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Counterdirectionality in the Grammar: Reversals and Restitutions

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Counterdirectionality in the Grammar:

Reversals and Restitutions

A Dissertation Presented

by

Jyoti Iyer

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

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Linguistics

Counterdirectionality in the Grammar:

Reversals and Restitutions

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To the village that raised me as a linguist—Sharada Nair, Ayesha Kidwai, Utpal Lahiri,

Veneeta Dayal, Rajesh Bhatt, and many excellent peers—and to the memory of

Rahul Balusu, and paths untaken

बीच में एक बार थोड़े दिनों के लिए दिल्ली वापस गया भी
पर लखनऊ की गलियों ने फिर पुकार लिया

biic mẽ ek baar thoRe dinõ ke liye dillii vaapas gayaa bhii

par lakhnau kii galiyõ ne phir pukaar liyaa

In between, I even returned to Delhi once, for a few days,

but the streets of Lucknow called me back again

—found in COSH corpus

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ABSTRACT

COUNTERDIRECTIONALITY IN THE GRAMMAR:

REVERSALS AND RESTITUTIONS

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This dissertation is an exploration of counterdirectionality, a semantic notion encompassing various sorts of reversals, involving either movement along a path, or—more abstractly—the restoring of an object or a state of affairs to a prior condition. Counterdirectionality is a relationship between an asserted event and a presupposed event in a strict temporal ordering. Across languages, it is frequently expressed by presuppositional adverbs that mean BACK (as in English *Ali flew **back** from New York*, *Bina hugged Ali **back***, *The door swung **back** open*).

The distribution of BACK-adverbs tends to overlap in a systematic way with that of repetitive/restitutive adverbs, i.e. those that mean AGAIN (as in English *swung **back** open/swung open **again***), a puzzling fact given that counterdirectional adverbs have no repetitive component. This work ties into an older literature in which restitutive readings have been used as tools to probe syntactic structure very low

in the VP. I demonstrate that Hindi-Urdu allows some adverbs to be structurally low, modifying very small sub-structures within the VP, as evidenced by highly constrained word order in restitutive readings, as opposed to the freedom of scrambling available in other circumstances. I show that a basic semantics for counter-directionality can derive the effect of restitution independent of repetition.

The core contribution of this dissertation is a semantic treatment of BACK-adverbs that moves beyond the basic task of capturing restitutive readings. I show that two core readings of BACK bear a family resemblance that is explained by a view of scalar change that unifies paths and scales: restitutive readings (restoring a state) and reversed path readings thus convey the same kind of meaning, with their slightly different flavours due to the specific scale involved in each case. Once we adopt this view, we no longer need to posit counterdirectionality or reversal as a semantic primitive; rather, the presupposition of BACK is derived correctly in each case by copying some (and critically not all) of the content of the assertion. My proposal radically simplifies the semantics of counterdirectionality, reducing it to concrete components already present in the assertion, and linking specificities (verbal selection, word order) of the various readings to independently available syntactic and semantic processes. I build my proposal on a detailed case study of *vaapas* 'back' in Hindi-Urdu, which exhibits a range of readings shared by BACK-adverbs in other languages.

Finally, the dissertation contributes to the crosslinguistic study of adverbs and focus-sensitive presupposition triggers through the study of *vaapas* 'back', which is both: it can create different licensing conditions for a sentence depending on which constituent it associates with. This focus-association has word order consequences: I show that there are multiple possible surface positions available to focus-bearing nominals between the adverb and the verb, complicating the established FocP account of positional focus across South Asian languages.

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CHAPTER 1

INTRODUCTION

This dissertation is an exploration of counterdirectionality, a semantic notion that encompasses various sorts of reversals, which may involve movement along a path (physical or metaphorical), or—more abstractly—the restoring of an object or a state of affairs to a prior condition. Counterdirectionality is a relationship between a presupposed event and an asserted event in a strict temporal ordering. Across languages, counterdirectionality is frequently expressed by adverbs that mean BACK, as illustrated in English in (1).[1]

(1) a. Ali flew **back** from New York. REVERSED PATH

     b. The door swung **back** open. RESTITUTIVE

     c. Bina hugged Ali **back**. RESPONSE

At first glance, counterdirectionality presents a challengingly heterogeneous category: the sentence in (1a) conveys movement to and from New York; (1b) the closing and opening of the door; and (1c) an act of Bina hugging Ali having received a hug from him. However there is simultaneously an intuition that these sentences have in common a presupposition that "a reverse event occurred in the past", and the asserted meaning identifies the event whose reverse is intended, as illustrated in (2) below.

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[1]I use SMALL CAPS when the word represents a concept, as opposed to the actual English word; so BACK and AGAIN refer to meanings that can exist in any language, expressed by whatever lexical item(s) that language may employ for the purpose.

(2) *Sentences in* (1) *are defined iff*

   a. There exists a prior event that is the reverse of *Ali flying from New York.*

   b. There exists a prior event that is the reverse of *the door swinging open.*

   c. There exists a prior event that is the reverse of *Bina hugging Ali.*

The collapsing of these three readings into a single adverb is not specific to the English word *back*, as its crosslinguistic counterparts like *terug* in Dutch (Zwarts 2019) and *pacho* in Kutchi Gujarati (Patel-Grosz & Beck 2014, 2019) have been observed to similarly lexicalize all three. To this list I add *vaapas* in Hindi-Urdu which shares this property, as shown in the examples below; I borrow the term "'re' domain" from Zwarts (2019) as a mnemonic to refer to the semantic space containing these three related readings.

(3) *Core readings in the 're' domain in Hindi-Urdu*

   a. ali **vaapas** bhaag rahaa hai
      Ali back   run   PROG be.PRS
      'Ali is running back.'   REVERSED PATH

   b. kamraa **vaapas** saaf   ho rahaa hai
      room   back   clean be PROG be.PRES
      Lit. 'The room is becoming back clean.'   RESTITUTIVE

   c. ham   bhii **vaapas** golii calaa   dẽge
      1PRON.PL also back   bullet WALK.CAUS GIVE.SUBJ.1PL
      'We will also shoot back.'   RESPONSE

The central contribution of this dissertation is a semantic treatment of counter-directional adverbs that captures the three core readings—REVERSED PATH, RESTITU-TIVE, and RESPONSE—with a single lexical entry.

1.1 Counterdirectionality without reversal

A presupposition can be thought of as *admittance condition on possible contexts* (Beck 2006): the sentences that contain the counterdirectional adverb (i.e. those listed in 1) are only defined in contexts which contain their corresponding counterdirectional presupposition (listed in 2). Previous approaches to counterdirectionality have attempted to capture the intuition of reversal expressed by the sentences (2), with a generalized counterdirectional presupposition, of which a recent version (Patel-Grosz & Beck 2019) is shown in (4) below.

(4)   *Counterdirectional presupposition*

There exists an event e' such that

a.   the runtime of e' precedes that of asserted event e,

b.   the event property P_C holds of e', and

c. P_C is the reverse of the event property P that holds of e.

The meaning contributed by the adverb in each of the cases above is entirely presuppositional; it can be removed from a sentence without impacting the assertoric component. So, putting the counterdirectional presupposition from (4) together with a complete lexical entry produces something like (5) below (Patel-Grosz & Beck 2019). Here the presuppositional part is shown between the colon and following period; the remainder of the lexical entry is the assertoric part, which is trivial: it merely passes up the event description $P(e)$ unchanged into further computation.

(5)   *Lexical entry for a counterdirectional adverb: Reverse version*

$\lambda P_{\langle v,t \rangle}.\lambda e_v : \exists e'_v[\tau(e') \prec \tau(e) \wedge P_C(e')].P(e)$

where P_C is the reverse of P

A drawback of this approach is that the value of P_C above is supposed to come

from the context—given an event such that $P(e)$ holds, there is no formal method provided to predict or calculate the value of the reverse property P_C, or the reverse event $P_C(e)$. This effectively replaces the term *counterdirectional* with the term *reverse* which the requires further explanation. Illustrative examples used in this approach typically assume that there is a natural reverse available for any given event, but this can quickly get quite complicated. For example, if the sentence asserts *Ali flying from New York*, can it count as the reverse of Ali taking a train from New York earlier? Similarly, if the sentence asserts *the door swinging open*, can it count as the door quietly clicking shut earlier? Is Bina hugging Ali a valid reverse event to Sarah hugging Bina?[2] Without a definition of reversal, there is no way to answer these questions.

A significant step towards a predictive theory of counterdirectionality is made by Zwarts (2019), who reduces the undefined notion of *reverse* to a concrete statement of *reverse paths*, as shown in (6). Zwarts's approach puts front and center the concepts of *path*, and *movement*—of one kind or another—along it. The advantage of this modification is that information about the path traversed in an asserted event can be reasonably assumed to be retrievable from the context. The reverse of one path, defined by Zwarts, is another path whose end point corresponds to the first path's start point, and vice versa. Reverse events are events who have paths that satisfy this definition.

(6) *Lexical entry for a counterdirectional adverb: Path reverse version*[3]

$\lambda E_{\langle v,t\rangle}.\lambda e_{\langle v\rangle} : \exists e'_v[e' \prec e \wedge E'(e') \wedge \textsc{reverse}(\textsc{path}(e), \textsc{path}(e'))]\ .\ E(e)$

In this analysis, PATH comes in three different flavours, each accounting for one of the three core readings. The first reading, REVERSED PATH most clearly involves

---

[2]I show in Chapter 3 that the answers are, respectively: Yes, Yes, and (unless Sarah and Ali are contextually equivalent in some way) No.

[3]Here E' is a free variable that specifies what is already in the common ground concerning e', apart from its being earlier and opposite in direction.

"a concrete movement along a spatial path" (which he abbreviates as L-PATH). The second reading, RESTITUTIVE is defined by Zwarts as "a more abstract development along a scalar path" (he calls this kind of path S-PATH). The third reading, RESPONSE is arguably the most abstract in this analysis, conceived of as an "action 'going' from one participant to another" (Zwarts 2019:224), captured by stipulating a new category for the purpose, called A-PATH. The PATH in the denotation above is thus a placeholder for the type of path specific to that reading. The proposal in (6) ends up representing not one, but three different lexical entries—this can be reduced to one if there is an explicit mechanism for connecting the selectional properties of the adverb to the choice of corresponding L-PATH, S-PATH, or A-PATH.

If Zwarts (2019) has embarked on a path to derive the readings of counter-directional adverbs without event-reversal, my proposal travels further, doing away with even the need to appeal to path-reversal. A large part of this dissertation is concentrated on the first two of the core readings—as Zwarts (2019) has already observed, when viewed in the correct light, REVERSED PATH and RESTITUTIVE readings are similar in a fundamental way. The first building block of my analysis of counterdirectionality is a demonstration of that similarity, drawing on insights from studies in event structure and the lexical semantics of verbs (notably Rappaport Hovav 2014): I show that both REVERSED PATH and RESTITUTIVE readings involve BACK selecting for *dynamic predicates*, i.e. predicates that involve a measurable change or potential change in a participant (Beavers 2008b:245,263). Typically, measurable change involves a scalar meaning component, where "a scale is a set of degrees—points or intervals indicating measurement values—on a particular dimension (e.g., height, temperature, cost), with an associated ordering relation" (Kennedy 2001; Kennedy & McNally 2005). Directed motion verbs give rise to the REVERSED PATH reading, and change of state verbs give rise to the RESTITUTIVE reading.

While I am very much building up from Zwarts (2019), the second building

block of my analysis diverges from it in one crucial way. In both REVERSED PATH and RESTITUTIVE readings, I argue in Chapter 3 that only certain selected aspects of the change along the scale are relevant to the BACK-adverb: most important is the *end point of the scalar change* described in the assertion. As long as this point is known, the entire path is no longer required. I base my argument on a careful investigation of novel data that highlight finer-grained contextual restrictions on the use BACK-adverbs. The properties in the list below are stable across the three languages that I discuss: English, Hindi-Urdu, and Dutch.

(7) Desiderata for a semantics of BACK:

   a. BACK makes reference to two events of scalar change such that the end point of the latter event was the start point of the earlier event.

   b. BACK does not restrict the predicate in the presupposed event type.

   c. The THEME must be the same across the two events.

   d. The SCALE must be the same across the two events.

The lexical entry in (8) captures the above desiderata. Here, TRACE$(e)(0)$ and TRACE$(e)(1)$ represent, respectively, a scalar value that holds of the THEME at the *start* of the event, and at the *end* of the event. The expression SCALE(e) specifies the domain of scalar change from which the scalar values are drawn: for all directed motion verbs, it is the spatial domain; for verbs of change of state, it is an attribute specified by the verb.

(8) *My proposed lexical entry for BACK*

$[\![\text{BACK}]\!]_{\langle\langle vt\rangle\langle vt\rangle\rangle}$

$= \lambda E_{vt}\lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$

$\text{TRACE}(e')(0) = \text{TRACE}(e)(1)].E(e)$

The above semantics, I show, does not account for RESPONSE readings as it is, and this is desirable because RESPONSE readings indeed diverge from the first two

readings in a couple of ways: RESPONSE cases are independent of scales, and do not even require a THEME. I therefore eschew the inclusion of A-PATH under the umbrella of PATH. These readings arise specifically when the above definition is weakened such that *only* the end point of the action is relevant, and the scalarity is not. In RESPONSE readings, BACK selects for what I identify as *reversible* predicates, a category of predicates that convey reversible directed actions, typically with a human Agent and a human receiver of the action (Patient or Recipient). An example of a reversible predicate is *to call someone*: you can *call someone* and they can *call you back*. Compare an irreversible predicate *eat*: you can *eat an apple* but the apple cannot #*eat you back*.

The analysis I present shows that only one lexical entry is needed to capture the three core readings of BACK-adverbs, and its key feature is that the presupposition can be derived correctly in each case by *copying* some—and critically not all—of the content already available in the assertion. The single lexical entry ends up having slightly different effects with different kinds of predicates. In the case of predicates of scalar change, these effects are determined by the SCALE specified by the predicate, which is explicitly part of the presupposition, thus doing away with the need for Zwarts-style L-PATH/S-PATH. Additionally, BACK-adverbs can occur with a diverse set of predicates, and it is the non-scalar reversible predicates that give rise to RESPONSE readings, doing away with A-PATH as well.

1.2   The RESTITUTIVE puzzle and a crosslinguistic sketch

The identification of counterdirectionality with BACK-adverbs is fairly recent. The introduction of the term *Kontradirektionalität* 'counterdirectionality' by Fabricius-Hansen (1983, 2001) was in a context that was not about BACK at all. Indeed, RESTITUTIVE readings have historically been discussed almost exclusively as a secondary meaning associated with adverbs that mean AGAIN (going back as far as Morgan

1969). The label REPETITIVE is standardly used for the meaning expressed by AGAIN-adverbs in a simple sentence like *Alice frowned **again**.* The AGAIN-adverb when used in a sentence with a slightly more complex event structure with a result state, gives rise to a secondary meaning known as RESTITUTIVE, distinguished from the REPETITIVE reading only in the presupposition. We see in (9) a classic example from the literature. In terms of admittance conditions, for the RESTITUTIVE reading in (9b), it is sufficient that the context contain the prior state of the door being open, hence the label that conveys "restoring" of a prior state. Whereas for the REPETITIVE reading in (9a), the entire event of the Agent opening the door needs to be in the context.

(9)   Bilbo opened the door **again**.   *Beck (2005)*

   a. REPETITIVE: 'Bilbo opened the door, and that **had happened before**.'

   b. RESTITUTIVE: 'Bilbo opened the door, and it **had been open before**.'

(10) Bilbo opened the door **back** up.

   RESTITUTIVE: 'Bilbo opened the door, and it **had been open before**.'

The fact that there are *two routes to restitution*, meaning that RESTITUTIVE readings can be expressed by BACK-adverbs as well as AGAIN-adverbs, has been noted relatively recently: (Wälchli 2006 presents a very illuminating 100-language survey; brief mention is made by McIntyre 2012, as well as by Sigrid Beck in various co-authored papers, notably Beck et al. 2009; Beck & Gergel 2015). The present project draws on analyses of the 're' domain presented by Patel-Grosz & Beck (2014, 2019); Zwarts (2019). In other words, the literature on restitutive readings has by and large looked into the paradigm in (9) and not considered examples like (10). To understand the puzzle posed by the attested two routes to restitution, I briefly discuss two types of analyses of RESTITUTIVE readings.

The now-standard approach to the REPETITIVE/RESTITUTIVE ambiguity shown above

is to consider AGAIN as an inherently repetitive adverb with a single lexical entry; its two readings come from its ability to repeat either an entire event, or just the result state within a larger event. This lexical entry is below. When (11) applies to a constituent that denotes a result state, we get the RESTITUTIVE reading. This approach I refer to as the STRUCTURAL-REPETITIVE account (exemplified by Stechow 1996).

(11) $[\![\text{AGAIN}/\textit{phir-se}]\!] = \lambda P_{\langle v,t \rangle}.\lambda e_v : \exists e'_v[\tau(e') \prec \tau(e) \wedge P(e')].P(e)$

The second of the two approaches is the LEXICAL-COUNTERDIRECTIONAL account; it is this context in which the term "counterdirectionality" was originally developed (Fabricius-Hansen 2001). This approach posits two lexical entries. One is repetitive AGAIN, just as we have seen above (11); the other is counterdirectional AGAIN_C (12), and it is this latter lexical entry that is posited as the source of the RESTITUTIVE reading.

(12) $[\![\text{AGAIN}_C/\textit{vaapas}]\!] = \lambda P_{\langle v,t \rangle}.\lambda e_v : \exists e'_v[\tau(e') \prec \tau(e) \wedge P_C(e')].P(e)$
      where P_C is the reverse of P

The denotation in (12) is exactly what Patel-Grosz & Beck (2014, 2019) adopt for BACK, as we have seen in (5), because it captures precisely the kind of relationship between different kinds of events that BACK expresses, and is general enough to capture what BACK means across several of its various uses. When we put (11) together with (12) in their colloquial forms, we obtain what appears to be a contradictory state of affairs.

(13) *Two seemingly contradictory routes to restitution*

a. RESTITUTIVE readings are produced when the prior event has the same properties as the asserted event.

b. RESTITUTIVE readings are produced when the prior event has properties reverse to the asserted event.

The restitutive puzzle is the following: how can two events simultaneously have the "same" properties, as well as the "reverse" properties? The answer I present in the dissertation is, in short, that both routes involve a return to a prior state of affairs. While AGAIN-adverbs achieve this return by directly repeating the result state as outlined above, BACK-adverbs achieve it with the requirement wavy-underlined below: $\textsc{trace}(e')(0) = \textsc{trace}(e)(1)$. In words, this means that the end point of the asserted event is copied into the presupposition as the *start* point of the presupposed event. The concepts of *start point* and *end point* when taken in tandem with a predicate that involves a SCALE and a THEME which "moves" on that SCALE, yield situations where the THEME ends up where it started from. Thus, AGAIN and BACK produce the same admittance conditions despite having rather different lexical entries.

(14)   *My proposed lexical entry for* BACK   [=(8)]

$\llbracket \textsc{back} \rrbracket_{\langle\langle vt \rangle \langle vt \rangle\rangle}$
$= \lambda E_{vt} \lambda e_v : \exists e'_v[e' \prec e \wedge \textsc{scale}(e') = \textsc{scale}(e) \wedge \textsc{theme}(e') = \textsc{theme}(e) \wedge$
$\textsc{trace}(e')(0) = \textsc{trace}(e)(1)].E(e)$

The two routes to restitution represent an empirical reality; we have already seen that in English the words *back* and *again* illustrate the two routes by being effectively interchangeable in contexts set up to license *only* RESTITUTIVE readings. Hindi-Urdu exemplifies this pattern: there are very clearly two adverbs, *vaapas* 'back' and *phir-se* 'again', and in exactly in the RESTITUTIVE-licensing contexts, these two adverbs can be used interchangeably. I present a detailed analysis of the semantics of BACK-adverbs and demonstrate its successful application to the Hindi-Urdu data. Space permitting, English examples are also provided for comparison of some of the divergent behaviours of these adverbs across languages.

There are two languages where the two routes to restitution have been already documented, but in a rather different way: Kutchi Gujarati (Patel-Grosz & Beck

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2014, 2019), and Dutch (Zwarts 2019). Both languages have a single adverb to express repetitive meaning as well as the meaning I am calling RESPONSE: *pacho* in Kutchi Gujarati, *terug* in Dutch. This same adverb also appears in contexts constructed to license a RESTITUTIVE reading while ruling out the REPETITIVE reading. Putting the Hindi-Urdu/English pattern together with the Dutch/Kutchi Gujarati, I shed light on the 're' domain as a systematic area where multiple distinct readings have a common semantic core, and lexical items may lexicalize either a subset of those readings, or the entire set. Zwarts (2019) captures this systematicity in a remarkable list of readings expressed by the Dutch adverb *terug*, shown in (15).

(15)   *The 're' domain in Dutch (Zwarts 2019)*

    a.   *Set I: Core readings*

        i.   De feestgangers liepen **terug** (naar de tent).
          the partygoers walked terug (to the tent)

          'The partygoers walked <u>back</u> (to the tent).'   REVERSED PATH[4]

        ii.   Hij heeft **terug** een job.
          he has terug a job

          'He has a job <u>again</u>.'   RESTITUTIVE

        iii.   Toen hij werd uitgescholden, schold hij niet **terug**.
          when he was reviled, reviled he not terug

          'When he was reviled, he did not revile <u>in return</u>.'   RESPONSE[5]

    b.   *Set II: Peripheral readings*

        i.   Kun jij van honderd totéén **terug** tellen?
          can you from hundred to one terug count

          'Can you count <u>backward</u> from 100 to 1?'   RETROGRADE

        ii.   Ada deinsde **terug**.
          Ada shrank terug

          'Ada shrank <u>back</u>.'   REARWARD

---

[4]Zwarts calls this RETURNATIVE. I do away with the term RETURNATIVE in part to avoid any potential confusion with the label RESPONSE/RESPONSIVE, and in part because the inclusion of PATH in the label emphasizes its importance and gestures towards motion, and the directedness of that motion.

[5]Zwarts calls this RESPONSIVE.

iii. Er   was **terug** iemand   zwanger.
there was terug somebody pregnant

'Again somebody was pregnant.'   REPETITIVE

A glance at the readings in *Set I* shows English translations of *terug* featuring the words *back*, *again*, and *in return*. The first half of the dissertation explains what connects these three core readings, such that they might be expressed by three different lexical items in one language, and a single item in another, and explores in a detailed corpus study the peripheral readings attested in Hindi-Urdu.

1.3   Discourse and the limits of counterdirectionality

The second half of the dissertation is a detailed exploration of various properties that interact with the particular counterdirectional presuppositions that actually arise in real discourse contexts. There are two main lines of inquiry that I pursue in this part.

First, as I have foreshadowed at in this introduction, the admittance conditions on sentences with RESPONSE readings seem to be far looser than the conditions on the other two core readings: RESPONSE readings basically only require that the start point of the presupposed prior event be identical to the end point of the asserted event. Theoretically, that opens up a vast arena of possible antecedent events that can satisfy the conditions; the arena is especially vast when we consider the fact that with AGAIN, the expectation is that *exactly one* event—i.e. the one that is identical to the event in the assertion—can serve as an appropriate antecedent event. In reality, are there any constraints on what are the permissible kinds of prior events for a RESPONSE sentence? Hindi-Urdu proves to be a source of illuminating evidence of a difference between the behaviour of (i) sentences examined in isolation (there is a pressure in these cases to keep the extrapolated presupposed/prior event as similar to the asserted event as possible), and (ii) sentences in actual discourse contexts,

however minimal (sequences of two sentences). The latter case—deliberately constructed discourse contexts—reveals that constraints of the above-mentioned kind do exist: it is only material bearing focus that is permitted to vary between the asserted and presupposed events.

Second, returning to *Set II* of the Dutch examples above (15b), we see that there are at least three peripheral readings that are expressed by the Dutch 're' domain-adverb, *terug*. I present a detailed study of the Hindi-Urdu adverb *vaapas* 'back' to outline the limits of counterdirectional meanings in this language and contribute to the crosslinguistic map of meanings in this semantic space.

1.4   Roadmap

In Chapter 2, I show that in Hindi-Urdu, *phir-se* 'again' and *vaapas* 'back' are interchangeable in restitutive contexts; *phir-se* emerges the true AGAIN-adverb, its syntactic distribution and corresponding meanings unproblematically derivable using the STRUCTURAL-REPETITIVE account. This account, by providing an explanation of a word order pattern persistent across languages, wins against the LEXICAL-COUNTERDIRECTIONAL account which is silent on syntactic questions. This latter account nevertheless represents a meaning that is actually attested: the lexical entry from the LEXICAL-COUNTERDIRECTIONAL account exactly corresponds to the meaning of *vaapas* 'back', which is the counterdirectional or BACK-adverb, shown to diverge in both meaning and syntactic distribution from *phir-se* 'again'. The two accounts, used together, illuminate the rapidly emerging landscape of various languages where the adverbs BACK and AGAIN jointly carve up portions of the 're' domain.

In Chapter 3, I present a set of features that characterize REVERSED PATH and RESTITUTIVE readings, and distill from these the desiderata for a semantics of BACK that can capture the observed facts that are stable across English, Dutch, and Hindi-Urdu. I propose and motivate an enriched semantics, which I apply to the Hindi-

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Urdu adverb *vaapas* 'back', producing semantic derivations building on the syntactic structures from Chapter 2. I then present a conceptual extension of the semantics to RESPONSE uses of BACK-adverbs.

In Chapter 4, I argue that BACK-adverbs are focus-sensitive, based on the fact that in addition to the range of related readings they can express, these adverbs even within the same reading can create different licensing conditions for the sentence they occur in, by associating with different constituents. In a language that indicates focus via syntax, this focus-association has consequences for word order. The established FocP account of positional focus across South Asian languages derives only one position (immediately preverbal); I show that this is actually just one of multiple possible surface positions available to focus-bearing nominals between the adverb and the verb.

In Chapter 5, I present a corpus study of *vaapas* 'back' in Hindi-Urdu, summarizing attested "core" and "peripheral" readings of the counterdirectional adverb and consolidating them into a typology showing which verbal types cannot combine with *vaapas*, which ones do, and what readings arise in each case.

In Chapter 6, I conclude with some interesting unexplained patterns in the 're' domain and offer some speculations about BACK-adverbs and a semantic change-in-progress.

CHAPTER 2

RESTITUTION AND BACK/AGAIN

Sentences like (16) are widely recognized to have two distinguishable readings: (16a) illustrates the REPETITIVE reading, which can be understood in descriptive terms as "an agent repeating an event". In (16b) is the RESTITUTIVE reading, which can be described as "a state holding a second time". The licensing contexts are different for each of these readings. The paraphrases below are written to reflect the assertoric (plain text) and the presuppositional (**bold**) content of the readings.

(16)   Bilbo opened the door **again**.   *Beck* (*2005*)

    a.   REPETITIVE: 'Bilbo opened the door, and that **had happened before**.'

    b.   RESTITUTIVE: 'Bilbo opened the door, and it **had been open before**.'

Research on restitutive readings has focused on these readings as they arise with the adverb AGAIN, based on the behaviour of English *again* and its German counterpart *wieder* (McCawley 1968, 1971; Morgan 1969; Dowty 1979; Stechow 1995, 1996, 2003; Egg 1999; Beck & Johnson 2004; Beck 2005, 2006; Beck & Gergel 2015; Pedersen 2015; Klein 2001; Fabricius-Hansen 1983, 2001; Jäger & Blutner 2000). In several languages, the restitutive reading is more restricted in its distribution than the repetitive reading. The restitutive reading is only available when the adverb follows the direct object, while repetitive is available both when the adverb precedes the direct object, and when it follows direct object. Put differently: low *again* (post-

DO) has both readings, while high *again* (pre-DO) has only the repetitive reading. This is illustrated in (17): in the latter case, the restitutive reading is not present.

(17) a. Bilbo opened <u>the door</u> **again**.   ✓ REPETITIVE, ✓ RESTITUTIVE

 b. Bilbo **again** opened <u>the door</u>.   ✓ REPETITIVE, *RESTITUTIVE

The independence of the two closely related REPETITIVE and RESTITUTIVE readings is established in the literature by examining contexts that rule in one reading and rule out the other. I will use the term *restitutive contexts* to refer to the relevant discourses that are constructed to support a reading of "a state holding a second time", and fail to support a reading of "an agent repeating an event". We will see that restitutive contexts play a central role in establishing the starting empirical finding of this chapter: that Hindi-Urdu exhibits restitutive readings in the same way as English and German, but employs for this purpose not one but two adverbs, *phir-se* 'again' and *vaapas* 'back'. In (18) is a Hindi-Urdu example.

(18) *Restitutive context*: The door to the department is usually open. Today, Sakshi finds it closed—maybe someone accidentally closed it. So...

 a. *Hindi-Urdu restitutive available when adverb follows DO*

  saakshii-ne <u>darwaazaa</u> **phir-se/ vaapas** khol diyaa
  Sakshi-ERG door   again/ back   open GIVE.PFV

  'Sakshi opened the door **again**.'

 b. i. *Hindi-Urdu restitutive unavailable when phir-se precedes DO*

   #saakshii-ne **phir-se** <u>darwaazaa</u> khol diyaa
   Sakshi-ERG again   door   open GIVE.PFV

  ii. *Hindi-Urdu restitutive degraded when vaapas precedes DO*

   ??saakshii-ne **vaapas** <u>darwaazaa</u> khol diyaa
   Sakshi-ERG back   door   open GIVE.PFV

In (18), the minimal context does not have any instance of Sakshi previously having done the action of closing the door and thus fails to support a reading of

"Sakshi repeating an event of closing the door". There are two important points illustrated in this example; first, the word-order pattern of *phir-se* 'again' (compare licit 18a and illicit 18b-i), and second, the fact that *vaapas* 'back' is interchangeable with *phir-se* 'again' in the licit case (18a).

In this restitutive context, we see that the post-DO adverb is the only one that is good, showing that the restitutive reading is only available when the adverb follows the direct object. This pattern is identical to the English facts seen in (17) and can be represented schematically as shown in (19).

(19) SURFACE ORDER: *phir-se*

    a. DO - *phir-se* - $\sqrt{\text{Root}}$ ✓ REPETITIVE, ✓ RESTITUTIVE

    b. *phir-se* - DO - $\sqrt{\text{Root}}$ ✓ REPETITIVE, *RESTITUTIVE

The interchangeability of *phir-se* 'again' and *vaapas* 'back' (18a) is striking. Both are equally good and acceptable in the restitutive context presented here. One of the key observations of this chapter is that in addition to this interchangeability, the word-order pattern shown in (19) is replicated by *vaapas* 'back': when *vaapas* 'back' is used in a restitutive context, the post-DO adverb is good, and the pre-DO adverb is bad, showing once more that the restitutive reading is available when the adverb follows the direct object (20), and when the adverb precedes the direct object that reading is either totally unavailable (*phir-se*) or degraded (*vaapas*).

(20) SURFACE ORDER: *vaapas*

    a. DO - *vaapas* - $\sqrt{\text{Root}}$ ✓ REVERSE, ✓ RESTITUTIVE

    b. *vaapas* - DO - $\sqrt{\text{Root}}$ ✓ REVERSE, ??RESTITUTIVE

Turning now to the pre-DO position: note that neither adverb is ungrammatical in this configuration; (19b) and (20b) are marked "*" and "??" respectively because the reading that arises in each case is unsupported by a restitutive context. The

pre-DO *phir-se* 'again' has the expected REPETITIVE reading, whereas pre-DO *vaapas* 'back' has a meaning which I have called REVERSE above. This subcategories of RE-VERSE-semantics, and their interaction (or lack thereof) with the syntactic position of *vaapas*, is discussed in various ways in Chapters 3, 4, and 5. The central question addressed in the present chapter is: how does a BACK-adverb give rise to restitutive readings when it does not normally mean AGAIN? The rest of this chapter is laid out as follows:

In §2.1, I discuss the first of the two approaches to restitution in the literature. This is the STRUCTURAL-REPETITIVE account, which is fundamentally not about BACK at all, but rather the story of a single inherently repetitive adverb AGAIN, and how it can repeat not just events but also states. In this account, result states are of primary importance and definitive of restitutive events. When the denotation in (21) applies to a result state denoting subconstituent, the reading is called restitutive. I show that this approach accounts for the attested behaviour of *phir-se* 'again' (§2.2), but not *vaapas* 'back' (§2.3).

(21) $\llbracket \text{AGAIN}/\textit{phir-se} \rrbracket = \lambda P_{\langle v,t \rangle}.\lambda e_v : \exists e'_v[\tau(e') \prec \tau(e) \wedge P(e')].P(e)$

In §2.4 I discuss the second of the two approaches to restitution in the litera-ture. This is the LEXICAL-COUNTERDIRECTIONAL account. I focus especially on recent literature which frames this account in a way that is simultaneously about AGAIN and BACK: there are two lexical entries, AGAIN, which is repetitive (21), and AGAIN$_C$, which is counterdirectional (22).

(22) $\llbracket \text{AGAIN}_C/\textit{vaapas} \rrbracket = \lambda P_{\langle v,t \rangle}.\lambda e_v : \exists e'_v[\tau(e') \prec \tau(e) \wedge P_C(e')].P(e)$
      where P_C is the reverse of P

The denotation in (22) can just as well be called BACK, as it captures precisely the kind of relationship between events that BACK expresses, and is general enough to capture what BACK means across several of its various uses. In Hindi-Urdu there are

very clearly two adverbs, *vaapas* 'back' and *phir-se* 'again' and in exactly the classic restitutive contexts these two adverbs can be used interchangeably. Unlike the STRUCTURAL-REPETITIVE account, the LEXICAL-COUNTERDIRECTIONAL account does not need to give a central role to result states. Rather, result states are entirely incidental to the analysis: counterdirectionality is a relationship that can exist between events with or without a result state, so long as the presupposition in (22) is satisfied; of those events, the ones which happen to have result states yield restitutive readings.

In §2.5 I show how the LEXICAL-COUNTERDIRECTIONAL account paves the way for an explanation of the attested behaviour of *vaapas* 'back' in Hindi-Urdu. While in the present chapter, I make my argument using the existing lexical entry given in (22) in its existing form to reflect the LEXICAL-COUNTERDIRECTIONAL approach taken by other scholars; in Chapter 3, I propose a significant revision of this lexical entry.

2.1 The STRUCTURAL-REPETITIVE account

In this section I discuss the first of two existing approaches to restitutive readings. In the widely adopted STRUCTURAL-REPETITIVE account of AGAIN, the two readings of AGAIN are analyzed as arising from a structural ambiguity (Stechow 1996; Beck & Johnson 2004; Beck 2005; Lechner et al. 2015). The adverb has the type $\langle\langle v,t\rangle,\langle v,t\rangle\rangle$, and is given a single denotation (23) which may apply to either the entire event, or a result-denoting subevent or *result state*.

(23) $[\![\text{AGAIN}]\!] = \lambda P_{\langle v,t\rangle}.\lambda e_v : \exists e'_v[\tau(e') \prec \tau(e) \land P(e')].P(e)$

In syntactic terms, this means that (minimally) there exists (i) a low attachment position which yields RESTITUTIVE meaning, and (ii) a high attachment position which yields REPETITIVE meaning. The denotation does not distinguish between states and events; the type v for eventualities covers both. The assertoric content of the adverb is merely the meaning of the constituent it modifies, represented below

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by $P(e)$, a property of eventualities. The presuppositional part of the denotation is that *there exists a prior eventuality e' of which the identical property holds*.

The word order reflex of the low and high positions is shown below with the previously seen examples from English.

(24) a. Bilbo opened <u>the door</u> **again**.   ✓REPETITIVE, ✓RESTITUTIVE

     b. Bilbo **again** opened <u>the door</u>.   ✓REPETITIVE, *RESTITUTIVE

Important to note is that while the restitutive reading can be ruled out by word order alone (as in 24b), the repetitive reading is freely available—I will refer to this fact as *persistence of the repetitive*. With predicates that involve a result, the repetitive reading entails the restitutive reading; for example, Bilbo opening the door twice means that in each event of opening, the resultant state of the door being open also comes to be. This means that it is impossible to construct a sentence with *again* where the restitutive reading is available and repetitive reading is not. The construction of examples which rule out the repetitive reading—but not the restitutive reading—can only be achieved by manipulating the context in a way that it fails to support a repetitive reading (as mentioned in the introduction to this chapter, I use the phrase *restitutive contexts* to refer to these specific contexts).

The two components of this account are explained below: the first is to provide the adverb an attachment site that is sufficiently low as to account for restitutive meaning, which is done by means of verbal decomposition in the syntax; the second is to provide an explanation for the word order facts (*why* the restitutive reading is restricted while the repetitive is more freely available), which in this account is done by appealing to movement for Case.

2.1.1   Two attachment sites, two readings

Stechow (1995, 1996) argues that the difference between the restitutive and repet-

itive readings is easily explained if a verb like *open* is considered as decomposable into [(CAUSE)+BECOME+open]. The basis of this explanation goes back to Generative Semantics: the classical treatment from Dowty (1979) employs a semantic decomposition involving a meaning component BECOME, such that in the one reading, the adverb takes semantic scope below the BECOME component, and in the other it takes semantic scope above it. In Dowty's approach, however, this scope-taking does not correlate with syntactic height—the adverb always occupies the same position in the syntactic structure. Rather, Dowty treats *wieder* 'again' as lexically ambiguous, and gives the task of creating the restitutive reading to a meaning postulate. Under such an analysis, even with verbal decomposition, there is no explanation of the fact that the surface position of the adverb restricts the range of possible readings:

> "...Dowty's grammar needs an *ad hoc* rule making sure that an initially occurring *again* is translated as **again**$_1$, but not as **again**$_2$. Dowty treats again as lexically ambiguous and the ambiguity is nevertheless sometimes disambiguated by syntactic context. I find this highly unsatisfactory. One would prefer to derive the restriction from the syntactic surface position of the adverb, i.e., to have one *again* and to derive the different meanings by a difference of scope." (*Stechow 1995:87*)

For Dowty, the decomposition is not located not in the syntax but only in a conceptual semantic language, "a logical language between the syntax proper and interpretation". Stechow makes an important shift, to the syntactic model (new at the time) under which abstract morphemes like CAUSE and BECOME play a crucial role in capturing the intuitive meanings, and therefore must be located in the syntax. With this shift, not only are the word order facts no longer mysterious, they come "for free" under assumptions of syntactically "visible" (albeit covert)

decomposition involving a small clause, combined with independently motivated movement of arguments to Case positions.

For Stechow, the decomposition crucially involves a covert syntactic head BE-COME (defined in 25 below). The motivation for BECOME comes from inchoatives (in his words "intransitive verbs of transition"). For the relatively small structure of an inchoative (no Agent/causer present) to be able to host two readings, there must exist a very low decomposition, which he takes to be BECOME. Note that at the time, CAUSE was identified with the introduction of the Agent (both occurring in Voice); the absence of the Agent therefore entailed the absence of CAUSE.

(25)   *Stechow (1996:96) definition for* BECOME

   BECOME$(P)(e) = 1$ iff e is the smallest event such that P is not true of the pre-state of e but P is true of the target state of e.

In a sentence like *Bilbo opened the door again*, the only possible target/result state is $[_{SC} [_{DP}$ the door] open]. A state cannot have an Agent; the function of BECOME is to turn the state into an event, i.e. something that can have an Agent: here, [BECOME $[_{SC} [_{DP}$ the door] open]]. Since Beck & Johnson (2004) it is fairly standard in the literature on AGAIN to assume two functional heads, v hosting Causative Shift (CAUSE) and Voice hosting Event Identification (Agent), following Kratzer (2004).

For ease of readability, in (26) I present a simplified semantic interpretation of each of the readings without the additional BECOME part. In more recent work (e.g. Lechner et al. 2015) it is common to see this simplified representation which shows the CAUSE layer but does not necessary show the additional BECOME layer below it.

(26)   Bilbo opened the door again.

   Assertion:

   $\lambda e_v.\exists s_v[open(s) \,\&\, Theme(s) = the\ door \,\&\, Cause(s) = e \,\&\, Agent(e) = Bilbo]$

   a.   *Repetitive presupposition:* "that had happened before"

$$= \exists e'[\tau(e') \prec \tau(e) \,\&\, open(e') \,\&\, Theme(e') = the\ door \,\&\, Agent(e') = Bilbo]$$

b. *Restitutive presupposition:* "the door had been open before"

$$= \exists s'[\tau(s') \prec \tau(s) \,\&\, open(s') \,\&\, Theme(s') = the\ door]$$

The sentence presented in (26) above has two readings as shown. The assertoric content is the same for both, and is equal to the semantic value of the event, i.e. the tenseless proposition that the adverb modifies. In this case, this is "Bilbo open the door", or to be fully explicit, "Bilbo do something which cause the door to be open". The assertion shown is thus simply a function from eventualities to truth values true iff that there exists an (sub-)eventuality s which is the result state of the door being open, and this result state is in turn caused by the eventuality that is fed to the function and has Bilbo as the Agent. The difference between the readings comes not from the assertion, but from the differences in the propositional content.

In (26a) we see the REPETITIVE presupposition: the sentence is defined iff there exists a prior eventuality e' such that e' is an event of door opening by Bilbo. In a fully elaborated semantics, (26a) might include a result state as well, but since it makes no impact on the overall semantics, I omit that extra detail here. In (26b) we see the RESTITUTIVE presupposition: the sentence is defined iff there exists a prior eventuality s' such that s' is the state of the door being open. The "priorness" of the presupposed eventuality in this notation is represented by $\tau(e') \prec \tau(e)$, where $\tau(e)$ is the running time of event e, and $\prec$ stands for temporal precedence.

Below in (27) is one version of the LF proposed in the literature (Lechner et al. 2015) to capture where the adverb attaches in the parse to yield RESTITUTIVE and REPETITIVE readings as given above. This tree is shorthand for two parses, one where the adverb attaches to ResultP, and the other where it attaches to VoiceP. As shown, both of these projections have the type $\langle v, t \rangle$. The adverb (phrase) has the type $\langle \langle v, t \rangle \langle v, t \rangle \rangle$ which can take either of them as argument, and simply pass up the same value, while adding a presupposition. The content of the presupposition is

determined by the meaning of the constituent that the adverb modifies: ResultP yields the presupposition that a state identical to ResultP held at a prior time, and VoiceP yields the presupposition that an event with denotation identical to that of VoiceP occurred at a prior time. Thus the lower attachment produces the RESTITUTIVE reading of "a state holding a second time", and the higher attachment produces the REPETITIVE of "an agent repeating an event".

(27)   *LF of a restitutive* (*Lechner et al. 2015*)

$$\text{VoiceP}_{\langle v,t \rangle}$$

AdvP $\text{VoiceP}_{\langle v,t \rangle}$ $\Rightarrow \lambda e_v. \exists s_v. \, open(s) \,\& \, Theme(s) = the\ door \,\&$
$\langle\langle v,t \rangle \langle v,t \rangle\rangle$ $Cause(s) = e \,\& \, Agent(e) = Bilbo$

again   DP $\text{VoiceP}_{\langle e,\langle v,t \rangle\rangle}$

REPETITIVE $\langle e \rangle$

Bilbo   Voice $v\text{P}_{\langle v,t \rangle}$ $\Rightarrow \lambda e_v. \exists s_v. \, open(s) \,\& \, Theme(s)$
$\langle v,t \rangle, \langle e, \langle v,t \rangle\rangle$ $= the\ door \,\& \, Cause(s) = e$

v $\text{ResultP}_{\langle v,t \rangle}$

AdvP $\text{ResultP}_{\langle v,t \rangle}$ $\Rightarrow \lambda s_v. open(s) \,\&$
$\langle\langle v,t \rangle \langle v,t \rangle\rangle$ $Theme(s) = the\ door$

again   ResultP

RESTITUTIVE $open(the\ door)$
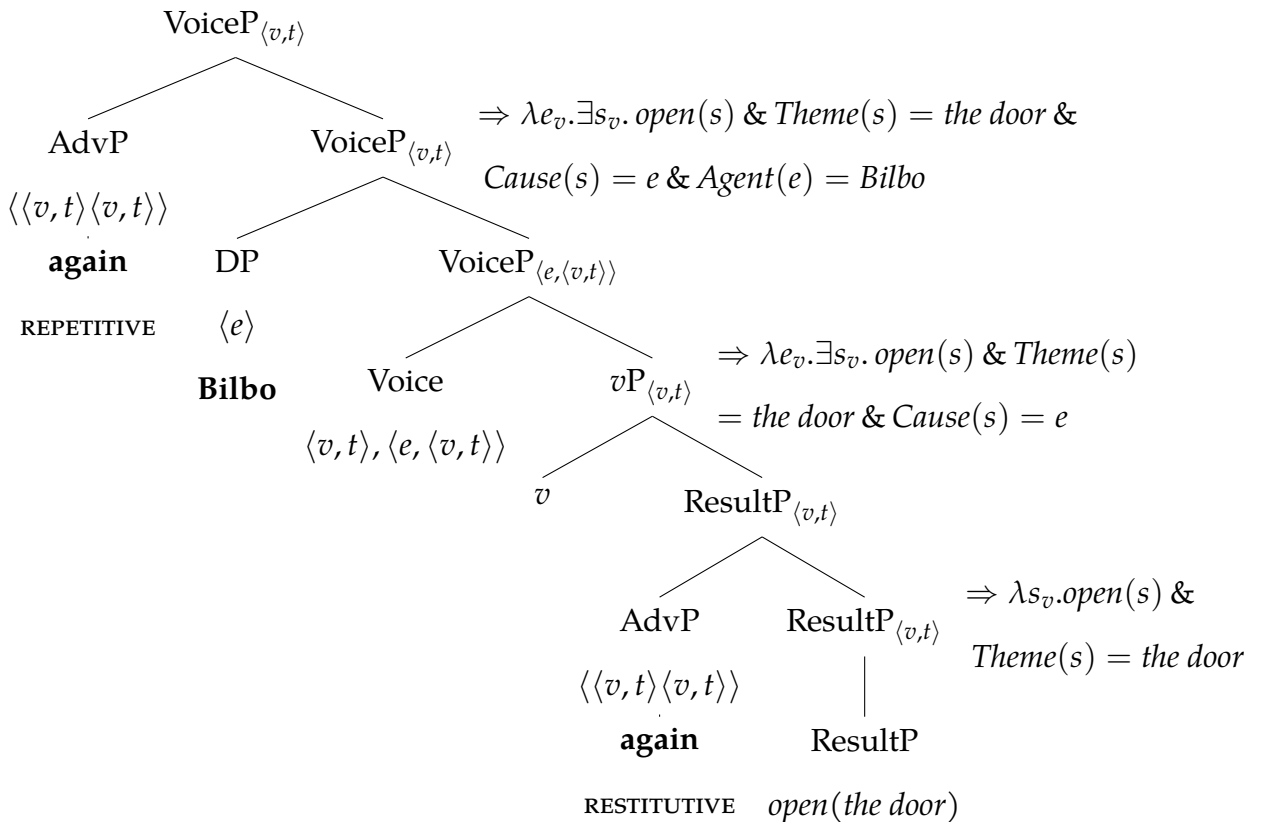
To sum up, the parts of the STRUCTURAL-REPETITIVE account of restitutive AGAIN sketched above capture the semantics of low attachment. The word order facts and their structural explanation is addressed in the next subsection.

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2.1.2   Word order in the STRUCTURAL-REPETITIVE account

In Stechow (1995, 1996), German examples (reproduced below) illustrate the syntactic ambiguity clearly because German is a language with (underlyingly) SOV word order. In (28a), the adverb (**bold**) in its surface position *precedes* the direct object (underlined), and restitutive reading is not available. In (28b), the adverb in its surface position *follows* the direct object, and the restitutive reading becomes available. The restitutive reading is not in complementary distribution with the repetitive reading; in German as in English, there is persistence of the repetitive reading, i.e. it is still available in (28b) along with the restitutive reading.

(28)   *German restitutive pattern (Stechow 1996)*

    a. Ali Baba **wieder** <u>Sesam</u> öffnete.
        Subj   again Obj   opened
        'Ali Baba again opened Sesam.'   ✓REPETITIVE, *RESTITUTIVE

    b. Ali Baba <u>Sesam</u> **wieder** öffnete.
        Subj   Obj   again opened
        'Ali Baba opened Sesam again.'   ✓REPETITIVE, ✓RESTITUTIVE

Assuming that the result state-denoting subconstituent is a small clause, the restitutive example in (28b) has the underlying structure shown in (29a) (for easy comparision, I also provide here the underlying structure for the repetitive reading below, in 29b).

(29)   *LFs for restitutive and repetitive readings (Stechow 1996)*

    a. *Restitutive*

        $[_{VoiceP}$ Subj $[_{VP}$ $[_{SC}$ **again** $[_{SC}$ <u>DO</u> Adj]] BECOME] Voice]

    b. *Repetitive*

        $[_{AgrOP}$ **again** $[_{AgrOP}$ $[_{VoiceP}$ Subj $[_{VP}$ $[_{SC}$ <u>DO</u> Adj]] BECOME] Voice] AgrO]]

The restitutive LF given in (29a) does not yet reflect the correct word order: the adverb precedes the direct object in (29a), but it supposed to *follow* it. In Stechow's

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proposal, the subject *Ali Baba* moves to Spec,AgrS while the direct object *Sesam* moves to Spec,AgrO as illustrated in the tree in (30) below. This derives the right word order, *DO-Adv*. The adverb is attached lower than the landing site of the direct object, and excludes the subject from its scope.[1]

Recall that the *DO-Adv* order does not have just one reading: there is a persistence of the repetitive reading in this surface order (as we saw in 28b). This happens because *DO-Adv* is consistent with two different parses based on where the adverb attaches: (i) low attachment at the level of the small clause (as shown in 30) and (ii) high attachment at the level of AgrOP (as shown in 31). The latter tree illustrates the repetitive reading that persists: if this is the parse, the adverb is structurally too high to yield the RESTITUTIVE reading.

(30)   *Restitutive with surface order DO-Adv (Stechow 1996)*

---
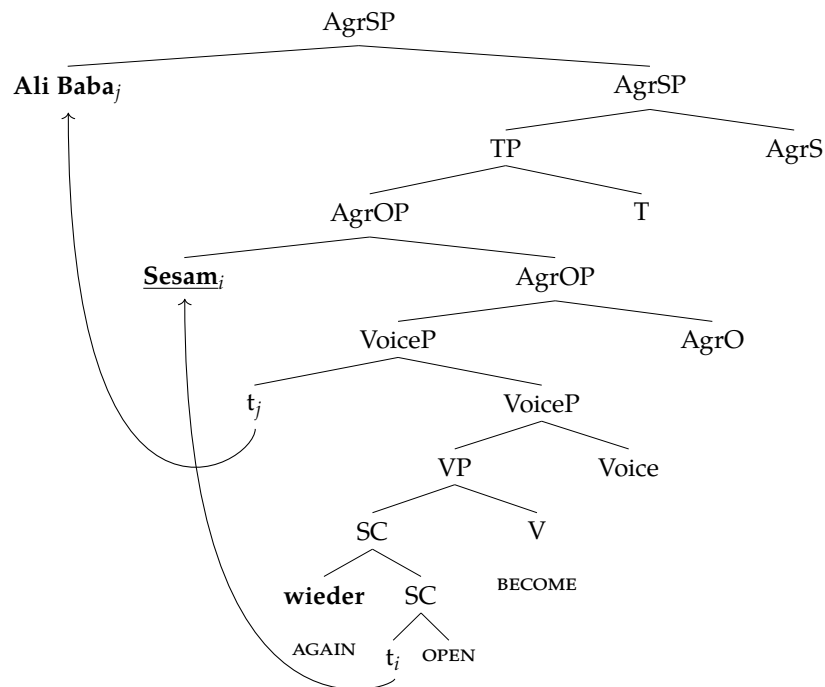
[1] In Stechow (1995, 1996), Spec,AgrS is a dedicated position for Nominative case, and Spec,AgrO is a dedicated position for Accusative case, and the DO moves to receive case. Since the advent of alternative proposals for Case that do not involve obligatory movement this approach requires further justification.

(31) *Repetitive with the same surface order as restitutive: DO-Adv* (*Stechow 1996*)

```
                        AgrSP
              ┌───────────┴──────────────┐
         Ali Baba_j                    AgrSP
                              ┌──────────┴────────┐
                             TP                  AgrS
                      ┌───────┴──────┐
                   AgrOP            T
             ┌───────┴──────┐
          Sesam_i         AgrOP
                    ┌────────┴────────┐
                 wieder             AgrOP
                 AGAIN        ┌───────┴──────┐
                           VoiceP           AgrO
                      ┌──────┴──────┐
                     t_j          VoiceP
                            ┌───────┴──────┐
                           VP            Voice
                      ┌────┴────┐
                     SC         V
                  ┌───┴───┐
                 t_i    OPEN    BECOME
```
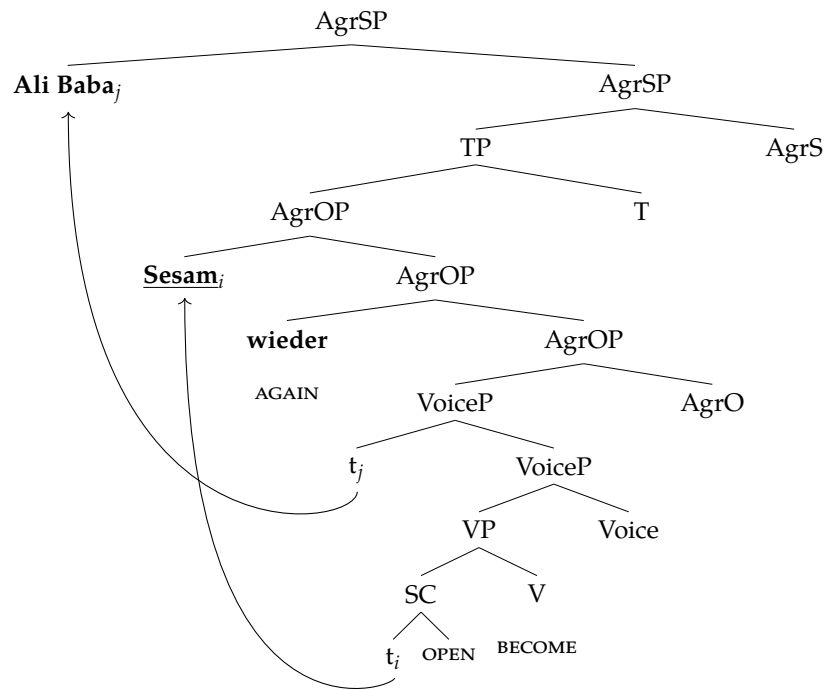
Compare the above situation with the other surface order, *Adv-DO*, which is unambiguously repetitive, indicating that "it must be generated outside VoiceP, for instance, as an adjunct of AgrO-P". This is the kind of system where Accusative case is assigned/checked/acquired by means of movement of the DO to Spec,AgrO. As shown above, AgrOP immediately dominates VoiceP. In such a system, for the adverb to be attached higher than the A-movement landing site of the direct object, *wieder* has to attach at least at the level of AgrOP. While the word order facts have held up over the years and are replicated by English and Hindi-Urdu, the explanation for *why* the DO must move has not. However it is sufficient for our purposes to simply note *that* the DO must move. The word order facts thus can be summarized as follows: the REPETITIVE reading arises in two word orders, as shown in (31) above and (32) below; it is more freely available than the RESTITUTIVE reading.

(32) *Repetitive with surface order distinct from restitutive: Adv-DO (Stechow 1996)*

```
                        AgrSP
              ┌───────────┴───────────────┐
          Ali Baba_j                    AgrSP
                              ┌────────────┴──────────┐
                             TP                      AgrS
                       ┌──────┴───────┐
                    AgrOP             T
                ┌─────┴──────┐
             wieder        AgrOP
             AGAIN    ┌──────┴──────────┐
                   Sesam_i            AgrOP
                             ┌──────────┴────────┐
                          VoiceP                AgrO
                      ┌─────┴──────┐
                    t_j          VoiceP
                           ┌───────┴──────┐
                          VP            Voice
                      ┌────┴────┐
                     SC         V
                  ┌───┴───┐
                 t_i   OPEN   BECOME
```
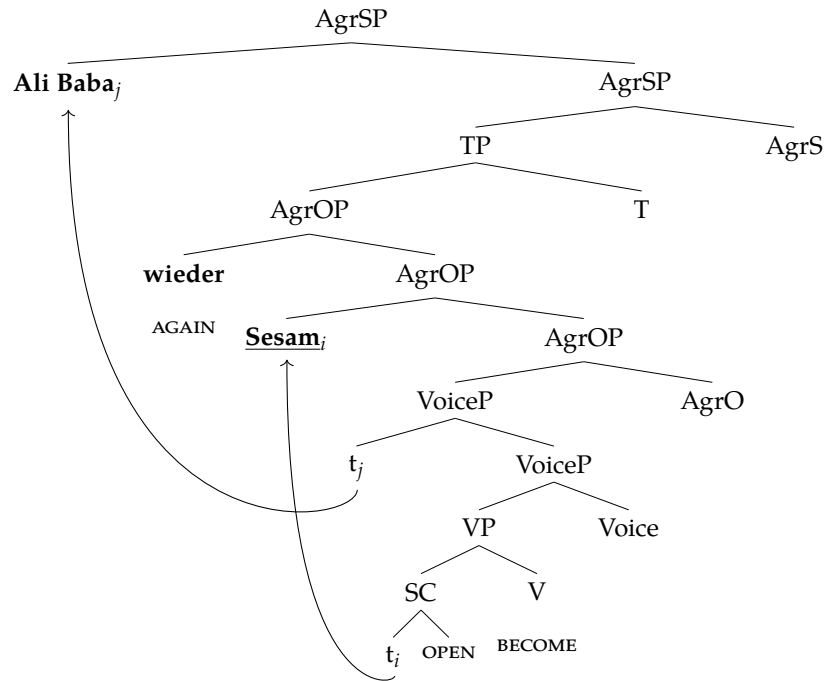
The STRUCTURAL-REPETITIVE account can be summarized as shown in (33); both word orders (31) and (32) for REPETITIVE arise from the same LF, shown in (33b).

(33) *LFs for restitutive and repetitive readings (Stechow 1996)*

a. *Restitutive*

[$_{VoiceP}$ Subj [$_{VP}$ [$_{SC}$ **again** [$_{SC}$ <u>DO</u> Adj]] BECOME] Voice]

b. *Repetitive*

[$_{AgrOP}$ **again** [$_{AgrOP}$ [$_{VoiceP}$ Subj [$_{VP}$ [$_{SC}$ <u>DO</u> Adj] BECOME] Voice] AgrO]]

The above account can be applied straightforwardly to Hindi-Urdu *phir-se* 'again'. In the following subsection I demonstrate that in restitutive contexts, *phir-se* 'again' and *vaapas* 'back' seem to have the same function and exhibit some of the same word order properties. In repetitive contexts, however, this equivalence breaks down and reveals *phir-se* to be the only true AGAIN in the language.

2.2 The STRUCTURAL account applied to *phir-se* 'again' restitutives

In this section I apply the STRUCTURAL-REPETITIVE account to Hindi-Urdu data. We saw in the previous section that in German, when the adverb in its surface position *precedes* the direct object, the only reading available is repetitive; when the adverb in its surface position *follows* the direct object, the RESTITUTIVE becomes available but the structure is ambiguous between RESTITUTIVE and REPETITIVE (34).

(34) a. Ali Baba **wieder** <u>Sesam</u> öffnete.
Subj   again Obj   opened
'Ali Baba opened Sesam again.'   ✓ REP, *REST

   b. Ali Baba <u>Sesam</u> **wieder** öffnete.
Subj   Obj   again opened
'Ali Baba opened Sesam again.'   ✓ REP, ✓ REST

In our Hindi-Urdu examples, repeated below as (35), we see the pattern is the same. Note that all the structures that follow are head-final, since this is an SOV language. The examples discussed here involve a verb that is built from an Adjectival root: *kamraa saaf karnaa* 'to clean (the) room' is the adjective *saaf* 'clean' with a periphrastic *do*-component *kar* 'do' (as in 35).

(35) a. lalji **phir-se** <u>kamraa</u> saaf   kar rahaa hai
Lalji again   room   clean DO PROG be.PRES
'Lalji is once more causing the room to be clean.'   ✓ REP, *REST

   b. lalji <u>kamraa</u> **phir-se** saaf   kar rahaa hai
Lalji room   again   clean DO PROG be.PRES
'Lalji is causing the room to once more be clean.'   ✓ REP, ✓ REST

In (36) is the schematic representation of the word-order pattern, where the adverb and DO are shown in relative positions to $\sqrt{\text{Root}}$.

(36) *Surface order for phir-se*

    a. *phir-se* - DO - √Root   ✓REPETITIVE, *RESTITUTIVE

    b. DO - *phir-se* - √Root   ✓REPETITIVE, ✓RESTITUTIVE

Hindi-Urdu, in addition to having Verbs with inherently Verbal roots, can form Verbs from inherently Adjectival or Nominal roots (Bhatt & Embick 2017). In (36) is an inherently Adjectival root *saaf* 'clean', "verbalized" with the addition of a head $v_{[BE]}$ that is always overt/pronounced. In an intransitive, it is pronounced as *ho* 'be'; in a transitive the combination of $v_{[BE]}$ and the higher, agent-introducing $v_{[AG]}$ is pronounced as *kar* 'do'. These kinds of verbalizations are a normal and highly productive way of making verbs in Hindi-Urdu, and show an *overt* version of the decomposition of the "verb" assumed in the STRUCTURAL-REPETITIVE approach.

This pattern in (36) is not restricted to cases of overt decompostion; it is completely general. If we examine inherently Verbal constructions with *covert* decomposition, we see exactly the same pattern as in Adjectival constructions with 'visible' result states. Put differently, the covert lexical decomposition component of the STRUCTURAL-REPETITIVE account finds strong support in Hindi-Urdu. Below, I add a minimally different Verbal variant to the Adjectival example to make this point clear. The particular Verbal root shown here is *saj* 'decorate$_{intrans}$', an intransitive form that alternates with a transitive form where the same root appears with a causative suffix *-aa* as in *saj-aa* 'decorate'. Thus *saj-aa*/*saj* show the causative/inchoative alternation pervasive in the language. In (37), we see the transitive form with the same characteristic word order pattern for the RESTITUTIVE reading.

(37) a. lalji **phir-se** <u>kamraa</u> {saaf kar/ saj-aa}   rahaa hai
             Lalji again   room   {clean DO/ decorate-CAUS} PROG be.PRES
             'Lalji is again cleaning/decorating the room.'   ✓REP, *REST

             i.e. 'Lalji is once more causing the room to be clean/decorated (and he had done so before).'

   b. lalji <u>kamraa</u> **phir-se** {saaf kar/ saj-aa}   rahaa hai
       Lalji room   again   {clean DO/ decorate-CAUS} PROG be.PRES

'Lalji is cleaning/decorating the room again.'   ✓ REP, ✓ REST

i.e. 'Lalji is causing the room to once more be clean/decorated (and the room was so before).'

2.2.1 Requirements for the RESTITUTIVE reading

The desideratum for the restitutive reading is that the adverb be low enough that it "sees" in its scope *only* a result-state constituent made up of the direct object and the state that holds of it. For the sentence meaning 'Lalji is cleaning the room again', the result state is **clean**(**room**). For the sentence meaning 'Lalji is decorating the room again', the result state is **decorated**(**room**). To semantically generate that reading, *phir-se* must be base-generated in a position where it modifies a state with direct object included (38a). As we saw in German, we have to concede movement of the DO over the adverb (38b) in order to reflect the correct word order (38c). However, under more modern treatments of case, it is no longer the default to posit obligatory movement of a DO for Accusative case, and therefore the explanation based on movement-for-Case (Stechow 1996) now requires an update that clarifies what motivates movement of the DO. I show in this chapter that whatever the motivation or driver, there is evidence that the DO *does* move out of the $\sqrt{\text{Root}}$P. In fact, as we will see, the DO has to move quite high to capture the word order facts. Obligatory movement of the DO in Hindi-Urdu is assumed for various reasons in the literature; I point the reader to Kidwai (2000) for details.

(38)   *Restitutive, order always DO-Adv*

    a. *phir-se* [$_{\sqrt{RootP}}$ DO $\sqrt{\text{Root}}$]   RESTITUTIVE LF

    b. *DO$_i$* ... [$_{vP}$ [$_{\sqrt{RootP}}$ *phir-se* [$_{\sqrt{RootP}}$ t_i $\sqrt{\text{Root}}$]] *v*]   DO MOVES

    c. DO - *phir-se* - $\sqrt{\text{Root}}$ RESTITUTIVE SURFACE ORDER

2.2.2 Requirements for the REPETITIVE reading

The desideratum for the repetitive reading is that the adverb be high enough that it "sees" in its scope a constituent *bigger* than just the result state. But how big? There is agreement in the literature that an easily-accessible reading that needs to be captured is the repetition of the entire event, such that the Agent of the prior event is also the Agent of the asserted event. For the sentences above, the adverb would have in its scope **clean**$(e) \wedge$ Theme$(e)=$**room** $\wedge$ Agent$(e)=$**Lalji**. This suggests that the adverb is attached *after* the introduction of Agent/subject into the tree.

There is disagreement in the literature about whether attachment of the adverb *after* the introduction of the Agent is the *only* attested high attachment reading. The interpretive effect of this attachment would be that the Agent of the prior event is identified with the Agent of the asserted event. Bale (2007) has shown for English that there exists an additional "intermediate" reading where the two Agents are not identified with one another. This intermediate reading can be isolated if the restitutive reading is removed (by using a predicate with no result state), and the Agent-including reading ruled out by specifying a context where there was in a prior event *of the same type* with a *different Agent*. Such an intermediate reading might arise if the adverb were to scope over the CAUSE/BECOME component, but below the Agent (see Lechner et al. 2015 for diagnostics for multiple intermediate readings). For example, for (35) repeated here as (39), an intermediate reading would arise if the discourse context contained a prior event of John (and not Lalji) cleaning/decorating the room (i.e. causing it to be clean/decorated).

(39) a. lalji **phir-se** <u>kamraa</u> saaf kar rahaa hai
Lalji again   room   clean DO PROG be.PRES
'Lalji is once more causing the room to be clean.'   ✓INT, ✓REP, *REST

  b. lalji <u>kamraa</u> **phir-se** saaf kar rahaa hai
Lalji room   again   clean DO PROG be.PRES
'Lalji is causing the room to once more be clean.'   ✓INT, ✓REP, ✓REST

The above examples are felicitous in the described context, showing that the intermediate reading is available in Hindi-Urdu: the repetitive presupposition of existence of a 'identical' prior event is thus met despite the Agents being different. Note that the Agent-including repetitive reading entails the Agent-less intermediate reading (Lalji doing something before $\longrightarrow$ someone did that thing before), and in the two orders above, the intermediate and repetitive readings travel together. For this reason, deciding between those two high readings is not the primary focus of the present work. My present goal is to model REPETITIVE with *phir-se* 'again' high enough to include the CAUSE/BECOME component *and* the Agent. I thus adopt the spirit of the Stechow (1996) German trees above, which represent the site of high attachment as "above VoiceP" i.e. an adjunct in AgrOP after the introduction of the Agent by Voice.[2]

2.2.3 Requirements for word order

The desideratum for word order is to capture the persistence of the repetitive reading. The underlying structure for the repetitive reading always starts out with vP attachment of the adverb. In addition, we have already seen above that to explain the word order of restitutive readings, the DO must move out of its original $\sqrt{\text{Root}}$P position. Let's apply these two ingredients to the different orders in which we find REPETITIVE, namely DO-Adv, and Adv-DO.

To ensure that the word order DO-Adv allows for the REPETITIVE reading (in addition to the RESTITUTIVE reading), we need a second possible attachment site for the adverb. We have established that restitutive arises at the $\sqrt{\text{Root}}$P level; therefore there has to be a verbal projection above $\sqrt{\text{Root}}$P and lower than the landing site of the object: putting the adverb in that verbal projection will give us REPETITIVE with

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[2]Stechow (1996) and Beck & Johnson (2004) claim that intermediate readings do not exist. English data subsequently published by Bale (2007) show that claim is no longer tenable; Hindi-Urdu data shown above corroborate these later findings.

order DO-Adv. We see below *phir-se* as a *v*P adjunct. There are a couple of options for the landing site of the DO above it; for present purposes whether it is Spec,*v*P or Spec,AspP makes no difference.

(40) *Repetitive with order DO-Adv*

    a. *phir-se* ... [$_{vP}$ [$_{\sqrt{RootP}}$ DO $\sqrt{\text{Root}}$] BECOME]   REPETITIVE LF

    b. DO_i ... [$_{vP}$ *phir-se* [$_{vP}$ [$_{\sqrt{RootP}}$ t_i $\sqrt{\text{Root}}$] BECOME]]   DO MOVES

    c. DO - *phir-se* - $\sqrt{\text{Root}}$ SURFACE ORDER

To ensure that the word order Adv-DO only has the repetitive reading, the adverb must attach above the landing site of the moved DO. However the adverb being of type $\langle\langle v, t\rangle\langle v, t\rangle\rangle$ can only attach to verbal projections, and not to higher projections like AspP or TP. In order to account for both these points, we must posit a landing site for the DO within *v*P, as shown:[3]

(41) *Repetitive with order Adv-DO*

    a. *phir-se* ... [$_{vP}$ [$_{\sqrt{RootP}}$ DO $\sqrt{\text{Root}}$] BECOME]   REPETITIVE LF

    b. [$_{vP}$ *phir-se* [$_{vP}$ DO_i [$_{vP}$ [$_{\sqrt{RootP}}$ t_i $\sqrt{\text{Root}}$] BECOME]]]   DO MOVES

    c. *phir-se* - DO - $\sqrt{\text{Root}}$ SURFACE ORDER

Comparing (40) and (41), we see that there is just one LF for REPETITIVE. The adverb *phir-se* 'again' only ever attaches to a projection of type $\langle\langle v, t\rangle\langle v, t\rangle\rangle$; the

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[3]Depending on one's view of adjuncts/specifiers/movement, one might wonder about the positions of *phir-se* within the *v*P. A point that is implicit in the literature on the RESTITUTIVE reading is that any possible difference between these two options ends up being unimportant:

  (i) [$_{vP}$ *phir-se* [$_{vP}$ DO_i [$_{vP}$ [$_{\sqrt{RootP}}$ t_i $\sqrt{\text{Root}}$] BECOME]]]

  (ii) [$_{vP}$ DO_i [$_{vP}$ *phir-se* [$_{vP}$ [$_{\sqrt{RootP}}$ t_i $\sqrt{\text{Root}}$] BECOME]]]

The logic is as follows: if the DO ends up in order DO-Adv at the end as in (ii), it makes no difference whether that order came about by the DO moving up to AspP, or simply moving to a *v*P projection such that the adverb *can* end up following it:

  (iii) [$_{vP/AspP}$ $\boxed{DO_i}$ [$_{vP}$ *phir-se* [$_{vP}$ $\boxed{DO_i}$ [$_{vP}$ [$_{\sqrt{RootP}}$ t_i $\sqrt{\text{Root}}$] BECOME]]]]

particular projection relevant to REPETITIVE is one that is larger than just $\sqrt{\text{RootP}}$. The two attested word order possibilities are a result of the DO moving from its original $\sqrt{\text{RootP}}$ position and landing up either (i) in vP which gives us DO-Adv; or (ii) above vP (perhaps in AspP) which gives us Adv-DO.

In the following subsection I go through the syntax for basic Verbal and Adjectival intransitives and transitives, specify the precise attachment sites for *phir-se*, and derive the semantics of the restitutive reading.

2.2.4 A detour into the basics of Hindi-Urdu verbal structures

As stated above, following Bhatt & Embick (2017), I take Hindi-Urdu roots to be inherently specified as Verbal, Adjectival, or Nominal. In order to behave like a verb—e.g. to form a phrase that can be selected by Aspect—an Adjectival root like $\sqrt{saaf}$ 'clean' must first combine with little-$v_{[\text{BE}]}$. This verbalizing head $v_{[\text{BE}]}$ is always overtly pronounced, by itself in inchoatives as *ho* 'be(/become)', and in combination with $v_{[\text{AG}]}$ in causatives as *kar* 'do'. The overt periphrastic *ho* 'be' in $v_{[\text{BE}]}$ immediately dominates the $\sqrt{\text{RootP}}$ in (intransitive) Adjectival constructions and looks exactly like the covert BECOME from Dowty and adopted by Stechow (1996); Beck & Johnson (2004), and others. If we take this low $v_{[\text{BE}]}$ head to be the location of BECOME across change of state predicates, we derive exactly the correct semantics and word other. Hindi-Urdu is thus a language that provides independent support for the existence of a covert BECOME in verbal structures having result states.

Note that BECOME is present in all the parses, but it is only in the case of *Adjectival* intransitives that it is morphologically accessible. In the *Verbal* cases, it is not possible to morphologically separate BECOME from the structure: only the combined form is attested in the language.[4] I label the BECOME-hosting low v head as $v_{[\text{BE}]}$ in the

---

[4]Indeed for a *Verbal* root like *saj* 'decorate (inchoative)' as we see in (43), deriving an adjective from it involves adding another BECOME to yield *sajaa huaa* 'decorated'. Similarly, an adjective like *khulaa* (*huaa*) 'open' is derived from *khul* 'open (inchoative)' and can drop the *huaa*.

Adjectival cases to indicate this difference; but v and $v_{[\text{BE}]}$ have the same semantics.

(42) *Basic Adjectival intransitive*

kamraa saaf   ho rahaa hai
room   clean be PROG be.PRES

Lit. 'The room is cleaning (i.e. becoming clean).'

```
                    TP
                 ／      ＼
              AspP         T
            ／     ＼        │
       v[BE]P       Asp     hai
      ／    ＼       │      be.PRES
 √saafP      v[BE]  rahaa
 ／   ＼       │     PROG
DP   √saaf   ho 'be'
│      │     BECOME
kamraa saaf
room   clean
```
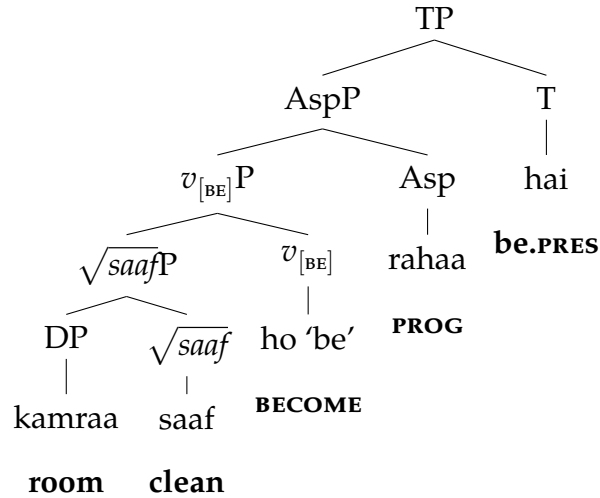
(43) *Basic Verbal intransitive*

kamraa saj   rahaa hai
room   decorate PROG be.PRES

Lit. 'The room is decorating (i.e. becoming decorated).'

```
                    TP
                 ／      ＼
              AspP         T
            ／     ＼        │
        vP          Asp     hai
      ／    ＼       │      be.PRES
 √sajP        v    rahaa
 ／   ＼       │     PROG
DP   √saj     Ø
│      │     BECOME
kamraa saj
room   decorate
```
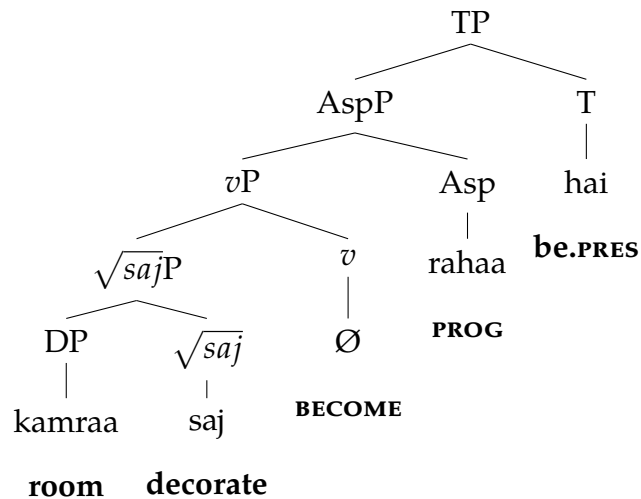
In the structures given here, $\sqrt{\text{RootP}}$ whose denotation is equivalent to the 'small' predication associated with the ResultP (as we have seen for German/English). Structurally and semantically the following are equivalent:

(44)   a.   *Adjectival structure:* $[v_{\text{[BE]}}\ [\textbf{room clean}_{Adj}]]$

   Interpretation: $\textsc{become}(\textbf{clean}(\textbf{the\_room}))$

   b.   *Verbal structure:* $[v\ [\textbf{room decorate}_V]]$

   Interpretation: $\textsc{become}(\textbf{decorated}(\textbf{the\_room}))$

Those familiar with Bhatt & Embick (2017) might notice that my trees give a unified structure for all verbs with result states regardless of the root type. This marks a significant departure from Bhatt & Embick (2017) who posit different structures for Adjectival and Verbal roots. The behaviour of *phir-se* 'again' never varies by category-specification of the root, indicating that it can attach at the same position in all cases. A reasonable interpretation of that fact is that verbal structures are the same irrespective of root type, which is the position I take here (see §2.2.6 for arguments in favour of this position).

2.2.5   The syntax and semantics of *phir-se* restitutives

In this section I present parses to capture the low attachment of *phir-se* 'again' in a way that yields the right semantics. The Hindi-Urdu data will enable us to adjudicate between three proposals for transitive verbs in the literature: (i) only BECOME and a result (Stechow 1996), (ii) only CAUSE and a result (Lechner et al. 2015; Stechow 2007), and (iii) both BECOME and CAUSE and a result (Dowty 1979; Stechow 1995; Beck & Johnson 2004; Patel-Grosz & Beck 2019). I argue here for the third proposal. The two factors supporting this argument are overt BECOME, and the identical behaviour of intransitives and their transitive (CAUSE-containing) counterparts.

Below, we see in low attachment of *phir-se* in the case of intransitives: (45) shows an Adjectival root and (46) shows a Verbal root. Both cases are identical in their basic form: there is a $\sqrt{\text{Root}}$ whose complement is the DO of the sentence. The adverb *phir-se* 'again' modifies this lowest constituent. As discussed earlier (in §2.2.3), the movement of the DO out of the $\sqrt{\text{Root}}$ P derives the correct surface word order: the adverb *follows* the DO. We see that this is the same in the Adjectival case (45) and the Verbal case (46). We now have the ingredients to derive restitutive meaning in Hindi-Urdu. To sum up, they are: $\sqrt{\text{Root}}$P attachment for *phir-se*; movement of the object from the base-generated complement position of $\sqrt{\text{Root}}$ to a high position in Spec,AspP; *v* obligatorily unpronounced with Verbal intransitives, and obligatorily *ho* 'be/become' for Adjectival intransitives.

(45) *Adj-intransitive, phir-se modifies $\sqrt{\text{RootP}}$, order DO-Adv*   RESTITUTIVE

kamraa phir-se saaf   ho rahaa hai
room   again   clean be PROG be.PRES

Lit. 'The room is cleaning again (i.e. becoming once more clean).'

35
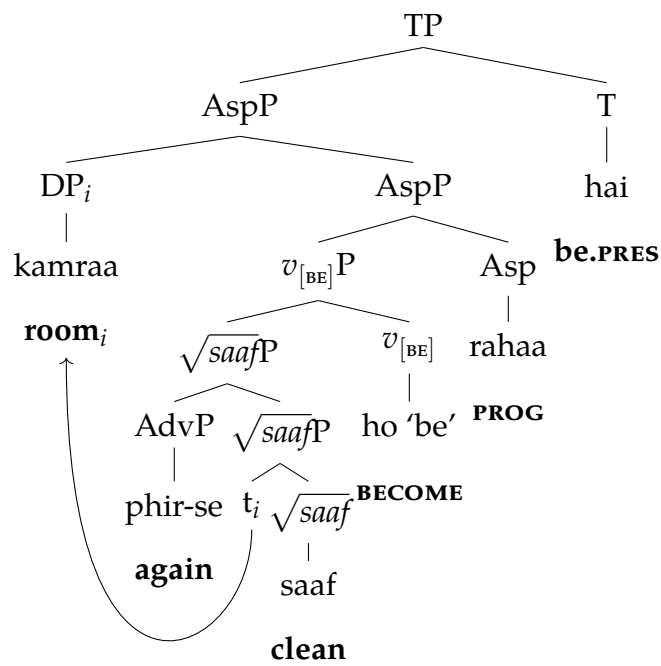
(46) *V-intransitive, phir-se modifies √RootP, order DO-Adv*   RESTITUTIVE

> kamraa phir-se saj   rahaa hai
> room   again   decorate PROG be.PRES

Lit. 'The room is decorating again (i.e. becoming once more decorated).'
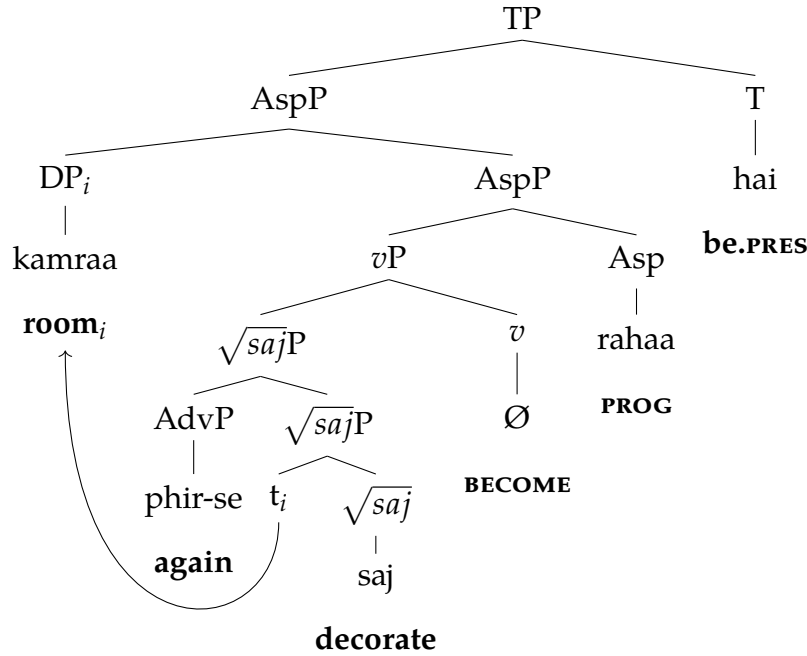
The transitive versions of the above sentences are given below. We add on top of the existing *v*P structure a further *v*-layer, $v_{\text{[AG]}}$P whose head hosts the bundled Causative Shift and Event Identification. For ease of reading, I label the syntactic head $v_{\text{[AG]}}$ to signal that the Agent will be merged at that level. For the semantic contribution of this head, I continue to use the term CAUSE to signal causative semantics. In (49), I make explicit the lexical entries for CAUSE and BECOME.[5]

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[5]Note that while I give the $v_{\text{[AG]}}$ the semantics of CAUSE, Bhatt & Embick (2017) captures the bundled $v_{\text{[AG]}}$ semantics in a different way, using a syncategorematic rule for interpretation of recursive *v*Ps. They do not have separate lexical entries for CAUSE and BECOME (in fact they have no BECOME component at all). Their syncategorematic rule is motivated by the behaviour of indirect causatives which have intermediate agents. Beck & Johnson (2004) for their part also use a syncategorematic rule to make interpretable the attested restitutive readings in resultatives. As neither of these cases is under discussion here, I provide discrete heads with separate semantics and the computation proceeding node-by-node. To my knowledge, everything here is compatible with a syncategorematic composition rule. The data presented here showing different readings of AGAIN in Hindi-Urdu provide a previously unconsidered category of evidence for the syntactic accessibility of different parts of the clause depending on whether CAUSE and BECOME are included or excluded.

(47) *V-transitive, phir-se modifies √RootP, order DO-Adv*   RESTITUTIVE

TP
DP$_i$ TP
Lalji   AspP   T
Lalji$_j$ DP$_i$ AspP   hai
kamraa $v_{[AG]}$P   Asp   **be.PRES**
room$_i$ t$_j$ $v_{[AG]}$P   rahaa
vP $v_{[AG]}$ **PROG**
√*saj*P   v   **CAUSE**
AdvP   √*saj*P   -aa
phir-se   t$_i$ √*saj*   **BECOME**
again   saj
decorate

(48) *Adj-transitive, phir-se modifies √RootP, order DO-Adv*   RESTITUTIVE

TP
DP$_i$ TP
Lalji   AspP   T
Lalji$_j$ DP$_i$ AspP   hai
kamraa $v_{[AG]}$P   Asp   **be.PRES**
room$_i$ t$_j$ $v_{[AG]}$P   rahaa
$v_{[BE]}$P $v_{[AG]}$ **PROG**
√*saaf*P $v_{[BE]}$ **CAUSE**
AdvP   √*saaf*P   **BECOME**
phir-se   t$_i$ √*saaf*
again   saaf
clean

37
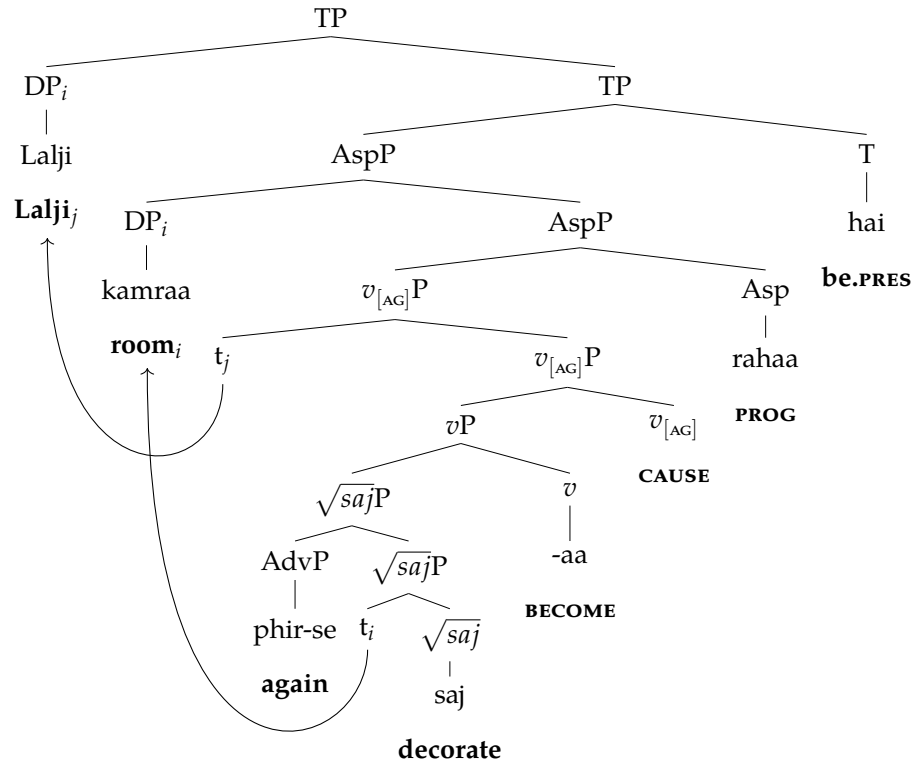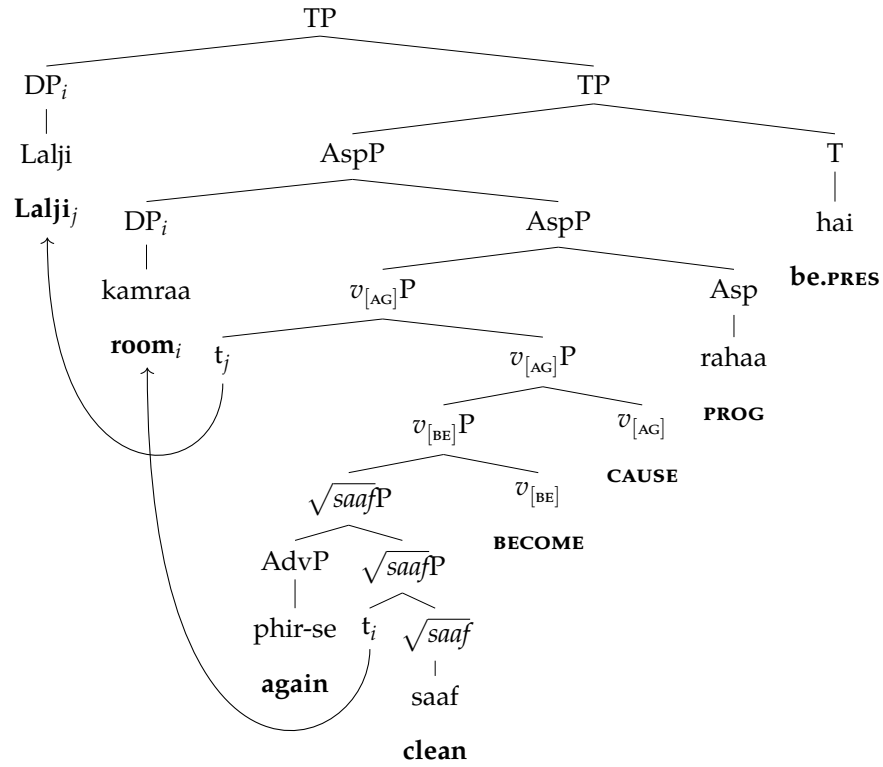
(49) a. $\sqrt{saafP} = \lambda s_v.\textbf{clean}(s) \wedge \textit{Theme}(s) = \textbf{room}$

  b. $[\![\textsc{become}]\!] = \lambda P_{\langle v,t\rangle}\lambda e_v.\neg P(\textit{begin}(e)) \wedge P(\textit{end}(e))$

   which can be colloquially paraphrased as: $P(e)$ *comes to be*

  c. $[\![\textsc{cause}]\!] = \lambda P_{\langle v,t\rangle}\lambda x_e\lambda e_v.\textit{Agent}(e) = x \wedge \exists e'[\textit{cause}(e') = e \wedge P(e')]$

  d. $[\![\textbf{again}]\!] = \lambda P_{\langle v,t\rangle}.\lambda e_v^* : \exists e_v''[\tau(e'') \prec \tau(e^*) \wedge P(e'')].P(e^*)$

Let's imagine the events that would satisfy the denotation of BECOME. These would look like the following: *the room is not clean at the beginning of the event, but is clean at the end of the event.* In all such situations, the colloquial paraphrase $P(e)$ can be substituted, for example: *the (state of) the room being clean comes to be.* For brevity, I will use this colloquialism in the semantic derivations to follow. Below is the full derivation of a restitutive example. We see that the initial set of arguments and assumptions I have made here do indeed yield the correct interpretation.

(50) *Semantic derivation of restitutive*

   $[\![\textsc{cause}]\!]([\![\textsc{become}]\!]([\![\textbf{again}]\!]\sqrt{saafP}))(\textbf{Lalji})$

(51) $\sqrt{saafP} = \lambda s_v.\textbf{clean}(s) \wedge \textit{Theme}(s) = \textbf{room}$

(52) $[\![\textsc{become}]\!] = \lambda P_{\langle v,t\rangle}\lambda e_v.\neg P(\textit{begin}(e)) \wedge P(\textit{end}(e))$

(53) $[\![\textsc{cause}]\!] = \lambda P_{\langle v,t\rangle}\lambda x_e\lambda e_v.\textit{Agent}(e) = x \wedge \exists e'[\textit{cause}(e') = e \wedge P(e')]$

(54) $[\![\textbf{again}]\!] = \lambda P_{\langle v,t\rangle}.\lambda e_v^* : \exists e_v''[\tau(e'') \prec \tau(e^*) \wedge P(e'')].P(e^*)$

(55) $[\![\textbf{again}]\!](\sqrt{saafP})$

   $= \lambda e_v^* : \exists e_v''[\tau(e'') \prec \tau(e^*) \wedge (\sqrt{saafP})(e'')].(\sqrt{saafP})(e^*)$

   $= \lambda e_v^* : \exists e_v''[\tau(e'') \prec \tau(e^*) \wedge \textbf{clean}(e'') \wedge \textit{Theme}(e'') = \textbf{room}].$
   $\textbf{clean}(e^*) \wedge \textit{Theme}(e^*) = \textbf{room}$

(56) $[\![\textsc{become}]\!](55)$

   $= [\lambda P_{\langle v,t\rangle}\lambda e_v.\neg P(\textit{begin}(e)) \wedge P(\textit{end}(e)](55)$

   which can be colloquially paraphrased as

$= \lambda e_v.((55)(e))$ *comes to be*

(57) $[\![\textsc{cause}]\!](56)$

$= [\lambda P_{\langle v,t \rangle} \lambda x_e \lambda e_v.Agent(e) = x \wedge \exists e'[cause(e') = e \wedge P(e')]](56)$

$= \lambda x_e \lambda e_v.Agent(e) = x \wedge \exists e'[cause(e') = e \wedge (56)(e')]$

(58) *Event Identification* $= [\![57]\!](\textbf{Lalji})$

$= \lambda x_e \lambda e_v.Agent(e) = x \wedge \exists e'[cause(e') = e \wedge (56)(e')](\textbf{Lalji})$

$= \lambda e_v.Agent(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (56)(e')]$

(59) *Putting everything together*

$\Rightarrow \lambda e_v.Agent(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (\lambda e_v.(55)(e) \text{ comes to be})(e')]$

$\Rightarrow \lambda e_v.Agent(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (55)(e') \text{ comes to be}]$

$\Rightarrow \lambda e_v.Agent(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (\lambda e_v^* : \exists e_v''[\tau(e'') \prec \tau(e^*) \wedge$
$\textbf{clean}(e'') \wedge Theme(e'') = \textbf{room}].\textbf{clean}(e^*) \wedge Theme(e^*) = \textbf{room})(e') \text{ comes to be}]$

$\Rightarrow \lambda e_v.Agent(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e \wedge \exists e_v''[\tau(e'') \prec \tau(e') \wedge \textbf{clean}(e'') \wedge$
$Theme(e'') = \textbf{room}].(\textbf{clean}(e') \wedge Theme(e') = \textbf{room}) \text{ comes to be}]$

(60) $\Rightarrow \lambda e_v.Agent(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (\textbf{clean}(e') \wedge Theme(e') = \textbf{room}) \text{ comes to be}]$

Defined only if: $\exists e_v''[\tau(e'') \prec \tau(e') \wedge \textbf{clean}(e'') \wedge Theme(e'') = \textbf{room}]$

(61) *Final result*

$\Rightarrow$ events e whose agent is Lalji and *directly* cause another event e' where the state of the room being clean comes to be (i.e. the room is in a *not*-clean state at the beginning of e', and in a clean state at the end of e')

Defined only if: the caused event e' is preceded by the state of the room being clean

The final step of the derivation above has the desired RESTITUTIVE interpretation. It is a function from events to truth values that picks out events that have Lalji as

an agent and result in the room being clean; it is defined just in case the there exists a prior state of the room being clean.

2.2.6 The syntax and semantics of repetitive readings

As we have seen in detail in prior sections, the analysis of the restitutive reading must be able to explain the persistence of the repetitive, i.e. the two word orders that are available to the repetitive reading, as against just one order available for the restitutive reading. This section provides that explanation.

Below I illustrate the repetitive reading using a Verbal intransitive. We have seen above strong motivation for placing BECOME in the lower v-head: its overt appearance in Adjectival intransitive constructions as $v_{[\text{BE}]}$ (pronounced as *ho*). Assuming a similar (but covert) v-projection in the Verbal construction as well gives us a welcome result: capturing the fact that intransitives are also ambiguous just like transitives. Presented in (62) below are contexts a. REPETITIVE/INTERMEDIATE and b. RESTITUTIVE. These license corresponding readings a. and b. of the single ambiguous sentence in (63).

(62)   a.   *Context* (REPETITIVE/INTERMEDIATE): It's a wedding. Yesterday we decorated the room to welcome the new couple, but it got messed up after the first few ceremonies. For tomorrow's activities...

   b.   *Context* (RESTITUTIVE): It's an IKEA store. There's a full living room on display, currently all decked out as a Christmas scene. A group of unruly kids come and wreck all the beautiful arrangements. The manager yells at the floor clerk, who makes assurances that...

(63)   kamraa phir-se saj   rahaa hai
       room   again   decorate PROG be.PRES

   a.   REPETITIVE context = 'The room is once more [becoming decorated].'

   b.   RESTITUTIVE context = 'The room is becoming [once more decorated].'

Now that we have established that even intransitives are big enough to host two potential attachment sites for *phir-se*, the reader may convince themselves that the restitutive reading can be achieved with the same $\sqrt{\text{Root}}$P attachment here as previously discussed. I focus here on the repetitive reading. Even in the case of intransitives, we see the two word-order possibilities for REPETITIVE: DO-Adv and Adv-DO. This is illustrated below in (64).

(64)   *V-intransitive, phir-se modifies vP, orders DO-Adv/Adv-DO*   REPETITIVE

     (phir-se) kamraa (phir-se) saj   rahaa hai
     (again)   room   (again)   decorate PROG be.PRES

     Lit. 'The room is once more decorating (i.e. once more becoming decorated).'

We know that REPETITIVE requires attachment of the adverb higher than $\sqrt{\text{Root}}$P. In addition, the ingredients used in the syntax so far already include the movement of the DO out of $\sqrt{\text{Root}}$P. The two orders for REPETITIVE can be captured based on how far the DO moves, as shown below in (65) and (66).

(65)   *Repetitive, order DO-Adv* $[=(40)]$

    a. *phir-se* ... $[_{vP}\ [_{\sqrt{RootP}}\ \text{DO}\ \sqrt{\text{Root}}\ ]$ BECOME $]$ REPETITIVE LF

    b. DO_i ... $[_{vP}$ *phir-se* $[_{vP}\ [_{\sqrt{RootP}}\ t_i\ \sqrt{\text{Root}}\ ]$ BECOME $]\ ]$ DO MOVES

    c. DO - *phir-se* - $\sqrt{\text{Root}}$ SURFACE ORDER

(66)   *Repetitive, order Adv-DO* $[=(41)]$

    a. *phir-se* ... $[_{vP}\ [_{\sqrt{RootP}}\ \text{DO}\ \sqrt{\text{Root}}\ ]$ BECOME $]$ REPETITIVE LF

    b. $[_{vP}$ *phir-se* $[_{vP}\ DO_i\ [_{\sqrt{RootP}}\ t_i\ \sqrt{\text{Root}}\ ]$ BECOME $]\ ]\ ]$ DO MOVES

    c. *phir-se* - DO - $\sqrt{\text{Root}}$ SURFACE ORDER

Putting the above ingredients together we have the following structure for an intransitive with *phir-se* 'again' attached low, at the *v*P level just above $\sqrt{\text{Root}}$P.

This particular example shows a Verbal root; if replaced with an Adjectival root, we would see the same pattern, the only difference being that BECOME would be pronounced.

(67)   *V-intransitive, phir-se modifies vP, orders DO-Adv/Adv-DO*   REPETITIVE

decorate
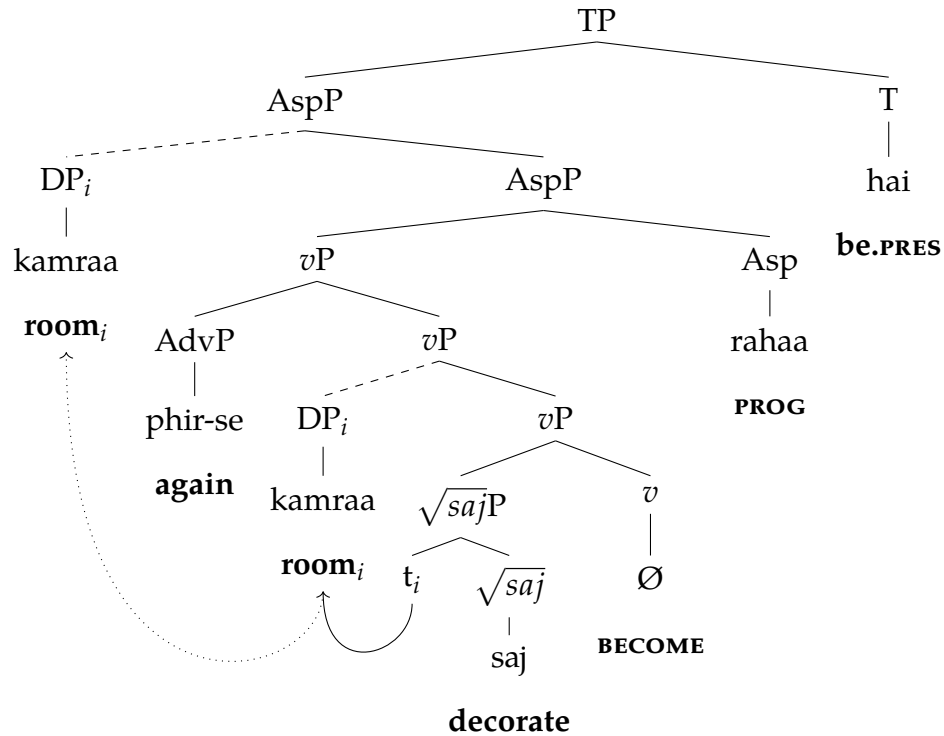
Now, building a transitive is a matter of adding more structure on top; this is shown below. In this case we have an Adjectival root with overt BECOME, there is an overt $v_{[\text{BE}]}$P. Here we have once more a tree that represents two different word orders, depending on where the moved DO ends up relative to the attachment of the adverb. In order to include the Agent in the REPETITIVE, the adverb is attached at the level of the higher, Agent-introducing $v_{[\text{AG}]}$P, rather than the $v_{[\text{BE}]}$P seen for intransitives.

(68) *Adj-transitive, phir-se modifies $v_{[\text{AG}]}$P, orders DO-Adv/Adv-DO* REPETITIVE

TP
- DP$_i$
  - Lalji
  - **Lalji**$_j$
- TP
  - AspP
    - DP$_i$
      - kamraa
      - **room**$_i$
    - AspP
      - $v_{[\text{AG}]}$P
        - AdvP
          - phir-se
          - **again**
        - t$_j$
        - $v_{[\text{AG}]}$P
          - $v_{[\text{AG}]}$P
            - $v_{[\text{BE}]}$P
              - DP$_i$
                - kamraa
                - **room**$_i$
              - $v_{[\text{BE}]}$P
                - $\sqrt{saaf}$P
                  - t$_i$
                  - $\sqrt{saaf}$
                    - saaf
                    - **clean**
                - $v_{[\text{BE}]}$
                - **BECOME**
            - $v_{[\text{AG}]}$
            - **CAUSE**
      - Asp
        - rahaa
        - **PROG**
  - T
    - hai
    - **be.PRES**
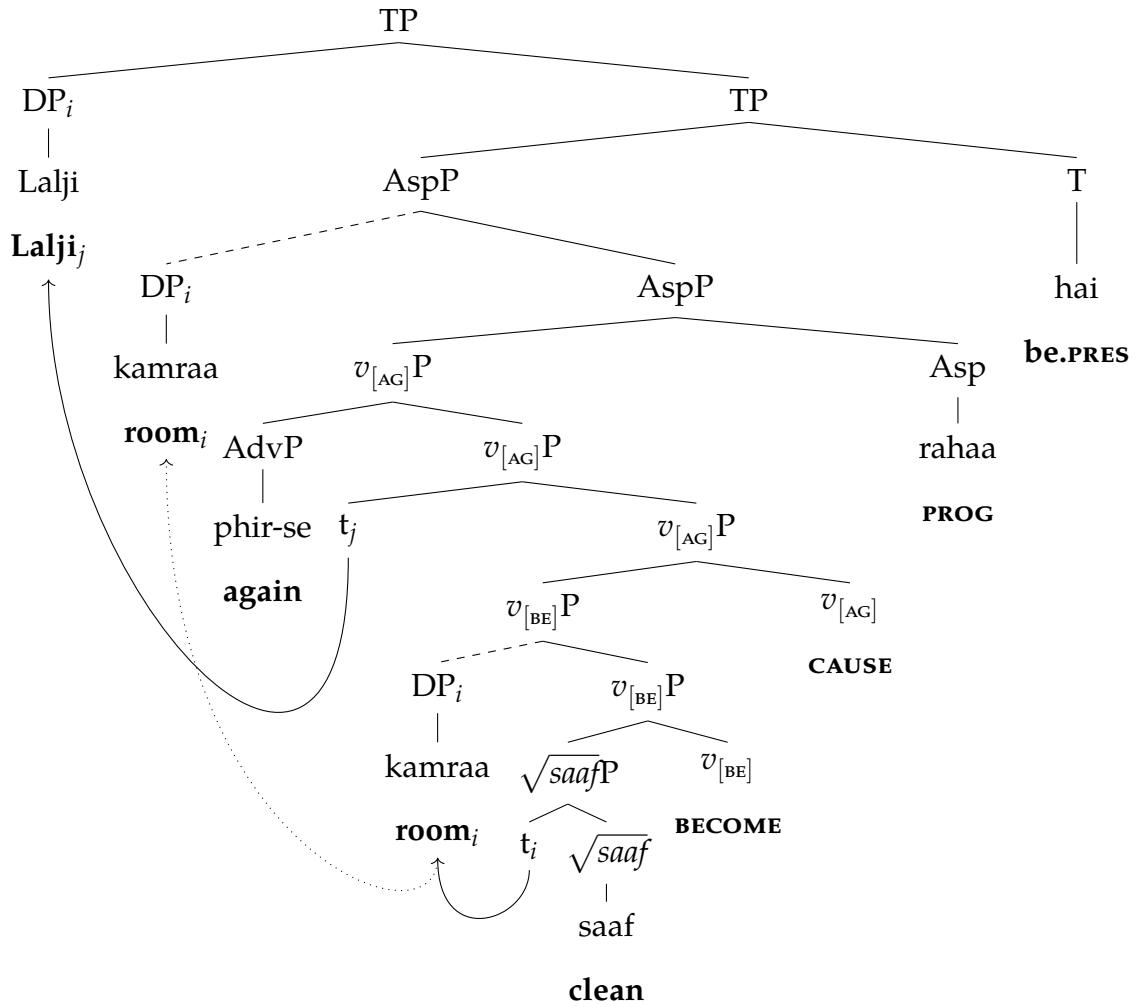
Attachment of *phir-se* 'again' at $v_{[\text{AG}]}$P corresponds to those situations where the prior event has the same Agent as the asserted event (this is what the literature refers to as REPETITIVE). Note that in the parse here there also exists an option of attaching to an intermediate position, i.e. $v_{[\text{BE}]}$P, which would correspond to situations where the prior event does not necessarily have the same Agent as the asserted event (what is referred to as the intermediate reading or the subjectless repetitive). The existence of this intermediate position option does not impact our present goal of deriving the difference between the restitutive and the repetitive readings; I therefore bracket it away. Below I give the semantic derivation for $v_{[\text{AG}]}$P

attachment of *phir-se*, the true repetitive where the adverb includes within its scope BECOME, CAUSE, and the Agent.

(69) *Semantic derivation of repetitive*

$[\![\textbf{CAUSE}]\!]([\![\textbf{again}]\!]([\![\textbf{BECOME}]\!]\sqrt{saafP}))(\textbf{Lalji})$

(70) $[\![\textbf{BECOME}]\!](\sqrt{saafP})$

$= [\![\textbf{BECOME}]\!](\lambda s_v.\textbf{clean}(s) \wedge \textit{Theme}(s) = \textbf{room})$

$= [\lambda P_{\langle v,t \rangle}\lambda e_v.\neg P(begin(e)) \wedge P(end(e))](\lambda s_v.\textbf{clean}(s) \wedge \textit{Theme}(s) = \textbf{room})$

which can be colloquially paraphrased as

$= [\lambda P_{\langle v,t \rangle}\lambda e_v.P\text{-}comes\text{-}to\text{-}be(e)](\lambda s_v.\textbf{clean}(s) \wedge \textit{Theme}(s) = \textbf{room})$

$= \lambda e_v.(\textbf{clean}(e) \wedge \textit{Theme}(e) = \textbf{room})$ *comes to be*

(71) $[\![\textbf{CAUSE}]\!](70)$

$= \lambda P_{\langle v,t \rangle}\lambda x_e \lambda e_v.\textit{Agent}(e) = x \wedge \exists e'[cause(e) = e' \wedge P(e')](70)$

$= \lambda x_e \lambda e_v.\textit{Agent}(e) = x \wedge \exists e'[cause(e) = e' \wedge (70)(e')]$

(72) *Merging the Agent by Event Identification*

$\Rightarrow \lambda e_v.\textit{Agent}(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (70)(e')]$

$\Rightarrow \lambda e_v.\textit{Agent}(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (\lambda e_v.(\textbf{clean}(e) \wedge \textit{Theme}(e) = \textbf{room})$ *comes to be*$)(e')]$

$\Rightarrow \lambda e_v.\textit{Agent}(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (\textbf{clean}(e') \wedge \textit{Theme}(e') = \textbf{room})$ *comes to be*$]$

(73) $[\![\textbf{again}]\!](72)$

$= [\lambda P_{\langle v,t \rangle}.\lambda e^* : \exists e''_v[\tau(e'') \prec \tau(e^*) \wedge P(e'')].P(e^*)](72)$

$= \lambda e^* : \exists e''_v[\tau(e'') \prec \tau(e^*) \wedge (72)(e'')].(72)(e^*)$

(74) *Putting everything together*

$\Rightarrow \lambda e^* : \exists e''_v[\tau(e'') \prec \tau(e^*) \wedge (72)(e'')].(72)(e^*)$

$\Rightarrow \lambda e^* : \exists e''_v[\tau(e'') \prec \tau(e^*) \wedge (72)(e'')].\textit{Agent}(e^*) = \textbf{Lalji} \wedge \exists e'[cause(e') = e^* \wedge (\textbf{clean}(e') \wedge \textit{Theme}(e') = \textbf{room})$ *comes to be*$]$

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$$\Rightarrow \lambda e^* : \exists e''_v[\tau(e'') \prec \tau(e^*) \wedge (72)(e'')].Agent(e^*) = \textbf{Lalji} \wedge \exists e'[cause(e') = e^* \wedge (\textbf{clean}(e') \wedge Theme(e') = \textbf{room})\ comes\ to\ be]$$

$$\Rightarrow \lambda e^* : \exists e''_v[\tau(e'') \prec \tau(e^*) \wedge Agent(e'') = \textbf{Lalji} \wedge \exists e'[cause(e') = e'' \wedge (\textbf{clean}(e') \wedge Theme(e') = \textbf{room})\ comes\ to\ be]].Agent(e^*) = \textbf{Lalji} \wedge \exists e'[cause(e') = e^* \wedge (\textbf{clean}(e') \wedge Theme(e') = \textbf{room})\ comes\ to\ be]$$

(75) *Final result*

$\Rightarrow$ events e^* with agent Lalji that *directly* cause another event e' where the state of the room being clean comes to be (i.e. the room is in a *not*-clean state at the beginning of e', and in a clean state at the end of e')

Defined only if: the event e^* is preceded by an event e'' with agent Lalji that *directly* caused another event e' where the state of the room being clean comes to be

The result of the derivation correctly captures the repetitive reading. The high attachment site of *phir-se* includes CAUSE and the Agent *Lalji* within the scope of the adverb.

In the following sections I shift focus to *vaapas* 'back'. We will see here that even though *vaapas* 'back' yields the same meaning as *phir-se* 'again' in the structures/contexts we have seen, the actual syntax of *vaapas*-restitutives is necessarily different due to certain properties that distinguish *vaapas* from *phir-se*.

2.3 The STRUCTURAL account can't apply to *vaapas* 'back' restitutives

We now have the details of how the STRUCTURAL-REPETITIVE account of AGAIN-adverbs can be applied directly to Hindi-Urdu sentences with *phir-se* 'again'. This account is designed to deal only with AGAIN-adverbs, and does not speak to BACK-adverbs, therefore leaving open the question of how a BACK-adverb like *vaapas* could effect a

restitutive reading—modelled as the repeating of a low result state—even though its core meaning is not repetition in the first place.

It is easy to establish that *phir-se* has a repetitive meaning and *vaapas* does not, by looking at contexts that only support repetitive meaning. In (76a) we can see a verb that lacks a result state, *gaanaa* 'to sing'. Here *phir-se* behaves as expected, like a simple repetitive AGAIN-adverb. By contrast, the ungrammaticality of *vaapas* in this construction (76b) confirms that *vaapas* 'back' cannot convey repetition in the way that *phir-se* 'again' does.[6,7,8]

(76) *Context* (REPETITIVE:) Jyoti sang a song yesterday.

    a. kal   phir-se jyoti gaane   waalii hai
       tomorrow again   Jyoti sing.INF.OBL going.to be.PRES
       'Tomorrow Jyoti is going to sing again.'

    b. *kal   vaapas jyoti gaane   waalii hai
       tomorrow back   Jyoti sing.INF.OBL going.to be.PRES
       Intended: 'Tomorrow Jyoti is going to sing again.'

The above pair of sentences rules out the possibility that *phir-se* and *vaapas* are synonyms. Nevertheless, they do display what appears to be identical behaviour, at least in some contexts; here I focus on their appearance in restitutive contexts. In (77) below, only the restitutive reading is supported ("a state holding a second time"), by specifying that the result state in the assertion was the primordial state held by the DO—there is nothing that can be identified as having "caused" it to hold in the past. In (77a) we see an example of the now-familiar facts for *phir-se* 'again':

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[6]There exists a split in speaker judgments about *vaapas* qua AGAIN which I touch on in §2.5.1, and discuss further in Chapter 5.

[7]Note that there exists a RESPONSE reading for (76b) on the lines of 'Tomorrow Jyoti is going to sing *back*', but that is unlicensed in this context. Indeed to 'sing back' is only conceivable as a communicative activity where there is a singer and also an addressee for the singing. Though (76b) is generally judged ungrammatical, speakers will nevertheless typically accept the same sentence in a RESPONSE-licensing context.

[8]A reasonable hypothesis explaining the facts presented here might be that *vaapas* is simply specified for RESTITUTIVE readings, i.e. can only modify to stative eventualities. I rule out this hypothesis in §2.5.1 entitled "No counterdirectional states: A ban on too-low attachment".

in a restitutive context it is felicitous in the immediately preverbal position, but not higher in the structure. The higher positions of *phir-se* are correspondingly marked "#" for infelicity in (77a); note that for completeness this includes the adverb preceding the subject. Hindi-Urdu is a language where the immediately preverbal position is associated with certain specific information-structural properties which are the subject of Chapter 4; I therefore refer to the surface position between DO and V (associated with restitutive readings) as the *immediately preverbal position*. In addition to *phir-se* in (77a), we see in (77b) that *vaapas* 'back' is available in restitutive contexts, and shows a similar affinity for the immediately preverbal position.

(77)   *Context* (RESTITUTIVE): There is a newly-built room which Lalji has rented, sight-unseen. The room was clean when it was built. A window was left open and let in some dirt just before he moved in, forcing Lalji to do some cleaning. (There was a prior state of room-cleanliness, but no prior event of the room being cleaned, by Lalji or by anyone else.)

  a.   (#phir-se) lalji (#phir-se) <u>kamraa</u> **phir-se** saaf kar rahaa hai
       (#again) Lalji (#again)   room   again   clean DO PROG be.PRES
       'Lalji is cleaning the room again.'

       i.e. 'Lalji is causing the room to once more be clean (and the room was so before).'

  b.   (#vaapas) lalji (??vaapas) <u>kamraa</u> **vaapas** saaf kar rahaa hai
       (#back)   Lalji (??back)   room   back   clean DO PROG be.PRES
       'Lalji is cleaning the room again.'

       i.e. 'Lalji is causing the room to once more be clean (and it had gotten dirty before).'

Here the primordial state of the room is clean, as it was *clean when it was built*, so no one "cleaned" (it). This rules out the repetitive ("an agent repeating an event") or intermediate reading ("repeating of an event by same or different agent"). The infelicity of the adverb in the high position in a restitutive context shows that the

restitutive reading is independent of other eventive readings. In the case of *phir-se*, this pattern has a straightforward explanation—the context simply does not support the eventive presuppositions given below under *defined only if*:

(78)　a.　*Output of derivation for repetitive reading*　　　　　　　　　　　　[=(75)]

⇒ events e^* with agent Lalji that *directly* cause another event e' where the state of the room being clean comes to be (i.e. the room is in a *not-clean* state at the beginning of e', and in a clean state at the end of e')

Defined only if: the event e^* is preceded by an event e'' with agent Lalji that *directly* caused another event e' where the state of the room being clean comes to be

　　　b.　*Corresponding intermediate reading*

⇒ events e^* with agent Lalji that *directly* cause another event e' where the state of the room being clean comes to be (i.e. the room is in a *not-clean* state at the beginning of e', and in a clean state at the end of e')

Defined only if: the event e^* is preceded by an event e'' ~~with agent Lalji~~ that *directly* caused another event e' where the state of the room being clean comes to be

I turn now to the *vaapas*-restitutives (77b): they are not in any way marked, nor are they different from the *phir-se*-restitutives in phonology, prosody, or contextual usage; they are totally interchangeable. This interchangeability is part of a crosslinguistic landscape that is rapidly being uncovered: most notably from Patel-Grosz & Beck (2019) and Zwarts (2019) respectively, we already know that *pacho* in Kutchi Gujarati and *terug* in Dutch similarly appear in restitutive contexts and can function as AGAIN or as BACK in other contexts (see also Chapter 1 for a bibliography of research on BACK, AGAIN, and counterdirectionality in various languages). The mere fact of *vaapas* 'back' being available in restitutive contexts is thus not in itself surprising. What is surprising is that *vaapas* "prefers" the immediately preverbal

position in restitutive contexts and "disprefers" other positions, a behaviour that appears to mirror the distribution of AGAIN. This mirroring is puzzling in light of evidence showing that the core meaning of *vaapas* is not repetition. The key example (77b) is repeated below:

(79) *Context* (RESTITUTIVE): There is a newly-built room which Lalji has rented, sight-unseen. The room was clean when it was built. A window was left open and let in some dirt just before he moved in, forcing Lalji to do some cleaning. (There was a prior state of room-cleanliness, but no prior event of the room being cleaned, by Lalji or by anyone else.) [=(77b)]

(#vaapas) lalji (??vaapas) <u>kamraa</u> **vaapas** saaf   kar rahaa hai
(#back)   Lalji (??back)   room   back   clean DO PROG be.PRES

'Lalji is cleaning the room again.'

i.e. 'Lalji is causing the room to once more be clean (and it had gotten dirty before).'

There are two things going on here: (i) presuppositions that arise with *phir-se* cannot arise with an adverb that does not have a repetitive meaning, so we cannot appeal to them to explain the word-order pattern for *vaapas*; and (ii) the pre-subject position of *vaapas* is completely infelicitous but the position between S and DO is merely degraded, not ruled out. To sum up:

(80) *In restitutive contexts, vaapas*

   a. is perfect in the immediately preverbal position   ✓ *S DO vaapas V*

   b. is degraded between subject and DO   *?? S vaapas DO V*

   c. cannot precede the subject   *# vaapas S DO V*

In the rest of the chapter I show that the surface-similar word-order patterns of *vaapas*/*phir-se* actually come from divergent sources. I present an application

of the LEXICAL-COUNTERDIRECTIONAL account to *vaapas* that, in combination with the movement of the DO, derives both the correct meaning and the word-order facts.

2.4 The LEXICAL-COUNTERDIRECTIONAL account

In this section I discuss the second of two existing approaches to restitutive readings. The LEXICAL-COUNTERDIRECTIONAL account of AGAIN (Kamp & Rossdeutscher 1994; Fabricius-Hansen 1983, 2001; Patel-Grosz & Beck 2014, 2019) holds that the restitutive reading arises in an totally different manner to what we have seen in the previous sections: in the present account, the AGAIN-adverb is lexically ambiguous, so AGAIN$_1$ gives us REPETITIVE and AGAIN$_2$ gives us RESTITUTIVE. Let's go back to the room-cleaning examples to see how this works, repeated below in (81) (let's assume that the context here rules out the repetitive reading of Lalji cleaning the room a second time).

(81) lalji <u>kamraa</u> **phir-se/ vaapas** saaf kar rahaa hai
     Lalji room   again/   back   clean DO PROG be.PRES
     'Lalji is causing the room to once more be clean.'

The restitutive reading of the above sentence can be paraphrased as 'Lalji cleaned the room again and it had been clean before'. In the original formulation of the lexical analysis of restitutives, a sentence like (81) does not simply require that the result state **clean**(**room**) held at some past time, but something more complex. In the assertoric content 'Lalji cleaned the room', there is a process involved (the room becoming clean). Given normal world knowledge, a process ending in a result state entails that the result state was not *already* holding when the process began. To put this is real-world terms: one cannot clean an already clean room; or a clear example—one cannot open an already open door.[9] To paraphrase, the

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[9]Anyone who has ever re-cleaned something because they were dissatisfied with the level of the prior person's cleaning, knows that you *can* clean an already clean room. However, this is an

room has to have been dirty before the start of the process that is asserted in the sentence: **dirty(room)** When we put a sentence like this into a restitutive context, we add in the presupposition that the room was clean prior to the start of the event. We have now (i) a prior state **clean(room)** associated with the presupposition, in addition to (ii) the state **dirty(room)** that obtains just before the asserted event, and (iii) the state **clean(room)** which is the result of the asserted action. Going from **clean(room)** to **dirty(room)** and then (back) to **clean(room)** is conceived of as a series of processes, where the latter two each serve to the undo the result of the previous process. Dowty puts forth this intuition as follows:

> "[...] **again**(p) is true just in case p is now true, [and] there was an earlier time at which p was false, and a still earlier time at which p was true. The intermediate time of p's falseness is needed to distinguish **John is here again** from **John is still here**. This latter sentence also involves p's being true at an earlier time as well as the present, but unlike the former sentence does not require the intermediate time at which p was false."   (*Dowty 1979:261–262*)

To put this more generally, restitutive readings involve a sequence of transitions from state to state. There are two transitions, as the sequence involved is: $\langle s, \neg s, s \rangle$. The term *counterdirectional* comes from the nature of these transitions: going from s to $\neg s$ is followed by a counterdirectional transition going from $\neg s$ to s.

> "[This] pattern of alternating complementary states [...] is characteristic of restitutive *wieder/again* when it occurs with telic change-of-state predicates."   (*Fabricius-Hansen 2001:110*)

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atypical use of an adjectical result state, in that it involves a recalibration of the scale associated with the adjective CLEAN. Restitutive readings of resultatives appear to disallow such a recalibration: if the counter is already clean, I can say *I wiped the counter again*, but it is odd for me to say *I wiped the counter **clean** again*. I ignore these atypical uses here.

The corresponding lexical entry given for the adverb in order to derive these transitions is as follows:

(82) *Denotation for counterdirectional adverb à la Patel-Grosz & Beck (2019)*

$$[\![\text{AGAIN}_C]\!] = \lambda P_{\langle v,t \rangle}.\lambda e_v : \exists e'_v[\tau(e') \prec \tau(e) \land P_C(e')].P(e)$$

where P_C is the reverse of P

The three readings of BACK discussed in the introduction suggest that the sort of transition-of-events scenario described above by Fabricius-Hansen is overly specific compared to the actual uses of the corresponding adverb in Hindi-Urdu: RESTITU- TIVE is not the only reading, there is also REVERSED PATH and RESPONSE, as well as (to a limited degree) REPETITIVE (see also Zwarts 2019 for even more uses of Dutch *terug*). Curiously, Fabricius-Hansen (2001) produces the theoretical underpinnings that lead to the denotation for a counterdirectional adverb in (82), but does not deal with the purely counterdirectional adverb that exists in German, namely *zurück* 'back'. In more recent research it has been since established that counterdirectional-ity is a category that is not limited to restitutive readings of AGAIN-adverbs, and in fact fits exactly to BACK-adverbs. Applying counterdirectionality to BACK-adverbs can capture not just RESTITUTIVE but the other readings as well.

2.4.1 Two lexical entries, two readings

The AGAIN-adverb is lexically ambiguous in this account. While the repetitive de-notation is the same as in the STRUCTURAL-REPETITIVE account, there is an additional, minimally different counterdirectional denotation (83), which gives rise to the read-ing referred to as 'restitutive'. The presuppositional part in (83) is that there exists in the context a temporarily preceding event e' with property P_C, which is the reverse of P. The subscript C on AGAIN indicates the counterdirectional reading.

(83) $\llbracket \text{AGAIN} \rrbracket = \lambda P_{\langle v,t \rangle}.\lambda e_v : \exists e'_v [\tau(e') \prec \tau(e) \wedge P_C(e')].P(e)$

   where P_C is the reverse of P

What (83) expresses is something very similar to the simple repetitive denotation for AGAIN (seen in (21), repeated as (84) below): both are functions taking as arguments a property and an event, and asserting $P(e)$, with the presupposition of a prior event e'. The crucial difference is in whether the property that holds of e' is P or P_C.

(84) $\llbracket \text{AGAIN} \rrbracket = \lambda P_{\langle v,t \rangle}.\lambda e_v : \exists e'_v [\tau(e') \prec \tau(e) \wedge P(e')].P(e)$

In Fabricius-Hansen's view, the above denotation still takes states into account because the counterdirectional events are conceptualized as 'transition events' *between states*. In a later re-formulation of counterdirectionality, Patel-Grosz & Beck (2019) make a move away from the overly narrow picture above, and treat counterdirectional events as more generally the reverse of each other in some relevant way. In their version, *some* counterdirectional events happen to have a result state (and these are exactly the ones that give us RESTITUTIVE readings), but the category of counterdirectionality does not by itself have anything to do with results. They make this move on the basis of their observation that *pacho* in Kutchi Gujarati has "purely" counterdirectional functions that do not involve states, and are demonstrably different from restitutives. We have already seen in the introduction that this observation is true of Hindi-Urdu *vaapas* as well. Patel-Grosz & Beck conclude that therefore counterdirectionality is a more general concept than its use by Fabricius-Hansen would suggest. I adopt this later move as it is better at capturing the attested data.

A significant shortcoming of this approach is that it does not provide a method for determining the value of P_C. Given some event with property P, getting to P_C is relegated to the context. I explain this shortcoming in detail in Chapter 3 and propose a significant revision to the semantics for BACK received (indirectly)

from the LEXICAL-COUNTERDIRECTIONAL account. The revised semantics I propose there provides a way for the presupposition of sentences with BACK-adverbs to be retrievable from the very sentence in which they occur.

2.4.2 Word order in the LEXICAL-COUNTERDIRECTIONAL account

Word order in the LEXICAL-COUNTERDIRECTIONAL approach is dealt with in a somewhat roundabout way, which reflects the semantic focus of this approach, as opposed to the syntactic lens of the STRUCTURAL-REPETITIVE account. Consider the following quote about German:

> "[W]hat *wieder* modifies [...] is mediated more or less unambiguously by surface word order: material to the right of *wieder* is in the scope of *wieder* and enters into the presupposition together with the sentence predicate, whereas constituents to the left of *wieder* belong to the assertoric part." (*Fabricius-Hansen 2001:107*)

Pittner (2003), a later implementation of Fabricius-Hansen (2001) brings in a syntactic consideration of where the adverb is base-generated:

> "Karin Pittner's contribution favours a scopal treatment of the repetitive-restitutive duality by reinforcing the role of syntactic differences to be observed. She argues that restitutive *wieder* syntactically belongs to the process-related manner adverbs [...] as it is base-generated below the internal arguments of the verb; whereas repetitive *wieder* exhibits the distribution of the event-internal adverbs [...] in its base position it c-commands the internal arguments [...] Similar considerations were presented by Fabricius-Hansen (2001)." (*Lang et al. 2003:16*)

There is a fundamental mismatch between the above sketched view and the Stechow (1996) view where the low position is actually not base-generated below

the internal argument of the verb, but above it, adjunct to a projection (small clause or $\sqrt{\text{Root}}$P) consisting of object and predicate; the object then moves over the adverb. In preceding sections I have already presented arguments supporting the application of Stechow's approach to Hindi-Urdu *phir-se* 'again'. Given that both *phir-se* and *vaapas* require an argument of type $\langle\langle v, t\rangle\langle v, t\rangle\rangle$, they have the same range of possibilities for attachment sites, and all of them include at least the DO. The word order pattern for *phir-se* was derived using a combination of *multiple* attachment sites for the adverb, and movement of the DO relative to it. By contrast, in the case of *vaapas*, we will see that the adverb can only go in a *single* place in the structure to derive the right meaning for the RESTITUTIVE reading, but the movement of the DO relative to the adverb is what derives the word-order facts.

2.5   The LEXICAL account applied to *vaapas* 'back' restitutives

Following the layout of previous sections, let's look at a *vaapas*-restitutive with an intransitive first. The parse below shows the structure of the intransitive with all the possible places where a adverb can attach to a projection of the right semantic type, $\langle\langle v, t\rangle\langle v, t\rangle\rangle$, namely: $\sqrt{\text{Root}}$P and $v_{[\text{BE}]}$P.

(85)   *Adjectival intransitive, possible Adv attachment sites:* $\sqrt{Root}P$ *and* $v_{[\text{BE}]}P$

kamraa vaapas/phir-se saaf   ho rahaa hai
room   back/again   clean be PROG be.PRES

Lit. 'The room is cleaning again (i.e. becoming once more clean).'

TP
├── AspP
│   ├── $v_{[BE]}$P
│   │   ├── AdvP
│   │   │   └── vaapas
│   │   │   **back**
│   │   └── $v_{[BE]}$P
│   │   ├── $\sqrt{saaf}$P
│   │   │   ├── AdvP
│   │   │   │   └── *vaapas
│   │   │   │   ***back**
│   │   │   └── $\sqrt{saaf}$P
│   │   │   ├── DP$_i$
│   │   │   │   └── kamraa
│   │   │   │   **room**
│   │   │   └── $\sqrt{saaf}$
│   │   │   └── saaf
│   │   │   **clean**
│   │   └── $v_{[BE]}$
│   │   └── ho 'be'
│   │   **BECOME**
│   └── Asp
│   └── rahaa
│   **PROG**
└── T
    └── hai
        be.PRES
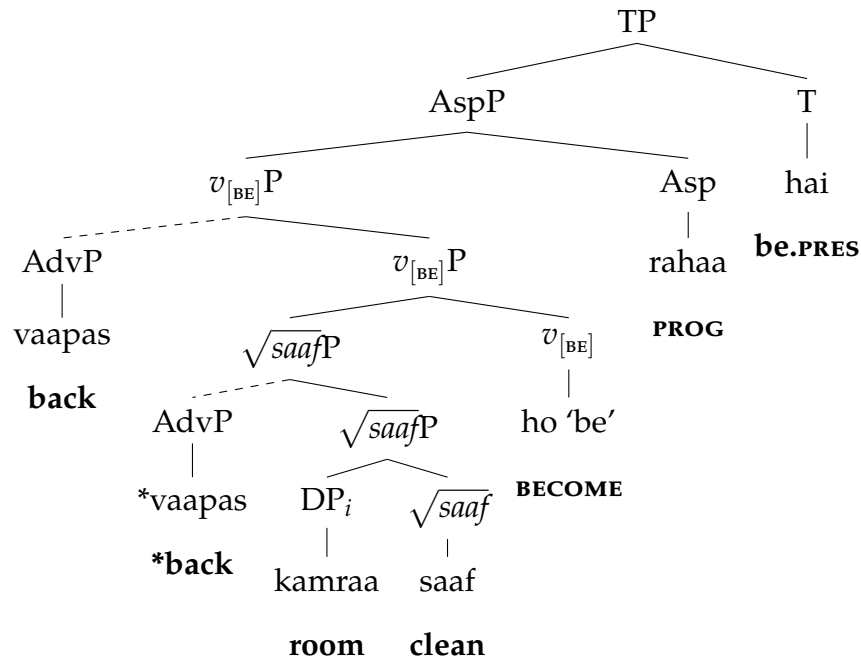
In the following subsections I demonstrate that $\sqrt{\text{Root}}$P is systematically unavailable for *vaapas*, leaving only $v_{[BE]}$P as the only possible attachment site. I then look at transitives, and additionally show that $v_{[AG]}$P is also ruled out, leaving $v_{[BE]}$P to be the place where *vaapas* 'back' always attaches.

2.5.1 No counterdirectional states: A ban on too-low attachment

We have already seen evidence that *vaapas* cannot denote the kind of unselective repetition that we know AGAIN-adverbs denote; this is repeated below:

(86) *Context:* Jyoti sang a song yesterday.   [=(76)]

    a. kal   phir-se jyoti gaane   waalii   hai
       tomorrow again   Jyoti sing.INF.OBL going.to be.PRES
       'Tomorrow Jyoti is going to sing again.'

    b. *kal   vaapas jyoti gaane   waalii   hai
       tomorrow back   Jyoti sing.INF.OBL going.to be.PRES
       Intended: 'Tomorrow Jyoti is going to sing again.'

This sort of evidence only rules out the possibility of *vaapas* denoting high/eventive

repetition. Another possibility to consider is that *vaapas* is specified for the repetition of states, and that's what makes it bad in (86); if this were the case, it could also be used to explain the word-order pattern. This possibility, though plausible, is not borne out: if we look at a stative, the true AGAIN-adverb can be used here to repeat the state (87a), but *vaapas* is ungrammatical (87b).

(87)   a.   ali phir-se khush hai
            Ali again   happy is
            'Ali is happy again.'

       b.   *ali vaapas khush hai
            Ali back   happy is
            Intended: 'Ali is happy again.'[10]

       c.   Ali is happy again/*back.

This property of BACK is syntactic, not semantic: to begin with, the semantic type v (for eventualities) does not distinguish between events and states; therefore the ungrammaticality cannot be due to a type-mismatch. Additionally, it is possible to imagine a coherent scenario where *Ali is back in a state of happiness*; in fact that expression in English reflects exactly such a scenario, which might obtain if Ali was *removed from his prior state of happiness*. Therefore there is no inherent conceptual-semantic incoherence that can be attributed to BACK in combination combining with states. Rather, the structure below is ungrammatical (96); thus in (88) it is the low attachment of *vaapas* to a result state-denoting constituent which causes the derivation to crash.

---

[10]As noted earlier in footnote 6, there exists a split in speaker judgments about *vaapas* qua AGAIN, which surfaces in examples like (87b): some speakers reject this sentence outright as ungrammatical, while others accept it (but interestingly never offer it up themselves). I present a detailed discussion of this split in Chapter 5, §**??**. My contention here is that these facts indicate that there exist some contexts/grammars in which *vaapas* can function like AGAIN. This does not counterexemplify the claim I make in this section, namely that statives without a dynamic component are fundamentally incompatible with counterdirectionality, as seen for English.

(88) *vaapas with states*

```
                          ╱‾‾‾‾╲
                    ╱‾‾‾‾‾       ╲
              √AdjP              
           ╱      ╲
       AdvP      √AdjP
         │       ╱    ╲
      *vaapas  DP    √Adj
                      │
        *back        Adj
```

adjective
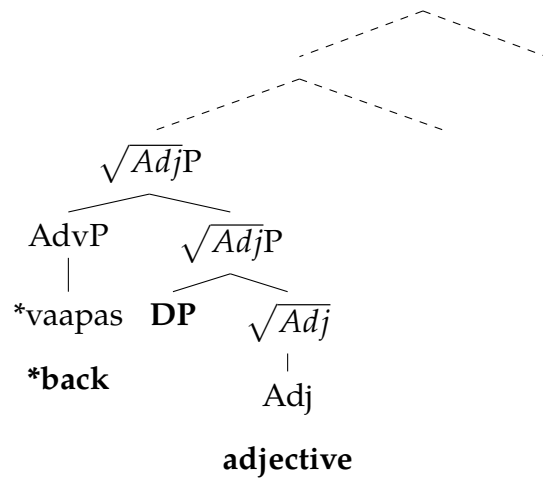
Thus the counterdirectional adverb operates on events, not states. An ungrammatical sentence like (87b), repeated with an elaborated context as (89a) can be rescued by adding the now-familiar *honaa* 'to be/become' (89b), which serves the purpose of making the predication eventive rather than stative. As we see below, *vaapas* is good with all the eventive forms.

(89) *Context* (COUNTERDIRECTIONAL): Ali wins the lottery, and becomes very happy. After a few days Ali discovers that after taxes he does not get to take home a single penny of his winnings, and becomes rather upset. Subsequently, while hanging out with his commiserating friends, he realizes that the value of life has little to do with money—looking at his friends' smiling faces cheers him up.

  a. *ali vaapas khush hai
      Ali back   happy is
      Intended: 'Ali is happy again.'

  b. ali vaapas khush {ho jaataa/ho gayaa/ho rahaa}   hai
      Ali back   happy {be go.IPFV/be go.PFV/be stay.PFV} be.PRES
      'Ali {becomes/became happy/is becoming} happy again.'

The complex predicate construction *khush ho jaataa hai* 'becomes happy' above

is unambigously inchoative. This is because the light verb *jaanaa* 'to go' of the complex predicate unambiguously indicates a change of state. For the adjective *khush* 'happy', that light verb is essential, because without it the adjectival predicate lacks an inchoative reading. This is illustrated below with the simple imperfective aspect (90a).

(90)   a. ali har   subah   khush hotaa   hai
         Ali every morning happy be-ɪᴘꜰᴠ be.ᴘʀᴇs

   i. *Unavailable inchoative*: 'Every morning, Ali becomes (i.e. is caused to be) happy.'

   ii. 'Every morning, Ali is happy.'

    b??ali (har   subah)   vaapas khush hotaa   hai
       Ali (every morning) back   happy be-ɪᴘꜰᴠ be.ᴘʀᴇs
       Intended: '(Every morning,) Ali becomes (i.e. is caused to be) happy again.'

As illustrated above, sentences which lack the inchoative reading in imperfective (e.g. 90a) cannot be modifed by *vaapas* (90b). Sentences which have the inchoative reading (e.g. 91a) cannot be modifed by *vaapas* (91b).

(91)   a. ali har   subah   khush ho jaataa   hai
         Ali every morning happy be go-ɪᴘꜰᴠ be.ᴘʀᴇs

   i. 'Every morning, Ali becomes (i.e. is caused to be) happy.'

   ii. *Unavailable stative*: 'Every morning, Ali is happy.'

    b. ali (har   subah)   vaapas khush ho   jaataa   hai
       Ali every morning happy be   go-ɪᴘꜰᴠ be.ᴘʀᴇs
       Every morning, Ali becomes (i.e. is caused to be) happy.'

There are also cases where both the stative and the inchoative readings are available in imperfect aspect without the use of a light verb. This is the case with *saaf* 'clean' in (92a). As shown below, modification by *vaapas* is acceptable.

(92)　a.　kamraa har　subah　saaf hotaa　hai
　　　　　room　every morning clean be-ɪᴘꜰᴠ be.ᴘʀᴇs

　　　　　　i.　'Every morning, the room is cleaned (i.e. caused to be clean).'

　　　　　　ii.　'Every morning, the room is cleaned.'

　　　b.　kamraa (har　subah)　vaapas saaf　hotaa　hai
　　　　　room　(every morning) back　clean be-ɪᴘꜰᴠ be.ᴘʀᴇs

　　　　　'(Every morning,) the room is cleaned (i.e. caused to be clean) again.'

The core observation of this section is true of English as well— *back* does not operate on states either (93). However, unlike in Hindi-Urdu, the addition of an eventive component does not save the sentence in English (94).

(93)　a.　John is/became happy (again).

　　　b.　The bottle broke/is broken (again).

(94)　a.　John is/became happy (*back).

　　　b.　The bottle broke/is broken (*back).

Based on the data presented above, I derive the following generalization:

(95)　Nᴏ ᴄᴏᴜɴᴛᴇʀᴅɪʀᴇᴄᴛɪᴏɴᴀʟ sᴛᴀᴛᴇs

　　　Counterdirectionality applies only to events. If the context fails to license an eventive presupposition, the counterdirectional adverb is bad.

The above statement creates a problem for the sᴛʀᴜᴄᴛᴜʀᴀʟ-ʀᴇᴘᴇᴛɪᴛɪᴠᴇ account of restitutive readings, as under this account, restitutive readings are, by definition, cases that convey the repetition of a state. It also, as it happens, directly contradicts the original basis for Fabricius-Hansen's proposal of counterdirectionality: in the core restitutive cases with change-of-state predicates, counterdirectionality amounts to one state ceasing to hold, and another starting to hold. Later work by Patel-Grosz & Beck has taken an approach where the concept of counterdirectionality is no longer tied to restitutive contexts, and thus no longer a function of change

of state. I adopt here the later definition of counterdirectionality based on the observations of this section.

To summarize, the structure below is ill-formed (96) because low attachment of *vaapas* to a result state-denoting constituent causes the derivation to crash.

(96)   *Adjectival intransitive, *vaapas modifying $\sqrt{RootP}$*

kamraa vaapas saaf   ho rahaa hai
room   back   clean be PROG be.PRES

Lit. 'The room is cleaning again (i.e. becoming once more clean).'

TP
AspP
DP$_i$
kamraa
room$_i$
$v_{[\text{BE}]}$P
$\sqrt{saaf}$P
AdvP
*vaapas
*back
$\sqrt{saaf}$P
t$_i$ $\sqrt{saaf}$ **BECOME**
saaf
clean
$v_{[\text{BE}]}$
ho 'be'   **PROG**
Asp
rahaa
AspP
Asp
be.PRES
T
hai
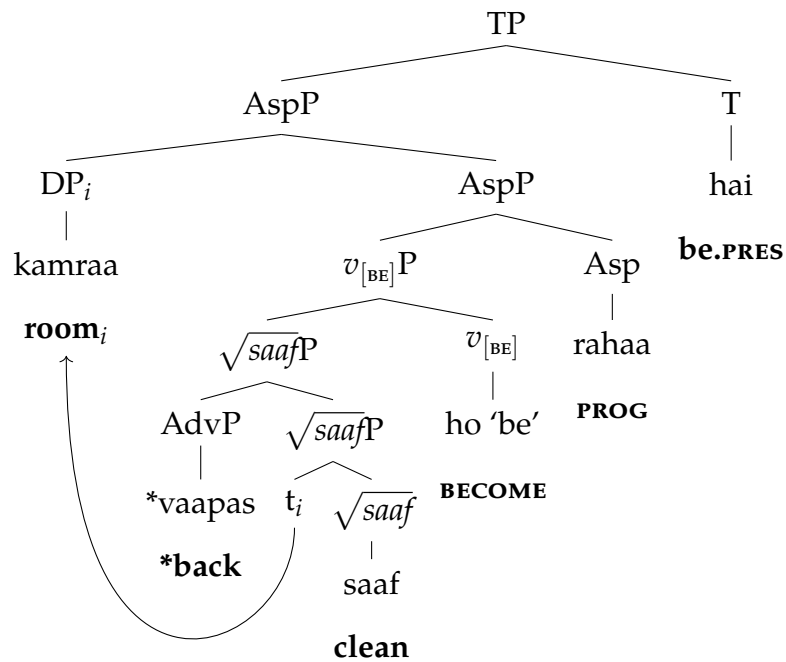
2.5.2 High-enough attachment

Now that we have ruled out the $\sqrt{\text{Root}}$P adjunct position, The intransitive has a scarcity of possible places for the adverb to attach. The only place for the adverb to go is above BECOME.

(97) *Adj-intransitive, vaapas modifies $v_{[\text{BE}]}$P, order DO-Adv*   RESTITUTIVE
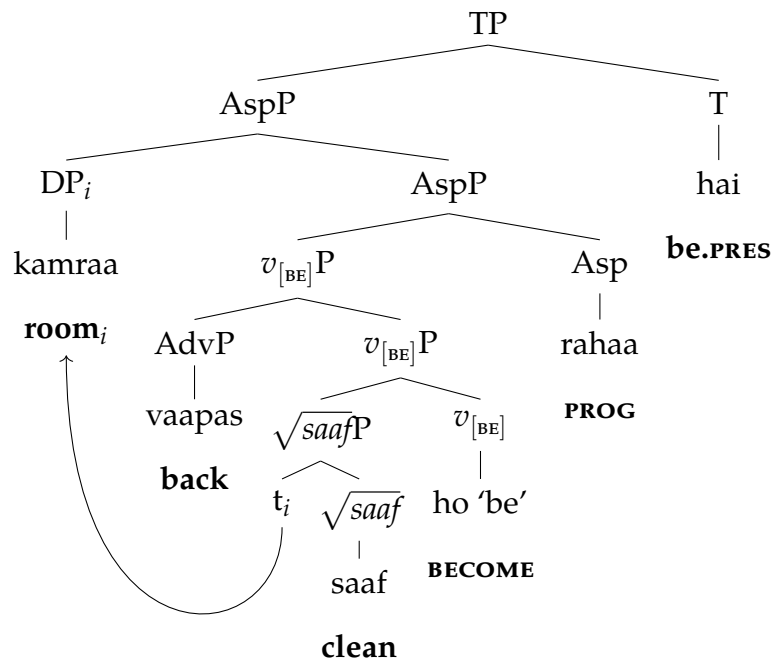
As we have seen in structures with *phir-se*, the transitive version is the same tree with an Agent+Cause layer above it, as shown below:

(98) *Adj-transitive, vaapas modifies $v_{[BE]}P$, order DO-Adv*   RESTITUTIVE
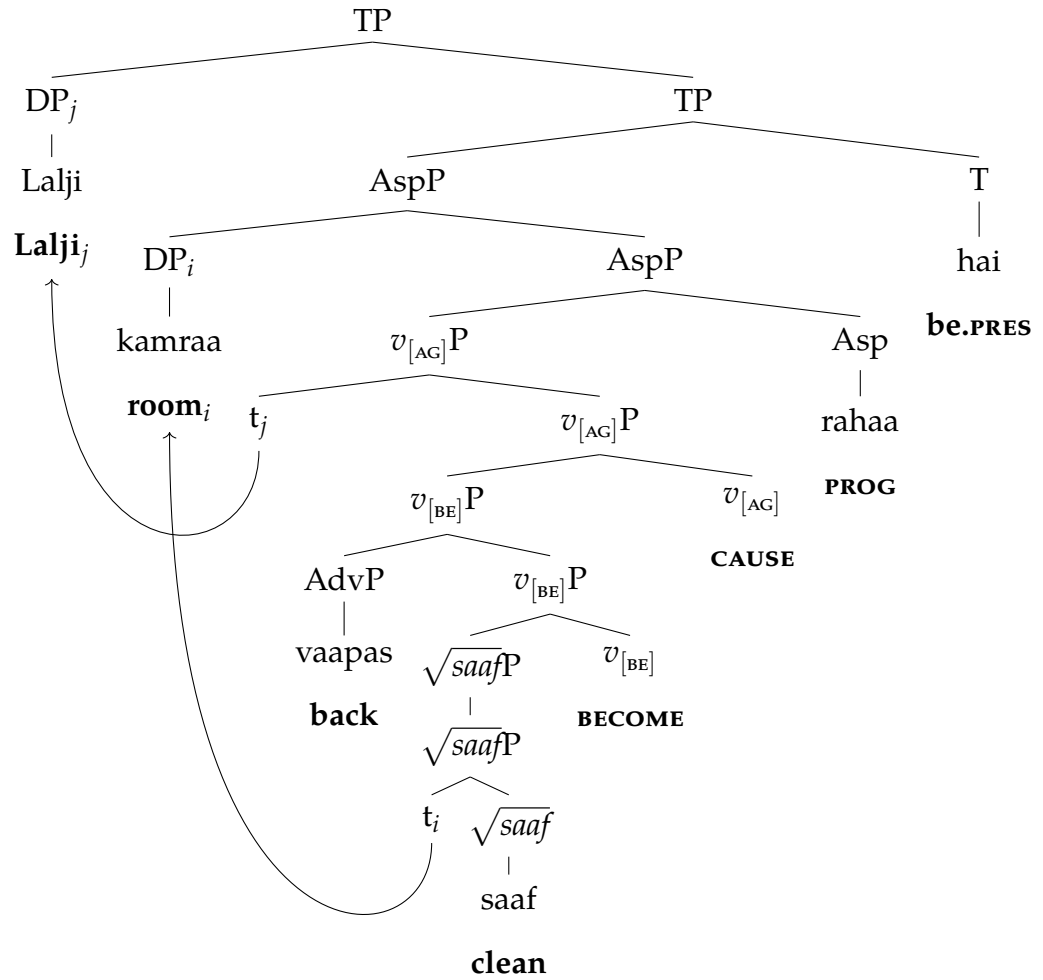
The semantic derivation of the above tree is given in full here:

(99) *Semantic derivation of restitutive with the counterdirectional adverb*

$[\![\textbf{CAUSE}]\!]([\![\textbf{back}]\!]([\![\textbf{BECOME}]\!]\sqrt{saaf}P))(\textbf{Lalji})$

(100) $[\![\textbf{BECOME}]\!](\sqrt{saaf}P)$

$= [\![\textbf{BECOME}]\!](\lambda s_v.\textbf{clean}(s) \wedge Theme(s) = \textbf{room})$

$= [\lambda P_{\langle v,t\rangle}\lambda e_v.\neg P(begin(e)) \wedge P(end(e))](\lambda s_v.\textbf{clean}(s) \wedge Theme(s) = \textbf{room})$

which can be colloquially paraphrased as

$= [\lambda P_{\langle v,t\rangle}\lambda e_v.P\text{-}comes\text{-}to\text{-}be(e)](\lambda s_v.\textbf{clean}(s) \wedge Theme(s) = \textbf{room})$

$= \lambda e_v.(\textbf{clean}(e) \wedge Theme(e) = \textbf{room})$ *comes to be*

(101) $[\![\mathbf{back}]\!](100)$

$= [\lambda P_{\langle v,t \rangle}.\lambda e^*_v : \exists e''[\tau(e'') \prec \tau(e^*) \wedge P_C(e'')].P(e^*)](100)$

$= \lambda e^*_v : \exists e''[\tau(e'') \prec \tau(e^*) \wedge (\textit{reverse of } 100)(e'')].(100)(e^*)$

(102) $[\![\textsc{cause}]\!](101)$

$= \lambda P_{\langle v,t \rangle}\lambda x_e \lambda e_v.Agent(e) = x \wedge \exists e'[cause(e) = e' \wedge P(e')](101)$

$= \lambda x_e \lambda e_v.Agent(e) = x \wedge \exists e'[cause(e) = e' \wedge (101)(e')]$

(103) *Merging the Agent and using Event Identification*

$= \lambda e_v.Agent(e) = \mathbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (101)(e')]$

(104) *Putting everything together*

$\Rightarrow \lambda e_v.Agent(e) = \mathbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (\lambda e^*_v : \exists e''_s[\tau(e'') \prec \tau(e^*) \wedge$ $(\textit{reverse of } 100)(e'')].(100)(e^*))(e')]$

$\Rightarrow \lambda e_v.Agent(e) = \mathbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (\exists e''_v[\tau(e'') \prec \tau(e') \wedge$ $(\textit{reverse of } 100)(e'')].(100)(e'))]$

$\Rightarrow \lambda e_v.Agent(e) = \mathbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (\exists e''_v[\tau(e'') \prec \tau(e') \wedge$ $(\textit{reverse of } (\lambda e_v.(\mathbf{clean}(e) \wedge \textit{Theme}(e) = \mathbf{room}) \textit{ comes to be})(e''))].$ $(\lambda e_v.(\mathbf{clean}(e) \wedge \textit{Theme}(e) = \mathbf{room}) \textit{ comes to be})(e'))]$

$\Rightarrow \lambda e_v.Agent(e) = \mathbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (\exists e''_v[\tau(e'') \prec \tau(e') \wedge$ $(\textit{reverse of } (\mathbf{clean}(e'') \wedge \textit{Theme}(e'') = \mathbf{room}) \textit{ comes to be}].(\mathbf{clean}(e') \wedge$ $\textit{Theme}(e') = \mathbf{room}) \textit{ comes to be})]$

$\Rightarrow \lambda e_v.Agent(e) = \mathbf{Lalji} \wedge \exists e'[cause(e') = e \wedge \exists e''_v[\tau(e'') \prec \tau(e') \wedge$ $\textit{reverse of } (\mathbf{clean}(e'') \wedge \textit{Theme}(e'') = \mathbf{room}) \textit{ comes to be}].(\mathbf{clean}(e') \wedge$ $\textit{Theme}(e') = \mathbf{room}) \textit{ comes to be}]$

(105)   *Final result*

⇒ events *e* whose agent is Lalji and *directly* cause another event *e′* where
the state of the room being clean comes to be (i.e. the room is in a *not*-clean
state at the beginning of *e′*, and in a clean state at the end of *e′*)

Defined only if: the caused event *e′* is preceded by another event, the reverse
of an event where the state of the room being clean comes to be (e.g. an
event of the room becoming dirty/an event of the room ceasing to be clean)

2.5.3   A note on word order *S vaapas DO V*

The structure in (98) above corresponds to the word order *S DO vaapas V*, i.e. where
the DO has moved over *vaapas* all the way to Asp. This accounts for the 'perfect'
word order in the pattern noted earlier:

(106)   *In restitutive contexts, vaapas*

a. is perfect in the immediately preverbal position   ✓ *S DO vaapas V*

b. is degraded between subject and DO   *?? S vaapas DO V*

c. cannot precede the subject   *# vaapas S DO V*

Turning now to the second available (degraded) word order *S vaapas DO V*.
The availability of this word order can easily be explained if the DO is permitted
to surface at an intermediate landing site lower than Spec,AspP. Indeed, this inter-
mediate landing site was already required to explain the persistence of REPETITIVE
in the order *S DO vaapas V*. The existence of $v_{[\text{BE}]}$P as a landing site thus receives
support from repetitive readings of *phir-se* as well as restitutive readings of *vaapas*.

(107) *Adj-transitive, vaapas modifies $v_{[BE]}$P, orders DO-Adv/Adv-DO* RESTITUTIVE

```
                              TP
                  ┌───────────┴───────────┐
                DP_j                      TP
                 │              ┌──────────┴──────────┐
               Lalji          AspP                    T
              **Lalji_j**   ┌───┴────────┐             │
                          DP_i         AspP           hai
                           │        ┌────┴────┐      **be.PRES**
                        kamraa   v_[AG]P      Asp
                      **room_i** t_j  ┌────┴────┐   │
                                  v_[BE]P    v_[AG]  rahaa
                              ┌──────┴───┐          **PROG**
                            AdvP      v_[BE]P      v_[AG]
                             │      ┌───┴───┐     **CAUSE**
                           vaapas  DP_i   v_[BE]P
                          **back**  │   ┌───┴───┐
                                 kamraa √saafP  v_[BE]
                                **room_i** ┌─┴─┐  **BECOME**
                                         t_i  √saaf
                                               │
                                              saaf
                                            **clean**
```
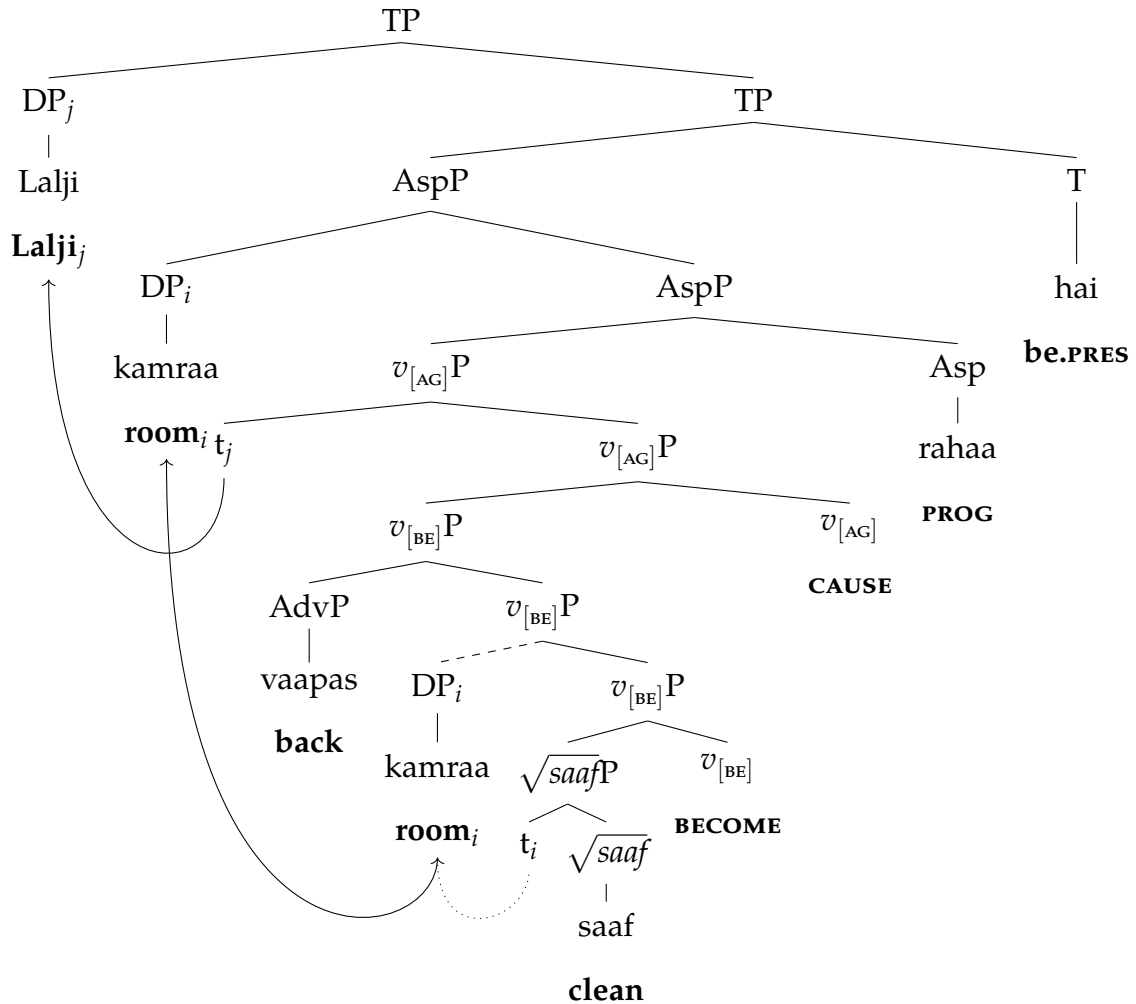
The $v_{[BE]}$P landing site for the DO is given with a dotted line above, to indicate that this is the degraded case. The parse above allows the order *S vaapas DO V* to exist in a restitutive context; I turn now to its degraded status. A comparison of discourse contexts of varying complexity shows that though the syntactic structure corresponding to this word order is actually uniformly available to *vaapas* 'back', nevertheless a sentence with *vaapas* in this position is judged worse in some specific situations. Let's re-examine the restitutive context which yielded the "??" judgement:

(108) *Context* (RESTITUTIVE): There is a newly-built room which Lalji has rented, sight-unseen. The room was clean when it was built. A window was left open and let in some dirt just before he moved in, forcing Lalji to do some cleaning. (There was a prior state of room-cleanliness, but no prior event of the room being cleaned, by Lalji or by anyone else.) [=(77)]

(#vaapas) lalji (??vaapas) <u>kamraa</u> **vaapas** saaf kar rahaa hai
(#back) Lalji (??back) room   back   clean DO PROG be.PRES

'Lalji is cleaning the room again.'

i.e. 'Lalji is causing the room to once more be clean (and it had gotten dirty before).'

The context above is specifically set up to rule out any prior event of the room being cleaned, by Lalji or by anyone else. The purpose of this setup is to rule out REPETITIVE and any possible intermediate readings. If we remove that specific setup, we actually get a perfectly acceptable sentence. Compare the above situation with (109) below, where the context is simpler, and the "??" judgment has gone away, and Adv-DO order is fine:

(109) *Context:* There is a clean room. It gets dirty somehow. (There was a prior state of room-cleanliness, and there may have been a prior event of the room being cleaned by someone.) Now...

lalji **vaapas** kamraa saaf kar rahaa hai
Lalji back   room   clean do PROG be.PRS

Lit. 'Lalji is causing the room to become back clean.'

The situation in (109) is what is predicted by the syntactic treatment of *vaapas* presented above: its attachment site has been identified as $v_{[\text{BE}]}\text{P}$, meaning that *vaapas* includes the BECOME component in its scope, and not the Agent. Despite the Agent being outside the scope of the adverb, what we are seeing here indicates the

presence of contextual pressure to make the presupposed event match the asserted event as much as possible. In (109), it is possible to accomodate a previous cleaning event by Lalji that led to the initial setup "there is a clean room", and the word order *S vaapas DO V* is acceptable; this contrasts with (108) where it is not possible to accomodate Lalji in this manner, and the word order *S vaapas DO V* is degraded.

This point revealed itself naturally in elicitation. A Hindi-Urdu consultant was presented the context and the sentence without *vaapas*: *vaigyaanik gufaa khol rahe hain*, and asked to place *vaapas* anywhere she likes. Her first comment was that she would not like to use *vaapas* at all, because the context is so long ago, it's not relevant that the cave was open before. Her second comment was that if she *had* to use *vaapas* in the sentence, she would say *vaigyaanik gufaa **vaapas** khol rahe hain* because "those scientists have not opened it before". This exchange shows once again that when the possibility of a prior event with the scientists as Agent is ruled out, the preference is for the word order *S DO vaapas V*.

(110)   *Context:* Geological scientists have recently found a hidden natural cave. Their theory is that it was always open until a prehistoric earthquake blocked the entrance. They want to get inside it.

vaigyaanik (??vaapas) gufa (vaapas) khol rahe hain
scientist   (??back)   cave (back)   open PROG be.PST

Lit. 'Scientists are restoring the cave to an open state.'

A plausible cause for the context-sensitivity of *vaapas* might be that the presupposition it introduces is not really existential, but rather anaphoric. This idea has been employed in the domain of both AGAIN-adverbs (notably the system proposed in Kamp & Rossdeutscher 1994 and applied in Beck 2006) and BACK-adverbs (see for brief but relevant note in Patel-Grosz & Beck 2019:8). The core of the idea is that the event variable in the presupposition behaves like a pronoun, receiving its reference from an event that is salient in the context. As a consequence of that

interpretive process, speakers would find slightly degraded any deviation from the contextually-supplied salient event. A deeper exploration of this line of thinking I leave to future work. In Chapter 3 I provide a discussion of deviations from that contextually-supplied event that are permitted (§3.1.2) and that are not permitted (§3.1.3). Further, Chapter 4 is dedicated to the role of focus in the determination of what material in Hindi-Urdu sentences is permitted to deviate in this manner.

2.5.4 Higher attachment

As we have seen earlier in this chapter, *phir-se* is able to attach at the $v_{[\text{AG}]}\text{P}$ level. Since *phir-se* and *vaapas* are of the same semantic type, a reasonable expectation is that $v_{[\text{AG}]}\text{P}$ should be able to host *vaapas* as well. In this section I show that this expectation is not met in restitutive readings: what we observe is that despite having the right semantic type, $v_{[\text{AG}]}\text{P}$ will always turn out to have a denotation that cannot be reversed in the way required by the counterdirectional adverb, making $v_{[\text{AG}]}\text{P}$ attachment impossible for *vaapas*. Below is the denotation of the $v_{[\text{AG}]}\text{P}$ that we are trying to attach *vaapas* to (with the colloquial expression *comes to be* used to express the contribution of BECOME):

(111) $\lambda e_v.Agent(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e \wedge (\textbf{clean}(e') \wedge$
    $Theme(e') = \textbf{room}) \textit{ comes to be}]$

Once again, the denotation of the counterdirectional adverb is as follows:

(112) $[\![\textbf{back}]\!] = \lambda P_{\langle v,t \rangle}.\lambda e_v^* : \exists e_v''[\tau(e'') \prec \tau(e^*) \wedge P_C(e'')].P(e^*)$

An important consequence of the treatment of *vaapas* in this chapter is that when the BACK-adverb is syntactically attached to the top of the structure, what it operates on in the semantics is not the lower (caused) event, but the higher (causing) event. If we try to feed the denotation of $v_{[\text{AG}]}\text{P}$ as the argument to the adverb, we run

into the following situation: the introduction of CAUSE by $v_{[\text{AG}]}$ creates a bieventive structure, where the lower (caused) event is existentially closed and therefore its components (crucially the THEME) is rendered inaccessible to the adverb. The accessible part is only the following extremely deficient meaning, which can be paraphrased as "events with Lalji as the Agent that cause another event".

(113) $\lambda e_v.Agent(e) = \mathbf{Lalji} \wedge \exists e'[cause(e') = e...]$

If attached at $v_{[\text{AG}]}$P, the adverb would apply to the above denotation. This creates a problem for the retrieval of the right counterdirectional presupposition: unlike the derivations we have seen so far in this chapter, there is no obvious reverse of (113). So far, the application of the LEXICAL-COUNTERDIRECTIONAL account to Hindi-Urdu data has been restricted to cases where the adverb modifies the BECOME-phrase (i.e. where a state *comes to be*), which can be formally written out in full as in (114a). This can in turn be reversed in an intuitive way, yielding (114b).

(114)   a. *An example* BECOME-*phrase* (P)

$\lambda e_v.$ $\boxed{\neg\mathbf{clean}}(begin(e)) \wedge Theme(begin(e)) = \mathbf{room} \wedge$
$\boxed{\mathbf{clean}}(end(e)) \wedge Theme(end(e)) = \mathbf{room}$

   b. *The reverse of the above* BECOME-*phrase* (P_C)

$\lambda e_v.$ $\boxed{\mathbf{clean}}(begin(e)) \wedge Theme(begin(e)) = \mathbf{room} \wedge$
$\boxed{\neg\mathbf{clean}}(end(e)) \wedge Theme(end(e)) = \mathbf{room}$

Since in P (114a) the Theme in P goes from $\neg\mathbf{clean}$ to $\mathbf{clean}$, it goes from $\mathbf{clean}$ to $\neg\mathbf{clean}$ in P_C (114b). In the present example, however, the goal is to compute the reverse of a rather different kind of eventuality, as we have seen in (113), repeated below. There is no way to reverse the expression in (115a) and yield a coherent result for (115b).[11]

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[11]One might attempt to introduce a negation to produce the 'opposite' event, which will form the presupposition: $\lambda e_s.Agent(e) = \mathbf{Lalji} \wedge \neg\exists e'[cause(e') = e...]$. This is not an attested reading.

(115)   a.   *What vaapas modifies if attached at $v_{[\text{AG}]}\text{P}$*   [=(113)]

           $\lambda e_v.Agent(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e...]$

     b.   *A failed attempt at computing the reverse of $v_{[\text{AG}]}\text{P}$*

           Reverse of $(\lambda e_v.Agent(e) = \textbf{Lalji} \wedge \exists e'[cause(e') = e...])$

To summarize: the application of the LEXICAL-COUNTERDIRECTIONAL to *vaapas* as described above predicts that if there is attachment at $v_{[\text{AG}]}\text{P}$, *vaapas* yields an incoherent meaning. This prediction is borne out, and has a real consequence to the Hindi-Urdu word-order facts, which I turn to next. Note that this account in its currently presented form does not formally specify the link between P and P_C; I fill this gap by proposing a detailed argument for deriving the counterdirectional presupposition, in Chapter 3.

Below is the parse of the structure we have now shown to be unavailable for restitutive readings, i.e. $v_{[\text{AG}]}\text{P}$ attachment *vaapas*. This parse accounts for the observation that *vaapas* cannot precede the subject. There are only two possible ways in which *vaapas* could precede the subject: (i) attachment higher than the $v_{[\text{AG}]}\text{P}$, or (ii) $v_{[\text{AG}]}\text{P}$ with the subject remaining in its base-generated position. The first option is ruled out because of type-mismatch, and the second option is ruled out by the parse below.

As we have already seen in §2.5.4, if we try to feed the denotation of $v_{[\text{AG}]}\text{P}$ as the argument to the adverb, we run into the following situation: the introduction of CAUSE by $v_{[\text{AG}]}$ creates a bieventive structure, where the lower (caused) event is existentially closed and therefore its components (crucially the THEME) is rendered inaccessible to the adverb. The accessible part is only the following extremely deficient meaning, which can be paraphrased as "events with Lalji as the Agent that cause another event". If the adverb is fed the above event, it doesn't really have any content on the basis of which to constitute the counterdirectional event: there is no THEME or SCALE accessible to the adverb in this situation.

(116) *Adjectival transitive, #vaapas modifying $v_{[AG]}$P*   # *vaapas S DO V*

TP
├─ AspP
│ ├─ $v_{[AG]}$P
│ │ ├─ AdvP
│ │ │ └─ #vaapas **#back**
│ │ └─ $v_{[AG]}$P
│ │   ├─ DP
│ │   │ └─ Lalji **Lalji**
│ │   └─ $v_{[AG]}$P
│ │   ├─ $v_{[BE]}$P
│ │   │ ├─ DP$_i$
│ │   │ │ └─ kamraa **room$_i$**
│ │   │ └─ $v_{[BE]}$P
│ │   │   ├─ $\sqrt{saaf}$P
│ │   │   │ ├─ t$_i$
│ │   │   │ └─ $\sqrt{saaf}$
│ │   │   │   └─ saaf **clean**
│ │   │   └─ $v_{[BE]}$ **BECOME**
│ │   └─ $v_{[AG]}$ **CAUSE**
│ └─ Asp
│   └─ rahaa **PROG**
└─ T
   └─ hai **be.PRES**
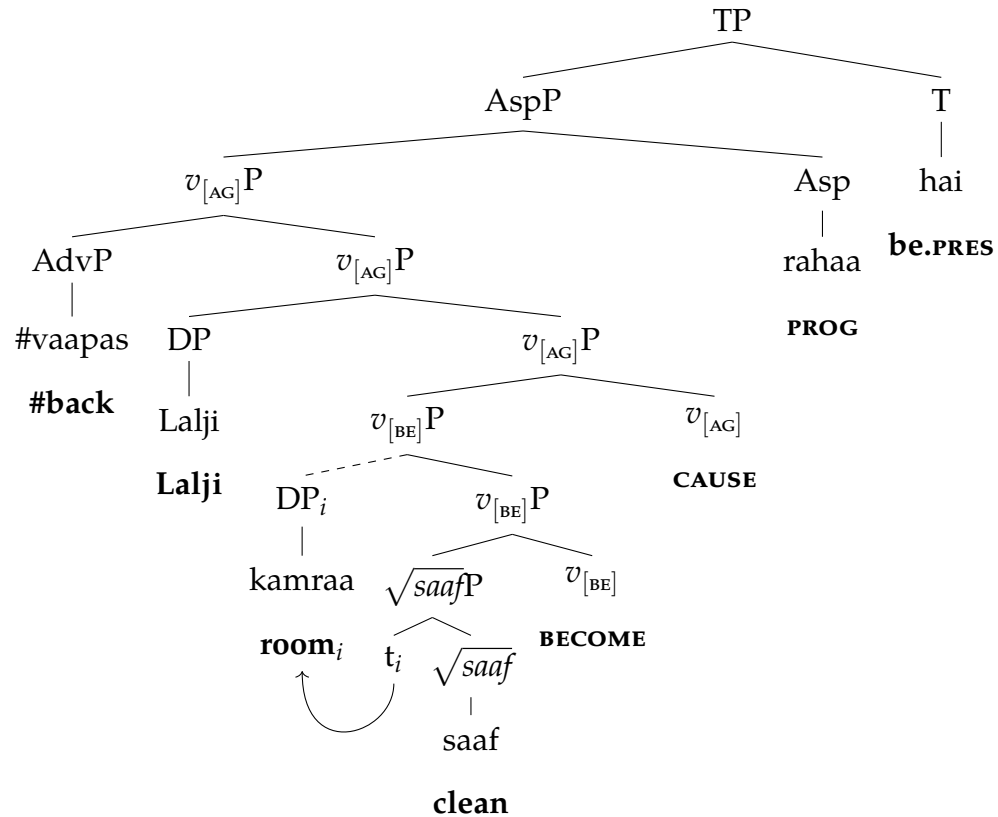
Thus the higher attachment for *vaapas*—and by extension the word order where it precedes the subject—is disallowed due to pragmatic reasons: because most all of the relevant content of the asserted event is existentially closed by CAUSE, leaving only a depleted higher event with nothing in it that *vaapas* can reverse, leading to an incoherent meaning.

This entire discussion, it should be noted, is about restitutive readings, and restitutive readings alone. As we have seen, there is no type-mismatch nor any other syntactic reason for $v_{[AG]}$P attachment of *vaapas* to be ruled out. In Chapter 3, I discuss RESPONSE readings as the instantiation of *vaapas* attaching higher than the restitutive cases (see especially §3.4). In Chapter 4, I go through all word felicitous orders possible with RESPONSE-*vaapas*, which include sentence-initial *vaapas*, an order which is never available in restitutive readings.

We now have an explanation for the complex word-order pattern observed with

vaapas based on a combination of what is allowed or disallowed in the syntax-semantics, and what is preferred in the domain of pragmatics.

2.6   Summary and conclusion

In this chapter I have argued that *phir-se* 'again' is the true AGAIN-adverb in Hindi-Urdu, and its distribution and meanings can be derived unproblematically using the STRUCTURAL-REPETITIVE account of AGAIN-adverbs, without needing to appeal to the less satisfactory alternative LEXICAL-COUNTERDIRECTIONAL account. The latter account, I have argued, exactly corresponds to the meaning imparted by BACK-adverbs. The two accounts, used together, illuminate a rapidly emerging landscape of various languages where the adverbs BACK and AGAIN jointly carve up portions of the semantic space that includes RESTITUTIVE readings.

In the second half of the chapter I derived a puzzling word-order pattern associated with *vaapas* 'back' using a fairly complex set of intersecting factors: semantics (type of projections that can/cannot be an argument for the adverb; reversibility/irreversibility of different kinds of events), syntax (several positions that the DO can move to), and pragmatics (contextual pressure to maximize similarity between prejacent and arising presupposition). The pattern is summarized in (117) below.

(117)   *In restitutive contexts, vaapas*

    a. is perfect in the immediately preverbal position   ✓ *S DO vaapas V*

    b. is degraded between subject and DO   *?? S vaapas DO V*

    c. cannot precede the subject   *# vaapas S DO V*

This pattern is strikingly different from what we have observed for *phir-se* 'again'; the persistence of the repetitive reading has shown that not only is *phir-se* freer in

its distribution, the repetitive reading is always available even where the restitutive reading is ruled out.

The sheer complexity of factors required to account for the word-order facts associated with *vaapas* contrasts sharply with the uncomplicated system that suffices to account for *phir-se* and its attendant word-order facts. A key contribution of the present work is to highlight this difference: BACK-adverbs are fundamentally different from AGAIN-adverbs, for the simple reason that all kinds of eventualities can be repeated, but not all kinds of eventualities can be reversed. To begin with, AGAIN does not discriminate between eventive and stative predication, but BACK can only apply to events, and not states. Even within the category of events, BACK can only reverse those events whose inherent semantics is *reversible*. A simple example of this asymmetry between the two sources of restitution can be illustrated with verbs of consumption. You can *eat an apple again*, but you can't #*eat an apple back*. Finally, a syntactic-semantic consequence of this asymmetry is that BACK-adverbs end up having only one possible prejacent in a sentence (because there is only one place to attach), and therefore only one possible reading (assuming that the lexical entry is kept constant); whereas AGAIN-adverbs have different possible places to attach, and can therefore have multiple possible prejacents, and many corresponding readings based on the size of said prejacent.

In the following chapter I explore other readings of BACK-adverbs and significantly revise the semantics of reversal to account for fine-grained features common to the readings of BACK and explain empirical patterns that would otherwise have to be deemed accidental.

CHAPTER 3

THE SEMANTICS OF REVERSAL

The aim of this chapter is to provide an explanation for the central empirical fact being investigated in this dissertation: that across different languages, BACK-adverbs can occur with a diverse set of predicates, and depending on which predicate is modified, produce slightly different, but ultimately related readings. For ease of exposition, I use English examples in this introduction to summarize the readings discussed, but they apply in the same way to Hindi-Urdu and Dutch as well.[1]

(118) a. Ali flew back from New York. $\boxed{\text{REVERSED PATH}}$

     b. The door swung back open. $\boxed{\text{RESTITUTIVE}}$

     c. Bina hugged Ali back. RESPONSE

In this chapter I deal with the semantics of the first two of the above readings in detail, to make the argument that given the right treatment of BACK, we can unify the $\boxed{\text{REVERSED PATH}}$ and $\boxed{\text{RESTITUTIVE}}$ cases under a single umbrella. This in turn opens the door to an extension to account for RESPONSE readings. My goal in this chapter is to show that in the first two cases, BACK selects for *dynamic predicates*, i.e. predicates that involve a measurable change or potential change in a participant (Beavers 2008b:245,263).[2] This category includes directed motion verbs, which

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[1]In English, the BACK-restitutive is restricted to resultatives; it is more productive in Dutch and Hindi-Urdu (e.g. they allow 'to open back' which is ungrammatical in English), showing a distribution similar to English AGAIN-restitutive (e.g. *to open again*). Details of crosslinguistic similarities and differences in Chapter 5.

[2]This work is the same as the later ebook Beavers (2013).

give rise to the REVERSED PATH reading, and change of state verbs, which give rise to the RESTITUTIVE reading. The lexical entry for BACK familiar from Chapter 2 will be revised significantly in this chapter, but I maintain the position that only one lexical entry is needed to capture these readings correctly.

I present the semantics first as it applies to the REVERSED PATH cases, where there is a path that can have a reverse counterpart. I then show that the RESTITUTIVE cases are simply a special case of the same category, where the dynamic change is not in position along a spatial path, but rather in the values on an ordered scale. Once change of state verbs and directed motion verbs are treated under one framework, it becomes straightforward to define the meaning contribution of BACK in terms of reversal of a path in both cases. In the REVERSED PATH cases, there is a physical path that is part of the lexical content of the verb itself, and consequently available for the adverb to access, and therefore to reverse. In the RESTITUTIVE cases, the adverb accesses a path made up of not points in space but values of a *measurable property* held by an object (Beavers 2008a:103).

The first section lays out the desiderata for a semantics of BACK that can capture the observed facts, and proposes and motivates an enriched semantics. The second section applies the proposed semantics to Hindi-Urdu *vaapas* 'back' and presents semantic derivations building on the syntactic structures presented in the previous chapter. The third section presents a conceptual extension of the semantics to RESPONSE uses of BACK-adverbs.

3.1 The ingredients of counterdirectional events

The core meaning shared by the examples above can be given informally as in (119):

(119)   *Counterdirectional presupposition (to be revised)*

There exists a temporally prior reverse event.

The lexical entry proposed for counterdirectional adverbs by Patel-Grosz & Beck (2014, 2019) (following Fabricius-Hansen 2001) captures the above informal statement (119) with the formal definition given below (120). While this is not the only treatment of counterdirectional available in the literature, it is an accessible representation of the sort of meaning that we are aiming to capture here. Patel-Grosz & Beck present counterdirectionality as a primitive.

(120) *Lexical entry of BACK à la Patel-Grosz & Beck (2019)*

$\llbracket \text{BACK/AGAIN} \rrbracket = \lambda P_{\langle v,t \rangle}.\lambda e_v : \exists e'_v[\tau(e') \prec \tau(e) \land P_C(e')].P(e)$

where P_C is the reverse of P

In this definition, BACK denotes a 2-place function which takes as arguments a predicate $P_{\langle v,t \rangle}$ (aka an *event type*; Zwarts 2019) and an event $e_{\langle v \rangle}$, and returns $P(e)$. The presupposition (between the colon and the final period) is that there exists an event e' which temporally precedes e, and of which P_C holds true. The symbol τ stands for running time of the event (as in Krifka 1998), and $\prec$ stands for temporal precedence. Let's look at just the presupposition by itself:

(121) *Counterdirectional presupposition à la Patel-Grosz & Beck (2014, 2019)*

$\exists e'_v[\tau(e') \prec \tau(e) \land P_C(e')]$

The variable P_C stands for a "contextually given predicate of type $\langle v, t \rangle$ that qualifies as the reversal of the event description" (Patel-Grosz & Beck 2019:4). Semantically, the BACK adverb simply passes up the tree the value of its sister (i.e. its assertoric content is the identity function as shown below), and its substantive meaning contribution lies in the presupposition it introduces.

(122) *Assertoric content of BACK à la Patel-Grosz & Beck (2014, 2019)*

$\lambda P_{\langle v,t \rangle}.\lambda e_v.P(e)$

While the lexical entry in (120) originated in the study of counterdirectional readings of AGAIN, it captures the core meaning contributed by BACK (Beck & Gergel

2015; Patel-Grosz & Beck 2014, 2019), as demonstrated in Chapter 2. This chapter is a detailed argument showing that it is both possible and necessary to go beyond this core meaning of BACK to give a finer-grained treatment of its semantics. By adding in its more specific features, we can explain empirical patterns that would otherwise be deemed accidental.

Properly, both P and P_C above should be understood as shorthand for a full neo-Davidsonian event description, i.e. a conjunction of thematic relations associating the verb and its (non-quantificational) arguments and adjuncts with the event, e.g. **fly(e) & Agent(e)=Ali & Source(e)=New York &...** and so on. Given the above lexical entry, the counterdirectional presupposition (i.e. the presupposition generated by BACK-adverb) in each case is simply some event type P_C predicated of the prior event e'. At this point there is an open question about the content of P_C: how do we know what sorts of events could count as reverse of each other? If the variable P_C stands for a "contextually given predicate...that qualifies as a reversal of the event description P", we are effectively putting off defining what that means by appealing to an undefined notion of reversal. In reality, there are very specific properties that characterize reverse events, and the following subsections discuss these properties.

This statement is derived from the licensing conditions observed for the examples above. A simple application of this statement to these examples is shown in (123)–(125) below. Note that I will generally ignore tense in my semantics, but I make the standard assumption that the event variable will be existentially closed with the introduction of tense.

(123)   Ali flew back from New York.   REVERSED PATH

⇒ The sentence is defined iff

There exists a prior event which is the reverse of Ali flying from New York.

(124)   The door swung back open.   RESTITUTIVE

⇒ The sentence is defined iff

There exists a prior event which is the reverse of the door swinging open.

(125)   Bina hugged Ali back.   RESPONSE

⇒ The sentence is defined iff

There exists a prior event which is the reverse of Bina hugging Ali.

The primary focus of this chapter is REVERSED PATH and RESTITUTIVE readings. The arguments that follow aim to establish that (i) the types of predicates that give rise to these readings form a natural class; (ii) this natural class can be described using a common set of formal properties; and (iii) therefore BACK can operate on this natural class and produce the two different, but ultimately related readings.

(126)   Ali flew back from New York. | REVERSED PATH |

(127)   The door swung back open. | RESTITUTIVE |

(128)   Bina hugged Ali back.   RESPONSE

In this framework, the RESPONSE readings are the elsewhere case, which I believe this is the right characterization: the RESPONSE readings indeed seem to be possible with any predicate conveying an action that is directed and therefore *reversible*. Response readings involve symmetrical events: an *action* and a *reaction*; they typically arise from communicative events. Predicates that commonly occur in this reading in Hindi-Urdu involve either literal communication, like talking, calling, sending a message, writing a letter—often with an expression of volitionality that makes clear that the asserted (re)action is undertaken in response to a previous action.

Unlike the REVERSED PATH and RESTITUTIVE readings, RESPONSE readings are not restricted to dynamic predicates, i.e. predicates that involve a measurable change or potential change in a participant (Beavers 2008b). The category of dynamic predicates includes directed motion verbs, which give rise to the REVERSED PATH reading, and change of state verbs, which give rise to the RESTITUTIVE reading. The other properties discussed in the following subsections are similarly inapplicable in the RESPONSE cases. Since RESPONSE readings differ in these ways from the other two readings, I present the analysis of RESPONSE readings as an extension in §3.4 (and return to further details of RESPONSE readings in Chapter 4).

3.1.1 Generalized movement

Intuitively, in (123)—repeated below as (129)—where the asserted event is a flying by Ali *from* New York (to place X), it is easy to imagine a reverse event which is a flying by Ali *to* New York (from place X).[3]

(129) Ali flew back from New York.   [=(123)]

  ⇒ The sentence is defined iff

  There exists a prior event which is the reverse of Ali flying from New York.

A similar intuition obtains for motion events in general: for any motion event, its reverse is some event in which the moving entity traverses the reverse spatial path. As shown in (130), the moving entity can have any grammatical role. The examples here are arranged in terms of which ends of the path of motion—Source and Goal—are specified; the entire range of possibilities is attested.

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[3]Somewhat less clunky version of "a fly by Ali", which is how one would standardly read out a Davidsonian tenseless event predication (Kratzer 2021).

(130) a. i. Sonam jumped back onto the stage.   *only Goal specified*

           ...and earlier she had left the stage

       ii. Sonam knocked the trash back off the stage.

           ...and earlier the trash had come onto the stage

    b. i. Ali flew back from New York.   *only Source specified*

           ...and earlier he had gone to New York

       ii. Ali flew the documents back from New York.

           ...and earlier the documents had gone to New York

    c. i. Bina went back home from work.   *both specified*

           ...and earlier she had gone from home to work

       ii. Bina carried her laptop back home from work.

           ...and earlier she had carried it from home to work

    d. i. Lassie came back.   *neither specified*

           ...and earlier she had left (*the place she came back to*)

       ii. Lassie was brought back.

           ...and earlier she had left (*the place she came back to*)

When we look at events of change of state, we find a parallel pattern. We already saw in (124)—repeated below as (131)—where the asserted event is a swinging-open by the door, an easily-imagined reverse event is something like a swinging-shut by the door. A similar intuition obtains for change of state events in general: for any change of state event, its reverse belongs to the set of events in which the entity subject to change undergoes a change in the reverse direction. The representative list below (132) exactly mirrors the list above.[4]

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[4]With one difference: as mentioned earlier in footnote 1 (page 75), the English ʙᴀᴄᴋ-restitutive is restricted to resultatives—this rules out the possibility of an example without an end state specified. Note that while (132b) is an apparent counterexample that seems to survive the lack of an end state, being careful about the meaning it conveys makes it clear that there is here a result, namely (*the speaker being*) *out of a stupor*. My sloppy-seeming use in the main text of the terms *start state* and *end*

(131)   The door swung back open.   [=(124)]

     ⇒ The sentence is defined iff

     There exists a prior event which is the reverse of the door swinging open.

(132)   a. Ada switched the tv back on.   *only end state specified*

        ...and earlier the tv had been turned off

     b. Sonam shook me back out of a stupor.   *only start state specified*

        ...and earlier I had gone into a stupor

     c. Fairy godmothers turn frogs back into princes.   *both specified*

        ...and earlier the princes had become frogs

The examples above show that in the case of REVERSED PATH and RESTITUTIVE readings there is a general pattern to what constitutes $P_C(e)$, given some $P(e)$. The pattern can be summarized as follows:

(133)   GENERALIZATION 1 (to be modified): BACK refers to two events with reverse directions of change.

The generalization above is a statement of the intuition that the REVERSED PATH cases and RESTITUTIVE cases bear a family resemblance. This is not a coincidence: the first kind of reading arises when BACK occurs with directed motion verbs, and the second with verbs of change of state. These two categories of verbs are semantically structured in parallel ways, each with an identifiable *stative scalar attribute* which serves as the semantic core of the verb, and events in the denotation of the verb involve a change in the value of that scalar attribute (see Rappaport Hovav 2014 for a useful survey and proposal for "building scalar changes"). The meaning of BACK can now be re-defined in way that makes reference to this common semantic core. Below is an example of such a redefinition, from Zwarts (2019), who uses PATH

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state is deliberate, to highlight the important parallels between the two readings with BACK—the real factor relevant here is actually the overt presence or absence of a result.

as shorthand for "path or scale"[5] and a names a REVERSE function which returns TRUE just in the case of one event fulfilling whatever are the requirements to be met to count as reverse of another event. Note that where Patel-Grosz & Beck use the notation $\tau(e') \prec \tau(e)$ for temporal precedence, Zwarts uses the shorter form $e' \prec e$ (I adopt this latter convention from here on out for reasons of visual brevity). Below are both the lexical entries that we now have in our toolbox. The reader will notice that the assertoric content is the same in both (I have retained the choice of the variable name E or P to distinguish the two sources).

(134) *Lexical entry of* BACK *à la Zwarts (2019)*

$\llbracket \text{BACK} \rrbracket = \lambda E_{\langle v,t \rangle}.\lambda e_v : \exists e'_v[e' \prec e \wedge E'(e') \wedge \text{REVERSE}(\text{PATH}(e), \text{PATH}(e'))].E(e)$

where E' is a free variable that specifies what is already in the common ground concerning e', apart from its being earlier and opposite in direction

(135) *Lexical entry of* BACK *à la Patel-Grosz & Beck (2014, 2019)* [=(120)]

$\llbracket \text{BACK} \rrbracket = \lambda P_{\langle v,t \rangle}.\lambda e_v : \exists e'_v[\tau(e') \prec \tau(e) \wedge P_C(e')].P(e)$

where P_C is the reverse of P

A note on terminology: from this point I uniformly use the term *event type* for properties of type $\langle v,t \rangle$, rather than its many possible variants: *property*, *event property*, *property of events*, or most confusingly *predicate* (to mean *predicate of events*). I especially want to eschew the simple term *predicate* here to avoid possible confusion with the main verb present in the sentence. To be completely explicit I have listed in (136) below the terms I use and how.

(136) For the sentence *Ali flew back from New York* (123)

    a. *verb* or *predicate* (takes entity as first argument): $\llbracket \text{fly} \rrbracket$

    b. *event type* (takes eventuality as only argument):

        $\lambda e.$ **fly(e) & Agent(e)=Ali & Source(e)=New York &...**

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[5]which Zwarts calls L-PATH (for spatial path) and S-PATH (for scalar path) respectively

    c. Variable name used for *event type*

        i. Patel-Grosz & Beck (2014, 2019): *P*

        ii. Zwarts (2019): *E*

The attractive feature of the Zwarts (2019) approach is that a scalar component is explicitly encoded into the lexical entry of BACK. This much seems necessary in order to allow the sytem to make any predictions at all—the core empirical insight that a theory of BACK needs to capture is the fact that it modifies events built on directed motion verbs and verbs of change of state alike, to yield readings which are essentially the same. The task is then to capture a semantics for the adverb that is able to derive from two discrete categories of predicates the same kind of readings. The explicit inclusion of PATH as in Zwarts (2019) means that a unified semantics for REVERSED PATH and RESTITUTIVE uses can be attempted, while permitting "flavours of path", so to speak, to derive what differences exist between the two. This is an advantage over the Patel-Grosz & Beck (2014, 2019) approach where P_C simply comes from the context, and presumably we would have to make statements on a case by case basis like the reverse of Ali's motion from New York is Ali's motion to New York, the reverse of the change of state from prince to frog is the change of state from frog to prince, and so on. These can all be accounted for in one sweep by introducing a specific path reversal component that lets us identify the locus of counterdirectionality in the grammar. In §3.1.7 of this chapter I discuss the formal definition given by Zwarts (2019) for this path reversal, point out some shortcomings, and propose an impoverished "end point restoring" version of a path as sufficient to capture certain nuances of the REVERSED PATH and RESTITUTIVE readings; this will lead to a refinement of Generalization 1. It will turn out that it is only the end point is relevant to BACK, rather than the entirety of a PATH.

3.1.2 The independence of the event type

A central question this chapter is attempting to answer is how to recover a reverse event from an assertion. To put this in terms of Zwarts' lexical entry (repeated below), what is the content of the event type E'?

(137) *Lexical entry of* BACK *à la Zwarts (2019)* $\hspace{2cm}$ [=(134)]

$[\![\text{BACK}]\!] = \lambda E_{\langle v,t \rangle}.\lambda e_v : \exists e'_v[e' \prec e \wedge E'(e') \wedge \text{REVERSE}(\text{PATH}(e), \text{PATH}(e'))].E(e)$

where E' is a free variable that specifies what is already in the common ground concerning e', apart from its being earlier and opposite in direction

Recall that Patel-Grosz & Beck posit an undifferentiated event type P_C that needs to be somehow recovered from P which is the event type in the assertion.[6] In its stead, Zwarts posits an event type E' that is a free variable whose value is "what is already in the common ground concerning e', apart from its being earlier and opposite in direction" as given in (134) above. Thus E' is somewhat differentiated, in the sense of being divisible into separate event properties such that direction and path can be extracted from it. The content of E' presumably needs to be somehow recoverable from E itself: we know this because sentences with BACK are felicitous out of the blue, showing that the common ground that Zwarts makes reference to can be as small as just the content of the sentence containing the adverb (minus the adverb itself), which is the asserted event type E.

Let's attempt to first make recoverability as straightforward as possible. The null hypothesis regarding the presupposition triggered by BACK is to assume it to be identical to the tenseless proposition that it applies to, i.e. its prejacent.[7] We can

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[6]For which they propose a method of F-marking (in the manner of Schwarzschild 1999), details of which are in Chapter 4. In short, this method can turn into a variable any element that is in P and not in P_C. For example in *Ali flew back from New York to Delhi*, $P =$ **Ali fly from [New York]**$_F$ **to [Delhi]**$_F$, from which we can get **Ali flew from [X] to [Y]**. Existentially closing those variables yields $P_C = \exists X \exists Y$ **such that Ali flew from [X] to [Y]** (a bleached version of P). See §4.4.2 for the syntax of this approach.

[7]something of the form $\lambda e.E(e)$

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express this as follows:

(138) Hypothesis 1: The presupposition triggered by BACK is *there exists a prior event with the same event type*

If this were the case, if the prejacent is a flying by Ali along path p, the presupposition is also a flying by Ali along path p. This null hypothesis can be rejected in the case of BACK because by definition the paths of the two events *cannot* be the same (and indeed have to be the *reverse*). The next best option to facilitate recoverability is to say that *other than the path (which is reversed)*, the other event properties are the same across the two events. We can express this as follows:

(139) Hypothesis 2: The presupposition triggered by BACK is *there exists a prior event with the same event type and reverse path*

This seems like a plausible statement, according to which the reverse of a flying by Ali along path p is a flying by Ali along path p' such that REVERSE(p, p'). This minimally modified hypothesis works for the examples discussed in §3.1.1: the counterdirectional presupposition recoverable from examples (140) and (141) are given below (indicated with $\Rightarrow$), now with an additional, easily accessible inference given in the last line (indicated with $\rightsquigarrow$).

(140) Ali flew back from New York. [=(129)]

$\Rightarrow$ The sentence is defined iff

*There exists a prior event which is the **reverse of Ali flying from New York**.*

$\rightsquigarrow$ *There exists a prior event of Ali **flying to New York**.*

(141) The door swung back open. [=(131)]

$\Rightarrow$ The sentence is defined iff

*There exists a prior event which is the **reverse of the door swinging open**.*

$\rightsquigarrow$ *There exists a prior event of the door **swinging shut**.*

Hypothesis 2 works for simple cases like above, where the sentence is presented out of the blue, and must rely on the content within the sentence from which to recover the right presupposition. Its success, however, relies on the presence of the "⤳"-inferences. However, if we add minimal context, we immediately find that (i) the "⤳"-inferences are not always available, and (ii) BACK is still good even in the absence of these inferences, therefore (iii) Hypothesis 2 cannot hold. Consider the first example below (142) which needs a prior event reverse to *Ali flew from New York*. Here there is an overt licensing antecedent which satisfies this condition despite it not containing an event of flying. Thus, the presupposition of the sentence can be satisfied by a prior event of Ali taking a train to New York; he does not have to have flown there.

(142) Ali took the train to New York and then flew back.   REVERSED PATH

= Ali took the train to New York and then [Ali flew back from New York].

⇒ The sentence is defined iff *There exists a prior event which is the reverse of Ali flying from New York.*

Similar facts obtain in (143) and (144); in each case we are forced to grant that the reverse of an event of R along path p is not simply an event of R along path p' where p' is the reverse of p. These examples show that leaving aside the reversal contributed by BACK itself, the presupposed event type need not be the same as the asserted event. I have included an example of the RESPONSE reading above to show that this underspecification cuts across uses of BACK-adverbs: an event of shaking hands may be the reverse of hugging, and so on.

(143) The door creaked shut and then swung back open.   RESTITUTIVE

= The door creaked shut and then [the door swung back open].

⇒ The sentence is defined iff *There exists a prior event which is the reverse of the door swinging open.*

(144) Ali shook Bina's hand and Bina hugged him back. RESPONSE

= Ali shook Bina's hand and [Bina hugged Ali back].

⇒ The sentence is defined iff *There exists a prior event which is the reverse of Bina hugging Ali.*

This short dicussion shows that an empirical fact to be captured is underspecification of the event type of the presupposed event to account for such 'mismatching' sequences of sentences. Note that this is not a property of English alone; the same underspecification can be observed in Hindi-Urdu as well in Dutch (Zwarts 2019).

(145) a. *Dutch* (*Zwarts 2019*)

Ada fietste naar school. Ze liep terug.

'Ada cycled to school. She walked back.'

Presupposition: There is an earlier event of Ada doing something along a reverse spatial path ending at school.

b. *Hindi-Urdu*

ali saikil calaakar   skuul gayaa aur bhaagkar   vaapas
Ali cycle walk.CONJ.PRT school go.PFV and run.CONJ.PRT back
aayaa
come.PFV
'Ali went to school cycling and (he) came back running.'

Presupposition: There is an earlier event of Ali doing something along a reverse spatial path ending at school.

The finding of this section can be summarized along with the previous findings as below:

(146) a. GENERALIZATION 2 (to be modified): BACK does not restrict the presupposed event type.

b. GENERALIZATION 1 (to be modified): BACK refers to two events with reverse directions of change.

Having laid out a further feature of the counterdirectional presupposition, I draw your attention to a technical problem with the Zwarts (2019) model. The putative recovery of E' from the context in this model seems to require a peculiar operation that we can informally describe as "give me everything about the event except its path and time specifications". Removing the time specification of an event is something that is already implicit in the semantics since the adverb modifies tenseless events; so far so good. It is not obvious, however, how the grammar would go about removing the path specification, or whether a dedicated semantic operation would be needed in order to achieve this effect. As is, it is impossible to "look inside" a full neo-Davidsonian conjunction of thematic relations expressed by the event e.g. **Agent(e)=Ali & Source(e)=New York &...**, to *subtract* some of the conjuncts. The question of how to recover the correct counterdirectional presupposition thus remains open in Zwarts' approach.

I will in my proposal retain the key path-scale unifying insight from Zwarts (2019) and abandon other parts of that analysis, including the "E' as free variable" part which creates the above problem. The next subsections aim to establish the non-negotiable parts of the counterdirectional presupposition, and the E' variable will ultimately be replaced by those finer-grained, more specific requirements.

3.1.3 The dependence of the THEME

The generalization that we have just noted—repeated below—is intended to capture attested mismatches between the assertion and the counterdirectional presupposition; it *broadens* the realm of what sorts of pairs of events can be counterdirectional. However, it needs to be revised somewhat, because in its current form it actually turns out to allow *too many* mismatches.

(147) GENERALIZATION 2 (to be modified): BACK does not restrict the presupposed
event type.

We will examine in this section a generalization of the opposite kind, which *narrows* the realm of counterdirectional events: it is a requirement for suffient commonality between the two events. Specifically, the moving entity (the THEME) must be common to both events. This is illustrated below in two ways. First, consider (148): Tara reversing the path traversed in the first event is infelicitous because that path was traversed by Sonam, and Tara ≠ Sonam.

(148)   Sonam flew from Delhi to London. A day later, #Tara flew back to Delhi.

This sequence produces a flavour of *non sequitur*: the sentence containing BACK is quite easy to accept if one accommodates a proposition that is not actually present in the context, i.e. that Tara also happened to have travelled in the past from Delhi to London (and presumably embarked on this return journey from there). Alternatively, if one were to somehow grant that Sonam is equivalent to Tara in the given context (members of one family, representatives of one company, etc.), the sequence becomes good. Indeed, in an sequence like (148) there is considerably pressure to accommodate Tara as, in fact, equivalent to Sonam; the sequence has the implicature that Tara is Sonam in disguise.[8] From this we can conclude that normally, the entity undergoing movement or progression along the path needs to be the same in the asserted and the presupposed event; deviations from this normal pattern causes implicatures of the "disguise"-kind.

In (149) below is what seems at first glance to be a counterexample to the above claim: the prior event is about Bob, but the following event is about Bob's family.

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[8]Tara and Sonam are both conventionally female names. Where we have two names that do not match in conventional gender, the implicature takes on the flavour of different expressions of gender, for example a transition, or being in drag.

(149)   *Dutch; Zwarts* (*2019*)

Bob emigreerde in de jaren 50. Zijn familie keerde onlangs terug naar Holland.

'Bob emigrated in the fifties. His family came back to Holland recently.'

Presupposition: There is an earlier event of someone migrating along a reverse spatial path starting in Holland.

The above sentence (149) is not really a counterexample, as will become clear by comparing it to (150): note the contrast in acceptability, which shows that an *unconstrained* variation between the two moving objects is not permitted. Rather, in (149) the different moving entities (Bob, Bob's family) are easily understood to serve as proxy for one other *in this particular context*. In (150), the asserted event containing *back* involves a random different moving entity, Famke Jensen (a Dutch actress). In the absence of any easy contextual equivalence between my friend Bob and Famke Jensen, we find that the sequence is once more *infelicitous*, just like (148):

(150)   My friend Bob emigrated from Holland in the fifties. #Famke Jansen came back (to Holland) recently.

The finding of this section can be added to the previous findings as below:

(151)   a.   GENERALIZATION 3 (to be modified): The moving entity (THEME) must be the same across the two events.[9]

b.   GENERALIZATION 2 (modified): BACK does not restrict the *predicate* in the

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[9]While I make this point about contextual equivalence in the context of definite descriptions, it applies in other contexts as well. Indefinites pose a potential counterexample because in specifically the RESTITUTIVE cases, it is possible for the referent of the indefinite to vary with scope. Its *form*, however, must be the same; e.g. in *I turned a light back on*, *a light* can refer to a different light than the one previously on (similar to Bale 2007 scope effects). In general, mismatches are still ruled out. Just like this is illicit: *An executive flew to San Francisco and then #a janitor flew back the next day* (unless the executive and the janitor are both understood as being part of the same unit/representing each other and therefore can be equivalent to each other, which is implausible—compare *an assistant* in place of *a janitor* and the sentence improves in plausibility of that contextual equivalence); so is *A door swung shut and then #a window swung back open*. Thus this generalization is not restricted to definite descriptions. See Chapter 6.

presupposed event type.

c. GENERALIZATION 1 (to be modified): BACK refers to two events with reverse directions of change.

Generalization 3 as stated above has a potential link to the syntax in the following way. Recall that the syntactic structures proposed for Hindi-Urdu involve obligatory movement of the DO, as shown below for an intransitive (repeated example 97, Ch. 2):

(152) *Adj-intransitive, vaapas modifies $v_{[BE]}P$, order Adv-DO*   RESTITUTIVE
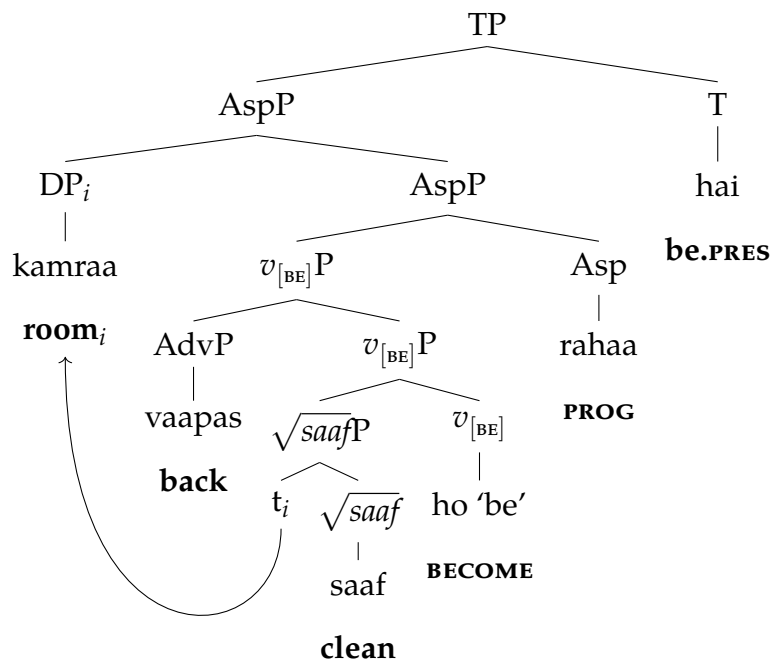
In (152) above, the movement of the DO is posited as something that occurs independently of the adverb, it is just that the adverb's ability to surface in the post-DO position in restitutive readings makes that movement visible. The movement of the DO would normally be understood as leaving a trace that it binds, meaning that the adverb modifies a phrase that contains a bound variable. While (152) involves movement of the DO in a RESTITUTIVE reading, looking at the structure of *vaapas*

modifying a sentence with a motion verbs shows that here too, there is a trace inside what *vaapas* modifies:[10] Note that I assume that the movements described here reconstruct.

(153)   *Motion (unergative), vaapas modifies vP*   [=(205)]

ali vaapas bhaag rahaa hai
Ali back   run   PROG be.PRS

'Ali is running back.'

```
                         TP
              ┌──────────┴──────────┐
            AspP                     T
      ┌──────┴──────┐                │
    DP_i          AspP              hai
      │       ┌─────┴─────┐
     ali     vP          Asp        be.PRES
    Ali_i  ┌──┴──┐        │
         AdvP    vP      rahaa
          │    ┌──┴──┐
        vaapas t_i   vP            PROG
         back       ┌──┴──┐
                 √bhaagP  v
                    │
                 √bhaag
                  bhaag
                   run
```
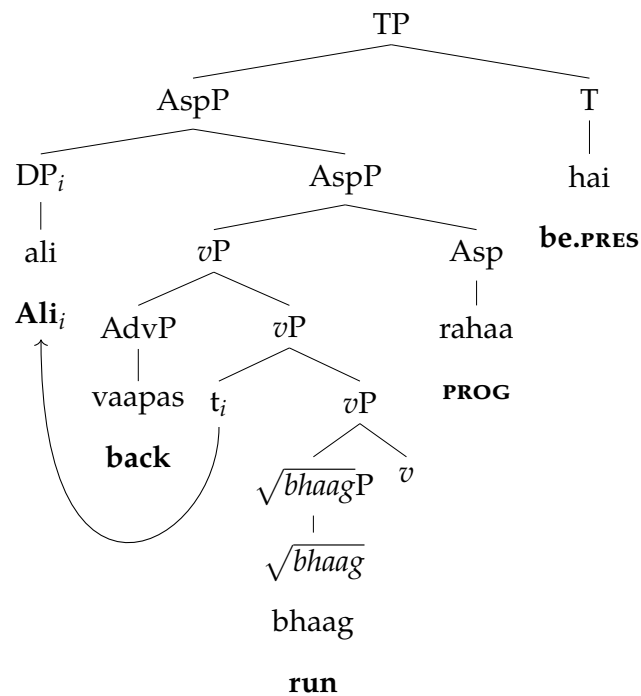
In (153) we see once again a trace within the scope of the adverb. Thus, whether the THEME is a subject that is moving, or an object that is undergoing a change of state, the prejacent of *vaapas* has the same property of containing a bound variable. This naturally raises the following question: is the bound variable the source of Generalization 3? This line of thinking is appealing because it would produce meanings of the following kind, where the THEME is necessarily the same in the

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[10]The tree shown in (153) foreshadows a discussion later in this chapter (§3.3.1) of PATH REVERSAL readings as arising from motion verbs.

assertion and the presupposition, exactly as described by Generalization 3:[11]

(154)   events e of Ali$_i$ running to a destination such that there exists an event e' preceding e where x_i's start point was that destination

(155)   events e of room$_i$ becoming clean such that there exists an event e' preceding e where x_i started out being clean

However, the fact that the requirement for *identity* of the THEME can be satisfied by entities that are merely *contextually equivalent* creates some tension in this appealing picture: the normal interpretation of traces would not be expected to allow for this looseness in the relationship between a binder and a bindee-trace. I leave the resolution of this tension to future work. For our purposes here, the following modification is adequate—for reasons of brevity, I will continue to use the word "same" to refer to the modified statement (see §3.2.2 for related issues).

(156)   a.   GENERALIZATION 3 (to be modified): The moving entity (THEME) must be the same across the two events.

   b.   GENERALIZATION 3 (modified): The moving entity (THEME) must be contextually equivalent across the two events.

3.1.4   Moving THEMES

In the previous subsection I used the term THEME for the moving entity in the sort of reverse 'movement' I am concerned with. Here I briefly discuss the appropriateness of the term for my approach to BACK. To reiterate: the core empirical insight that a theory of BACK needs to capture is the fact that it modifies events built on directed motion verbs and verbs of change of state alike, to yield readings which are essentially the same. The task is then to capture a semantics for the adverb

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[11]Note that these statements of the meaning are based on my revised semantics for BACK, fully fleshed out in §3.1.7, featuring equivalence between the end point of the asserted and the start point of the presupposed event.

that is able to derive from two discrete categories of predicates the same kind of readings. Using THEME as a cover term for "moving or changing entity" plays a role in this task.

The idea of a THEME as an entity that moves in motion events and undergoes change in change of state events seems to be taken as a given in, say Dowty (1991), who makes reference to "traditional Themes, i.e. things entailed to 'move or undergo a change of state'", and then repeated in quotation in a range of subsequent work by various authors. The first (unambiguous) use of the term "Theme" — rather than, say, "Patient" or "affected object"—is somewhat hard to track down precisely. Gropen et al. (1991) state that "...[s]ince the early analyses of Gruber (1965) and Jackendoff (1975) it has been apparent that events involving physical motion and events involving more abstract changes are expressed using parallel syntactic structures", and discuss in this context the concept of *affectedness*, qua "a change of location (i.e., a motion) or a change of state". At its most abstract, affectedness has been modelled by Jackendoff (1983, 1987, 1992) and Pinker (1989) as involving the putative predicate GO (from X to Y) (Gropen et al. 1991:158, fn 2).

In more recent work, most notably Rappaport Hovav (2014), there has been a conceptual unification of these two categories from the standpoint of the predicate rather than the moving/changing entity. This unification is brought about under the umbrella of scalar change, where verbs of directed motion and change of state verbs are shown to have similar interpretive and argument realization properties, analyzed as being due to these verbs lexically encoding a scale.

The intuitive family resemblance of the REVERSED PATH and RESTITUTIVE cases with BACK comes from a fundamental equivalence between paths and scales, both in the way that natural language refers to them, and in their own internal mereological structure. A succinct statement of this equivalance comes from Rappaport Hovav & Levin (2010): "Verbs denoting events of scalar change lexically specify a

scale, where a scale is a set of degrees—points or intervals indicating measurement values—on a particular dimension (e.g., height, temperature, cost), with an associated ordering relation (Kennedy 2001; Kennedy & McNally 2005). The dimension represents an attribute of an argument of the verb, with the degrees indicating the possible values of this attribute. A scalar change in an entity involves a change in value of this attribute in a particular direction along the scale, with the direction specified by the ordering relation.''

It is worth mentioning here that once we treat scalar change as a unified category, there is in principle nothing preventing us from using the terminology of Figure and Ground from Talmy (1985, 1991) to describe the terms of this unification. Where a THEME undergoes development (motion or change) along a SCALE, a FIGURE equivalently moves relative to a reference GROUND ($\cong$ SCALE), thereby tracing a PATH *to*(*wards*) a Goal or a result (see for example Ito 2018 for a recent application of this approach). Indeed, the realm of predicates that BACK combines with—strikingly so in English—is peppered with prepositional phrases in not only the REVERSED PATH cases (e.g. **walk** *back* **to the house**), but also the restitutive cases (e.g. **warm** *the soup back* **up**), including apparently "dummy" PPs that have no discernible role in the sentence other than to provide an overt result (e.g. **open** *the store back* **up**).

In either case, dynamic predicates, i.e. those that can combine with BACK will form a natural class. An example of a verb denoting change of state (i.e. having a result state) is *cool*; it is associated with a scale made up of values on the dimension of temperature, and an event of cooling involves a decrease in value along this dimension. In the domain of directed motion verbs, the scale is made up of values on the spatial dimension, specifying the location of a theme, most often relative to a reference point/object/direction, for example: a perspectival center for *come* and *go*, or the (downward) direction of gravity for *ascend* and *descend*. For the sake of clarity I adopt the following definition of a THEME, and in this dissertation I use

THEME as the cover term for both *cool*-type events and *come*-type events.

(157)   *Maling (2001)*

The THEME is the entity which undergoes the (physical) change of state or
location.

It is important to dissociate this usage of THEME from the grammatical (syntac-
tic) role of object, or thematic (semantic) role PATIENT/THEME, because subjects and
objects alike, AGENT or PATIENT, they are all equally able to be a moving entity in this
context.

The finding of this section can be summarized along with the previous findings
as below:

(158)   a. GENERALIZATION 3: The THEME must be the same across the two events.

   b. GENERALIZATION 2: BACK does not restrict the predicate in the presup-
       posed event type.

   c. GENERALIZATION 1 (to be modified): BACK refers to two events with re-
       verse directions of change.

3.1.5   Verbs and SCALE

The preceding subsection established a vocabulary for dynamic predicates, where
THEME is the entity that moves or undergoes change of state, and introduced a claim
that movement and change of state can be subsumed under the single notion of
scalar change. Rappaport Hovav (2014) provides extensive argumentation sup-
porting this claim, by showing that the two categories share several key properties.
Below is a brief summary of the arguments most relevant here.

Verbs of change of state denote a scalar change undergone by the THEME in the
property domain. This change is established via a comparison of the degree to
which a scalar attribute holds of the THEME at the beginning of the event versus

at the end of the event. The particular scalar attribute may be associated with a range of possible values, e.g. *the water is d-warm*, where there are many degrees or values of *d* on the temperature scale that count as *warm*. Alternatively, it may have just two values corresponding to YES (has the attribute) and NO (does not have the attribute), e.g. *the cat is dead*, where there are just two values on the degenerate scale of non-dead versus dead: *dead* and *not dead* (cannot be partially *dead*); or *the glass is cracked*, where there are just two values on the degenerate scale of non-cracked versus cracked (if something has even a tiny crack, it is *cracked*). There are then verbs (*to*) *warm*, (*to*) *die*, and (*to*) *crack* corresponding to these attributes.[12]

Analogously, verbs of directed motion denote a scalar change undergone by the THEME in the spatial domain. This change is established via a comparison of the location of the THEME along a path at the beginning of the event versus at the end of the event. In every case, the scalar attribute is location relative to some reference object. Similar to change of state verbs, there is are two sub-categories based on the values of the location-attribute that can characterize direction events. There are directed motion events that can be associated with a range of spatial positions or coordinates at the end of the event: consider verbs like *descend*, where there are many positions lower in the vertical space than the starting point that satisfy the truth conditions of *descend*. Alternatively, verbs like *arrive* and *leave* only have two values once again corresponding to YES and NO. For a verb like *arrive*, YES means at the end of the event the THEME is located *at* the reference object (it has *arrived*); for *leave*, YES means at the end of the event the THEME is located *not at* the reference object (it has *left*). The similarity of these properties have been used to argue that change of state verbs and directed motion verbs express the same kind

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[12]Beavers (2008b) calls such cases "minimally complex", as opposed to just "complex":

(i) a. Minimally Complex Objects (MCO) have exactly two subparts.
     b. Complex Objects (CO) have at least three subparts.

of core meaning. To summarize: "[directed motion] verbs are instance of verbs which encode scalar change. There are striking similarities in the structure of the scales encoded in [change of state] verbs and those encoded in [directed motion] verbs, which justifies considering them to be two instantiations of the same kind of change" (Rappaport Hovav 2014:26).

We know that the category of directed motion verbs yields REVERSED PATH readings with BACK, while the category of change of state verbs yields RESTITUTIVE readings. This statement can now be rephrased as follows: when the scalar change is in the spatial domain, BACK produces REVERSED PATH readings; when it is in the property domain, BACK produces readings traditionally referred to as RESTITUTIVE. In the framework I am laying out here, these readings are fundamentally one and the same.

Most of the discussion here is centered around change of state *verbs* and directed motion *verbs* (drawing from Rappaport Hovav 2014 which is a work that concerns itself mainly with the *lexicalized* properties of verbs). For our present purposes this is sufficient. In Chapter 5, I discuss a wider variety of examples where BACK gives rise to REVERSED PATH and RESTITUTIVE readings even with verbs that do not themselves lexicalize the necessary scalar change, but rather can occur in combination with something else, usually a PP, which would provide the missing meaning. A well-known link between PPs and events is that properties like telicity are often encoded via a PP; verbs that are not inherently telic (like *walk *in an hour*) can be made telic with the addition of a bounded PP (like *walk to the store in an hour*). I discuss in Chapter 5 the contribution of BACK in creating telic events, drawing heavily on Beavers (2008b); here is a quick preview. In the motion domain: (*to*) *roll* is not by itself directed motion, and does not have to be in relation to a reference object; however it can acquire the character of directed motion with a PP, e.g. in (*to*) *roll to the corner*. The fact that BACK can occur in these situations, e.g. in *roll back*

(*to the corner*), shows that the adverb is not sensitive to whether its requirements are met via material lexicalized by the predicate, or in some other way. In the change of state domain: English RESTITUTIVES formed with BACK are syntactically similar to these REVERSED PATH cases, as in this domain too, the presence of PP-results can affect the nature of the event as a whole. Consider for instance the examples below (adapted from Rappaport Hovav 2008; Beavers 2008b):

(159)   a. Brad dyed his eyebrows.   *lexicalized scale*

   b. Brad dyed his eyebrows {purple/to a weird colour}.   *can take PP*

   c. Brad dyed his eyebrows **back** (brown/to their original colour).[13]

(160)   a. Max scrubbed the pan.   *no lexicalized scale*

   b. Max scrubbed the pan to shiny silver.   *PP introduces scale*

   c. Max scrubbed the pan **back** *(to shiny silver).[14]

The verb *dye* in (159) has a colour scale built into its meaning, and also an end state when the THEME has fully changed colour and become the final colour. By contrast, *scrub* in (160) is *compatible* with a scale, but the scale is not lexically specified: scrubbing does not entail resulting cleanliness. Rappaport Hovav (2008) concludes from this evidence that all dynamic verbs (at least in English) are *potentially* associated with a scale: with some verbs this is a lexical property and with other verbs it is not.

For the present chapter it is convenient to restrict the deeper discussions to

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[13]Note that in English, adjectival resultatives with BACK are highly restricted compared to PP-resultatives—it is common to find lexically underspecified verbs that are ok with the addition of *back* with a PP-result but resist *back* with an adjectival result (e.g. *?scrubbed the pan **back** shiny*). To my knowledge this asymmetry is idiosyncratic. It does not apply to Hindi-Urdu. In order to maintain uniformity across examples presented each of the languages, I have chosen here verbs for which one can find a reasonable number of hits on online searches. The dyed eyebrows example is from here: `https://www.facebook.com/bradmondonyc/videos/466461484803804/`

[14]Full text: Let the fella wash pots once, he comes in and tells me the oven tray was black so hes (sic.) scrubbed it back to shiny silver the best he can.....and that was the day my brand new none (sic.) stick tray met its demise. (Source: `https://twitter.com/HayleyMorgan092/status/14137 78951105925125`)

material lexicalized by the verb. To make explicit the idea of scalar change as a singular property that unites directed motion verbs and change of state verbs, I give below example lexical entries for some of the types of verbs we are concerned with here, with a guide to the notation I use.

(161) $[\![(to)\ come]\!]_{\langle e,vt\rangle}$

$= \lambda x_e \lambda e_v [\textsc{scale}(e) = \textsc{location} \wedge \textsc{theme}(e) = x \wedge \textsc{trace}(e)(0) = s^* \wedge$
$\textsc{trace}(e)(1) = g^*]$

where LOCATION *is the spatial domain (made up of locations/spatial coordinates)*

The scalar value that holds of the THEME at the start of the event is denoted by $\textsc{trace}(e)(0)$, and the scalar value that holds of the THEME at the end of the event is denoted by $\textsc{trace}(e)(1)$. The function TRACE (modelled on Krifka 1998; Link 1998, following Zwarts 2019) takes as arguments the event variable and an index, and returns the scalar value held by the THEME at that index. I have used s^* and g^* to indicate the Source and Goal which come from the context. Since the verb used above is *come*, the Goal (and possibly the Source) can bear further restrictions based on perspective, which I ignore here. The expression $\textsc{scale}(e)$ specifies the domain of scalar change; as discussed above, this is a property in case of verbs of change of state. For directed motion verbs, the domain of scalar change is always the spatial domain, but there may be further specifications, e.g. motion in the vertical plane (*ascend*, *descend*). We are not concerned here with manner specifications, as these constitute non-scalar changes (Rappaport Hovav 2014), but they may also be additionally present in the lexical entry.

We can see a pair of change of state events below, *to heat* and *to cool*, which have identical lexical entries except for the specification that in the case of heating, the value on the temperature scale at the end of the event must be higher than at the start; this is reversed in the case of cooling.

(162) $[\![(to)\ heat]\!]_{\langle e,vt \rangle}$

$= \lambda x_e \lambda e_v[\text{SCALE}(e) = \text{TEMPERATURE} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = s^* \wedge$

$\text{TRACE}(e)(1) = g^* \wedge g^* > s^*]$

(163) $[\![(to)\ cool]\!]_{\langle e,vt \rangle}$

$= \lambda x_e \lambda e_v[\text{SCALE}(e) = \text{TEMPERATURE} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = s^* \wedge$

$\text{TRACE}(e)(1) = g^* \wedge s^* > g^*]$

An important feature of the lexical entries sketched above is that the start point and end point are explicitly encoded, and other interim points are not. Indeed, there need not be any interim points, as BACK-adverbs are generally good even where the scalar change involved in a verb consists of only two values. In English we can observe *back* with motion events that are punctual, as with *click* below, or that are durative, as with *drag*.[15] Note that (164a) and (164b) both involve manner of motion verbs that are interpreted as directed due to the presence of the PP.

(164)   a. Sally clicked the seatbelt back into place.

   b. Sally dragged the seatbelt back across herself.

In Hindi-Urdu, we can find a minimal pair where *pohonc* 'arrive' is punctual, and *bhaag* 'run' is durative—as shown below, both are good with *vaapas* 'back'.

(165)   a. sab log   {vaapas | #ek ghante tak} pohonce
             all people {back | #for an hour}   arrive.PFV
             Lit. 'Everyone arrived back/#for an hour.'

   b. sab log   {vaapas | ek ghante tak} bhaage
             all people {back | for an hour}   run.PFV
             Lit. 'Everyone ran back/for an hour.'

---

[15]The durative nature of (164b) is revealed by the fact that adding a durative adverbial causes the dragging to be interpreted as lasting for the entire duration specified (*Sally dragged the seatbelt back across herself for a whole 30 seconds*). By contrast, (164a) is punctual; while it is compatible with the same durative phrase, the interpretation of the sentence is not that the clicking action was carried out over a span of 30 seconds (*Sally clicked the seatbelt back into place for a whole 30 seconds*). Rather, the most salient interpretation is that Sally clicked the seatbelt back into place and let that situation persist for 30 seconds (before changing it, perhaps by undoing it once again).

Another kind of change of state event can best be illustrated with a verb like
(*to*) *clean*. This example is slightly different from those seen above because here we
cannot appeal to a scale of absolute values as we could with *heat* and *cool*, where
temperature is the relevant attribute. We can, however, identify what constitutes
something being *clean*, and what does not. In this kind of situation, the lexical
entry would look like this:

(166) $[\![(to)\ clean]\!]_{\langle e,vt \rangle}$

$= \lambda x_e \lambda e_v [\text{SCALE}(e) = \text{CLEANNESS} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = \neg\text{CLEAN} \wedge$
$\text{TRACE}(e)(1) = \text{CLEAN}]$

The above case differs in an important way from both the *heat*/*cool* cases, and
the directed motion verbs discussed above, because unlike the previous cases we
have here a two-point scale. While the process of cleaning can of course be gradual
and occur over an extended period of time, the part of the meaning that defines the
verb is the transition from ¬CLEAN to CLEAN. We can define a verb like (*to*) *crack* in
a similar fashion, as shown below, where the relevant domain of scalar change can
be imagined as something like WHOLENESS, and the transition therefore from WHOLE
to ¬WHOLE.

(167) $[\![(to)\ crack]\!]_{\langle e,vt \rangle}$

$= \lambda x_e \lambda e_v [\text{SCALE}(e) = \text{WHOLENESS} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = \text{WHOLE} \wedge$
$\text{TRACE}(e)(1) = \neg\text{WHOLE}]$

This section has presented a way to formalize the vocabulary that we had es-
tablished for dynamic predicates. I turn now to a specific interaction between the
BACK-adverb and the scale of the predicate in its prejacent.

3.1.6 Dependence of the SCALE

An important consideration while formalizing the meaning of BACK is that the presupposition it contributes needs to match the asserted dynamic event in its specified SCALE. In the absence of such a restriction, our semantics would fail to rule out peculiar sequences involving change of state verbs, like someone dirtying a room (movement along the scale of cleanliness/dirtiness) being followed by someone warming it back up (movement along the scale of temperature), as in (168a). The (b) sentence is provided as a control, to rule out the possibility that warming a room back up might somehow be internally ill-formed. It is the unacceptability of the *sequence* in (168a) that needs to be accounted for in our semantics for BACK.

(168)   a.   Aman dirtied the room and then Ben cleaned it back up/ *warmed it back up.

   b.   If the room gets too cold at night, you can warm it back up using the thermostat knob.

Thus in change of state events just like in directed motion events, this pattern can be explained by restricting the use of BACK to cases where the two events involve the same SCALE:

(169)   a.   SCALE(e) = CLEANNESS   b.   SCALE(e) = TEMPERATURE

   (*to*) *clean*, (*to*) *dirty*   (*to*) *warm*, *to cool*

With the addition of the findings from this section, the list of generalizations may be updated as below:

(170)   a.   GENERALIZATION 4: The SCALE must be the same across the two events.

   b.   GENERALIZATION 3: The THEME must be the same across the two events.

   c.   GENERALIZATION 2: BACK does not restrict the predicate in the presupposed event type.

d. GENERALIZATION 1 (to be modified): BACK refers to two events with reverse directions of change.

In the following subsection I return Zwarts' lexical entry, and modify it to reflect the generalizations above.

3.1.7 An impoverishment of paths

Here is the lexical entry from Zwarts (2019) once more, which I now revise based on the above generalizations.

(171) *Lexical entry of BACK à la Zwarts (2019)* $[=(134)]$

$[\![\text{BACK}]\!] = \lambda E_{\langle v,t \rangle}.\lambda e_v : \exists e'_v [e' \prec e \wedge E'(e') \wedge \text{REVERSE}(\text{PATH}(e), \text{PATH}(e'))].E(e)$

where E' is a free variable that specifies what is already in the common ground concerning e', apart from its being earlier and opposite in direction

What we have seen in the above discussion is that there are certain constraints on (i) what BACK can combine with, and (ii) what specific presuppositions under the broad notion of *reversal* it can actually generate; none of which can be easily explained given just a contextual notion of reverse events. A successful alternate proposal would need to capture the generalizations from the previous sections, which I summarize below:

(172) Desiderata for a semantics of BACK:

a. To be modified: BACK makes reference to two events with reverse directions of change.

b. BACK does not restrict the predicate in the presupposed event type.

c. The THEME must be the same across the two events.

d. The SCALE must be the same across the two events.

These points can be expressed in a more formal fashion as shown in their corresponding restatements below:

(173)   a. SCALE is required; without it the adverb is undefined

         b. E' is no longer required, as it is replaced by the following two points:

              i. THEME(e') = THEME(e)

             ii. SCALE(e') = SCALE(e)

A first attempt at rewriting the counterdirectional lexical entry is below. The free variable E' has been removed to account for the freedom that we have seen for the predicate to mismatch between the assertion and presupposition. The THEME and SCALE have been added in to capture the requirement that they remain constant across the two events. The key inheritance that is retained from Zwarts (2019) is the inclusion of PATH, and the as-yet undefined REVERSE function.

(174)   *Lexical entry of* BACK *(to be modified)*

$\llbracket$BACK$\rrbracket = \lambda E_{\langle v,t \rangle}.\lambda e_{\langle v \rangle} : \exists e'_v[e' \prec e \wedge$ SCALE$(e') =$ SCALE$(e) \wedge$ THEME$(e') =$ THEME$(e) \wedge$ REVERSE$($PATH$(e),$ PATH$(e'))].E(e)$

In this section I go one step further in refining the above lexical entry, by presenting an argument in favour of abandoning the REVERSE and PATH components altogether. The purpose being served by these two components in (174) above can be expressed better if we make the following change:

(175)   a. *Change this...*

             REVERSE$($PATH$(e),$ PATH$(e'))$

             "The path of the presupposed prior event e' is the reverse of the path of the asserted event e." (in other words, the assertion denotes movement of the THEME in a direction reverse to a prior movement)

         b. *...to this*

             TRACE$(e')(0) =$ TRACE$(e)(1)$

             "The start point of the presupposed prior event e' is the same as the

end point of the asserted event e'' (in other words, the assertion denotes movement of the THEME to a place it was at before)

An expression TRACE$(e)(0)$ denotes a scalar value that holds of the THEME at the *start* of the event, and correspondingly, TRACE$(e)(1)$ denotes a scalar value that holds of the THEME at the *end* of the event. The function TRACE (modelled on Krifka 1998; Link 1998, following Zwarts 2019) takes as arguments the event variable and an index, and returns the scalar value held by the THEME at that index. The 0 and 1 are used as a convenient way to identify the measurement of the value at the start and end of the event, respectively. My proposed modification to (174) would be as follows (176):

(176)   *Proposed lexical entry for* BACK

$\llbracket$BACK$\rrbracket_{\langle\langle vt\rangle\langle vt\rangle\rangle}$

$= \lambda E_{vt}\lambda e_v.\exists e'_v[e' \prec e \land$ SCALE$(e') =$ SCALE$(e) \land$ THEME$(e') =$ THEME$(e) \land$ TRACE$(e')(0) =$ TRACE$(e)(1)].E(e)$

In order to understand the move away from REVERSE and PATH, let's work through a peculiar event involving movement which highlights a problem with the inclusion of those two components. Consider (177a), and what exactly is happening within the asserted event: there is a pushing event by Road Runner, resulting in Wile E. ending up *off the cliff*.

(177)   a. Road Runner pushed Wile E. Coyote off the cliff.

    b. Road Runner pushed Wile E. Coyote back off the cliff.

In (177a), it is enough that Wile E. is off the cliff at the end, there is no need for the context to specify, for instance, how far he fell, or whether he kept falling forevermore. This sentence suggests that the *relevant* part of the motion undergone by the THEME can be reduced to its location in terms of a 2-point scale that con-

sists of ON_CLIFF and OFF_CLIFF. We can understand this statement as a sufficiency condition:

(178)   *Sufficiency condition for back*

The value of the end point of the asserted event is the only information that is required in order for BACK to convey the reversal of a path.

What are the implications of this sufficiency condition on the next sentence, (177b) which contains *back*? The minimal context that can satisfy the presupposition of (177b) is one where the following is true: there is an eventuality of Wile E. OFF_CLIFF, followed by an eventuality of Wile E. OFF_CLIFF. Importantly, for this sequence to be possible, Wile E. has to have been ON_CLIFF between those two eventualities.

The above description conveys two characteristics of the presupposition of *back*, which I discuss in the subsections below in the following expository order: **First**, that the sequence above necessarily involves some sort of minimal eventuality, and **Second**, that to compute the reverse of a path, it is sufficient to have information about only the end point of the path.

There is a key component of the Road Runner-Wile E. Coyote context that merits further discussion, namely that eventualities are understood to be minimal. In this example, there is an eventuality of Wile E. OFF_CLIFF, followed by an eventuality of Wile E. OFF_CLIFF which can only occur if Wile E. has to have been ON_CLIFF between those two eventualities. This is necessary in order to avoid an interpretation of the sequence of Wile E. OFF_CLIFF (first instance) followed by Wile E. OFF_CLIFF (second instance) as a *continuously holding* state of affairs. This putative continuous interpretation of two distinct eventualities appears to be generally unattested in language, and its non-existence is arguably an extralinguistic property of the world as it normally works. Just like Wile E. has to have been ON_CLIFF between two eventualities of him being OFF_CLIFF, we see that in general, a sequence of two occurrences of

the *same* type of eventuality is *only* coherent when there is a *separation* of the two occurrences. Here I propose a diagnostic using two adverbs that are useful to probe this empirical ground: *again* goes with situations that have this separation, and *still* goes with situations that do not. Indeed, the presence of *again* entails a separation between the two salient eventualities, while the presence of *still* entails that there be no separation. This is illustrated below. Given the contextual information that the heater was running last night (179), you can only say it is *running again* (180a) if it ceased to be running at some intervening point (180b), and you can only say it is *still running* if that is not the case (181b).

(179)   *Context:* The heater was running last night.

(180)   a. The heater is running again.

          $\rightarrow$ Between last night and now,

          $\exists$ time t such that $\neg$(*The heater is running*) at t.

    b. The heater is running **again** after being stopped for an hour.

(181)   a. The heater is still running.

          $\rightarrow$ Between last night and now,

          $\neg\exists$ time t such that $\neg$(*The heater is running*) at t.

    b. The heater is **still** running #after being stopped for an hour.

The above discussion shows that the fact of the sequence $s \prec s$ being interpreted as $s \prec \neg s \prec s$ is not peculiar to the adverb *back*, but rather a general property of how sequences of eventualities are interpreted. Thus it is unsurprising that the presupposition introduced by *back* should also involve this interpretation, i.e. that Wile E.'s states are OFF_CLIFF $\prec$ ON_CLIFF $\prec$ OFF_CLIFF.

With these refinements, we can return to the sufficiency condition (repeated below in 182):

(182)   *Sufficiency condition for back*   [=(178)]

      The value of the end point of the asserted event is the only information that
      is required in order for BACK to convey the reversal of a path.

The statement in (182) matches intuitions about a sentence like (183a) below.
This sentence is true even if before reaching San Francisco, Ali had a layover in
Denver; or if he started his journey, got waylaid and had to re-start it; or in a variety
of other travel-disaster situations. As long as he started in New York and ended in
San Francisco, the presupposition of the adverb is satisfied. We can go further and
eliminate the start-state of the asserted event altogether, as in (183b): here we only
know that Ali ended up in San Francisco—where he had originated—irrespective
of where he had been in between, or from what place (e.g. New York) he began
the specific journey of his return to San Francisco.

(183)   a. Ali flew back from New York to San Francisco.

      b. Ali came back to San Francisco (after many years).

The characteristic ability of counterdirectional "motion" to allow all sorts of
stops, starts, false starts, backtracking, and delays suggests that the events we are
considering are simply silent on what happens between the start and the end. The
two properties of *back* discussed here reflect a view presented by Fabricius-Hansen
(2001) in the context of *wieder* 'again' in German, where the function of the counter-
directional adverb is to restore a formerly holding state of affairs.

Having made clear that for the meaning of *back*, it is sufficient to know the
end-state of the asserted eventuality, we can now rerturn to Generalization 1 and
explicitly define a formal statement of the informal placeholder "reverse directions
of change":

(184)   a. GENERALIZATION 1 (to be modified): BACK refers to two events with re-
         verse directions of change.

b. GENERALIZATION 1 (modified): BACK refers to two events of scalar change such that the end point of the latter event was the start point of the earlier event.

There are some expressions of path reversal available in the literature; below are two such available definitions (and one attempt of my own). All of these definitions of REVERSE include elements that—as we have seen—are not actually required to capture the distribution of BACK.

(185) *Definitions of* REVERSE

    a. *Stronger (Beck & Gergel 2015)*

        i. Let a path be a sequence of locations $\langle l_1, ..., l_n \rangle$

        ii. REVERSE(p, p') if and only if $p = \langle l_1, ..., l_n \rangle$ and $\langle l_n, ..., l_1 \rangle$

    b. *Weaker (Zwarts 2019)*

    For any two paths p, p', REVERSE(p, p') iff

        i. $p(0) = p'(1)$ and

        ii. there is a $j \in (0, 1]$ and an $i \in [0, 1)$ such that $p(j) = p'(i)$

    c. *Somewhere in the middle*

    Two paths p and p' are the *reverse* of each other if and only if

        i. The end point of p is the start point of p'

        ii. The start point of p is the end point of p'

The version from Beck & Gergel (2015) would not allow for backtracks and other types of paths that are compatible with BACK. Both Zwarts' and mine appear to serve their purpose with only one clause. I therefore adopt the following lexical entry, where reversal is defined in the most economical way possible: TRACE$(e')(0) = $ TRACE$(e)(1)$.

(186)   *Proposed lexical entry for* BACK $[=(176)]$

$[\![\text{BACK}]\!]_{\langle\langle vt\rangle\langle vt\rangle\rangle}$

$= \lambda E_{vt} \lambda e_v : \exists e'_v [e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$
$\text{TRACE}(e')(0) = \text{TRACE}(e)(1)].E(e)$

3.1.8   Summary: A semantics for BACK adverbs

The previous sections have established that REVERSED PATH and RESTITUTIVE readings share a variety of properties, all of which have the form "this component of the presupposition derives from a component in the assertion". In addition we have a list of desiderata to capture:

(187)   Desiderata for a semantics of BACK:

    a. BACK makes reference to two events of scalar change such that the end point of the latter event was the start point of the earlier event.

    b. BACK does not restrict the predicate in the presupposed event type.

    c. The THEME must be the same across the two events.

    d. The SCALE must be the same across the two events.

The lexical entry in (188) captures the above desiderata. Its components are: (i) the running time of the presupposed event comes from the running time of the asserted event (presupposed is prior), (ii) the value of the THEME and SCALE of the presupposed event comes from the THEME and SCALE (respectively) of the asserted event (they are identical across the events), and (iii) the end point of the presupposed event is identical to a component of the asserted event (its start point).

(188)   *Proposed lexical entry for* BACK $[=(186)]$

$[\![\text{BACK}]\!]_{\langle\langle vt\rangle\langle vt\rangle\rangle}$

$= \lambda E_{vt} \lambda e_v : \exists e'_v [e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$
$\text{TRACE}(e')(0) = \text{TRACE}(e)(1)].E(e)$

Here I reiterate some of the terminology in (188). First, the expression $\text{TRACE}(e)(0)$ denotes a scalar value that holds of the THEME at the *start* of the event. Correspondingly, $\text{TRACE}(e)(1)$ denotes a scalar value that holds of the THEME at the *end* of the event. The function TRACE (modelled on Krifka 1998; Link 1998, following Zwarts 2019) takes as arguments the event variable and an index, and returns the scalar value held by the THEME at that index. Second, the expression $\text{SCALE}(e)$ specifies the domain of scalar change from which the scalar values are drawn; I name the domain of change by the attribute involved. For directed motion verbs, the domain of scalar change is *always* the spatial domain, which I name LOCATION; for verbs of change of state, the domain corresponds to whatever attribute is part of the result state lexically specified by the verb itself.

3.2 Some potential problems

In this section I outline some potential pitfalls for two claims arising from the proposed semantics of BACK, namely (i) that the function of BACK is always to restore a THEME to its original location, i.e. $\text{TRACE}(e')(0) = \text{TRACE}(e)(1)$, and (ii) that the THEME that traverses the path in the asserted event and the presupposed event is one and the same, i.e. $\text{THEME}(e') = \text{THEME}(e)$.

3.2.1 Events of departure

Part of the presuppositional content of the BACK-adverbs, according to my proposed semantics, is the identification of the start point of the presupposed event with $\text{TRACE}(e)(1)$; this is expressed as $\text{TRACE}(e')(0) = \text{TRACE}(e)(1)$. A potential problem for my analysis can be found in examples involving verbs like (194a) above: in Hindi-Urdu, even if $\text{TRACE}(e)(1)$ is not part of the semantics of the verb, *vaapas* is nevertheless possible, as illustrated in (189) below. How can $\text{TRACE}(e')(0)$ be

identified with $\text{TRACE}(e)(1)$ in this case?

(189) bohot der rukne   ke   baad vijay **vaapas** calaa gayaa
       much time stay.INF.OBL GEN.OBL after Vijay **back**   WALK GO.PFV

       Lit. 'After waiting a long time, Vijay left back.'

Note that in this example we can make explicit the speaker's lack of knowledge regarding the position of the THEME at end of the event, by adding the expression *pata nahĩĩ kahãã* 'don't know where' in (190).

(190) bohot der rukne   ke   baad vijay **vaapas** calaa gayaa, **pataa**
       much time stay.INF.OBL GEN.OBL after Vijay **back**   WALK GO.PFV **knowledge**
       nahĩĩ kahãã
       NEG   **where**

       Lit. 'After waiting a long time, Vijay left back, to I don't know where.'

So far, in all the examples discussed, it has been possible to identify a value that holds of the THEME at the end of the event. In change of state, this value is expressed in the verb as a lexicalized end state: we have already seen the verbs *to clean* and *to crack*, which both involve two-point scale. In each case, what is being expressed is the transition from one state to another: from ¬CLEAN at the start to CLEAN at the end, or from WHOLE at the start to ¬WHOLE at the end. Any further changes in the value held by the THEME on that scale are irrelevant; if an object gets cleaner, it is still clean, and an object can be cracked to a lesser or greater degree, but regardless it is still cracked.

(191) a. $[\![(to)\ clean]\!]_{\langle e,vt\rangle}$ $\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ $[=(166)]$

        $= \lambda x_e \lambda e_v[\text{SCALE}(e) = \text{CLEANNESS} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = \neg\text{CLEAN} \wedge$

        $\text{TRACE}(e)(1) = \text{CLEAN}]$

    b. $[\![(to)\ crack]\!]_{\langle e,vt\rangle}$ $\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ $[=(167)]$

        $= \lambda x_e \lambda e_v[\text{SCALE}(e) = \text{WHOLENESS} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = \text{WHOLE} \wedge$

        $\text{TRACE}(e)(1) = \neg\text{WHOLE}]$

In this chapter, I have treated directed motion verbs as if they can all be represented by the templatic lexical entry in (192) below which exactly mirrors the change of state verbs, i.e. they all lexicalize a location held at the end point of the event, as well as a location held at the beginning of the event. Since the proposed semantics for the BACK-adverb requires the end value, the template always provides that value. This is an oversimplification that I now revisit in light of the potential counterexample presented above in (189).

(192) $[\![(to)\ come]\!]_{\langle e,vt \rangle}$ [=(161)]

$= \lambda x_e \lambda e_v [\text{SCALE}(e) = \text{LOCATION} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = s^* \wedge$
$\text{TRACE}(e)(1) = g^*]$

where LOCATION *is the spatial domain (made up of locations/spatial coordinates)*
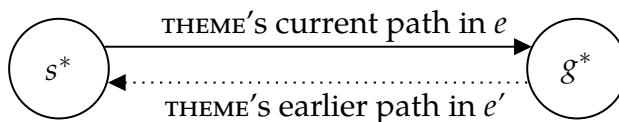
Figure 3.1: $\text{TRACE}(e')(0) = \text{TRACE}(e)(1)$

In reality, directed motion verbs need not lexicalize both start point $\text{TRACE}(e)(0)$ and end point $\text{TRACE}(e)(1)$. Definitionally, to be "directed", one of these must be lexicalized, but the other value s^* or g^* can contribute to the meaning available to the BACK-adverb even if it is not part of the lexical entry - as long as it is retrievable from context. Further, as mentioned in §3.1.5, verbs can be split into two classes: in the case of verbs like *(to) arrive*, it is only $\text{TRACE}(e)(1)$ that is lexically specified; and for verbs like *(to) leave*, it is only $\text{TRACE}(e)(0)$. In either case, the specified value is retrievable from context, and may be expressed within the sentence. Here I refer to that contextually specified spatial location value as LOC_c. Notably, the verb is agnostic to the other value: it need not be overtly mentioned, nor does it need to be known or retrievable from context. Thus the more accurate lexical entries for these

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verbs are as shown in (193a) and (193b). Accompanying them are corresponding trajectories that license the use of *vaapas*.

(193) a. $[\![(to)\ arrive]\!]_{\langle e,vt\rangle}$

   $= \lambda x_e \lambda e_v [\text{SCALE}(e) = \text{LOCATION} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(1) = \text{LOC}_c]$
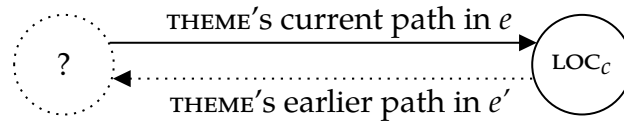
Figure 3.2: $\text{TRACE}(e)(1)$ specified

   b. $[\![(to)\ leave]\!]_{\langle e,vt\rangle}$

   $= \lambda x_e \lambda e_v [\text{SCALE}(e) = \text{LOCATION} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = \text{LOC}_c]$
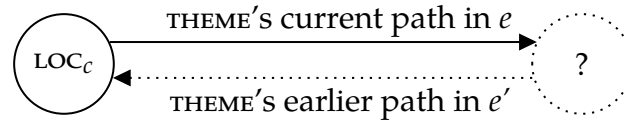
Figure 3.3: $\text{TRACE}(e)(0)$ specified

Verbs of arrival like (193a) are unproblematic for the the proposed treatment of BACK-adverbs: the value $\text{TRACE}(e)(1)$ is retrieved and copied into the presupposition as $\text{TRACE}(e')(0)$. By contrast, verbs of departure like (193b) with the corresponding trajectory Figure 3.3 present a problem, as there is no requirement for $\text{TRACE}(e)(1)$ to be specified. The Hindi-Urdu example is repeated below in (194a) without the adverb: the verb in this case, *calaa gayaa* '(he) left', is a form of *jaanaa* 'to go', which functions like the English verbs *to leave*, *to exit*, *to depart*. Crucially, in this example it is not necessary to know where Vijay ends up after he leaves, and this is behaviour characteristic of the class of verbs of departure, independent of the BACK-adverb. Informally speaking, $\text{TRACE}(e)(1) = $ anywhere except LOC_c; as long as the THEME is somewhere other than the contextually specified location, the sentence is true. The translation 'went away' in (194a) reflects this meaning.

(194) a. bohot der rukne   ke   baad vijay calaa gayaa
           much time stay.INF.OBL GEN.OBL after Vijay WALK GO.PFV

           'After waiting a long time, Vijay went away.'

       b. bohot der rukne   ke   baad vijay **vaapas** calaa gayaa
           much time stay.INF.OBL GEN.OBL after Vijay **back**   WALK GO.PFV

           Lit. 'After waiting a long time, Vijay left back.'

Let's now turn to the sentence with the adverb, repeated in (194b) above. For illustrative purposes, let's assign TRACE$(e)(1)$ a placeholder value LOC$_d$ that can be fed to the denotation of the adverb. We then have the following assignment: TRACE$(e)(0) =$ LOC$_c$, and TRACE$(e)(1) =$ LOC$_d$. The relevant part of the presupposition introduced by the adverb can thus be calculated as follows: TRACE$(e')(0) =$ TRACE$(e)(1) =$ LOC$_d$. This calculation can be stated in words as, "Vijay goes from LOC$_c$ to LOC$_d$, and he was at LOC$_d$ before that", and illustrated schematically as shown below in Figure 3.4. As we have seen, the context does not need to provide a value for LOC$_d$; to show this I have put it inside a dotted circle below.
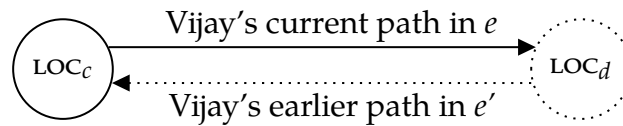
Figure 3.4: Departure with *vaapas*: TRACE$(e')(0) =$ TRACE$(e)(1)$

The felicity of (190) seems to suggest that a weaker statement may suffice; since LOC$_d$ is not a location but rather a placeholder for "any location that is not LOC$_c$", it is enough for it to be true that "Vijay goes from LOC$_c$ to LOC$_d$, and he was at some place other than LOC$_c$ before that (let's call that place LOC$_b$)". This weaker putative alternative can be summed up as follows: TRACE$(e')(0) \neq$ TRACE$(e)(0)$, and illustrated schematically as shown below in Figure 3.5. The context does not need to provide a value for LOC$_d$ or for LOC$_d$; to show this I have put them both inside dotted circles below.
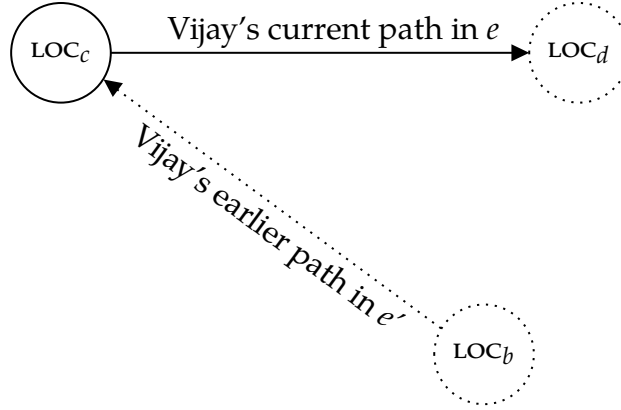
Figure 3.5: Departure with *vaapas*, weakened: $\text{TRACE}(e')(0) \neq \text{TRACE}(e)(0)$

To summarize the effect of the above discussion on the semantics for BACK-adverbs in general, I present the two alternatives together below:

(195)   *Lexical entries for* BACK

    a. *Proposed version* $[=(176)]$

       $[\![\text{BACK}]\!]_{\langle\langle vt\rangle\langle vt\rangle\rangle}$

       $= \lambda E_{vt}\lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$

       $\text{TRACE}(e')(0) = \text{TRACE}(e)(1)].E(e)$

    b. *Weakened version*

       $[\![\text{BACK}]\!]_{\langle\langle vt\rangle\langle vt\rangle\rangle}$

       $= \lambda E_{vt}\lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$

       $\text{TRACE}(e')(0) \neq \text{TRACE}(e)(0)].E(e)$

The weaker putative alternative would allow the presupposition of BACK-adverbs to be satisfied by a much larger set of possible situations. Indeed the presupposition in that case would amount to merely stating that the THEME was not always located at LOC_c; in other words there was a preceding event of motion to LOC_c, it need not have started at the same point where the asserted movement ends. When we look at data from Hindi-Urdu, we find this weaker alternative to be untenable, as I show in (196) below. The context here is set up with the following values: $\text{LOC}_c = \text{NY}$,

LOC_b = SF (where he was before), and LOC_d (where he ends up) is unknown. If the weaker alternative were true, the value of LOC_d could be anything: the contextually salient SF, some other place like LA, or a phrase meaning 'don't know where'. As the example below shows, this does not bear out: compare (196a) which does not contain *vaapas* and (196b) which contains *vaapas*.

(196)   *Context:* Vijay started his journey in San Francisco (SF). He went to New York (NY) for a meeting with someone. The person never showed up, so Vijay left.

    a. bohot der rukne   ke   baad vijay {vahãã/ NY}-se   {SF/
       much time stay.INF.OBL GEN.OBL after Vijay {there/ NY}-from {SF/
       LA/ pataa   nahĩĩ kahãã} calaa gayaa
       LA/ knowledge NEG   where} WALK GO.PFV

       'After waiting a long time, Vijay went from {there/NY} to {SF/LA/ don't know where}.'

    b. bohot der rukne   ke   baad vijay {vahãã/ NY}-se   **vaapas**
       much time stay.INF.OBL GEN.OBL after Vijay {there/ NY}-from **back**
       {SF/ #LA/ #pataa   nahĩĩ kahãã} calaa gayaa
       {SF/ #LA/ #knowledge NEG   where} WALK GO.PFV

       'After waiting a long time, Vijay went back from {there/NY} to {SF/#LA/ #don't know where}.'
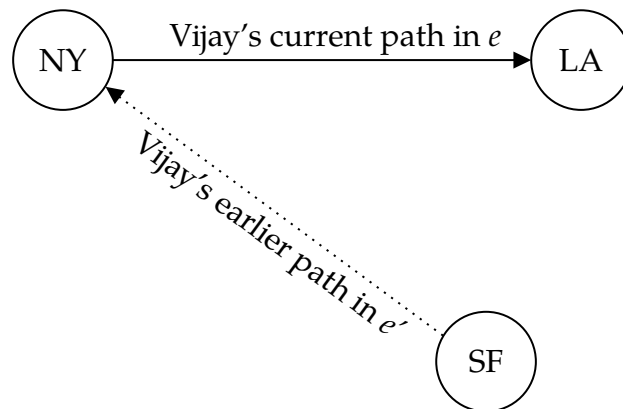
Figure 3.6: Departure with mismatch (196) does not support *vaapas*

In the example above, the sentence without *vaapas* (196a) can have an end point

that matches Vijay's original location (SF), or one that does not (e.g. LA). By contrast, the sentence with *vaapas* (196b) does not permit the end point to be anything other than Vijay's original location. This situation thus illustrates that for *vaapas* to be used correctly in this context, there is no mismatch permitted between $\textsc{trace}(e)(1)$ and $\textsc{trace}(e')(0)$. In other words, the condition from my proposed semantics for BACK-adverbs must be valid: $\textsc{trace}(e')(0) = \textsc{trace}(e)(1)$.

The discussion above shows that weakening the semantics proposed for BACK-adverbs would erroneously rule in a pattern that is not attested. There is also a further alternative we can rule out on the basis of *vaapas* being unsupported in a trajectory like Figure 3.6, let's call this the "mirror-image hypothesis". This alternative recognizes that in terms of material lexicalized within the verb, verbs of departure are the "mirror-image" of verbs of arrival; *vaapas* might then be expected to have a mirror-image counterpart—let's call that $vaapas_d$. For the putative $vaapas_d$, instead of the start point of the presupposed event being copied from the end point of the asserted event $\textsc{theme}(e)(1)$, it is the other way around: $\textsc{theme}(e')(1) = \textsc{theme}(e)(0)$. This statement is in fact true of the situation described by the trajectory in Figure 3.6: $\textsc{theme}(e)(0) = \text{LA}$, and also $\textsc{theme}(e')(1) = \text{LA}$. Since in that situation *vaapas* is not felicitous, we can conclude that stipulating a mirror-image version of *vaapas* exclusively to handle verbs of departure would also erroneously rule in an unattested pattern.

Let's return to the original question, then—what if the destination of the attested motion is truly unknown? If the preceding context truly does not contain any retrievable value for $\textsc{loc}_c$, as in (197) below, there are two observations to be made. First, any end point that is named within the sentence itself will automatically be interpreted Vijay's original location, reflecting a pressure to satisfy the condition $\textsc{trace}(e')(0) = \textsc{trace}(e)(1)$. Thus, if the overtly mentioned place is SF, Vijay will be understood to have started his trip in SF; if it is LA, Vijay is understood to have

started in LA; and so on. Second, if the destination of the asserted motion is truly not known, then Vijay is understood to have started his trip from some place that is also not known.

(197) *Context:* Vijay arrived in NY for a meeting with someone (we don't know where he came from). The person never showed up, so Vijay left (we don't know where he ended up).

a. bohot der rukne   ke   baad vijay {vahãã/ NY}-se   {SF/
    much time stay.INF.OBL GEN.OBL after Vijay {there/ NY}-from {SF/
    LA/ pataa   nahĩĩ kahãã} calaa gayaa
    LA/ knowledge NEG   where} WALK GO.PFV
    'After waiting a long time, Vijay went from {there/NY} to {SF/LA/

    don't know where}.'

b. bohot der rukne   ke   baad vijay {vahãã/ NY}-se   **vaapas**
    much time stay.INF.OBL GEN.OBL after Vijay {there/ NY}-from **back**
    {SF/ LA/ pataa   nahĩĩ kahãã} calaa gayaa
    {SF/ LA/ knowledge NEG   where} WALK GO.PFV
    'After waiting a long time, Vijay went back from {there/NY} to {SF/LA/

    don't know where} (and he had been there before).'
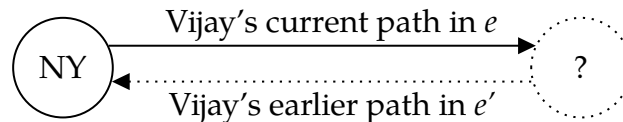
Figure 3.7: Departure with unknown goal (197) supports *vaapas*

My speculation is that a verb of departure can come in two flavours, where one them involves an impoverished or degenerate path (similar to Wile E. Coyote examples in §3.1.7). The relevant part of the motion undergone by the THEME can be reduced to its location in terms of a 2-point scale that consists of AT_LOC$_c$ and ¬AT_LOC$_c$. It appears that while this impoverished version is available in Hindi-Urdu, it is not available in English. While *to leave*, *to depart*, *to exit* and other similar FROM-path verbs do exist in English, they typically do not occur with *back* alone; as

shown in (198a), the English translation of the Hindi example above is ungrammatical. These verbs, however, do occur with *back* when a Goal is overtly present and thus a value for $\textsc{loc}_d$ is retrievable from context: for example *depart back* in (198b) below is accompanied by *to Toronto*. They may also occur with *back* is the Goal is easily inferred from world knowledge, as in (198c) where the end point of an *exit back through the window* is 'outside'. Both (198b)/(198c) effectively sidestep the issue under discussion by allowing the context to straightforwardly provide a value for $\textsc{trace}(e)(1)$, and therefore for $\textsc{trace}(e')(0)$ as well.

(198)   a. *No Goal:* After waiting a long time, Vijay left (*back).

b. *Overt Goal:* Beginning June 28, a direct flight will leave Toronto every day at 3:05 p.m., arriving in Charlottetown at 6:01 p.m. At 6:35 p.m., this same plane will **depart back to Toronto**, and then continue non-stop to its final destination, Vancouver.[16]

c. *Inferred Goal:* The woman inside the apartment woke up, then saw the man enter it through a window...[*violence ensues*]...The woman was finally able to get out the front door of the apartment, while the man **exited back through the window** and was detained by police.[17]

Examples of the above kind, i.e. departure with an overt Goal present, are more common in Hindi-Urdu (according to the corpus study reported in Chapter 5) than departure without an overt Goal. English and Hindi-Urdu both show that when a Goal is present, these departure events become exactly the same as arrival events: the value of $\textsc{loc}_c$ is retrieved, and copied into the presupposition.

I leave a final resolution regarding verbs of departure for future work. In the following sections, in order to illustrate how my semantics proposed BACK-adverbs

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[16]http://www.gov.pe.ca/webarchive/index.php?number=news&dept=&newsnumber=4078&lang=E
[17]https://ca.finance.yahoo.com/news/man-steals-intercity-transit-truck-121500383.html

applies to Hindi-Urdu, I return to the fully articulated version of the lexical entry for verbs of directed motion, i.e. where both start point and end point are specified, $\textsc{trace}(e)(1) = g^*$ and $\textsc{trace}(e)(0) = s^*$.

3.2.2 Non-identity of THEME

Part of my proposed presuppositional content for BACK the following condition: $\textsc{theme}(e') = \textsc{theme}(e)$. As discussed in §3.1.3, this condition needed to be weakened somewhat: it is not necessary that the THEME be the same individual across the two events, so long as they are able to serve as contextual proxies for each other. Here I want to mention a further potential problem for this condition that may warrant a further weakening.[18] There are two classes of examples below that suggest that the perceived equivalence of moving entities across the two events may be better treated as a cancellable implicature.

The first set in (199) are constructed examples involving indefinites. In (199a), the noun phrase *a book* in *I put a book back in* need not refer to the same book that was taken out. Additionally, since it is the second instance of *a book*, it will typically be interpreted as a new book, since a definite (the book) or a pronoun (it) would have been used if it was intended to be the same book at the first. Thus the inference of identical THEME need not hold. Note that the overt antecedent establishing a different referent is required to effect this cancellation: where it is absent, the inference arises as normal, as in (199b), (199c).

(199)   *Context:* I have a large box of books.

    a.   I took a book out, then **put a book back in**. $\nrightarrow$ *The book I put in was inside the box before.*

    b.   I was messing around with my book-box all day. At some point I put a book back in. $\rightarrow$ *The book I put in was inside the box before.*

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[18]Thanks to Kyle Johnson for pointing this out and Robert Henderson at SALT 32 for examples.

c. I was messing around with my books all day. At some point **a book fell back out of the box**. → *The book that fell out was out before.*

d. An extra book was added to the box, but the total weight ended up staying the same since **a book fell (?/#back) out of the box**. ⟶ *The book I put in was inside the box before.*

e. John took my most recent novel out of the box and then **put his new book (?/#back) in**. → *The book John put in (his new book) was inside the box before.*

Further, the cancellation of the identity inference has something to do with the THEME being an indefinite: in (199e) we have two definite descriptions picking out two distinct referents, but still the inference arises as normal, leading to infelicity of *back*. Bale (2007) has examined examples that are quite similar, involving the scope of a quantifier phrase (QP) relative to *again*. He has shown that QPs are allowed be interpreted within the scope of *again* in the case of non-stative transitive verbs, leading to similar situations where the THEME is not the same across the two events, e.g. *He opened two windows again* can be true in a multi-window situation if no two windows were opened twice. Bale's thesis is that non-stative, transitive verbs are functions from individuals to propositions (rather than to predicates), and are thus their VPs are propositionally complex, thus permitting a propositional level before the merger of the subject. It is this extra propositional level that hosts the QP within the scope of the adverb in the case of these verbs and not other verbs (statives, intransitives). It may be fruitful to explore Bale's approach in relation to BACK-adverbs as well: comparing (199a) to the intransitive case (199d), we find that in the latter case despite having all the right conditions for cancellation of the inference, it arises as normal, and is not cancelled.

In (200) below, I note a different strategy to cancel the identity inference. These are all naturally occurring examples where in addition to an overt antecedent, the

THEME in the sentence containing BACK is marked as distinct with the use of an expression like *another one*, *someone else*, *a different one*, and so on.

(200) *Various ways to cancel the identity inference*

    a. [In a 50 Meter T-Shirt Relay,] swimmers will need to swim with a t-shirt over their swimsuit to the other end of the pool...transfer the t-shirt onto their partner and **the partner then swim back to the starting block**.[19]

    b. [An abusive relationship has ended.] It took me over a year to get over what had happened and **let someone else back into my life**.[20]

    c. When you take your trash bag out of the garbage can, you will inevitably have to **put another one back in its place**.[21]

    d. [Someone has handed over their debit card to a taxi driver running a scam, and thus becomes a victim of debit card fraud.] The victim is then distracted by the "customer" and the driver switches the debit cards — keeping the victim's card and **giving them a different one back.**[22]

There are thus two ways to cancel the identity inference, as we have seen above. Note that the discussed examples have involved the reversed path reading (or a reading of reversing possession; these are closely related readings that I deal with in Chapter 5). Restitutive cases do not appear to be amenable to variation in the THEME across the two events:

(201) a. *English*

      I dirtied one room and then **cleaned another one back up**.

      → *The room I cleaned had to have been clean before*

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[19]https://www.teamunify.com/recswisawwm/UserFiles/Image/QuickUpload/3nd-annual-fundrasier-meet-v4$_0$35700.pdf

[20]https://www.adolescent.net/a/when-love-is-the-poison

[21]https://www.walmart.com/ip/Coreless-Interleaved-Rolls-33-Gal-Trash-Bags-250-ct/655422991

[22]https://www.communitysafety.utoronto.ca/fraud-prevention/types-of-frauds-and-scams/taxi-bank-card-fraud/

b. *Hindi-Urdu*

mɛ̃-ne   ek   kamraa gandaa kiyaa   aur phir **doosraa vaapas saaf**
1PRON-ERG one room   dirty   do.PFV and then **second back   clean**
(**kiyaa**)
(**do.PFV**)

'I dirtied one room and then cleaned the second one back up.'

→ *The room I cleaned had to have been clean before*

The persistence of the identity inference in the restitutive cases above suggests that the possibilities of its cancellation are limited to reversed path cases. A way of understanding may be through the nature of paths and attribute scales. While a path in the spatial domain can exist whether or not there is any moving entity on it, the scale of an attribute like cleanliness requires an entity for the attribute/value to be predicated of.

Having seen how the identity inference may be cancelled, I return now to a summary of observations from §3.1.3. In the case of proper names, we saw that introducing variation between the moving entity in the prior event and the asserted event causes an interesting pragmatic effect: two separate individuals are interpreted as being the "same" individual in disguise (202). This disguise-effect reveals a real pragmatic pressure that the THEME be the same across the two events. The relevant notion of "same"-ness cannot truly be limited to strict identity but something looser, like contextual equivalence, as evidenced by the proxy-effect: acceptability of two definite descriptions serving as contextual proxies across the two events (203).

(202)   *Acceptable if Tara = Sonam in disguise*   [=(148)]

Sonam flew from Delhi to London. A day later, #Tara flew back to Delhi.

(203)   *Good if moving entities are contextual proxies for each other*   [(149)]

Bob emigreerde in de jaren 50. {Zijn familie/#Famke Jansen} keerde on-

langs terug naar Holland.

'Bob emigrated in the fifties. {His family/#Famke Jansen} came back to

Holland recently.'

The fact that the identity inference arises as normal when there is no overt an-
tecedent, combined with the appearance of disguise- and proxy-effects for proper
names, all together continue to support the condition THEME(e') = THEME(e) in the
presupposition of BACK, with "=" interpreted to denote contextual equivalence. The
condition may be better treated as a cancellable implicature: *unless overtly indicated
otherwise*, the THEME is understood to remain constant across the two events. To
signal a difference, (i) the context must overtly identify two separate salient in-
dividuals, and (ii) either the sentence containing BACK must mark the THEMES as
distinct with the use of an expression like *another one, someone else, a different one*,
and so on, or it must contain QP in a structure that allows the scope BACK » QP. Like
Bale, I will not attempt to resolve the question here of whether the identity inference
should be removed from the presupposition and treated as an implicature; this I
leave for future work.

3.3   Applying the recipe to Hindi-Urdu

Having laid out the ingredients of the lexical entry for BACK, I now turn to examples
from Hindi-Urdu and show how the semantics I have proposed can be applied
to *vaapas* 'back' such that it can modify motion events to produce REVERSED PATH
readings, and change of state events to produce RESTITUTIVE readings.

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3.3.1 Directed motion verbs and *vaapas*: REVERSED PATH readings

Below are Hindi-Urdu examples with intransitive motion verbs and *vaapas* 'back'. The first example contains the verb *bhaagnaa* 'to run'.

(204)   *Motion verb (unergative)*

ali bhaag rahaa hai
Ali run   PROG be.PRS

'Ali is running.'
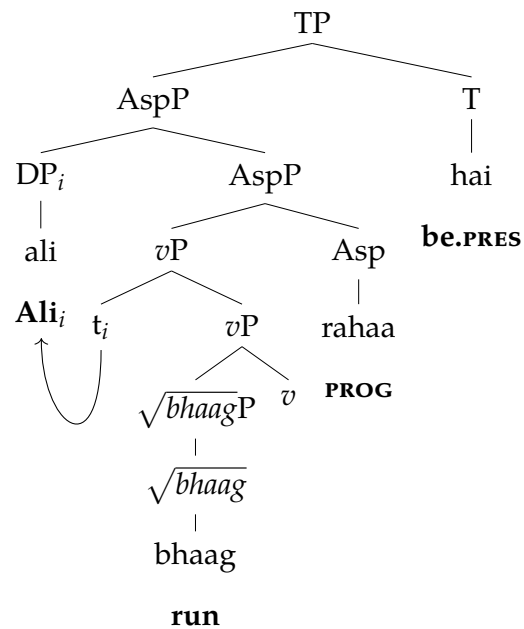
The *v*P part of the above structure can be modified by the BACK-adverb; the result of this modification is a REVERSED PATH reading. Note that following Bhatt & Embick (2017) I represent roots as occuring with a verbal head *v*, whose *v*P projection the adverb attaches to. For our purposes this *v*P is equivalent to what would more standardly be labelled as VP.

(205) *Motion (unergative), vaapas modifies vP*

> ali vaapas bhaag rahaa hai
> Ali back   run   PROG be.PRS

'Ali is running back.'
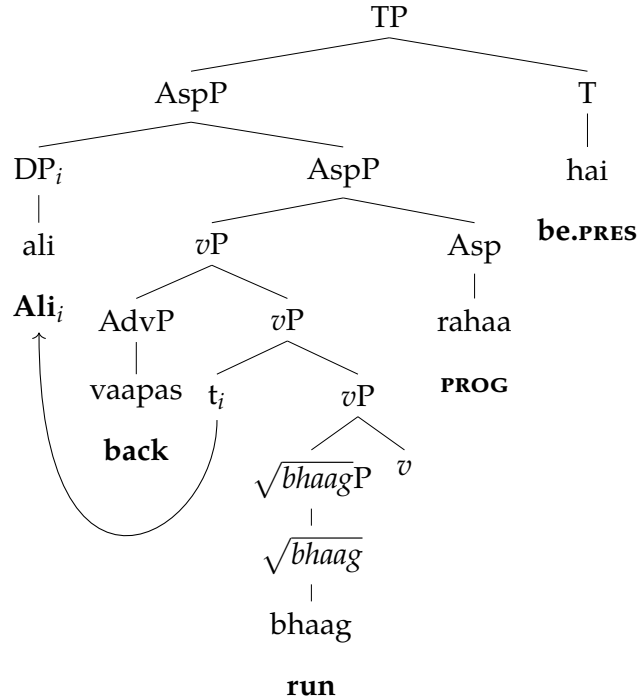
In the intransitive structures, the adverb combines with a constituent of propositional type $\langle v, t \rangle$ which includes the THEME. To be explicit about what is meant by THEME here, I refer to the following definition:

(206) *Maling (2001)*   [=(157)]

The THEME is the entity which undergoes the change of state or location.

The above definition critically does not make reference to grammatical role; this is important in order to separate the concept of THEME from that of OBJECT or the thematic role *Patient*. First, this separation is necessary to account for the fact that a moving THEME functions the same whether it is a grammatical *Subject* or *Agent*, or a grammatical *Patient* or *Undergoer*. Second, it is necessary because in Hindi-Urdu, many verbs show hybrid behaviour with semantic unaccusativity diagnos-

tics (Ahmed 2010), making the structural distinction between internal and external argument harder to make. Indeed, there may be reason to posit two distinct structures for intransitive directed motion verbs, and consequently for causatives built using those structures—while, crucially, *vaapas* does not discriminate based on the structure. Here I assume the unergative structure for the verb *bhaagnaa* 'to run' (204)/(205). The alternative structure would correspond to an unaccusative, as shown below in (207) for the verb *aanaa* 'to come':

(207) *Motion verb (unaccusative), vaapas modifies vP*

ali vaapas aa rahaa hai
Ali back come PROG be.PRS

'Ali is coming back.'
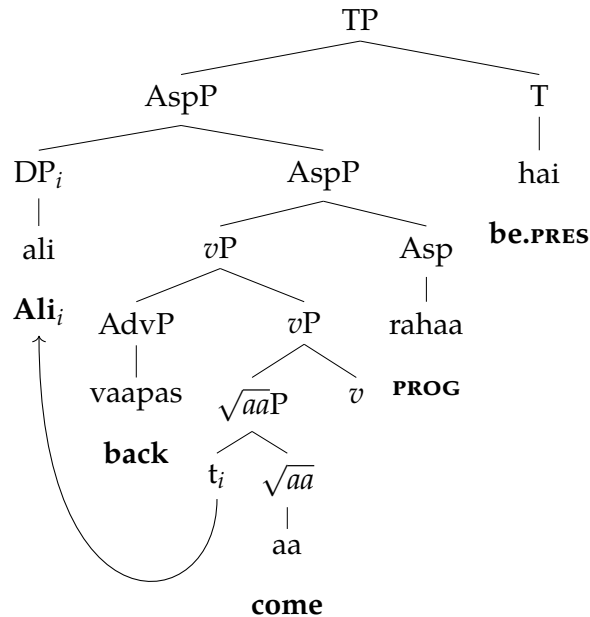
A happy consequence of the semantics for BACK and the definition of THEME employed here (both repeated below in 208a) is that the adverb can apply the same way to either structure, so the meaning of the sentence is unaffected by these syntactic decisions.

(208) a. $[\![\text{BACK}]\!]_{\langle\langle vt\rangle\langle vt\rangle\rangle}$ $[= (186)]$

$= \lambda E_{vt}\lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$

$\text{TRACE}(e')(0) = \text{TRACE}(e)(1)].E(e)$

b. The THEME is the entity which undergoes the change of state or location.

The semantic derivation proceeds as follows for an example like (207) above.

(209) *Composing the $\sqrt{aa}$P*

a. $[\![aa]\!]_{\langle e,vt\rangle}$

$= \lambda x_e \lambda e_v[\text{SCALE}(e) = \text{LOCATION} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = s^* \wedge$

$\text{TRACE}(e)(1) = g^*]$

b. $[\![ali\ aa]\!]_{\langle vt\rangle} = [\![aa]\!]([\![ali]\!])$

$= \lambda x_e \lambda e_v[\text{SCALE}(e) = \text{LOCATION} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = s^* \wedge$

$\text{TRACE}(e)(1) = g^*](ali)$

$= \lambda e_v[\text{SCALE}(e) = \text{LOCATION} \wedge \text{THEME}(e) = ali \wedge \text{TRACE}(e)(0) = s^* \wedge$

$\text{TRACE}(e)(1) = g^*]$

(210) *Denotation of the adverb*

$[\![vaapas]\!]_{\langle\langle vt\rangle\langle vt\rangle\rangle}$

$= \lambda E_{vt}\lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$

$\text{TRACE}(e')(0) = \text{TRACE}(e)(1)].E(e)$

(211) *Composing the vP*

$[\![vaapas]\!]_{\langle\langle vt\rangle\langle vt\rangle\rangle}([\![ali\ aa]\!]_{\langle vt\rangle})$

$= [\lambda E_{vt}\lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$

$\text{TRACE}(e')(0) = \text{TRACE}(e)(1)].E(e)](\lambda e_s[\text{SCALE}(e) = \text{LOCATION} \wedge \text{THEME}(e) =$

$ali \wedge \text{TRACE}(e)(0) = s^* \wedge \text{TRACE}(e)(1) = g^*])$

(212) *Final result*

$= \lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$

$\text{TRACE}(e')(0) = \text{TRACE}(e)(1)].\text{SCALE}(e) = \text{LOCATION} \wedge \text{THEME}(e) = \text{ali} \wedge \text{TRACE}(e)(0) = s^* \wedge \text{TRACE}(e)(1) = g^*$

(213) *Which can also be written as*

$= \lambda e_v : \exists e'_v [e' \prec e \wedge \text{SCALE}(e') = \text{LOCATION} \wedge \text{THEME}(e') = \text{ali} \wedge \text{TRACE}(e')(0) = g^*].\text{SCALE}(e) = \text{LOCATION} \wedge \text{THEME}(e) = \text{ali} \wedge \text{TRACE}(e)(0) = s^* \wedge \text{TRACE}(e)(1) = g^*$

(214) *Final result*

$\Rightarrow$ events e where the THEME starts out at a contextually specified source location s^* and ends up at a contextually specified goal location g^*

Defined only if: the asserted event e is preceded by another event e' where the same THEME starts out at location g^*

3.3.2 Change of state verbs and *vaapas*: RESTITUTIVE readings

The change of state verbs have one specific feature in the syntax that sets them apart from the directed motion verbs, namely the BECOME component.[23] The traditionally given definition for BECOME can be stated informally as follows: the THEME did not posess the relevant property at the beginning of the event, and does possess it at the end of the event. This component is already represented within our definition of BACK in a notationally different way which has the same interpretive effect. Recall the lexical entry we saw earlier for a change of state verb (*to*) *clean*. This happens to be a transitive, but the point holds for intransitive change of state verbs as well.

(215) $[\![(to)\ clean]\!]_{\langle e,vt \rangle}$

$= \lambda x_e \lambda e_v [\text{SCALE}(e) = \text{CLEANNESS} \wedge \text{THEME}(e) = x \wedge \text{TRACE}(e)(0) = \neg \text{CLEAN} \wedge \text{TRACE}(e)(1) = \text{CLEAN}]$

The relevant parts of the lexical entry above are "$\text{TRACE}(e)(0) = \neg \text{CLEAN}$" and

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[23]See Stechow (1995, 1996) for details and citations.

"TRACE$(e)(1)$ = CLEAN". We know that the TRACE function picks out the value of the property held by the THEME at a given index, where 0 corresponds to the beginnig of the event and 1 to the end of the event. This notation therefore means the THEME *does not* posess the property of CLEANNESS at the beginning of the event, and *does* possess that property at the end of the event. An important point to reiterate here is that as we have seen in the previous chapter on restitutives with *phir-se* and *vaapas*, attaching to the result phrase to the exclusion of BECOME is ungrammatical for *vaapas*, and similar facts were observed for English as well. The treatment of change of state predicates and directed motion predicates that I have undertaken here hinges on the BACK-adverb containing BECOME in its scope, and this requirement is captured in the definition of the adverb in the following way. Since the adverb essentially *copies* into the presupposition parts of the assertion, those parts must be present in the assertion: SCALE must be defined, and so must be TRACE$(e)(1)$. Additionally, where there is TRACE$(e)(1)$, there is also TRACE$(e)(0)$—these are the components of change of state, and stand in for BECOME—if either of these is undefined, the presupposition of BACK will be not be met, and the derivation will crash, which is what we want.

The structures I discuss below draw on argumentation presented extensively in Chapter 2. To recapitulate: Hindi-Urdu roots are category-specified as Adjectival and Verbal; I center the present discussion around an intransitive change of state event built on an Adjectival root, noting that Verbal roots behave in the same way.

(216) *C-o-s intransitive, vaapas modifies $v_{[BE]}P$ (order DO-Adv)* RESTITUTIVE

kamraa vaapas saaf   ho rahaa hai
room   back   clean be PROG be.PRES

Lit. 'The room is cleaning again (i.e. becoming back clean).'
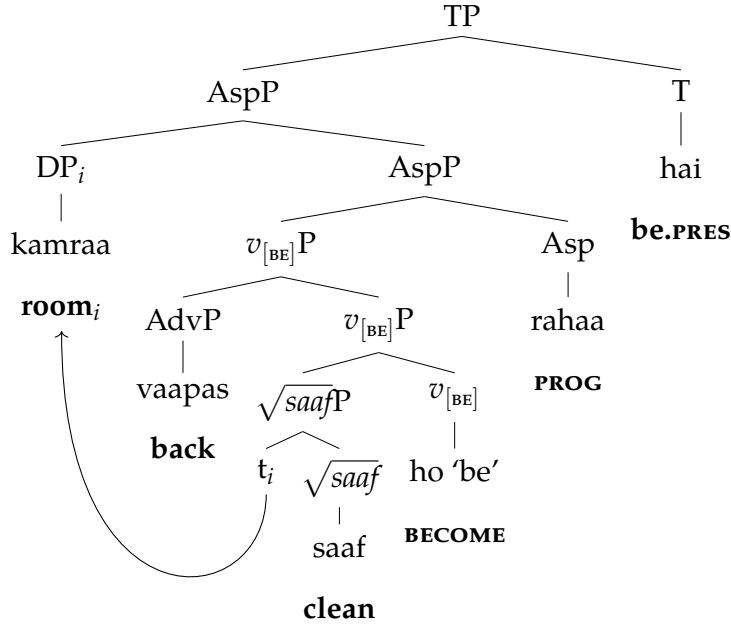
(217) *Composing the $v_{[BE]}P$ before the adverb is merged*

⟦*kamraa saaf ho*⟧$_{\langle vt \rangle}$

$= \lambda e_v[\text{SCALE}(e) = \text{CLEANNESS} \wedge \text{THEME}(e) = \text{room} \wedge \text{TRACE}(e)(0) = \neg\text{CLEAN} \wedge$

$\text{TRACE}(e)(1) = \text{CLEAN}]$

(218) *Denotation of the adverb*

⟦*vaapas*⟧$_{\langle\langle vt \rangle \langle vt \rangle\rangle}$

$= \lambda E_{vt}\lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$

$\text{TRACE}(e')(0) = \text{TRACE}(e)(1)].E(e)$

(219) *Composing the $v_{[BE]}P$ with the adverb*

⟦*vaapas*⟧$_{\langle\langle vt \rangle \langle vt \rangle\rangle}$(⟦*kamraa saaf ho*⟧$_{\langle vt \rangle}$)

$= [\lambda E_{vt}\lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$

$\textsc{trace}(e')(0) = \textsc{trace}(e)(1)].E(e)](\lambda e_s[\textsc{scale}(e) = \textsc{cleanness} \land \textsc{theme}(e) =$ room $\land \textsc{trace}(e)(0) = \neg\textsc{clean} \land \textsc{trace}(e)(1) = \textsc{clean}])$

(220) *Result*

$= \lambda e_v : \exists e'_v[e' \prec e \land \textsc{scale}(e') = \textsc{scale}(e) \land \textsc{theme}(e') = \textsc{theme}(e) \land$
$\textsc{trace}(e')(0) = \textsc{trace}(e)(1)].\textsc{scale}(e) = \textsc{cleanness} \land \textsc{theme}(e) = $ room $\land$
$\textsc{trace}(e)(0) = \neg\textsc{clean} \land \textsc{trace}(e)(1) = \textsc{clean}$

(221) *Which can also be written as*

$= \lambda e_v : \exists e'_v[e' \prec e \land \textsc{scale}(e') = \textsc{cleanness} \land \textsc{theme}(e') = $ room $\land \textsc{trace}(e')(0) =$
$\textsc{clean}].\textsc{scale}(e) = \textsc{cleanness} \land \textsc{theme}(e) = $ room $\land \textsc{trace}(e)(0) = \neg\textsc{clean} \land$
$\textsc{trace}(e)(1) = \textsc{clean}$

(222) *Final result*

$\Rightarrow$ events e where a THEME starts out not clean, and ends up clean

Defined only if: the asserted event e is preceded by another event e' where the same THEME starts out clean

The $v_{[\text{BE}]}\text{P}$ node in change of state verbs whether intransitive or transitive contributes the same semantic content (BECOME). The derivation proceedes for transitives just as it did for intransitives, the structure differring only in the addition of a $v_{[\text{AG}]}\text{P}$ layer on top of the transition event, which introduces the AGENT. Instead of *ho* 'be(come)', we see in the tree below the morpheme *kar* 'do' which is the expression of $v_{[\text{BE}]} + v_{[\text{AG}]}$.

(223)   *C-o-s transitive, vaapas modifies $v_{[BE]}$P (order DO-Adv)*   RESTITUTIVE

TP

DP$_i$ — Lalji

Lalji$_j$

TP

AspP

DP$_i$ — kamraa — **room$_i$**

t$_j$

$v_{[AG]}$P

$v_{[BE]}$P

$v_{[AG]}$P

AdvP — vaapas — **back**

$v_{[BE]}$P

$\sqrt{saaf}$P

t$_i$ — $\sqrt{saaf}$ — saaf — **clean**

$v_{[BE]}$ — **BECOME**

$v_{[AG]}$ — **CAUSE**

Asp — rahaa — **PROG**

T — hai — **be.PRES**
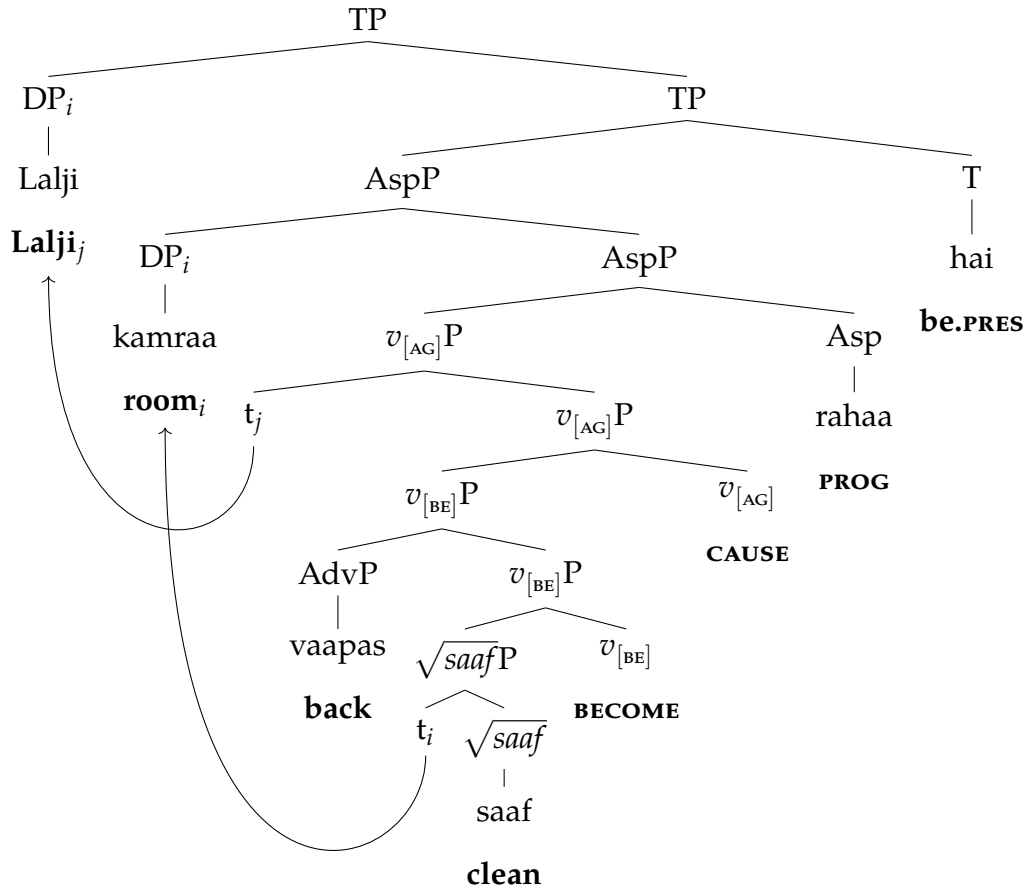
(224)   *Composing the $v_{[BE]}$P with the adverb (same as intransitive above)*

$= \lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{CLEANNESS} \wedge \text{THEME}(e') = \text{room} \wedge \text{TRACE}(e')(0) = \text{CLEAN}].\text{SCALE}(e) = \text{CLEANNESS} \wedge \text{THEME}(e) = \text{room} \wedge \text{TRACE}(e)(0) = \neg\text{CLEAN} \wedge \text{TRACE}(e)(1) = \text{CLEAN}$

(225)   *Composing the $v_{[AG]}$P*

which composes Agent with assertoric content (presupposition stays same)

$= \lambda e_v : \exists e'_v[e' \prec e \wedge \text{SCALE}(e') = \text{CLEANNESS} \wedge \text{THEME}(e') = \text{room} \wedge \text{TRACE}(e')(0) = \text{CLEAN}].\text{AGENT}(e) = \text{Lalji} \wedge \exists e''[cause(e'') = e \wedge \text{SCALE}(e'') = \text{CLEANNESS} \wedge \text{THEME}(e'') = \text{room} \wedge \text{TRACE}(e'')(0) = \neg\text{CLEAN} \wedge \text{TRACE}(e'')(1) = \text{CLEAN}]$

(226) *Final result*

⇒ events *e* with Agent Lalji which causes another (sub)event where a THEME starts out not clean and ends up clean

Defined only if: the asserted event *e* is preceded by another event *e′* where the same THEME starts out clean

3.3.3   Summary of applying the recipe to Hindi-Urdu

In §3.3, I have shown that my proposed semantics for BACK successfully captures the following attested fact about *vaapas* 'back' in Hindi-Urdu: *vaapas* occurs with directed motion verbs and change of state verbs, and a single lexical entry can derive the correct meaning across those two categories.

(227) *Directed motion*

⇒ events *e* where the THEME starts out at a contextually specified source location s^* and ends up at a contextually specified goal location g^*

Defined only if: the asserted event *e* is preceded by another event *e′* where the same THEME starts out at location g^*

(228) *Change of state*

⇒ events *e* where a THEME starts out in a state $\neg s$, and ends up in a state s

Defined only if: the asserted event *e* is preceded by another event *e′* where the same THEME starts out in a state s

Additionally, this section has shown that the contribution of *vaapas* is insensitive to change in transitivity. I have presented only the transitive version of change of state events here, but this insensitivity also holds of transitive directed motion events (like *to return something*).[24]

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[24]Hindi-Urdu examples and verbal paradigms are further discussed in Chapter 5.

(229) *Transitive events* (*directed motion or change of state*)

⇒ events *e* with Agent, which cause another (sub)event where a THEME starts out {in a state ¬*s*/at a location *s**} and ends up {in a state *s*/at a location *g**}

Defined only if: the asserted event *e* is preceded by another event *e′* where the same THEME starts out {in a state ¬*s*/at a location *g**}

Applying the semantic to recipe to Hindi-Urdu has so far looked exactly the same across directed motion and change of state: notably, the attachment site of *vaapas* above is always $v_{[\text{BE}]}$P (or its counterpart *v*P that is the structurally the same but lacks the meaning of BECOME). In §3.4, I turn to an exceptional case of higher attachment of *vaapas*.

3.4 The elsewhere case: RESPONSE readings

The primary focus of this chapter so far has been REVERSED PATH and RESTITUTIVE READINGS. I turn now to the third meaning that arises with BACK, the RESPONSE reading. An example found in the COSH (corpus used for the study presented in Chapter 5) is below:

(230) *Response*   [=(363), Ch. 5]

raavjii **vaapas** likhte   h~ɛ   ki   mahenduu jii ko shikaar
Rao ji **back**   write.IPFV be.PRES.HON that Mahendu ji DAT hunt
ke   bahaane   rohaDyãã ke   biihaR mẽ bhej do,   aage
GEN.OBL excuse.OBL Rohadiyan GEN.PL ravine in   send GIVE.IMP further
mẽ   dekh lũũgaa
1PRON see   TAKE.FUT

'(In response,) Rao ji writes (**back**): Send Mahendu ji to the Rohadiyan ravines on the pretext of hunting, I'll take care of the rest.'

In the assertoric part of (230) above, Rao ji is writing to someone. The adverb *vaapas* does exactly what *back* does in the English translation: it introduces the

presupposition of a prior event of someone's having written to Rao ji. The sentence as a whole is understood to convey Rao ji's writing to the person who wrote to him. Response readings like (230) appear to be the 'elsewhere case' to the first two readings, for three reasons that I outline below.

First, response readings are not restricted to *dynamic predicates* as I have treated them, i.e. predicates that involve a measurable change or potential change in a participant (Beavers 2008b:245,263) (directed motion verbs giving rise to REVERSED PATH readings, and change of state verbs giving rise to RESTITUTIVE readings). At this point a note on terminology is needed: following Beavers, I have so far followed the convention of using "dynamic" to describe change that is measurable in a narrowly specified way: it is "a directed change in the values of a single attribute" (Rappaport Hovav & Levin 2010:12, citing Tenny 1994). In this usage, the term "dynamic predicates" is equivalent to "predicates involving scalar change". By contrast, Rappaport Hovav & Levin draw the "dynamic" line not between scalar and non-scalar verbs, but between stative and non-stative, where "dynamic" refers to the latter. In their taxonomy, there consequently exists a category of *non-scalar dynamic* predicates, which involve "any change that cannot be characterized in terms of an ordered set of values of a single attribute" Rappaport Hovav & Levin (2010:12). Response readings most commonly arise when BACK occurs in combination with precisely this category.

Second, though non-scalar predicates—especially those that describe communicative events like writing—readily lend themselves to response readings, there is a large degree of freedom in predicates that can give rise to this reading given the right context. More or less any action that is directed, and therefore *reversible*, can yield a response reading. Even if a predicate does not typically convey a directed action, the right context can give the event as a whole a directed interpretation, thus making it amenable to modification by *vaapas* to yield the response reading.

Third, from a syntactic perspective, response readings operate on the largest available event, where the internal contents of the event (like its THEME, SCALE, or predicate) are no longer accessible.

3.4.1 Exceptionally high *vaapas*

In Chapter 2 (§2.5.2 and §2.5.4), I have discussed extensively the reasons why *vaapas* attaching higher than $v_{[\text{BE}]}$P produces an incoherent meaning, and therefore in restitutive contexts in particular, word orders corresponding to higher-than-$v_{[\text{BE}]}$P attachment are disfavoured. However, an important part of that discussion is that there is no structural reason to rule out $v_{[\text{AG}]}$P, the only higher projection of the right semantic type (once Agent argument is saturated). It was thus somewhat of a mystery that $v_{[\text{AG}]}$P attachment leads to incoherence. In this section I demistify this observation, and show that $v_{[\text{AG}]}$P in fact does exist, but for it to produce a coherent meaning it must meet a certain specific discourse-requirement.

When *vaapas* is attached at $v_{[\text{AG}]}$P, it can access only a depleted higher event: there is no THEME or SCALE accessible to the adverb, as those are both inside the "closed-off" lower BECOME-event. The relevant structure (repeated from 116, Ch. 2) is shown below. For the structure in (231) below, there is a response reading available, that can be described as given in (232).

(231) *Adjectival transitive, vaapas modifying $v_{[\text{AG}]}P$*

    Unavailable reading: RESTITUTIVE

    Available reading: RESPONSE

```
                              TP
                    ┌─────────┴───────┐
                  AspP                 T
          ┌────────┴──────────┐        │
      v[AG]P                 ┌─┴──┐    hai
   ┌─────┴──────┐           Asp  be.PRES
 AdvP        v[AG]P          │
  │        ┌───┴────────┐  rahaa
vaapas    DP          v[AG]P   PROG
 back      │       ┌────┴──────┐
          Lalji  v[BE]P       v[AG]
          Lalji  ┌──┴──────┐  CAUSE
                DPi       v[BE]P
                 │     ┌────┴────┐
               kamraa √saafP   v[BE]
               roomi  ┌─┴──┐  BECOME
                     ti  √saaf
                          │
                         saaf
                         clean
```
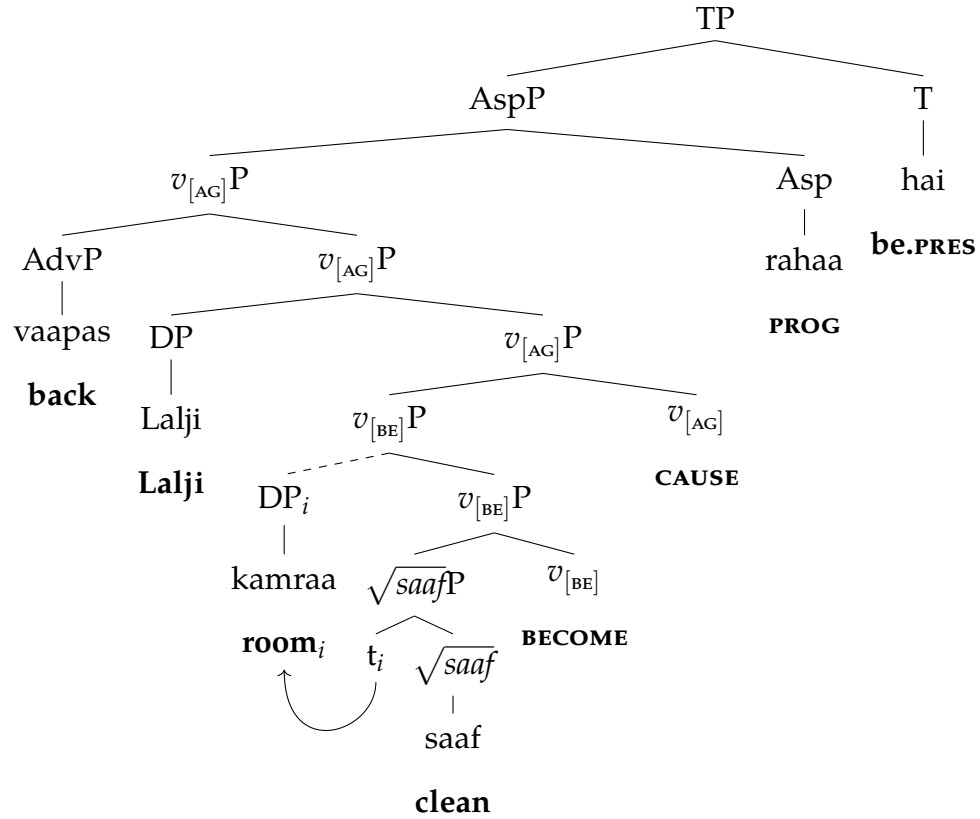
(232) *Context:* Sara and Lalji are on holiday and staying in a hotel room. Sara was nice and took care of the prep for their adventures today; to do a nice thing back, Lalji is tidying up...

vaapas lalji kamraa saaf   kar rahaa hai
back   Lalji room   clean do PROG be.PRES

'In response, Lalji is cleaning the room.'

    The following sections explore in detail some examples of these kinds of RE-SPONSE readings and the core common properties they share. To foreshadow: while the response-event in the RESPONSE reading cases like (232) *can* be an event of scalar change, it usually is not: prototypical cases involves a communicative predicate, no scalar change, and no THEME.

3.4.2 Verbal selection in RESPONSE

In both Hindi-Urdu (and English), RESPONSE readings are typically associated with communicative events. Predicates that occur in this reading in Hindi-Urdu involve talking, sending a message, writing a letter. Below is a Dutch example with *terug*, the equivalent of *vaapas*. Note that I retain Zwarts' placeholder-gloss for *terug* in the example; importantly, the sense conveyed by this sentence is exactly the same as in the Hindi-Urdu example in (230).

(233) *Dutch* (*Zwarts 2019*)

Zij schreef **terug** dat ze kwam.
she wrote **terug** that she came

'She wrote **back** that she came.'

Another feature of RESPONSE readings is volition: examples which express a clear intentionality and will are most easily accepted. Apart from verbs of literal communication, we can find in this category other kinds of verbs which express volition in Hindi-Urdu. These cases often metaphorically 'send a strong message', meaning that the asserted event conveys (re)action that is vengeful or otherwise dramatic, more often than not in response to a previous action which was itself dramatic or aggressive. A relevant example is given below.

(234) aap   ham   par golii daagẽ   ham   bhii
       2PRON.HON/PL 1PRON.HON/PL on bullet shoot.SUBJ 1PRON.HON/PL also
       vaapas golii calaa   dẽge
       back   bullet WALK.CAUS GIVE.SUBJ.1PL.HON/PL
       Lit. 'You shoot bullets at us, we will also shoot back.'

Indeed, RESPONSE always involves an action event and a reaction event, and these two events are frequently of the same kind, as in (234) above. This example is chosen because the two events are overtly specified, but that need not be the case; we can take the first sentence to be equivalent to the presupposition of the second.

The two events have the property of being *reversible*, in the sense that grammatical roles can be reversed or swapped and still yield a coherent meaning: the action is a shooting (A shoots B), and the reaction is a shooting back (B shoots A). Not all events are reversible in this manner; this is easily shown with a verb of consumption like *eat*: you can *eat an apple* but the apple can't *eat you back*. Another shared property of the two events is their THEME: bullet(s).[25] In the first (prior) event, the THEME undergoes movement from (the contextually specified) entity referred to as YOU to (the contextually specified) entity referred to as US. In the second (later) event—which is the assertion that *vaapas* modifies—the THEME moves in the opposite direction, i.e. from US to YOU. Once again, we can find similar examples in Dutch, as described in the following quote (followed by an illustrative example in 235 below):

> "What we find in these examples is an agent acting in response to an earlier action. Sometimes the term *counterdirectional* is used for this sense, in relation to the behaviour of *again* in older stages of English (Beck & Gergel 2015; Gergel & Beck 2015). Larsen (2014) uses the term *reciprocal* for this use of *back*. We typically find communicative events here ('talk', 'write', 'answer', 'call', 'yell'), but also other types of interaction ('love', 'strike', 'fight')." (*Zwarts 2019:216*)

(235)   *Context:* Soldiers hating Jesus.

Toen hij werd uitgescholden, schold hij niet terug.
when he was   reviled,   reviled he not terug

'When he was reviled, he did not revile in return.'

The quote above makes it clear that the communicative flavour of the RESPONSE cases like (235) in Dutch is the same as what we have seen in the Hindi-Urdu cases.

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[25] As noted earlier in §3.1.3 footnote 9, the dependence of the THEME is a requirement of the other readings of BACK-adverbs, and manifests in a restriction on the *form* of the THEME, while the *referent(s)* can be different (in this case different bullets), and that does not violate the requirement.

3.4.3 Semantic characteristics of RESPONSE

Zwarts (2019) treats examples like (235) (repeated below as 236a) in the manner shown in (236b) below, intended to capture the meaning that can be paraphrased as "an action done in response to a prior action of a similar type". Notably, here we do not have the sort of literal movement of the THEME seen in (234), but rather a more abstract progression of an action with a particular directionality. Zwarts appeals to a notion of 'fictive motion' from Talmy (1996) to describe this more abstract/metaphorical movement. The idea here is that verbs that express an action "going" from one participant to another can be thought of as having metaphorical paths. This kind of metaphorical path is referred to as APATH by Zwarts, short for ACTION PATH. The APATH of event e is "the pair of the participants that are connected" by an action-reaction sequence.

(236)   a.   *Context:* Soldiers hating Jesus.

Toen hij werd uitgescholden, schold hij niet terug.
when he was   reviled,   reviled he not terug

'When he was reviled, he did not revile in return.'

   b.   terug schelden ⇒ RESPONSIVE(**revile**)

$$= \lambda e : \exists e'[e' < e \land \textbf{revile}(e') \land \text{REVERSE}(\text{APATH})(e), \text{APATH}(e')].[\textbf{revile}(e)]$$

The APATH basically "encodes the thematic directionality of an action, based on the intuitive idea that we always find a situation here that has a person at one end of the path (where the action starts) and another person at the other end of the path (where the action ends) and that involves an implicit (and often abstract) theme moving along the path". In the above example, the soldiers revile Jesus in the prior event, and in the asserted event is a negation of Jesus reviling the soldiers in return. This is expressed by Zwarts in the manner shown in (237), where the start point of the prior event (i.e. the soldiers doing the hating) is identified with the end point of the asserted event (i.e. the soldiers being—or not being—hated).

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(237)   a.   APATH$(e') = [0 \rightarrow$ **soldiers**$, 1 \rightarrow$ **jesus**$]$

        b.   *There is no event e such that* APATH$(e) = [0 \rightarrow$ **jesus**$, 1 \rightarrow$ **soldiers**$]$

3.4.4   A semantic extension for RESPONSE readings

The ability to accommodate non-identity of event type we are seeing here recalls the general pattern of *vaapas* that we have already discussed in this chapter. To reiterate these general characteristics of BACK captured in the semantic analysis presented in this chapter:

(238)   Desiderata for a semantics of BACK: $[=(172)]$

      a.   BACK makes reference to two events of scalar change such that the end point of the latter event was the start point of the earlier event.

      b.   BACK does not restrict the predicate in the presupposed event type.

      c.   The THEME must be the same the two events.

      d.   The SCALE must be the same across the two events.

With RESPONSE readings, however, some of the above characteristics are irrelevant, specifically the last two points. The irrelevance of scalar change here removes the scalar portion of (239a); it also entirely removes the need for (239d) since there simply are no scales involved. The THEME is an integral, inseparable part only of an event involving change—there has to be something that undergoes the change—since there is no scalar change anymore, THEME becomes irrelevant to the specifications of BACK-as-RESPONSE (indeed RESPONSE readings are perfectly well-formed when there is no THEME present at all). As for (239b): we now know that it is still true of RESPONSE readings that the predicate is not restricted; *vaapas* tolerates mismatches between the presupposed and asserted events (242a) in RESPONSE as it has done in other readings.

These observations on RESPONSE can be summarized as below in (239).

(239)   Desiderata for a semantics of RESPONSE readings of BACK:

  a.   RESP-BACK makes reference to two events ~~of scalar change~~ such that the
       end point of the latter event was the start point of the earlier event.
       (*generally doesn't involve scalar change*)

  b.   RESP-BACK does not restrict the predicate in the presupposed event type.

  c.   ~~The THEME must be the same across the two events.~~   (*theme irrelevant*)

  d.   ~~The SCALE must be the same across the two events.~~   (*not applicable*)

To begin with, the RESPONSE readings we have seen do not have anything to do
with scalar change. Indeed, this is a general property of RESPONSE readings: when
sentences with *vaapas* fail to yield a RESTITUTIVE reading (because they something
other than a change of state predicate for a main verb), and also fail to yield a
REVERSED PATH reading (because they do not contain a motion verb), RESPONSE is
available as the elsewhere case. It is limited only by the above-mentioned inde-
pendent fact that some event types are *irreversible* and those cannot combine with
vaapas at all (all the readings are bad).

3.5   Conclusions

In this chapter I have presented (i) the desiderata for a semantics of BACK based
on observed facts about the relationship between the assertion and the presuppo-
sition in context, and (ii) independent arguments for the unification of categories
that BACK selects for, under the single umbrella of scalar change. The proposed
semantics has been shown to work for Hindi-Urdu *vaapas* 'back' in general, and
pave the way an analysis of RESPONSE readings.

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3.5.1 An anaphoric presupposition

With these tools in place, I can now zoom out and make some broader comments regarding the nature of the counterdirectional presupposition. In the context of the semantic contribution of *again*, Beck views its presupposition as defining an *admittance condition on possible contexts*. This condition may be satisfied by linguistic or non-linguistic means, and may receive overt expression in the proposition that the adverb modifies. Beck (2006) takes the presupposition of *again* to be "anaphoric", in the sense that what precise presupposition is triggered depends on the context. I propose that BACK-adverbs—the semantic and typological cousins of AGAIN-adverbs—can be understood in the same way.[26]

(240)   *Counterdirectional presupposition (basic version)*   [=(119)]

There exists a temporally prior reverse event.

The counterdirectional presupposition (240) seems on the surface to express something at odds with Beck's idea. On the one hand, there can only exist a reverse event *of some event*, and in that sense the presupposition does depend on the content of the assertion. But the problem is that the counterdirectional presupposition can—by definition—never have an antecedent identical to it (linguistic or non-linguistic).

Once we replace the above presupposition with its revised version based on the information we now have, a rather different picture emerges. Instead of having to define the presupposition in terms of opposition to the assertion, we can define it in terms of similarity, features shared or copied from the assertion.

(241)   a. *Counterdirectional lexical entry*

$[\![\text{BACK}]\!]_{\langle\langle vt\rangle\langle vt\rangle\rangle}$ [= (186)]

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[26]While this might appear to be a trivial statement true of all presuppositions, it is not: according to Beck such an analysis is not true for all presuppositions; she cites the definite article as an example of an element whose presupposition does not necessarily depend on an anaphor.

$$= \lambda E_{vt} \lambda e_v : \exists e_v'[e' \prec e \wedge \text{SCALE}(e') = \text{SCALE}(e) \wedge \text{THEME}(e') = \text{THEME}(e) \wedge$$
$$\text{TRACE}(e')(0) = \text{TRACE}(e)(1)].E(e)$$

b. *Counterdirectional presupposition*

There exists a temporally prior event with the following features copied from the assertion: the THEME undergoing scalar change, the domain of change, and the end point of the change.

I have thus presented an analysis of BACK-adverbs that allows the presupposition to be retrieved not from mysterious contextual sources, but simply from the sentence in which the adverb occurs.

3.6 Variation between the two events: A segue to Chapter 4

Having argued for the retrieval of the newly-phrased counterdirectional presupposition (241b) from the sentence hosting it, I turn once more to the situations where the anaphoricity described above breaks down. In this chapter, I have discussed two axes of variation between the assertion and the presupposition. I present some reflections on these below, as well as a third axis of variation.

The first axis is the independence of the event type. We have seen that the predicate must be free to vary between the assertion and the presupposition. To recall examples from §3.1.2, this freedom applies across the three readings: reversed path (*Ali took the train to New York and then flew back*), restitutive (*The door creaked shut and then swung back open*), and response readings (*Ali shook Bina's hand and Bina hugged him back*).

The second axis is the non-identity of the THEME. As discussed in §3.2.2, the moving entity is allowed to vary between the assertion and the presupposition, but only under some specific circumstances: (i) the context must overtly identify two separate salient individuals, and (ii) either the sentence containing BACK must mark

the THEMES as distinct by using an expression like *another one*, or contain a QP within the scope of the adverb. This variation appears to not apply to restitutive cases.

The third axis pertains to response readings in particular. Zwarts points out that in response readings, the action and reaction do not necessarily have to be the same kind: "identity of event types that we see here does not always obtain, because one can hit *terug* 'back' as a response to being kicked, for instance." This observation holds for Hindi-Urdu as well, as shown by the felicity of *vaapas* in the following example. In the sentence-pair below, the action is Anu giving Benu something (242a), and the reaction is Benu complaining about that action to Anu's mom (242b). The reaction thus diverges from the action: the two events need not be identical.

(242)   a. *Hindi-Urdu response pair with predicate non-identical*   [=(281); *Ch 4*]

   Context:

   anu-ne benu-ko jaan buujhkar   galat taalaa de
   Anu-ERG Benu-DAT know understand.CONJPRT wrong lock   give
   diyaa.   jab   baat   niklii   to...
   give.PFV when matter emerge.PFV then

   'Anu deliberately gave Benu the wrong lock.

   When that became known...'

   b. benu-ne {vaapas/ badle meN} [anu-kii maa-ko   jaake
   Benu-ERG {back/   return in} Anu-GEN mother-DAT go.CONJPRT
   chuglii   kar dii]_F
   complaint do give.PFV

   'In response, Benu went and complained to Anu's mom.'

In (242a), where the start point of the prior event (i.e. Anu giving Benu something) is Anu, our definition of the adverb (which identifies the start point of the prior event with the end point of the asserted event), would normally work only if the end point of the asserted event is also Anu. We see here that in Hindi-Urdu, the tolerance for mismatch is very high: *vaapas* is felicitous even though the end point

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of the asserted event (i.e. Benu complaining to Anu's mom) is *not* Anu, but Anu's mom. Despite the *radical mismatch* between an event of Anu giving Benu the wrong lock versus Benu complaining to Anu's mom, the context permits these two events to be understood as a being a response pair. The meaning of the sentence in (242a) conveys deliberate reaction or response on the part of Benu: the reaction of going and complaining to someone (in this case Anu's mom) is effective/relevant in this context only insofar as it can serve as a direct response to Anu's prior action. In the examples below I demonstrate that English similarly allows for radical mismatch in response readings.

(243)   a. *Theme varies:*

One time I was travelling to the airport by bus. I jumped on, **gave the driver some money** and then **he gave me back some change** which I put in my pocket and then sat down.[27]

b. *Agent varies:*

It only lasted for about 1 or 2 months when one night, **I called him**. Next day, **his wife called me back**.[28]

c. *Entire event varies:*

...before *Keeton* was argued, **Flynt had sent Justice O'Connor a complimentary subscription of Hustler magazine**. Generally, litigants are not allowed to engage in ex parte communications with judges. And litigants are definitely not allowed to give valuable gifts to judges. Of course, Flynt did both! **O'Connor's secretary wrote back**, and asked that Flynt take her off the list. Flynt declined.[29]

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[27]https://www.inspiritive.com.au/read-2-common-ways-people-become-stubborn-can
-avoid/

[28]https://www.city-data.com/forum/relationships/2425901-did-you-ever-catch-you
r-spouse-3.html

[29]https://reason.com/volokh/2021/05/14/from-the-fbis-secret-scotus-files-about
-larry-flynt/

The existence of these kinds of licit sequences in multiple languages suggests the mismatch cases in response readings are not a Hindi-Urdu-specific phenomenon, but pertain more generally to the retrieval of presuppositions from context.

The next chapter is about how the retrieval of the counterdirectional presupposition in Hindi-Urdu is impacted by the presence of focus in the sentence containing the presupposition trigger. To foreshadow: introducing focus—and thereby new information—into the sentence expands the set of contexts which satisfy its presupposition. In Hindi-Urdu, focus is positional; it has long been known that for focus to be interpreted on a constituent, that constituent must occur in a specific syntactic position, namely immediately preverbally. Novel data in the coming chapter show that the placement of *vaapas* in the sentence effects the positions available to a focus-bearing constituent. Through the study of the interaction between word order, focus, and *vaapas*, I shed light on some ways in which a language may restrict the variation available when a presupposition is retrieved from a context.

CHAPTER 4

WORD ORDER EFFECTS WITH RESPONSE-*vaapas*

In this chapter, I explore the interaction of *vaapas* with information structure. To this end, I closely examine pragmatic effects that occur as a consequence of varying the surface position of *vaapas*, looking primarily at ditransitives, where the presence of a direct object (DO), indirect object (IO), and subject provide a range of word-order manipulations. Note that the meanings conveyed by the ditransitive sentences are largely in the domain of RESPONSE readings.

The adverb *vaapas* is permitted to occur almost anywhere in a ditransitive; manipulating its position impacts the set of possible contexts that can license the host sentence. Data presented here constitute a significant novel observation: sentences with *vaapas* in the immediately preverbal position are focus-neutral, while sentences with *vaapas* surfacing in any other position signal the presence non-Given ('new') information. The central finding of this chapter is that when not in the focus-neutral order, *vaapas* marks the left edge of a "focus zone": the sentence is required to contain in that zone some material that is not Given in the discourse.

This required non-Given material is in the asserted event that *vaapas* applies to. The focus-effect described above has the consequence that when there is an overt antecedent that satisfies the presupposition generated by *vaapas*, that antecedent must *mismatch* with the assertion in order to meet the non-Givenness requirement. At the end of the last chapter, I discussed cases where the retrieval of the counter-

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directional presupposition allows for variation between the asserted and presupposed events; what we see here is a situation where that variation is not just allowed, but required.

I demonstrate that the observed information-partitioning of the sentence is focus-partitioning of the same kind observed by Bhatt & Dayal (2014) (and discussed further in Bhatt & Dayal 2014; Butt et al. 2017; Butt & Jabeen 2017; Biezma et al. 2018; Bhatt & Dayal 2020) in the context of polar questions in Hindi-Urdu. In the second half of this chapter, through the lens of focus-partitioning I shed new light on what is already known about Hindi-Urdu focus (due most notably to Kidwai 2000), and show that here we are dealing with patterns that cannot be explained by the FocP model standardly adopted for Hindi-Urdu and many other South Asian languages that exhibit positional focus tied to the immediately preverbal position. I engage in this chapter with a syntactic model presented in Patel-Grosz & Beck (2014, 2019) for an adverb (*pacho* 'again/back') equivalent to *vaapas* in the related Indo-Aryan language Kutchi Gujarati. While their model goes a long way in giving a structural account of counterdirectional meaning, the pattern of focus-partitioning examined here shows that such a model could not work for Hindi-Urdu.

4.1 Focus neutrality and accommodation

If we look across the different uses of *vaapaas* 'back', we find that it can appear in almost any position in a sentence. The following sentence is an example of the ditransitive verb *denaa* 'to give' which appears here with a light verb. As shown below, *vaapas* is good anywhere, except for *between* the parts of the complex predicate (which is a position that typically disallows lexical material, permitting only some operators like negation, *-hii* 'only', and *bhii* 'also'). Each position is associated with different pragmatic licensing conditions, but as we can see the assertoric content of the sentence is the same in every case.

(244) (**vaapas**) benu-ne (**vaapas**) anu-ko   (**vaapas**) caabii (**vaapas**) de
       (**back**) Benu-ERG (**back**) Anu-DAT (**back**) key   (**back**) give
       (*vaapas) dii   (**vaapas**)
       (*back)   GIVE.PFV (**back**)

       ≡ 'Benu gave Anu a/the key back.'

Though there is this freedom afforded to *vaapas*, there is a strong native-speaker

intuition that the order *DO vaapas V* is somehow different from other grammatical

surface orders. This intuition finds support in the fact that when uttered as an

answer to the question, "What happened?" only this one order is felicitous, while

all other orders are systematically infelicitous. Sentences that can felicitously an-

swer this kind of maximally broad question are widely regarded as 'focus-neutral'.

In many languages, it is departing from the word-order or prosodic properties of

focus-neutral sentences that signals focus or other marked information-structural

features.[1] Following Kidwai (1999) I use the term 'neutral focus' for the defining

information-structural property of such sentences.[2] Looking at the examples be-

low, we can conclude that only the first sentence (245a) with the order *DO vaapas V*

has neutral focus. The latter three sentences (245b)–(245d) are infelicitous, which

shows that they are not focus-neutral.[3]

(245) (aaj subah) kyaa huaa?
       this morning what happen.PFV

       'What happened this morning?'

       a. benu-ne anu-ko   caabii **vaapas** de   dii
          Benu-ERG Anu-DAT key   back   give GIVE.PFV

          'Benu gave Anu the key back.'

       b. #benu-ne anu-ko   **vaapas** caabii de   dii
          Benu-ERG Anu-DAT back   key   give GIVE.PFV

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[1]This sentence is itself an example of this phenomenon: a cleft.

[2]Another term commonly used in the literature is 'wide focus' (as opposed to narrow focus) in analyses where information-structurally unmarked sentences are assumed to bear focus on the entire sentence.

[3]All Hindi-Urdu data not attributed to cited authors represent my own native speaker judgments corroborated by Rajesh Bhatt, Sakshi Bhatia, and Veneeta Dayal.

   c. #benu-ne **vaapas** anu-ko caabii de dii
      Benu-ERG back Anu-DAT key give GIVE.PFV

   d. #**vaapas** benu-ne anu-ko caabii de dii
      back Benu-ERG Anu-DAT key give GIVE.PFV

As we can see above, of the four grammatical word orders for ditransitives with *vaapas*, it is only the order *DO vaapas V* that is focus-neutral. This neutral flavour arises from the ease with which the presupposition can be accommodated: this order can be uttered felicitously out of the blue as well. Below we see exactly the same pattern as (245) above: only (246a) is felicitous, while (246b)—(246d) are all infelicitous.

(246)   *Out of the blue*

   a. benu-ne anu-ko caabii **vaapas** de dii
      Benu-ERG Anu-DAT key back give GIVE.PFV
      'Benu gave Anu the key back.'

   b. #benu-ne anu-ko **vaapas** caabii de dii
      Benu-ERG Anu-DAT back key give GIVE.PFV

   c. #benu-ne **vaapas** anu-ko caabii de dii
      Benu-ERG back Anu-DAT key give GIVE.PFV

   d. #**vaapas** benu-ne anu-ko caabii de dii
      back Benu-ERG Anu-DAT key give GIVE.PFV

The fact that (246a) is good out of the blue despite containing the presupposition-triggering adverb indicates that *vaapas* in the neutral position falls within the class of presupposition triggers that allow accommodation, making them good out of the blue. This class includes possessive pronouns, some definite descriptions, and some factive verbs. It also seems to be the case that in any other position it falls within a different class of triggers, whose presuppositions systematically resist accommodation (which includes personal pronouns, discourse particles like *too*). However, whether accommodation is possible (soft trigger) or not (hard trigger) is an inherent property of a lexical item; given that *vaapas* has an invariant lexical

entry here, we would not expect there to be variation in this inherent property. The non-neutral orders cannot, therefore, be explained by appealing to the soft/hard trigger distinction.

The pattern above points rather to an explanation based on pragmatics, where the information-structural status of various elements of the sentence can be diagnosed in terms of their positioning relative to *vaapas*. As we will see below, cases that are never acceptable out of the blue form a natural class: they all obligatorily involve focus or the introduction of non-Given information.[4] Below I explain how the presence of focus in the prejacent of the presupposition trigger makes accommodation difficult.

4.1.1 Too many presuppositions to choose from

Consider first a sentence in the neutral order *DO vaapas V* (247a). In (247b) I represent the set of minimal contexts (single propositions) in which the target sentence can be uttered felicitiously.

(247) a. *Target sentence*

benu-ne anu-ko <u>caabii</u> **vaapas** de dii
Benu-ERG Anu-DAT key back give GIVE.PFV

'Benu gave Anu the key back.'

b. *Presuppositions consistent with target sentence*

{Anu had given Benu a/the key earlier}

The truth/falsity of the sentence (247a) can be evaluated if and only if there exists a true proposition in (247b). In other words, (247b) is the set of possible presuppositions compatible with (247a); in this case, as shown above, we have a singleton set. The licensing conditions of the above sentence are easy to identify be-

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[4]The unaccepability of sentences involving focus or the introduction of non-Given information is a very general property—it is shared, for example, by English clefts.

cause there is only one proposition in the presupposition-set, and that proposition contains referents and verb already present (Given) within the uttered sentence it-self. A licit preceding discourse (248) must entail/match the presupposition within the presupposition-set. Let's call this situation the *Match* condition (248a).

(248) anu-ne benu-ko <u>caabii</u> dii,   phir...
       Anu-ERG Benu-DAT <u>key</u> give.PFV then
       'Anu gave Benu a key, then...'

    a. *Match*

        benu-ne anu-ko   <u>caabii</u> **vaapas** de   dii
        Benu-ERG Anu-DAT <u>key</u>   back   give GIVE.PFV

        'Benu gave Anu the key back.'

    b. *Mismatch*

      #benu-ne anu-ko   <u>ciTThii</u> **vaapas** de   dii
      Benu-ERG Anu-DAT <u>#letter</u> back   give GIVE.PFV

      #'Benu gave Anu the letter back.'

In (248b) is shown the *Mismatch* condition: this is a minimally different example created by varying the direct object. If we take (248b) as the target sentence, reading it following context sentence (248) produces the situation where the context does not entail/match the presupposition-set of this sentence (which is the singleton set consisting only of the tenseless proposition expressed by the target sentence itself).

Let us now turn to a sentence in a non-neutral order *vaapas DO V* (249a). Note that to reflect the pragmatically non-neutral nature of this sentence, a pseudocleft has been used in the English translation. I follow this convention throughout this chapter in sentences where it is clear which particular constituent bears focus, and can therefore be pseudoclefted.

In (249b) is the set of minimal contexts in which the target sentence can se uttered felicitously. The truth/falsity of the target sentence can be evaluated if and only if there exists a true proposition in (249b). As shown below, this is no

longer a singleton set, but a set of presuppositions whose common feature is that each of them has some unique material that is not present (Given) within the uttered sentence itself. The set of presuppositions given in (249b) is characterized by (i) the expected contribution of *vaapas*, which effectively designates the Agent from the context as the Recipient in the target sentence, and the Recipient from the context sentence as the target Agent; and (ii) alternatives created by varying the Theme/direct object and keeping constant any other material.

(249)   a. *Target sentence*

        benu-ne anu-ko **vaapas** caabii de   dii
        Benu-ERG Anu-DAT back   key   give GIVE.PFV

        'What Benu gave Anu back was a/the key.'

   b. *Presuppositions consistent with target sentence*

        {~~Anu had given Benu a key earlier~~,

        Anu had given Benu a lock earlier,

        Anu had given Benu a letter earlier,

        Anu had given Benu a password earlier...}

As before, a licit preceding discourse must entail/match a presupposition in the presupposition-set. In this case, the licensing conditions of the target sentence are much harder to identify because the presupposition-set contains an arbitrarily large set of propositions. For uniformity, I have used here the same context sentence as above. This context was a *Match* for the neutral order (248a), but is a *Mismatch* for a non-neutral order: it fails to license (250a) as it does not match anything in the relevant presupposition-set (249b) of that sentence. Indeed it matches the one proposition in that set that is explicitly ruled out.

(250) anu-ne benu-ko caabii dii,   phir...
       Anu-ERG Benu-DAT key   give.PFV then
       'Anu gave Benu a key, then...'

   a. *Mismatch*

      #benu-ne anu-ko **vaapas** <u>caabii</u> de   dii
       Benu-ERG Anu-DAT back   key   give give.PFV

      #'What Benu gave Anu back was the key.'

   b. *Match*

      benu-ne anu-ko **vaapas** <u>ciTThii</u> de   dii
      Benu-ERG Anu-DAT back   letter give give.PFV

      'What Benu gave Anu back was a/the letter.'

In (250b) is shown an example of the *Match* condition. Once more, this minimally different example is created by varying the direct object. If we then take (250b) to be the target sentence, we can derive its presupposition-set analogously to what we have seen above, yielding:

(251) *Presupposition-set for (250b)*

       {~~Anu had given Benu a letter earlier~~,

       Anu had given Benu a lock earlier,

       Anu had given Benu a key earlier,

       Anu had given Benu a password earlier...}

Now we can see that the context sentence (250) does in fact *Match* a proposition in the presupposition-set of (250b), and therefore (250b) is licensed here.

The failure of the non-neutral order to be licensed in (250) shows that the presupposition of the sentence is not being accommodated in this case. In other words, accommodation is only possible in the neutral order. Sentences with neutral order signal unambiguously that everything in the sentence is Given other than the adverb itself, thereby restricting the space of possible presuppositions to just one.

In such a situation, the presupposition has maximal ease of identifiability, and thus can be identified and accommodated even without any discourse context. By contrast, if the actual presupposition can be any one out of an unrestricted set, identifying the right one becomes more complex, and accommodation does not occur. It is important to reiterate here that all of the non-neutral orders are grammatical, differing only in the contexts that license them, and therefore this chapter makes careful use of minimal contextual manipulations to produce informative '#' (infelicity) judgments.

The central role in determining the possible presupposition(s) of a sentence with *vaapas* is played by focus: the presuppositions consistent with the target sentence are all alternatives created by replacing the DO with an alternative DP in the original sentence. The following sections examine other surface positions of *vaapas* and their relationship with focus.

4.1.2   Information-partitioning in non-neutral orders with *vaapas*

We have now established the reason that *DO vaapas V* has a neutral flavour, while other orders do not, and their orders can thus be referred to as non-neutral. Here 'non-neutral' is distinct from 'non-canonical': the arguments in all cases appear in their *canonical* SOV word order; in ditransitives the order is normally *S IO DO V*, which is what is observed here. I will show here that all the non-neutral word orders involve focus on something smaller than the entire sentence. The generalization we will arrive at is the following:

(252)   FOCUS GENERALIZATION 1:

Whenever *vaapas* surfaces in a non-neutral order (i.e. in some position other than *DO vaapas V*), the sentence is interpreted to introduce some non-Given information.

I illustrate the above generalization using ditransitives below: since there are more arguments that can be moved around, ditransitives show clear evidence that the position of an argument relative to the adverb *vaapas* (i.e. whether is is preceding or following) has a correlation with the Given/non-Given status of that argument. I use 'non-Given' here to avoid conflating the absence of Givenness with 'new'-ness. Here Givenness is treated as in Schwarzschild (1999), as the primary metric for various effects involving information-structure, and working in conjunction with F-marking. In this system, all non-Given constituents are F-marked. While a constituent that is entirely new must be F-marked, not all F-marked constituents necessarily represent new information. This is because what can serve as functionally novel at the level of a sentence might be able to do so due to contrast, rather than novelty *per se*. In other words, "old parts can be assembled in new ways".

In Schwarzschild's system, there is a set of calculations that can be done to assess whether something is Given or not. For simplicity, in the examples I present here I consider only the most basic circumstance that satisfies Givenness: prior mention of a DP; everything that is not Given by this criterion is considered non-Given here. In informal terms, the relevant definition of Given is: "being salient due to having prior mention in the proximate preceding discourse". Note that the Given/non-Given paradigm for nouns in one aspect departs from what might be expected if extrapolating from Schwarzschild (1999), which states for entities: "An utterance U counts as given iff it has a salient antecedent A and if U is type *e, then A and U corefer*" (emphasis mine). A key feature of the Hindi-Urdu data is that even if the introduced non-Given material in a sentence like (254b) had *different reference*, it still counts as Given; we know this because the sentence is still unacceptable in that situation.[5]

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[5]If different reference is intended but the description of the noun is the same (still *key*), this sameness is overtly acknowledged in the sentence containing *vaapas*. A strategy commonly employed for this purpose is the use of the additive particle *bhii* 'also', or *hii* (which effectively means 'the same') here. For example:

Let us first revisit the first of the non-neutral orders, which we are already familiar with the prior section.

(253)   benu-ne anu-ko **vaapas** caabii dii
         Benu-ERG Anu-DAT back   key   give.PFV

If we place the above sentence in a context where all of the arguments receive local prior mention, that makes all arguments Given (254a). The target sentence is infelicitous in such a situation (254b).

(254)   a. *Context:*

       ek din anu-ne benu-ko caabii dii,   phir...
       one day Anu-ERG Benu-DAT key   give.PFV then

       'One day Anu gave Benu a key, then...'

   b. *All constituents are Given*

     #benu-ne anu-ko **vaapas** caabii dii
     Benu-ERG Anu-DAT back   key   give.PFV

     #'What Benu gave Anu back was the key.'

By contrast, when placed in a context where not all of the arguments receive local prior mention (255a), there exists some non-Given material in the target sentence, and therefore it is felicitous (255b). Here, the non-Given argument is *caabii* 'key'.

(i)   a. *Context:*

       ek din anu-ne benu-ko caabii dii,   phir...
       one day Anu-ERG Benu-DAT key   give.PFV then

       'One day Anu gave Benu a key, then...'

   b. *All constituents are Given:*

     *ok*benu-ne anu-ko **vaapas** (bhii) caabii-hii dii
     Benu-ERG Anu-DAT back   (also) key-HII   give.PFV

     'What Benu gave Anu back was (also) { a | *the } key (itself).'

(255)   a. *Context:*

ek   din   anu-ne   benu-ko   taalaa diyaa,   phir...
one day Anu-ᴇʀɢ Benu-ᴅᴀᴛ lock   give.ᴘꜰᴠ then

'One day Anu gave Benu a lock, then...'

   b. *Not all constituents are Given*

   *ᵒᵏ*benu-ne   anu-ko   **vaapas** | caabii | dii
   Benu-ᴇʀɢ Anu-ᴅᴀᴛ back   key   give.ᴘꜰᴠ
   'What Benu gave Anu back was a/the key.'

What we have seen above illustrates that when *vaapas* surfaces in a non-neutral order (i.e. in some position other than *DO vaapas V*), the sentence is interpreted to introduce some non-Given information; i.e. Focus Generalization 1. Note that this pattern holds for the other non-neutral orders as well. In the following sections we will see that the non-Given material behaves as F-marked material would.

Having established that in non-neutral word orders with *vaapas* there is some non-Given information, we can turn to another generalization.

(256)   Fᴏᴄᴜs Gᴇɴᴇʀᴀʟɪᴢᴀᴛɪᴏɴ 2:

Whenever *vaapas* surfaces in a non-neutral order, non-Given information must follow *vaapas*.[6]

The illustrative examples below employ an invariant context sentence (257a) with the following arguments: {Anu, Benu, lock}. Here (257b) is infelicitous because it contains no non-Given material even though its word order signals that it should. What we see below in (257c) is that there exists a further restriction. The mere presence of some non-Given material (*alisha* 'Alisha') in the sentence is not

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[6]The statement of Focus Generalization 2 is ambiguous, and my claim here is that both interpretations hold: (i) there must exist some non-Given information in the area following *vaapas*, and (ii) if there exists some non-Given information in a sentence, it must follow (not precede) *vaapas*. Note that this is point of difference between *vaapas* 'back' and the polar question particle *kyaa* which I discuss in the upcoming section.

enough: it is still bad. The contrast between infelicitous (257c) and (257d) shows that the non-Given material must *follow* the adverb.

(257)   a. *Context:*

    ek   din anu-ne   benu-ko   taalaa diyaa
    one day Anu-ᴇʀɢ Benu-ᴅᴀᴛ lock   give.ᴘꜰᴠ

    'One day Anu gave Benu a lock.'

   b. *All constituents are Given*

   #benu-ne   anu-ko   **vaapas** taalaa diyaa
   Benu-ᴇʀɢ Anu-ᴅᴀᴛ back   lock   give.ᴘꜰᴠ

   'What Benu gave Anu back was the lock.'

   c. *Non-Given constituent cannot precede adverb*

   #benu-ne   alisha-ko   **vaapas** taalaa diyaa
   Benu-ᴇʀɢ Alisha-ᴅᴀᴛ back   lock   give.ᴘꜰᴠ

   'Who Benu gave the lock back to was Alisha.'

   d. *Non-Given constituent follows adverb*

   *ᵒᵏ*benu-ne   anu-ko   **vaapas** caabii dii
   Benu-ᴇʀɢ Anu-ᴅᴀᴛ back   key   give.ᴘꜰᴠ

   'What Benu gave Anu back was a/the key.'

The above examples illustrate that non-Given information must follow *vaapas*; i.e. Focus Generalization 2. An additional point is worth making here: recall that in §(3.1.3) (Chapter 3), we have seen that at least in the case of the ᴛʜᴇᴍᴇ, contextual equivalence or proxy is sufficient to satisfy the requirement for the ᴛʜᴇᴍᴇ to be the same in the assertion and the presupposition. One might expect that it would be sufficient to establish Givenness as well. What we are observing in the present context is that is not the case; Givenness is only satisfied by literal prior mention.

Focus Generalization 2 is deliberately framed in terms of non-Given information while being silent on where Given arguments occur. This is because Given

arguments are not restricted, they are free to occur preceding or following the adverb. An argument is therefore not necessarily non-Given if it occurs following the adverb. This paradigm is generalizable; below we see that in another non-neutral order, the same pattern emerges.

(258) a. *Context:*

ek   din anu-ne   benu-ko taalaa diyaa.   (baad meN...)
one day Anu-ᴇʀɢ Benu-ᴅᴀᴛ lock   give.ᴘꜰᴠ later in

'One day Anu gave Benu a lock. (Later...)'

b. *Non-Given constituent cannot precede adverb*

\# baldev-ne **vaapas** anu-ko   taalaa diyaa
Baldev-ᴇʀɢ back   anu-ᴅᴀᴛ lock   give.ᴘꜰᴠ

'...Baldev gave Anu the lock back.'

c. *Non-Given constituent (IO) follows adverb*

*ok*benu-ne   **vaapas** alisha-ko taalaa diyaa
Benu-ᴇʀɢ back   Alisha-ᴅᴀᴛ lock   give.ᴘꜰᴠ

'...Benu gave Alisha the lock back.'

d. *Non-Given constituent (DO) follows adverb*

*ok*benu-ne   **vaapas** anu-ko   caabii dii
Benu-ᴇʀɢ back   Anu-ᴅᴀᴛ key   give.ᴘꜰᴠ

'...Benu gave Anu back a key.'

When we put together Generalizations 1 and 2, we are left with the following statement:

(259) *Focus effect with vaapas (to be revised)*

Sentences with *vaapas* in a non-neutral word order must contain some information that has not received prior mention, and that information must follow the adverb.

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In the following section I employ certain diagnostics to show that the non-Given element can be targeted by tests that have been developed in other contexts to pick out focus-bearing constituents, and argue that the pattern we are seeing here indicates a focus-partition, where the adverb thus marks the left edge of a "focus zone".

4.2 Focus-partitioning

In this section, I show that *vaapas* marks the left edge of a "focus zone", and in doing so exactly mirrors the behaviour of polar question particle *kyaa*. In the first subsection I present diagnostic from the literature on *kyaa* to show that *kyaa*-questions and their follow-ups reveal a focus zone. I then apply the introduced diagnostic to similar sentences containing *vaapas*, and show that their follow-ups reveal the same focus zone.

4.2.1 A diagnostic from polar question particle *kyaa*

In Hindi-Urdu, *kyaa* is a focus-sensitive polar question particle (Bhatt & Dayal 2014; Butt et al. 2017; Butt & Jabeen 2017; Biezma et al. 2018; Bhatt & Dayal 2020). While *kyaa* also functions as the *wh*-word meaning 'what', these two uses are in complementary distribution. The polar question particle (PQP) can occur freely anywhere in a sentence except the immediately preverbal position—there it may occur only if the verbal complex exhibits some specific properties. Polar sentences with or without *kyaa* (which tends to be optional) are always marked by rising question-intonation, i.e. ending in H%. By contrast, *wh*-questions in general, including those with *kyaa* 'what', place the *wh*-word preferentially in the immediately preverbal position with H* pitch accent, and have falling intonation similar to declaratives, i.e. ending in L%.

(260) (kyaa) tum-ne   (kyaa) kek khaayaa (kyaa)?↑
       (PQP) 2PRON-ERG (PQP) cake eat.PFV (PQP)?
       'Did you eat cake?'

       Unavailable: 'What cake did you eat?'

The PQP is a focus sensitive operator that serves to constrain the set of possible answers viable in the context of utterance. An appropriate response to a *kyaa*-question involves evaluating alternatives to the question, which are created by considering alternatives to some specified constituent that *kyaa* associates with. The distribution of *kyaa*-questions is more constrained than plain-info-seeking polar questions; *kyaa*-questions constrain what the question is about, and responses to *kyaa*-questions are felicitous just in case they belong to the resultant set of possible answers. Negative responses accompanied by a corrective follow-up reveal this requirement. Consider the *kyaa*-question below, and the responses to it:

(261) *Corrective follow-ups with kyaa à la Bhatt & Dayal (2014)*

       anu-ne **kyaa** umaa-ko tohfaa diyaa?↑
       Anu-ERG PQP   Uma-DAT present give.PFV?

       'Did Anu give the present to Uma?'

	a. nahĩĩ, ruyaa-ko	b. #nahĩĩ, ali-ne
	no, Ruya-DAT	no, Ali-ERG
	'No, to Ruya.'	'No, Ali did.'

As we can see above, the corrective follow-up in (261a) is felicitous, whereas (261b) is not, indicating that possible answers include alternatives to *umaa-ko* 'to Uma', and not to *ali-ne* 'Ali'. Bhatt & Dayal (2014) observed that cases like (261) above illustrate a difference between material before and after *kyaa*: the focus associate of *kyaa* must occur *following* the PQP. Their findings are in line with long-standing observations about languages like German, where there exists a *watershed* (Krivonosov 1977, cited in Butt et al. 2017) which partitions the sentence into,

roughly speaking, given informaton preceding the watershed, and new informa-
tion following it. The term 'open to challenge' is used in this literature for any
constituents permitted to be the focus-associate of *kyaa*. There are two main indi-
cators of a constitutent being open to challenge: (i) it can be corrected (as seen
above), and (ii) it can host an alternative question. The examples below illustrate
that all and only the constituents (arguments, adverbs) that follow *kyaa* are open to
challenge. These are <u>underlined</u> in each case. First let's look at cases with corrective
follow-ups (262).

(262) *Corrective follow-ups with kyaa à la Bhatt & Dayal (2020)*

raam-ne siita-ko **kyaa** <u>kal</u>   <u>kitaab</u> <u>dii</u>   <u>thii?</u>↑
Ram-ERG Sita-DAT PQP   yesterday book   give be.PST?

'Had Ram given a/the book to Sita yesterday?'

a. *S corrected*
   #nahĩĩ, shyam-ne   dii
    no   Shyam-ERG give.PFV
    thii
    be.PST

   'No, Shyam did.'

b. *IO corrected*
   #nahĩĩ, uma-ko dii   thii
    no   Uma-DAT give.PFV be.PST

   'No, to Uma.'

c. *Adverb corrected*
   nahĩĩ, parsoN
   no   day.before.yesterday
   dii   thii
   give.PFV be.PST

   'No, the day before yesterday.'

d. *DO corrected*
   nahĩĩ, maegzin dii   thii
   no   magazine give.PFV be.PST

   'No, he gave her a magazine.'

Alternative questions, shown in (263) below, have the additional property of
explicitly mentioning a salient alternative. Here we see that same pattern as above:
all and only the constituents following the PQP that are open to challenge (here IO,
adverb, and DO). Alternatives to constituents that precede the PQP cannot be used
felicitously (here S). Note that the example in (263) below is deliberately presented

with *kyaa* in a different position than (262)—the pattern of partitioning the sentence into two zones is the same regardless of where the PQP is.

(263)   *Alternative question follow-ups with kyaa based on Bhatt and Dayal (2020)*

raam-ne **kyaa**   siita-ko kal   kitaab dii   thii?↑
Ram-ERG Sita-DAT PQP   yesterday book give be.PST?

'Had Ram given a/the book to Sita yesterday,...'

    a. *S alternative Q*
      #ya miinaa-ne?
      or Mina-ERG

      'or had Mina?'

    b. *IO alternative Q*
      ya viinaa-ko?
      or Veena-DAT

      'or to Veena?'

    c. *Adverb alternative Q*
      ya parsoN?
      or day.before.yesterday

      'or the day before yesterday?'

    d. *DO alternative Q*
      ya maegzin?
      or magazine

      'or a magazine?'

The data presented in this section have shown that the position of *kyaa* divides the sentence, turning the following part of the sentence into a focus zone.

4.2.2   Focus partitioning in non-neutral orders with *vaapas*

As mentioned briefly above, not all polar questions in Hindi-Urdu are *kyaa*-questions; in other words the PQP is not obligatory in a regular polar question. Regular polar questions can be formed without *kyaa* simply by using the right rising intonation. I present novel data below where declarative sentences with *vaapas* are converted into polar questions by changing the intonation, to show that *vaapas* partitions the sentence in exactly the same way as the PQP does.

Recall that the order *vaapas DO V* is focus-neutral, and all others orders are non-neutral orders. Below, I look at a simple ditransitive example and apply the diagnostics from the previous section to each one of its possible non-neutral orders

in turn, starting with *vaapas DO V* (with S and IO in their canonical positions as shown) in example (264).

(264) *vaapas precedes DO*

benu-ne anu-ko **vaapas** <u>taalaa</u> diyaa?↑
Benu-ERG Anu-DAT back lock give.PFV?

'Did Benu give Anu a/the lock back...'

a. *Alternative question follow-ups*

i. #ya giitaa-ne?	ii. #ya alisha-ko?	iii. ya lifaafaa?
or Gita-ERG	or Alisha-DAT	or envelope
'or did Gita?'	'or to Alisha?'	'or an envelope?'

b. *Corrective follow-ups*

i. #nahĩĩ, giitaa-ne	ii. #nahĩĩ, alisha-ko	iii. nahĩĩ, lifaafaa
no Gita-ERG	no Alisha-DAT	no envelope
'No, Gita did.'	'No, to Alisha.'	'No, an envelope.'

In the example above, the first set (264a) shows alternative question follow-ups. There are three possible constituents whose alternatives can form the alternative question: subject, indirect object, or direct object. The subject (S) and indirect object (IO) both precede the adverb in this order, and as we see above, an alternative to S (264a-i) or IO (264a-ii) is infelicitous. Only the DO follows the adverb, and alternatives to it are felicitous (264a-iii). In (264b) we see the same effect with corrective follow-ups.

Examining the other non-neutral orders yields the same pattern: in (265) the IO and DO both follow the adverb, and it is only these that can be targeted by alternative questions or corrective follow-ups, not the subject.

(265) *vaapas precedes IO DO*

benu-ne **vaapas** <u>anu-ko</u> <u>taalaa</u> diyaa?↑
Benu-ᴇʀɢ Anu-ᴅᴀᴛ back lock give.ᴘꜰᴠ?

'Did Benu give Anu a/the lock back...'

a. *Alternative question follow-ups*

    i. #ya giitaa-ne?   ii. ya alisha-ko?   iii. ya lifaafaa?
       or Gita-ᴇʀɢ   or Alisha-ᴅᴀᴛ   or envelope

       'or did Gita?'   'or to Alisha?'   'or an envelope?'

b. *Corrective follow-ups*

    i. #nahĩĩ, giitaa-ne   ii. nahĩĩ, alisha-ko   iii. nahĩĩ, lifaafaa
       no   Gita-ᴇʀɢ   no   Alisha-ᴅᴀᴛ   no   envelope

       'No, Gita did.'   'No, to Alisha.'   'No, an envelope.'

This pattern is fully generalizable, as shown by the example set below which is the final non-neutral order, with *vaapas* sentence-initially.

(266) *vaapas precedes S IO DO*

vaapas <u>benu-ne</u> <u>anu-ko</u> <u>taalaa</u> diyaa?↑
Benu-ᴇʀɢ Anu-ᴅᴀᴛ back lock give.ᴘꜰᴠ?

'Did Benu give Anu a/the lock back...'

a. *Alternative question follow-ups*

    i. ya giitaa-ne?   ii. ya alisha-ko?   iii. ya lifaafaa?
       or Gita-ᴇʀɢ   or Alisha-ᴅᴀᴛ   or envelope

       'or did Gita?'   'or to Alisha?'   'or an envelope?'

b. *Corrective follow-ups*

    i. nahĩĩ, giitaa-ne   ii. nahĩĩ, alisha-ko   iii. nahĩĩ, lifaafaa
       no   Gita-ᴇʀɢ   no   Alisha-ᴅᴀᴛ   no   envelope

       'No, Gita did.'   'No, to Alisha.'   'No, an envelope.'

4.2.3 Prosodic focus and *vaapas* in non-neutral orders

In all the diagnostics using polar questions, intonation has played an important role, as it is the obligatory final rise that distinguishes polar questions from declaratives and *wh*-questions, both of which have falling intonation. Apart from this intonation contour, there is an aspect of prosody that I have not yet touched upon, namely prosodic marking of focus in *vaapas*-sentences with non-neutral order, which is the subject of this section.

Let's look at a set of examples in (267), similar to paradigms presented earlier in the chapter. There is a minimal context sentence in (267a). In the absence of a non-Given constituent, a sentence with *vaapas* in this context is infelicitous (267b). The next three examples show that when there is a non-Given constituent, it is bad preceding the adverb (267c) and good following it (267d, 267e). This is our baseline for the present discussion.

(267) a. *Context:*

ek din anu-ne benu-ko taalaa diyaa. (baad meN...)
one day Anu-ERG Benu-DAT lock give.PFV later in

'One day Anu gave Benu a lock. (Later...)'

b. *All constituents cannot be Given in a non-neutral order*

#benu-ne **vaapas** anu-ko taalaa diyaa
Benu-ERG back Anu-DAT lock give.PFV

'...Benu gave Anu the lock back.'

c. *Non-Given constituent (S) cannot precede adverb*

baldev-ne **vaapas** anu-ko taalaa diyaa
Baldev-ERG back anu-DAT lock give.PFV

'...Baldev gave Anu the lock back.'

d. *Non-Given constituent (IO) follows adverb (to be revisited below)*

^{ok}benu-ne **vaapas** | alisha-ko | taalaa diyaa
Benu-ᴇʀɢ back   Alisha-ᴅᴀᴛ lock   give.ᴘꜰᴠ

'...Benu gave Alisha the lock back.'

e. *Non-Given constituent (DO) follows adverb (to be revisited below)*

^{ok}benu-ne **vaapas** anu-ko | caabii | dii
Benu-ᴇʀɢ back   Anu-ᴅᴀᴛ key   give.ᴘꜰᴠ

'...Benu gave Anu back a/the key.'

A feature of the good sentences (267d) and (267e) that is not represented above, is that the non-Given information in each case is not marked just by its position, but also with accompanying prosodic prominence. To foreshadow: data presented in this section support the revised statement of the focus-effect in (268) below.

(268)   *Focus effect with vaapas (final):*

Sentences with *vaapas* in a non-neutral word order must contain some information that has not received prior mention, and that information must follow the adverb **and be prosodically prominent**.

The focus-partitioning examples we have already seen, if properly represented with prosody, are as shown below (in 269a and 269b respectively)—[sᴍᴀʟʟ ᴄᴀᴘs]$_F$ and a focus subscript to indicate the prosodic prominence. Additionally, since these sentences are all declaratives, I show declarative (falling) intonation by means of sentence-final ↓.

(269)   a. *Non-Given constituent (IO) follows adverb, **is prosodically prominent***

^{ok}benu-ne **vaapas** [ᴀʟɪsʜᴀ-ᴋᴏ]$_F$ taalaa diyaa↓
Benu-ᴇʀɢ back   Alisha-ᴅᴀᴛ   lock give.ᴘꜰᴠ
'Who Benu gave the lock back to was Alisha.'

b. *Non-Given constituent (DO) follows adverb, **is prosodically prominent***

   ^{ok}benu-ne **vaapas** anu-ko [CAABII]_F dii↓
   Benu-ERG back Anu-DAT key   give.PFV
   'What Benu gave Anu back was a/the key.'

The richer representations above show that post-adverbial non-Given material is facilitated by prosodic focus. The existence of a prosodic focus strategy has been noted in the Hindi-Urdu literature on focus:

> "Hindi-Urdu, for example, has three strategies for realizing non-neutral focus: a syntactic strategy of preverbal positioning, a morphological strategy of in situ focus via *-hii*-cliticization, and a prosodic strategy of heavy (contrastive) stress. Furthermore, neither of these strategies are in complementary distribution with each other...all three may be used simultaneously in a single utterance."   (*Kidwai 1999:223*)

(270) *Three focus strategies in one sentence; Kidwai (1999:223)*

   kitaab [RAAM]_F-hii laayegaa (siitaa nahĩĩ)
   book Ram-EMPH bring-FUT (Sita NEG)

   '[RAM]_F will bring the book, not Sita.'

Something that has not been observed before is the disambiguating function of prosodic focus in cases where there are multiple options for where focus may be felicitously interpreted. Broadly, the focus-partitioning data explored here are consistent with the existing observation that focus strategies are not in complementary distribution. Below we see that prosodic focus is permitted in places where the syntax already allows for focus to be interpreted, indeed it is permitted *only* in these places. If we try to use prosody to focus a constituent that is not in the focus-zone, we get infelicity, as shown in (271) below (here I use the [XP]_F notation to indicate the interpretation of focus accompanied by prosodic prominence). The fact that

(271) is infelicitous shows that prosodic focus is not an independent focus strategy, but rather one that is parasitic on syntactic or positional focus.[7]

(271)   *Non-Given constituent (IO) preceding adverb: bad despite prosodic prominence*

    #benu-ne   [ALISHA]$_F$-ko **vaapas** taalaa diyaa↓
    Benu-ERG [ALISHA]-DAT back   lock give.PFV

    Intended: 'Who Benu gave the lock back to was Alisha.'

The above example illustrates that the position of an XP trumps its prosodic properties: if its position is preceding the adverb, it cannot be interpreted as focused. Even prosodic prominence cannot save it. To put this in a different way: the prosodically prominent constituent [ALISHAA]$_F$ in (271) does not satisfy the requirement imposed by *vaapas*. This is a significant point of difference between the behaviour of *vaapas* versus the behaviour of the polar question particle *kyaa* noted by Bhatt & Dayal (2020). Recall that the final statement of the Focus Generalization was as follows:

(272)   *Focus effect with vaapas (final):*

    Sentences with *vaapas* in a non-neutral word order must contain some information that has not received prior mention, and that information must follow the adverb and be prosodically prominent.

---

[7]Indeed, anecdotally there is evidence to suggest that prosodic focus is not just permitted, but *required* to appear where the syntax allows for focus to be interpreted—for instance in (i) there is no prosodic prominence in a sentence with *vaapas* in a non-neutral word order. The result is infelicitous.

(i)   *Non-neutral orders require prosodic prominence*
    #benu-ne **vaapas** anu-ko   caabii dii↓
    Benu-ERG back   Anu-DAT key   give.PFV
    Intended: 'What Benu gave Anu back was a/the key.'

Examples like (i) are quite difficult for native speakers to pronounce. An interesting line of experimental study might be to present hearers with sentences artificially generated in this format such that there is really no prominence anywhere, to see if they force an interpretation of focus somewhere, (and if so, whether the preverbal position or the position right-adjacent to the adverb are in any way privileged/favoured).

Examples involving *kyaa* from Bhatt & Dayal (2020) show that the position left-adjacent to the focus-partioning element (*kyaa* for them) is an exception to the above generalization. The focus-zone for *kyaa* includes the area following it, *plus* the constituent to its immediate left. Prosody plays an important role in the interpretation of focus in relation to *kyaa*; "...there is an adjacency effect for focus on the left: stress on the immediately pre-*kyaa*-XP makes it contrastable" (Bhatt & Dayal 2020:1131). Importantly, an XP that is preceding *kyaa* but separated from it by some intervening material is no longer allowed this exceptional status; it is, therefore, *adjacency* to the adverb that is relevant here.[8]

4.2.4   Prosodic focus and *vaapas* neutral (preverbal) position

The preceding discussion has shown that non-neutral orders with *vaapas* have a certain information-structurally marked status, and that status brings along with it prosodic prominence. For the sake of completeness I present here a control: below I return to the neutral order, with *vaapas* in the preverbal position. We see here that the neutral order does not inherently need there to be any focus present; this is shown by (273) where no single constituent is open to challenge. Thus, all of the follow-up options in the first set (273a) and the second set (273b) are infelicitous.

(273)   ***Neutral order*** *without prosodic focus: no constituent open to challenge*

benu-ne anu-ko taalaa **vaapas** de   diyaa?↑
Benu-ERG Anu-DAT back   lock   give GIVE.PFV?

'Did Benu give Anu a lock back...'

   a.   *Alternative question follow-ups to constituents*

i. #ya giitaa-ne?	ii. #ya alisha-ko?	iii. #ya lifaafaa?
or Gita-ERG	or Alisha-DAT	or envelope
'or did Gita?'	'or to Alisha?'	'or an envelope?'

---

[8]Note that some speakers of Hindi-Urdu accept sentences like (271) which is reported as infelicitous above (judgment from Farhat Jabeen, p.c.).

b. *Corrective follow-ups to constituents*

i. #nahĩĩ, giitaa-ne	ii. #nahĩĩ, alisha-ko	iii. #nahĩĩ, lifaafaa
no Gita-ERG	no Alisha-DAT	no envelope
'No, Gita did.'	'No, to Alisha.'	'No, an envelope.'

c. *Only available follow-up is alternative to entire sentence* (*wide focus*)

ya nahĩĩ (diyaa)?
or NEG   give.PFV?

'or not?'

Since we are looking at *vaapas* in the neutral order here, that means that nothing in the *word order* indicates focus. That does not mean that nothing can bear focus; in this situation, prosodic focus is available as a standalone strategy, as shown by (274)—what we see in the example set below is that only the follow-up to the indirect object *alisha-ko* is marked *ok*, and this is the very constituent that bears prosodic focus, as indicated once more by the [XP]$_F$ notation. Thus, in neutral order, there can be some non-Given information, but *only* if it bears a prosodic marker of focus. Compare (274) (*vaapas* in neutral order/preverbal position, sentence can host appropriately pronounced non-Given information preceding the adverb) with (i) (*vaapas* in non-neutral order, sentence cannot host non-Given information preceding the adverb, regardless of prosody) .

(274)   **Neutral order** *with prosodic focus: only focused constituent open to challenge*

benu-ne   [ANU-KO]$_F$ taalaa **vaapas** de   diyaa?↑
Benu-ERG Anu-DAT   back   lock   give GIVE.PFV?

'Did Benu give Anu a lock back...'

a. *Alternative question follow-ups to constituents*

i. #ya giitaa-ne?	ii.^{ok}ya alisha-ko?	iii. #ya lifaafaa?
or Gita-ERG	or Alisha-DAT	or envelope
'or did Gita?'	'or to Alisha?'	'or an envelope?'

b. *Corrective follow-ups to constituents*

    i. #nahĩĩ, giitaa-ne   ii.*ᵒᵏ*nahĩĩ, alisha-ko   iii. #nahĩĩ, lifaafaa
       no   Gita-ERG   no   Alisha-DAT   no   envelope
      'No, Gita did.'   'No, to Alisha.'   'No, an envelope.'

c. *Cannot follow up with alternative to entire sentence (wide focus)*

   #ya nahĩĩ (diyaa)?
    or NEG give.PFV?
   Intended: 'or not?'

The controls above further support the conclusion that word orders where *vaapas* appears anywhere other than the immediately preverbal position are information-structurally non-neutral and display behaviour different to the neutral order. The findings of this section may be summarized with the revised focus-effect generalization as follows:

(275)   *Focus effect with vaapas (final):*

     Sentences with *vaapas* in a non-neutral word order must contain some information that has not received prior mention, and that information must follow the adverb **and be prosodically prominent**.

4.2.5   Focus on larger constituents

A point not addressed so far is the possibility of F-marking on a constituent larger than just an argument; single arguments that follow the adverb have been the hosts for F-marking in previous examples (shown again in 276a), largely because of the relative ease in pronouncing sentences with prosodic prominence on one argument. However, marking of a larger constituent following *vaapas* is also possible, as evidenced by the well-formedness a sentence like (276b) and its felicity in the below context. The context sentence given below can be followed by (276a) or (276b) but not (276c).

(276) *Context:*

anu-ne   benu-ko   kitaab dii
Anu-ERG Benu-DAT book   give.PFV

'Anu gave Benu a book.'

a. benu-ne   anu-ko   vaapas [caabii]$_F$ dii
   Benu-ERG Anu-DAT back   key   give.PFV

   'In return, Benu gave Anu a [KEY]$_F$.'

b. benu-ne   anu-ko   vaapas [apne   saare   tohfe   dikhaaye]$_F$
   Benu-ERG Anu-DAT back   self.GEN all.OBL gift.OBL see.CAUS.PFV

   Lit. 'What Benu did back was [SHOW ANU ALL HER GIFTS]$_F$.'

c. #benu-ne   anu-ko   vaapas [kitaab]$_F$ dii
   Benu-ERG Anu-DAT back   book   give.PFV

   'In return, Benu gave Anu a [BOOK]$_F$.'

Recall that the cases that are illicit are the ones where a non-neutral order is placed in a context that makes the sentence all-Given, as in (276c). What we are now seeing is that there are multiple ways to introduce something new after *vaapas*. The non-Given information can either be just an argument (276a) or an entire VP (or higher) level projection (276b).

An illustration of focus being interpreted unambiguously on a larger constituent can be found in a sentence where the direct object is something that resists a referential interpretation, for instance if it is part of an idiom, and does not have a semantic denotation by itself. Such an object would resist F-marking, as there can be no focus-alternatives to something that lacks a semantic denotation. In (277) we have an example using the idiom *cakmaa denaa* 'to cheat' which is composed of the semantically empty word *cakmaa* and the verb *denaa* 'to give' (in this example there is also the light verb version of *denaa* 'to give').[9] Despite the impossibilty of inter-

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[9]Note that I have glossed the complex predicate *cakmaa de* as 'cheat'; the infinite version would be *cakmaa denaa* 'to cheat'.

preting focus on the direct object, *vaapas* is acceptable in this sentence, suggesting that there is focus on a larger constituent.

(277) benu-ne anu-ko (vaapas) cakmaa de diyaa
Benu-ERG Anu-DAT back cheat GIVE.PFV

'(In return,) Benu cheated Anu.'

Even though this sentence appears similar to (276a) above, their licensing environments are not the same. In the very same context used above, (276a) with a referential object is good (repeated below as 278a), this sentence with a non-referential object is bad (278b).

(278) *Context:*

anu-ne benu-ko kitaab dii
Anu-ERG Benu-DAT book give.PFV

'Anu gave Benu a book.'

 a. benu-ne anu-ko vaapas [caabii]$_F$ de dii
 Benu-ERG Anu-DAT back key give GIVE.PFV

 'In return, Benu gave Anu a [KEY]$_F$.'

 b. #benu-ne anu-ko vaapas [cakmaa]$_F$ de diyaa
 Benu-ERG Anu-DAT back cheat give GIVE.PFV

The badness of (278b) in the context above is easily explained by a non-referential object not being able to bear focus marking. What kinds of contexts *would* license (278b)? According to what saw above, F-marking on the entire material following *vaapas* is possible: we see the same in sentences with non-referential objects as well. In the pair below, the sentence (278b) (repeated as 279b) is presented in a context such that everything after *vaapas* is new information. In such a context, the target sentence is acceptable, suggesting that the underlying structure of the target sentence in this case is "focus on post-*vaapas* material" (and not "focus on direct object").

(279) a. *Context:*

anu-ne   benu-par puuraa vishwaas kiyaa   thaa, aur dekho
Anu-ERG Benu-ON full   faith   do.PFV be.PST and see.IMP

'Anu had full faith in Benu, and look...'

b. benu-ne   anu-ko   vaapas [cakmaa de diyaa]$_F$
Benu-ERG Anu-DAT back   cheat   give.PFV

'In return, Benu cheated Anu.'

If focus is interpreted on the entire post-*vaapas* zone, the corresponding focus-alternatives can be represented as in (280b).[10]

(280) a. *Target sentence*

benu-ne   anu-ko   vaapas chakmaa de diyaa
Benu-ERG Anu-ACC back   cheat   give.PFV

'In return, Benu cheated Anu.'

b. *Presuppositions consistent with target sentence*

{Anu **X-ed** Benu earlier,

Anu **Y-ed** Benu earlier,

Anu **Z-ed** Benu earlier...}

c. *Presuppositions inconsistent with target sentence*

{Anu gave **X** to Benu earlier,

---

[10]For completeness, it is also possible to F-mark intermediate sized phrases like VP or AspP, to the exclusion of T. We saw that (278b) was bad where the context sentence had *kitaab dii* 'gave a book' and no overtly expressed tense. With a *larger* predicate as shown below, new possibilities open up for the target sentence, even though the 'verb' *denaa* 'to give' is strictly speaking still present. Now the VP alone can be contrasted, and therefore the same target sentence is good in this context:

(i) *Context:*

anu-ne   benu-ko   tijorii kaa paaswarD de   diyaa
Anu-ERG Benu-DAT safe   GEN password give give.PFV be.PST but

'Anu gave Benu the password to the safe.'

a. benu-ne   anu-ko   vaapas [cakmaa de]$_F$ diyaa
Benu-ERG Anu-DAT back   cheat   give.PFV

'In return, Benu cheated Anu.'

Anu gave **Y** to Benu earlier,

Anu gave **Z** to Benu earlier...}

The set of presuppositions given in (280b) is characterized by (i) the expected contribution of *vaapas*, which effectively designates the Agent from the context as the Patient/Recipient in the target sentence, and the Patient/Recipient from the context sentence as the target Agent; and (ii) alternatives created by varying the action being done by the Agent to the Patient/Recipient. The set of presuppositions in (280b) is distinct from the presuppositions expected to arise if the focus was being interpreted only on the Theme/direct object; compare (280c).[11]

A consequence of focus being interpreted on larger constituents is that we can create sequences of context sentence and target sentence that have no intuitive or inherent relation to each other; in other words they display a *radical mismatch*, as we have seen in Chapter 3 (§3.4.3). The only requirement for such sequences to make sense is that the second sentence be understood as a response to the first. In such cases substituting *vaapas* with the phrase *badle mẽ* which literally means 'in return/response' is very natural.

(281)   a. *Context:*

anu-ne benu-ko jaan buujhkar   galat taalaa de
Anu-ERG Benu-DAT know understand.CONJPRT wrong lock   give
diyaa. jab   baat niklii   to...
give.PFV when matter emerge.PFV then

'Anu deliberately gave Benu the wrong lock. When that became known...'

b. benu-ne {vaapas/ badle meN} [anu-kii maa-ko   jaake
Benu-ERG {back/   return in}   Anu-GEN mother-DAT go.CONJPRT
chuglii   kar dii]$_F$
complaint do give.PFV

'In response, Benu went and complained to Anu's mom.'

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[11]The comments I have made here are consistent with observations found in Butt & King (1996) in a similar vein. They report that where 'non-specific objects' (their term; includes semantically empty *cakmaa denaa*) appear to bear focus, what is really going on underlyingly is that there is focus on the entire predicate, made possible by the semantic incorporation of said object.

4.3 Some properties of focus-partitioning

In this chapter, the phenomenon of focus partioning has appeared to be uniform across the examples with *vaapas* and with *kyaa*. Here I briefly compare certain properties of *kyaa* discussed the literature, with properties of *vaapas* in equivalent configurations. The contributions of this section are to show that (i) adjacency to *kyaa/vaapas* is not an essential component of focus-partitioning; and (ii) despite the surface-similarity of focus-partitioning across examples with *kyaa* and *vaapas*, we cannot conclude that they occupy the same position in the clause structure.

4.3.1 Adjacency effect vs. neo-Gricean reasoning

First, let's look at right-adjacency to *kyaa/vaapas*. Biezma et al. (2018) observe that typically it is only the constituent to the *immediate* right of *kyaa* is open to challenge; consider this quote from their handout (formatting modifed for consistency): "*kyaa*-Qs are not just like plain polar questions: *kyaa*-Qs impose restrictions on what the question is about. It seems that we ask about the material immediately right to *kyaa*"; they treat this is an indication of syntactic scope. They further observe that "prosodic focus marking overrides syntactic encoding—polar *kyaa* associates with the prosodically focused element".

Looking at focus-partitioning with *vaapas* might provide a slightly different insight into explaining these two observations. Data from *vaapas* discussed in this chapter, including the marking of focus on constituents larger than a single argument, suggests that the syntactic scope of (at least in the case of *vaapas*) is the entire focus zone, not just the argument immediately to the right of it. In the interests of maintaining a single analysis for what appears to be a unified phenomenon of focus-partitioning, let's assume for now that *kyaa* also takes the entire focus zone as its syntactic scope. How, then, do we explain the above observation that the

right-adjacent constituent is privileged? I propose that is observation is the result of neo-Gricean pragmatic reasoning. Let's look at *vaapas* when it is preceding the subject, for example.

(282) a. vaapas S̲ I̲O̲ D̲O̲ V

         Open to challenge: S, IO, DO

     b. kyaa S̲ I̲O̲ D̲O̲ V

         Open to challenge: S, IO, DO

This configuration is only *required* when it is the subject that is intended to be the constituent open to challenge. If any constituent other than the subject is intended to be open to challenge, using an order that includes unnecessary other arguments in the focus zone would necessitate the use of prosodic focus to disambiguate. Assuming that speakers only use exceptional strategies only when they are required, it is the subject on which focus would be interpreted most easily; this can be extended to other non-neutral orders as well.

(283) a. S IO vaapas D̲O̲ V

         Open to challenge: only DO

     b. S IO kyaa D̲O̲ V

         Open to challenge: only DO

Such an explanation works equally well for *kyaa*: speakers will interpret focus on the constituent for which the present order is required, because picking out any other constituent would involve a further step of ambiguity resolution via prosody.

(284) *Available options when focus is intended on DO*

    a. S IO vaapas/kyaa [DO]$_F$ V

       No competition for where focus is interpreted

    b. S vaapas/kyaa IO [DO]$_F$ V

       Competes with the following option

       i. S vaapas/kyaa [IO]$_F$ DO V

    c. vaapas/kyaa S IO [DO]$_F$ V

       Competes with the following options

       i. vaapas/kyaa S [IO]$_F$ DO V

       ii. vaapas/kyaa [S]$_F$ IO DO V

While prosody would help to facilitate this ambiguity resolution, the relevant examples in Biezma et al. (2018) are all presented with the caveat that "neutral prosody" is assumed. My contention in this chapter is that neutral prosody (falling intonation with no prosodic prominences) is actually impossible in non-neutral orders with *vaapas*, and I believe this is the case in the analogous *kyaa*-examples as well. Carefully controlled experimental study is needed to understand the prosodic status of elements in the sentence besides the PQP.

Second, let's look at left-adjacency to *kyaa/vaapas*. Biezma et al. (2018) present prosodic focus as a strategy to override the syntax, based on their observation that something to the left of *kyaa* can be open to challenge if it is given the right prosody. Bhatt & Dayal (2020) show that this property is in fact restricted to only the constituent to the *immediate* left of *kyaa*. This is the one place where *kyaa* and *vaapas* differ in how they interact with information-structure. Recall the example with *vaapas* that rules out the possibility of prosodic focus overriding the focus zone, repeated below:

(285) *Non-Given constituent cannot precede adverb even with prosodic prominence* [=(271)]

#benu-ne [ALISHA]$_F$-ko **vaapas** taalaa diyaa↓
Benu-ERG Alisha-DAT back lock give.PFV

Intended: 'Who Benu gave the lock back to was Alisha.'

The fact that (285) is infelicitous shows that prosodic focus is not an independent focus strategy, but rather one that is parasitic on syntactic or positional focus. Why, then, is the following allowed with *kyaa*?

(286) *Prosodic focus appears to override focus-partitioning with kyaa; BBJ (2018)*

a.^{ok}[ANU-NE]$_F$ kyaa umaa-ko tohfaa diyaa?↑
Anu-ERG PQP Uma-DAT present give.PFV?

'Did [ANU]$_F$ give a/the present to Uma?'

b. nahĩĩ, asim-ne diyaa
no Asim-ERG give.DIYAA

Lit. 'No, Asim gave.'

The divergence of this example from (285) containing *vaapas* is explained in the following way by Bhatt & Dayal (2020) (henceforth BD). There are several particles in Hindi-Urdu that associate to their immediate left, including *hii* 'only', *bhii* 'also', and *nahĩĩ* 'not'. Here *kyaa* is functioning like one of them in that it is able to produce focus-alternatives by an independent means unrelated to the focus zone. This explanation receives support from the fact that other arguments outside the focus zone cannot be 'saved' by prosody, thus making the normal behaviour of the PQP the same as *vaapas*:

(287) *Prosodic focus cannot override focus-partitioning with kyaa; BD (2020)*

a. #[RAAM-NE]$_F$ siitaa-ko kyaa kal kitaab dii thii?↑
Ram-ERG Sita-DAT PQP yesterday book give.PFV be.PAST

'Had [RAM]$_F$ given a/the book to Sita yesterday?'

b. nahĩĩ, asim-ne
no Asim-ERG

Lit. 'No, Asim did.'

4.3.2 The irrelevance of ForceP to *vaapas*

In the preceding sections we have established that both in the case of *vaapas* and *kyaa*, we are seeing a pattern of focus-partitioning. Putting these two similar patterns together raises a question: does the surface-similar pattern reflect an identical syntax? In the case of *kyaa*, Bhatt & Dayal (2020) give strong arguments for its treatment as a polar question particle in ForceP, leading to the focus-partitioned zones being naturally defined as "within ForceP" from what is "outside ForceP". In this section, I revisit the findings from the previous chapter and this one to argue that in the case of *vaapas*, the same explanation cannot be straightforwardly extended.

The previous sections have shown that the focus-partitioning effected by *vaapas* is superficially identical to what is reported in recent literature for the polar question particle *kyaa*. This superficial similarity cannot be taken too literally, however, as *kyaa* being a polar question particle occurs in ForceP, which we expect to project (only) when necessary to host the feature(s) associated with some specific illocutionary force. When that happens, the focus-partition is quite naturally defined as "within ForceP" and "outside ForceP".

Let's entertain the null hypothesis that the surface-similar pattern does indeed reflect an identical syntax. This hypothesis is easily ruled out by adopting the stance taken in Bhatt & Dayal (2020) that ForceP is not projected in every sentence, but rather has specific consequences to the semantics: there are some specific embedding predicates can take complements which are larger (and therefore more complex) and display corresponding semantic type-distinctions. The distribution of *kyaa* is tied to the presence of ForceP: it is "only acceptable in the complements of predicates that can take ForceP. These are canonically the set of rogative predicates." Indeed, in the rogative case below, the *kyaa* is generally required (it can be

dropped when specific intonation is present).[12]

(288) a. *kyaa is ungrammatical in the complement of responsive predicate*

      *anu jaantii   hai   [ki kyaa tum   caay piyoge]
      Anu know.ɪᴘꜰᴠ be.ᴘʀᴇs that ᴘǫᴘ   2ᴘʀᴏɴ tea   drink.ꜰᴜᴛ

      Intended: 'Anu knows whether you will drink tea.'

    b. *kyaa is good in the complement of rogative predicate*

      Tiicar-ne   anu-se   puuchaa ki *(kyaa) vo   caay piiyegii
      teacher-ᴇʀɢ Anu-from ask.ᴘꜰᴠ   that ᴘǫᴘ   3ᴘʀᴏɴ tea drink.ꜰᴜᴛ

      'The teacher asked Anu whether she would drink tea.'

These distinctions do not have any relevance to *vaapas*. While all the examples of *vaapas* seen so far have been unembedded declaratives, we can also look at *vaapas* in the sorts of responsive/rogative sentence pairs above and see easily that the adverb does not interact with illocutionary force or clause types, and therefore there is no reason to place it in ForceP:

(289) a. *vaapas is good in the complement of responsive predicate*

      anu jaantii   hai   ki [vaapas tum   kitaab doge]
      Anu know.ɪᴘꜰᴠ be.ᴘʀᴇs that back   2ᴘʀᴏɴ book give.ꜰᴜᴛ

      'Anu knows that what you will give back is a book.'

    b. *vaapas is good in the complement of rogative predicate*

      Tiicar-ne   anu-se   puuchaa ki [kyaa vo   vaapas kitaab
      teacher-ᴇʀɢ Anu-from ask.ᴘꜰᴠ   that ᴘǫᴘ   3ᴘʀᴏɴ back   book
      degii]
      give.ꜰᴜᴛ

      'The teacher asked Anu whether what she will give back is a book.'

Since we have now ruled out the possibility that *vaapas* occupies the same ForceP as *kyaa*, we can turn to the broader question of how *vaapas* interacts with focus as it is normally understood to operate in Hindi-Urdu.

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[12]For some exceptions—rogatives which do not accept *kyaa*, and responsives which with some modifcations do accept *kyaa*—see (Bhatt & Dayal 2020:§2.3).

4.4 Positional focus vs. focus-partitioning

There is a widely accepted analysis of focus in Hindi-Urdu (Kidwai 1999, 2000) and other South Asian languages, starting with Malayalam (Jayaseelan 1996, 2001), and more or less uncontested since, which involves the projection of a Focus Phrase (FocP). This analysis arose from some key empirical observations from the data traditionally looked at, which are as follows: (i) argument scrambling and focus always go together, and (ii) regardless of which constituent is the one to undergo scrambling, focus is always (and only) interpreted on the preverbal constituent. An example is shown below, where instead of canonical **S**OV order we have O**S**V. The order below is preferred both for a subject-question (290a) (subject *wh*-word in immediately preverbal position), and for its corresponding answer (290b) (focus interpreted on S in preverbal position). The constituent bearing focus can also be corrected in a follow-up, as in (290c).

(290) *Hindi-Urdu preverbal position for wh- and focus; Kidwai (1999)*

    a. kitaab kaun laayegaa?
        book   who bring-FUT?
        'Who will bring the book?'

    b. kitaab [RAAM]$_F$ laayegaa
        book   Ram   bring-FUT
        '[RAM]$_F$ will bring the book.'

    c. kitaab [RAAM]$_F$ laayegaa (siitaa nahĩĩ)
        book   Ram   bring-FUT (Sita NEG)
        '[RAM]$_F$ will bring the book, not Sita.'

Another example is below, where a ditransitive (canonically *S IO DO V*) appears as *S DO IO V*, and similar to the example above, the preverbal constituent (here IO) can be corrected in a follow-up. Note that the trace is a shorthand to represent the part of the derivation that makes the departure from non-canonical order obvious; with respect to focus, the only relevant information is which con-

stituent ends up in preverbal position, it does not matter which constituent does the moving to effect that particular word order.

(291) anu-ne   tohfaa$_i$ [umaa-ko]$_F$ t_i diyaa,   naki madhuu-ko
       Anu-ERG present Uma-DAT   give.PFV NEG Madhu-DAT
       'Anu gave the present to [UMA]$_F$, not Madhu.'

The characterization above has proved to account for all Hindi-Urdu data considered until Bhatt & Dayal (2014)'s observations about *kyaa*. Strikingly, the focus-partitioning facts seem to reference a completely different paradigm of indicating focus in Hindi-Urdu, even though in terms of their information-structural properties, sentences with focus all behave the same, whether it is focus-partitioning or positional focus. In the following subsection I outline the ways in which the focus-partitioning facts diverge from the FocusP facts in two ways.

4.4.1   Two disjoint paradigms of focus

First, let's think about property (i) mentioned above: that argument scrambling and focus always go together; in Kidwai's analysis there is a [FOCUS] feature in the numeration and that drives argument scrambling, which in turn overtly signals to the hearer that the uttered sentence contains focus. The *vaapas* data seen have seen throughout this chapter *prima facie* fail to fit this characterization, as the arguments are all in canonical word order *S IO DO V*. If there has been argument scrambling in the non-neutral orders with *vaapas*, it is not 'visible', which is not reconcilable with a theory where scrambling—which is by definition an overt process—is required. There are several open questions about how non-neutral orders of the adverb come about. Is there adverb-scrambling that can trigger focus interpretation, and what could drive that? Is the non-neutral position of the adverb rather an alternative way of overtly indicating that an argument has, in fact, scrambled, but in a way that turns out vacuous in terms of how the arguments are positioned relative to

each other?

Let's turn then to property (ii) mentioned above: that focus is always on the constituent in the immediately preverbal position. Based on the diagnostics from Bhatt & Dayal (2020), I have demonstrated in this chapter that *vaapas* marks the region following it as a focus zone. Narrow focus is required to appear when partitioning occurs—i.e. when *kyaa* or *vaapas* are somewhere other than the immediately preverbal position—and it must occur *somewhere* within the focus zone. The traditional account of Hindi-Urdu focus expects narrow focus to always be on the immediately preverbal constituent, and therefore does not predict the fact that a constituent that is within the focus zone but not in the preverbal position can host focus. The FocP account assumes that one particular word order is associated with one underlying structure, meaning that there is only one possible place where focus can be in each word order configuration. In this chapter we have seen evidence to the contrary: a single word order can offer multiple options for where focus is to be interpreted, limited only by how many constituents are in the focus zone. Critically, where there is more than one option, prosodic focus disambiguates; prosody is thus an important part of this picture in addition to word order.

It is worth noting that the focus zone will inevitably *include* the surface preverbal position. In the case of PQP *kyaa*, since it does not itself typically occur in the immediately preverbal position, there is generally at least one constituent between the PQP and the verb. Unlike *kyaa*, *vaapas* does occur in the preverbal position (indeed this is its neutral position); however, the properties of focus-partitioning shown here arise only in non-neutral orders, and all of those contain at least one constituent between *vaapas* and the verb. These facts are summed up below:

(292) *Configurations which require focus in the sentence; partitioning element not in preverbal position*

    a. (*kyaa*) ZP (*kyaa*) YP (*kyaa*) XP ~~(kyaa)~~ V

    b. (*vaapas*) ZP (*vaapas*) YP (*vaapas*) XP ~~(vaapas)~~ V

(293) *Behaviour of the sentence when partitioning element is in preverbal position*

    a. ZP YP XP *kyaa* V   *permitted iff verbal complex sufficiently heavy*

    b. ZP YP XP *vaapas* V   *default when there is no focus*

Thus in all the focus-partitioning contexts we have discussed, whatever constituent happens to be in the preverbal position is generally available to bear focus, it is just never the only one. If the focus-partitioning observed here is just another kind of scrambling that triggers focus interpretation, what makes a non-preverbal constituent available for focus in the focus zone?

The possibility of the FocP account to answer this question can be ruled out straightaway in the following manner. The first step in the FocP account is that whatever XP is focused moves to Spec,FocP. This is shown using the sentence (294) expressing the assertoric content 'Benu gave Anu a/the lock'. The sentence has *vaapas* at the highest *v*P level, such that the entire event is within its scope. The schematic tree is given in (295) below.

(294)   *vaapas* [**Benu**$_S$ **Anu**$_{IO}$ **lock**$_{DO}$ **give**]

(295) *Ditransitive with vaapas in vP and FocusP above*

AspP
- FocusP
  - Spec,FocP
    - move [XP]$_F$ here
  - FocusP
    - vP
      - AdvP
        - vaapas
        - **back**
      - DP$_S$
        - Benu-ne
        - **Benu**
      - DP$_{IO}$
        - Anu-ko
        - **Anu**
      - DP$_{IO}$
        - taalaa
        - **lock**
      - √de
        - diyaa
        - **give**
    - Focus
      - **FOCUS**
- Asp
  - **PFV**
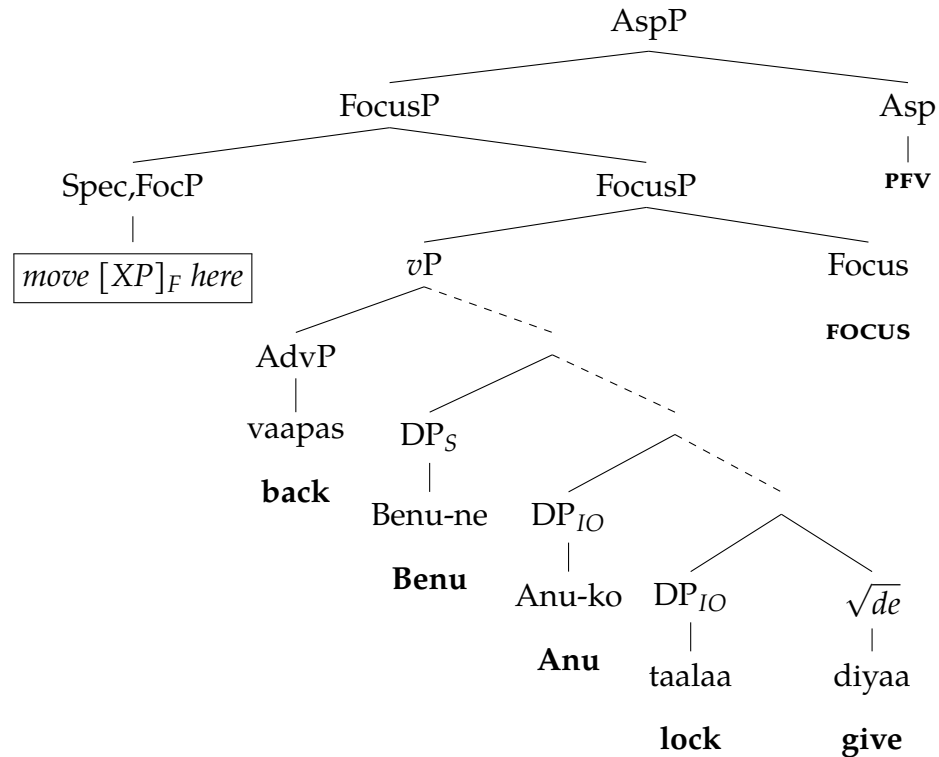
This step results in a configuration that does not reflect where constituents other than [XP]$_F$ are observed to surface. In order to derive the order found in pre-verbal focus examples, this movement to Spec,FocusP is followed by a process of evacuating the remaining material out of the verbal projection. In sentences that contain *vaapas*, this verbal projection is the *v*P to which the adverb is attached. This evacuation process can conceivably be derived by a variety of different means. The remaining arguments could simply each move out of the *v*P. Here I have chosen to depict it as remnant movement, but nothing hinges on this choice in the present work. In the tree below, since there is focus on the subject, it is S that moves to Spec,FocP, and therefore it is everything else but S that evacuates (IO, DO).

(296) *Ditransitive with vaapas in vP; S moves to Spec,FocP and vP evacuates*

AspP
├─ [t_S , DP$_{IO}$ (Anu-ko / **Anu**), DP$_{DO}$ (taalaa / **lock**)]
└─ AspP
   ├─ FocusP
   │ ├─ DP$_S$ (Benu-ne / **Benu**)
   │ └─ FocusP
   │   ├─ vP
   │   │ ├─ AdvP (vaapas / **back**)
   │   │ └─ [$t_{remnant}$, $\sqrt{de}$ (diyaa / **give**)]
   │   └─ Focus (**FOCUS**)
   └─ Asp (**PFV**)
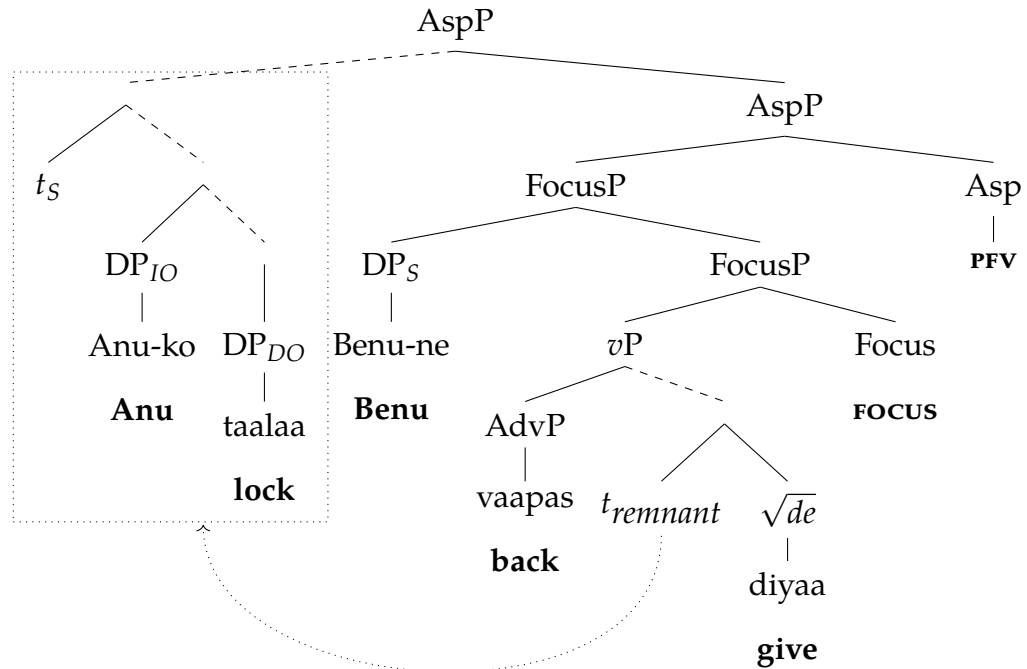
(297) *Final result of S focus (296)*

anu-ko   taalaa [BENU-NE]$_F$ **vaapas** diyaa
Anu-DAT lock   Benu-ERG   **back**   give.PFV

As seen in (297), the final result of this computation has the word order *IO DO **S** vaapas V*, i.e. with *non-canonical* order of the arguments (*IO DO **S** V*). This resulting sentence is grammatical, and the S that bears focus behaves exactly like any $[XP]_F$ in the diagnostics used in this chapter. The emerging landscape of focus in the language is made up of two disjoint patterns: recall that a defining property of focus-partitioning constructions is that the arguments are in *canonical* surface order—they are thus incompatible with the result in (297). Indeed, all the sentences produced by the FocusP account are grammatical, and in each case focus is interpreted exactly where it is intended. This can be shown for the above example (297) using the familiar diagnostics:

(298) *IO DO S vaapas V*

anu-ko   taalaa benu-ne   **vaapas** diyaa?↑
Anu-DAT lock   Benu-ERG **back**   give.PFV?

'Did Benu give Anu a/the lock back...'

a. *Alternative question follow-ups*

i.^{ok}ya giitaa-ne?	ii. #ya alisha-ko?	iii. #ya lifaafaa?
or Gita-ERG	or Alisha-DAT	or envelope
'or did Gita?'	'or to Alisha?'	'or an envelope?'

b. *Corrective follow-ups*

i.^{ok}nahĩĩ, giitaa-ne	ii. #nahĩĩ, alisha-ko	iii. #nahĩĩ, lifaafaa
no Gita-ERG	no Alisha-DAT	no envelope
'No, Gita did.'	'No, to Alisha.'	'No, an envelope.'

The fact that only the subject is open to challenge here is indicated by the felicitous subject-targeting follow-up (298a-i) versus infelicitous IO/DO-targeting follow-ups (298a-ii)/(298a-iii); and correspondingly felicitous (298b-i) versus infelicitous (298b-ii)/(298b-iii). This set of data shows that "focus" is the same beast, whether it is present in a sentence with positional focus or a sentence with focus-partitioning.

In the following section I explore an existing application of the FocusP approach to data with a *vaapas*-like adverb (in a different language, namely Kutchi Gujarati), and show that it does not work for the data presented here: Patel-Grosz & Beck (2014, 2019) place the adverb not in *v*P, but in the next higher projection, i.e. FocP itself. They posit the standard FocP account: movement of [XP]*F* to Spec,FocusP followed by evacuation of the *v*P remnant; their analysis thus ends up causing a similar adjacency problem to the one we have already seen.

4.4.2 Not captured by FocusP-generated *vaapas*

Patel-Grosz & Beck (2014, 2019) present an analysis for the Indo-Aryan cousin of *vaapas*—namely *pacho*—used in Kutchi Gujarati. I summarize their analysis here

and outline some significant differences between the Kutchi Gujarati (henceforth KG) and Hindi-Urdu (henceforth HU) word order patterns in the domain of BACK/AGAIN adverbs, that effectively make this analysis inapplicable to the HU data I have presented.

I recreate below Patel-Grosz & Beck's analysis of a simple RESPONSE case versus its corresponding REPETITIVE.[13] The key facts they seek to explain are exemplified by the following minimal pair which shows a transitive rather than a ditransitive, so there are fewer moving parts to keep track of. Notice the position of S and O relative to the adverb.

(299) a. Raj *pach-o* Khimji-ne mar-y-o
           Raj again-M.SG Khimji-ACC hit-PFV-M.SG
           (Khimji hit Raj, and then) 'Raj hit Khimji in return.'   RESPONSE

       b. Raj Khimji-ne *pach-o* mar-y-o
           Raj Khimji-ACC again-M.SG hit-PFV-M.SG
           (Raj hit Khimji, and then) 'Raj hit Khimji again.'   REPETITIVE

In order to explain these key facts, the authors appeal to movement to FocusP in the following manner. First, they explain that RESPONSE readings can be derived from the context by a process of focus alternative-based replacement. For example, in (299a), the target sentence containing *pacho* departs from the context in terms of S and O. The authors assert a fundamental claim about presupposition triggers that states that when such items are used correctly (i.e. the presupposition is TRUE in the context), the prejacent of the presupposition trigger is Given. This claim obviously holds true of the prejacent of any AGAIN-adverb, but in the case of a BACK-adverb, on the surface it is impossible to be Given:

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[13]Note that in KG (like in Dutch) a single adverb *pacho* is used express three different meanings, each associated with a distinct word order: RESTITUTIVE, REPETITIVE, and RESPONSE (the reading I call RESPONSE they call COUNTERDIRECTIONAL). In other words *pacho* covers the semantic ground that in HU is covered jointly by the AGAIN-adverb *phir-se* (RESTITUTIVE and REPETITIVE), and the BACK-adverb *vaapas* (RESTITUTIVE and RESPONSE).

(300) a. *pacho*_{BACK}[Raj hit Khimji] (*when licensed in context*)   RESPONSE

   ⟶ Raj hit Khimji   ⚠ *condition not met* ⚠

  b. *pacho*_{AGAIN}[Raj hit Khimji] (*when licensed in context*)   REPETITIVE

   ⟶ Raj hit Khimji   *condition met*

In order to comply with the Givenness requirement, Patel-Grosz & Beck propose that in the RESPONSE case, the arguments that cause the non-Givenness are actually F-marked, which makes them amenable to existential F-closure (Schwarzschild 1999), yielding the following:

(301) a. *pacho*_{BACK}[Raj$_F$ hit Khimji$_F$] (*when licensed in context*)   RESPONSE

   ⟶ $\exists X \exists Y.\ X$ hit Y *condition met*

  b. *pacho*_{AGAIN}[Raj hit Khimji] (*when licensed in context*)   REPETITIVE

   ⟶ Raj hit Khimji   *condition met*

The proposal above finds strong empirical support in the word order. Normally, there is only ever a single specifier of FocusP, and therefore only one constituent can ever move to Spec,FocusP; even if multiple constituents bear focus, the others will end up evacuating the *v*P just like the constituents that have no focus. If the arguments are F-marked as shown above, we would expect that (i) in the REPETITIVE case, since there are no F-marked arguments, the S and O evacuate the VP and end up in IP; and (ii) in the RESPONSE case, since there are two F-marked arguments, the lower one (O) ends up in Spec,FocP and the other evacuates (S). In the REPETITIVE case, there is F-marking on the adverb itself because everything else in the sentence complies with the Givenness requirement already (note that since *pacho* is generated as a FocP adjunct, it cannot/does not move to Spec,FocP).

(302)   a. $[_{IP}$ Raj$_{i,F}$ *pacho*$_{\text{BACK}}$ $[_{FocP}$ Khimji-ne$_{j,F}$ $[_{Foc'}$ $[_{VP}$ t$_i$ t$_j$ mar-y-o] Foc^0]]]

    Derives: Raj$_F$ *pach-o* Khimji-ne$_F$ mar-y-o   RESPONSE

  b. $[_{IP}$ Raj$_i$ Khimji-ne$_i$ *pacho*$_{\text{AGAIN},F}$ $[_{FocP}$ $[_{Foc'}$ $[_{VP}$ t$_i$ t$_j$ mar-y-o] Foc^0]]]

    Derives: Raj Khimji-ne *pach-o*$_F$ mar-y-o   REPETITIVE

While the word order pattern in KG can be successfully captured as discussed above, there is an open question about how the S and DO come to have F-marking in the first place. In Patel-Grosz & Beck's system sketched above, F-marking is the device used to explain a specific word-order pattern. More investigation of KG data is required to determine what focus actually is in this approach: do these F-marked arguments have the same discourse-behaviour as any normal $[XP]_F$, or is F-marking simply a theory-internal tool? The KG data in Patel-Grosz & Beck (2014, 2019) are not presented in a way that suggests that any of the word orders are information structurally marked or non-neutral. At present, there is no evidence in either direction to settle the question of whether there are information-structural consequences in KG that are similar to what we have seen in HU. It appears that the F-marking in this system is no more than a driver for a process that accounts for the underlying pattern wherein some arguments precede the adverb and some follow the adverb. In presenting the information-structural effect in HU, I have been able to draw a clear distinction in the licensing conditions for sentences with and without the presence of focus. What I have shown in previous sections is that there is a real difference between a RESPONSE-sentence that *has* focus and one that *does not*: the former can exist in contexts that make it all-Given, and the latter cannot. This distinction suggests to me that the neutral order RESPONSE cases in HU should *not* be considered to have any focus.

Let's look at what the Patel-Grosz & Beck system would predict for HU. A schematic application to the familiar HU ditransitive case would look as follows with the adverb attached in FocusP (*cf.* 295 where the adverb is in *v*P).

(303) *Ditransitive with vaapas in FocusP*

```
                                    AspP
                       ┌──────────────┴──────────────┐
                    FocusP                           Asp
              ┌───────┴────────┐                      │
          Spec,FocP          FocusP                  PFV
              │          ┌──────┴───────────┐
      ┌───────────────┐ AdvP             FocusP
      │ move [XP]_F here │  │        ┌───────┴────────┐
      └───────────────┘  vaapas     vP             Focus
                          back   ┌───┴┄┄┄┄┄           FOCUS
                               DP_S    ┄┄┄┄
                                 │      ┌───┴┄┄┄┄┄
                              Benu-ne  DP_IO   ┄┄┄┄
                                Benu     │    ┌───┴────┐
                                      Anu-ko DP_IO    √de
                                        Anu   │        │
                                           taalaa    diyaa
                                            lock      give
```
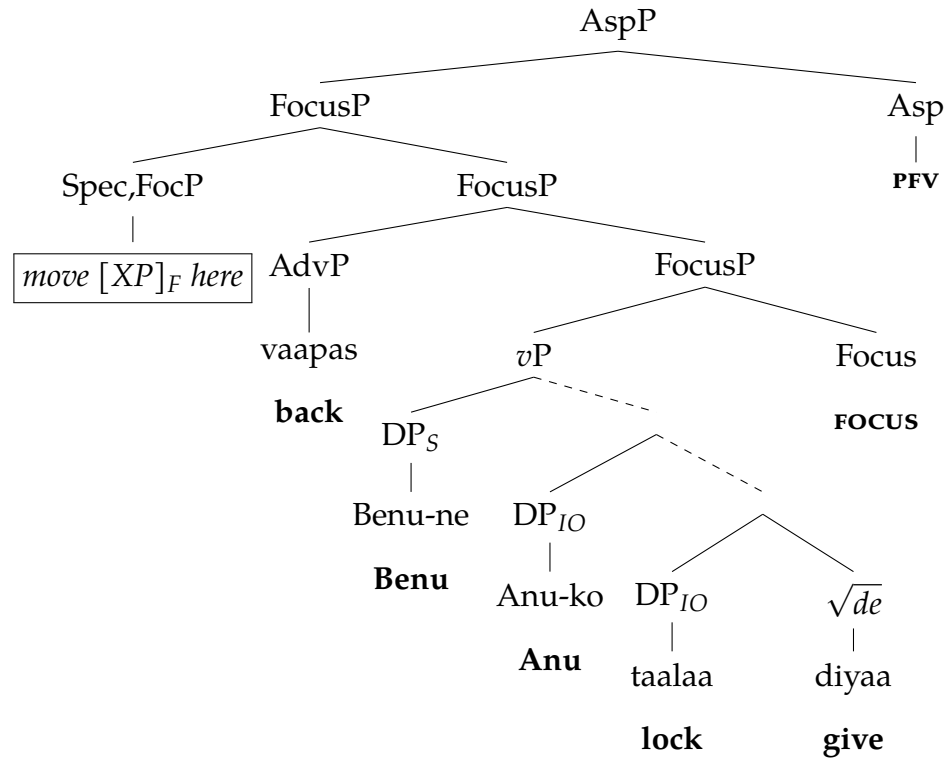
Starting with the above underlying structure, we derive a peculiar result. If indeed just like KG, we have in HU F-marking on S and O (what is here IO), we would expect that in every RESPONSE sentence with this structure, the IO would be the one to move to Spec,FocP, and everything else would evacuate.[14] We see below the result of that computation. This result does exist, as we have seen in the previous section, but critically has completely different information-structural status/licensing conditions compared to the neutral order cases.

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[14]Note that the A'-movement to Spec,FocusP shown here is of the 'tucking-in' variety, as opposed to the sort of external Merge that obeys the Extension Condition (i.e. what Kidwai 2000 calls *XP-adjunction*).

(304) *Ditransitive with vaapas in FocP; IO moves to Spec,FocP and vP evacuates*

AspP

DP$_S$ — t_{IO}

Benu-ne   **Benu**

DP$_{DO}$

taalaa   **lock**

AspP

FocusP   Asp   **PFV**

AdvP   FocusP

vaapas   **back**

DP$_{IO}$ FocusP

Anu-ko   **Anu**

vP   Focus   **FOCUS**

$t_{remnant}$ $\sqrt{de}$

diyaa   **give**
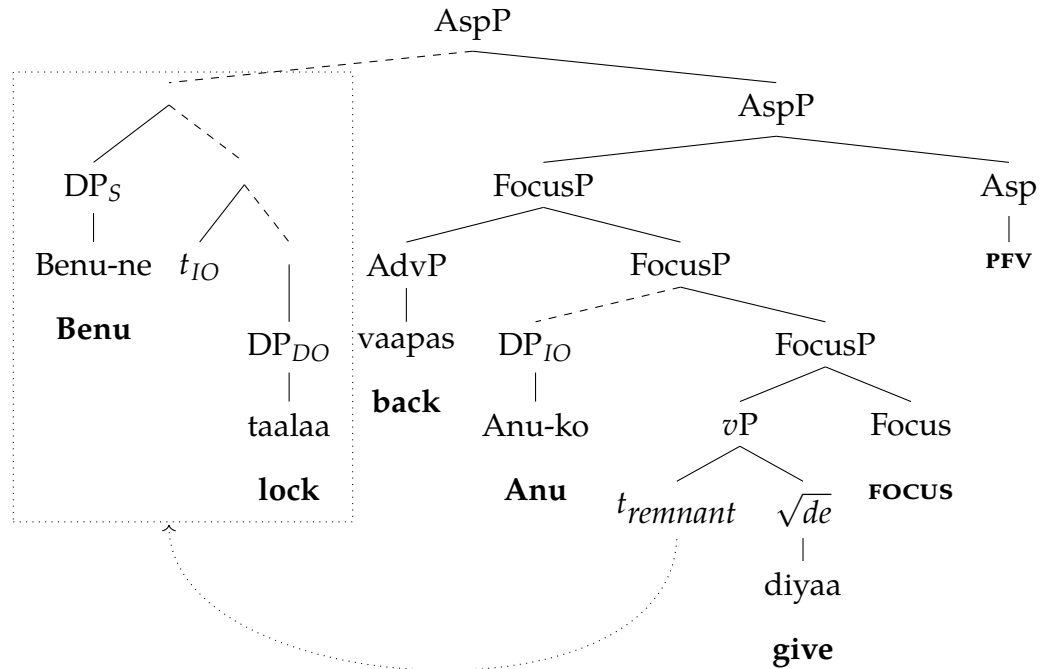
To sum up, the Patel-Grosz & Beck system predicts the following pattern in HU for RESPONSE readings in ditransitives:[15]

(305) *Predictions for HU from Patel-Grosz & Beck (2019)*

a. That the normal order for RESPONSE will be *S DO vaapas IO* V

b. That further explanation is required to explain the neutral/default order being *S IO DO vaapas V*

c. That there is no information-structural difference between these two orders

In other words when the presupposition is licensed in context, it is not the *entire* prejacent that is Given; rather, the Givenness requirement is on only one part of the assertion, namely its end point of the assertion: the recipient of the *reaction* event. The radical mismatch cases have shown that it is indeed possible to interpret

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[15]assuming the two languages are equivalent in their pragmatic processes; a reasonable assumption to make since the normal FocP movement is the same when there are no adverbs around

two eventualities to be in an action-reaction relation when only the end point of the assertion is Given in the discourse, and other parts of the prejacent are not. I conclude from the arguments presented here that the analysis that works for *pacho* in KG in terms of deriving the puzzling word order is inapplicable to HU *vaapas*.

4.4.3 Summary

The preceding discussion went through the steps of simply applying the FocusP account (movement of $[XP]_F$ to Spec,FocP followed by evacuation of the remainder of the vP) to a ditransitive sentence, and varying which constituent is focused. They all share the key property that the $[XP]_F$ ends up left-adjacent to the adverb, which is in turn left-adjacent to the verb. In the absence of the intervening vP-level adverb, the $[XP]_F$ would be left-adjacent to the verb itself, in the word order characteristic of the examples examined in the literature on postional focus in South Asian languages. I have illustrated that there is an incompatibility between the positional focus facts and the observed focus-partitioning facts. This incompatibility holds in general, since it makes no difference which constituent is focused. In (306) below I summarize the word orders generated by the FocusP account, and in (307) the focus-partitioning facts, for easy comparison.

(306) *Final result of positional focus*

    a. *S focus*

        anu-ko   taalaa [BENU-NE]$_F$ **vaapas** diyaa
        Anu-DAT lock   Benu-ERG   **back**   give.PFV

    b. *IO focus*

        benu-ne   taalaa [ANU-KO]$_F$ **vaapas** diyaa
        Benu-ERG lock   Anu-DAT   **back**   give.PFV

    c. *DO focus*

        benu-ne   anu-ko   [TAALAA]$_F$ **vaapas** diyaa
        Benu-ERG Anu-DAT lock   **back**   give.PFV

201

(307) *Focus-partitioning facts*

    a. *S focus options*

        vaapas [BENU-NE]$_F$ anu-ko   taalaa diyaa
        back   Benu-ERG Anu-DAT lock give.PFV

    b. *IO focus options*

       i. benu-ne **vaapas** [ANU-KO]$_F$ taalaa diyaa
          Benu-ERG **back**   Anu-DAT   lock give.PFV

       ii. **vaapas** benu-ne [ANU-KO]$_F$ taalaa diyaa
          back   Benu-ERG Anu-DAT   lock give.PFV

    c. *DO focus options*

       i. benu-ne anu-ko   **vaapas** [TAALAA]$_F$ diyaa
          Benu-ERG Anu-DAT **back**   lock   give.PFV

       ii. benu-ne **vaapas** anu-ko   [TAALAA]$_F$ diyaa
          Benu-ERG **back**   Anu-DAT lock   give.PFV

      iii. **vaapas** benu-ne anu-ko   [TAALAA]$_F$ diyaa
          back   Benu-ERG Anu-DAT lock   give.PFV

Comparing (306) and (307), the focus-partitioning facts seem to reference a completely different *syntactic* paradigm of indicating focus in Hindi-Urdu. We know that there is no way to reduce this to (say,) some difference between the kinds of focus: for every [XP]$_F$, the starting point of the derivation the same (i.e. the syntax before movement) across the first set (306) and the second (307), and also the contexts which license the sentences are identical. Additionally, in every case, [XP]$_F$ can be picked out by the diagnostic tests designed to identify focus. Thus, no matter which of the two paradigms we draw from—whether focus-partitioning or positional focus—in terms of information-structural properties, sentences with focus all behave the same. It is now clear that the FocusP approach (including its Patel-Grosz & Beck 2019 application) is simply inapplicable to the focus-partitioning facts. A formal analysis of the focus-partitioning facts observed in this chapter I leave to future work.

4.5 Concluding remarks

This chapter has shown that the retrieval of the counterdirectional presupposition, when mediated through focus, provides precisely the conditions necessary to allow for variation between the asserted and presupposed events. This particular study has zoomed into the specificities of Hindi-Urdu, showing that that variation is not just allowed, but required in certain configurations, but it invites the investigation of the effects focus or other information-structural processes on the retrieval of presuppositions in other situations and other languages. To conclude the chapter, I offer some speculations on some loose ends as well as further avenues for explorations.

First: Of the three familiar readings of *vaapas*, reversed path and restitutive readings seem to fundamentally differ from response readings in terms of how much information they specify or need to retrieve from the context. To consider all the readings in terms of Givenness: reversed path and restitutive readings require the THEME and SCALE to be Given, whereas response readings require neither. I believe that the underspecification of the requirements for response readings leads to more reliance on information retrievable from the context in these cases, which in turn opens up the possibility for more pragmatic effects. This indicates a significant difference from *phir-se* whose two readings (repetitive and restitutive) are both derived simply by appealing to different places of syntactic attachment.

Second: This chapter has focused on response readings, and sentences containing a single verb *denaa* 'to give'. A natural question that arises is whether any of the findings from these cases have any bearing on other readings or other verbs. Regarding restitutive readings specifically, we have already seen in Chapter 2 (§2.5.3) the less-preferred word order *S vaapas DO V*, which in light of the present chapter's observations, may be called a 'non-neutral' order. As we saw in §2.5.3, there appear to be discourse-reasons for this order being marked, but pinning those reasons

down proved to be difficult. One way of looking at its degraded status might be that it is simply degraded by virtue of its non-neutral order. The order signals the expectation of some non-Given information in the focus zone, an object being restored to its former state is typically Given, so there is a preference to *not* put it in the position after the adverb. I have not had a chance to carefully test these situations, so I leave this thought here as a speculation that may be pursued in future research.

Third: Characterizing all the readings of examples in this chapter as response readings has been an effective tool to allow comparison of the Hindi-Urdu data to the data from Patel-Grosz & Beck (2019). However, I want to highlight the fact that response readings of *denaa* 'to give' happen to also typically have the result that whatever is given/transferred is, at the end of the event, with the recipient. So, do we then think of the data from this chapter as instances of restitutive readings with variation in what is being restored? The next step for the work started in this dissertation is to map out the interaction between three moving parts: the position of *vaapas*, which of its reading(s) can arise in that position, and the information-structural status of other constituents, relative to its position.

CHAPTER 5

VAAPAS: A CORPUS STUDY

This chapter presents a corpus-based case study of *vaapas* 'back' in Hindi-Urdu. The data used in this study are primarily sourced from the Corpus Of Spoken Hindi (COSH) developed by Osaka University and the Lago Language Institute. The COSH is a large-scale web corpus of about two hundred million words collected from webpages written in UTF8 Devanagari script. The corpus and the dedicated concordancer used to analyze it are accessible using the web interface at the following link: http://www.cosh.site. Data from the COSH are supplemented in places by examples from web searches. Native speaker inputs are used in this chapter mainly as a method of verification, and not as a source of primary data.

This chapter is not intended to be a quantitative study. Rather it is an analytical and classificatory exercise intended to capture not only the uses of *vaapas* which happen to occur with greater frequency, but also certain uses which are most informative about the limits of what this lexical item can do. Based on the empirical findings from the COSH, and other examples retrieved from web searches, I analyze the distribution and semantics of *vaapas* in terms of the following two properties: (i) which verbs it occurs with, and (ii) what type of meaning – presuppositional or assertoric – it contributes to a sentence.

5.1 Methodology

The study presented in this chapter involves a detailed examination of a randomized sample of 104 sentences. The small sample size was chosen to account for the following features of the Corpus Of Spoken Hindi (COSH).

First, a significant proportion of sentences within the COSH are "false hits", i.e. sentences that are ungrammatical or otherwise unnatural, but appear in the corpus because they are in the target script (Devanagari) and thus collected by a web-scraper. Most of the false hits come from websites whose entire content is clearly auto-translated, typically from English. Examples of this case are found on websites that offer translations of pages via a toggle or a drop-down list of languages (this includes Wikipedia). In results from such pages, individual words are largely true/attested words in Hindi-Urdu, and often manually scanning the page may yield wholly grammatical sentences of Hindi-Urdu until an indicator of auto-translate is encountered. Such indicators are most commonly either (i) word salad, or (ii) a grammatical error (often involving case) that would most likely not be produced by a person, but would be expected from auto-translation. Some false hits come from other kinds of auto-generated or Search Engine Optimized (SEO) Devanagari "text" that lacks any meaning, for example: a page full of single words, designed to match text searches. Any method involving aggregation of results thus requires manually reading and assessing each sentence.

Second, there is no inbuilt analyzer within the COSH. Thus it is not possible to simply query and obtain lists like "top 10 most frequent words preceding" that occur with a target item. Automatic counting of number of occurrences is possible, but restricted to the number of *total* results for any given search. We can see, for example, that there are 29,972 total occurrences of the word *vaapas* in the COSH, but we cannot see any aggregated information about how those occurrences may be grouped. Information about the occurrence of verbs with *vaapas* is of particu-

lar interest, since *vaapas* is a VP-level or event-level adverb. In the absence of an option to directly query the frequencies of verbs occurring with *vaapas*, alternative methods must be employed to obtain counts.

From the total 29,972 occurrences of the word *vaapas* in the 200 million word COSH corpus, I first extracted 10,000 occurrences as a spreadsheet. Here *occurrence* is used to describe an attested sentence containing the target item. These results appeared to be random, as they were not auto-sorted based on any of the auto-generated column titles in the spreadsheet: left context, node, right context, and URL. To ensure randomness of the sample, I assigned serial numbers to these 10,000 rows, and then extracted via random sampling 139 occurrences corresponding to 139 serial numbers. A number larger than 100 was chosen anticipating that some proportion would have to be discarded as false hits. Of the 139, I identified 35 false hits (25%) which were discarded, and 104 true hits (75%) on which analysis was then carried out. The complete 104-sentence sample is included in Appendix D.2. For the classification and analysis, if the sentence by itself was not enough to un-ambiguously determine the sense of *vaapas*, the surrounding context was examined until the sense was disambiguated, and the occurrence classified accordingly.

5.2 Summary of readings with different event types

In the analysis of *vaapas* presented in this dissertation, the semantic type of *vaapas* is $\langle\langle vt\rangle\langle vt\rangle\rangle$; in other words, the adverb modifies what I am calling *event types*: functions from events to truth values.[1] It does not, however, modify *all* event types. Rather, there are restrictions on what sorts of event types can produce a coherent meaning in combination with *vaapas*. The present chapter derives a classification of event types that can/cannot be modified by *vaapas*, and what readings are produced in each case. This classification is previewed in (308) and introduced in brief below.

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[1]See p.83 for note on terminology.

(308) *Readings of vaapas and how they arise*[2]

Event type

Dynamic | Stative

Stative:
- *Non-directed* | *Directed*
- Non-directed → %REPETITIVE
  - *phir-se*
- Directed → *

Dynamic:
- *Scalar change* | *Non-scalar change*

Scalar change:
- *Location* (66%) | *Attribute* (3%) | *Possession* (29%)
- Location → REVERSED PATH
- Attribute → RESTITUTIVE
  - *phir-se*
  - *vaapas-se*
- Possession → RE-POSSESSION

Non-scalar change:
- *Directed* (1%) | *Process* (1%) | *Other*
- Directed → RESPONSE
- Process → REPETITIVE
  - *phir-se*
  - (*vaapas-se*)
- Other → *

A basic division of events is Dynamic (involving change) versus Stative (not involving change). As shown in the classification above, the observed readings of *vaapas* are largely confined to Dynamic events.[3]

Dynamic events encoding **Scalar change** kind give rise to the two core readings of *vaapas* that we know from Chapter 3. An event that involves a spatial scale or change in *Location* produces the REVERSED PATH reading (restoring a THEME to its previous location); e.g. *vaapas aanaa* 'to come back'. An event that involves a property scale or change in value of an *Attribute* produces the RESTITUTIVE reading (restoring a THEME to its previous state); *vaapas joRnaa* 'to join *x* back (together)'. Corpus data support the inclusion of a third closely reading related reading: an

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[2]Where lexical items are mentioned in this tree, they are available as alternatives to *vaapas*. In one case, *vaapas-se* is shown in parentheses, indicating that not all speakers allow *vaapas-se* in that particular context.

[3]See §3.4 for an introduction the usage of "dynamic" to include non-scalar change, following Rappaport Hovav & Levin (2010).

event which involves motion of a metaphorical kind, typically a transfer of possession, produces the RE-POSSESSION reading (restoring a THEME to its previous possessor); e.g. *vaapas bhejnaa* 'to send *x* back'.

Dynamic events expressing "any change that cannot be characterized in terms of an ordered set of values of a single attribute" (Rappaport Hovav & Levin 2010) fall into the **Non-scalar change** category, which can be further divided into three subcategories. The first of these, which I label *Process*, are complex events involving a "confluence of many changes" (Beavers & Koontz-Garboden 2017). Modification by *vaapas* conveys the REPETITIVE reading of restoring a previously ongoing process; e.g. *vaapas sukuun-se jiine lagnaa* 'to start to live in peace again'. The second label I employ is *Directed*, to refer to events that involve "intentional activities" (Rappaport Hovav & Levin 2010:13): deliberate acts of volition directed at an animate experiencer, typically an act of communication, either literal or metaphorical (taking an action to achieve a communicative effect). With *vaapas*, *Directed* events produce the RESPONSE reading: "an action done in response to a prior action of a similar type" (Zwarts 2019), e.g. *vaapas likhnaa* 'to write back'. The third label, *Other*, represents the elsewhere case in my proposed classification: activities which do not involve **Scalar change**, and do not meet semantic criteria for *Directed* or *Process*. Listed below are the occurences of each of the above event types in the corpus study.

(309) *Distribution of vaapas in the 104-sentence sample*

    a. **Scalar change** (98.08%)   b. **Non-scalar change** (1.92%)

        i. *Location:* 69/104 = 66.35%   i. *Directed:* 1/104 = 0.96%

       ii. *Possession:* 30/104 = 28.85%   ii. *Process:* 1/104 = 0.96%

      iii. *Attribute:* 3/104 = 2.88%

5.2.1 Occurrence of different verbs with *vaapas*

In Table 5.1 on pg. 211 is presented the list of main verbs from the 104-sentence sample along with frequency and event type. Following standard practice for Hindi-Urdu, verbs are presented in their infinitival citation forms: root + infinitival suffix *-naa*.

5.2.2 A note on frequency groupings

In Table 5.1, TOTAL shows the sum of the values under COUNT for different forms of a single root. The different forms are due to two kinds of alternations: intransitive versus transitive, or suppletive variants. An example of an alternation between intransitive/transitive is found in the first row: intransitive *vaapas lauTnaa* 'to return (back)' and transitive *lauTaanaa* 'to return *x* (back)'. The common root is *lauT*, which means 'return'. In the table, transitive forms include '*x*' as a placeholder for an object, to avoid confusion where the English translation does not correspond to the Hindi-Urdu in (in)transitivity. Morphologically, *lauT-aa* is the causative of *lauT*, an instance of *-aa* suffixation, the highly productive causativation strategy operative in Hindi-Urdu. Note that the event type may vary between the alternants: the THEME in the transitive is likelier to be inanimate, and the corresponding sense conveyed therefore likelier to be transfer of possession. Examples of suppletive variants can be seen in: *vaapas lenaa*/*laanaa* 'to take/bring *x* back', and *vaapas jaanaa*, *vaapas cale jaanaa*, *vaapas calnaa* 'to go back'.

5.2.3 Event type ≠ verb

For all events, the event type, and thus the reading of *vaapas*, is determined at least in part by the lexical category of the main verb; however it is important to note that the verb is not the only determining factor. Table 5.1 thus requires an important

VERB	MEANING MEANING	EVENT TYPE	READING	COUNT	TOTAL
vaapas lauTnaa	'to return (back)'	*Loc.*	**REV. PATH**	21	23
vaapas lauTaanaa	'to return *x* (back)'	*Poss.*	**RE-POSESS.**	2	
vaapas aanaa	'to come back'	*Loc.*	**REV. PATH**		20
vaapas lenaa/	'to take/bring	*Poss./*	**RE-POSSESS./**	13	18
laanaa	*x* back'	*Loc.*	**REV. PATH**	5	
vaapas jaanaa				7	
vaapas cale jaanaa/	'to go back'	*Loc.*	**REV. PATH**		9
vaapas calnaa				2	
vaapas honaa	'to return'	*Poss.*	**RE-POSESS.**	1	8
vaapas karnaa	'to return *x*'	*Poss.*	**RE-POSESS.**	7	
vaapas bhejnaa	'to send *x* back'	*Loc.*	**REV. PATH**		6
vaapas pohoncnaa	'to reach'	*Loc.*	**REV. PATH**	2	5
vaapas pohoncaanaa	'to reach *x*'	*Loc.*	**REV. PATH**	3	
vaapas denaa	'to give *x* back'	*Poss.*	**RE-POSESS.**		3
vaapas paanaa	'to get *x* back'	*Poss.*	**RE-POSESS.**		2
vaapas bulaanaa	'to call/summon *x* back'	*Loc.*	**REV. PATH**		1
vaapas girnaa	'to fall *x* back (down)'	*Loc.*	**REV. PATH**		1
vaapas rakhnaa	'to put/keep *x* back'	*Loc.*	**REV. PATH**		1
vaapas haasil karnaa	'to get/achieve *x* back'	*Poss.*	**RE-POSESS.**		1
vaapas khariidnaa	'to buy *x* back'	*Poss.*	**RE-POSESS.**		1
vaapas joRnaa	'to join *x* back (together)'	*Attr.*	**RESTITUTIVE**		1
vaapas ADJ *karnaa*	'to bring *x* back to ADJ again'	*Attr.*	**RESTITUTIVE**		1
vaapas ADJ *banaanaa*	'to make *x* ADJ again'	*Attr.*	**RESTITUTIVE**		1
vaapas ADV *jiine lagnaa*	'to start living ADV again'	*Proc.*	**REPETITIVE**		1
vaapas likhnaa	'to write back'	*Dir.*	**RESPONSE**		1

Table 5.1: Occurrences of different verbs in 104-sentence sample

caveat: for most of the examples represented in the 104-sentence sample, event type is wholly reducible to the lexical category of the verb. This is notably not the case for *vaapas honaa* 'to return'/*vaapas karnaa* 'to return *x*'. In this pair, *vaapas* does not behave like an adverb but like a part of the verbal complex: it is not optional, and removing it from a sentence produces incoherence. As discussed previously in Chapter 2, non-verbal roots (i.e. those that cannot directly host verbal inflectional morphology) can tack on a variety of light verbs to periphrastically form a verbal complex unit of *Root + Light Verb*. In this chapter, we see that *vaapas* exhibits this same behaviour as adjectival roots like *saaf* 'clean', appearing with *honaa* 'to be' and *karnaa* 'to do', denoting an intransitive verb and a transitive verb respectively.

Further, while the 104-sentence sample would suggest that (besides the exceptional case of *vaapas* acting as an adjective) there is a one-to-one correspondence between verb type and event type, this is not always the case. Consider motion verbs: the category named *Location* under **Scalar change** events above refers to events of directed motion. In combination with this event type, *vaapas* yields reversed path readings. While there exists a corresponding category of verbs, namely *verbs of directed motion*, it is not only verbs of directed motion that give rise to reversed path readings. In Hindi-Urdu, *vaapas* occurs with true directed motion verbs which lexicalize/entail a Path component, as well as with motion verbs which do not entail Path, but are amenable to modification by Path-denoting PP. In the latter case the "directed" part of the motion is expressed external to the verb.

In order to paint a more complete picture than this sample can provide, I therefore supplement the corpus data with examples found outside the COSH, as well as some constructed ungrammatical sentences to motivate claims regarding which event type are unattested because they are illicit.

5.3 *Scalar change: Location*

This section discusses examples that convey a return to an original location. These cases represent 69 sentences out of the 104-sentence sample, or a 66.35% share. In the classification of event types in (308) as well in the rest of the dissertation I have referred to readings in this category as REVERSED PATH readings. These readings arise when *vaapas* modifies a Dynamic *Scalar change* event involving change in *Location*.

The present section breaks down directed motion events into two parts: motion and directedness. All the verbs typically involved in directed motion events express motion, but not all are inherently directed. There are four observed categories of verbs found in sentences with reversed path readings: those that lexicalize direction along with perspective (§5.3.1), those that lexicalize direction but not perspective (§5.3.2), and finally those that lexicalize departure from a Source rather than arrival at a Goal (§3.2.1). These three categories are found to occur with *vaapas*, and are therefore discussed with illustrative examples from the COSH. For completeness, I supplement the positive evidence from the COSH with negative evidence using constructed examples: *vaapas* is unattested with verbs that do not express direction at all, and are incompatible with the addition of a Goal.

I assumed here a practical definition of directedness as follows:

(310)   Directed motion: Motion in which the location described by TRACE$(e)(0)$ is required to be distinct from the location described by TRACE$(e)(1)$.

I include in the category of reversed path readings some atypical cases as well, of what is best described as caused motion, i.e. some action (not necessarily involving motion itself) that causes a change in *Location*. An example of this kind of atypical case is *x-ko vaapas bulaanaa* 'to call/summon *x* back' (which results in *x* being at *x*'s previous location, unless explicitly denied).

5.3.1 Directed motion verb with perspective: *aanaa* 'to come'

Directed motion is 'directed' relative to some contextually specified spatial location which I will refer to as LOC_c; for example "into LOC_c", "out of LOC_c" or even "up" (higher than) or "down" (lower than) relative to LOC_c. The addition of *vaapas* then conveys the meaning of returning to an original or previously held location, which is equivalent to reversing the direction of the original motion relative to LOC_c. The motion conveyed by *aanaa* 'to come' is directed towards LOC_c.

In addition to the above specification, *aanaa* 'to come' (311) has a deictic or perspectival component, meaning that the value of LOC_c comes from a perspectival source. The interpretation of this verb involves contextually retrieving a *perspective*, i.e. a body of knowledge representing the doxastic beliefs of a particular individual called the ANCHOR (Barlew 2017). Thus the verb denotes motion towards the ANCHOR. More formally, for *aanaa* 'to come' to be used felicitously, it must be true that the self-identified location of the ANCHOR is the Goal of the motion event being described. This verb appears to be the only truly perspectival motion verb in Hindi-Urdu.

(311) *aa.naa* [come.INF] 'to come'

मैं जाऊं बस्तर और [वापस] आऊं तिरंगे में लिपटकर।

mɛ̃   jaaũ̃   bastar aur **vaapas** aaũ̃   tirange mɛ̃
1PRON go.SUBJ.1s Bastar and **back**   come.SUBJ.1s tricolour in
lipaTkar
wrap.CONJPRT

'Should I go to Bastar and come back wrapped in the tricolour [flag].'[4]

A sentence like (311) above is useful to illustrate the use of *vaapas* with *aanaa* 'to come', as it explicitly lays out two events: a 'going' or motion away from the ANCHOR, followed by a 'coming' or motion towards the ANCHOR. Of interest here is

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[4]A euphemism for being dead and wrapped in the flag as a soldier would.

the second conjunct, as it contains *vaapas*: this conjunct asserts an event of motion *towards* a Goal, which is the location of the ANCHOR. In this case we can additionally retrieve the Source, which is Bastar. The presupposition contributed by *vaapas* is the existence of a prior event of motion in the 'reverse direction', i.e. *away from* the Goal/ANCHOR. The first conjunct in the above example express a proposition that entails the (proposition expressed by the) presupposition. Thus, the presupposition is satisfied in this minimal context, and the complete sentence is understood to convey return to the location of the ANCHOR.

In order to isolate the contribution of *vaapas*, I employ the *subtraction test*, comparing a sentence containing *vaapas* to its counterpart without *vaapas*. If the latter is found to be grammatical, it is a confirmation of the expected use of *vaapas* as an adverbial adjunct—it modifies a VP projection, and it is optional. Applying the subtraction test to (311), we see that after removing the adverb, the sentence remains grammatical and coherent (312), showing that here *vaapas* is in its presuppositional/adverbial avatar.

(312) *Subtraction test successful* (*no change*)   *aanaa* 'to come'

मैं जाऊं बस्तर और [वापस] आऊं तिरंगे में लिपटकर।

mɛ̃   jaaũ͠   bastar aur ~~vaapas~~ aaũ͠   tirange mẽ
1PRON go.SUBJ.1s Bastar and ~~back~~   come.SUBJ.1s tricolour in
lipaTkar
wrap.CONJPRT

'Should I go to Bastar and come ~~back~~ wrapped in the tricolour.'

Note that the meanings of (311) and (312) are exactly the same. It is possible for the sentence to remain unchanged in meaning after removing *vaapas* because in this example the function of the counterdirectional adverb—to convey a return to a previously held location—is fulfilled in (312) even without *vaapas* being present. This is effected by the combination of (i) the 'coming' event whose Goal is highly

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salient in the context, as it is the location of the ᴀɴᴄʜᴏʀ, and (ii) the overtly mentioned 'going' event, which independently asserts that the original location was the location of the ᴀɴᴄʜᴏʀ. Therefore, the addition of the adverb *vaapas* does not restrict the context any further than the verb already does.

Compare (313) below, which has the same verb but lacks an overt antecedent. In this case, the subtraction test is successful in the sense that the sentence without *vaapas* remains grammatical and coherent; this indicates that *vaapas* has a presuppositional contribution here as it does in the previous example. Since there is no further contextual information below, in this case removing *vaapas* removes the presupposition of prior movement away from the Goal/ᴀɴᴄʜᴏʀ.

(313) *Subtraction test successful* (*presupposition lost*)   *aanaa* 'to come'
वो तो [वापस] नही आया।

vo   to   **vaapas** nahĩĩ aayaa
3ᴘʀᴏɴ ᴛᴏᴘ **back**   ɴᴇɢ   come.ᴘꜰᴠ

'He didn't come ~~back~~.'

5.3.2   Directed motion verbs without perspective: *pohoncnaa* 'to reach', *lauTnaa* 'to return', and their causatives

There are other verbs that express a meaning similar to *aanaa* 'to come', but are non-perspectival, namely: *pohoncnaa* 'to reach' and *lauTnaa* 'to return' (317). I turn to the first of these in (314) below.[5]

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[5]Note this verb (and its Indian English counterpart *reach*) can be used without a Goal PP. This behaviour is not shared by *reach* in American/British Englishes, where the closest equivalent would be *arrive*.

(314) *pohonc.naa* [reach.ɪɴꜰ] 'to reach' (intransitive)

जिस टीम का खिलाड़ी अपने साथी को झाड़ू या चादर पर बैठा कर खींचते हुए सबसे पहले अंतिम रेखा पहुंचकर [वापस] शुरुआती रेखा तक पहुंचेगा, वही विजेता होगा।

jis   tiim ka khilaaRii apne   saathii-ko   jhaaRuu ya
ʀᴇʟᴘʀᴏɴ.ᴏʙʟ team ɢᴇɴ player   sᴇʟꜰ.ɢᴇɴ companion-ᴀᴄᴄ broom   or
chaadar par baiThaa-kar   khiincte hue   sabse   pehle
bedsheet on sit.ᴄᴀᴜs-ᴄᴏɴᴊᴘʀᴛ pull.ɪᴍᴘꜰv ᴡʜɪʟᴇ all.ꜰʀᴏᴍ first
antim rekhaa pohonckar   **vaapas** shuruuaatii rekhaa tak pohoncegaa,
last line   reach.ᴄᴏɴᴊᴘʀᴛ   **back**   starting   line   till reach.ꜰᴜᴛ
vahii   vijetaa hogaa
3ᴘʀᴏɴ.ᴏɴʟʏ winner be.ꜰᴜᴛ

Lit. 'The team whose player, while pulling their companion seated on a broom or bedsheet, reaches to the finish line and then reaches back to the starting line before anyone else, will be the winner.'

As in the case of *aanaa* 'to come', the motion conveyed by *pohoncnaa* 'to reach' is directed towards a Goal, or ʟᴏᴄ$_c$. In the above example, we can retrieve the value of ʟᴏᴄ$_c$, namely 'the starting line'. Let's look at just the relevant portion of (314) above, from within the (cor)relative clause:

(315) ...sabse pehle antim rekhaa pohonckar   **vaapas** shuruuaatii rekhaa tak
       all.ꜰʀᴏᴍ first last line   reach.ᴄᴏɴᴊᴘʀᴛ **back**   starting   line   till
       pohoncegaa...
       reach.ꜰᴜᴛ
       '...will reach to the finish line and then reach back to the starting line before anyone else...'

The above clause contains *vaapas*, and asserts an event of motion from the finish line ('back') to ʟᴏᴄ$_c$, i.e. the starting line. The presupposition contributed by *vaapas* is the existence of a prior event of motion in the direction opposite to what is asserted, i.e. away from ʟᴏᴄ$_c$, or from the starting line to the finish line. Similar to the 'going-and-coming' example (311), here we have a minimal context that contains an overt antecedent which expresses a proposition that entails the (proposition

expressed by the) presupposition. That overt antecedent is the first part of (315), which asserts an event of reaching the finish line, and is understood to have started at the starting line even though that is not explicitly mentioned. The sentence as a whole is thus understood to convey return to an original location, which here is 'the starting line'.

While examples like (314) above are useful for exposition, there is no requirement for an overt antecedent in prior discourse. Where there is no overt antecedent, accomodation of the presupposition occurs. We can see this below in (316); here the main verb is the transitive/causative counterpart of the above verb *pohoncnaa* 'to reach', i.e. *pohoncaanaa* 'to cause *x* to reach'.

(316) *pohonc.aa.naa* [reach.CAUS.INF] 'to reach *x*' (transitive)

घर से १००० कि.मी. दूर लगभग भोरे के बखत बैठे ब्लॉग पढ़ रहे एक लड़के को एक ही पल में [वापस] उसके शहर पहुंचा दिया।

ghar-se   1000 ki.mi. duur lagbhag bhore   ke bakhat baiThe
home-FROM 1000 km   far about   dawn.OBL GEN time sit.PFV.OBL
blaug paRh rahe   ek laRke-ko ek hii pal   mein **vaapas**
blog read STAY.PFV.OBL one boy-ACC one ONLY moment in   **back**
uske   sheher pohoncaa   diyaa
3.PRON.GEN city   reach.CAUS.PFV GIVE.PFV

'In just one moment, [it] transported a boy sitting 1000 km away from home and reading a blog around dawn, back to his city.'

The sentence asserts an event of (metaphorical) motion of a boy to 'his city', i.e. his hometown, from a point 1000 km away from it. The Goal/LOC_c as well as the Source of this motion are thus present in the sentence. The presupposition contributed by *vaapas* is the existence of a prior event of motion away from LOC_c, i.e. the boy's hometown. According to world knowledge, the boy could only have moved away from his hometown if he had been there to begin with. Note that the context does not supply any information regarding the boy's previous location. In

fact, we can be confident that there is no overt antecedent at all for (316) because this particular COSH corpus example is from a comment left on a blog post. The commenter enters the conversation for the first time, posting what is effectively an 'out of the blue' sentence (it is preceded only by a salutation). Nevertheless (316) is understood to convey the boy's return to a location he was previously at. The meaning of return is facilitated by the fact that 'one's city' is normally understood to be where one is primordially situated, and therefore both parts of the presupposition can be readily accommodated: the fact of prior motion, as well as that prior motion being away from LOC_c or the hometown.

Note that in the above example, *vaapas* contributes a meaning that is already present or easily recoverable from the context, and therefore does not restrict the meaning of the sentence. Rather, the function of the adverb in (316) seems to be to foreground or make salient the event of having left the original location. To explore further this redundant-seeming function of the adverb, I turn to *lauTnaa* 'to return', as in (317). This verb already means 'return' or 'motion to a previously held location'. In contrast to American/British Englishes, Hindi-Urdu permits *vaapas lauTnaa* 'to return back' (as does Indian English). Not only this is combination possible, in the 104-sentence COSH sample being examined here, *lauTnaa* is the most frequently occurring verb with *vaapas* (21 instances of the intransitive form, and 2 of the causative).

(317)   *lauT.naa* [return.INF] 'to return' (intransitive)

फिर, [वापस] लौट कर बस स्टैन्ड से रात आठ बजे की बस पकड़नी थी।

phir **vaapas** lauT kar   bas sTaenD-se raat aaTh baje-kii   bas
then **back**   return CONJPRT bus stand-GEN night eight o'clock-GEN bus
pakaRnii   thii
catch.INF.F be.PST.F

Lit. 'Then once we returned back we were to catch the 8 pm bus from the bus stand.'

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In (317), the redundant-seeming *vaapas* performs a function analogous to a Goal-denoting PP; we can replace the adverb with a phrase making explicit *where* the THEME is returning to. I illustrate in (318) two different ways of expressing a Goal: a correlative, and a location (which may optionally appear with the preposition that is used in the language to mark a Goal).

(318)   *Replacing vaapas with a PP*   *lauTnaa* 'to return'
फिर, {जहाँ से हम निकले थे, वहाँ (को)/कानपुर} लौट कर बस स्टैन्ड से रात आठ
बजे की बस पकड़नी थी।

phir {jahãã   se   ham   nikle   the,   vahãã(-ko)/
then {RELPRON.PLC from 1PRON.PL emerge.PFV.PL be.PST.PL there(-DAT)/
kaanpur} lauT   kar   bas sTaenD-se raat aaTh baje-kii   bas
Kanpur} return CONJPRT bus stand-GEN night eight o'clock-GEN bus
pakaRnii thii
catch.INF.F be.PST.F

'Then once we returned to {where we had started from/Kanpur}, we were
to catch the 8 pm bus from the bus stand.'

In the following example we have the causative of *lauTnaa*, i.e. *lauTaanaa* 'to return *x*' in (319). Note that the causative form is generally restricted to an inanimate THEME (and an animate causer). In this example, the adverb makes salient the prior event of the awardees receiving their awards, thus imparting the flavour of *deliberately* returning the awards to where they had come from, which is the intended sense here.

(319)   *lauT.aa.naa* [return.CAUS.INF] 'to return *x*' (transitive)
वे पनबिजली परियोजनाओं को रोक कर उत्तराखंड के विकास को अवरूद्ध करने वाले
सरकारी फैसलों के विरोध में अपने सम्मान [वापस] लौटायें।

ve   panbijlii   pariyojnaaon-ko   rok-kar
3PRON.HON hydroelectric power project.PL.OBL-ACC stop.CONJPRT
uttarakhanD ke vikaas-ko   avruddh karne   vaale
Uttarakhand GEN progress-ACC opposed do.INF.OBL person.PL.OBL
sarkaarii   fainslon-ke   virodh   mein apne   sammaan
governmental decision.PL-GEN opposition in   self.GEN.PL award
vaapas lauTaayẽ
back   return.SUBJ

'They should return their awards in opposition to the govermental deci-
sions to stop the hydroelectric power projects thereby impeding progress
in Uttarakhand.'

Another verb we can observe similar behaviour with is given below in (320):
bhaagnaa 'to run'. This sentence is understood to end with the runner at the place
they originally started out at. Conventionally, this is *sasural* 'the marital home',
where the female subject of this sentence is assumed to live.

(320)   *bhaag.naa* [run.INF] 'to run' (intransitive)

छुट्टियों में मायके आई थी दो हफ्ते के लिए लेकिन चार दिन में ही [वापस] भागी।

chuTTiyõ   mẽ mayke   aaii   thii   do hafte
holiday.PL.OBL in maternal_home.OBL come.PFV.3FS e.PST.3FS two week.OBL
ke liye lekin caar din mẽ hii   **vaapas** bhaagii
for   but four day in ONLY **back**   run.PFV

'In the holidays I had come to my maternal home for two weeks but in just
four days I ran back.'

Finally, in the example below we see a case of caused change in location. While
the main verb here is a verb of transfer, and not a motion verb (it does not have
to involve any actual motion), its end point is a PP, and so this sentence conveys a
return to the previously held location identified by that PP. In this case the location
is the metaphorical 'track' which the careers of successful actors (like Priyanka
Chopra in the sentence below) run on.

(321) *laa.naa* [take/bring.ɪɴꜰ] 'to bring'[6]

इसने एक झटके में प्रियंका का करियर [वापस] पटरी पर ला दिया है।

isne   ek jhaTke   mein priyankaa ka kariyar vaapas
3ᴘʀᴏɴ.ᴘʀᴏx.ᴏʙʟ-ᴇʀɢ one yank.ᴏʙʟ in   Priyanka ɢᴇɴ career **back**
paTrii par laa   diyaa   hai
track on take/bring ɢɪᴠᴇ.ᴘꜰᴠ be.ᴘʀᴇs

'It has brought Priyanka's career back on track in one swoop.'

The above example illustrates that motion of a ᴛʜᴇᴍᴇ ending at a Goal does not necessary have to be caused by an action motion verb. There is some flexibility in the particular verb doing the causing; as long as the result itself is a change in *Location*, we are in the realm of events that give rise to $\boxed{\text{ʀᴇᴠᴇʀsᴇᴅ ᴘᴀᴛʜ}}$ readings.

5.3.3 Light verbs add direction

There is an important component of how events are expressed in Hindi-Urdu that I have not touched on so far: light verbs. Light verbs are pervasive in this language, conveying various sorts of information, including aspect, manner, and speaker attitude. Even though their absence rarely, if ever, causes ungrammaticality, light verbs are ubiquitous to the degree that speakers will usually judge sentences without a light verb as incomplete or degraded unless there is a context rich enough to convey all of the required information. In this section I outline some of the main properties of light verbs in Hindi-Urdu via the interaction of these properties with the meaning and distribution of *vaapas*. Two sorts of information contributed by light verbs to events are: (i) an end point (i.e. telic interpretation), and (ii) an orientation (i.e. directed interpretation). These are my focus in the present section.

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[6]In (321) the main verb is *laanaa* 'to bring', which occurs here in the perfective construction *laa diyaa* [bring give.ᴘꜰᴠ] 'brought', licensing ᴇʀɢ on the subject. An alternative form of the perfective construction with the same main verb *laanaa* 'to bring' is *le aayaa* [take come.ᴘꜰᴠ] 'brought', which is associated with nominative rather than ergative.

A verb like *lauTnaa* 'to return' can have different perspectival orientations depending the light verb present in the sentence; it commonly occurs with the light verb version of *aanaa* 'to come' and *jaanaa* 'to go':[7]

(322) a. *lauT **aa.naa*** [return COME.INF] 'to **come** back'

     b. *lauT **jaa.naa*** [return GO.INF] 'to **go** back'

These combinations above correspond to their main-verb counterparts: (322a) with 'to come' conveys motion towards the ANCHOR/LOC$_c$, and (322b) with 'to go' conveys motion away from LOC$_c$. These combinations can in turn each appear with *vaapas*, as shown below:

(323) a. *vaapas lauT aa.naa* [back return COME.INF] 'to come back'

     b. *vaapas lauT jaa.naa* [back return GO.INF] 'to go back'

The combination *vaapas lauT jaanaa* 'to go back' is particularly interesting because it creates an event of departure; this is illustrated in (324), (325). Strikingly, when the same verb appears without a light verb, it is understood to convey motion to the same place where the THEME had started from (326). This inference of returning to original location is thus disrupted by the light verb 'to go'.

(324) *lauT jaa.naa* [return go.INF] 'to go back' (intransitive)

मीडिया में आ रही खबरों के मुताबिक सैफ कोलाबा पुलिस स्टेशन के नजदीक आकर मीडिया का जमावड़ा देखकर [वापस] लौट गए हैं।

miiDiyaa mẽ aa rahii khabarõ ke mutaabik saif kolaabaa
media in come STAY.PFV.F report.PL.OBL GEN.OBL according Saif Colaba
steshan ke najdiik aakar miiDiyaa kaa jamaavDaa
Station GEN.OBL near come.CONJPRT media GEN accumulation
dekhkar **vaapas** lauT gaye hɛ̃
see.CONJPRT **back** return GO.PFV.HON be.PRS

---

[7]The main verb does not bear the aspectual inflection as it normally would, it is borne by the light verb. Tense morphology, when present, is expressed as it usually is in Hindi-Urdu, i.e. with a BE-auxiliary.

'According to media reports coming in, Saif, after seeing the media gathered at Colaba Police Station when he approached it, has left.'

(325) *lauT jaa.naa* [return go.INF] 'to go back' (intransitive)

दो बार उन्होंने गीतकारी के लिए जद्दोजेहद की और हारकर [वापस] लौट गये।

do   baar unhõne   giitkaarii ke liye jaddojehed kii   aur
two time 3PRON.HON.OBL.ERG   lyric   FOR   best effort do.PFV and
haarkar   **vaapas** lauT   gaye
defeat.CONJPRT   **back**   return GO.PFV

'Twice, he tried very hard to become a lyricist and left defeated.'[8]

In (324), actor Saif Ali Khan turns away from LOC$_c$ (= Colaba Police Station) to avoid being ambushed by reporters there, and we don't know where he ends up. In (325), the aspiring lyricist turns away from LOC$_c$ (= here a metaphorical location of "being a lyricist"), and we don't know where he ends up. By contrast, below in (326), the people end up where they had started from.

(326) *Without light verb, lauTnaa describes motion to* LOC$_c$ *lauTnaa* 'to return'

फिर, [वापस] लौट कर बस स्टैन्ड से रात आठ बजे की बस पकड़नी थी।

phir **vaapas** lauT   kar   bas sTaenD-se raat aaTh baje-kii   bas
then **back**   return CONJPRT bus stand-GEN night eight o'clock-GEN bus
pakaRnii   thii
catch.INF.F be.PST.F

Lit. 'Then once we returned back we were to catch the 8 pm bus from the bus stand.' → *The place we go to catch the bus is the place we started from*

Below is an example of what happens when the light verb is 'to come'. Here the main verb is *bhaagnaa* 'to run'. Similar to (326), there is an inference here that the place the person runs to is where they were before. The light verb in this case is

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[8] Anand Bakshi, who was successful on his third attempt and went on to become a prolific lyricist in the Bombay film industry, at the time one of very few engaged full-time in the occupation.

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thus oriented in the same way as its main verb version 'to come': it denotes motion towards a contextually specified location LOC$_c$.

(327) *bhaag aa.naa* [run COME.INF] 'to run' (intransitive)

बेगम जान नाइन से पीठ मलवाते वक्त अगर मुझे किसी काम से बुलाती तो मैं गर्दन मोड़े-मोड़े जाती और [वापस] भाग आती।

begum jaan naain   se piiTh malvaate   vakt agar
Begum Jaan barberess by back massage.CAUS.IPFV.OBL time if
mujhe   kisii kaam se bulaatii   to mɛ̃   gardan
1PRON.OBL.ACC some work for call.IPFV.3FS then 1PRON neck
moRe-moRe   jaatii   aur **vaapas** bhaag aatii
turned-turned go.IPFV and **back**   run   come.IPFV

'If while being massaged by the barberess Begum Jaan called me for some work, I'd go with my neck half-turned (i.e. reluctantly) and run right **back**.'

→ *The place I'd run to is the place I was earlier*[9]

The brief introduction to light verbs provided here will facilitate an understanding of what is going on in the more complex examples coming up.

5.3.4 Motion verbs that can be directed or non-directed

Some motion verbs are conventionally directed, in the sense that they normally contribute an implicature of traversal of some ground, as in (328) below, which would be infelicitous if the King had already been at his destination when he received word. However the implicature can be explicitly denied or cancelled in the case of these verbs, by using constructions like *running in place*, as shown below in (329).

(328) *dauR.naa* [run.INF] 'to run' (intransitive)

रियासत पर अंग्रेजी सेना के हमले का सन्देश मिलते ही राजा नाहर सिंह [वापस] दौड़े।

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[9]From Ismat Chugtai's renowed story, *Lihaaf* (*The Quilt*).

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riyaasat   par angrezii senaa ke   hamle   kaa sandesh
principality on British   army GEN.OBL attack.OBL GEN message
milte   hii   raajaa naahar singh **vaapas** dauRe
receive.IPFV.OBL ONLY King   Nahar Singh **back**   run.PFV

'As soon as he received word of the British army's attack on the principality,

King Nahar Singh ran back.'

(329) *Can deny implicature of traversal*   *dauRnaa* 'to run'

स्पॉट रनिंग यानि [एक ही जगह पर खड़े होकर दौड़ना]।[10]

spauT raning yaani   **ek hii   jagah par khaRe   hokar**
spot   running meaning **one ONLY spot   on standing.OBL be.CONJPRT**
dauRnaa
run.INF

'Spot-running, i.e. **running while standing at one place**.'

In (330) below, we see that *vaapas* is found to occur with the causative form of the
verb as well; here one person is running the other person over to some contextually
specified place.

(330) *dauR.aa.naa* [run.CAUS.INF] 'to get *x* to run' (causative)
इसके ठीक दस दिन बाद शाम के समय गंगिया ने कसरती डील-डौल के कुछ लोगों को
शिवालय में घुसते देखा! गंगिया दौड़कर मेरे पास आई---"मालकिन, कुछ खतरनाक
लोग मिसिर बाबा की तरफ गए हैं।" मैंने [वापस] उसको दौड़ाया कि देखकर आये,
शिवाले में क्या हो रहा है!

iske   Thiik   das din baad shaam   ke   samay gangiyaa ne
3P.PROX.OBL correct ten day later evening GEN time   Gangiya ERG
kasratii   Diil-Daul   ke   kuch logõ   ko shivaalay mẽ ghuste
muscular appearance GEN some people.OBL ACC Shivalay in   enter.IPFV.PL
dekhaa! gangiyaa dauRkar   mere   paas aayii   — "maalkin,
see.PFV Gangiyaa run.CONJPRT 1P.GEN.OBL near come.PFV.3F   mistress
kuch khatarnaak log   misir baabaa kii   taraf   gaye
some dangerous people Misir Baba   GEN.OBL.F direction go.PFV

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[10]https://web.archive.org/web/20220128050527/https://www.jagran.com/lifestyle/health-4-
easy-and-effective-workouts-you-can-do-at-your-home-20143985.html

hɛ̃.   mɛ̃ne **vaapas** usko   dauRaayaa ki   dekhkar
be.PRES.3PL 1PR.ERG **back** 3P.OBL.ACC run.CAUS.PFV COMP see.CONJPRT

aaye,   shivaalay mẽ kyaa ho rahaa   hɛ
come.SUBJ.3s Shivalay in   what be STAY.PFV be.PRES

'Exactly ten days after that, one evening Gangiya saw some muscular types going into the Shivalay. Gangiya ran to me—"Mistress, some dangerous people have gone towards Misir Baba." I ran her back to find out, what is happening in the Shivalay!'

There are other verbs in the category of non-directed motion that are compatible with *vaapas*, but only in the presence of a light verb. In (331) is the verb *kuudnaa* 'to jump' which appears with the light verb *jaanaa* (in perfective form as *gaye*) whose meaning as a main verb is 'to go', but here conveys something else: a completed action and the implicature of jumping in a downward direction. This combination is compatible with *vaapas*:

(331)   *kuud.naa* [jump.INF] 'to jump'

सत्ता परिवर्तन हुआ और देश उसे सम्भाल ना सका और हम गंदी नाली के कीड़े फिर उसी गंदगी में [वापस] कूद गए।[11]

sattaa   parivartan huaa aur desh   use   sambhaal naa
government change   be.PFV and country 3PRON.OBL.ACC handle   NEG

sakaa   aur ham   gandii naalii ke   kiiRe phir usii
can.PFV and 1PRON.PL dirty.f gutter GEN.OBL insects again 3PRON.OBL.ONLY

gandgii mẽ **vaapas** kuud gaye
dirt   in **back** jump GO.PFV

'The government changed and the country could not handle it, and we vermin of the dirty gutter jumped back into the same muck once more.'

Both verbs *dauRnaa* 'to run' and *kuudnaa* 'to jump' behave the same with respect to the implicature of traversal: they both commonly contribute an implicature of

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[11]https://web.archive.org/web/20220128042524/https://www.jagran.com/blogs/ashok
srivastava/%E0%A4%85%E0%A4%A8%E0%A5%8D%E0%A4%A8%E0%A4%BE-%E0%A4%94%E0%A4%B0-%E0%A4
%89%E0%A4%A8%E0%A4%95%E0%A5%80-%E0%A4%9F%E0%A5%80%E0%A4%AE/

covering ground (either with the verb alone, or in combination with a light verb), but the implicature of traversal can be explicitly denied as shown below in (333). In the case of *kuudnaa* 'to jump' (332), the implicature involves motion in the vertical plane, lending a further (downward) directedness to this traversal that is not part of the meaning of *dauRnaa* 'to run'.

(332) *Implicature of directed traversal with light verb*

mɛ̃ kuud gayii
I   jump go.PFV

'I jumped down.'

(333) *Can deny implicature of traversal*   *kuudnaa* 'to jump'
यानी सुबह उठ कर आसान करना, सूर्य नमस्कार करना और एक ही जगह पर कूदना
--- यह मेरा रोज का दस्तूर था।[12]

yaanii   subha   uTh kar   aasan   karnaa, suurya namaskaar
meaning morning rise CONJPRT yoga poses do.INF sun   salutation
karnaa aur **ek hii jagah par kuudnaa**   — ye   meraa   roj
do.INF and **one ONLY place on jump.INF** 3PRON.PROX.S 1PRON.GEN day
kaa dastuur thaa
GEN rule   be.PST

'Meaning, waking up in the morning and doing yoga, doing sun-salutation and **jumping in place**–that was my daily routine.'

5.3.5 Directed motion verbs and departure: *jaanaa* 'to go', *nikal lenaa* 'to escape'

While the above examples all involve motion that is directed towards LOC_c, there are also verbs that have the opposite orientation - they describe motion *away* from a contextually specified location. The verb *jaanaa* 'to go' is in this category, and is

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[12]From short story *Ek Admi Ke Udne Ki Kahani* by Arun Sadhu, in *Bharatiya Vigyan Kathaein*, Kitabghar Prakashan.

shown in (334) below with *vaapas*. Note that this verb does not include a perspectival component.

(334)   *jaa.naa* [go.INF] 'to go'

मोबाइल फोन में बजते वालगा संगीत का आनन्द लेती हुई मैं [वापस] जा रही थी...

mobaail	fon	mɛ̃	bajte	vaalagaa	sangiit	kaa	aanand	letii
mobile	phone	in	play.IMPFV	Valaga	music	GEN	joy	TAKE.IMPFV.F

huii	mɛ̃	**vaapas**	jaa	rahii	thii
be.PFV.F	1PRON	**back**	go	STAY.PFV.F	be.PST.F

'I was going back enjoying the Valaga music[13] playing on [my] mobile phone.'

The sentence asserts an event of motion of the THEME but does not specify any information about its Goal. Here, *vaapas* contributes a presupposition of an event of prior motion away from some contextual point LOC_c. With no further context, there is no further information about where the person is heading after leaving LOC_c, nor is it required for this sentence to be felicitous.

Applying the subtraction test to (334) above yields (335) below which is a coherent and natural sentence, but removing *vaapas* eliminates the presupposition that the motion of the THEME away from LOC_c was preceded by its motion towards LOC_c. The use of *vaapas* thus contributes a meaning that is not already recoverable from the context. The sentence in (335) below has a meaning like 'moving along'.

(335)   *Subtraction test yields less restricted meaning*   *jaanaa* 'to go'

मोबाइल फोन में बजते वालगा संगीत का आनन्द लेती हुई मैं [वापस] जा रही थी...

mobaail	fon	mɛ̃	bajte	vaalagaa	sangiit	kaa	aanand	letii
mobile	phone	in	play.IMPFV	Valaga	music	GEN	joy	TAKE.IMPFV.F

huii	mɛ̃	~~**vaapas**~~	jaa	rahii	thii
be.PFV.F	1PRON	~~**back**~~	go	STAY.PFV.F	be.PST.F

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[13]Traditional music of the Kodava tribe from the Brahmagiri mountains around Coorg in the southern state of Karnataka.

'I was moving along enjoying the Valaga music playing on [my] mobile phone.'

Similar examples are to be found with other verbs that involve leaving or exiting, for example *nikal le.naa* [emerge TAKE.INF] 'to escape' in (336):

(336) *nikal le.naa* [emerge TAKE.INF] 'to escape'

लोगों ने इसकी शिकायत पुलिस से की, जिस पर पुलिस वहां पहुंची भी और कुछ देर टहलकर बिना कार्रवाई के [वापस] निकल ली।

logõ	ne	iskii		shikaayat	pulis	se	kii,
people.PL	ERG	3PRON.PROX.OBL.GEN.F		complaint	police	to	do.PFV,

jis		par	pulis	vahãã	pohoncii	bhii	aur	kuch	der
RELPRON.OBL		on	police	there	reach.PFV.F	also	and	some	time

Tehelkar		binaa	karravaaii	ke	**vaapas**	nikal	lii
saunter.CONJPRT		without	prosecution	GEN.OBL	**back**	emerge	TAKE.PFV

'People reported this to the police, whereupon the police did get there, wandered about for a bit, and then escaped without taking any action.'

Note that though a Goal is not obligatory, COSH data show that it is common for *jaanaa* 'to go' to appear with a Goal in sentences with *vaapas*, in which case there is a retrievable value for LOC$_c$ provided by the overt PP. As discussed in Chapter 3 (§3.2.1), English and Hindi-Urdu both show that when a Goal is present, these departure events become exactly the same as arrival events: the value of LOC$_c$ is retrieved, and copied into the presupposition. Thus cases like (334) and (336) where the event describes departure without an overt Goal constitute a relatively small class of examples where the adverb operates on an impoverished or degenerate path, reducing the motion undergone by the THEME to its location in terms of a 2-point scale that consists of AT_LOC$_c$ and ¬AT_LOC$_c$.

5.4 A supplement: Manner and Result in Hindi-Urdu motion

In this section I provide supplemental information about the landscape of motion verbs in Hindi-Urdu in general, and consolidate the findings from COSH into a form informs that landscape. While my basic observations and diagnostic tests draw from Narasimhan (2003), I enrich her typology of motion verbs in Hindi-Urdu with two further contributions: (i) I bring it into conversation with other work done in the motion domain—notably by Rappaport Hovav & Levin (2010)—resulting in 3 main categories of motion verbs, and (ii) I describe new facts relating to the role of light verbs and aspect in the application of diagnostic tests to motion verbs.

There is a well-known observation in the literature on motion verbs that motion is either accompanied by a Path specification or a Manner specification, but not both: a verb will typically not be able to express both Path and Manner in its lexical entry (see Rappaport Hovav & Levin 2010 and references therein). In order for both Manner and Path to be expressed in a sentence, either Manner will be expressed by an adverbial, or Path will be expressed by a PP while the other component is lexicalized by the verb itself. This observation is often referred to as Manner-Result Complementarity, where "Result" gestures toward the treatment of Path as one particular type of scalar change, thereby unifying verbs of change of state with verbs of motion, and separating them from motion that lexicalizes Manner. In Chapter 3, I focused on this unification of scalar change and showed that *vaapas* and its crosslinguistic counterparts combine with verbs that lexicalize a scale. In the present chapter we will see it is not necessary that this scalar information be lexicalized within the verb itself. Motion verb data I will discuss in the following sections will demonstrate that as long as a verb is compatible with a phrase expressing a scalar component, it is also compatible with *vaapas*.

Motion verbs in Hindi-Urdu can be divided into three subcategories that I'll call

Strictly Result verbs of motion, *Underspecified* verbs of motion, and *Strictly Manner* verbs of motion. For brevity, I will not repeat 'of motion' in these category-names in the rest of the section. *Strictly Result* verbs are verbs of motion that entail a result. In the world of motion, a result is an end point of the motion, canonically expressed as a Goal or a bounded path. A result-denoting phrase can be just an NP expressing a location (*Delhi*, *home*), a full PP (*to Delhi*, *to the house*), or just a P (*here*, *down*). *Strictly Manner* verbs are verbs of motion that do not entail a result, and in fact are incompatible with a result-denoting phrase. *Underspecified* verbs are verbs of motion that do not entail a result, but are nevertheless compatible with a result-denoting phrase.

5.4.1   Diagnostic 1: 'in one place'

A distinction can be made between result verbs and manner verbs in the following way. If a motion verb is felicitous when there is no traversal of space, that means the verb does not lexicalize a path; in other words it does not entail a result. A situation of this kind can be created using the phrase 'in one place' to explicitly deny the traversal of space: if a verb can occur with this phrase, it is not in the *Strictly Result* category.

(337)   *Motion verbs compatible with 'in one place' are **not** Strictly Result verbs*

mɛ̃   ek   hii   jagah par {dauR/ jhuum/ kuud/ reng/ naac} rahaa
1PRON one ONLY place on {run/   sway/ jump/ crawl/ dance} STAY.PFV
hũũ
be.PRS.1SG

'I am running/swaying/jumping/wriggling/dancing in one place.'

Examples like the above show that even with verbs that may conventionally be understood to involve traversal of space, this traversal can be denied as shown, and is therefore not an entailment of the verb, and thus not part of what it lexicalizes.

5.4.2 Diagnostic 2: Goal or bounded path

A futher distinction can be made between *Underspecified* and *Strictly Manner* verbs. Some verbs that are compatible with 'in one place' can also occur with a Goal or a bounded path, which means that despite not lexicalizing path information, these manner verbs are still compatible with a result. These are the *Underspecified* cases.

(338)   *Motion verbs compatible with 'in one place'* **and** *Goal/bounded path are Underspecified*

   mɛ̃   duusrii taraf {dauRaa/ ghuumaa}
   1PRON other   side   {run.PFV/ swivel.PFV}

   'I ran/swivelled to the other side.'

A small number of verbs entirely resist the addition of a Goal or a bounded path. These are the *Strictly Manner* verbs, incompatible with any kind of result.

(339)   *Motion verbs incompatible with Goal/bounded path are Strictly Manner verbs*

   mɛ̃   vahãã {*tɛraa/   *rengaa/   *naacaa}
   1PRON there   {swim.PFV/ crawl.PFV/ dance.PFV}

   'I swam/crawled/danced there.'

5.4.3 Correspondence between result and *vaapas*

There is a 1:1 correspondence between a motion verb's ability to occur with a result-denoting phrase, and its ability to occur with *vaapas*. *Strictly Manner* verbs, i.e. those incompatible with a result, are also incompatible with *vaapas*.

(340)   *Strictly Manner verbs and vaapas*

    a. *If incompatible with result...*

        m̃ɛ   vahãã {*tɛraa/   *rengaa/   *naacaa}
        1PRON there {swim.PFV/ crawl.PFV/ dance.PFV}

        'I swam/crawled/danced there.'

    b. *...also incompatible with vaapas*

        m̃ɛ   vaapas {*tɛraa/   *rengaa/ *naacaa}
        1PRON back   {swim.PFV/ crawl.PFV/ dance.PFV}

        'I swam/crawled/danced back.'

Note that it is possible to construct what superficially appear to be grammatical examples with *Strictly Manner* verbs and *vaapas*, as shown below: but note that in these cases the main verb is actually *jaanaa* 'to go' (in perfective aspect, *gayaa*). The circumlocution below (putting the manner component into an adverbial) is characteristic of 'verb-framed' languages (Talmy 1985; Aske 1989).

(341)   *A circumlocution to express Strictly Manner events with traversal of space*

    m̃ɛ   vahãã {tɛrke/   rengke/   naacke}   (vaapas)
    1PRON there {swim.CONJPRT/ crawl.CONJPRT/ dance.CONJPRT} (back)
    gayaa
    go.PFV

    'I went (back) there swimming/crawling/dancing.'

An example of the above circumlocution found in the COSH is given below with the verb *phisalnaa* 'to skid/slide': *phisalkar* is not the main verb but rather an adverbial phrase meaning '(by/while) sliding', and the main verb is actually *aanaa* 'to come'.

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(342) *phisal.naa* [skid.INF] 'to skid/slide'

सीधे व कमर के बल सोने पर एसिड [वापस] फिसलकर इसोफैगस में आ जाता है।

siidhe va kamar ke   bal sone   par aesiD **vaapas**
straight or waist GEN.OBL side sleep.INF.OBL from acid **back**
phisalkar isophɛgas mɛ̃ aa   jaataa hɛ
slid.CONJPRT oesophagus in   come GO.IPFV be.PRES

'When sleeping straight or on the side, the acid comes sliding back into the oesophagus.'

Underspecified verbs, i.e. those compatible with a result, are also compatible with *vaapas*. Let's look at (343) first. In (343a) we see the sentence with a Goal, and in (343b) the same sentence with *vaapas* in place of the Goal.

(343)   *Underspecified verbs and vaapas*

  a. *If compatible with result...*

  mɛ̃   duusrii taraf {dauRaa/ ghuumaa}
  1PRON other   side {run.PFV/ swivel.PFV}

  'I ran/swivelled to the other side.'

  b. *...also compatible with vaapas*

  mɛ̃   vaapas {dauRaa/ ghuumaa}
  1PRON back   {run.PFV/ swivel.PFV}

  'I ran/swivelled back.'

The above discussion illustrates the centrality of path to the compatibility of the BACK-adverb with verbal categories. The incompatibility of *vaapas* with all and only the verbs which disallow path expressions aligns with Manner/Result Complementarity. We can see that the adverb is only good on the result-side of this division. Notably in the table, the path specification is never *required* to be lexicalized by the verb's lexical entry, it is always fine for it to come from a light verb. The adverb is thus sensitive to the event as a whole, rather than the lexical content of particular verbs.

5.4.4 Known confounds: Light verbs, aspect

There is a class of verbs that behave similarly to (343) above, the only difference being that the sentence (344) includes a light verb.

(344) *Underspecified verbs and vaapas* (*light verb cases*)

    a. *If compatible with result...*

       mɛ̃   duusrii taraf {jhuum/ kuud/ uR} gayaa
       1PRON other   side {sway/ jump/ fly} GO.PFV

       'I swayed/jumped/flew to the other side.'

    b. *...also compatible with vaapas*

       mɛ̃   vaapas {jhuum/ kuud/ uR} gayaa
       1PRON back   {sway/ jump/ fly} GO.PFV

       'I swayed/jumped/flew back.'

Verbs like *jhuumnaa* 'to sway', *kuudnaa* 'to jump', and *uRnaa* 'to fly' require the presence of a light verb in order to take a Goal. Without the light verb, they are degraded, as shown in (345) below:

(345) mɛ̃   duusrii taraf {??jhuumaa/ ??kuudaa/ ??uRaa}
       1PRON other   side {??sway.PFV/ ??jump.PFV/ ??fly.PFV}
       'I swayed/jumped/flew to the other side.'

In (345), the light verb contributes telicity, which facilitates compatibility with a Goal or bounded PP, as these are also telic in nature.

A similar phenomenon is observed with the 'in one place' test: the test itself picks out events that are durative, i.e. involve motion on a scale with more than two points.[14] Progressive aspect seems to facilitate compatibility with 'in one place' because it contributes durativity. In general, the compatibility of verbs with 'in one place' (346a) is degraded with perfective aspect (346b).

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[14]As opposed to events that are punctual events, i.e. involve a two-point scale (e.g. *to arrive*), and describe a transition from one place to another, thus fundamentally incompatible with occuring 'in one place'.

(346) a. pannii   (ek hii jagah par) {uR/ ghuum/ tɛr} rahii   hɛ
        plastic bag (one ONLY place on) {fly/ swivel/ swim} STAY.PFV be.PRS
        'The plastic bag is flying/spinning/floating (in one place).'

    b??pannii   (ek hii jagah par) {uRii/ ghuumii/ tɛrii}
        plastic bag (one ONLY place on) {fly.PFV/ swivel.PFV/ swim.PFV}
        'The plastic bag flew/spun/floated (in one place).'

5.4.5 Concluding motion

This section has consolidated the learnings about motion verbs and their interaction with *vaapas* drawn from the COSH, given in table form on the next page. The table shows that the distribution of *vaapas* with motion verbs has only one real constraint: it is only if the verb is incompatible with any kind of result (a Goal or bounded PP) that *vaapas* is unable to occur with it. In all other cases, whether or not the verb lexicalizes a result, or a different constituent does, or even if there is no result overtly mentioned, the adverb is freely available. This pattern provides evidence for my claim from the beginning of this chapter - that it is not strictly speaking the verb that *vaapas* selects for, but characteristics of the whole event. Even manner verbs, so long as they don't outright reject paths, can occur with *vaapas* because the event type does not rule it out. Indeed, the fact of such underspecified verbs existing, combined with facilitating effects of light verbs and aspect, reveals a much more complicated landscape of motion and REVERSED PATH readings than would arise with just verbal selection.

5.5 *Scalar change: Possession*

The following examples convey a restoration of possession, like in English *to get x back*. These cases represent 30 sentences out of the 104-sentence sample, or a 28.85% share. In the classification of event types in (308), I referred to readings in this

MOTION VERB	MEANING	GOES WITH *vaapas*	CAN TAKE GOAL/ BOUNDED PP	CAN DO IN PLACE
Strictly Result verbs - entail result				
bhaagnaa	'to run (away)'	yes	yes	* (durative)
calnaa	'to walk'	yes	yes	* (durative)
khisaknaa	'to move shiftily'	w/ LV	yes	NA (punctual)
saraknaa	'to slip/slide/shift'	w/ LV	yes	NA (punctual)
phisalnaa	'to skid/slide'	w/ LV	yes	NA (punctual)
luRaknaa	'to tumble'	w/ LV	yes	NA (punctual)
Underspecified verbs - compatible with result				
dauRnaa	'to run'	yes	yes	yes
ghuumnaa	'to roam/swivel/rotate'	yes	yes	yes
jhuumnaa	'to sway'	w/ LV	w/ LV	yes
kuudnaa	'to jump'	w/ LV	w/ LV	yes
uRnaa	'to fly'	w/ LV	w/ LV	yes
Strictly Manner verbs - incompatible with result				
tɛrnaa	'to swim'	*	*	yes
rengnaa	'to crawl/slither'	*	*	yes
naacnaa	'to dance'	*	*	yes
phudaknaa	'to bounce'	*	*	NA (iterative)
bhaTaknaa	'to wander'	*	*	NA (iterative)

Table 5.2: A non-exhaustive snapshot of motion verbs and their properties

category as RE-POSSESSION readings. These readings arise when *vaapas* modifies a certain specific kind of Dynamic **Scalar change** event, namely those involving transfer of *Possession*: the THEME being transferred is typically inanimate, and the transfer itself is typically between two animate, usually human, entities.

(347) *haasil kar.naa* [obtain do.INF] 'to obtain *x*'

हालांकि अपनी फोटो तथा अन्य सामग्री को ऑर्कुट में डालने वाले प्रयोगकर्ता वर्ष 2016 तक इन्हें [वापस] हासिल कर सकेंगे।

haalãāki apnii   foto   tathaa anya saamagrii-ko aurkuT mẽ Daalne
though   self.GEN photo and   other stuff-DOM   Orkut in put.INF.OBL
vaale   prayogkartaa varsh 2016 tak   inhẽ   **vaapas** haasil kar
person.PL user   year 2016 until 3P.PROX.PL.OBL **back**   obtain do
sakẽge
can.FUT

'Though users who put their photos and other stuff on Orkut (social net-

working site) can get them back (retrieve them) until the year 2016.'

(348) *paa.naa* [get.INF] 'to get *x*'

मैं उन सारे कणों की तलाश में हूं, जिनसे [वापस] अपना साबुत रूप पा सकूं।

mẽ   un   saare kaNon   kii talaash mẽ hũũ
1PRON 3PRON.PL.OBL all   particle.PL GEN search in be.PRES.1SG
jin-se   **vaapas** apnaa   saabut ruup paa sakũũ
RELPRON.PL.OBL-from **back**   self.GEN.M whole form get can.1.SG

'I'm looking for all those particles from which I can get back (regain) my

whole form.'

(349) *de.naa* [give.INF] 'to give *x*'

मैंने तेरी चीज तुझे [वापस] दे दी।

mẽne   terii   ciiz tujhe   **vaapas** de   dii
1.PRON.ERG 2.PRON.GEN thing 2.PRON.OBL.ACC **back**   give GIVE.PFV

'I gave your thing back to you.'

In this category I include actions that cause a transfer of possession, e.g. buying

something:

(350) *x(-ko) khariid.naa* [x(-DAT) buy.INF] 'to buy *x*'

इस राशि से कम्पनी को अमेरिकी सरकार से हिस्सेदारी [वापस] खरीदने में मदद मिलेगी।

is   raashii-se   kampanii-ko amerikii sarkar-se
3PRON.PROX.OBL money-from company-DAT American government-from
hissedarii   **vaapas** khariidne   mein madad milegii
shareholding **back**   buy.INF.OBL in   help get.FUT

'This money will help the company buy [its] shareholdings back from the American government.'

I treat all of the above cases under *Scalar change* in the same way that I treat scalar change involving two-point scale, be it in the realm of change of state, or motion. Similar to those now-familiar scalar changes, the transfer of possession cases also have a start point and an end point, and analogously to a spatial scale, the THEME starts out at one and at the end of the event ends up at the other.

5.6 *Scalar change: Attribute*

The following examples involve RESTITUTIVE readings. As we know from prior chapters, these readings arise when *vaapas* modifies Dynamic *Scalar change* events involving a change in the value of an *Attribute*. These cases represent a relatively small proportion of the data: 3 sentences out of the 104-sentence sample, or a 2.88% share. All three examples are given below:

(351) इसके बाद हृदय और फेफड़ों को रक्त संचार व्यवस्था से [वापस] जोड़ देते हैं, जिससे वे पहले की तरह काम करने लगें।

iske   baad hriday aur phephRõ   ko rakt   sancaar
3PRON.PROX.OBL.GEN.OBL after heart and lung.PL.OBL ACC blood circulation
vyavasthaa se **vaapas** joR   dete   hɛ̃,   jisse   ve   pehle ki
system   to **back** attach GIVE.IPFV be.PRS, so.that 3PRON.PL before GEN
tarah kaam karne   lagẽ
way   work do.INF.OBL ATTACH.SUBJ

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'After this they re-attach the heart and lungs back to the circulatory system, so that they start working like before.'

(352) *x-ko y banaa.naa* [x-DAT y make.INF] 'to make *x* into *y*'

उत्तरी बस्तर में बाबा बिहारी दास ने 'आदिवासियों को [वापस] हिंदू बनाने' के लिए एक आक्रामक अभियान शुरू किया था...

uttarii   bastar mein baabaa bihaarii daas-ne aadivaasiyon-ko
northern Bastar in   Baba   Bihari   Das-ERG aboriginal.PL.OBL-ACC
'**vaapas** hinduu banaane'   ke liye ek   aakramak abhiyaan shuruu
back   Hindu   make.INF.OBL for   one aggressive campaign start
kiyaa   thaa
do.PFV be.PST

'In northern Bastar, Babu Bihari Das had started an aggressive campaign to "make the aboriginals Hindu again"...'

Note that in the sentence above, the author-speaker's position is very clearly that the aboriginals were in fact *not* Hindus to begin with. The part of the sentence containing *vaapas* is in "scare quotes" indicating a disavowal of the material within the quotes.

For the next example, some notes are in order. The predicate below is a transitive form of 'stand', similar to the use of *stand* in an English sentence like *I stood the pallet against the wall*. It is built from an adjectival root *khaRaa* 'standing', which happens to be the masculine (and default) agreement form; other agreement forms are also possible. For example, if the object made to stand has feminine gender, the adjective can appear in the feminine agreement form *khaRii*. There is also an 'optional' *-ko* suffix on the object represented by *x*: this suffix is the normal differential object marker whose appearance is conditioned by animacy, specificity, etc.

(353) *x(-ko) khaRaa kar.naa* [*x*(-DAT) standing do.INF] 'to make *x* stand'

और सारा ध्वस्त कर दिया तो ८२ साल के चर्चिल ने पूरे इंग्लैंड को संभाला, प्रधान मंत्री बन कर के [वापस] अपने देश को खड़ा कर दिया, ताकतवान बनाकर के।

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aur saaraa   dhvast   kar diyaa   to   82 saal ke carcil-ne
and everything destroyed do GIVE.PFV then 82 year GEN Churchill-ERG
puure inglaenD-ko sambhaalaa, pradhaan mantrii bankar-ke
whole England-ACC handle.PFV   Prime   Minister become.CONJPRT
vaapas apne   desh-ko   khaRaa kar diyaa,   taakatvaan
back   self.GEN country-ACC standing do GIVE.PFV strong
banaakar-ke
become.CAUS.CONJPRT

'And when everything was destroyed, 82 year old Churchill took charge of

the whole of England, became the Prime Minister, stood his country back

on its feet, by making it strong.'

5.6.1 *vaapas-se*

In RESTITUTIVE readings, a variant form *vaapas-se* is observed to be used among

speakers and also attested in online content, although to a notably lesser extent

than *vaapas* without the suffix. In the COSH corpus, for example, we find only 44

occurrences of *vaapas-se* out of the about 30,000 total occurrences of words begin-

ning with *vaapas*. The suffix *-se* used in these cases has a variety of functions in

Hindi-Urdu, some of which are listed below:

(354)   a. 'from'

    ghar-se [home-from] 'from home'

   b. 'with' (INSTRUMENTAL)

    chuurii-se [knife-with] 'using a knife'

   c. 'than' (marks standard of comparison in comparative)

    ali-se [Ali-than] 'than Ali'

   d. a form of ACC

    ali-se kaho [Ali-ACC say.IMP] 'tell Ali'

   e. adverb-deriving

    Thiik-se karo [correctly do.IMP] 'do it properly'

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The found examples are for the most part restricted to restitutive readings; the following cases all involve change along a property scale, restoring a prior state. In the first example (355), the boy is brought back to life; in (356) what's brough back to life is poetry, in (357) the head is attached back to the torso, and in (358) the person is restored to an extremely alert state.

(355) *x(-ko) jindaa kar.naa* [*x*(-DAT) alive do.INF] 'to make *x* alive'

सलाह पर जगदम्बा की स्तुति कर माता भगवती को शांत किया और फिर सभी देवी-देवताओं ने मिलकर उस बालक को [वापस से] जिन्दा करने का अनुरोध भगवान शिवजी से किया।

salah par jagdambaa kii stuti kar   maataa bhagwatii-ko shaant
advice on Jagadamba GEN praise CONJPRT Mata   Bhagwati-ACC calm
kiyaa aur phir sabhii devii-devtaaõ-ne   milkar   us
do.PFV and then all   god-goddess.PL.OBL-ERG join.CONJPRT 3PRON.OBL
baalak-ko **vaapas-se** jindaa karne   kaa anurodh bhagwaan shivjii se
boy-ACC **back-se** alive do.INF.OBL GEN request Lord   Shiva from
kiyaa
do.PFV

'As advised, [they] calmed Mata Bhagwati by praising Jagadamba, and then all the gods and godesses together requested Lord Shiva to make the boy back alive.'

(356) *x(-ko) jiivit kar.naa* [*x*(-DAT) alive do.INF] 'to make *x* alive'

पंकज जी सिर्फ आप के इस ब्लॉग के कारण जिस शायरी को वक्त ने मुझसे छीन लिया था, उसे मैं [वापस से] जीवित कर पाया हूं।

pankaj ji sirf aap-ke   is   blaug ke   kaaraN
Pankaj ji only 2PRON.HON-GEN 3PRON.PROX.OBL blog GEN.OBL reason
jis   shaayarii-ko vakt-ne mujhse   chiin liyaa
RELPRON.OBL poetry-ACC   time-ERG 1PRON.OBL.from snatch TAKE/BRING.PFV
thaa   use   mɛ̃ **vaapas-se** jiivit kar paayaa   hũũ
be.PST 3PRON.PROX.OBL.ACC 1PRON **back-se**   alive do OBTAIN.PFV be.PRS

'Pankaj ji, it is only because of this blog of yours that I have been able to bring back to life the poetry that time had snatched from me.'

(357) *x(-ko) y-se joR.naa* [*x(-ACC) y-to join.INF*] 'to join *x* to *y*'

समस्या यह थी कि कटा हुआ सिर [वापस से] धड़ के साथ जुड़ नहीं सकता था।

samasyaa ye   thii ki kaTaa huaa sir **vaapas-se** dhaR ke
problem 3PRON.PROX be.PST that cut   be.PFV head **back-se**   torso GEN
saath   juR nahĩĩ saktaa   thaa
together join NEG   can.IPFV be.PAST

'The problem was that the severed head could not join back with the torso.'

(358) ADJ *ho jaa.naa* [ADJ be GO.INF] 'to become ADJ'

मैं खुले आइटमों की बजाय हमेशा से पैकेज्ड फ़ूड लेना पसंद करता हूं। लेकिन, इससे आगे मैं अपने खाने को लेकर कम फ़िक्रमंद रहता हूं। हालांकि, कोरोना वायरस के दौर में मैं [वापस से] बेहद सतर्क हो गया हूं जैसा मैं एक दशक पहले अपनी मेंटल हेल्थ के चरम पर होने के वक़्त था।

mɛ̃   khule aiTamõ   kii bajaay hameshaa-se pɛkejD   fuud lenaa
1PRON open item.PL.OBL GEN instead always   packaged food buy.INF
pasand kartaa hũũ. lekin, isse   aage   mɛ̃
like   do.IPFV be.PRS but 3PRON.PROX.OBL-from forward 1PRON
apne   khaane ko lekar   kam fikrmand rehtaa   hũũ.
self.GEN.OBL food.OBL ACC TAKE.CONJPRT less worried STAY.IPFV be.PRS
halanki, koronaa vairas ke   daur mɛ̃ mɛ̃ **vaapas-se** behad
although corona virus GEN.OBL era in 1PRON **back-se**   limitless
satark ho gayaa hũũ jaise mɛ̃   ek dashak pehle apnii   menTal
alert   be GO.PFV be.PRS like 1PRON one decade before self.GEN.OBL mental
hɛlth ke caram par hone   ke   vaqt thaa
health GEN limit   on be.INF.OBL GEN.OBL time be.PFV

'Instead of open items, I always prefer packaged food. However, beyond this I am less worried about my food. Although in coronavirus times I have become extremely alert once more just like I was a decade ago when I was at the extreme limit of my mental health.'

In the following example, in addition to *vaapas-se*, we also have the word *punaha* a formal word for 'again'. Here the person Puran Singht Shekhawat is being restored to a position he previously held.

(359) *x(-ko) y ghoshit kar.naa* [*x*(-ACC) *y* announce do.INF] 'to announce *x* as *y*'

जब सभी सहमत हो गए तो मंचाशिन सदश्यो ने एक बार पुन: बडागांव के श्री पूरण सिंह शेखावत को ही [वापस से] जिला अध्यक्ष घोषित कर इस पद की जिम्मेदारी दी।

jab   sabhii   sehmat ho gaye   to   mancaashin sadasyõ-ne
when everyone agreed be GO.PFV.PL then stage-seated member.PL.OBL-ORG
ek   baar punaha baDaagaaõ ke   shrii puuraN singh shekhaawat ko
one time again   Badagaon GEN.OBL Shri Puran Singh Shekhawat ACC
hii **vaapas-se** jilaa adhyaksh ghoshit   kar   is   pad
ONLY **back-se**   Zila Adhyaksh announced CONJPRT 3PRON.PROX position
kii zimmedaarii dii
GEN responsibility give.PFV

'When consensus was reached, the presiding members again declared the same Shri Puran Singh Shekhawat from Badagaon as Zila Adhyaksh (District President) once more and gave him the responsibilty of this position.'

There exist a few examples where *vaapas-se* appears to participate in a REPETITIVE reading. Once such is shown below in (360), where the adverb is preceding the subject *Taliban*. In the repetitive reading, the Taliban is presupposed to have in the past *captured* the region.

(360) *x-par kabjaa kar le.naa* [*x*-on capture do TAKE.INF] 'capture *x*'

अमेरिका अपने कहे अनुसार तालीबान को बिना हराये अफगानिस्तान से निकल गया तो फिर वहां पर पाकिस्तान की मदद से [वापस से] तालीबान आसानी से कब्जा कर लेगा और फिर ये खतरा सीधे भारत की सीमा तक आ जायेगा।

amerikaa apne   kahe   anusaar taaliibaan-ko binaa
America self.GEN.OBL said.OBL according Taliban-ACC   without
haraaye   afgaanistaan-se nikal gayaa to   phir vahãã par
defeat.PFV.OBL Afghanistan-from emerge GO.PFV then again there on
paakistaan kii madad se   **vaapas-se** taaliibaan aasaanii-se kabjaa kar
Pakistan   GEN help   from **back-se** Taliban   ease-from capture do
legaa   aur phir ye   khatraa siidhe   bhaarat kii siimaa tak
TAKE.FUT and then 3PRON.PROX danger straight.OBL India   GEN border till
aa   jayegaa
come GO.FUT

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'If America does what it said and leaves Afghanistan without defeating the Taliban, then with Pakistan's help, the Taliban will easily capture the region back, and again the danger will come straight up to India's border.'

I conclude that *vaapas-se* is generally restricted to RESTITUTIVE readings, but examples like (360) may indicate a change in progress where *vaapas-se* is becoming like *phir-se*: higher attachment, and a REPETITIVE reading.

5.7 *Non-scalar change: Directed* **events and response readings**

The following examples involve RESPONSE readings. There was only 1 example out of the 104-sentence sample, or a 0.96% share with this reading; this example is shown in (361). Response readings arise from communicative events. Predicates that commonly occur in this reading involve talking, sending a message, writing a letter.

(361)   *likh.naa* [write.INF] 'to write'

मुंबई से [वापस] मैं कुछ न कुछ <u>लिखता</u> रहूंगा।

mumbai se **vaapas** mɛ̃ kuch na kuch <u>likhtaa</u> rahũũgaa
Mumbai from **back** 1PRON something or something <u>write.IPFV</u> STAY.FUT

'I'll keep writing something or other back from Mumbai.'

Some more examples from the larger COSH are illustrated below to give a better sense of their semantic flavour.

(362)   *jawaab de.naa* [answer GIVE.INF] 'to reply'

उसने...कहा, "अन्नदाता, मेरी पगड़ी की कुछ तो लाज रखिये!" हाकिम उसके इशारे को समझ गया। [वापस] हाकिम ने वैसा ही जवाब दिया, "सेठजी, तुम्हारी पगड़ी तो भैंस चर गयी!"

usne...kahaa,　　　　　"annadaataa merii　　pagRii kii kuch to
3PRON.OBL.ERG...say.PFV, "Provider,　1PRON.GEN turban GEN some TOP
laaj　　rakhiye!"　**vaapas** haakim ne vɛse hii　jawaab diyaa,
honour keep.IMP.HON!" **back**　judge　ERG same ONLY answer GIVE.PFV,
"seThji, tumhaarii pagRii　to　bhains car　gayii!"
"Sethji, 1PRON.GEN turban" TOP buffalo graze GO.PFV

'He...said, "O Provider, please save some of the honour of my turban!" **In response** the judge said in the same way, "Sethji, your turban was eaten by a buffalo!"'

(363)　*likh.naa* [write.INF] 'to write'

रावजी [वापस] लिखते है कि महेन्दू जी को शिकार के बहाने रोहड्यां के बीहड़ में भेज दो, आगे मैं देख लूंगा।

raavjii **vaapas** likhte　　hɛ̃　　　　ki　mahenduu jii ko　shikaar
Rao ji **back**　write.IPFV be.PRES.HON that Mahendu ji DAT hunt
ke　　　　bahaane　rohaDyãã ke　　biihaR mẽ bhej do,　　aage
GEN.OBL excuse.OBL Rohadiyan GEN.PL ravine in　send GIVE.IMP further
mɛ̃　　dekh lũũgaa
1PRON see　TAKE.FUT

'Rao ji writes (**back**): Send Mahendu ji to the Rohadiyan ravines on the pretext of hunting, I'll take care of the rest.'

Another feature of response readings is volition: examples which express a clear intentionality and will are most effective. The following two examples combine both the salient features of response readings: communication and clear will.

(364)　*gaali de.naa* [abuse GIVE.INF] 'to cuss out/swear'

　　a. गाली देने वाले को जो व्यक्ति [वापस] गाली नहीं देता वह दोहरी विजय प्राप्त करता है।

gaalii dene　　　vaale-ko　　jo　　　vyakti **vaapas** gaalii nahĩĩ
abuse GIVE.INF.BL one.OBL-ACC RELPRON person **back**　abuse NEG
detaa　　vah　dohrii vijay　prapt kartaa hɛ
GIVE.IPFV 3PRON dual　victory obtain do.IPFV be.PRS

'The one who does not **in return** hurl abuses at the one who abused him achieves a dual victory.'

b. मान लीजिये कि आपकी किसी से झड़प हो गयी और उसने आपको गाली दे दी। यह तथ्य है कि उसने आपको गाली दी है। पर, अब आपके पास दो विकल्प हैं। आप या तो बदले की भावना को चुनकर उसको [वापस] गाली दें या क्षमा की भावना से उसे माफ़ कर दें।

maan   liijiye   ki aapkii   kisii-se   jhaRap ho
believe TAKE.IMP.HON that 3PRON.HON.GEN someone-from fight   be
gayii   aur usne   aapko   gaalii dii.   ye
GO.PFV and 3PRON.OBL.ERG 3PRON.HON.ACC abuse GIVE.PFV. 3PRON.PROX
tathya hɛ   ki usne   aapko   gaalii dii   hɛ.
fact   be.PRS that 3PRON.OBL.ERG 3PRON.HON.ACC abuse GIVE.PFV be.PRS.
par, aapke   paas do   vikalp hɛ̃.   aap   yaa to
but, 3PRON.HON.GEN.OBL near two choice be.PRS.PL. 3PRON.HON or   TOP
badle-kii   bhaavnaa-ko cunkar   usko   **vaapas**
revenge.OBL-GEN feeling-ACC choose.CONJPRT 3PRON.OBL.ACC **back**
gaalii dẽ   yaa kshamaa-kii   bhaavnaa-se use   maaf
abuse GIVE.IMP or   forgiveness.GEN feeling-from 3PRON.OBL.ACC forgive
kar dẽ
do GIVE.IMP

'Suppose you got in a fight with someone and they swore at you. It's a fact that they swore at you. But, now you have two options. Either you can choose revenge and swear **back** at them or you can choose forgiveness and forgive them.'

Apart from verbs of literal communication, we can find in response readings other kinds of verbs which express volition and often metaphorically 'send a strong message', meaning that the asserted event conveys an action that is vengeful or otherwise dramatic, more often than not in response to a previous action which was itself dramatic or aggressive. More broadly speaking, response cases (unless marked by exceptional intonation and word order) tend to involve symmetrical events: an action and a reaction.

(365) *thappaR maar.naa* [slap HIT.INF] 'to slap'

एक दिन प्रेम के मित्र की शादी में वह दोनों जा रहे होते हैं। जहाँ वह शराब पी लेता है और संध्या के बारे में इधर-उधर की बात कह देता है। यह सुनकर संध्या सभी लोगों के सामने उसे थप्पड़ मार देती है। इसके बाद प्रेम भी उसे [वापस] थप्पड़ मार देता है।

ek din prem ke   mitra kii shaadii mẽ vo   donõ jaa rahe
one day Prem GEN.OBL friend GEN wedding in 3PRON both go STAY.PFV
hote   hɛ̃. jahãã vo   sharaab pii letaa   hɛ   aur sandhyaa
be.IPFV be.PRS. where 3PRON alcohol drink TAKE.IPFV be.PRS and Sandhya
ke   baare mẽ idhar-udhar kii baat keh detaa   hɛ. ye
GEN.OBL about in here-there   GEN talk say GIVE.IPFV be.PRS. this
sunkar   sandhyaa sabhii logõ   ke   saamne use
hear.CONJPRT Sandhya all   people.OBL GEN.OBL front 3PRON.OBL.ACC
thappaR maar detii   hɛ. iske   baad prem bhii
slap   hit GIVE.IPFV be.PRS. 3PRON.PROX.OBL.GEN.OBL after Prem also
use   **vaapas** thappaR maar detaa   hɛ
3PRON.OBL.ACC **back**   slap   hit GIVE.IPFV be.PRS

'One day they are both going to Prem's friend's wedding. There, he gets drunk and speaks badly about Sandhya. On hearing this, Sandhya slaps him in front of everyone. Then Prem also slaps her **back**.'

(366) *golii cal.aa.naa* [bullet WALK.CAUS.INF] 'to shoot'

आप हम पर गोली दागें, हम भी [वापस] गोली चला देंगे।

aap   ham   par golii daagẽ,   ham   bhii **vaapas** golii
3PRON.HON 1PRON.PL on bullet hurl.SUBJ.3PL 1PRON.PL also **back**   bullet
calaa   denge
WALK.CAUS.PFV GIVE.SUBJ.1PL

'(If) you shoot a bullet at us, we will also shoot **back**.'

In various places in the dissertation I have noted that there is scope for variation between the two events. The corpus study puts that possible variation into perspective: typical response readings, as we have seen in the above examples, have certain semantic characteristics, cluster around an identifiable set of predicates, and involve two symmetrical events. The variation-cases allow us to look at atypical examples and examine the edges of possibility with response readings.

5.8 *Non-scalar change: Process* events and repetitive readings

The following examples involve REPETITIVE readings. There was only 1 example out of the 104-sentence sample, or a 0.96% share with this reading. The category of events that gives rise to these readings is not a natural class. Rather, examples in this section show complex changes with no particular identifiable constraints. The following example shows *vaapas* restoring a complex original state of affairs which can be rendered roughly in English as *going back to living peacefully*, to illustrate the role of BACK in the sentence. A more natural translation is given below, and the reader will notice that there is in fact no *back* that appears in the English.

(367) *jii.naa* 'to live'

बहरहाल किन्हीं भी कारणों से यदि किसी अन्य हस्तक्षेप या प्रयास से दो लोग अपनी गलतफहमियों को दूर कर [वापस] सुकून से जीने लगते हैं तो किसी को आपत्ति नहीं होनी चाहिए।

beherhaal kinhiin   bhii kaaraNon   se   yadii kisii anya
anyway   some.PL.ONLY.OBL even reason.PL.OBL from if   some other
hastakshep yaa prayaas se   do log   apnii
intervention or   effort   from two people self.GEN.PL
Galatfehmiyon-ko   duur kar **vaapas** sukuun-se jiine
misconception.PL-ACC far   do **back**   peace-from live.INF.OBL
lagte   hain   to   kisii-ko   aapattii nahin honii   chahiye
START.IPFV.PL be.PRES.PL then some-ACC problem NEG   be.INF.F should

'Anyway for whatever reasons, if by some other intervention or effort, two people clear their misconceptions and start to live in peace again, no one should have any problem.'

Let's dissect the meaning of the above sentence: the state of affairs that is being restored is *sukuun-se jii.ne* [peace-from live.INF.OBL] 'to live in peace'. This phrase is an infinitival complement of *lag.naa* [ATTACH.inf] 'to start'. The scope of *vaapas* is limited to the infinitival clause: [start [[two people living in peace] *vaapas*]].

This scope shows that the above Hindi-Urdu involves modification of a subevent that is not a small clause. In canonically restitutive examples in the literature, the subevent is in almost all cases a result state which is generally analyzed as a small clause; what we see here is the restitution of an infinitival subevent.

Below are some more examples from the larger COSH.

(368) *Repetitive ⇔ return to previous state of affairs*

बीच में जब मौका मिलता है, उन रंगीन पैकेटों पर हाथ फेरकर अपार आनंद का अनुभव कर लेती है, और [वापस] अक्षत, कुमकुम के थाल सजाने लगती है।

biic   mẽ jab   maukaa miltaa hɛ,   un   rangiin paeketõ
middle in when chance   get.ɪᴘꜰᴠ be.ᴘʀs, those colourful packet.ᴘʟ.ᴏʙʟ
par haath pherkar   apaar   anand   kaa anubhav kar letii
on hand spread.ᴄᴏɴᴊᴘʀᴛ limitless happiness ɢᴇɴ feeling   do ᴛᴀᴋᴇ.ɪᴘꜰᴠ
hɛ,   aur **vaapas** akshat, kumkum ke   thaal sajaane
be.ᴘʀs, and **back**   Akshat, Kumkum ɢᴇɴ.ᴏʙʟ tray decorate.ɪɴꜰ.ᴏʙʟ
lagtii   hɛ
ᴀᴛᴛᴀᴄʜ.ɪᴘꜰᴠ be.ᴘʀs

'In between when she finds a moment, she runs her hands over those brightly-coloured packets and feels limitless happiness, and then returns to decorating the trays for Akshat and Kumkum.'

(369) *Repetitive ⇔ return to previous state of affairs*

लीप ईयर वर्ष आने के कारण मकर संक्रांति वर्ष 2017 व 2018 में [वापस] 14 को ही मनाई जाएगी।

liip iiyar varsh aane   ke   kaaraN makar sãkraanti varsh 2017
leap year year come.ɪɴꜰ.ᴏʙʟ ɢᴇɴ.ᴏʙʟ reason Makar Sankranti year 2017
va   2018 mẽ **vaapas** 14 ko hii   manaaii   jayegii
and 2018 in **back**   14 on ᴏɴʟʏ celebrate.ᴘꜰᴠ ɢᴏ.ꜰᴜᴛ

'Due to the coming of a leap year, in 2017 and 2018 Makar Sankranti will to back to being celebrated on the 14th (it is confirmed).'

Recall that unlike its repetitive cousin *phir-se* 'again', *vaapas* 'back' can never express "pure" repetition, i.e. repetition that does not entail the restoring of a previously held location, possession, state, or situation.

(370) *Context* (REPETITIVE:) Jyoti sang a song yesterday.

    a. kal   phir-se jyoti gaane   waalii hai
       tomorrow again   Jyoti sing.INF.OBL going.to be.PRES
       'Tomorrow Jyoti is going to sing again.'

    b. *kal   vaapas jyoti gaane   waalii hai
       tomorrow back   Jyoti sing.INF.OBL going.to be.PRES
       Intended: 'Tomorrow Jyoti is going to sing again.'

Speakers with the judgment reported in (370b) are evidently *not* using *vaapas* to mean AGAIN, and when asked if they can, will tend to vehemently disavow the possibility of using *vaapas* in these purely repetitive contexts. I highlight this group because it is represented by speakers of Lucknow-Hindi/Urdu and similar, which are often taken to be a more stable 'standard' (let's call this the BACK-*vaapas* group). Strikingly, even within this group, speakers readily accepted sentences like (371) from the COSH, where *vaapas* is clearly used to convey a repetitive reading.

(371) *Repetitive ⇔ return to previous state of affairs*

    Context: A thief was caught and offered two options for punishment: to be slapped ten times, or to eat a kilo of onions. He choose ten slaps and regretted it after just two. He switched to onions and could not take for long that either...

    इसलिये [वापस] उसने थप्पड़ का विकल्प पसंद किया।

    isliye **vaapas** usne   thappaR ka vikalp pasand   kiyaa
    so   **back**   3PRON-ERG slap   GEN option preference DO.PFV

    'So, he returned to the slaps-option.'

Some speakers (let's call it the AGAIN-*vaapas* group) diverge from the judgment of (370b), finding it to be grammatical. These speakers can (and do) use this kind of construction to convey repetitive readings. They also accept *vaapas* with stative eventualities (though in "fill-in-the-blank"-style completion tasks, they tend to only ever offer *phir-se*). Further work is required to assess is there are any repetitive contexts where the AGAIN-*vaapas* group can use *phir-se* but not *vaapas*.

(372) कई बार मुझे स्क्रीन से नज़र हटाकर, फिर [वापस] देखना होता है - ताकि दिमाग़ ताज़ा हो जाए

kai   baar mujhe   skriin se   nazar hataakar,   phir **vaapas**
many time 1PRON.OBL.DAT screen from gaze   remove.CONJPRT, then **back**
dekhna hotaa hɛ- taaki dimag taazaa ho   jaaye
see.INF be.IPFV be.PRS -   so   brain fresh be   GO.SUBJ

'Many times I have to look away from the screen and then back - so my brain gets refreshed.'

5.9   Lexical *vaapas*

So far in the dissertation, in all example sentences *vaapas* has exhibited the following characteristics: (i) it is an adverb, (ii) its meaning contribution is wholly presuppositional, and (iii) its assertoric content is trivial, since the semantic value of the tenseless proposition modified by the adverb simply projects unchanged upwards into further computation. I turn now to cases that do not exhibit these characteristics, and rather involve *vaapas* contributing lexical or assertoric content to the sentence. There are two way in which *vaapas* contributes assertoric content: by forming a complex predicate, or by turning into a nominal or an adjective via derivational nominalizing morphology.

We have already seen in previous sections that a simple *subtraction test* can pick out the now-familiar adverbial uses, as follows. I compare the sentence with *vaapas*

to its counterpart without *vaapas*: sentences which remain grammatical and have a coherent meaning when *vaapas* is removed represent the expected use of *vaapas* as an adverbial adjunct—it modifies a VP projection, and it is optional. Not only is the assertoric content coherent in these cases, it remains the same with and without the adverb, which is consistent with the characterization of the presuppositional meaning of the adverb presented so far. In the present section, I will focus on sentences that become ungrammatical or incoherent when *vaapas* is removed, which represent the use of *vaapas* not as an adverb but as a part of the verbal complex itself—it has non-trivial assertoric content, and it is not optional. Other minor forms of *vaapas* I discuss in this chapter are the nominalization *vaapsii* 'return', and a PP-use of *vaapas*. All of the above categories are *lexical*—rather than *presuppositional*—uses of *vaapas*.

5.9.1 Complex predicates: *vaapas karnaa* 'to return *x*'

The simplest case of *vaapas* contributing assertoric content is illustrated using the example in (373).

(373) *vaapas kar.naa* [back do.INF] 'to return *x*' (transitive)

किन्तु आधे पैसे [वापस] करने पड़ेंगे।

kintu aadhe pɛse   **vaapas** karne   paRenge
but   half.OBL money.PL **back** do.INF.OBL FALL.FUT.3PL

'But (one) will have to return half the money.'

In the sentence above, *vaapas* is a part of the verbal complex, rather than an adjunct. This is indicated by the fact that removing *vaapas* causes the sentence to become ill-formed, as shown in (374), in other words it fails the subtraction test. This behaviour would be unexpected if *vaapas* was an optional modifier.[15]

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[15]Note that (374) is marked as *semantically* ill-formed using '#', because it is incoherence in the meaning that causes the sentence to crash. Replacing the main verb *karnaa* 'to do' with another verb with more semantic content would create a well-formed sentence.

(374) *Subtraction test yields incoherence* *vaapas karnaa* 'to return *x*'

#किन्तु आधे पैसे [वापस] करने पड़ेंगे।

#kintu aadhe paise   ~~vaapas~~ karne   paRenge
but   half   money.PL **back** do.INF.OBL have*t*O.FUT.3PL

#'But (one) will have to do half the money.'

The verbal complex above is an example of a pervasive process of predicate-formation in Hindi-Urdu which involves a non-verbal root combining with a 'light' verb like *kar.naa* [do.INF] 'to do'. For example, the monomorphemic nominal root *jhaaRuu* 'broom' yields *jhaaRuu kar.naa* [broom do.INF] 'to sweep', and similarly the monomorphemic adjectival root *saaf* 'clean' yields *x(-ko) saaf kar.naa* [clean do.INF] 'to clean *x*' (see Chapter 2 for the syntax of these cases). Since such verbs are internally complex, I refer to the *Root + Light Verb* unit as *verbal complex* where it is necessary to distinguish between verbs formed from the different sources. Where that distinction is not relevant, I use *verb* to refer to all kinds of verbs, formed from inherently verbal or non-verbal roots, and internally simplex or complex. Since *vaapas* forms internally complex predicates, I refer to these cases as *complex predicate* uses of *vaapas*.[16], to refer "any construction in which two or more predicational elements each contribute to a joint predication" (Butt 2010). In Hindi-Urdu we find complex predicates of various stripes: *N+V*, *Adj+V*, *Adv+V*, and *V+V*, where the second item, the *V*, is typically referred to as a *light verb*.

Here I will be zooming in on two specific parts of the "light verb jungle" (Butt 2003, 2010):

(375)   a. *non-verbal* root with a light verb: the combination functions as a verb (this is the verbal complex), and

b. *verbal* root with a light verb: the light verb can contribute telicity, direction, perspective (among many other meanings not relevant here)

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[16]The term *complex predicate* has been in wide use for a while (Verma 1993; Mohanan 1994, 1995; Butt 1993, 2003, 2010)

Note that *all* verbs can yield complex predicates: for internally simplex verbs this is simply *V+V*; for internally complex verbs, we see a *further* light verb layer, yielding the following 'larger' combinations which are irrelevant to this dissertation because *vaapas* is not sensitive to information in Asp.

(376)   a. *N+V+V* (*jhaaruu kar lenaa* [broom do TAKE.INF] 'to sweep')

      b. *Adj+V+V* (*saaf kar denaa* [clean do GIVE.INF] 'to clean *x*')

      c. *Adv+V+V* (*jaldii kar denaa* [haste do GIVE.INF] 'to be quick or precipitous')

      d. *V+V+V* (in passives like *likh diyaa gayaa* [write GIVE.PFV GO.PFV] 'was written')

The example in (373) shows that *vaapas*, which is an "adverb", can participate in the same kind of predicate formation, yielding a verbal complex. My primary focus here is not to pin down the category of "adverb", because in Hindi-Urdu the same phrase may (i) function as an adverbial modifier, e.g. *jaldii* 'quickly'; (ii) occur with *karnaa* 'to do'; and also (iii) function as a noun, like *jaldii* 'haste'. The category of "adverb" in the language appears to be fairly fluid in this respect. What is clear is that there is no difference between *vaapas* and any other non-verbal root (nominal or adjectival) in examples like (373).

5.9.2 Complex predicates: *vaapas honaa* 'to return'

There are other examples of complex predicate uses of *vaapas*. Roots that can combine with *kar* can generally also combine with *ho* 'be' to yield an intransitive.[17] For example, *saaf* 'clean' yields *saaf kar.naa* [clean do.INF] 'to clean *x*' as well as *saaf ho.naa* [clean be/become.INF] 'to (become) clean'. This type of alternation is

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[17] These are *equipollent* predicates in the terminology of Haspelmath 1993 (via Montaut 2016): predicates that can be transitive or intransitive depending on the verbal affix or auxiliary added.

observed with *vaapas* as well. We have already seen the transitive *vaapas karnaa* above, we now have the intransitive predicate formation illustrated in (377).

(377) *vaapas ho.naa* [back be.INF] 'to return' (intransitive)

मामले में हस्तक्षेप करना चाहिए ताकि इस तरह के गैर कानूनी कारोबार पर रोक लग सके और निवेशकों का पैसा [वापस] हो सके।

maamle mein hastakshep karnaa cahiye taaki is tarhaa ke
matter in intervention do.INF should so_that this.OBL kind GEN.OBL
Ghair kanuunii karobaar par rok lag sake aur niveshakon kaa
unlawful business on stop ATTACH can.SUBJ and investor.PL GEN
paisaa **vaapas** ho sake
money **back** be can.SUBJ

Lit. 'There should be an intervention in the matter so that these kinds of illegal businesses can be put to an end and the investors' money can return.'[18]

We see that applying the subtraction test (to 377) produces incoherence, as shown below in (378), once more indicating that *vaapas* is not an optional modifier, and this is another complex predicate use.

(378) *Subtraction test yields incoherence*   *vaapas honaa* 'to return'

#**...**निवेशकों का पैसा [वापस] हो सके।

#...niveshakon kaa paisaa **vaapas** ho sake
investor.PL GEN money **back** be can.SUBJ

*...the investors' money can become.'

5.9.3 Complex predicates: *vaapas lenaa* 'to withdraw'

In Hindi-Urdu, it is common for a root to appear with a variety of different light verbs, each combination functioning as a different complex predicate. We observe

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[18]The English running translation above has been used deliberately to indicate that in the Hindi-Urdu sentence, *paisaa vaapas ho sake* '(the) money can return' is in active voice, and not a passivization.

this behaviour in the case of *vaapas* as well. In addition to *karnaa* 'to do' and *honaa* 'to be' which are the 'lightest' of the light verbs—in the sense that they serve as a vehicle for aspectual morphology but are completely bleached of any semantics— *vaapas* may also appear with light verbs with non-trivial semantic content. For example, it can combine with *lenaa* (or its root-suppletive variant *laanaa*), which in its main verb use means 'to take/bring *x*'.[19] In the example below, we see the phrase *x vaapas le lii gayii* '*x* was taken back', which is translated into English below as the single lexical item *withdrawn* to capture the correct sense.

(379)   *vaapas le.naa* [back take/bring.INF] 'to withdraw *x*'

बैठक के बाद एटक नेता लखन लाल महतो ने कहा, हड़ताल [वापस] ले ली गई है।

baiThak ke   baad AITUC netaa lakhan laal mahto-ne   kahaa haRtaal
meeting gen after AITUC leader Lakhan Lal Mahto-erg say.pfv strike
vaapas le   lii   gayii hai
back   take TAKE.PFV.F GO.PFV be.PRES

'After the meeting, AITUC (All-India Trade Union Congress) leader Lakhan Lal Mahto said the strike has been withdrawn.'

Let us consider the separate pieces *vaapas* 'back' and *lenaa* 'to take' and their functions in this sentence. Once again, we see that *vaapas* is integrated into the meaning of the predicate: the subtraction test below produces incoherence. The sequence *haRtaal le lii gayii hai* 'the strike has been taken ~~back~~' is incoherent because you cannot 'take' a strike in Hindi-Urdu, i.e. #*haRtaal lenaa*—which would literally mean 'to take (a) strike'—is unattested.

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[19]I have used here 'to take/bring' to translate the citation form because it is impossible to pick one from *take/bring* in English, since that choice depends on perspectival considerations that do not work the same in Hindi-Urdu. Additionally, the meaning of *lenaa* varies based on whether it appears with a light verb or not, and if it does, which one (in particular, appearing with *aanaa* 'to come' adds a perspectival component).

(380)   *Subtraction test yields incoherence*   *vaapas lenaa* 'to withdraw *x*'

#बैठक के बाद एटक नेता लखन लाल महतो ने कहा, हड़ताल [वापस] ले ली गई है।

#baiThak ke   baad AITUC netaa   lakhan laal mahto-ne   kahaa   haRtaal
meeting gen after AITUC leader Lakhan Lal Mahto-erg say.pfv strike
~~vaapas~~ le   lii   gayii hai
~~back~~   take TAKE.PFV.F GO.PFV be.PRES

#'After the meeting, AITUC leader Lakhan Lal Mahto said, the strike has
been taken ~~back~~.'

The incoherence of the sentence in (380) indicates that *vaapas* is not merely an
adverbial adjunct in this instance, as removing an adjunct would not have such an
effect. We thus find the adverb in a closer relationship to the main verb here: it is
part of the meaning of the predicate. To put it differently, the data presented here
show that the meaning of a complex predicate like *vaapas lenaa* 'to withdraw' is not
the sum of its parts, and isolating an event of 'taking' using the subtraction test
is shown to be impossible above. This is expected behaviour, as the light verb-
versions of verbs canonically do not contribute the full semantics of their main
verb counterparts. To make this point clear, compare the following sentence (381)
where we see *vaapas* 'back' and *lenaa* 'to take/bring', but this time not in the close
relationship described above:

(381)   *vaapas le jaa.naa* [back take/bring GO.INF] 'to bring *x* back'

वो मुझे [वापस] घर ले गई।

vo   mujhe   **vaapas** ghar le   gayii
3PRON 1PRON.OBL.ACC **back**   home take/bring GO.PFV.3F

'She took/brought me back home.'

In (381), we see the use of *vaapas* with the main verb *lenaa* 'to take/bring' (also
present is *jaanaa* 'to go' as a light verb). Applying the subtraction test to (381),
we get (382) which is a coherent and well-formed sentence, from which we can

conclude that in this instance *vaapas* is a true adverbial modifier and not part of a complex predicate. There is an actual event of 'taking/bringing' in (382) which can be isolated from (381), unlike what was observed in the complex predicate case (379)/(380).

(382) *Subtraction test successful: no change*   *vaapas le jaanaa* 'to bring *x* back'

वो मुझे [वापस] घर ले गई।

vo   mujhe   ~~vaapas~~ ghar le   gayii
3PRON 1PRON.OBL.ACC **back**   home take/bring GO.PFV.3F

'She took me ~~back~~ home.'

In the 104-sentence COSH sample, *vaapas lenaa* 'to take/bring *x* back' is the third most frequent collocation of *vaapas* with a verb: 18 occurrences out of 104, or a 17% share (this includes both root-suppletive variants *lenaa~laanaa*). Out of the 18 occurrences, 12 are complex predicate uses (67%), and 6 are adverbial uses (33%). A noteworthy feature of the data is that in all of the complex predicate uses, the direct object or THEME is an abstract entity:

(383)   a. *riyaayat* 'concession'

b. *samarthan* 'support' x 2

c. *aandolan* '(political) movement' x 2

d. *haRtaal* 'strike'

e. *adhyaadesh* 'ordinance' x 2

f. *FIR* 'First Information Report' (police report of a criminal event)

g. *shikaayat* 'complaint'

h. *mukadmaa* 'legal proceedings'

i. *apnaa naam* 'their name' (= their political candidacy)

Note that the COSH is a web-scraped corpus which is not restricted to any genre of writing, and indeed contains lots of text from blogs, books, pornography, and user

manuals. Thus the over-representation of political news topics is not due to the selection of examples. Rather, these data points suggest that the complex predicate usage *vaapas lenaa* 'to withdraw' is semantically restricted to these sorts of abstract themes.[20]

Of the 18 cases of *vaapas lenaa* 'to take/bring *x* back', there were only 3 cases where *vaapas* was non-contiguous with the main verb; all 3 of the non-contiguous cases were adverbial, rather than complex predicate uses. While strong conclusions cannot be drawn from just 18 sentences, this observation might suggest a greater degree of word-order freedom in adverbial uses as compared to complex predicate uses of *vaapas*, and may be worth exploring in future quantitative studies in Hindi-Urdu.

As per my investigations, complex predicate formation with *vaapas* appears to be limited to only these three cases: *vaapas karnaa* 'to return *x*' (transitive), *vaapas honaa* 'to return' (intransitive), and *vaapas lenaa* 'to withdraw'.

5.9.4 Nominalization/adjectivization: *vaapsii*

Apart from complex predicate uses of *vaapas*, the other usage which adds to the assertoric content of the sentence is the form *vaapsii*. As noted in the previous section, a single lexical item or phrase may have different functions in Hindi-Urdu, moving between different parts-of-speech categories. The form *vaapsii* 'return' can be used as a noun as in (384) and (385), or as an adjective as in (386). Note that the 104-sentence sample was restricted to whole-word matches of *vaapas*, and therefore excluded *vaapsii*. However in the overall COSH there were several thousand results, including the three examples below.

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[20]In English in addition to *withdraw support* and *withdrawing candidacy*, you can *withdraw troops*, *withdraw money*, *withdraw your hand*. In Hindi-Urdu, none of those additional uses are possible with *vaapas lenaa*.

(384) *vaapsii* 'return$_N$'

10 जनवरी 2010 की [वापसी] तय हुयी है।

10 janvarii 2010 kii vaapsii tay huii hɛ
10 January 2010 GEN.F return.F decide be.PFV.FS be.PRES

Lit. '10 January 2010's return has been decided.'

('The return has been decided, it is on 10 January 2010.')

In (384), we have *vaapsii* in an unambiguously nominal role: it controls agreement on the genetive marker *kii*, as well as on the light verb *huii*—both of those surface here in the feminine form corresponding to the feminine gender feature of *vaapsii*. In (385) below, we similarly see feminine agreement on the light verb *karii*.

(385) *vaapsii* 'comeback$_N$'

दिल्ली में आम आदमी पार्टी ने ऐतिहासिक जीत दर्ज करते हुए, दमदार [वापसी] करी।

dillii mẽ aam aadmii partii ne ɛtihaasik jiit darj karte hue,
Delhi in Aam Aadmi Party ERG historic win register do.IPFV be.PFV
damdaar vaapsii karii
powerful return do.PFV

'In Delhi, the Aam Aadmi Party, registering a historic win, has made a powerful comeback.'

In (386) below, we have the constituent [*vaapsii yaatraa*], which denotes [$_{NP}$ return journey]. This is not an embedded structure but simply an NP with an adjunct *vaapsii* 'return' modifying *yaatraa* 'journey', and there is a postposition *par* 'on' that NP.[21]

(386) *vaapsii* 'return$_{Adj}$'

यानी मौसम बदलने के बाद पक्षी फिर से अपनी [वापसी] यात्रा पर निकल पड़ते हैं और यह चक्र साल-दर-साल चलता रहता है।

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[21]This is not a possessive: there is overt genetive marking, and the absence of a genetive structure is confirmed by the fact that a postposition would cause the noun and its genetive to both surface in their oblique form, which is not the case here.

yaanii   mausam badalne   ke   baad pakshii phir se apnii
meaning weather change.INF.OBL GEN.OBL after bird   again self.GEN.F
vaapsii yaatraa par nikal   paRte   hɛ̃   aur ye   cakra
return journey on emerge COLLAPSE.PFV be.PRES.PL and 3PRON.PROX cycle
saal-dar-saal caltaa   rehtaa   hɛ
year on year WALK.IPFV STAY.IPFV be.PRES

'Meaning after the weather changes, birds set out on their return journey

and this cycle continues year after year.'

5.9.5   PP-*vaapas*

A somewhat infrequent lexical use of *vaapas* is shown below in (387). In this exam-
ple, *vaapas* is performing the role of a prepositional phrase, expressing the spatial
end point of the asserted event.[22]

(387)   *x(-ko)* *vaapas dekhnaa* [*x*(-ACC) back see.INF] 'see *x* back (in some location)'
बंगलोर वापस आकर फिर से अपना काम शुरू करना आसान नहीं रहा। कुछ लोग तो
मेरे आने से फूले नहीं समा रहे थे लेकिन कुछ ऐसे भी थे जिन्हें मुझे [वापस] देखकर
जबरदस्त झटका लगा।

bãglor   vaapas aakar   phir-se apnaa   kaam shuruu karnaa
Bangalore back   come.CONJPRT again self.GEN work start   do.INF
aasaan nahiin rahaa.   kuch log   to   mere   aane   se
easy   NEG   STAY.PFV some people TOP 1PRON.GEN.OBL come.INF.OBL by
phuule   nahiin samaa rahe   the   lekin kuch aise   bhii
swell.PFV NEG   fit   STAY.PFV.PL be.PST.PL but   some like_this.OBL also
the   jinhẽ   mujhe   **vaapas** dekhkar   jabardast
be.PST.PL RELPRON.PL.ACC 1PRON.OBL.ACC **back**   see.CONJPRT incredible
jhaTkaa lagaa
shock   attach.PFV

'Starting my work again after returning to Bangalore was no longer easy.

---

[22]The subtraction test is not informative here: in its prepositional use *vaapas* always passes the
test, i.e. it can be removed with no ill-effect on the acceptability or the assertoric meaning of
the sentence. This behaviour is expected of adverbial *vaapas* but would also be expected of most
prepositional phrases, so it doesn't help us adjudicate between *vaapas*-as-adverbial versus *vaapas*-
as-prepositional.

Some people were overcome with joy at my arrival, but there were also some to whom seeing me back gave an incredible shock.'

In the example above, the interpretation suggests that the object of the verb *dekhkar* 'seeing' is the constituent given in (388). We can in fact replace the constituent (388) with its counterpart containing a true PP (389), and the sentence retains the same meaning.

(388)   *Constituent in* (387)

mujhe   **vaapas**
1PRON.OBL.ACC **back**

'me **back**'

(389)   *Similar construction with true PP*

mujhe   **bãglor   mẽ**
1PRON.OBL.ACC **Bangalore in**

'me **in Bangalore**'

In example (387), *vaapas* expresses a location that is predicated of the individual 'me' here in much the same way as in the English *seeing* [*me back*], which can be paraphrased as 'seeing [that I was back]'. This kind of use is therefore different from the familiar adverbial use of *vaapas* at the beginning of the example, i.e. *bãglor* ***vaapas*** *aakar* '(after) coming **back** to Bangalore', where *vaapas* modifies the event of coming to Bangalore.

Note that structurally speaking the phrase we are concerned with at the moment (*mujhe* ***vaapas*** *dekhkar* 'seeing me back') could plausibly be analyzed as an instance of *vaapas* modifying the verb *dekhnaa* 'to see'. We might imagine this could mean something like 'to look back at'. However, this analysis can be ruled out for a couple of different reasons. First, the context of (387) makes it very clear that it is the first person speaker/narrator who is 'back in Bangalore', and the other people who are

doing the seeing. Thus *vaapas* is not here modifying the seeing event. Further, *vaapas* is ungrammatical with the verb *dekhnaa*. The only way to 'look back at' in Hindi-Urdu is to limit the scope of the adverb to a clause with a verb that it is compatible with, for example *muRnaa* 'to turn', and have that entire clause modify the seeing event.

(390) mẽ-ne **vaapas** *(muRkar) dekhaa
1PRON.OBL **back** *(turn.CONJPRT) see.PFV
'I looked back.'

A similar flavour is observed in the following example, which also involves the verb *dekhnaa* 'to see'. In this example, the narrator (on Amma's instructions) travelled to someone's house to deliver a particular glass. They forgot to make the delivery, so the glass is 'back', and they are afraid that Amma will see it and be angry.

(391) *x(-ko) vaapas dekhnaa* [*x*(-ACC) back see.INF] 'see *x* back (in some location)'
रास्ते में ध्यान आया कि गिलास देना तो हम भूल ही गए। पहले तो हम दोनों ही एक-दूसरे को गिलास न देने का दोष देते रहे। फिर यह परेशानी मुख्य थी कि अम्मा गिलास [वापस] देखकर कितना गुस्सा होंगी।

raaste mẽ dhyaan aayaa ki gilaas denaa to ham bhuul hii
way.OBL in notice COME.PFV that glass give.INF TOP 1PRON.PL forget ONLY
gaye. pehle to ham donõ hii ek-duusre ko gilaas na
GO.PFV. first.OBL TOP 1PRON.PL both FOC one another ACC glass NEG
dene kaa dosh dete rahe. phir ye pareshaanii
give.INF.OBL GEN blame GIVE.IPFV.PL STAY.PFV.PL then 3PRON.PROX worry
mukhya thii ki ammaa gilaas **vaapas** dekhkar kitnaa gussaa
foremost be.PST that Amma glass **back** see.CONJPRT how_much anger
hõgii
be.FUT

'On the way we noticed that we had forgotten to give the glass. First the both of us kept blaming each other for not giving the glass. Then the foremost worry was how angry Amma will be seeing the glass back.'

A slightly different PP-like usage of *vaapas* is shown in (392) below. In addition to *vaapas* we also see *phir-se* 'again' in this sentence. Note that unlike the previous two examples in this section, we have here an overt location-PP as well.

(392)   *x(-ko) vaapas dekhnaa* [*x*(-ACC) back see.INF] 'see *x* back (in some location)'

आज वे सब इस पक्षी को अपने घरों में फिर से [वापस] देखना चाहते हैं।

aaj   ve   sab is pakshii ko apne   gharõ   mẽ phir-se
today 3PRON.PL all this bird   ACC self.GEN.OBL home.pl.obl in again
vaapas dekhnaa caahte   hɛ̃
back   see.INF want.IMPFV.PL be.PRS.PL

'Today they all want to see this bird back in their homes again.'

The sentence with *phir-se* alone or *vaapas* alone would convey the same meaning; I have shown this in the English running translation to show that this redundancy is the same in English as well.

(393)   a. aaj   ve   sab is pakshii ko apne   gharõ   mẽ
            today 3PRON.PL all this bird   ACC self.GEN.OBL home.pl.obl in
            phir-se ~~vaapas~~ dekhnaa caahte   hɛ̃
            again   ~~back~~   see.INF want.IMPFV.PL be.PRS.PL
            'Today they all want to see this bird ~~back~~ in their homes again.'

        b. aaj   ve   sab is pakshii ko apne   gharõ   mẽ
            today 3PRON.PL all this bird   ACC self.GEN.OBL home.pl.obl in
            ~~phir-se~~ **vaapas** dekhnaa caahte   hɛ̃
            ~~again~~ **back**   see.INF want.IMPFV.PL be.PRS.PL
            'Today they all want to see this bird back in their homes ~~again~~.'

5.9.6   Summary of lexical *vaapas*

This section has focused on cases of the lexical uses of *vaapas*, which appear to be limited to three complex predicates (transitive *vaapas karnaa* 'to return *x*', intransitive *vaapas honaa* 'to return', and *vaapas lenaa* 'to withdraw'); the nominalization *vaapsii* 'return' used as a noun or an adjective; and a PP-use of *vaapas*.

5.10 Transitivity and *vaapas*

We have already seen in one example of a transitivity-alternation pair of sentences with the verbs *lauTnaa* 'to return' ∼ *lauTaanaa* 'to return *x*'; these data are repeated below.

(394) *lauTnaa* 'to return' (intransitive) [=(317)]

फिर, [वापस] लौट कर बस स्टैन्ड से रात आठ बजे की बस पकड़नी थी।

phir **vaapas** lauT kar   bas sTaenD-se raat aaTh baje-kii   bas
then **back**   return CONJPRT bus stand-GEN night eight o'clock-GEN bus
pakaRnii thii
catch.INF.F be.PST.F

Lit. 'Then once we returned back we were to catch the 8 pm bus from the bus stand.'

(395) *lauTaanaa* 'to return *x*' (transitive) [=(319)]

वे पनबिजली परियोजनाओं को रोक कर उत्तराखंड के विकास को अवरूद्ध करने वाले सरकारी फैसलों के विरोध में अपने सम्मान [वापस] लौटायें।

ve   panbijlii   pariyojnaaon-ko   rok-kar
3PRON.HON hydroelectric power project.PL.OBL-ACC stop.CONJPRT
uttarakhanD ke vikaas-ko   avruddh karne   vaale
Uttarakhand GEN progress-ACC opposed do.INF.OBL person.PL.OBL
sarkaarii fainslon-ke   virodh   mein apne   sammaan
governmental decision.PL-GEN opposition in   self.GEN.PL award
vaapas lauTaayẽ
back   return.SUBJ

'They should return their awards in opposition to the govermental decisions to stop the hydroelectric power projects thereby impeding progress in Uttarakhand.'

The existence of these kinds of alternations in the COSH provide support to the syntactic treatment of *vaapas* presented in this dissertation: it always attaches

at the lowest *v*P (where that includes a BECOME component, I've called that $v_{[\text{BE}]}$P) regardless of whether there is a higher verbal projection above it ($v_{[\text{AG}]}$P).

We can observe the same behaviour of *vaapas* with further alternations as well, where verbs permit them, for example the ditransitive *denaa* (396), its first-order causative *dilaanaa* (397), and second-order causative *dilvaanaa* (398). Here too, *vaapas* occurs with each member of the paradigm.

(396) *de.naa* [give.INF] 'to give *x*'   [=(349)]

मैंने तेरी चीज तुझे [वापस] दे दी।

mɛ̃ne   terii   ciiz tujhe   vaapas de   dii
1.PRON.ERG 2.PRON.GEN thing 2.PRON.OBL.ACC back   give GIVE.PFV

'I gave your thing back to you.'

(397) *dil.aa.naa* [give.CAUS.INF] 'to cause *y* to get *x*'

रेता के डकैतों ने थारुओं से कहा कि हमारा साथ दो, हम तुम्हें ठेकेदारों, जमींदारों से तुम्हारी जमीन, तुम्हारी इज्जत [वापस] दिलाएंगे।

reta ke   Dakaitõ-ne   thaaruuõ   se kahaa ki   hamaaraa
Reta GEN.OBL dacoit.PL.OBL-ERG Tharu.PL.OBL to say.PFV that 3PRON.PL.GEN
saath do, ham tumhẽ   Thekedaarõ,   zamiindaarõ   se
support GIVE, 3PRON 2PRON.ACC contractor.PL.OBL, zamindar.PL.OBL from
tumharii   zamiin, tumhaarii izzat   **vaapas** dilaayẽge
2PRON.GEN land,   2PRON.GEN dignity **back**   give.CAUS.FUT

'The dacoits of Reta said to the Tharus that, support us, and we will get you back your land and your dignity from the contractors and the zamindars (landowners).'

(398) *dil.v.aa.naa* [give.VAA_CAUS.INF] 'to cause *y* to get *x*'

क्या कभी आम आदमी पार्टी के किसी नेता ने कश्मीरी पंडितों को पुनः उनके घर उनकी भूमि [वापस] दिलवाने की बात कही है?

kyaa kabhii aam aadmii partii ke   kisi netaa   ne kashmiirii
PQP ever Aam Aadmi Party GEN.OBL any politician ERG Kashmiri
paNDitõ-ko   punaha unke   ghar unkii   bhuumii **vaapas**
Pandit.PL.OBL-ACC again self.GEN.PL house self.GEN land   **back**
dilvaane   ki baat kahii hai?
give.VAA*c*AUS.INF.OBL GEN talk do.PFV be.PRS

'Has any politician from Aam Aadmi Party (Common Man Party) ever
spoken about getting Kashmiri Pandits their homes, their land back again?'

Note that though there is a first-order causative *dilaanaa* and a morphologi-
cally distinct second-order causative *dilvaanaa*, their meanings are the same (this
is normal; see Bhatt & Embick 2017 for information on the second-order or *vaa*
causative). This particular verb root thus allows the unique opportunity to observe
vaapas occurring with all three causativity-alternants and conveying exactly the
same meaning, namely RE-POSSESSION.

5.11   Non-adjacency of *vaapas* to the main verb

Out of the 104-sentence sample, 86 of the total sentences (83%) contain *vaapas* in
a contiguous sequence with the main verb: *vaapas V*. The remaining 28 sentences
contain *vaapas* separated from the main verb (17%) by various different kinds of
intervening material, summarized below:

(399)   *Intervening material between vaapas and the main V*

  a. Goal (NP = 7, bounded PP = 8, unbounded PP = 1)

  b. negation (8)

  c. subject (1)

  d. DO (1)

  e. DO and dropped subject (1)

  f. subject and DO (1)

g. *From larger COSH:* topic marker *to*, additive particle *bhii* 'also', other adverbs

Turning first to the most common case, a Goal intervening between *vaapas* and the main verb, below is one example of each type of Goal. Note that in all examples intervening material between them, I have bolded the adverb and underlined the main verb.

(400) *Non-adjacency to V: Intervening NP Goal*   *aanaa* 'to come'

वह [वापस] दिल्ली <u>आईं</u>।

vo   **vaapas** dillii   <u>aayı̃ı̃</u>
3PRON **back**   Delhi   <u>come.pfv.f.sg</u>

'She returned to Delhi.'

(401) *Non-adjacency to V: Intervening unbounded PP Goal*   *laanaa* 'to take/bring'

वहीं सैकड़ों सालों से हिन्दु धर्म, संस्कृति और धर्मग्रन्थों को पूजने वाले गोंड आदिवासियों को [वापस] गोंडी संस्कृति और धर्म के करीब <u>लाने</u> के लिये वही कट्टरता का उपयोग जी.जी.पी. कर रही हैं जो धर्म की राजनीति करनेवाले राजनैतिक समूह करते रहे हैं...

vahı̃ı̃   sɛkRõ   saalõ se   hindu dharm, sanskriti aur
there.ONLY hundred.PL.OBL year.PL from Hindu religion culture   and
dharmgranthõ ko   puujne   vaale   gonD aadivaasiyõ
scripture.PL.OBL ACC worship.INF.OBL person.PL.OBL Gond aboriginal.PL.OBL
ko   **vaapas** gonDii sanskriti aur dharm ke   kariib <u>laane</u>
ACC **back**   Gondi culture   and religion GEN.OBL near   <u>take/bring.INF.OBL</u>
ke liye vahii kaTTartaa   kaa upyog jiijiipii kar rahii   hai   jo
for   same dogmatism GEN use   GGP   do STAY.PFV.F be.PRS RELPRON
dharm kii   raajniiti karnevaale raajnaitik   samuuh karte
religion GEN.F politics do.INF.OBL   person.PL.OBL political group.PL do.INF.OBL
rahe   hɛ̃...
do.IPFV.PL STAY.PL be.PRES.PL

'Meanwhile, the GGP is employing the same fanaticism in bringing the

Gond aboriginals—who have for hundreds of years worshipped the Hindu

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religion, culture, and scriptures—back into proximity to Gondi culture and religion as do the political groups who peddle the politics of religion...'

(402) *Non-adjacency to V: Intervening bounded PP Goal*   *aanaa* 'to come'
सरकार बदलने के बाद पूरे विभाग के कर्मचारियों के स्थानांतरण हो गए और छह माह बीतते बीतते सब [वापस] अपने मुकाम पर <u>आ</u> गए।

sarkaar	badalne	ke	baad	puure	vibhaag	ke
government	change.INF.OBL	GEN.OBL	after	entire	department	GEN.OBL
karmcaariyõ	ke	sthaanantaraN	ho gaye		aur	chɛ maah
worker.PL	GEN.OBL	transfer	be GO.PFV.PL		and	six month
biitte	biitte	sab	**vaapas**	apne	mukaam par	<u>aa</u>
pass.IPFV.OBL	pass.IPFV.OBL	all	**back**	self.GEN.OBL	place on	<u>come</u>
gaye						
GO.PFV.PL						

'After the government changed over, the entire department's workers were transferred (elsewhere), and over the course of six months returned to their places.'

Next, the following examples show example of the intervening item between *vaapas* and the verb being some form of negation.

(403) *Non-adjacency to verb: Intervening negation*   *aanaa* 'to come'
वो तो [वापस] नहीं <u>आया</u>।

vo	to	**vaapas**	nahĩĩ	<u>aayaa</u>
3PRON	TOP	**back**	NEG	come.PFV.M

'(Him,) he didn't come back.'

Here I present some examples from the larger COSH, outside of the 104-sentence sample. The first form below *na* is interchangeable with/equivalent to *nahĩĩ* above. The form *mat* is specified for imperative negation, which can be paraphrased in English as 'don't'.

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(404) *Non-adjacency to verb: Intervening negation (na)*   *lenaa* 'to take/bring'

फिर, स्वाभिमान वश वह यह राशि मुझसे तो [वापस] न <u>लेंगे</u>।

phir, swaabhiimaan vash vah   ye   raashi mujhse   to
then, out of pride   3PRON 3PRON.PROX amount 1PRON.OBL.FROM TOP
vaapas na <u>lẽge</u>
back   NEG take.FUT

'Then, out of pride, he/she won't take this money back from me, at least.'

(405) *Non-adjacency to verb: Intervening imperative negation*   *bulaanaa* 'to call'

उसे [वापस] मत <u>बुलाओ</u>।

use   **vaapas** mat   <u>bulaao</u>
3.PRON.OBL.ACC **back**   IMP_NEG call.IMP

'Don't call (summon/invite) him/her back.'

Next, in the example below we see there is a DO between *vaapas* and the verb, although note that in this sentence, the subject inside the relative clause has been dropped. So, underlyingly there is both S and DO intervening.

(406) *Non-adjacency to verb: Intervening (S +) DO*   *paanaa* 'to get' [=(348)]

मैं उन सारे कणों की तलाश में हूं, जिनसे [वापस] अपना साबुत रूप <u>पा</u> सकूं।

main un   saare kaNon   kii talaash mein huun
1PRON 3PRON.PL.OBL all   particle.PL GEN search in   be.PRES.1SG
jin-se   **vaapas** apnaa   saabut ruup <u>paa</u> sakuun
RELPRON.PL.OBL-from **back**   self.GEN.M whole form <u>get</u> can.1.SG

'I'm looking for all those particles from which [I] can get back (regain) my whole form.'

(407) *Non-adjacency to verb: Intervening subject (S)*   *aanaa* 'to come'

इन्द्र तो तीर-कमान रखकर चलता बना, अब [वापस] किसे <u>आना</u> था?

indra to tiir-kamaan rakhkar   caltaa   banaa,   ab **vaapas**
Indra TOP arrow-bow put.CONJPRT walk.IPFV make.PFV, now **back**
kise   <u>aanaa</u>   thaa
who.OBL.ACC <u>come.INF</u> be.PST

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'Indra, he put his arrows down and left, who needed to return now?'

(408) *Non-adjacency to verb: Intervening S DO*   *likhnaa* 'to write'

मुंबई से [वापस] मैं कुछ न कुछ <u>लिखता</u> रहूंगा।

mumbai se   **vaapas** mɛ̃   kuch   na kuch   <u>likhtaa</u>   rahũũgaa
Mumbai from **back**   1PRON something or something <u>write.IPFV</u> STAY.FUT

'I'll keep writing something or other back from Mumbai.'

(409) *Non-adjacency to verb: Intervening topic marker*   *aanaa* 'to come'

दंगों का डर छंटने के बाद अब लोग घरों में [वापस] तो <u>आ</u> गए हैं पर सवाल उठता है कि क्या ये लोग एकदूसरे के प्रति पहले जैसा भरोसा कर पाएंगे?

dangõ   ka dar chanTne   ke   baad ab log
riot.PL.OBL GEN fear dissipate.INF.OBL GEN.OBL after now people
gharõ   mɛ̃ **vaapas** to <u>aa</u>   gaye hɛ̃   par sawaal uThtaa
home.PL.OBL in **back**   TOP <u>come</u> GO.PFV be.PRS but question arise.IPFV
hɛ ki kyaa   log   ekduusre   ke   prati pehle jɛsaa
that PQP 3PRON.PROX.PL people each_other.OBL GEN.OBL toward before like
bharosa kar payenge?
trust   do GET.FUT

'After the fear of the riot dissipated, now (though) people have come back to (their) homes, but the question that arises is if these people will be able to trust each other like before?'

(410) *Non-adjacency to verb: Intervening bhii + adverb*   *aanaa* 'to come'

आज नन्हा दिगबोई गया था, लोकल बस से, और [वापस] भी उसी से <u>आया</u>।

aaj   nanhaa digboi gayaa thaa, local bas se,   aur **vaapas** bhii
today Nanha Digboi go.PFV be.PST local bus from and **back**   also
usii   se   <u>aayaa</u>
3PRON.OBL.ONLY from <u>come.PFV</u>

'Today Nanha had gone to Digboi by local bus and came back also by the same.'

(411) *Non-adjacency to verb: Intervening process adverb*   *aanaa* 'to come'

कल घर [वापस] जल्दी <u>आया</u>।

kal   ghar **vaapas** jaldii <u>aayaa</u>
yesterday home **back**   fast   <u>come.PFV.3MSG</u>

'Yesterday (he) came home early.'

(412) *Non-adjacency to verb: Intervening attitudinal adverb*   *aanaa* 'to come'

यानी कि गब्बर [वापस] जरूर <u>आया</u> है, लेकिन उसकी यह वापसी ऑडियंस को रिझाने में असफल रही है।

yaani   ki gabbar **vaapas** jaruur   <u>aayaa</u>   hɛ,   lekin
meaning that Gabbar **back**   certainly <u>come.PFV</u> be.PRS but
uskii   ye   vaapsii audians ko rijhaane   mẽ
3PRON.OBL.GEN 3PRON.PROX return audience ACC WOO.INF.OBL in
asafal   rahii   hɛ
unsuccessful STAY.PFV be.PRS

'Meaning, Gabbar[23] has indeed come back, but his (this) return is unsuccessful in wooing the audience.'

---

[23]Notorious villian from the superhit movie *Sholay* (1975).

5.12 Conclusion

In this chapter I have presented the results of a corpus study using a 104-sentence sample from the COSH (Corpus Of Spoken Hindi).

(413) *Readings of vaapas and how they arise*[24]
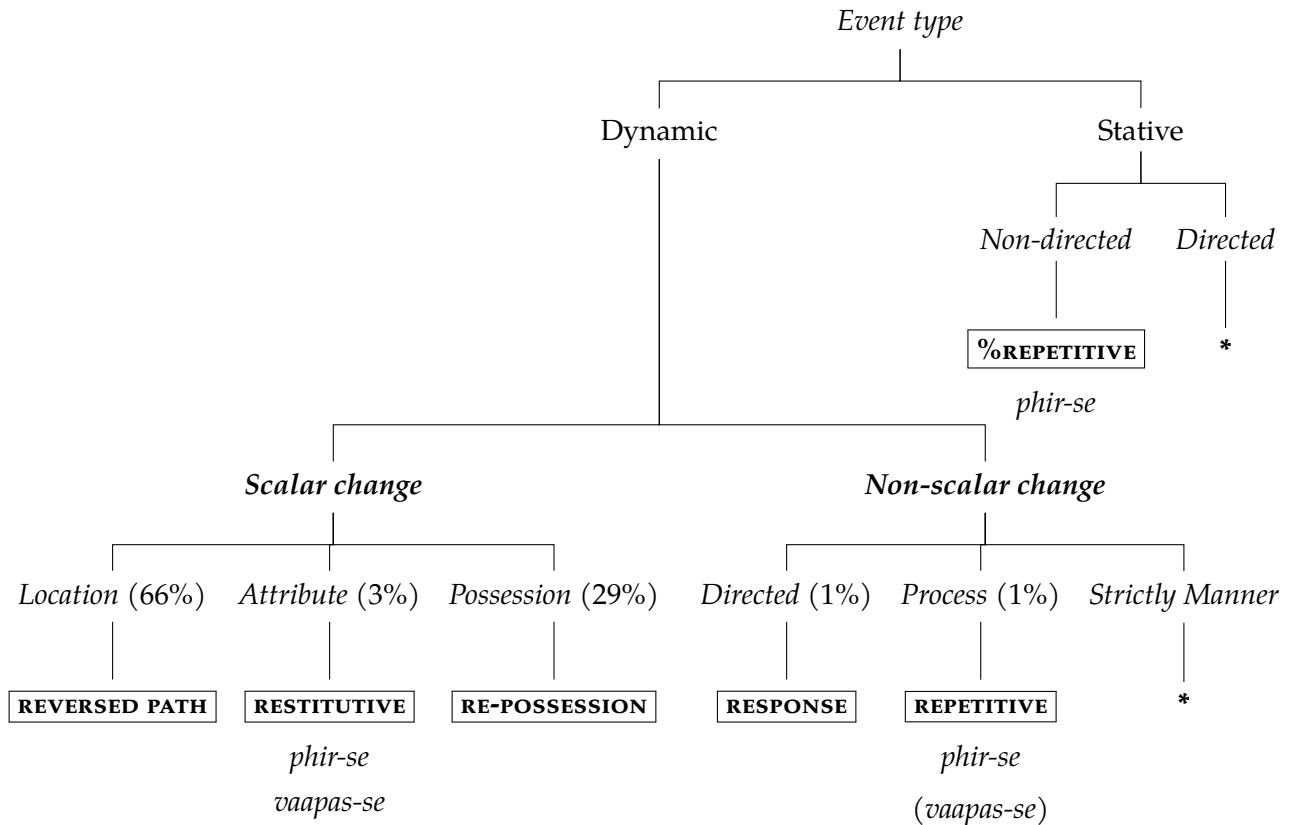
I have demonstrated that the attested readings of *vaapas* are almost exclusively within Dynamic events, the single largest sub-category within it being ***Scalar change*** in *Location*. Events within this sub-category are formed from motion verbs, and in *vaapas* is extremely free with the motion verbs that it can appear with. Only a very small class of motion verbs are truly incompatible with any kind of Path specification, and it is events with these specific (*Strictly Manner*) verbs that disallow *vaapas*. The second largest sub-category is ***Scalar change*** in *Possession*. Treating these in the

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[24]Where lexical items are mentioned in this tree, they are available as alternatives to *vaapas*. In one case, *vaapas-se* is shown in parentheses, indicating that not all speakers allow *vaapas-se* in that particular context.

same way as direction motion and change of state explains their ease of occurrence with *vaapas*: transfer of possession, for example in *take back*, is simply "movement" along a 2-point scale, similar to *arrive* (motion) or *break* (change of state). **Scalar change** in *Attribute* did not occur very frequently, meaning restitutive readings with actual property scales were relatively uncommon. This may plausibly be due to the presence of *phir-se* as a competitor.

Within the **Non-scalar change** category, we saw *Directed* events—typically involving communication and strong volition—yielding response readings, and complex unclassifiable changes yielding repetitive readings. Something I have not explicitly mentioned so far: we can now identify the third category (which I had earlier labelled as *Other*) as *Strictly Manner* verbs, i.e. those that disallow *vaapas*. Since these have been shown to *not* involve scalar change, they can be correctly situated in the *Non-scalar change* category (this is consistent with how Rappaport Hovav (2014) situate manner verbs).

Finally, within Stative events, while in Chapter 2 we have seen judgments where speakers reject *vaapas* with *Non-directed* statives (e.g. *I am happy*), some speakers do accept *vaapas* with stative predication when presented with it, though when asked to produce translations, even these speakers do not readily offer up *vaapas* with statives. The category of *Directed statives* must be mentioned for completeness: these are typically transitive stative events like *I hate you*. These are completely ruled out in Hindi-Urdu. In Hindi-Urdu, this sentence would be translated as *mujhe tumse nafrat hɛ* 'I hate you' which involves an experiencer subject (roughly, 'I have hate from you'). Once viewed in this way, the even no longer seems reversible at all, but becomes an event of 'havin'g something, which reduces it to the *Non-directed* cases. My speculation is that since 'having' cannot be reversed easily, *vaapas* does not occur with this category.

CHAPTER 6

PATHS AHEAD

All das ist wieder nicht richtig ausgearbeitet.

All of this is again not properly worked out.

—*Arnim von Stechow, quoted in Klein* (*2001*)

I have attempted to show in this dissertation that *counterdirectionality* does not really exist in the way that it was conceived of. The notion of *reversal*—central to the original conception of counterdirectionality—does not ultimately do explanatory justice to the complexity of the 're' domain that I have laid out here.

My goal when I started this work was to draw a mathematical line that had at one end *repetition*—representing the relationship two events that are *identical*, and at the other end *reversal*—representing the relationship of two events that are *opposite*. What quickly became evident, however, was that the identity-set of an event is a singleton set, i.e. a set comprised of just *one* event; whereas the non-identity set contains infinite events. The mathematical line no longer seemed tenable: while *identity* is a highly informative relation, *non-identity* is highly uninformative, as it barely restricts the space of possibility. I concluded that events that are *opposite*, thus, cannot be simply *non-identical*, but rather must be subject to some constraints—if such constraints existed, they could be uncovered.

From the perspective of what seems plausible in natural language, the putative process of identifying and retrieving reverse events from a discourse comes with

the distinct disadvantage that the reverse event is, by definition, never present within the host sentence itself. Other, more familiar presupposition triggers all seem to directly rely on the prejacent—the constituent they modify—for their value: in the case of *also/too*, *even*, factive verbs, and the definite article, the presupposition "copies" the content of the constituent being modified, and other parts of the presupposition are in addition to that copied content. In this light, BACK-adverbs at first glance seem like the odd one out: presupposition triggers that are banned from copying their prejacent.

In the thesis I have presented here, BACK is not the odd one out, but rather, fits in nicely with other triggers: as I have argued, presuppositions of BACK-adverbs in fact do involve copying content directly from the prejacent. The effect of reversal comes about because—critically—only *some* parts of the prejacent are copied. Common to the three core readings (REVERSED PATH, RESTITUTIVE, and RESPONSE) is the copying of the *end point* of the event that is being asserted. Further, the factors that unite the first two readings and separates them from the third can be expressed in an additive way: REVERSED PATH and RESTITUTIVE have the *additional* constraint that the THEME and SCALE must also be copied.

The additive expression above can be paraphrased in the following manner: the set of admittance conditions on sentences with RESPONSE readings form a subset of the admittance conditions on REVERSED PATH/RESTITUTIVE readings. This turns out to be a considerable advantage compared to an approach where the three readings are distinguished from each other by the type of path (Zwarts 2019), for reasons that I explain using the diagrams below. A compelling part of Zwarts's proposal is that there exist relationships of direct implication between the meanings of the 're' domain.[1] Sketching out these relationships yields the following semantic map:

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[1] The logic in Zwarts (2019) for the relation REVERSED PATH ⟶ RESTITUTIVE is complicated; the reader is directed to the original text for details. In brief: RESPONSE cannot have a direct implication to RESTITUTIVE, so REVERSED PATH mediates between them.

(414) *Zwarts's semantic map of the 're' domain*[2]

REARWARD $\longrightarrow$ REVERSED PATH $\longrightarrow$ RESTITUTIVE

RETROGRADE RESPONSE REPETITIVE
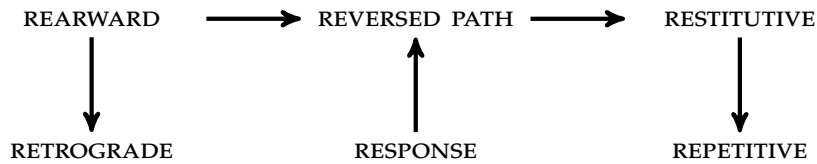
The semantic map above represents the *contiguity principle of polysemy* (Zwarts 2019), which states that a single lexical item is only allowed to express (or "colexify") multiple readings if those readings are all contiguous on the map. This is indeed the case in Hindi-Urdu, as illustrated in (415) below. We have seen that *phir-se* colexifies the readings in the black-dotted box below, and *vaapas* colexifies the three core "counterdirectional" readings, along with REPETITIVE available in some situations/to some speakers. I believe that this variation is indicative of a semantic change in progress.; the expansion of the true BACK-adverb to include a purely REPETITIVE meaning is a path of semantic change argued to have occurred in English (see Beck & Gergel 2015 and Beck et al. 2009 for evidence from Old and Middle Englishes). Additionally, though *vaapas* does not synchronically express the two peripheral readings on the left, the historical antecedent of *vaapas—pas* in Farsi—does have the meaning of 'behind', suggesting a path of semantic change that has already occurred within this picture.

I have attempted in the dissertation to push the theory of the 're' domain a step further than the semantic maps, by providing a map of verbal selection in Hindi-Urdu (Chapter 5) that I hope will be a useful starter kit for anyone interested in replicated this kind of study in another language.

(415) *Colexified readings in Hindi-Urdu*

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[2]Note that as in the rest of the dissertation, I replace Zwarts's as follows: RESPONSE (instead of RESPONSIVE), REVERSED PATH (instead of RETURNATIVE).

REARWARD → REVERSED PATH → RESTITUTIVE

phir-se   *vaapas*

RETROGRADE   RESPONSE   REPETITIVE
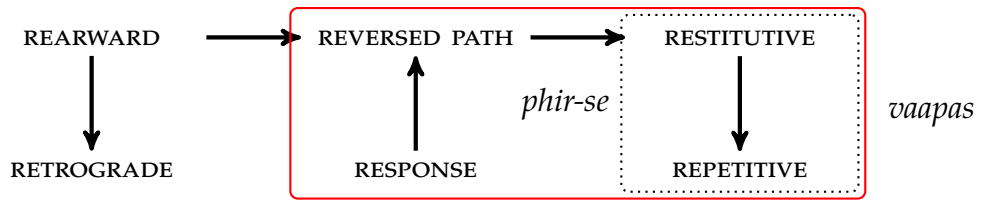
An observation made in the course of this study and briefly mentioned in the dissertation pertains to the behaviour of English *back* and its relationship to paths. Directedness and the idea of movement along a conceptual path has in some ways been part of the conception of counterdirectionality; even in Fabricius-Hansen (1983, 2001) where the term *Kontradirektionalität* 'counterdirectionality' originated, there is a discussion of "opposite direction" as a relevant factor in the etymological path of the following lexical items: *against* ⇒ *again* in English, and their exact German equivalents *wieder* 'again' ⇒ *wider* 'against'. In English, we can see what I believe is a synchronic reflex of this general idea: in online searches I conducted, *back* was far more frequently attested with PPs than with what we might call 'true' results (syntactic resultatives). This anecdotal evidence is accompanied by polled English speakers' general willingness to accept examples like *Brad dyed his hair back to its original color* over examples like *%Brad dyed his hair back brown*. What is interesting here is that even though both sentences would be acceptable in exactly the same contexts (provided Brad's hair used to be brown), there is a syntactic constraint active in English which disfavors results that are not expressed with a preposition. A related phenomenon is unacceptable sentences being rescued by adding a "dummy" preposition. As we have seen extensively in the dissertation, Hindi-Urdu *vaapas* 'back' produces RESTITUTIVE readings with adjectival roots just as well as *phir-se* 'again' does. By contrast, in English, while constructions like *The door opened again* are fine, constructions like **The door opened back* are bad across the board. The unacceptable sentence can, however, be rescued by adding a preposition (*The door opened back up*) that does not have any apparent semantic contribution, but merely

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serves to satisfy the syntactic requirement for a prepositional result.

Areas of future inquiry that are as yet unexplored involve on the one hand language-specific phenomena like those detailed for English, and on the other, broad generalizations that unite languages across language families. One of these that merits mention is summed up in the following quote:

> "Note also that 'again' expressions may develop from expressions of return etymologically, notably return verbs, by the way of the area of functional overlap between return and local restitution." (Wälchli 2006:75)

This path is attested all over South Asia in different ways, and I will close with some potentially interesting crosslinguistic rabbit-holes to fall into. An example of microvariation in the Indo-Aryan family in the region involves the word *phir-se* 'again' in Hindi-Urdu, which is obviously related to *phirnaa* (also Hindi-Urdu) which synchronically means 'to roam around'; in Bangla, however, the related lexical items *pherot/phire* have the meaning of 'back', not 'again', though the 'roam around' meaning is also present synchronically within Bangla (Marathi is also like Bangla). Wälchli's quote above is in the context of Garo, a Sino-Tibetan language of the region, which is reported (via Burling 1961) to have the verb *pir-* 'return' as well as a suffixal marker *-pir* meaning 'back' in the restitutive sense. Dravidian, another language family in the region, yields some other kinds of patterns. In Tamil, for instance, the transitive *tiruppu* 'turn (something)' and the reflexive *tirumbu* 'turn oneself' instantiate a productive morphological paradigm of reflexivization. In addition, the transitive form productively participates in complex predicates like *tiruppi kuDu* 'give back', and the reflexive form in combination with a quantificational particle *-um* yields *tirumbi-um* 'again' (one of multiple 'again' options). I hope that this brief snapshot of semantic connectedness and microvariation creates interest in the rich area of study that the 're' domain continues to offer, and I leave further investigations to future work.

(416) *A starter bibliography of the 're' domain across languages*

    a. Basso (2019)   Brazilian Portuguese

    b. Zwarts (2019)   Dutch

    c. Beck et al. (2009); Beck & Gergel (2015)   (Historical) English

    d. Spahr (2013)   Finnish

    e. Alexiadou & Schäfer (2011)   Greek

    f. Csirmaz (2015); Hegedűs (2020)   Hungarian

    g. Lee (2017)   Korean

    h. Patel-Grosz & Beck (2014, 2019)   (Kutchi) Gujarati

    i. Laca (2017)   Spanish

    j. Comparing two or more languages

        i. Zwarts & Basso (2016):

            Dutch, Brazilian Portuguese

       ii. Csirmaz & Slade (2016); Slade & Csirmaz (2016):

            Hungarian, English, Hindi

      iii. Wechsler & Noh (2001):

            Korean, English

      iv. Wälchli (2006):

   Large-scale study of parallel texts; 100-language sample

Appendices

Appendix A

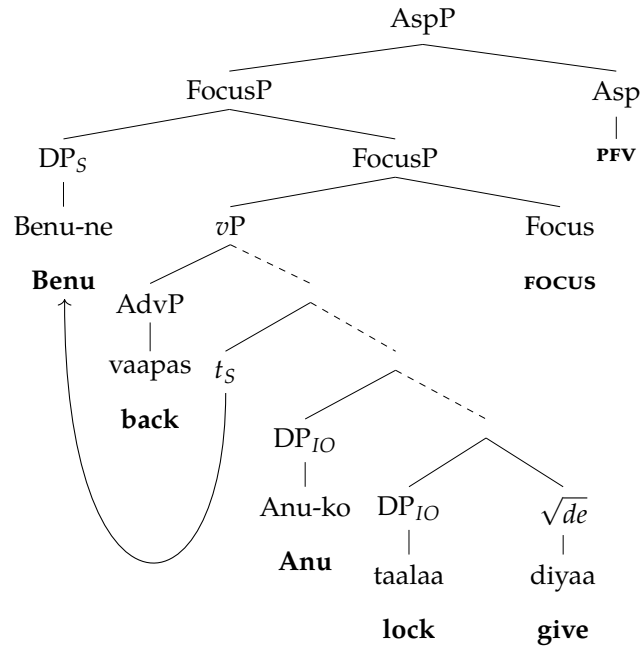# FocusP + *v*P *vaapas* **undergenerates partitioning facts**

In the parses below, I go through configurations that arise from implementing the FocusP (or FocP) account of Hindi-Urdu focus. The first step in the FocP account is the XP is focused moves to Spec,FocP; shown for (417) (assertoric content 'Benu gave Anu a/the lock') in (418) below.

(417)   *vaapas* [**Benu**$_S$ **Anu**$_{IO}$ **lock**$_{DO}$ **give**]

(418)   *Ditransitive with vaapas in vP and FocusP above*
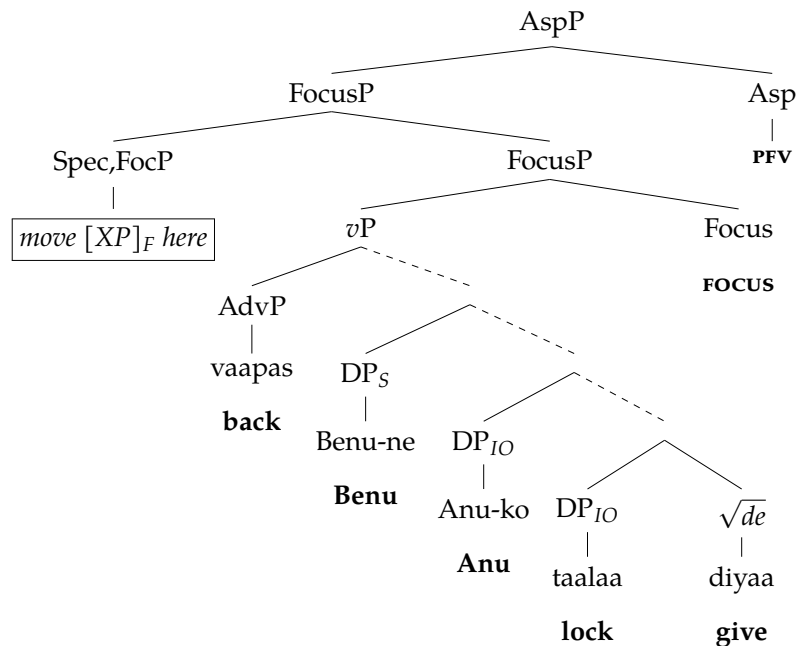
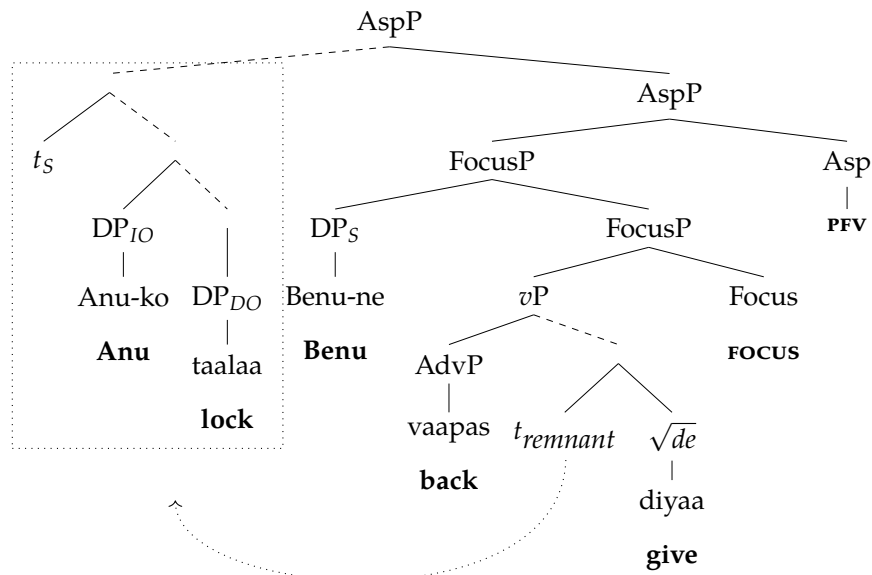(419)   *Ditransitive with vaapas in vP and FocusP above; S moves to Spec,FocP*

```
                              AspP
                   ┌───────────┴───────────┐
                 FocusP                    Asp
            ┌──────┴──────┐                 │
          DP_S          FocusP             PFV
            │        ┌─────┴─────┐
         Benu-ne    vP          Focus
          Benu   ┌──┴───┐       FOCUS
               AdvP    t_S
                │
              vaapas
               back
                        DP_IO
                          │
                      Anu-ko   DP_IO      √de
                       Anu       │         │
                              taalaa     diyaa
                               lock       give
```

(420)   *Intermediate result* (419)*: S moved to FocP*

#[BENU-NE]_F **vaapas** anu-ko   taalaa diyaa
Benu-ERG   **back**   Anu-DAT lock   give.PFV

The word order at this stage is as shown above, which is not the final result; the
next and final step is given in (421) below:

(421)   *S moves to Spec,FocP and vP evacuates*   [=(296), Ch. 4]

```
                              AspP
              ┌────────────────┴────────────────┐
             t_S                               AspP
         ┌────┴────┐                  ┌─────────┴─────────┐
                  DP_IO             FocusP                Asp
                    │          ┌──────┴──────┐            PFV
               Anu-ko  DP_DO   DP_S        FocusP
                Anu      │    Benu-ne   ┌────┴────┐
                      taalaa   Benu    vP       Focus
                       lock          ┌──┴──┐    FOCUS
                                   AdvP
                                    │
                                  vaapas  t_remnant  √de
                                   back               │
                                                    diyaa
                                                     give
```

The above example involved focus on the subject; we find that same facts hold when focus is interpreted on indirect object (422) or direct object (423). In these cases too, the result is grammatical and has the desired information-structural properties, but does not have a surface order compatible with focus-partitioning. Below I show the movement structures; note that the test from (298) applied to these sentences yields the same results.

(422) *IO moves to Spec,FocP and vP evacuates*
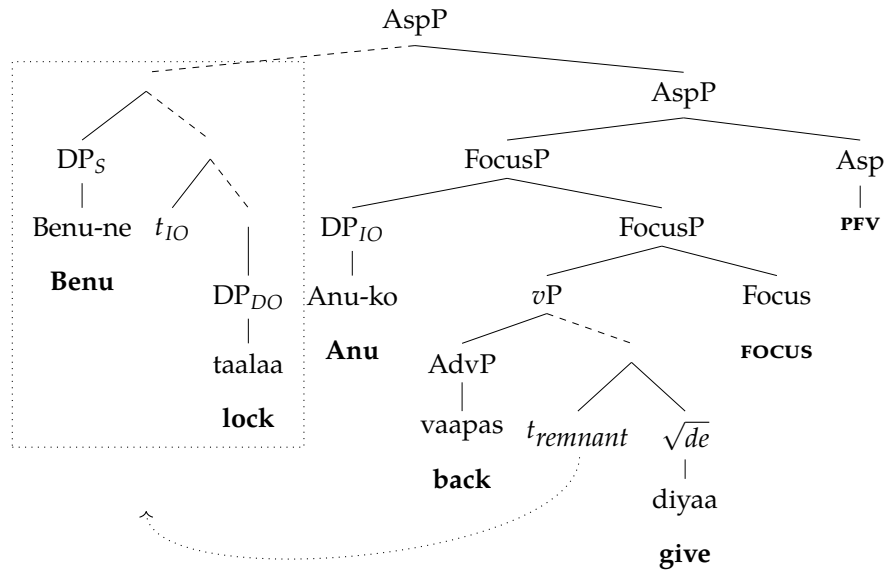
(423) *DO moves to Spec,FocP and vP evacuates*

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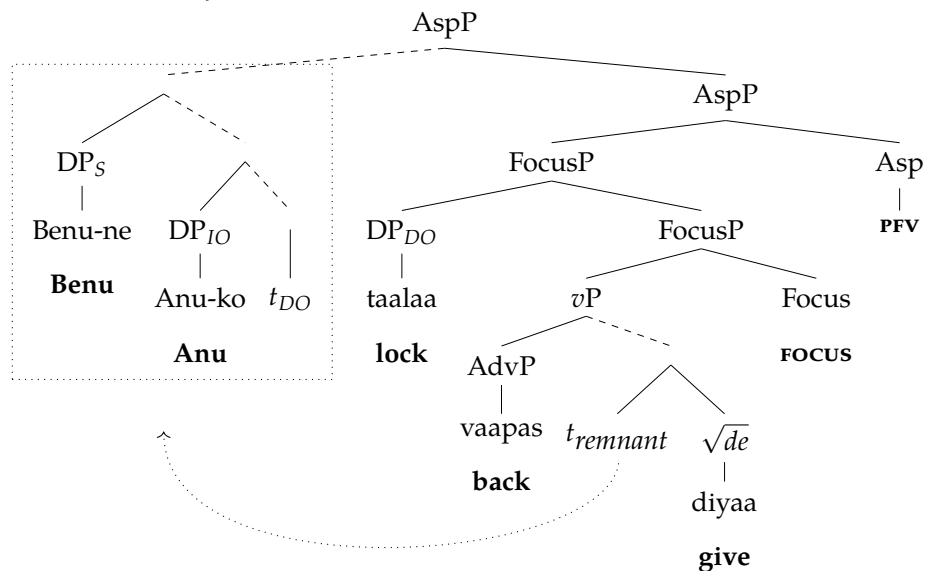
The trees shown here represent the result of simply applying the FocusP account (movement of $[XP]_F$ to Spec,FocP followed by evacuation of the remainder of the vP) to a ditransitive sentence, and varying which constituent is focused. They all share the key property that the $[XP]_F$ ends up left-adjacent to the adverb, which is in turn left-adjacent to the verb. In the absence of the intervening vP-level adverb, the $[XP]_F$ would be left-adjacent to the verb itself, in the word order characteristic of the examples examined in the literature on postional focus in South Asian languages. I have illustrated that there is an incompatibility between the positional focus facts and the observed focus-partitioning facts. This incompatibility holds in general, since it makes no difference which constituent is focused.

Appendix B

Difference between Kutchi Gujarati and Hindi-Urdu

The data that Patel-Grosz & Beck present are more complicated than the HU data in the sense that the single adverb *pacho* can express three different meanings—RESTITUTIVE, REPETITIVE, and RESPONSE[1]—each associated with distinct word orders. The below examples show that *pacho* by itself in KG covers the semantic ground that in HU is covered jointly by the AGAIN-adverb *phir-se* (RESTITUTIVE and REPETITIVE), and the BACK-adverb *vaapas* (RESTITUTIVE and RESPONSE).

(424)   *Uses of Kutchi Gujarati pacho; Patel-Grosz & Beck (2019)*

    a. *pach-o*   Valji Maya-ne   kagar lakh-y-o
        again-M.SG Valji Maya-DAT letter write-PFV-M.SG
        'Valji caused Maya to once more have a letter.'   RESTITUTIVE

    b. Valji *pach-o*   Maya-ne   kagar lakh-y-o
        Valji again-M.SG Maya-DAT letter write-PFV-M.SG
        'Valji wrote Maya a letter in return.'   RESPONSE

    c. Valji Maya-ne *pach-o*   kagar lakh-y-o
        Valji Maya-DAT again-M.SG letter write-PFV-M.SG
        'Once more, V.'s writing causes M. to come to have a letter.'   REPETITIVE

    d. Valji Maya-ne   kagar *pach-o*   lakh-y-o
        Valji Maya-DAT letter again-M.SG write-PFV-M.SG
        'Once more, V.'s writing causes M. to come to have a letter.'   REPETITIVE

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[1]In their terminology, the reading I call RESPONSE is called COUNTERDIRECTIONAL.

In HU, the two adverbs carving up this semantic space are not completely inter-changeable. We have already seen in Chapter 2 evidence that *vaapas*≠AGAIN (with some exceptions); that evidence is repeated here as (425). Note that in both the sentences below, placing the adverb after the subject instead does not affect the judgment.

(425) *Context* (REPETITIVE:) Jyoti sang a song yesterday.   [=(76), Ch. 2]

    a. kal   phir-se jyoti gaane   waalii hai
       tomorrow again   Jyoti sing.INF.OBL going.to be.PRES
       'Tomorrow Jyoti is going to sing again.'

    b. *kal   vaapas jyoti gaane   waalii hai
       tomorrow back   Jyoti sing.INF.OBL going.to be.PRES
       Intended: 'Tomorrow Jyoti is going to sing again.'

Additionally, we have evidence that *phir-se*≠BACK shown in (426). Note that in (426b) the all-Given nature of the sentence necessitates that *vaapas* surface in immediately preverbal position. The corresponding sentence with *phir-se* in (426a) is shown in the same word order for comparison; other configurations are also #.

(426) *Context* (RESPONSE:) Renu hit Jyoti.

    a. #baad mẽ jyoti-ne renu-ko phir-se   maaraa
       later in again   Jyoti-ERG Renu-ACC hit.PFV
       'Later Jyoti hit Renu again.'

    b. baad mẽ jyoti-ne renu-ko   vaapas maaraa
       later in Jyoti-ERG Renu-ACC back   hit.PFV
       'Later Jyoti hit Renu back.'

Appendix C

Example stories to elicit different readings of BACK-adverbs

This appendix presents longer, story-length discourses that may be translated and used for the elicitation of two core readings of BACK-adverbs in different languages.

C.1 The discrimination of the law: RESPONSE

(427) न्याय का भेद *nyaay kaa bhed* 'the discrimination of the law'

एक गूजर किसी बनिये का कर्जदार था। गूजर का दुर्भाग्य कि हर साल कुछ-न-कुछ अनहोनी होती रही। कर्ज चुकाना उसके लिए मुश्किल हो गया। अपने रुपयों का जोखिम देख बनिए ने उस पर मुकदमा दायर कर दिया। अपने हक़ में जल्दी फैसला हो जाने की नीयत से बनिए ने हाकिम को बीकानेर की एक बढ़िया पगड़ी उपहार में दी। गूजर ने देखा कि न्याय की इन कचहरियों में रिश्वत से ही काम बनता है तो उसने भी चुपके से अत्यधिक दूध देने वाली एक भैंस हाकिम को नजराने में दी। हाकिम ने गूजर के हक़ में फैसला सुना दिया। न्यायालय में खड़ा बनिया रिश्वत का भेद कैसे प्रकट करता परन्तु फिर उसने इशारे-इशारे में समझाते हुए सिर की पगड़ी को हाथ में लेकर याचना के स्वर में कहा, "अन्नदाता, मेरी पगड़ी की कुछ तो लाज रखिये!" हाकिम उसके इशारे को समझ गया। [वापस] उसने वैसा ही जवाब दिया, "सेठजी, तुम्हारी पगड़ी तो भैंस चर गयी!"

ek guujar kisii baniye kaa karjdaar thaa. guujar kaa durbhaagya ki har saal kuch na kuch anhonii hotii rahii. karj cukaanaa uske liye mushkil ho gayaa.

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apne rupayon ko jokhim mein dekh baniye ne us par mukadmaa daayar kar diyaa. apne haq mein jaldii phaislaa ho jaane kii niiyat se baniye ne haakim ko biikaaner kii ek baRhiyaa pagRii uphaar mein dii. guujar ne dekhaa ki nyaay kii in kacehariyon mein rishwat se hii kaam bantaa hai to usne bhii cupke se atyaadhik duudh dene waalii ek bhains haakim ko najraane mein dii. haakim ne guujar ke haq mein phaislaa sunaa diyaa. nyaayaalay mein khaRaa baniyaa rishwat kaa bhed kaise prakaT kartaa parantu phir usne ishaare-ishaare mein samjhaate hue sir kii pagRii ko haath mein lekar yaacnaa ke swar mein kahaa, "annadaataa merii pagRii kii kuch to laaj rakhiye!" haakim uske ishaare ko samajh gayaa. vaapas usne vaise hii jawaab diyaa, "seThji, tumhaarii pagRii to bhains car gayii!"

'A Gujar is in a Baniya's debt. Unfortunately for the Gujar every year some calamity or other kept happening. It became difficult for him to repay the debt. Seeing his money in jeopardy, the Baniya filed a case against him. With a view to landing a quick verdict in his favour, the Baniya gave the judge a marvellous turban from Bikaner as a present. The Gujar saw that bribery was the only way to get anything done in the courthouses of law, so he secretly presented the judge a tribute of a buffalo that yielded exceptional quantities of milk. The judge returned a verdict in favour of the Gujar. How could the Baniya convey the difference of the bribe while standing in the court—but then, explaining using gestures, he took the turban from his head into his hands and in a pleading voice said, "O Provider, please save some of the honour of my turban!" The judge understood his gestures. **In response** he said in the same way, "Sethji, your turban was eaten by a buffalo!"'

C.2 The onion thief (REPETITIVE)

(428) एक मजेदार पुरानी लोककथा है...एक कड़क मिज़ाज पुलिस फौजदार ने एक चोर को पकड़ा। उसने सजा के रुप में चोर को दो विकल्प दिये -- या तो दस थप्पड़ खा या एक बार में एक किलो तीखी प्याज़ कोरी कोरी खा। चोर ने सोचा, प्याज खाने से तो थप्पड़ खाना ठीक रहेगा, सो उसने थप्पड़ का विकल्प पसंद किया। पर फौजदार के राठौड़ी हाथ की दो थप्पड़ खाते ही उसे तो दिन में तारे नज़र आ गए, उसने सोचा, बाप रे, ऐसे थप्पड़ खाने से तो प्याज खाना अच्छा। उसने विकल्प बदला और प्याज खाना शुरू किया। अभी २०० ग्राम प्याज़ खाई ही थी कि उसकी तो हालत खराब होने लगी...आँखों से पानी बहने लगा, जीभ ढीली पड़ गई और पेट से विचित्र सी आवाजें आने लगीं। इसलिये [वापस] उसने थप्पड़ का विकल्प पसंद किया। दो थप्पड़ खाते ही फिर हालत खराब, तो फिर प्याज़ पर आया...फिर थप्पड़...फिर प्याज़...अंत में हुआ ये कि उसने दस थप्पड़ भी खाये और एक किलो प्याज भी। बिना सोचे समझे लगातार निर्णय बदलने वाले ऐसे लोगों को आजकल हम खुजलीवाला के रुप में जानते हैं!

'There's an entertaining old folktale...a police officer with an unforgiving personality caught a thief. He offered two options for punishment – either get ten slaps, or eat a kilo of sharp onions, just on their own. The thief thought, having slaps is more acceptable than having onions, so he choose the slaps option. As soon as he got two slaps from the burly Rathod police-man, he started to see stars in the daytime, he though, jeez, compared to getting slaps like these, eating onions would be better. He changed his choice and started to eat the onions. He had just eaten 200 grams of onions and he was in a terrible state...eyes watering, tongue slack, and crazy sounds coming from his stomach. So, he (**once more**) went **back** to the slaps option. Two more slaps and he was in bad shape again, so he switched to onions again...then slaps...then onions...in the end what happened was that he ate both the ten slaps and the kilo of onions. These days we know people who

unthinkingly keep changing their minds by the name of 'Khujliwala'!'[1]

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[1] https://www.facebook.com/pushpendrafaujdar.05/posts/1427402480870928; link no longer active as of Tuesday, January 26, 2022 at 11:47 AM. Versions of the same story but in English: https://web.archive.org/save/https://www.indiaforums.com/forum/topic/3240727 and https://web.archive.org/web/20200225230506/http://www.zensufi.com/stories/thief.html and https://web.archive.org/web/20220128044101/https://paulocoelhoblog.com/2012/01/05/paying-for-the-same-thing-three-times/

Appendix D

Notes to the corpus study

D.1   Rationale for the sample used in this study

The random sampling method that produced the data represented in Table 5.1 involved extraction of 10,000 random occurrences of *vaapas*, followed by further extraction of a randomized sample of 140 occurrences, of which 104 were the true hits that I then analyzed. These hits were not restricted in terms of word order: *vaapas* occurs in the sentence but it is not specified where in the sentence. Given the manageable size of this sample, it was possible to manually read and code each sentence for "true hit" or "false hit", and include only the former. I then coded each sentence for main verb.

Any quantitative analysis is impossible on the COSH unless it is done manually. The above manual exercise would be incredibly inefficient with 30,000 occurrences of *vaapas*: extrapolating from the 25% false hits of the randomized 139-sentence sample, we may guess (and it is only a guess) that something in the range of 7,500 out of 30,000 hits would have to be manually identified and discarded.

Given that we have a basic idea of the most frequent verbal collocations with *vaapas* from the 104-sentence sample, an alternative option might be to perform broader searches for those specific verbs occurring with *vaapas* in the entire COSH, and then manually clean those. Since there is no inbuilt analyzer within the COSH,

it is not possible to directly replicate this 104-sentence study over the entire corpus: there is no inbuilt way to query "number of times this particular verb occurs with *vaapas*", or "top 10 most frequent verb collocations with *vaapas*". Automatic counting of number of occurrences is restricted to the number of total results for any given search; we can see, for example, *that* there are 29,972 total occurrences of the word *vaapas* in the COSH, but we cannot see any quantitative information *about* those occurrences.

To situate the 104-sentence sample in the larger context of the COSH, I employed the following method. I downloaded all search results containing *vaapas* and manually went through all the results to obtain a general sense of what sorts of verbs occur with *vaapas*. There was a download limit of 10,000 results at a time from the COSH, and no inbuilt way to specify subsets like "first 10,000" and then "everything else", which created a hurdle for downloading all 30,000-odd occurrences. As a workaround, I organized my searches alphabetically in order to create downloadable subsets that I could then analyze locally, given the absence of a native analyzer within the COSH.

In the 104-sentence sample I manually coded (i) whether the main verb is contiguous with *vaapas*, i.e. the sequence *vaapas V*, and (ii) where non-contiguous, what is the intervening material. Attempting to retrieve similar information from the COSH faces a problem: searches for non-contiguous sequences *vaapas...V* or *V...vaapas* have to be set up by using the operator "[]" meaning "any word", and to allow for more than just a single word between *vaapas* and the verb, we must use "[]+", where the "+" means "any number of occurrences". This method does not respect word boundaries. Thus a sentence $S1$ with a sequence *vaapas* V_1 will turn up as non-contiguous because ignoring the sentence boundary causes the search to spuriously include any verb V_2 in the following sentence $S2$, as shown below:

(429) $[_{S1}vaapas\ V_1]\ [_{S2}...V_2...]$

The only reliable method available was manually running through lists of sentences spotting instances of different identified target verbs. This unwieldly task was made tractable by restricting results to sentences containing contiguous sequences of *vaapas V*. The total number of examples with the *vaapas V* sequence is 21,389. The following numbers are from within this set. Note that the proportions in Table D.1 are not directly comparable to the extracted 104-sentence sample which was extracted from a general unrestricted list of occurrences of *vaapas*; additionally the presence of false hits makes the numbers below unsuitable to derive further conclusions from. They have been included here to give a broad impressionistic sketch of where the 104-sentence sample comes from. It is worth noting that despite these difficulties in using the COSH corpus and likelihood of spurious results, the list of verbs in Table D.1 still matches the list of verbs from the manually cleaned and checked 104-sentence sample. Of occurrences of *vaapas* followed by a verb, 85% were covered by the following 5 verbal forms.

VERB	MEANING	CATEGORY/SENSE	TOTAL*	%*
vaapas lenaa/laanaa	'to take/bring *x* back'	motion/location	5,862	27%
vaapas aanaa	'to come back'	motion/location	4,609	22%
vaapas lauTnaa	'to return (back)'	motion/location	3,462	16%
vaapas lauTaanaa	'to return *x* (back)'	transfer/possession		
vaapas jaanaa	'to go back'	motion/location	2,086	10%
vaapas cale jaanaa/ *vaapas calnaa*	'to go back'	motion/location		
vaapas honaa	'to return'	motion OR transfer	2,066	10%
vaapas karnaa	'to return *x*'	transfer/possession		
vaapas karvaanaa	'to have *y* return *x*'	transfer/possession		

Table D.1: Corpus counts for *vaapas V* sequences
Includes unknown number of false hits

D.2 104-sentence sample

(1001)   *Location: lauTnaa with Goal; intervening NP*

साहब ने सजा नहीं दी और गांव वाले, हंसी-खुशी चंद्रसिंह का गुणगान करते [वापस] गांव लौट आए।

(1002)   *Location: lauTnaa with Goal; intervening PP*

अपनें गुरु से शिक्षा समापवर्तन का समादेश पाकर वह शिष्य [वापस] अपनें पितृ आवास नहीं लौटा अपितु सन्यासी बनकर विचरण करता रहा।

(1003)   *Location: lauTnaa with Source and implicit Goal; intervening negation*

अरुण जी तब तक अपने काम से [वापस] नहीं लौटे थे।

(1004)   *Location: lauTnaa with recoverable Source/Goal; intervening negation*

नारायण गिरि महाराज का कहना है कि दुनिया के हिंदुओं का घर भारत है और यदि पाकिस्तान से आए हिंदू [वापस] नहीं लौटना चाहते हैं तो सरकार को उन्हें संरक्षण देना चाहिए।

(1005)   *Location: lauTnaa with recoverable Source and implicit Goal; intervening negation*

रचना 10 अप्रैल, 2006 को एक स्थानीय दुकान से परचून का कुछ सामान खरीदने गई थी लेकिन वह [वापस] नहीं लौटी।

(1006)   *Location: lauTnaa with Source and implicit Goal*

तथा नफीस बलराज साहनी ने, जो बीबीसी में दो बरस काम करने के बाद कुछ ही अर्सा हुए लंदन से [वापस] लौटे थे, खुद को ऐसे आधे-पेट खाकर गुजर करते बंगाली किसान में बदला, जैसे वह अकाल के मारे लाखों किसानों

(1007)   *Location: lauTnaa with Goal; intervening negation*

लेकिन शाम होने पर घर [वापस] नहीं लौटी।

(1008)   *Location: lauTnaa - departure*

एक तो यह कि उसने सभी से [वापस] लौट जाने को कहा है जिसमें भारत भी शामिल है। इसे तो यूं समझना होगा कि वह सभी देशों के

(1009)   *Location: lauTnaa with implicit Goal*

होलिका दहन के बाद ग्रामीण ठड्ढा गायन करते हुए [वापस] लौटे।

(1010)   *Location: lauTnaa with implicit Goal*

इससे कामदेव भी भयभीत हो गये किन्तु अपने कार्य को पूर्ण किये बिना [वापस] लौटने में उन्हें संकोच हो रहा था।

(1011)   *Location: lauTnaa with implicit Goal*

शाम को जब इनके मां बाप [वापस] लौटे तो बच्चों की तलाश शुरू हुई।

(1012)   *Location: lauTnaa with implicit Goal*

फिर, [वापस] लौट कर बस स्टैन्ड से रात आठ बजे की बस पकड़नी थी।

(1013)   *Location: lauTnaa with Goal*

में अगर कभी पूर्वांचल का दौरा भी किया, तो शाम तक वे यहां ताज होटल के आलीशान कमरे में ही [वापस] लौट आते थे।

(1014)   *Location: lauTnaa with implicit Goal*

मैं [वापस] लौट आया।

(1015)   *Location: lauTnaa with implicit Goal*

जब वो [वापस] लौट रही थी तो रास्ते में जिस बस में वे सफर कर रहीं थी, कुछ डाकुओं ने उस बस को

(1016)   *Location: lauTnaa with implicit Goal*

---आशीष भटनागरसंदेश १४ : ५६, २५ जून २००९ हम 28 जून को [वापस] लौट रहे हैं और 1 जुलाई से आज का आलेख देख रहे हैं।

(1017)   *Location: lauTnaa with implicit Goal*

[वापस] लौटने के बाद भी उसे लगातार दहेज के लिए प्रताडित किया जाता रहा।

(1018)   *Location: lauTnaa with Source and implicit Goal*

हाजी इस महीने के प्रारंभ में अमेरिका के दौरे से [वापस] लौटे हैं, जहां उन्होंने अंतररा-ष्ट्रीय सूफी सम्मेलन में हिस्सा लिया और संयुक्त राष्ट्र में भाषण दिया।

(1019)   *Location: lauTnaa with implicit Goal*

उन्होंने जो कहा उसने मुझे [वापस] लौटने पर मजबूर कर दिया।

(1020)   *Location: lauTnaa - departure*

लगभग कूदता-फांदता, [वापस] लौटते लोगों के बीच से रास्ता बनाता, तेजी से नीचे उतरता हूं और पहुंच जाता हूं उस्ताद के घर।

(1021)   *Location: lauTnaa - departure*

होमकुंड से यात्रियों के [वापस] लौटने का दौर जारी है।

(1022)   *Possession: lauTaanaa with implicit Goal*

वे पनबिजली परियोजनाओं को रोक कर उत्तराखंड के विकास को अवरूद्ध करने वाले सरकारी फैसलों के विरोध में अपने सम्मान [वापस] लौटायें।

(1023)   *Possession: lauTaanaa with implicit Goal*

पाते हैं, जो उनकी अपेक्षाओं के मुताबिक ना सिर्फ कांग्रेस को बना पाएगी, बल्कि पार्टी के पुराने गौरवमयी दिनों को [वापस] लौटा पाएगी।

(1024)   *Location: aanaa; intervening NP*

वह [वापस] दिल्ली आई।

(1025)   *Location: aanaa; intervening PP*

सरकार बदलने के बाद पूरे विभाग के कर्मचारियों के स्थानांतरण हो गए और छह माह बीतते बीतते सब [वापस] अपने मुकाम पर आ गए।

(1026)   *Location: aanaa; intervening negation*

जब तक भय [वापस] नहीं आता तब तक ऐसा ही चलेगा।

(1027)   *Location: aanaa; intervening S*

इन्द्र तो तीर-कमान रखकर चलता बना, अब [वापस] किसे आना था?

(1028)   *Location: aanaa*

हम वहां से सिटी बस से [वापस] आए।

(1029)   *Location: aanaa*

कुछ वर्ष उपरांत धनीराम वर्मा जी रायपुर [वापस] आ गए एवं रायपुर में 1943 में

श्रीराम स्टोर्स नामक दुकान खोलकर जीवन यापन करने लगे, बालक तुलेन्द्र नें सेंटपाल

(1030)   *Location: aanaa*

स्कूल से [वापस] आते ही हम क्रिकेट खेलने में जुट जाते थे और तब तक क्रिकेट खेलते थे, जब तक या तो सूरज

(1031)   *Location: aanaa*

फोन पर बात कर वो [वापस] आया तो मुझे थोड़ा अनमना सा दिखा।

(1032)   *Location: aanaa*

मैं जाऊं बस्तर और [वापस] आऊं तिरंगे में लिपटकर।

(1033)   *Location: aanaa*

29 जून को समझौते के बाद जब इमके कार्यकर्ता कुछ मजदूरों से गेट पर मिलकर [वापस] आ रहे थे तो बिगुल कार्यकर्ताओं ने किसी शख्स से फोन पर बात करने के बहाने इमके कार्यकर्ताओं की स्थिति

(1034)   *Location: aanaa*

तेरा मनोरथ पूरा न होगा और मैं यूं ही [वापस] आ जाऊंगी।

(1035)   *Location: aanaa*

कि ऐसे अर्जेंट छुट्टी के लिए कोई प्रावधान नहीं होता - मैंने उसे बोला कि मैं छुट्टी पर हूं तो हूं - [वापस] आउंगा तब बात करेंगे - !

(1036)   *Location: aanaa; intervening negation*

गेहूं तो कल पैदा हो जाएगा, राजा की इज्जत एक बार चली गई तो [वापस] नहीं आएगी।

(1037)   *Location: aanaa*

हालांकि, [वापस] आये हुए आज 2 दिन हो गए मगर कुछ लिख नहीं पाया इस ब्लॉग पर।

(1038)   *Location: aanaa*

वहां बात न बने तो [वापस] आ जाऊं।

(1039)   *Location: aanaa*

गुस्सा होते हैं, तत्काल मैनेजर को बुलाकर उस वेटर को ज़लील करते हैं, और उसे टिप दिये बगैर तमतमाते हुए [वापस] आ जाते हैं।

(1040)   *Location: aanaa*

जाग-जाग कर, काम करने के बीच भाग-भाग कर, पानी के जग, गिलास आदि तक जाता है, पानी पीता है, और [वापस] आ जाता है।

(1041)   *Location: aanaa; intervening negation*

योगगुरु बाबा रामदेव ने रविवार को कहा कि जब तक विदेशों में जमा काला धन [वापस] नहीं आ जाता, वह चुप नहीं बैठेंगे और देशभर में अपना आंदोलन चलाते रहेंगे।

(1042)   *Location: aanaa; intervening negation*

वो तो [वापस] नही आया।

(1043)   *Location: aanaa; intervening PP*

सारी सेना के घोड़ो को मार गिराते हैं और अपनी गायों को लेकर [वापस] गोठां में आ जाते हैं।

(1044)   *Possession: vaapas lenaa (complex pred)*

टी क्षेत्र का काम निश्चित रूप से बिना कर रियायतों के चल सकता है, किन्तु बीपीओ उद्योग से कर रियायतें [वापस] लेने की स्थिति में उस पर दुष्प्रभाव पड़ेगा।

(1045)   *Possession: vaapas lenaa (complex pred)*

से सरकार चलाई थी लेकिन राजीव गांधी की जासूसी करने के आरोप में कांग्रेस ने चंद्रशेखर सरकार से अपना समर्थन [वापस] ले लिया था।

(1046)   *Possession: vaapas lenaa (complex pred)*

उन्होंने आंदोलन [वापस] लेने की बात कहते हुए गुरुवार को टोल के मसले पर राज ठाकरे के साथ बैठक की की पेशकश की

(1047)   *Possession:vaapas lenaa (complex pred)*

बैठक के बाद एटक नेता लखन लाल महतो ने कहा, हड़ताल [वापस] ले ली गई है।

(1048)   *Possession: vaapas lenaa (complex pred)*

बाद मे जब जयललिता के समर्थन [वापस] ले लेने से भाजपा सरकार अल्पमत मे आ गई तब राजनीति मे आने के बजाय दिल्ली की सडको पर भीख

(1049) *Possession: vaapas lenaa (complex pred)*

भाकियू सुप्रीमो चैधरी नरेश टिकैत ने केंद्र सरकार से किसान विरोधी प्रावधानों के चलते भूमि अध्याग्रहण अध्यादेश को तत्काल [वापस] लेने की मांग की।

(1050) *Possession: vaapas lenaa (complex pred)*

आयशा ने पुलिस को बयान दर्ज करवाया है कि वह अपनी ओर से दायर एफआईआर [वापस] लेंगी, इसके बाद जज ने मामला रद्द कर दिया।

(1051) *Possession: vaapas lenaa (complex pred)*

गया तो उन्होंने इसकी लिखित शिकायत एसएसपी गोरखपुर से की पर बाद में एक सीनियर अफसर की सलाह पर उसे [वापस] ले लिया।

(1052) *Possession: vaapas lenaa (complex pred)*

असहयोग आंदोलन क्यों [वापस] लिया गया - चौरी-चौरा में हुई हिंसक घटना के कारण।

(1053) *Possession: vaapas lenaa (complex pred)*

इससे पहले भी जितने आन्दोलन हुए सभी में मुकद्मे [वापस] लेने का फार्मूला लागू होता रहा है और यही कारण है कि आन्दोलनकारी सरकारी सम्पत्ति, जन-धन हानि बेहिचक करते हैं

(1054) *Possession: lenaa/laanaa*

बार यह झांसा भी देती हैं कि लाभ नहीं होने की स्थिति में आप सामान कंपनी को लौटाकर अपनी रकम [वापस] ले सकते हैं।

(1055) *Possession: vaapas lenaa (complex pred)*

रुख अख्तियार कर रखा है कि कानून को संशोधित नहीं किया जाना चाहिए और वे नहीं चाहते कि सरकारी अध्यादेश [वापस] लिया जाए।

(1056) *Possession: vaapas lenaa (complex pred)*

सुबह इसका आंशिक असर दिखा शिवसेना के विजय कुमार औटी ने अपना नाम

[वापस] ले लिया और बाद में कांग्रेस की वर्षा गायकवाड़ भी रेस से हट गईं।

(1057) *Location: lenaa/laanaa (non-contiguous sequence with vaapas); intervening NP*

वो मुझे [वापस] घर ले गई।

(1058) *Location: lenaa/laanaa (non-contiguous sequence with vaapas); intervening unbounded PP*

वहीं सैकड़ों सालों से हिन्दु धर्म, संस्कृति और धर्मग्रन्थों को पूजने वाले गोंड आदिवासियों को [वापस] गोंडी संस्कृति और धर्म के करीब लाने के लिये वही कटटरता का उपयोग जी.जी.पी. कर रही हैं जो धर्म की

(1059) *Location: lenaa/laanaa (non-contiguous sequence with vaapas); intervening PP*

इसने एक झटके में प्रियंका का करियर [वापस] पटरी पर ला दिया है।

(1060) *Location: lenaa/laanaa*

भविष्य में ऐसे लोगों की लिस्ट आउट की जायेगी, इससे अच्छा है कि अभी से लोग रुपया भारत में [वापस] ले आवें।

(1061) *Location: lenaa/laanaa*

नयी टीम आनंद बक्षी - लक्ष्मीकांत प्यारेलाल के साथ बना ली, लेकिन अपनी फ़िल्म "राम तेरी गंगा मैली" में हसरत को [वापस] ले आये, जहां हसरत ने "सुन साहिबा सुन" लिखा, लेकिन राज कपूर की मौत के बाद हसरत का फिल्मी सफ़र

(1062) *Location: jaanaa with Goal; intervening PP*

उन्होंने इन ब्रिगेडों को [वापस] चीन सीमा पर जाने का आदेश दिया।

(1063) *Location: jaanaa with implicit Goal*

था कि अगर रास्ते में उसे दिक्कत हुई तो हम सबके लिए लाए गए सपोर्ट वीइकल को ब्लॉक किए बिना [वापस] जा सके।

(1064) *Location: jaanaa with implicit Goal*

- मैंने कहा...
- कहीं नहीं, बस तुमने मुझे देख लिया, इतना ही काफी है, अब मुझे शॉपिंग करके [वापस] जाना है।

(1065)   *Location: jaanaa - departure*

रहे तीन व्यापारियों में से एक नंद जी ने बताया कि तीन दिनों से कोई ग्राहक नहीं मिलने से हम [वापस] जा रहे हैं जबकि पप्पू ने बताया कि मैंने घोड़े सहित सामान ढोने वाली गाड़ी 16 हजार रुपये में बेची

(1066)   *Location: jaanaa - departure*

दरअसल, इस चोर ने एक घर में घुसकर जम कर शराब पी लेकिन [वापस] जाने का रास्ता न ढूंढ पाया।

(1067)   *Location: jaanaa with implicit Goal*

बैंड मार्च [वापस] जाते समय लोकप्रिय धुन सारे जहां से अच्छा बजाते हैं।

(1068)   *Location: jaanaa with implicit Goal*

मोबाइल फोन में बजते वालगा संगीत का आनन्द लेती हुई मैं [वापस] जा रही थी।

(1069)   *Location: jaanaa - departure*

सास की वजह से प्रोग्राम नहीं बना और मुझे ले कर वो अपने साथ अपनी कार से [वापस] चल दी।

(1070)   *Location: jaanaa - departure*

काफी देर तक प्रतीक्षा के बावजूद उस दिन कई मजदूर बिना कोई काम पाए [वापस] चले गए, लेकिन कुछ कम पैसे लेकर वह छोटा गड्ढा तक खोदने को राजी नहीं हुए।

(1071)   *Possession: vaapas honaa*

मामले में हस्तक्षेप करना चाहिए ताकि इस तरह के गैर कानूनी कारोबार पर रोक लग सके और निवेशकों का पैसा [वापस] हो सके।

(1072)   *Possession: vaapas karnaa*

- उत्तर प्रदेश की मुख्यमंत्री मायावती ने रायबरेली की रेल कोच फैक्ट्री के लिए 189.25 करोड़ एकड़ भूमि रेल मंत्रालय को [वापस] की।

(1073)   *Possession: vaapas karnaa*

सहारा को अपने निवेशकों के 20,000 करोड़ रुपये [वापस] करने है और यह मामला सुप्रीम कोर्ट में चल रहा है।

(1074)   *Possession: vaapas karnaa*

बढ़ाकर एक करोड़ परिवार करने की योजना साझा करते हुए मोदी ने कहा कि 2.8 लाख उपभोक्ताओं द्वारा एलपीजी सब्सिडी [वापस] करने के फैसले से 100 करोड़ रुपये की बचत होगी।

(1075)   *Possession: vaapas karnaa*

किन्तु आधे पैसे [वापस] करने पड़ेंगे।

(1076)   *Possession: vaapas karnaa*

भिवानी जिले के रहने वाले हैं, लेकिन अब उन्होंने मुख्यमंत्री अरविंद केजरीवाल को पत्र लिखकर चंदे में दी गई रकम [वापस] करने की मांग की है।

(1077)   *Possession: vaapas karnaa*

मूल कानून में यह भी था कि यदि अधिगृहीत भूमि का इस्तेमाल नहीं होता है, तो पांच साल बाद उसे [वापस] करना होगा, लेकिन अध्यादेश में 'पांच साल की समय-सीमा' को हटा दिया गया है।

(1078)   *Possession: vaapas karnaa*

वह बोला भगवान मुझे मेरा लण्ड [वापस] कर दो?

(1079)   *Location: bhejnaa; intervening NP*

को चंडीगढ़ पुलिस के पास भेज देती है तो चंडीगढ़ पुलिस मामला बलटाना से जुड़ा होने की बात कहकर उसको [वापस] जीरकपुर भेज देती है।

(1080)   *Location: bhejnaa; intervening PP*

मत करना यार मुझ पर केस मत करना बड़ी मुश्किल से ३ महीने की फरारी काट कर आया हूं, मुझे [वापस] वनवास पर मत भेजो भाई!

(1081)   *Location: bhejnaa*

रोबोट उतारे, जो उसकी सतह पर 500 मीटर चलकर जांच करे और इसका हाई डेफिनेशन वीडियो 2015 तक धरती पर [वापस] भेजा जाए।

(1082)   *Location: bhejnaa*

अपने 'कंतक' नामक श्वेताश्व, तलवार तथा राजकीय परिधान तक 'चन्ना' (एक

सारथी) के हाथों अपने पिता राजा शुद्धोधन के पास [वापस] भेज दिये थे।

(1083)   *Location: bhejnaa*

इसके साथ ही मंत्री के स्तर पर लंबित पत्रावलियों को [वापस] भेजने की भी बात कही गई है।

(1084)   *Location: bhejnaa*

एक-एक करके उसकी किताबें [वापस] भेजती रही।

(1085)   *Location: pohoncnaa; intervening NP*

लगभग सायं 6.00 बजे हम लोग [वापस] कैम्प पहुंचे पानी गिरना भी प्रारंभ हो गया।

(1086)   *Location: pohoncnaa; intervening PP*

जिस टीम का खिलाड़ी अपने साथी को झाड़ू या चादर पर बैठा कर खींचते हुए सबसे पहले अंतिम रेखा पहुंचकर [वापस] शुरुआती रेखा तक पहुंचेगा, वही विजेता होगा।

(1087)   *Location: pohoncnaa*

नहीं थीं - न वेटिंग-लाउंज में, न अपने कमरे के चमचमाते शौचालय में, उन्हें दफ्तर में हर जगह खोज कर हांफता-हांफता [वापस] पहुंचा तो उनके कमरे में फिनाइल की तेज गंध छाई हुई थी।

(1088)   *Location: pohoncaanaa; intervening NP*

पूरे देश में एक साथ सभी राज्यों में ऑपरेशन स्माइल जैसे कार्यक्रम चलाने की जरुरत है जिससे बच्चों को सुरक्षित [वापस] उनके घर पहुंचाया जा सके।

(1089)   *Location: pohoncaanaa; intervening NP*

घर से १००० कि.मी. दूर लगभग भोरे के बखत बैठे ब्लॉग पढ़ रहे एक लड़के को एक ही पल में [वापस] उसके शहर पहुंचा दिया।

(1090)   *Possession: denaa*

इतिहास गवाह है, मांगने से न रावण सीता [वापस] देगा, न समुद्र रास्ता।

(1091)   *Possession: denaa*

मैंने तेरी चीज तुझे [वापस] दे दी।

(1092)   *Possession: denaa*

इस मशीन को लोग खरीद लें और कंपनी से हीरे ले कर उसे अपने घर में तराश कर कंपनी को [वापस] दे दें।

(1093)   *Possession: paanaa; intervening DO (and dropped S)*

मैं उन सारे कणों की तलाश में हूं, जिनसे [वापस] अपना साबुत रूप पा सकूं।

(1094)   *Possession: paanaa*

युद्ध के बाद, फ्रैंकफर्ट ने अपनी संपन्नता [वापस] पा ली।

(1095)   *Location: bulaanaa*

उस समय उत्तर प्रदेश सरकार ने कहा था, ' केंद्र चाहे तो अपने आईएएस ऑफिसर्स को [वापस] बुला ले, हमें उनकी जरूरत नहीं।

(1096)   *Location: girnaa*

/ सेकंड के बराबर है, अतः वस्तु चाहे कोई भी हो, एक गोली या एक बेसबॉल, इसे पृथ्वी की सतह पर [वापस] गिरने से बचने के लिए कम से कम 11.2 किमी / सेकंड की रफ्तार से चलना होगा।

(1097)   *Location: rakhnaa; intervening PP*

रूमाल [वापस] जेब में रखते हैं और पहलू बदलकर दूसरी जेब से चांदी की डिबिया निकालकर पहले खुद पान खाते हैं, फिर

(1098)   *Possession: haasil karnaa*

हालांकि अपनी फोटो तथा अन्य सामग्री को ऑर्कुट में डालने वाले प्रयोगकर्ता वर्ष 2016 तक इन्हें [वापस] हासिल कर सकेंगे।

(1099)   *Possession: khariidnaa*

इस राशि से कम्पनी को अमेरिकी सरकार से हिस्सेदारी [वापस] खरीदने में मदद मिलेगी।

(1100)   *Attribute: joRnaa*

इसके बाद हृदय और फेफड़ों को रक्त संचार व्यवस्था से [वापस] जोड़ देते हैं, जिससे वे पहले की तरह काम करने लगें।

(1101)   *Attribute:* ᴀᴅᴊ *karnaa; intervening DO*

और सारा ध्वस्त कर दिया तो ८२ साल के चर्चिल ने पुरे इंग्लैंड को संभाला, प्रधान मंत्री बन कर के [वापस] अपने देश को खड़ा कर दिया, ताकतवान बनाकर के।

(1102)   *Attribute:* ᴀᴅᴊ *banaanaa*

उत्तरी बस्तर में बाबा बिहारी दास ने 'आदिवासियों को [वापस] हिंदू बनाने' के लिए एक आक्रामक अभियान शुरू किया था, जिसके तहत आदिवासी संस्कृति को नष्ट कर उनमें हिंदू धर्म

(1103)   *Process:* ᴀᴅᴠ *jiine lagnaa*

बहरहाल किन्हीं भी कारणों से यदि किसी अन्य हस्तक्षेप या प्रयास से दो लोग अपनी गलतफहमियों को दूर कर [वापस] सुकून से जीने लगते हैं तो किसी को आपत्ति नहीं होनी चाहिए।

(1104)   *Response: likhnaa; intervening S + DO*

मुंबई से [वापस] मैं कुछ न कुछ लिखता रहूंगा।

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