# Causation in Hindi-Urdu: Care for your Instruments and Subjects[*]

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## 1.    Introduction

This paper seeks to highlight novel differences between direct and indirect causatives in Hindi-Urdu with respect to 'optional' *-se* phrases and 'causer' subjects. As opposed to the singular instrument *-se* phrase in the case of direct causatives, indirect causatives allow multiple *-se* phrases - two instruments and an intermediate agent. While the licensing of the intermediate agent *-se* phrase in indirect causatives has been the cornerstone of various theoretical accounts of Hindi-Urdu causatives (Kachru 1980, Saksena 1982, Bhatt & Embick 2003, Ramchand 2008, 2010 & Richa 2011 among others), the additional instrument *-se* phrase in indirect causatives has not been discussed in detail hitherto.

In this paper I demonstrate that this observation regarding instruments can be best accounted for under a conceptualization of indirect causation as being structurally and semantically more complex than the direct causative. In particular, it is the bi-eventiveness of indirect causation, as opposed to the mono-eventiveness of direct causation, that mediates the licensing of an additional instrument. In this way this paper provides evidence against the analysis of indirect causatives as involving an event structure which lacks an interpretive boundary between the causing and caused events (Ramchand 2008, 2010).

The relativization of argument licensing to event structure, in the vein of a long line of work from Carlson (1984) to Williams (2015) recently, allows for a uniform analysis of *-se* phrases in causatives. The proposed unification of the broad class of 'optional' *-se* phrases, thus, seeks to take forward an enterprise initiated by Ramchand (2010), albeit with different theoretical assumptions, tools and consequences. Rather than having the interpretation of *-se* phrases be sensitive to the presence of 'implicit' sub-events, I argue for an analysis which cashes out the varying interpretations of *-se* phrases as a consequence of the mod-

ification of distinct syntactico-semantic objects in each case. The analysis presented here has the advantage of being straightforwardly able to capture the licensing and interpretative conditions on instrument 'causer' subjects across the causative verbal alternations, without taking recourse to any additional stipulations regarding causers themselves.

The paper is organized as follows: §2 provides a brief overview of the causative verbal alternations and *-se* phrases along with recapitulating previous accounts of the phenomena. §3 discusses the additional data motivating the movement away from pre-existing analyses and presents the analysis for *-se* phrases in causatives. §4 discusses the consequences of the proposal for 'causer' subjects and §5 concludes the paper.

## 2.    A short tour of Hindi-Urdu causatives

Hindi-Urdu has a productive morphological causativization paradigm. This involves suffixation of causativizing morphemes to verbal roots (Kellogg 1876, Kachru 2006, inter alia). Two types of causatives are identified: The **direct causative (DC)** realized with the suffix *-aa* or stem alternation and the **indirect causative (IC)** realized with the suffix *-vaa*. This three way alternation is illustrated in (1) with an unaccusative verb as the first member of the paradigm and transparent suffixation indicating causativization. Unergatives, transitives and ditransitives also participate in the causative alternation, but this paper does not explore these additional paradigms due to space constraints.

(1)    *The causative paradigm.*

| Unaccusative | Direct causative | Indirect causative |
|---|---|---|
| jal | jal-aa | jal-vaa |
| burn | burn | cause to burn |

The use of the terms 'direct causative' and 'indirect causative' is based on Saksena (1982). The use of the direct causative suffix *-aa* 'signifies that the verb is a causative with a personally involved causer' (Saksena 1982: 2) and the indirect causative suffix *-vaa* signifies that the 'verb is a causative with a non-involved causer'. Thus, in (2) the ergative marked nominal *zamindaar* 'landlord', is understood to be directly involved in the burning of the house as its agent when the corresponding verbal form is that of the *-aa* suffixed direct causative. In contrast, when the verbal form is that of the *-vaa* suffixed indirect causative, the landlord is not understood to be involved in the burning of the house itself, with that task having been delegated to an unmentioned intermediate agent in this case.

(2)    a.    ghar    **jal**-aa
             House burn-PFV
             'The house burned.'

       b.    zamindaar-ne  ghar  **jal-aa**-yaa
             Landlord-ERG house burn-DC-PFV
             'The landlord burned the house.'

    c.    zamindaar-ne ghar  **jal-vaa**-yaa
          Landlord-*erg* house burn-IC-PFV
          'The landlord had the house burned.'        (Based on Bhatt & Embick 2003)

Causativization can be realized through stem alternation for some predicates, for instance, *khul* 'open (unaccusative)', (3). See Bhatt & Embick (2003) for a detailed discussion.

(3)    *Stem alternation.*

| Unaccusative | Direct causative | Indirect causative |
|---|---|---|
| kh**u**l | kh**o**l | kh**u**lvaa |
| open | open | cause to open |

In addition to the 'core' arguments discussed above, causative predicates permit a range of 'optional' arguments bearing the case marker *-se* (*-se phrases*). These *-se* phrases may introduce an *instrument* and an *intermediate agent* into the syntax, see *mashaal* 'torch' in (4-a) and *Dakait* 'bandit' in (4-b) respectively. The intermediate agent is distinct from an instrument in that it is an animate entity capable of performing the action described volitionally and is licensed only when the corresponding verb form is that of the indirect causative, (4-c). Arguably, it is this distinction regarding the licensing of the intermediate agent that has been almost definitional of indirect causatives (Saksena 1982). The basic distribution of *-se* phrases is summarized in (5).

(4)    a.    ye  ghar  *mashaal*-se jal-aa       thaa
               this house torch-INST  burn-PFV be.PAST
               'This house was burned with a torch.'
               (i.e. the burning happened with a torch)

        b.    zamindaar-ne (**Dakait-se**) (*mashaal-se*) ghar  jal-vaa-yaa
               Landlord-ERG bandit-INST torch-INST    house burn-IC-PFV
               'The landlord had the house burned by the bandit.'

        c.    zamindaar-ne (*****Dakait-se**) (*mashaal-se*) ghar  jal-**aa**-yaa
               Landlord-ERG bandit-INST  torch-INST    house burn-DC-PFV
               'The landlord had the house burned by the bandit.'

(5)    *Distributions of -se phrases.*

| -se phrase | Unaccusative | Direct causative | Indirect causative |
|---|---|---|---|
| Instrument | ✓ | ✓ | ✓ |
| Intermediate agent | ✕ | ✕ | ✓ |

## 2.1    Previous accounts of Causatives

Previous accounts of Hindi-Urdu causatives have varying empirical coverage - Bhatt & Embick's (2003) account concentrates more on the intermediate agent *-se* phrase, while Ramchand's (2010) proposal also deals with the interpretation of one instrument *-se* phrase.

I will briefly present their ideas before turning to additional data that neither of their proposals sufficiently captures.

### 2.1.1 Bhatt & Embick 2003: The embedded passive

In Bhatt and Embick's (2003) proposal the DP agent of the transitive (direct causative) is licensed by an agentive *v*. This argument is added to the structure via *Event Identification* (Kratzer 1996). The syntactic structure for a basic direct causative under their account is given in (6). Like the direct causative the DP agent of an indirect causative is also licensed by an agentive *v* under their proposal. This *v* embeds *a passive complement*, which is a *v*P that contains an agentive *v*, but no case feature and no DP in the specifier of this head. With the embedded *v*P lacking an external argument, the resultant structure has the matrix subject be the agent of the causing event but not the embedded event and the embedded event does not have an explicitly realized agent, giving us the structure in (7). The agent of the embedded event - the intermediate agent - can then be introduced in a *-se* phrase modifying the passive *v*P.

(6)  *Direct causative.*
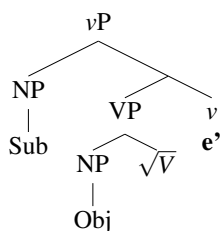
(7)  *Indirect causative.*
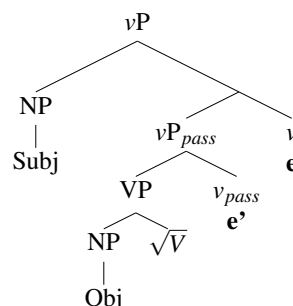


The corresponding semantic denotation for the direct causative is in (8-a) and for the indirect causative in (8-b). There is no overt causative component for the direct causative in this account. By having two agentive *v* heads as part of the indirect causative structure, Bhatt & Embick's proposal allows for the introduction of two events since each agentive *v* introduces a new event. Event identification is not available for events introduced by agentive *v* heads as that would be semantically anomolous and a causation relation holds between the two event arguments introduced by these two *v*'s.

(8)  a.  *Direct Causative.*
$[[subj\ obj\ \sqrt{V}\ v]] = \lambda e_s\ \text{Agent(subj)(e) \& V(obj)(e') }$

b.  *Indirect Causative.*
$[[subj\ obj\ \sqrt{V}\ v_{pass}\ v]] = \lambda e_s \text{Agent(subj)(e) \& } \exists e'_s[\text{CAUS(e,e')}$
$\text{\& } \exists x_e[\text{Agent(x)(e')] \& V(obj)(e')]}$

Even though Bhatt & Embick do not engage with the issue of licensing instruments, we will see in §3.1 that the distribution of instruments also pushes us towards a bieventive

account of indirect causatives with an interpretive distinction between and causation event and a caused event.

### 2.1.2 Ramchand 2008, 2010: Modifying Overt and Covert Subeventualities

Ramchand's (2010) analysis of *-se* phrases builds on her (2008) proposal and takes the functional sequence corresponding to V to have been put together from a recursive embedding of eventuality descriptors - init(iator)P, proc(ess)P and res(ult)P - whose specifiers are systematically interpreted locally as the 'thematic' element of each sub-description. The account assumes that the *cause/leads to* relation holds between sub-events such that there are two loci of causation in a maximally complex event.

Based on the additive nature of the morphology of alternation, she argues for a structure building analysis where the direct causative (transitive) alternant is structurally larger than the intransitive version. The direct causative counterpart of an unaccusative verb would have the structure in (9). The indirect causative does not differ from the direct causative in having additional overt syntactic structure, (10). Rather, it differs from the direct causative in that there is no temporal overlap or common lexical content that is asserted for the *proc* and *res* subevents in the case of indirect causative, such that the whole event will be interpreted as involving an 'indirectly caused' result.
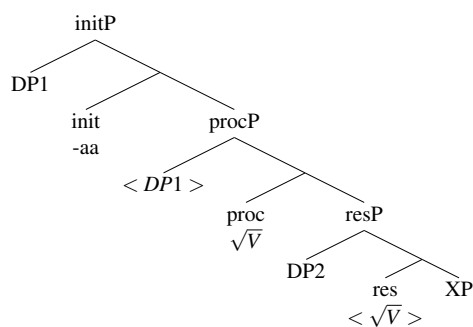
(9)    *Direct Causative.*          (10)    *Indirect causative.*
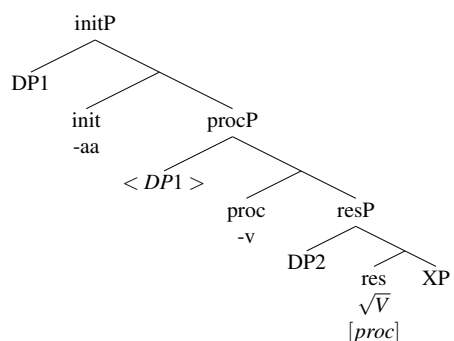


Furthermore, with the *-vaa* suffix multiply inserting into both *init* and *proc*, any verb root that combines with it will have to leave some of its own category features unassociated. This has the consequence that there exists an underassociated *proc* in the verbal phase whose encyclopedic content is still accessible to the semantics. Thus, rather than arguing for the presence of an implicit argument (for example, the intermediate agent) in a verb's argument structure, she argues in favour of implicit sub-eventual structure for the indirect causative.

The unified analysis of *-se* phrases based on this event-structural account, has *-se* phrases be sub-event modifiers, such that the 'instrument' interpretation arises if the overt *proc* is modified, while the 'intermediate agent' interpretation arises if the underassociated *proc* is modified. In providing an analysis where both instruments and intermediate agents form a uniform class of adjuncts in that they are 'non-volitional direct causers', she argues

against the Bhatt & Embick (2003) style analysis where the intermediate agent *-se* phrase has a privileged status as it functions as the by-phrase agent for an embedded passive.

However, since the implicit *proc* is distinct from the overt *proc* only in terms of the former lacking its independent projection or lexicalization and there is no difference between the implicit and overt *proc* in terms of their encyclopedic content, there are some concerns regarding the implementation of Ramchand's (2010) analysis. If both instruments and intermediate agents are 'non-volitional direct causers', as Ramchand suggests, then what prevents a *-se* marked intermediate agent from modifying the overt *proc* in a direct causative structure and have it be interpreted (and licensed) as an intermediate agent in that case, contra the observation in (4-c)? Similarly, in the case of the indirect causative, her account does not prevent a derivation where the *-se* marked intermediate agent modifies the covert *proc* and the instrument modifies the overt *proc* from converging.

Thus, in the absence of further delineation of differences between the two types of *proc*, the empirically attested interpretive differences between intermediate agents and instrument do not follow through. Furthermore, as we will see in the next section, there are additional challenges with respect to extending this account to include the licensing of the second instrument *-se* phrase that is available with indirect causatives.

## 3.    The syntax-semantics of *-se* phrases

In this section I explore the multiplicity of instruments made available by indirect causation and what that implies about the event space for different types of predicates. I also look at additional evidence supporting the Bhatt & Embick proposal which treats the intermediate agent like the agent of the passive. Finally, I present my account of *-se* phrases in causatives.

### 3.1    Motivation 1: Being *the* instrument of *an* event

The syntactic distribution of instruments is not so much a factor of the valency of a predicate, but rather the predicate's status in the causativization paradigm. Unaccusatives and their (transitive) direct causatives forming a distinct grouping compared to the indirect causatives, since the former group only permits a single instrument -se phrase, which I refer to as an **instrument of the result** (instrument$_{res}$). The greater valency of the transitive is unaccompanied by the availability of a greater number of instrument *-se* phrases, see (11). In contrast, the indirect causative permits an additional instrument, *threats*, in (12). This additional instrument will be referred to as an **instrument of causation** (instrument$_{caus}$).

(11)     *zamindaar-ne **maachis**-se     *mashaal*-se ghar   jal-aa-yaa
          landlord-ERG   matchstick-INST torch-INST  house burn-DC-PFV
          'The landlord burned the house with a torch with a matchstick.'

(12)     zamindaar-ne apni    **dhamkii**-se Dakait-se    mashaal-se ghar   jal-vaa-yaa
          Landlord-ERG SELF'S threat-INST bandit-INST torch-INST house burn-IC-PFV
          'The landlord used his threats to get the house burned by the bandits with a torch.'

While an instrument$_{caus}$ is intuitively distinguishable from an instrument$_{res}$ - the former category largely includes abstract means used to make an intermediate agent perform a desired action and the latter category includes concrete means to effect an action affecting the theme argument - there is no motivation for claiming the status of distinct semantic primitives for them and both are considered realizations of the instrument role.

The availability of an instrument$_{caus}$ as a *second* instrument in indirect causatives flies in the face of the long held observation that a semantic relation associated with one dependent cannot be repeated by another, irrespective of whether it is an adjunct or an argument, that is 'each dependent is interpreted as *exhausting* its semantic role, naming all of its satisfiers' (Williams 2015). This observation has formed the basis of the various conceptions of *thematic uniqueness* in the literature (Carlson 1984 inter alia) and has recently been recast as the principle of Role Exhaustion by Williams (2015).

(13)    **Role Exhaustion**:
        When a dependent is assigned a relation to some *(group of) event(s)*, it identifies *all and only* the individuals in that relation to *that (those) event(s)*.

As an illustration, let us look at (14-a) and (15-a). Here, the event of *smacking* has two roles associated with it: a *smacker* and a *smackee*. Given (13) , (14-a) and (15-a) entail their respective counterparts in (b). However, assigning the role assigned to *the wall* in (14-a), to two objects *the wall* and *the floor* in (15-a) leads to an inconsistency, that is, (15-a) cannot be used to express the meaning in (15-b).

(14)    a.    Nik smacked the wall.
        b.    There was smacking, and in it only the wall was smacked, and only Nik was a smacker.                                                    *(Williams 2015)*

(15)    a.    * Nik smacked the wall the floor.
        b.    There was smacking, and in it only the wall was smacked, only the floor was smacked, and only Nik was a smacker.                         *(Williams 2015)*

As a semantic principle that governs how any dependent is interpreted, the Role Exhaustion principle requires that a single dependent refer to the entirety of a given relatum, thereby accounting for the unacceptability of (15-a), as well as (11) where having two dependents referring to a single role - that of the instrument - is unacceptable as well.

The co-occurence of two instruments in indirect causatives, (12), would be in clear violation of the Role Exhaustion principle unless, in keeping with the formulation of the principle, which relies on the connection between events and argument structure, we have two (groups of) events at play in indirect causatives. The conclusion, therefore, is that each of these events has an independent existence in the semantics which allows for each of them to be independently modifiable. This in turn allows two instrument roles to be licensed.

Furthermore, this predicts that multiple exponents of other dependents bearing the same relation might be attested. Location is one such candidate. Thus, in (16), two independent

locations, London and Delhi, indicate the site of John's initiation of the entire causation event and the site of Mira's initiation of the caused event respectively.

(16)   a.   Context: John owns property in Dehradun. Since he is in London, he has to get his lawyer Mira, who is in Delhi, to divide it up for his family.

       b.   john-ne **london**-se   miiraa-se  **dilli**-se    jaaydaad baNt-vaa-yi
           john-ERG london-INST Mira-INST delhi-INST property divide-IC-PFV
           From London, John got Mira to get the property divided up from Delhi.

Thus, multiple instruments (and multiple locations) bolster the conceptualization of indirect causation in Hindi-Urdu involving multiple events. This position has been explored independently in the semantic literature on causation. For instance, Kratzer (2005: 27) alludes to indirect causation as being a relation which involves 'possibly very long causal chains connecting the mentioned cause to the mentioned effect'. Therefore, indirect causation is bi-eventive at the very least and by extrapolation it is this property that is responsible for the differentiation observed between indirect causatives and other predicates in Hindi-Urdu as evidenced in the domain of licensing of instruments.

The bi-eventive analysis of indirect causation for Hindi-Urdu has been challenged by Ramchand (2008, 2010) who argues for a complex event structure decomposition for these causatives, but without an interpretive boundary between the causation event and the caused event. However, the modulation of semantic relations such as *instrument* by the event structure argued for above suggests that the event structure decomposition in indirect causatives is in fact associated with an interpretive differentiation. Furthermore, accommodating the second instrument in indirect causatives - instrument$_{caus}$ - while remaining true to the spirit of Ramchand's account is not straightforward. Two possibilities are explored here - either the instrument$_{caus}$ modifies an additional overt *procP* or it modifies the singular overt *procP* of the indirect causative along with the instrument$_{res}$. The former line of thought would necessarily have to be accompanied by constraints on the number of *procP*'s since empirically the number of instruments is not unrestricted. This option also has the consequence that the indirect causative structure would be syntactically more complex than the direct causative, and there would be more than two loci of causation in this sort of event.

The second line of thought - multiple instrument *-se* phrases modifying the same overt *procP* - would have to be accompanied by guidelines for the interpretation of two instruments relative to one sub-event since this is not the standard state of affairs given the Role Exhaustion principle. Furthermore, having the instruments be in roughly the same syntactic position would also fail to capture the effect of the verb root on an instrument$_{res}$ but not an instrument$_{caus}$. It has been noted in the literature that the kind of singular instrument a transitive predicate takes is determined by the lexical meaning of the verb root in question (Rissman 2012) or is encoded as part of the lexical entry of a verb (Erteschik-Shir & Rappaport 2007). Thus, what constitutes a valid instrument varies from one predicate to another - *burning* events requires *torches* and *matchsticks* and *cutting*, *knives*. In Hindi-Urdu, we only see this variation with respect to the instrument$_{res}$ across the verbal inventory while the class of possible instrument$_{caus}$ is not constrained by the properties of the caused event.

This suggests that there exists an asymmetry between instrument$_{res}$ and instrument$_{caus}$, which is not captured by this second extension.

## 3.2    Motivation 2: Intermediate agents are agents, not instruments

In this section I provide support for the claim that the intermediate agent differs from instruments and not (passive) agents. For one, intermediate agents are able to control into *-kar* adjunct clauses both when overt (Clauss 2014) and when *implicit* while this is not available even to *overt* instrument *-se* phrases.

(17)    a.    kabir$_i$-ne   (mira$_j$-se) john$_k$-ko  [**PRO**$_{i/j/*k}$ cilla-kar]  jag-vaa-yaa
             Kabir-ERG Mira-INST John-DAT           scream-do wake-IC-PFV
             'Kabir$_i$ got John$_k$ woken up (by Mira$_j$) through his/her$_{i/j/*k}$ shouting.'
             (Based on Clauss 2014)

        b.    kabir$_i$-ne   kainchi$_j$-se   kapRa$_k$ [**PRO**$_{i/*j/*k}$ fisal-kar] cir-vaa-ya
             Kabir-ERG scissors-INST cloth            slip-do    tear-IC-PFV
             'On slipping, Kabir tore the cloth on the scissors.
             Unavailable: 'The scissors slipped and Kabir tore the cloth on them.'

Another domain where the intermediate agent patterns with agents is that of binding the possessive anaphor *apnaa*. This anaphor has been traditionally described to be subject oriented in Hindi-Urdu (see for instance Dayal 1994). However, as Srishti (2014) notes the intermediate agent is also a possible binder, as in (18-a). The passive counterpart of Srishti's example also allows for this binding possibility, as in (18-b).

(18)    a.    miinaa$_i$-ne miikuu$_j$-se **apnaa**$_{i/j}$ darwaazaa khul-vaa-yaa
             Mina-ERG Miku-INST SELF'S   door       open-IC-PFV
             'Mina made Miku open his/her door.'            (Srishti 2014)

        b.    miinaa$_i$-dwaaraa miikuu$_j$-se **apnaa**$_{i/j}$ darwaazaa khul-vaa-yaa  ga-yaa
             Mina-BY          Miku-INST SELF'S   door       open-IC-PFV go-PFV
             'Mina made Miku open his/her door.'

Finally, intermediate agents can bear the marker *dwaaraa* 'by' used for agents of regular passives instead of *-se*, and the use of this marker on instruments is very marked.

(19)    miiraa-ne *raam -dwaaraa*/-se **aarii ??-dwaaraa**/-se lakRii kat-vaa-yii
            Mira-ERG Ram -BY/INST     saw -BY/INST      wood cut-IC-PFV
            'Mira had the wood cut by Ram with a saw.'

Together, all of the evidence presented above suggests that the similar syntactic treatment of (passive) agents and the intermediate agent *-se* phrase has its merits.

## 3.3    The proposal

Given the structural and interpretive differences between direct and indirect causatives with respect to instrument *-se* phrases - (a) unaccusatives and their direct causatives license a single instrument *-se* phrase - instrument$_{res}$; (b) bieventive indirect causatives license an additional *-se* phrase - instrument$_{caus}$; (c) the range of possible instruments$_{res}$ is constrained strongly by the meaning of the verb root as expressed by the caused event - I propose an alternative unified account of *-se* phrases which takes these distinctions into consideration. Under my proposal the indirect causative has the structure in (20).

(20)
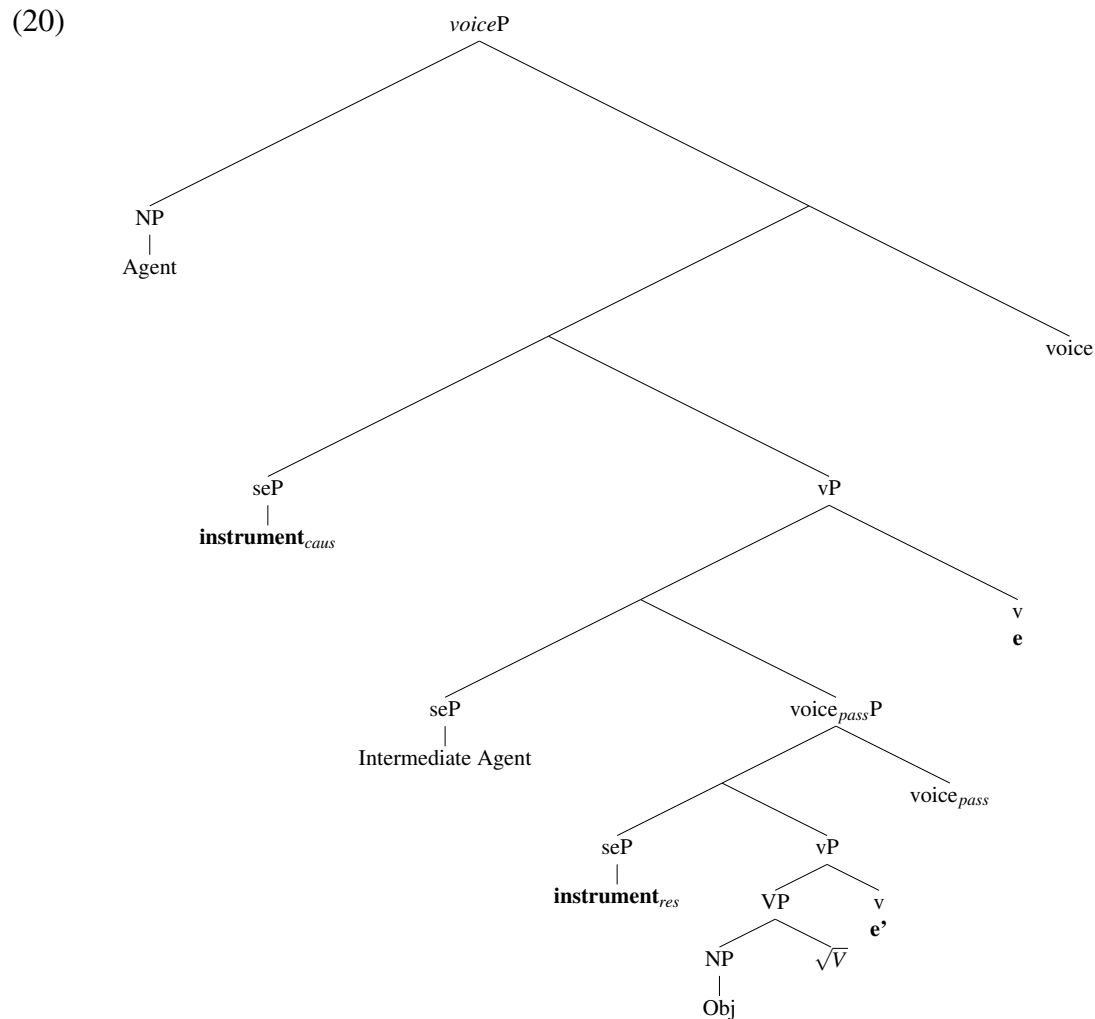


Here the (stative) verb root composes with the theme argument. This VP is selected by an event argument **e'** introducing *v* head. The intermediate agent *-se* phrase is merged in the specifier of the *passive voice* head which selects this vP and is interpreted as the agent of the embedded event as in Bhatt & Embick (2003). However, following the arguments presented in Srishti (2011) I assume that *voice* and *v* are not bundled (see Pylkkänen 2008). The embedding *v* introduces a second event argument **e** and selects for the voice$_{pass}$P.

The configuration of two event arguments which cannot be identified with one another is interpreted through the CAUSE relation standardly defined as in (21).

(21)    $[[\text{CAUSE}]] = \lambda f_{st} \lambda e_s \exists e'_s [CAUS(e, e') \& f(e')]$

With both the embedded and embedding *v* introducing event arguments into the semantics, instrument *-se* phrases get a uniform treatment since both instrument$_{res}$ and instrument$_{caus}$ are modifying *vPs* and are thereby interpreted as intersective event modifiers (as in Davidson 1967 and Parsons 1990). The interpretive differences between the two instruments - such that only the class of possible instruments$_{res}$ is determined independently by each predicate - follows from the structural asymmetry of the two *v* heads themselves and the consequent relativization of the interpretation of instruments to the different events.

## 4.    Implications for causer subjects

In this section we look at the 'subjects'[1] of direct and indirect causatives with the aim of highlighting how my account of instruments in causatives derives restrictions on possible candidates in this slot. Beginning with direct causatives, we can see that these predicates permit animate *agents*, as well as inanimate eventive or instrument *causers* . This is in line with cross-linguistically attested patterns of there being a range of argument types that can be subjects (see Fillmore 1968, Parsons 1990, Schäfer 2012 inter alia). Thus, in direct causatives, instruments can be introduced either in *-se* phrases, see *caabi* 'key' in (22-b), OR subject positions, see (22-a), with no observable restriction other than a single utterance being barred from having both an instrument subject and an instrument *-se* phrase simultaneously in line with the Role Exhaustion principle.

(22)    a.    [anu / jinn ke jaadu     / caabi]-ne     taalaa khol-aa
              anu  / djinn GEN magic / hammer-ERG lock   open.DC-PFV
              'Anu / the djinn's magic/ the key opened the lock.'

        b.    anu-ne     **caabi**-se  taalaa khol-aa
              John-ERG key-INST lock   open.DC-PFV
              'Anu unlocked the door with a key.'

In contrast, as first noted by Ramchand (2010), there seem to be some additional restrictions at play with respect to indirect causatives. In (23) *kettle* is not a suitable subject for the Indirect causative verb *ubal-vaa* 'cause to boil' even as it constitutes a licit subject for the Direct causative variant in the *boil* paradigm. This contrast may appear to be surprising given that other types of causers, for instance, eventive causers continue to be acceptable subjects in indirect causatives, (24).

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[1]Diagnostics for 'subjects' in Hindi-Urdu: (a) Participation in the nominative/ergative split; (b) Binding of subject oriented anaphoric possessives; and (c) Anti-subject orientation effects for pronominal possessives.

(23)  kettle-ne    paani (jaldi-jaldi)  [ubaal-aa      / *ubal-vaa-yaa]
      kettle-ERG water (quick-quick) boil-DC-PFV   boil-IC-PFV
      'The kettle boiled the water/ had the water boil quickly.'
      (based on Ramchand 2010)

(24)  paagalpan ke  daure-ne ravi-se    na jaane kya-kya    kar-vaa-yaa
      madness   GEN bout-ERG ravi-INST not know what-what do-IC-PFV
      'The bout of madness caused Ravi to do all sorts of things.'

Ramchand (2010) takes these empirical facts to suggest that inanimate and stative causers are systematically impossible as subjects of indirect causatives, and that in effect, the subject of a direct causative is *different* from the subject of the indirect causative, in that the former is a pure *initiator* while the latter must be an *undergoer-initiator*. However, there is reason to question this reading of the empirical observations given the additional data in (25) where we do find inanimate causers - *a glass of water* and *a lost key* - to be licit with indirect causatives.

(25)  a.  [ek  gilaas paani-ne]  kar-vaa-ya talaaq
          One glass   water-ERG do-IC-PFV divorce
          'One glass of water caused there to be a divorce.'
          Unavailable: 'A glass of water was the means of the divorce'
          (Article Headline, *Patrika* News, Peter Hook, p.c. via Rajesh Bhatt)

      b.  (khoyi hui)  caabii-ne karan-se    taalaa khul-vaa-yaa
          lost    be.PFV key-ERG  Karan-INST lock   open-IC-PFV
          'The (lost) key caused Karan to unlock the lock.'
          Unavailable: 'The key was the means of the unlocking.'

Based on the data in (25), animacy and stativity of the causer appear not to be key here. I argue that the unlicensed instrument subjects in indirect causatives has its basis in the specific properties of the indirect causative. Recall the discussion in §3.1 which highlighted that indirect causatives can license two distinct kinds of instruments - an instrument$_{res}$ and an instrument$_{caus}$. Re-examining (23), where *kettle* is clearly an instrument$_{res}$, would then suggest that the restriction observed here is an interpretive one.

    Furthermore, not all instrument subjects are banned in indirect causatives. Comparing (12) with (26) shows that the distributions of different subject types are better stated as in (27). The emergent generalization would then be of the form in (28).

(26)  zamindar-ki  dhamkii-ne Dakait-se    mashaal-se ghar  jal-vaa-yaa
      Landlord-GEN threat-ERG   bandit-INST torch-INST house burn-IC-PFV
      'The landlord's threat caused the bandit to burn the house with a torch.'

(27)    *Subjects of Causatives*

|                        | Direct causative | Indirect causative |
|------------------------|:----------------:|:------------------:|
| Animate agent          | ✓                | ✓                  |
| Eventive causer        | ✓                | ✓                  |
| Instrument$_{res}$     | ✓                | ×                  |
| Instrument$_{caus}$    | -                | ✓                  |

(28)    Instruments$_{res}$ can be subjects of direct causatives but not an indirect causatives.
Instrument$_{caus}$ can be subjects of indirect causatives.

Thus, rather than distinguishing between the basic properties of subjects themselves, I argue that the interpretation of an instrument subject is relativized to the event structure of the predicate in question. Given the bi-eventive analysis of indirect causatives and the semantic operation of existential closure, (29), the caused event is not available for modification once the CAUSE relation comes into play.

(29)    Existential Closure (EC) saturates open argument positions by existentially quantifying over them.EC is the default mechanism for saturating event argument positions. (Davidson 1967 *via* Chung & Ladusaw 2004)

This means that all of the participant roles of the caused event - intermediate agent, instrument, affected object - are existentially closed if they remain unsaturated once the causation operation is applied and therefore cannot be modified further. Thus, any element merged into the structure at this stage will be evaluated only with respect to the causing event **e** and not the caused event **e'**. This allows us to account for the interpretive restriction exemplified in (25-b), where the only well-formed interpretation is one where *key* is understood to be modifying the causing event **e** i.e. as a causer of **e**, and interpreting the *key* to be modifying the caused event, that is the actual unlocking, is illicit.

## 5.    Conclusion

This paper focused on two differences between *direct* and *indirect* causatives in Hindi-Urdu regarding their instruments. On examining the domain of *-se* phrases we saw that in addition to licensing an intermediate agent, which is the traditional identifier of indirect causation in the language, the indirect causative also allows an additional instrument *-se* phrase. This is in contrast to the unaccusative and the direct causative which are lacking in this regard. The availability of the instrument$_{caus}$ was argued to be an indicator of the bi-eventiveness of indirect causatives. In addition to *-se* phrases this paper also examined the restrictions on the 'subject' slot of direct and indirect causatives. It was observed that the direct causative permits its subject slot to be occupied by an instrument$_{res}$, while the indirect causative permits its subject slot to be occupied by an instrument$_{caus}$ but not an instrument that would ordinarily be construed to be modifying the result state. Thus, it was concluded that the complexity of indirect causation, in particular its bi-eventiveness,

predicts the distribution of causer subjects and additional differentiation of the agents of direct and indirect causatives is not required.

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