirectional readings. Furthermore, accomplishment and achievement predicates (e.g., 'open the door', 'write a letter') can have result state modifying (i.e., restitutive) readings. Based on these empirical findings, we propose that the facts in this language are best captured by adopting both the structural and lexical ambiguity analysis: the scope analysis derives only part of the empirical landscape, namely the repetitive and the restitutive reading, whereas the lexical ambiguity approach allows us to explain the distinct counterdirectional reading. What remains to be seen is why these distinct readings of *pacho* correlate with different positions for *pacho* in the syntax; that is, how the LFs in (39) are related to the surface structures. This will be the focus of the remainder of the paper.

    Before proceeding with this discussion, it is worth revisiting the analysis of English *again*. As discussed, there is an ongoing debate as to whether the restitutive reading of *again* should be derived by means of the scope analy-

sis or the lexical ambiguity analysis. We have seen that present day English *again* differs from Kutchi Gujarati *pacho* 'again' in that it lacks a designated counterdirectional reading. In connection with our discussion in Section 3.2, this entails that the scope analysis (where repetitive *again* can take low scope over a result state denoting small clause) is more suitable for English *again* than the lexical ambiguity analysis.

4 The syntax-semantics-pragmatics interface in Kutchi Gujarati

4.1 The syntactic distribution of *pacho*

So far, we have established that *pacho* has three distinct readings, and that these readings correlate with its linear position in relation to the clausal arguments; in this section, we want to further investigate how word order correlates with the different readings. We will see that the possible syntactic positions of *pacho* are relatively rigid, whereas other elements undergo movement. This yields the word order effects that we see.

As shown in (42) and (43), repetitive *pacho* must occur in a surface position that follows the subject, but also referential arguments such as *Bhuj-ma* 'in Bhuj', in (43c). By contrast, the word order for a restitutive reading is one where the subject follows *pacho*, illustrated in (44a). In the repetitive example (44b), the subject precedes *pacho*. In this example, *pacho* precedes the object *cake* 'cake', which is presumably due to the fact that *cake* is unspecific (or even incorporated into the verb). Note that (42a) and (43a) are judged unacceptable (i.e., syntactically ill-formed) by native speakers. By contrast, (43b) is merely dispreferred (as opposed to (43c)).

(42) Context: Two weeks ago, Valji finished an important assignment. To celebrate, he danced. Yesterday, he finished another important assignment. Valji danced again.

    a. *pach-o   Valji nach-y-o
        again-M.SG Valji dance-PFV-M.SG

    b. Valji *pach-o*   nach-y-o   *repetitive*
        Valji again-M.SG dance-PFV-M.SG
        'Valji danced again.'

(43)   Context: Last year, John was in Bhuj for the first time. Then he went
        back to London. Now, John is in Bhuj again.

   a. *pach-o   John Bhuj-ma ch-e
      again-M.SG John Bhuj-in   be-PRES-3.SG

   b. ?John pach-o   Bhuj-ma ch-e   *?repetitive*
      John again-M.SG Bhuj-in   be-PRES-3.SG

   c. John Bhuj-ma pach-o   ch-e   *repetitive*
      John Bhuj-ma again-M.SG be-PRES-3.SG
      'John is in Bhuj again.'

(44)   a. Context: John walked into the living room. There was a cake on
            the table. He thought it was a prop and put his finger in it. The
            cake was destroyed. John baked a cake again.
            pach-o   John cake banav-y-o   *restitutive*
            again-M.SG John cake bake-PFV-M.SG
            'John baked the cake again.'

        b. Context: Last week, it was Mary's birthday. John baked a cake and
            brought it to her party. Today, it is Sue's birthday. Once again,
            John baked a cake.
            John *pach-o*   cake banav-y-o   *repetitive*
            John again-M.SG cake bake-PFV-M.SG
            'John baked a cake again.'

The contrast between counterdirectional *pacho* and repetitive *pacho* is given
in (45b) and (45c). In the counterdirectional reading, (45b), *pacho* precedes
the direct object *baiman-ne* 'the woman'. In the repetitive reading, (45c), *pa-
cho* follows the direct object. Example (46) is parallel to (45). As for (45a),
this variant is judged unacceptable (i.e., syntactically ill-formed) by native
speakers (though there are cases where counterdirectional *pacho* 'again' can
precede the subject, as we have seen in example (33), and see also (47a)).

(45)   a. *pach-i   Valji baiman-ne   phone kar-i
           again-F.SG Valji woman-ACC phone do-PFV.F.SG

        b. Context: A woman phoned Valji and left a message for him. He
           does not know the woman or her number. Valji phoned the woman
           back.
           Valji *pach-i*   baiman-ne   phone kar-i   *counterdirectional*
           Valji again-F.SG woman-ACC phone do-PFV.F.SG
           'Valji phoned the woman back.'

    c.   Context: Valji phoned a woman, but could not reach her. Valji phoned the woman again.

Valji	baiman-ne	*pach-i*	phone	kar-i	*repetitive*
Valji	woman-ACC	again-F.SG	phone	do-PFV.F.SG	

      'Valji phoned the woman again.'

(46)   Context: Khimji and Raj are good friends who attend the same introductory karate lessons. When practicing karate, Khimji has never hit Raj, and Raj has never hit Khimji; guess what!

    A: gaykale   Khimji Raj-ne   mar-y-o
        yesterday Khimji Raj-ACC hit-PFV-M.SG
        'Yesterday, Khimji hit Raj.'

    B: pache su   th-y-u?
        then   what happen-PFV-N.SG
        'What happened then?'

    a.   A: Raj *pach-o*   Khimji-ne mar-y-o   *counterdirectional*
          Raj again-M.SG Khimji-ACC hit-PFV-M.SG
          'Raj hit Khimji in return.'

    b.   A: Khimji Raj-ne   *pach-o*   mar-y-o   *repetitive*
          Khimji Raj-ACC again-M.SG hit-PFV-M.SG
          'Khimji hit Raj again.'

The data in (44)–(46) give rise to a somewhat odd set of generalisations concerning the surface word order: (i) restitutive *pacho* must precede the subject, cf. (44a); (ii) counterdirectional *pacho* follows the subject, but precedes referential objects, cf. (45b)/(46a);[9] (iii) repetitive *pacho* follows both subject and referential objects, cf. (42b), (43c), (44b) (where *cake* 'cake' is presumably part of the predicate, either by incorporation or pseudo-incorporation; see Dayal 2011 for Hindi), (45c), and (46b).

    This distribution is also confirmed by the three-way ambiguous 'write a letter'. In (47c)–(47d), *pacho* follows the subject and the (referential) indirect object; it can only be interpreted repetitive. When *pacho* precedes the (referential) object, as in (47b), a counterdirectional reading emerges, and finally, the restitutive reading is only possible when *pacho* precedes the subject, (47a).

---

9 Here, the label "referential" excludes objects that combine with a light verb and thus may count as incorporated, like *phone* 'phone' in (45); see Kachru (2006: 92-93) for Hindi, who uses the label "conjunct verb" and treats it as a type of word formation.

(47)   Contexts: see (30)–(35)

    a. *pach-o*   Valji Maya-ne kagar   *restitutive (or counterdir.)*
       again-M.SG Valji Maya-DAT letter
       lakh-y-o
       write-PFV-M.SG

    b. Valji *pach-o*   Maya-ne kagar lakh-y-o   *counterdirectional*
       Valji again-M.SG Maya-DAT letter write-PFV-M.SG

    c. Valji Maya-ne *pach-o*   kagar lakh-y-o   *repetitive*
       Valji Maya-DAT again-M.SG letter write-PFV-M.SG

    d. Valji Maya-ne kagar *pach-o*   lakh-y-o   *repetitive*
       Valji Maya-DAT letter again-M.SG write-PFV-M.SG

The generalisations we have seen with respect to surface word order can be illustrated by the diagram in (48).

(48)   …subject ……(referential) object ……(incorporated object)…verb

        PACHO   PACHO(ctrdir)   PACHO(rep)
      (rest/ctrdir)
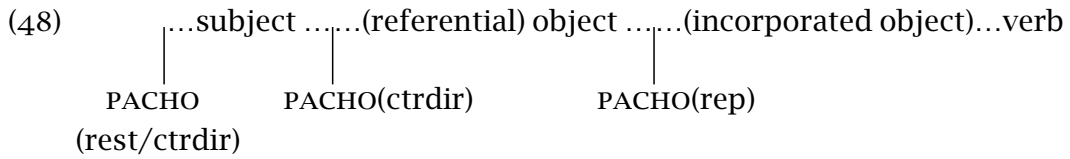
The word order generalisations in (48) are very surprising, given that at LF, repetitive *pacho* takes wide scope, while restitutive *pacho* takes narrow scope (cf. (39a) and (39b); see also von Stechow 1996, who shows that in the corresponding German data the mapping between surface order and LF is fairly transparent). Thus it is not immediately clear how the surface position of *pacho* maps to its LF position. Moreover, repetitive *pacho* and counterdirectional *pacho* are expected to have the same scope position (cf. (39b) and (39c)), giving rise to the puzzle that is summarised in (49) and (50). While their semantics tells us that repetitive and counterdirectional *pacho* are best understood as VP modifiers, as in (50a) and (50b), they take different surface positions, as shown in (49a) and (49b).

(49)   Contexts: see (45b)–(45c)

    a. Valji *pach-i*   baiman-ne   phone kar-i   *counterdirectional*
       Valji again-F.SG woman-ACC phone do-PFV.F.SG
       'Valji phoned the woman back.'

    b. Valji baiman-ne *pach-i*   phone kar-i   *repetitive*
       Valji woman-ACC again-F.SG phone do-PFV.F.SG
       'Valji phoned the woman again.'

(50)   a.   *counterdirectional LF:*[VP *pachi*ctrdir[VP Valji baiman-ne phone kari]]
         b.   *repetitive LF:*   [VP *pachi*rep   [VP Valji baiman-ne phone kari]]

In the next sections, we argue that that the mapping between (49) and (50) is related to information-structural considerations. In fact, repetitive *pacho* 'again' and counterdirectional *pacho* 'again' occur in the same position, much in line with (50), whereas it is the placement of other elements (specifically: the arguments of the verb) that varies. In other words, *baiman-ne* 'the woman' remains in a position below *pacho* in (49a), whereas it moves to a position above *pacho* in (49b), and so forth; *pacho* itself does not undergo movement in either (49a) or (49b).

4.2   Information-structural movement in Kutchi Gujarati

In this section, we show that word order in Kutchi Gujarati is tightly connected to information structure (see Butt & King 1996 for a parallel proposal in Hindi-Urdu). We start by discussing two pieces of evidence for this proposal. First, we observe that Kutchi Gujarati is a scrambling language, where scrambling reflects information structure. Focus can be detected by means of question-answer pairs, cf. Rooth 1985, 1992: the focus in the answer corresponds to the new information, which corresponds to the *wh*-element in the question. Kutchi Gujarati is descriptively *wh-in-situ*, but information structure determines the word order, as shown by the examples in (51)–(55). We added *laghbagh* 'probably' into the answers in order to detect the syntactic position of different elements (assuming that *laghbagh* has a rigid position as an IP adjunct). The data in (51)–(55) summarise the most natural word orders, and show that the focused element in the answer occur to the right of *laghbagh*, whereas all other arguments of the verb preferably occur to its left. These data also show that the *wh*-element in the question (which does not contain *laghbagh* 'probably') occupies a pre-verbal position parallel to the positions of focused elements in the answers.

(51)   Q: Reena-ne   aa   chopri *kaun* did-th-i?
               Reena-DAT this book   who   give-PFV-F.SG
               'Who gave this book to Reena?'
         A: Reena-ne   aa   chopri laghbagh [*Valji*]F did-th-i?
               Reena-DAT this book   probably Valji   give-PFV-F.SG
               '[Valji]F probably gave this book to Reena.'
                                                    (narrow focus on subject)

(52) Q: Valji aa   chopri *kaun-ne* did-th-i?
           Valji this book   who-DAT give-PFV-F.SG
           'Who did Valji give this book to?'
      A: Valji aa   chopri laghbagh [*Reena-ne*]_F did-th-i?
           Valji this book   probably Reena-DAT give-PFV-F.SG
           'Valji probably gave this book [to Reena]_F.'
(narrow focus on indirect object)

(53) Q: Valji Reena-ne *su*   did-th-u?
           Valji Reena-DAT what give-PFV-N.SG
           'What did Valji give to Reena?'
      A: Valji Reena-ne   laghbagh [*aa   chopri*]_F did-th-i?
           Valji Reena-DAT probably this book   give-PFV-F.SG
           'Valji probably gave [this book]_F to Reena.'
(narrow focus on direct object)

(54) Q: Valji *su*   *kar-y-u*?
           Valji what do-PFV-N.SG
           'What did Valji do?'
      A: Valji laghbagh [*Reena-ne   aa   chopri did-th-i*]_F
           Valji probably Reena-DAT this book   give-PFV-F.SG
           'Valji probably [gave this book to Reena]_F.' *(VP focus)*

(55) Q: *su*   *th-y-u*?
           what happen-PFV-N.SG
           'What happened?'
      A: laghbagh [*Valji Reena-ne   aa   chopri did-th-i*]_F
           probably Valji Reena-DAT this book   give-PFV-F.SG
           '[Valji]_F probably [gave this book to Reena]_F.' *(all-new focus)*

Further evidence for interactions between information structure and word order stems from the distinction between epithets, which are *given* (cf. Schwarzschild 1999, which we come back to later) and novel definites, which are *non-given*. Umbach (2004: 302) discusses examples like (56) (this version quoted from Krifka 2008: 263), which contain words (*the shed*) that have a literal meaning and an epithet meaning. In the epithet reading, the DP qualifies as *given* (i.e., it anaphorically picks up an antecedent) and must be deaccented, (56a). If it is accented, (56b), it must be read as non-given, introducing a new referent.

(56) a. Ten years after John inherited an old farm,
          he SOLD [the shed]_Given.
          (*the shed* = 'the old farm')

    b.   Ten years after John inherited an old farm,
         he sold [the SHED]_{Non-Given.}
         (*the shed* = 'the shed that came with the old farm')

In Kutchi Gujarati, word order disambiguates, which we attribute to the assumption that (non)givenness syntactically correlates with word order. If *gadalyu* 'mattress, dump' follows *laghbagh* 'probably', (57), it can both refer to the dirty apartment that Dhanush bought (as a *given* epithet), or to a *non-given* mattress that is inside the apartment. The two readings can be elicited as follows: if the epithet reading is available, a native speaker will reply 'yes' to the question 'can this sentence mean that he sold the entire apartment?'; if the novel definite reading is available, a native speaker will reply 'yes' to the question 'can this sentence mean that he kept the apartment but sold the mattress that came with the bed in the apartment?' Crucially, if *gadalyu* 'mattress' precedes *laghabgh* 'probably', which is the case in (58), only the epithet reading is possible. In other words, the position to the left of sentence adverbials seems to be reserved for elements that are given and cannot contain non-given elements.

(57)   a.   Dhanush chataru apaatment lid-th-u
            Dhanush dirty   apartment take-PFV-N.SG
            'Dhanush bought a dirty apartment.'
    b.   i   *laghbagh* gadalyu-ne   venchi nakh-se
            he probably mattress-ACC sell   put-FUT.3.SG
            ^{OK} 'He will probably sell the dump (= the apartment).'   *(epiphet)*
            ^{OK} 'He will probably sell the mattress (which is in the apartment).'
                                                         (novel definite)

(58)   a.   Dhanush chataru apaatment lid-th-u
            Dhanush dirty   apartment take-PFV-N.SG
            'Dhanush bought a dirty apartment.'
    b.   i   gadalyu-ne   *laghbagh* venchi nakh-se
            he mattress-ACC probably sell   put-FUT.3.SG
   ^{OK} 'He will probably sell the dump (= the apartment).'   *(epiphet)*
            * 'He will probably sell the mattress (which is in the apartment).'
                                                              (novel definite)

The distribution of given vs. non-given elements further corroborates a view where word order tracks information structure.

For now, we propose the following: First, Kutchi Gujarati has an information-structural FocP directly above the VP, as previously argued for Malayalam in Jayaseelan 2001 and for Hindi-Urdu in Irani 2014. Second, FocP attracts a focused element to its specifier position, which can only host a single constituent. Third, all unfocused arguments must evacuate the VP (and thus move above the FocP). This is sketched in (59) for the example in (51): A.[10] For examples with all-new focus, (55), and VP focus, (54), we assume (for now) that the VP (containing all of the arguments of the verb) or a remnant of the VP is moved into SpecFocP; more in-depth investigations of such examples are required in order to see if this is the right approach or if broad (all-new or VP) focus employs a different strategy from narrow focus.

(59)   a.   Reena-ne   aa   chopri laghbagh [*Valji*]$_F$ did-th-i
            Reena-DAT this book   probably Valji   give-PFV-F.SG
            '[Valji]$_F$ probably gave this book to Reena.'

   b.
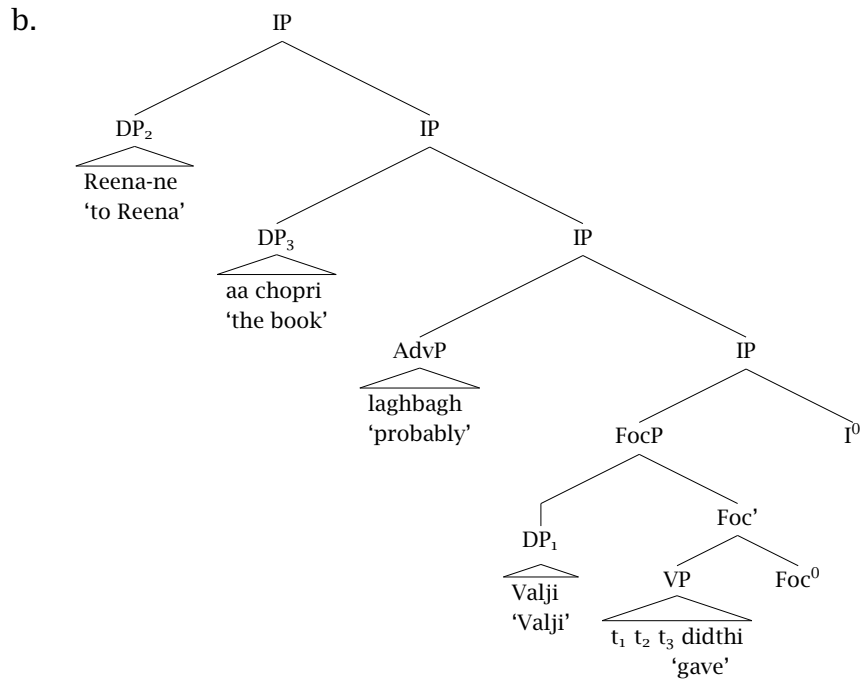
The core motivation for such an IP-internal FocP in South Asian languages originally stems from the observation that word order in Hindi-Urdu (Indo-Aryan) and Malayalam (Dravidian) (and presumably in other South Asian languages) is rigidly connected to information structure; see the discussion by

---

10 The clause structure is simplified in order to concentrate on the components that are directly relevant for the present discussion; we leave open whether Kutchi Gujarati projects a vP.

Gambhir (1981), Butt & King (1996, 1997), Kidwai (2000), Kachru (2006), and Patil et al. (2008). These authors generally agree that if a single constituent is in focus, it must occur in a directly preverbal position. To argue for this point, Butt & King (1996) provide examples such as (60) from Hindi-Urdu.

(60)   a. Naadyaa=ne Hassan=ko [*tofii*]$_F$ d-ii   *Urdu*
             Nadya=ERG Hassan=DAT toffee give-PFV.F.SG
             'Nadya gave TOFFEE to Hassan.'
      b. #Nadyaa=ne [*Hassan=ko*]$_F$ tofii   d-ii
             Nadya=ERG Hassan=DAT toffee give-PFV.F.SG
             'Nadya gave toffee to HASSAN.'
             (Butt & King 1996, ex. (5))

Identical examples can be constructed for Kutchi-Gujarati, as in (61); here, we see that the focused phrase always has to occur in a directly preverbal position, ruling out A1 in (61a) and (61b), while A2 is acceptable.

(61)   a. Q: Naadyaa Hassan-ne *su*   did-th-u?
               Nadya   Hassan-DAT what give-PFV-N.SG
               'What did Nadya give to Hassan?'
        A1: #Naadyaa [*tofii*]$_F$ Hassan-ne   did-th-i
               Nadya   toffee Hassan-DAT give-PFV-F.SG
               'Nadya gave TOFFEE to Hassan.'
        A2: Naadyaa Hassan-ne   [*tofii*]$_F$ did-th-i
               Nadya   Hassan-DAT toffee give-PFV-F.SG
               'Nadya gave TOFFEE to Hassan.'
      b. Q: Naadyaa tofii   *kaun-ne* did-th-i?
               Nadya   toffee who-DAT give-PFV-F.SG
               'Who did Nadya give toffee to?'
        A1: #Naadyaa [*Hassan-ne*]$_F$ tofii   did-th-i
               Nadya   Hassan-DAT toffee give-PFV-F.SG
               'Nadya gave toffee to HASSAN.'
        A2: Naadyaa tofii   [*Hassan-ne*]$_F$ did-th-i
               Nadya   toffee Hassan-DAT give-PFV-F.SG
               'Nadya gave toffee to HASSAN.'

Similarly, Jayaseelan (2001) and Butt (2014) argue that *wh*-elements in Malayalam and Hindi-Urdu, respectively, must be located in an immediately preverbal position by default. We have already seen in Section 4.2 that the exact same pattern arises in Kutchi Gujarati, supporting the view in (59).

An issue that we have not addressed at this point concerns the behavior of constructions with two independent focus constituents. Since this will be important for our discussion of counterdirectional *pacho*, we would like to briefly address it here. A representative example is given in (62).

(62) Q: *kaun su*   pi-dh-u?
       who   what drink-PFV-N.SG
       'Who drank what?'
    A: [*Valji*]$_F$ laghbagh [*aa chai-ne*]$_F$ pi-dh-i
       Valji   probably this tea-ACC   drink-PFV-F.SG
       '[Valji]$_F$ probably drank [this tea]$_F$.'
       [*Khimji*]$_F$ mane   lage   [*aa pani-ne*]$_F$ pi-dh-u
       Khimji   me-DAT seems this water-ACC drink-PFV-N.SG
       '[Khimji]$_F$ probably drank [this water]$_F$.'

The corresponding structure for A's first utterance is indicated in (63). It is not possible for both Foci to occupy SpecFocP, hence one of them occurs higher in the structure.

(63) [$_{IP}$ [*Valji$_1$*]$_F$ [$_{IP}$ laghbagh [$_{FocP}$ [*aa chai-ne$_2$*]$_F$ [$_{VP}$ t$_1$ t$_2$ pi-dh-i]   Foc^0] I^0]]
      Valji   probably   this tea-ACC   drink-PFV-F.SG
    '[Valji]$_F$ probably drank [this tea]$_F$.'

Note that there may be cases where two arguments of the verb surface between *laghbagh* 'probably' and the verb, since indefinite objects can undergo pseudo-incorporation into the verb (cf. Dayal 2011 for Hindi), as discussed for (44b) above. Presumably, such (pseudo-)incorporated objects form part of the predicate and are thus not expected to undergo information-structural movement to SpecFocP; in turn, SpecFocP becomes the landing site for the next higher argument.

In Section 4.3, we show that the distribution of *pacho* follows directly from its information-structural impact. This, in turn, sheds new light on how presuppositional information interacts with information structure.

4.3 Connecting information structure (GIVENness) to *pacho*'s presuppositions

4.3.1 GIVENness

For concreteness' sake, we implement our proposal in the approach of Schwarzschild (1999) (though other implementations are conceivable). Schwarzschild assumes that focus and givenness are connected, and that givenness is the central property in information structure. By contrast, focus-marking, or F-marking, serves a purpose of signalling new, or "non-given" information, thus tracking the givenness of elements in the clause. Schwarzschild's definition of givenness is provided in (64). The idea is that any constituent, that is, any utterance U, can be evaluated with respect to whether it is given or not. First, if U denotes an individual, then it is given if there is a salient coreferring antecedent. Second, if U denotes a proposition, then it is given if its Existential F-Closure is entailed by a salient proposition in the context. The Existential F-Closure of an utterance U is achieved by substituting variables for all F-marked constituents in U, and existentially binding them.[11]

(64) *Definition of GIVEN* (final informal version):
      An utterance U counts as GIVEN iff it has a salient antecedent A and

    a. if U is type e, then A and U corefer;
    b. otherwise: modulo $\exists$-type shifting, A entails the Existential F-Closure of U.   (Schwarzschild 1999: p. 151)
        where:
        i. $\exists$-*type shifting* existentially closes all open argument slots, and
        ii. the *Existential F-closure* of φ is $\exists X[\varphi]$, where X (recursively) replaces an F-marked constitutent in φ.

In Schwarzschild's proposal, GIVENness interacts with F-marking. The core idea, given in (65), is that if a constituent is not F-marked, it must be GIVEN. The information-structural constraint GIVENness enforces F-marking, which, in turn, governs the distribution of focus-related phenomena, such as accent. It should be noted that something can be GIVEN, but still F-marked. This becomes crucial below.

---

11 We will not be concerned with $\exists$-*type shifting*, which involves the existential closure of all open argument slots in an expression that is neither propositional nor of type e.

(65)   GIVENness (Schwarzschild 1999: 155)
       If a constituent is not F-marked, it must be GIVEN.

We first illustrate the system at work with the simple example in (66), after which we will turn to a more complex case when we discuss *again*. The question we want to ask with respect to (66) is the following: Is GIVENness satisfied with respect to the IP constituent (66c) when (66b) occurs in the context of (66a)? The answer is as follows. If (66c) did not contain F-marking, then the IP would not be GIVEN, and GIVENness would be violated. However, (66c) contains F-marking on Bill. Therefore, the existential F-closure of the IP is the proposition in (66d): *There is someone who danced.* Since the antecedent proposition *John danced* (our A in the spirit of (64)) entails the proposition *There is someone who danced* (our U in the spirit of (64)), the IP is GIVEN, cf. (66e).

(66)   a.   John danced.
       b.   (No,) [BILL]$_F$ danced.
       c.   [$_{IP}$ [BILL]$_F$ danced]
       d.   Existential F-Closure of (66c):   ∃ X [*X danced*]
       e.   (66c) is GIVEN, because *John danced* (=(66a))
            entails ∃X [*X danced*] (=(66d))

To limit how much material may be F-marked, Schwarzschild posits a constraint AVOIDF, which is defined in (67). This constraint requires as little F-marking as possible.[12] In the section that follows, we show how F-marking and GIVENness connect to *again*-type elements such as *pacho*.

(67)   AVOIDF (Schwarzschild 1999: 156)
       F-mark as little as possible, without violating GIVENness.

4.3.2   GIVENness & *again*

We observe that there is a fundamental difference between sentences containing repetitive *pacho/again* and sentences containing counterdirectional *pacho* (and presumably also *again*-type elements in Middle English/Early Modern English) in terms of their information structure. First, when an utterance with repetitive *pacho/again* is used appropriately, everything in the

---

12 GIVENness would also be satisfied if more than *Bill* was F-marked in (66b)–(66c), e.g., the entire IP, but this is blocked by AVOIDF.

utterance (except, presumably, *pacho/again* itself) is GIVEN (cf. Wagner 2012: p. 136). In other words, sentences with repetitive *pacho/again* are "all-given" sentences, meaning that there is no overt material that needs to be F-marked, other than possibly *pacho/again* itself, as indicated in (68b) (see von Stechow 1996, and also Umbach 2012, for the observation that German *wieder* 'again' is accented in the repetitive reading, and Beck 2006 for an analysis). To illustrate, if (68b) is uttered felicitously, then there must be a salient antecedent proposition corresponding to *John danced*. When *again*$_{rep}$ is used appropriately in (68b), the context entails that John danced. Therefore, all of the overt constituents in *John danced*, that is, [*John*], [*danced*] and [*John danced*] are GIVEN.[13]

(68)   a.   Last week, John danced. What did he do yesterday?
       b.   John danced [again]$_F$.
       c.   PSP: $\exists t'[t' < t_{yesterday}$ & John danced at t']

Let's generalize from this example. There is the following connection between repetitive *pacho/again* and GIVENness:

(69)   For any context c: [*pacho*$_{rep}$/*again*$_{rep}$ S] is used appropriately in c
       → S is entailed in c (modulo ∃-type shifting of S's time variable)
       → S is GIVEN in c

We conjecture that (69) instantiates an underlying, more general connection between presupposition and GIVENness, which can be stated as in (70). We expect to find reflexes of this generalization with presupposition triggers such as *also* and *even* (compare Reis & Rosengren 1997 on stressed *auch* 'also, too', which may be a case in point, parallel to F-marked *again*).

(70)   For any context c and presupposition trigger φ:
       φ(S) presupposes S (modulo ∃-type shifting) and φ(S) is used appropriately in c
       → S is entailed in c (modulo ∃-type shifting)
       → an utterance that expresses S is GIVEN in c

By contrast, when a utterance with counterdirectional *pacho* (≈ *back* in present day English) is used appropriately, constituents that are themselves GIVEN

---

13 For expository ease, we omit event variables from (68c) and (71c), to highlight the parallels between the presuppositions in (68c)/(71c) and the object language expressions in (68a)/(71a).

must partly be F-marked in order for the sentence to comply with GIVENness. This is illustrated in (71) and (72). If we first say that *John phoned Mary* and then we follow up with *Mary phoned John*, then the two individuals, *John* and *Mary* (as well as the verb) are GIVEN by themselves, since they have an antecedent in the context. But they still need to be F-marked in order for the IP to count as GIVEN and comply with GIVENness.

(71) a. Last week, John phoned Mary. What happened yesterday?
      b. Mary phoned John back. (*in Kutchi Gujarati literally*: 'Mary phoned John again.')
      c. PSP: $\exists t'[t' < t_{yesterday}$ & John phoned Mary at t']

(72) a. Last week, John phoned Mary. What happened yesterday?
      b. [Mary]$_F$ phoned [John]$_F$.
      c. [$_{IP}$ [Mary]$_F$ phoned [John]$_F$]
          is GIVEN, because *John phoned Mary* entails $\exists X \exists Y$ [*Y phoned X*]

The reason for the F-marking in (72b) is as follows: the antecedent proposition *John phoned Mary* entails that *somebody phoned somebody*, (72c). But it does not entail that *Mary phoned somebody* or that *somebody phoned John* (see (73c)). Thus, only if both *Mary* and *John* are F-marked, then the IP is GIVEN. In other words, Schwarzschild's analysis requires (71b) to have the F-marking in (72b), even though *Mary* and *John* are GIVEN, so that GIVENness is satisfied at higher constituents, for example IP. If one of them is not F-marked, the IP cannot be GIVEN and thus violates GIVENness. Example (73) demonstrates what would happen if, for example, *Mary* were not F-marked.

(73) a. Last week, John phoned Mary. What happened yesterday?
      b. #Mary phoned [John]$_F$.
      c. [$_{IP}$ Mary phoned [John]$_F$]
          is not GIVEN, because *John phoned Mary* does not entail $\exists X$ [*Mary phoned X*].
          Therefore, GIVENness is violated (at the IP level).

In sum, sentences with repetitive *pacho/again* lack F-marking (other than plausibly on *pacho/again* itself). By contrast, sentences with counterdirectional *pacho/back* require F-marking on arguments within the VP, for example, on *John* and *Mary* in *Mary phoned John back*. That is, counterdirectional *pacho/back* sentences must have F-marking on those arguments that are involved in the event reversal (subsuming both the source-goal reversal and

the subject/object-role reversal that we have seen in Section 3.3); for example, arguments whose AGENT/PATIENT roles are reversed must be F-marked.

4.3.3 Counterdirectional vs. repetitive *pacho* analysed

We are now ready to return to the word order facts with *pacho*. Recall our empirical generalisation: Subjects generally precede both repetitive and counterdirectional *pacho*; referential objects precede repetitive *pacho*, and follow counterdirectional *pacho*. We take *pacho* to always be a FocP-adjunct and, the position of referential objects (and other complements of the verb) to be sensitive to information structure.

An example that illustrates (and supports) our proposal is given in (74) and (75). Both describe an event of John going to Bhuj. In (74), the reading is repetitive, that is, "Once more, John went to Bhuj." By contrast, in (75), a counterdirectional reading surfaces, that is, "John went back to Bhuj", after he left Bhuj for the very first time. As indicated, none of the arguments in (74) are F-marked, since *John Bhuj pacho gyo* 'John went to Bhuj again' has an antecedent for the purposes of GIVENness, in *John Bhuj gyo* 'John went to Bhuj'. By contrast, in (75), *Bhuj* must be F-marked, for the same reasons as above. There is no antecedent that entails that anyone has gone to Bhuj in the preceding context. *John* does not have to be F-marked, since there is an antecedent that entails that John has gone somewhere, namely the proposition *John Mandvi gyo* 'John went to Mandvi'.

Crucially, if a complement of the verb is F-marked, then it must move into the SpecFocP right above VP, in the spirit of (59); this is the case for counterdirectional *pacho*, as shown in (75). If a complement of the verb is not F-marked, then it must move out of the VP to a position above FocP; this is what happens to *Bhuj* in the case of repetitive *pacho*, as shown in (74).

(74) Context: John is originally from Mandvi. When he was 10, he went to Bhuj for the very first time. Soon, he returned to Mandvi …
John Bhuj [*pach-o*]_F g-y-o *repetitive*
John Bhuj again-M.SG go-PFV-M.SG
'(Then,) John went to Bhuj again.'

(75) Context: John is originally from Bhuj. When he was 10, he left Bhuj for the very first time to go to Mandvi …
a. John *pach-o* [Bhuj]_F g-y-o *counterdir.*
John again-M.SG Bhuj go-PFV-M.SG
'(Then,) John went back to Bhuj.'

b.   [$_{IP}$ John went to [Bhuj]$_F$]
        is GIVEN, because *John went to Mandvi* entails $\exists X$ [*John went to X*]

We can now look at an example of event reversal, as given in (76a) and (76b). As above, we take *pacho* to always be a FocP-adjunct and the position of referential objects, such as *baiman-ne* 'the woman' in (76), to be sensitive to information structure. If they are not F-marked, then they must move out of the VP to a position above FocP; this is indeed the case for repetitive *pacho*, as shown in (76a). By contrast, if they are F-marked, then they must move into the FocP right above VP; this is the case for counterdirectional *pacho*, as shown in (76b). Recall that, as discussed in Section 4.2, the specifier of FocP can only host a single constituent. A crucial point regarding (76) is thus the following: we have argued that both arguments in examples like (76b) have to be F-marked in order to comply with Schwarzschild's (1999) GIVENness. What we observe is that only one F-marked element must follow *pacho* (here: the direct object *baiman-ne* 'the woman'), and thus occur in SpecFocP, while the other preferably precedes *pacho* (and does not occur in SpecFocP). This is in line with the idea that SpecFocP can contain exactly one constituent (and recall (62)–(63)). The empirical generalization seems to be that if there are several independent F-marked constituents, it is the structurally lowest one that occupies SpecFocP. As for repetitive *pacho* itself (which is base generated as a FocP adjunct and thus cannot move downward into SpecFocP), we merely need to assume that SpecFocP remains empty when there is no F-marked element that is base-generated below SpecFocP (i.e., within the VP).

(76)   a.   Context: Valji phoned the woman. Some time passed by. Then, …
            Valji baiman-ne   [*pach-i*]$_F$ t$_{Valji}$ t$_{baiman-ne}$ phone kar-i   *repetitive*
            Valji woman-ACC again-F.SG   phone do-PFV.F.SG
            'Valji phoned the woman again.'
        b.   Context: The woman phoned Valji. Some time passed by. Then, …
            [Valji]$_F$ *pach-i*   t$_{Valji}$ [baiman-ne]$_F$ phone kar-i   *counterdir.*
            Valji   again-F.SG   woman-ACC phone do-PFV.F.SG
            'Valji phoned the woman back.'

Example (77) is a further illustration of the pattern in (76b) and exhibits parallel behavior.

(77)   Context: When practicing karate together, Khimji has never hit Raj, and Raj has never hit Khimji; guess what!

    a.   gaykale   Khimji Raj-ne   mar-y-o
        yesterday Khimji Raj-ACC hit-PFV-M.SG
        'Yesterday, Khimji hit Raj.'

    b.   aache [Raj]_F *pach-o*   [Khimji-ne]_F mar-y-o
        Today Raj   again-M.SG Khimji-ACC hit-PFV-M.SG
        'Today, Raj hit Khimji in return.'

The distribution in (77b) (where one F-marked argument follows *pacho* 'again' while the other one precedes it) also seems independent from conceivable confounds such as the grammatical roles of the different arguments. One may worry, in this connection, that subjects are simply base-generated above the FocP. To check this, we can take the observation that grammatical roles in Kutchi Gujarati are often reflected by case marking, as in (78). Looking at (78), we find that the same pattern that we have seen in (77b) emerges with psych predicates that assign experiencer dative case. Here, it can be assumed that the dative-marked experiencer argument (*Bill-ne*) is base-generated in a structurally higher position than the unmarked stimulus argument (*John*), but both are base-generated within the VP, cf. Grosz & Patel-Grosz 2014, that is, presumably below FocP.

(78)   John-ne   Bill gam-e
       John-DAT Bill like-PRES.3.SG

       [Bill-ne]_F (bhi) *pach-o*   [John]_F gam-e
       Bill-DAT PRT again-M.SG John   like-PRES.3.SG
       'John admires Bill. Bill admires John in turn.'

Our take on this issue builds on Jayaseelan's (2001) and Irani's (2014) proposals (as given in (59), Section 4.2 above): since the specifier of FocP contains exactly one constituent, which happens to be the structurally lowest element in the case of multiple focus constructions such as (76b), (77b) and (78), it follows that exactly one constituent follows (counterdirectional) *pacho*. Other F-marked constituents precede it.

    We can now spell out our analysis of a counterdirectional example and a repetitive example, as in (79), adapted from (46a)-(46b).

(79)   a.   Raj *pach-o*   Khimji-ne   mar-y-o   *counterdirectional*
         Raj again-M.SG Khimji-ACC hit-PFV-M.SG
         'Raj hit Khimji in return.'

b. Raj Khimji-ne *pach-o*   mar-y-o   *repetitive*
   Raj Khimji-ACC again-M.SG hit-PFV-M.SG
   'Raj hit Khimji again.'

The relevant surface configuration that is derived in the syntax for (79a) is given in (80a). We assume that for the purposes of interpretation, the scrambled elements (*Raj* and *Khimji-ne*) reconstruct, yielding the logical form in (80b). We take Foc^0 and FocP to be syntactic devices for the marking of information structure, which lack interpretation, which is why Foc^0 is placed in parentheses in (80b). F-marking is of course not vacuous and represented in the LF as well as the surface structure. The lexical entry of counterdirectional *pacho* is repeated in (80c), yielding the overall interpretation in (80e). (In (80d)–(80e), we take the second argument of *hit* to be the patient and the third argument the agent; therefore *hit(e')(K)(R)* corresponds to an event of Raj hitting Khimji, whereas *hit(e)(R)(K)* corresponds to the event of Khimji hitting Raj.)

(80)   complete analysis of a counterdirectional example

    a.   surface syntax
        $[_{\text{IP}}\ \text{Raj}_{i,\text{F}}\ \textit{pach-o}_{\text{ctrdir}}\ [_{\text{FocP}}\ \text{Khimji-ne}_{j,\text{F}}\ [_{\text{Foc'}}\ [_{\text{VP}}\ t_i\ t_j\ \text{mar-y-o}]\ \text{Foc}^0]]]$
           Raj   again-M.SG   Khimji-ACC   hit-PFV-M.SG
        'Raj hit Khimji in return.'

    b.   logical form
        $[_{\text{IP}}\ \_\_\ \textit{pach-o}_{\text{ctrdir}}\ [_{\text{FocP}}\ \_\_\ [_{\text{Foc'}}\ [_{\text{VP}}\ \text{Raj}_{i,\text{F}}\ \text{Khimji-ne}_{j,\text{F}}\ \text{mar-y-o}]\ (\text{Foc}^0)]]]$
            again-M.SG   Raj   Khimji-ACC hit-PFV-M.SG

    c. $\llbracket\, \text{pacho}_{\text{ctrdir}}\,\rrbracket = \lambda P.\ \lambda e: \exists e'[\tau(e') < \tau(e)\ \&\ P_C(e')]\ .\ P(e)$

    d. $\llbracket\ [_{\text{VP}}\ \text{Raj Khimji-ne maryo}]\ \rrbracket = \lambda e.\ \text{hit}(e)(K)(R)$

    e. $\llbracket\ \text{pacho}_{\text{ctrdir}}\ [_{\text{VP}}\ \text{Raj Khimji-ne maryo}]\ \rrbracket =$
        $\lambda e: \exists e'[\tau(e') < \tau(e)\ \&\ \text{hit}(e')(R)(K)]\ .\ \text{hit}(e)(K)(R)$

    f.   Existential F-closure of (80a): $\exists x \exists y \exists e\,[\text{hit}(e)(y)(x)]$
        when *pacho*'s PSP is true, this is GIVEN, hence (80a) is acceptable.

Correspondingly, we can give the complete analysis of a repetitive example, as in (81), which is the analysis of (79b). As in (80b), we assume that all scrambled elements reconstruct at LF, yielding the logical form in (81b). The eventual interpretation in (81e) differs from that in (80e) in exactly the desired respect: repetitive *pacho* conveys that an event of the same type has taken place before, (81e).

(81)   complete analysis of a repetitive example

      a.   surface syntax
          [$_{IP}$ Raj$_i$ Khimji-ne$_j$ *pach-o*$_{rep,F}$ [$_{FocP}$ [$_{Foc'}$ [$_{VP}$ t$_i$ t$_j$ mar-y-o] Foc^0]]]
             Raj Khimji-ACC again-M.SG   hit-PFV-M.SG
          'Raj hit Khimji again.

      b.   logical form
          [$_{IP}$ __ ___ *pach-o*$_{rep,F}$ [$_{FocP}$ [$_{Foc'}$ [$_{VP}$ Raj$_i$ Khimji-ne$_j$ mar-y-o] (Foc^0)]]]
              again-M.SG   Raj Khimji-ACC hit-PFV-M.SG

      c.   ⟦ pacho$_{rep}$ ⟧ = λP . λe : ∃e'[τ(e') < τ(e) & P(e')] . P(e)

      d.   ⟦ [$_{VP}$ Raj Khimji-ne maryo] ⟧ = λe . hit(e)(K)(R)

      e.   ⟦ pacho$_{rep}$ [$_{VP}$ Raj Khimji-ne maryo] ⟧ =
          λe : ∃e'[τ(e')<τ(e) & hit(e')(K)(R)] . hit(e)(K)(R)

      f.   when *pacho*'s PSP is true, the entire proposition that *pacho* modifies in (81a) is GIVEN, hence (81a) is acceptable.

Note that if (80a) contained repetitive *pacho* instead of counterdirectional *pacho*, it would violate the constraint AvoidF. Conversely, if (81a) contained counterdirectional *pacho* instead of repetitive *pacho*, it would violate GIVEN-ness (in the context provided for the example): Nothing other than *pacho* is F-marked, hence *Raj Khimji-ne maryo* 'Raj hit Khimji' should be GIVEN, but it isn't. Therefore, our analysis relating word order, information structure and presupposition makes the right predictions about the interpretive range of examples with counterdirectional and repetitive *pacho*.

    Our analysis relating word order of sentences with *pacho* to their information structure makes an important further prediction. It predicts that the word order effects with *pacho* are not rigid, context-independent effects. Rather, they are context-dependent, since they involve information structure. A relevant contrast is built on examples from Sæbø 2016: Sæbø observes that focus requirements must be satisfied more locally than the presuppositions triggered by words such as *again*, an observation he attributes to Kamp & Bierwisch 2008. The same observation is made in Beck 2006, and see Eckardt & Fränkel 2012 for a relevant discussion of discourse management and its connection to particles such as *too*, *still* and *again*. Sæbø's (2016: p. 134) examples are given in (82) and (83). The idea is that *slept through* cannot be focused in (82b), since it is given in the immediately preceding utterance. Contrastively, *slept through* can be focused in (83), since this is not the case.

(82)   (The first night, she cried for almost 30 minutes, ….
       […] The next night, she slept through till about 5.30am!)

   a.   The [NEXT]_F night, she slept through [AGAIN]_F,
        waking up just after 6am.
   b.   #The [NEXT]_F night, she [slept THROUGH]_F again,
        waking up just after 6am.

(83)   (Frankie was sleeping through but the other night he woke at 2am
       — I tried everything else but he was hungry and wolfed down 8 oz.)
       ✓ The [NEXT]_F night he [slept THROUGH]_F again.

The following Kutchi Gujarati examples show the same effect. So far, we observed that repetitive *pacho* has to follow all arguments, but we have consistently been assuming a context in which its repetitive presuppositions are satisfied in the immediately preceding utterance. This would be parallel to Sæbø's (82). Another parallel example is set up in (84). The acceptability of (84a) and the unacceptability of (84b) mirror the observations for repetitive *again* above.

(84)   Khimji nisar-n-o   gundo chokro ch-e   ane
       Khimji school-GEN-M.SG bully boy   be-PRES.3.SG and
       Khimji-n-i   guru   e-n-i   maa   saathe vaat kare
       Khimji-GEN-F.SG teacher 3.SG-GEN-F.SG mother with   talk do
       ch-e   ke Khimji su   su   kar-y-u   gaya
       be-PRES.3.SG that Khimji what what do-PFV-N.SG last
       atwarya-ma
       week-in
       'Khimji is the school bully, and his teacher was telling his mother
       what Khimji did last week.'
       somvare Khimji Raj-ne   bharav-y-o
       Monday Khimji Raj-ACC make-PFV-M.SG
       mangarvare Khimji Dhanji-ne   bharav-y-o
       Tuesday   Khimji Dhanji-ACC make-PFV-M.SG
       budthware Khimji Valji-ne   bharav-y-o
       Wednesday Khimji Valji-ACC make-PFV-M.SG
       'On Monday, Khimji teased Raj. On Tuesday, Khimji teased Dhanji.
       On Wednesday, Khimji teased Valji.'

   a.   ^{OK} guruvare Khimji Valji-ne *pach-o*   bharav-y-o
             Thursday Khimji Valji-ACC again-M.SG make-PFV-M.SG

  b. # guruvare Khimji *pach-o* Valji-ne bharav-y-o
    Thursday Khimji again-M.SG Valji-ACC make-PFV-M.SG
    'On THURSDAY, Khimji teased Valji AGAIN.'

However, once we bring distance in between the antecedent utterance and the *again* utterance, as in (85), mirroring Sæbø's (83), the pattern reverses, which is exactly what we expect, given our information-structural explanation. Note that the context requires a repetitive (as opposed to a counterdirectional) reading in both (84) and (85).

(85) Khimji nisar-n-o   gundo chokro ch-e   ane
    Khimji school-GEN-M.SG bully boy be-PRES.3.SG and
    Khimji-n-i   guru e-n-i   maa saathe vaat kare
    Khimji-GEN-F.SG teacher 3.SG-GEN-F.SG mother with talk do
    ch-e   ke Khimji su su kar-y-u   gaya
    be-PRES.3.SG that Khimji what what do-PFV-N.SG last
    atwarya-ma
    week-in
    'Khimji is the school bully, and his teacher was telling his mother what Khimji did last week.'
    somvare Khimji Valji-ne bharav-y-o
    Monday Khimji Valji-ACC make-PFV-M.SG
    mangarvare Khimji Raj-ne bharav-y-o
    Tuesday Khimji Raj-ACC make-PFV-M.SG
    budthware Khimji Dhanji-ne bharav-y-o
    Wednesday Khimji Dhanji-ACC make-PFV-M.SG
    'On Monday, Khimji teased Valji. On Tuesday, Khimji teased Raj. On Wednesday, Khimji teased Danji.'

  a. # guruvare Khimji Valji-ne *pach-o* bharav-y-o
    Thursday Khimji Valji-ACC again-M.SG make-PFV-M.SG
  b. ^OK guruvare Khimji *pach-o* Valji-ne bharav-y-o
     Thursday Khimji again-M.SG Valji-ACC make-PFV-M.SG
    'On THURSDAY, Khimji teased VALJI again.'

The Kutchi Gujarati pattern thus tracks the local licensing of focus-related effects that we also find in English, as discussed by Sæbø (2016), indicating that the distribution of *pacho* is indeed governed by information structure.

Before we conclude this section, it is worth revisiting a (possibly related) piece of variation in the data that we have not addressed so far. We have seen that counterdirectional *pacho* 'again' can occasionally precede the subject, while it usually follows the subject; this is illustrated in (86), adapted from (33).

(86)   Context: Maya met Valji at a film festival last week. She was very attracted to him. After hesitating for a few days, she wrote him a letter. Valji got it on Wednesday.
        {*pach-o*}   Valji {*pach-o*}   Maya-ne   kagar lakh-y-o
        again-M.SG Valji again-M.SG Maya-DAT letter wrote-PFV-M.SG
        'Valji wrote a letter to Maya in return.'

However, this possibility is clearly restricted, as shown by (87), adapted from (45), where counterdirectional *pacho* 'again' cannot precede the subject. By contrast, the word order where counterdirectional *pacho* 'again' follows the subject is always acceptable.

(87)   Context: A woman phoned Valji and left a message for him. He does not know the woman or her number. Valji phoned the woman back.
        {**pach-i*}   Valji {*pach-i*}   baiman-ne   phone kar-i
        again-F.SG Valji again-F.SG woman-ACC phone do-PFV.F.SG
        'Valji phoned the woman back.'

For present purposes, we conjecture that a broader focus may be possible in (86) (in line with example (55)), which would give rise to the F-marking in (88).

(88)   *pach-o* [Valji Maya-ne kagar lakh-y-o]$_F$

Importantly, for the present discussion, we would not expect (88) to occur with repetitive *pacho* 'again', and, indeed, this is something that we have not found.

4.3.4   Remarks on restitutive *pacho*

To summarise the preceding section, it appears that the syntactic distribution of repetitive vs. counterdirectional *pacho* does not reflect properties such as scope. Rather, F-marked (referential) objects follow *pacho* (i.e., they surface in the specifier of the FocP, which is located right above the VP),

whereas non-F-marked objects precede *pacho* (i.e., they move out of the VP to scrambling positions above FocP). One open question at this point concerns the word order in sentences with restitutive *pacho*. The observation, repeated in (89), is that restitutive *pacho* precedes all other material in the clause. Moreover, as indicated in (89), the examples with restitutive *pacho* seem to require some type of emphatic focus on *pacho* (which we will revisit later in this section).

(89) *Restitutive context*:
      Pat has a tree house. It had a flag, but last week's storm tore the flag off and destroyed it. Pat was very sad, but then her neighbour Sandy crocheted Pat a flag again.
      PACH-U   Sandy Pat-maate dhaja kotar-y-u
      again-N.SG Sandy Pat-for   flag   crochet-PFV-N.SG
      'Sandy crocheted a flag for Pat again.'

As we saw in (47), parallel observations hold for predicates like *kagar lakh-* 'write a letter', repeated in (90). (Here, we indicate the emphatic stress on sentence-initial *pacho*, which further disambiguates towards a restitutive reading, ruling out a counterdirectional reading.)

(90) a. *PACH-O*   Valji Maya-ne   kagar lakh-y-o   *resitutive*
          again-M.SG Valji Maya-DAT letter write-PFV-M.SG

      b. Valji *pach-o*   Maya-ne   kagar lakh-y-o   *counterdirectional*
          Valji again-M.SG Maya-DAT letter write-PFV-M.SG

      c. Valji Maya-ne   *pach-o*   kagar lakh-y-o   *repetitive*
          Valji Maya-DAT again-M.SG letter write-PFV-M.SG

      d. Valji Maya-ne   kagar *pach-o*   lakh-y-o   *repetitive*
          Valji Maya-DAT letter again-M.SG write-PFV-M.SG

The surface syntactic position of restitutive *pacho* is puzzling since the LF position of restitutive *pacho*, in (91a), for (90a), is actually lower than the LF position of repetitive *pacho*, in (92a), for (90c)–(90d). So, why would restitutive *pacho* surface so much higher in the clause?

(91) a. Sketch of Restitutive LF
          [$_{VP}$ Valji [$_{V'}$ write (CAUSE) [$_{SC}$ *pacho*$_{rep}$ [$_{SC}$ Maya HAVE a letter]]]]
      b. only possible surface word order:
          PACHO Valji Mayane kagar lakhyo.

(92) a. Sketch of Repetitive LF
[VP *pacho*rep [VP Valji [V' write (CAUSE) [SC Maya HAVE a letter]]]]
b. possible surface word order 1: Valji Mayane *pacho* kagar lakhyo.
c. possible surface word order 2: Valji Mayane kagar *pacho* lakhyo.

We propose that the surprising distribution of restitutive *pacho* is due to an information-structural tendency that marks restitutive *pacho* as a contrastive topic. Our discussion proceeds in three steps: (i) we show how contrastive topic is marked in Kutchi Gujarati and that restitutive *pacho* matches this pattern; (ii) we look at the information structure of sentences with restitutive *again*-type elements in more familiar languages (English *again*, German *wieder* 'again'); and (iii) we compare the English/ German pattern to Kutchi Gujarati.

First, observe that contrastive topics in Kutchi Gujarati exhibit the exact same properties that we see with restitutive *pacho*: they occur in a clause-initial position and, if they are moved to clause-initial position (e.g., when objects function as contrastive topics), they require an emphatic stress. The examples in (93)–(94) correspond to the classic examples of contrastive topics that were introduced by Jackendoff (1972) and discussed in Büring 2003. In (93), we are attempting to resolve the question under discussion (QUD) *Who ate what?* by asking subquestions in a person-by-person manner (*What did Raj eat? What did Sue eat? …*). In (93): B, *Raj* is thus the contrastive topic, while *beans* 'beans' is the focused element that answers the question.

(93) A: Raj-n-u   su   th-y-u?   ene su kha-dh-u?
Raj-GEN-N.SG what happen-PFV-N.SG him what eat-PFV-M.SG
'What about RAJ? What did HE eat?'
B: [Raj]CT [beans]F kha-dh-a
Raj   beans   eat-PFV-PL
'RAJ ate the BEANS.'

In (93): B, the canonical word order (subject before object) is preserved and no particular stress pattern can be observed on *Raj*, which is presumably due to the fact that it is the subject that functions as contrastive topic. However, if the contrastive topic is the object, matters change. In (94), we are attempting to answer the question *Who ate what?* by asking subquestions in a food-by-food manner (*Who ate the beans? Who ate the khichdi? …*), which is why *beans* is marked as the contrastive topic in B's reply. As indicated, contrastive topics must be fronted and carry a particular stress, as in (94): B – this is

exactly what we have observed for restitutive *pacho*. By contrast, the variant in (94):B', in which *beans* remains low, is not completely unacceptable, but deviant.

(94) A: beans-n-u   su   th-y-u?   kaun kha-dh-a?
          beans-GEN-N.SG what happen-PFV-N.SG   who eat-PFV-PL
          'What about the BEANS? Who ate THEM?'
      B: [BEANS]$_{CT}$ [Raj]$_F$ kha-dh-a
          beans   Raj   eat-PFV-PL
          'RAJ ate the BEANS.'
      B': ?? [Raj]$_F$ [BEANS]$_{CT}$ kha-dh-a
             Raj   beans   eat-PFV-PL
             'RAJ ate the BEANS.'

Büring (2003: p. 525) introduces another example (*What did the pop stars wear?*—*The FEMALE$_{CT}$ pop stars wore CAFTANS$_F$.*), in which B volunteers a partial answer to A's question; a corresponding example for Kutchi Gujarati is given in (95). In (95), B introduces an implicit subquestion to the QUD *Who is looking after the children?*, namely the subquestion *Who is looking after the older children?* (in contrast with a separate subquestion, *Who is looking after the little children?*); as Büring shows, the element that varies across subquestions (here: *mota* 'big') must be marked as a contrastive topic. Once again, the NP that contains the contrastive topic (*mota chokra-ne* 'the older/big children') must be fronted as in (95):B and carry a particular stress.

(95) A: chokra-ne   kaun rakh-e-ru?
          children-ACC who look.after-PRES.3.SG-PROG.N.SG
          'Who is looking aftre the children?'
      B: [[MOT-A]$_{CT}$ CHOkra-ne]   [Fred]$_F$ rakh-e-ro
            big-PL   children-ACC Fred   look.after-PRES.3.SG-PROG.M.SG
          'FRED is looking after the OLDER children.'
      B':??[Fred]$_F$ [[MOT-A]$_{CT}$ CHOkra-ne]   rakh-e-ro
           Fred   big-PL   children-ACC look.after-PRES.3.SG-PROG.M.SG
          'FRED is looking after the OLDER children.'

We can now observe, as in (89) and (90a), that the restitutive examples tend to exhibit a contrastive topic information structural syntax, and, in particular, that *pacho* bears contrastive topic stress. Why should that be?

   In order to establish what kind of information structure we expect for sentences with restitutive *again*-type elements, we next take a look at German

wieder 'again'. In examples like the ones below (on the restitutive reading), what can we observe regarding information structure? First, we observe that the F-marked constituent in (96a) is the finite verb, *schloss* 'closed'. Similarly, the F-marked constituent in (96b) (similar to the Kutchi Gujarati example (89)) is the finite verb, *gehäkelt* 'crocheted'.

(96)   a.   Peter betrat einen Raum mit einem FENster. Der Wind hatte das Fenster geÖFFnet.
'Peter entered a room with a WINdow. The wind had OPENed the window.'

Peter SCHLOSS das Fenster wieder.
Peter closed   the window again
'Peter CLOsed the window again.'

b.   Pat hatte eine Fahne aus dem SPIELzeugladen. Im Sturm ist die Fahne zerRISSEN.
'Pat had a flag from the TOY store. The flag RIPped in the storm.'

Sandy hat Pat wieder eine Fahne geHÄkelt.
Sandy has Pat again a   flag   crocheted
'Sandy croCHEted a flag for Pat again.'

To see why an *again*-type element like Kutchi Gujarati *pacho* 'again' would be tied to contrastive topic marking, we can consider a variant of German (96a), which adds the adverb *dann* 'then', as given in (97a). Example (97a) also has a restitutive LF in which *wieder* 'again' modifies the result Small Clause; this is shown in (97b). The verb receives stress, as indicated. This can be made sense of by taking it to be marked for contrastive focus (*closed* vs. *open*). In (96) and (97), *Peter* 'Peter' and *das Fenster* 'the window' are GIVEN. The information-structural role of German *wieder* 'again' is not completely clear. In German, restitutive *wieder* 'again' is unstressed (see Beck 2006 and references therein for a discussion of focus on *again*; see also Umbach 2012 for related observations with the additive particle *noch* 'still').

(97)   a.   Als Peter ins Zimmer kam, war das Fenster geSCHLOSSen. Der Wind ÖFFnete es.
'When Peter entered the room, the window was closed. The wind opened it.'

DANN SCHLOSS Peter das Fenster wieder.
then   closed   Peter the window again
'Then, Peter closed the window again.'

b.   [$_{VP}$ Peter [$_{V'}$ [$_{SC}$ wieder [$_{SC}$ das Fenster schloss$_F$]] $\varnothing_V$]]

When we look at the complete sentence in (97a), it also contains the temporal adverbial *dann* 'then', which marks the temporal flow of the discourse. Let's concretely suppose that it marks the new topic time. In a narrative context such as (97a), we can posit a big QUD such as 'What happened?'. This question is addressed by means of subquestions of the type 'What happened at t_0?' / 'What happened at t_1?' / 'What happened at t_2?' / ..., that is, subquestions that are organized by topic time (Klein 1994). In the spirit of Büring 2003, we expect *dann* 'then' to be a contrastive topic, since it is the exponent of the changing topic times in the flow of the discourse. We can complete our analysis of the information structure of (97a), by adding *dann* 'then' as the contrastive topic, (98). The other example in (96b) is parallel.

(98) $[\text{DANN}]_{\text{CT}}$ ...$[_{\text{VP}}$ Peter $[_{\text{V'}}$ $[_{\text{SC}}$ wieder $[_{\text{SC}}$ das Fenster schloss$_F$]] $\varnothing_V$]]

Generally, the topic time does not have to be overtly marked at all. For example, in the context in (97a), a hearer/reader will similarly assume that we move on in time between the first and the second sentence. Klein (1994) calls this "referential movement". This is also the case in sentences with restitutive *wieder* 'again', which do not contain a temporal adverbial. Nevertheless, we assume that they answer sub-QUDs such as 'What happened at t_i?'/'What happened next?'.

Finally, we can revisit the Kutchi Gujarati data and see if parallel considerations can be used to account for our observations. Let us start with a variant that contains *pache* 'then', in (99a). What we observe is that *pacho* 'again' is no longer fronted to the beginning of the clause once *pache* 'then' is inserted. (This seems to be a general effect of adding *pache* 'then'.) In fact, the word order in (99a) seems to reflect the underlying structure that we developed for German in (98). This is shown in (99b). Note that in Kutchi Gujarati, the predicate is deaccented in the examples (99) and (100), which is a difference between Kutchi Gujarati and German. To the extent that focus marking is audible, it occurs on *aa baari-ne* 'this window' in (99), and on *Peter* in (100), but the main stress of these clauses seems to be on the contrastive topic.[14]

---

14 Note that the divergent agreement on *pachi* 'again.F.SG' vs. *pachu* 'again.N.SG' reflects effects that are present in other parts of the agreement system of Kutchi Gujarati; for reasons that we currently do not understand, movement sometimes gives rise to default agreement, which is always neuter singular, that is, *-u*.

(99) a. aaje   aa   baari   pavan ane varsad-thi kholi g-y-i
          today this window wind   and rain-from open go-PFV-F.SG
          'Today, the storm opened this window.'
          PACHE Peter pach-i   aa   baari-ne   bandth kar-i
          then   Peter again-F.SG this window-ACC close   do-PFV.F.SG
          'Then, Peter closed this window again.'
      b. [PACHE]$_{CT}$ …[$_{VP}$ Peter [$_{V'}$ [$_{SC}$ pach-i   [$_{SC}$ aa   baari-ne
          then   Peter   again-F.SG   this window-ACC
          bandth]] kar-i]]
          close   do-PFV.F.SG

However, as soon as we omit *pache* 'then', the puzzling word order emerges again, as in (100a); the most likely structural configuration is given in (100b), where *pacho* 'again' has moved to this fronted position in order to carry the contrastive topic marking.

(100) a. aaje   aa   baari   pavan ane varsad-thi kholi g-y-i
           today this window wind   and rain-from open go-PFV-F.SG
           'Today, the storm opened this window.'
           PACH-U   Peter aa   baari-ne   bandth kar-i
           again-N.SG Peter this window-ACC close   do-PFV.F.SG
           'Peter closed this window again.'
       b. [PACH-U$_1$]$_{CT}$ …[$_{VP}$ Peter [$_{V'}$ [$_{SC}$ t$_1$ [$_{SC}$ aa   baari-ne   bandth]]
           again-N.SG   Peter   this window-ACC close
           kar-i]]
           do-PFV.F.SG

The difference between Kutchi Gujarati and English/German thus is that in the absence of a time adverbial that can carry contrastive topic marking (*pache* 'then' or *dann* 'then'), English/German stress the predicate and destress *again/wieder*, while Kutchi Gujarati marks *pacho* 'again' as a contrastive topic (via position and emphasis), stresses *pacho* and destresses the predicate. The languages seem parallel when there is a time adverbial that marks changing topic time (although they differ in how emphasis is realized in such configurations).

The contrastive-topic-related movement in (99) and (100) suggests that in Kutchi Gujarati there is more pressure to overtly mark contrastive topic than, say, in German (in keeping with the general, strong requirements of Kutchi Gujarati to mark information structure), and that *pacho* 'again' is the best option for doing so in the restitutive examples. This follows from the

contrast in (96a), (96b) on the one hand and (100) on the other hand. Looking at the lexical entry of (repetitive) *pacho* once more in (101), we have some indication of why it should be the case that *pacho* 'again' can fulfill the role of signaling the topic time (otherwise associated with *pache* 'then'). The earlier topic time, let's call it t_0, shows up in this entry as $\tau(e')$; the new topic time, let's call it t_1, shows up as $\tau(e)$. A more fine-grained LF analysis of all the meaning components of *pacho* (cf. e.g., the analysis in Beck 2007) might allow us to see that stressing *pacho* in fact marks t_1 in contrast to t_0.

(101) $[\![pacho_{rep}]\!] = \lambda P . \lambda e : \exists e'[\tau(e') < \tau(e) \, \& \, P(e')] . P(e)$

How exactly this should be implemented is a question which we leave for future research, as well as how the marking of referential movement generally proceeds in Kutchi Gujarati.

5   Conclusion

In this paper, we investigated the behavior of *pacho* 'again' in Kutchi Gujarati, a language that marks information structure syntactically. Studying the syntactic positions that correlate with the three distinct interpretations of *pacho* 'again', our empirical observations reveal an intimate connection between presupposition and information structure. Our study has shown that each of the three readings of *pacho* 'again', a presupposition trigger, is associated with a different information structure, and thus gives rise to a different word order. Our information-structural explanation of the observed word order patterns accounts for striking differences between Kutchi Gujarati and other languages such as English and German with respect to the relation between surface structure and Logical Form (cf. von Stechow 1996). The most promising generalization, looking beyond Kutchi Gujarati, stems from repetitive *pacho*: As argued in this paper, there is evidence that sentences with repetitive *pacho* tend to be marked "all-given", which does not carry over to sentences with restitutive *pacho* or to sentences with counterdirectional *pacho*. This sheds new light on how presupposition triggers that do not affect the truth conditions of the clause that they occur in interact with the information structure (givenness, topic, focus) of that clause.

References

Alexiadou, Artemis, Elena Anagnostopoulou & Florian Mathis Schäfer. 2015. *External arguments in transitivity alternations: A layering approach*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199571949.001.0001.

Bale, Alan. 2005. Quantifiers, "again" and the complexity of verb phrases. *Semantics and Linguistic Theory (SALT)* 15. 1–18. https://doi.org/10.3765/salt.v15i0.2928.

Beck, Sigrid. 2005. There and back again: A semantic analysis. *Journal of Semantics* 22(1). 3–51. https://doi.org/10.1093/jos/ffh016.

Beck, Sigrid. 2006. Focus on again. *Linguistics and Philosophy* 29(3). 277–314. https://doi.org/10.1007/s10988-005-5794-z.

Beck, Sigrid. 2007. Quantifier dependent readings of anaphoric presuppositions. In Uli Sauerland & Penka Stateva (eds.), *Presupposition and implicature in compositional semantics*, 12–33. Houndmills: Palgrave MacMillan. https://doi.org/10.1057/9780230210752_2.

Beck, Sigrid & Remus Gergel. 2015. The diachronic semantics of English *again*. *Natural Language Semantics* 23(3). 157–203. https://doi.org/10.1007/s11050-015-9111-2.

Beck, Sigrid & Kyle Johnson. 2004. Double objects again. *Linguistic Inquiry* 35(1). 97–123. https://doi.org/10.1162/002438904322793356.

Büring, Daniel. 2003. On D-trees, beans, and B-accents. *Linguistics and Philosophy* 26(5). 511–545. https://doi.org/10.1023/A:1025887707652.

Butt, Miriam. 2014. Question and information structure in Urdu/Hindi. In Miriam Butt & Tracy Holloway King (eds.), *The LFG '14 Conference*, 158–178. CSLI Publications.

Butt, Miriam & Tracy Holloway King. 1996. Structural topic and focus without movement. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG '96 Conference*. Stanford, CA: CSLI Publications.

Butt, Miriam & Tracy Holloway King. 1997. Null elements in discourse structure. Unpublished manuscript. http://ling.uni-konstanz.de/pages/home/butt/main/papers/nulls97.pdf.

Cresswell, Maxwell John. 1978. Prepositions and points of view. *Linguistics and Philosophy* 2(1). 1–41. https://doi.org/10.1007/978-94-009-5414-4_5.

Dayal, Vaneeta. 2011. Hindi pseudo-incorporation. *Natural Language and Linguistic Theory* 29(1). 123–167. https://doi.org/10.1007/s11049-011-9118-4.

Dowty, David. 1979. Word meaning and Montague Grammar. In *Studies in linguistics and philosophy* 7. Dordrecht: Reidel. https://doi.org/10.1007/978-94-009-9473-7.

Eckardt, Regine & Manuela Fränkel. 2012. Particles, *Maximize Presupposition* and discourse management. *Lingua* 122(15). 1801–1818. https://doi.org/10.1016/j.lingua.2012.08.014.

Fabricius-Hansen, Cathrine. 2001. "Wi(e)der" and "again(st)". In Caroline Féry & Wolfgang Sternefeld (eds.), *Audiatur Vox Sapientiae: A festschrift for Arnim von Stechow*, 101–130. Berlin: Akademie. https://doi.org/10.1515/9783050080116.101.

von Fintel, Kai. 2004. Would you believe it? the King of France is back! Presuppositions and truth-value intuition). In Anne Bezuidenhout & Marga Reimer (eds.), *Descriptions and beyond: An interdisciplinary collection of essays on definite and indefinite descriptions and other related phenomena*, 315–341. Oxford: Oxford University Press.

Gambhir, Vijay. 1981. *Syntactic restrictions and discourse functions of word order in standard Hindi*. University of Pennsylvania, Philadelphia dissertation. https://repository.upenn.edu/dissertations/AAI8207964/.

Grosz, Patrick & Pritty Patel-Grosz. 2014. Agreement and verb types in Kutchi Gujarati. In Pritha Chandra & Richa Srishti (eds.), *The lexicon-syntax interface: Perspectives from South Asian languages* (Linguistik Aktuell / Linguistics Today 209), 217–244. Amsterdam: John Benjamins. https://doi.org/10.1075/la.209.10gro.

Heim, Irene. 1990. Presupposition projection. In Rob van der Sandt (ed.), *Reader for the Nijmegen workshop on presupposition, lexical meaning, and discourse processes*. Nijmegen: University of Nijmegen. https://semanticsarchive.net/Archive/GFiMGNjN/Presupp%20projection%2090.pdf.

Huitink, Janneke. 2003. *Again*. University of Nijmegen. MA thesis.

Irani, Ava. 2014. *Focusing in Hindi syntax*. Georgetown University, Washington DC. MA thesis. http://hdl.handle.net/10822/709834.

Jackendoff, Ray. 1972. *Semantic interpretation in Generative Grammar*. Cambridge, MA: MIT Press.

Jäger, Gerhard & Reinhard Blutner. 2000. Against lexical decomposition in syntax. In Adam Zachary Wyner (ed.), *The Israeli Association for Theoretical Linguistics 15*, 113–137. Haifa: University of Haifa.

Jayaseelan, K.A. 2001. IP-internal topic and focus phrases. *Studia Linguistica* 55. 39–75. https://doi.org/10.1111/1467-9582.00074.

Kachru, Yamuna. 2006. *Hindi*. Amsterdam: John Benjamins. https://doi.org/10.1075/loall.12.

Kamp, Hans & Manfred Bierwisch. 2008. Simultaneous resolution of information structure-related and other presuppositions. Unpublished manuscript. Stuttgart & Berlin.

Kamp, Hans & Antje Rossdeutscher. 1994. Remarks on lexical structure and DRS construction. *Theoretical linguistics* 20(2-3). 97–164. https://doi.org/10.1515/thli.1994.20.2-3.97.

Kidwai, Ayesha. 2000. *XP-adjunction in Universal Grammar: Scrambling and binding in Hindi/Urdu*. Oxford: Oxford University Press.

Klein, Wolfgang. 1994. *Time in language*. New York: Routledge.

Krifka, Manfred. 1998. The origins of telicity. In Susan Rothstein (ed.), *Events and grammar*, 197–235. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-011-3969-4_9.

Krifka, Manfred. 2008. Basic notions of information structure. *Acta Linguistica Hungarica* 55(3-4). 243–276. https://doi.org/10.1556/ALing.55.2008.3-4.2.

Kripke, Saul A. 2009. Presupposition and anaphora: Remarks on the formulation of the projection problem. *Linguistic Inquiry* 40(3). 367–386. https://doi.org/10.1162/ling.2009.40.3.367.

Kroch, Anthony & Ann Taylor. 2000. *Penn-Helsinki Parsed Corpus of Middle English*, second edition. University of Pennsylvania. http://www.ling.upenn.edu/ppche/ppche-release-2016/PPCME2-RELEASE-4.

McCawley, James. 1968. The role of semantics in grammar. In Emmon Bach & R. Harms (eds.), *Universals in linguistic theory*, 124–169. New York: Holt, Rinhart & Winston.

Paslawska, Alla. 1998. Transparente Morphologie und Semantik eines deutschen Negationsaffixes. *Linguistische Berichte* 175. 353–385.

Patel-Grosz, Pritty & Sigrid Beck. 2014. Revisiting *again*: The view from Kutchi Gujarati. *Sinn und Bedeutung (SuB)* 18. 303–321. https://ojs.ub.uni-konstanz.de/sub/index.php/sub/article/view/319.

Patil, Umesh, Gerrit Kentner, Anja Gollrad, Frank Kügler, Caroline Féry & Shravan Vasishth. 2008. Focus, word order and intonation in Hindi. *Journal of South Asian Linguistics* 1. 55–72. https://ojs.ub.uni-konstanz.de/jsal/index.php/jsal/article/view/3.

Pedersen, Walter. 2015. A scalar analysis of *again* ambiguities. *Journal of Semantics* 32(3). 373–424. https://doi.org/10.1093/jos/ffu003.

Reis, Marga & Inger Rosengren. 1997. A modular approach to the grammar of additive particles: The case of German 'auch'. *Journal of Semantics* 14(3). 237–309. https://doi.org/10.1093/jos/14.3.237.

Rooth, Mats. 1985. *Association with focus.* University of Massachusetts, Amherst dissertation. https://scholarworks.umass.edu/dissertations/AAI8509599/.

Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics* 1. 75–116. https://doi.org/10.1007/BF02342617.

Sæbø, Kjell Johan. 1993. Anaphoric presuppositions, accomodation, and zero anaphora. In Hans Kamp (ed.), *Presupposition: DYANA-2 Report R2.2.A, part 2*, 135–192. Amsterdam: University of Amsterdam.

Sæbø, Kjell Johan. 2016. Information structure and presupposition. In Caroline Féry & Shinichiro Ishihara (eds.), *Oxford University handbook of information structure.* Oxford: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199642670.013.012.

van der Sandt, Rob & Janneke Huitink. 2003. Again. In Paul Dekker & Robert van Rooij (eds.), *Proceedings of the 14th Amsterdam Colloquium*, 181–186. Amsterdam: ILLC / University of Amsterdam.

Schwarzschild, Roger. 1999. Givenness, avoidf and other constraints on the placement of accent. *Natural Language Semantics* 7. 141–177. https://doi.org/10.1023/A:1008370902407.

Shanon, Benny. 1976. On the two kinds of presuppositions in natural language. *Foundations of Language* 14(2). 247–249. http://www.jstor.org/stable/pdf/25170057.pdf.

Soames, Scott. 1989. Presupposition. In Dov M. Gabbay & Franz Guenther (eds.), *Handbook of philosophical logic, vol. IV. (Topics in the philosophy of language)*, 553–616. Dordrecht: D. Reidel Publishing Company. https://doi.org/10.1007/978-94-009-1171-0_9.

von Stechow, Arnim. 1996. The different readings of *wieder* 'again': A structural account. *Journal of Semantics* 13(2). 87–138. https://doi.org/10.1093/jos/13.2.87.

von Stechow, Arnim. 2006. *Spatial prepositions in interval semantics,* Ms. University of Tübingen.

Taylor, Ann, Arja Nurmi, Anthony Warner, Susan Pintzuk & Terttu Nevalainen. 2006. *Parsed Corpus of Early English Correspondence.* Compiled by the CEEC Project Team. York: University of York & Helsinki: University of Helsinki. Distributed through the Oxford Text Archive. http://ota.ox.ac.uk/desc/2510.

Tovena, Lucia & Marta Donazzan. 2008. On ways of repeating. *Recherches linguistiques de Vincennes* 37. 85–112. https://doi.org/10.4000/rlv.1724.

Umbach, Carla. 2004. Cataphoric indefinites. *Sinn und Bedeutung (SuB)* 8. 301–316. https://doi.org/10.18148/sub/2004.v8i0.765.

Umbach, Carla. 2012. Strategies of additivity. German additive *noch* compared to *auch*. *Lingua* 122(15). 1843–1863. https://doi.org/10.1016/j.lingua.2012.01.011.

Wagner, Michael. 2012. Focus and givenness: A unified approach. In Ivona Kučerová & Ad Neeleman (eds.), *Contrasts and positions in Information Structure*, 102–148. Cambridge: Cambridge University Press.

Pritty Patel-Grosz
Department of Linguistics and
Scandinavian Studies
University of Oslo
P.O. Box 1102 Blindern
0317 Oslo
Norway
pritty.patel-grosz@iln.uio.no

Sigrid Beck
Department of English
Eberhard Karls Universität Tübingen
Wilhelmstr. 50
72074 Tübingen
Germany
sigrid.beck@uni-tuebingen.de