Ellipsis in *Wh*-in-Situ Languages: Deriving Apparent Sluicing in Hindi-Urdu and Uzbek

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Wh-in-situ languages have a special role to play in investigating the relation between the *wh*-syntax of a language and the availability of sluicing-like constructions (SLCs). Van Craenenbroeck and Lipták (2013) propose that whether a language exhibits genuine sluicing should be predictable from the syntax of the language's *wh*-questions in nonelliptical contexts. We refine this formulation by considering SLCs in two contrasting *wh*-in-situ languages, Hindi-Urdu and Uzbek. Hindi-Urdu *wh*-movement occurs in the narrow syntax, but is obscured by PF processes; in Uzbek, no narrow syntax dependency is involved. Correspondingly, only Hindi-Urdu SLCs involve genuine sluicing; Uzbek SLCs are derived from reduced copular clauses. Thus, narrow syntax *wh*-movement may be obscured by lower-copy pronunciation in nonelliptical environments; the head of the *wh*-chain is then pronounced in combination with ellipsis, but not otherwise. Here, we demonstrate that the availability of genuine sluicing in Hindi-Urdu and Uzbek corresponds directly to the specific properties of their *wh*-systems, but not necessarily to the surface position of *wh*-material in a typical constituent question.

Keywords: wh-in-situ, Hindi-Urdu, Uzbek, sluicing, ellipsis, PF, copular clauses, *wh*-movement

1 Introduction

Since Ross's (1969) original exploration of sluicing ellipsis constructions (1), a growing collection of crosslinguistic studies has demonstrated that languages leverage diverse strategies to arrive at similar surface strings.

(1) Hasan saw someone, but I don't know who(m).

The core question we address in this article is whether the availability of such strings, and their diverse semantic-syntactic properties, can be predicted from observations about the *wh*-syntax of a particular language.

Ross's original analysis, reinvented in Merchant 2001 and subsequent work, holds that the syntax of (1) is the syntax of *wh*-movement, in conjunction with ellipsis of a clause-sized constituent (TP). Following Paul and Potsdam (2012), among others, we label surface strings resembling (1) with the descriptive term *sluicing-like constructions* (SLCs), reserving the term *genuine sluicing* for strings that demonstrably arise from *wh*-movement (or another Ā-movement to the left periphery) in combination with clausal ellipsis. The Ross/Merchant analysis makes a broad typological prediction: it should be possible to explain the properties of an SLC in a given language by appealing to two independent properties of the language: first, the syntax of its *wh*-system, and second, the mechanisms it has at its disposal to achieve nonpronunciation, ellipsis among them. In other words, as Van Craenenbroeck and Lipták (2013) put it, the availability of genuine sluicing in a given language should be predictable on the basis of other syntactic conditions that hold in that language, and in particular on the basis of its *wh*-syntax.

One consequence of this prediction is that there should be numerous types of movement that allow a *wh*-phrase to escape the elided constituent across languages and, correspondingly, some crosslinguistic diversity when it comes to the semantic-syntactic properties of SLCs. Sure enough, there is good evidence that Russian (Grebenyova 2006, 2007) and Romanian (Hoyt and Teodorescu 2004, 2012) SLCs can be derived by discourse-motivated movement (rather than *wh*-movement) to the left periphery and clausal ellipsis. Van Craenenbroeck and Lipták (2006) have shown that Hungarian relativization yields SLCs, and Malagasy SLCs have been argued to arise from pseudoclefts in which the *wh*-phrase pivot is found at the left periphery as part of the predicate fronting that derives VOS orders in Austronesian (Potsdam 2007, Paul and Potsdam 2012). What most of these analyses have in common is that the *wh*-remnant escapes a clause that itself undergoes elision. Clefts and copular clauses have often been taken to be the underlying source of SLCs as well—for example, in Turkish (Kizu 1997, 2000, Hankamer 2010), Japanese (Shimoyama 1995, Kuwabara 1996, Nishiyama, Whitman, and Yi 1996, Merchant 1998, Fukaya and Hoji 1999, Hiraiwa and Ishihara 2002), Chinese (Wang Adams and Tomioka 2012), English (Van Craenenbroeck 2008, 2010a), Polish (Szczegielniak 2008), Spanish, and Brazilian Portuguese (Rodrigues, Nevins, and Vicente 2009) (see also Barros 2014). Some of these analyses, too, posit a phrasal movement to the left periphery followed by ellipsis; others derive the SLC by appealing to independently motivated mechanisms for nonpronunciation (e.g., *pro* drop, copula drop).

Wh-in-situ languages have a special role to play in this discussion, for two reasons. First, the above prediction is one way in which the Ross/Merchant theory of genuine sluicing differs from its competitors. Accounts of sluicing fall broadly into two families: those that rely on reference to an internal syntactic structure for the ellipsis site at some point in the derivation (Ross 1969, Williams 1977, Fiengo and May 1994, Chung, Ladusaw, and McCloskey 1995, Lappin 1999, Merchant 2001), and those that accord no internal syntactic structure to the ellipsis

site, resolving its meaning instead by pragmatic inference (Ginzburg and Sag 2000, Culicover and Jackendoff 2005). This debate is reflected in the rich literature surrounding the presence or absence of various types of connectivity effects in SLCs, including but not limited to case-matching and preposition-stranding effects (see Merchant 2016 for a thorough summary). Analysis of SLCs in *wh*-in-situ languages offers another way of distinguishing between these two schools of thought. Implicit in accounts that involve some ''syntax in the silence'' (Merchant 2001) is that the syntax of the elided constituent in genuine sluicing involves *wh*-movement, or, more broadly, that there is some way for the remnant to escape the ellipsis site to the periphery of the clause. This need not be true for pragmatic inference accounts (Ginzburg and Sag 2000, Culicover and Jackendoff 2005) because under these accounts, genuine sluicing is not predicated on the existence of underlying syntactic structure in the sluice, nor on the ability of the remnant phrase to undergo syntactic movement. To the extent that the availability or unavailability of genuine sluicing can be directly linked to the characteristics of *wh*-syntax in a *wh*-in-situ language, the ''syntax in the silence'' approaches are vindicated.

Second, investigating the interaction of sluicing with *wh*-in-situ languages allows us to get a better handle on the exact nature of the purported correspondence between the *wh*-syntax of a language and the availability of genuine sluicing in that language. The most recent and clear formulation of this generalization is found in Van Craenenbroeck and Lipták 2013:511.

(2) *The* wh-*/sluicing correlation*
The syntactic features that the [E]-feature has to check in a language L are identical to the strong features a *wh*-phrase has to check in a regular constituent question in L.

To put this another way, it should be the surface position of *wh*-material in a typical constituent question that serves as the input to sluicing. As the discussion just below demonstrates, *wh*-in-situ languages have a crucial role to play in testing and ultimately refining this formulation.

In this article, we explore the typological consequences of this prediction for two *wh*-in-situ languages, Hindi-Urdu (Indo-Iranian) and Uzbek (Turkic). Both languages exhibit SLC patterns, though they are considered *wh*-in-situ.

(3) *Hindi-Urdu*
Aisha-ne ek ciiz   khariid-ii par mujhe   nahiiN pa-taa   kyaa.
Aisha-ERG a thing buy-PFV.F but 1SG.OBL NEG   know-HAB.M what
'Aisha bought something, but I don't know what.'

(4) *Uzbek*
Siz kim-ga-dir   pul   ber-di-ngiz, lekin kim(-ga)-lig-i-ni
you some-DAT-one money give-PST-2SG but   who(-DAT)-COMP-3SG.POSS-ACC
bil-ma-y-man.
know-NEG-PRS-1SG
'You gave money to someone, but I don't know (to) who.'

Proceeding from the Ross/Merchant analysis, the formulation in (2) would predict that genuine sluicing should never be available in these languages, since at the surface, *wh*-material in a typical

constituent question will not be in the right position to be stranded under genuine sluicing. Here, we will demonstrate that this view is too simplistic to capture the full range of sluicing behavior in *wh*-in-situ languages, not least because scope taking and *wh*-phrase island sensitivity in these languages vary significantly (see Cheng 2009 for a useful review), with a corresponding diversity in analyses, from LF movement accounts (Aoun, Hornstein, and Sportiche 1981, Huang 1982), to unselective binding accounts (Pesetsky 1987), to accounts in which a syntactic movement is obscured by other movements (Simpson and Bhattacharya 2003), among others. We argue—on the basis of comparative evidence from the languages' clefting strategies, case connectivity, verbal agreement, and subtle meaning differences—that despite superficial similarities, (3) and (4) are derived from cardinally different underlying structures, and that only Hindi-Urdu (3) is an instance of genuine sluicing (in direct violation of the prediction made by (2)).

What we demonstrate here is that the availability of genuine sluicing in Hindi-Urdu and Uzbek corresponds directly to the specific properties of their *wh*-systems, which contrast sharply and consistently with respect to a range of syntactic tests, including scope taking and island sensitivity. We argue that this systematic clustering of divergent properties points to at least two distinct derivations for SLCs in Hindi-Urdu and Uzbek. In Hindi-Urdu, *wh*-movement takes place in the narrow syntax but is disguised by PF operations, while in Uzbek, the interaction between *wh*-material and interrogative heads must take place without movement in the narrow syntax. Correspondingly, the contrasting properties of Hindi-Urdu and Uzbek SLCs can best be understood as resulting from these distinct derivations: Hindi-Urdu SLCs instantiate genuine sluicing, fed by *wh*-movement with exceptional PF (but not syntactic) properties, while Uzbek SLCs are instances of reduced copular clauses. These findings fit with existing typological observations about Turkic and Indo-Iranian languages, which indicate that the latter language family implements genuine sluicing (Toosarvandani 2008, Manetta 2011, Bhattacharya and Simpson 2012), while the former implements reduced copular clauses (Kizu 1997, Hankamer 2010, Gribanova 2013).

We further suggest that Hindi-Urdu and Uzbek represent opposite ends of a spectrum of *wh*-in-situ languages defined by the presence or absence of a narrow syntax *wh*-dependency. By establishing a clear analysis for the extremes on this spectrum, we aim to set the stage for further inquiry into the more subtle variation in between. With a particular focus on sluicing in *wh*-in-situ languages, we claim that the availability of genuine sluicing depends on the availability of a long-distance *wh*-dependency that is established in the narrow syntax. This narrow syntax dependency may be obscured by PF requirements of the particular language (in this case, Hindi-Urdu), resulting in the appearance of *wh*-in-situ properties.

The article is structured as follows. Section 2 details the behavior of Uzbek SLCs like (4), arguing that these have properties that can only be associated with copular clauses and demonstrating how such strings can be derived from copular clauses. Section 3 looks at the analogous Hindi-Urdu constructions, arguing that despite surface appearances, these instantiate genuine sluicing. We propose an account in which Hindi-Urdu *wh*-dependencies are formed via movement in the narrow syntax, with additional PF restrictions that dictate which copy in each dependency is pronounced. In section 4, we broaden the discussion by comparing the syntactic properties of the two languages' *wh*-systems and demonstrate that Hindi-Urdu, but not Uzbek, exhibits evidence

of narrow syntax *wh*-dependencies. Uzbek is best analyzed as a language that makes use of unselective binding and exhibits the corresponding lack of island sensitivities. Section 5 concludes by discussing how the comparative analytical strategy pursued here may be extended to other *wh*-in-situ languages.

2 Putative Sluicing in Uzbek

This section discusses the properties of Uzbek SLCs like the one in (4), drawing largely on discussion from Gribanova 2013. Uzbek makes for a particularly useful case study because of its genetic relatedness to Turkish and its typological similarity to Japanese. Both are *wh*-in-situ languages the correct analysis of whose SLCs has been the topic of major debate. For genuine sluicing analyses, see Takahashi 1994 for Japanese and Ince 2006, 2012 for Turkish; for reduced-cleft analyses, see Shimoyama 1995, Kuwabara 1996, Nishiyama, Whitman, and Yi 1996, Kizu 1997, 2000, Merchant 1998, Fukaya and Hoji 1999, Hiraiwa and Ishihara 2002; and for claims that both structures are instantiated in Japanese, see Iseda 2007 and Hasegawa 2008.

What we demonstrate here for the Uzbek case is that despite some surface similarities to genuine sluicing, Uzbek SLCs are better accounted for via a reduced-copular-clause analysis. That is, they are derived, via independently available processes of omission, from copular clauses of the type in (5).

> (5) Siz kim-ga-dir   pul   ber-a-siz,   lekin (u)   kim e-kan-lig-i-ni
>   you some-DAT-one money give-PRS-2SG but   (3SG) who COP-KAN-COMP-3SG.POSS-ACC
>   bil-ma-y-man.
>   know-NEG-PRS-1SG
>   'You give money to someone, but I don't know who it is.'

One surface fact that makes this contention initially dubious is that the remnant of the Uzbek reduced copular clause may exhibit case connectivity.

> (6) Siz kim-ga-dir   pul   ber-a-siz,   lekin kim(**-ga**)-lig-i-ni
>   you some-DAT-one money give-PRS-2SG but   who(-DAT)-COMP-3SG.POSS-ACC
>   bil-ma-y-man.
>   know-NEG-PRS-1SG
>   'You give money to someone, but I don't know who.'

> (7) Siz kim-dan-dir   pul   ol-a-siz,   lekin kim(**-dan**)-lig-i-ni
>   you some-ABL-one money take-PRS-2SG but   who(-ABL)-COMP-3SG.POSS-ACC
>   bil-ma-y-man.
>   know-NEG-PRS-1SG
>   'You take money from someone, but I don't know from whom.'

Ross's (1969) original observation was that in sluicing structures, the remnant *wh*-phrase bears the case marking that it would bear in the corresponding nonelliptical *wh*-question. On the other hand, the *wh*-pivot in copular clauses and clefts generally appears in whatever the default case is for a given language (Merchant 2001, Lasnik 2007, Van Craenenbroeck 2010a). For

instance, Merchant (2001) demonstrates that Greek genuine sluicing requires case connectivity, while a copular clause would require a nominative pivot. Given this reasoning and the examples in (6)–(7), one might surmise that a genuine sluicing option is available in Uzbek. In fact, similar patterns and reasoning led Ince (2006) to hypothesize that Turkish SLCs should be analyzed as genuine sluicing, and a similar line of reasoning can be found in the literature on Japanese (Takahashi 1994, Iseda 2007).

In the discussion that follows, we will draw on evidence presented in Gribanova 2013 to demonstrate that Uzbek SLCs like the ones in (6)–(7) are not in fact instances of genuine sluicing, despite the appearance of case connectivity. Instead, these are copular clauses that permit the appearance of a case marker in their pivots. The omission of the subject of the copular clause and the copula, which yields the sluicing-like appearance of the construction, results from independent processes in the language (copula omission and *pro* drop). For reasons that will become clear later in this section, we focus in this investigation primarily on SLCs inside nominalized embedded clauses.

2.1 Arguments in Favor of a Reduced-Copular-Clause Analysis in Uzbek

A number of facts about the Uzbek SLC suggest a copular source.[1] The first argument to be discussed here comes from the observation that the construction in question can cooccur with a copula in the nominalized, embedded clause.

(8) Siz kim-ga-dir   pul   ber-a-siz,   lekin kim(-ga)   e-kan-lig-i-ni
   you some-DAT-one money give-PRS-2SG but   who(-DAT) COP-KAN-COMP-3SG.POSS-ACC
   bil-ma-y-man.
   know-NEG-PRS-1SG
   'You give money to someone, but I don't know (to) who (it is).'

(9) Siz kim-dan-dir   pul   ol-a-siz,   lekin kim(-dan) e-kan-lig-i-ni
   you some-ABL-one money take-PRS-2SG but   who(-ABL) COP-KAN-COMP-3SG.POSS-ACC
   bil-ma-y-man.
   know-NEG-PRS-1SG
   'You take money from someone, but I don't know (from) who (it is).'

Copulas in Uzbek require a host (Kononov 1960, Sjoberg 1963) and thus will appear inside embedded clauses attached to the host *-kan*, whose identity we will not be concerned with here. If the source of an SLC is a copular clause with a *wh*-phrase as its pivot, as this evidence suggests, then we also expect that the subject of this copular clause should be pronounceable; this is borne out.

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[1] For reasons of space, we cite only some of the arguments presented in Gribanova 2013. The empirical situation is actually more complicated than the discussion here reflects, though this does not affect the logic of our argument. There are several possible copular sources for the Uzbek SLC, some of them purely copular and some of them clefts. For a more complete picture, see Gribanova 2013.

(10) Siz kim-ga-dir   pul   ber-a-siz,   lekin u-ning   kim(-ga)
     you some-DAT-one money give-PRS-2SG but   3SG-GEN who(-DAT)
     e-kan-lig-i-ni   bil-ma-y-man.
     COP-KAN-COMP-3SG.POSS-ACC know-NEG-PRS-1SG
     'You give money to someone, but I don't know (to) who (it (the money) is).'

(11) Siz kim-dan-dir   pul   ol-a-siz,   lekin u-ning   kim(-dan)
     you some-ABL-one money take-PRS-2SG but   3SG-GEN who(-ABL)
     e-kan-lig-i-ni   bil-ma-y-man.
     COP-KAN-COMP-3SG.POSS-ACC know-NEG-PRS-1SG
     'You take money from someone, but I don't know (from) who (it (the money) is).'

A second argument for a copular source, and against a genuine sluicing analysis, comes from the possessive agreement suffix that survives the omission process in nominalized embedded clauses. As a marker of embedded subject agreement, this morpheme provides crucial information about the features of the grammatical subject of the embedded clause, even when that subject is not pronounced.[2]

(12) a. Kim-ni-dir   ko'r-di-ngiz, lekin (**u**-ning) kim-lig-**i**-ni
         some-ACC-one see-PST-2SG but   (**3SG**-GEN) who-COMP-**3SG.POSS**-ACC
         bil-ma-y-man.
         know-NEG-PRS-1SG
         'You saw someone, but I don't know who (he/she/it is).'
    b. *Kim-ni-dir   ko'r-di-ngiz, lekin kim-lig-**ingiz**-ni   bil-ma-y-man.
         some-ACC-one see-PST-2SG but   who-COMP-**2SG.POSS**-ACC know-NEG-PRS-1SG

(13) a. Siz kim-ga-dir   pul   ber-di-ngiz, lekin kim-ga-lig-**i**-ni
         you some-DAT-one money give-PST-2SG but   who-DAT-COMP-**3SG.POSS**-ACC
         bil-ma-y-man.
         know-NEG-PRS-1SG
         'You gave money to someone, but I don't know to whom (it was).'
    b. *Siz kim-ga-dir   pul   ber-di-ngiz, lekin kim-ga-lig-**ingiz**-ni
         you some-DAT-one money give-PST-2SG but   who-DAT-COMP-**2SG.POSS**-ACC
         bil-ma-y-man.
         know-NEG-PRS-1SG
    c. Siz kim-ga-dir   pul   ber-di-ngiz, lekin siz kim-ga   pul
         you some-DAT-one money give-PST-2SG but   you who-DAT money
         ber-gan-lig-**ingiz**-ni   bil-ma-y-man.
         give-PST.PTCP-COMP-**2SG.POSS**-ACC know-NEG-PRS-1SG
         'You gave money to someone, but I don't know to whom you gave money.'

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[2] See Gribanova 2013 for more details about different types of copular clauses and, correspondingly, restrictions on the type of subject (and subject agreement) permitted in the different types.

If the underlying source of the SLC in (12a)/(13a) were a full clause, as in genuine sluicing, then we would expect (12b)/(13b) to be grammatical, since the agreement suffix there expresses second person singular features, consistent with the second person singular features of the subject in the antecedent of the putatively sluiced clause. (13c), which embeds a nonreduced full sentence identical to the matrix clause, is provided for comparison with (13b). Crucially, as (12b)/(13b) show, agreement with the subject of the matrix clause (and the putative embedded subject, under a genuine sluicing analysis) is not acceptable. Instead, the agreement marker expresses third person singular features,[3] consistent with the subject's being a third person pronoun that matches the pivot in either an equative (12) or a predicational (13) copular clause.[4]

   A third argument comes from the observation that Uzbek SLCs may be uttered without a linguistic antecedent, suggesting that these are instances of deep (rather than surface) anaphora and are therefore not amenable to a true ellipsis account.[5]

(14) a. [Showing someone a mysterious object.]
        Nima-lig-i-ni   bil-ma-y-man.
        what-COMP-3SG.POSS-ACC know-NEG-PRS-1SG
        'I don't know what (that is).'
     b. [Showing someone a present.]
        Kim(-ga)-lig-i-ni   bil-ma-y-man.
        who(-DAT)-COMP-3SG.POSS-ACC know-NEG-PRS-1SG
        'I don't know who that's for.'
        Lit. 'I don't know to whom (that is).'

   A final argument comes from correlations in variation between a specific set of SLCs and their copular sources. Gribanova (2013) demonstrates that there is a pattern of variation in whether Uzbek speakers allow accusative pivots in copular clefts, which may also be reduced to generate SLCs. If a speaker accepts the accusative pivot in (15a), that same speaker will accept an SLC with an accusative remnant (15b). If a speaker does not accept (15a), that speaker will not accept (15b) either (the diamond notation reflects variability in acceptability among speakers).

(15) a. ◇Farhod kim-ni-dir   ko'r-di,   lekin kim-ni   (e-kan)-lig-i-ni
        Farhod some-ACC-one see-PST.3SG but   who-ACC (COP-KAN)-COMP-3SG.POSS-ACC
        bil-ma-y-man.
        know-NEG-PRS-1SG
        'Farhod saw someone, but I don't know who (it is).'

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[3] A reviewer points out that complementizer agreement in Bavarian and southern Dutch dialects goes missing under genuine sluicing (Lobeck 1995), so missing agreement is not in itself a reason to posit the lack of a sluicing operation. As the reviewer notes, the important point about Uzbek is that agreement in (12a)/(13a) is retained, but is invariably third person singular.

[4] See Gribanova 2013 for evidence that these are in fact predicational and equative copular clauses. Nothing in the present discussion hinges on this determination.

[5] See Schachter 1977, Pullum 2000, and Merchant 2004 for discussions on the reliability of this diagnostic.

b.   A: Farhod kim-ni-dir   ko'r-di.
         Farhod some-ACC-one see-PST.3SG
         'Farhod saw someone.'
 ◇B: Siz-ni   (e-kan)-lig-i-ni   bil-a-man.
         you-ACC (COP-KAN)-COMP-3SG.POSS-ACC know-PRS-1SG
         'I know that (it is) you.'

A genuine sluicing analysis fails to account for this pattern of variation, since the variation in the SLC is linked directly to a copular source.

One other note is due here regarding whether the reduced-copular-clause strategy is limited to embedded and nominalized contexts, with genuine sluicing available elsewhere.[6] This is an important question since, for reasons we will elaborate in section 4, the perspective on *wh*-in-situ languages and sluicing we adopt here would predict that Uzbek should not make use of the genuine sluicing strategy in any grammatical context. More detailed investigation is in order here, but the preliminary evidence suggests that Uzbek matrix clauses behave just like their nominalized embedded counterparts with respect to SLCs. Preliminary evidence, based on a more limited survey, suggests that the same pattern of variation discussed just above exists for matrix clauses as well: speakers accept the accusative remnant in an SLC (16) only if they also accept an accusative pivot in a cleft construction (15a).

(16)   A: Farhod kim-ni-dir   ko'r-di.
            Farhod some-ACC-one see-PST.3SG
            'Farhod saw someone.'
   ◇B: Kim-ni?
            who-ACC
            'Who?'

We take this preliminary evidence to indicate that a genuine sluicing analysis could not hold in other clausal contexts, although the strongest evidence happens to come from nominalized embedded clauses.

Taken together, these and other observations in Gribanova 2013 suggest that the structure underlying SLCs is a copular clause, rather than a canonical clause with a full verb. And because the parts of this copular clause may be optionally pronounced independently of each other, it also appears that the omission mechanism by which we arrive at the SLC is not ellipsis.

2.2 Deriving Sluicing-Like Strings from Reduced Copular Clauses

A number of questions arise at this point. First, what is the nature of the copular clause, and how do its properties connect to the observable properties of the SLC? It is particularly important to understand the mechanism by which case connectivity arises on the *wh*-remnant of the SLC, since

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[6] Our thanks to a reviewer for pointing this out.

this is what initially suggests a genuine sluicing analysis. Second, by what process are the subject of this copular clause and its copula omitted? Whatever this process is, the approach to SLCs adopted here leads us to expect that they should be attested in the language independently of this particular construction.

The examples discussed here involve two types of copular clauses: *equative* and *predicational*.[7] The equative copular clauses (17) establish the identity of an individual by matching that individual (in subject position) with the pivot. The predicational copular clauses (18) involve some property being predicated of an individual in subject position.

(17) *Equative copular clause*
    a. Biz siz-dan   pul   ol-di-k,   lekin (biz-ning) kim
        we you-ABL money receive-PST-1PL but (we-GEN) who
        (e-kan)-lig-imiz-ni   bil-ma-y-siz.
        (COP-PST.PTCP)-COMP-1PL.POSS-ACC know-NEG-PRS-2SG
        'We took money from you, but you don't know who (we are).'
    b. U-lar kim-dir   bilan gaplash-a-di-lar, lekin (u-ning)   kim
        3-PL some-one with talk-PRS-3-PL   but (3SG-GEN) who
        (e-kan)-lig-i-ni   bil-ma-y-di-lar.
        (COP-PST.PTCP)-COMP-3SG.POSS-ACC know-NEG-PRS-3-PL
        'They speak to someone, but they don't know who (he/she is).'

(18) *Predicational reduced copular clause*
    a. U-lar kim-ga-dir   pul   ber-ar-lar, lekin (u-ning) kim-ga
        3-PL some-DAT-one money give-HAB-PL but (3SG-GEN) who-DAT
        (e-kan)-lig-i-ni   bil-ma-y-di-lar.
        (COP-KAN)-COMP-3SG.POSS-ACC know-NEG-PRS-3-PL
        'They were giving money to someone, but they don't know to/for whom it (the money) is.'
    b. Siz yo'qolib ket-di-ngiz, va (siz-ning) qayer-da   (e-kan)-lig-ingiz-ni
        you disappear-PST-2SG   and (you-GEN) where-LOC (COP-KAN)-COMP-2SG.POSS-ACC
        bil-ma-y-man.
        know-NEG-PRS-1SG
        'You disappeared, and I don't know where (you are).'

The primary difference between these two types is that the equative copular clause always involves a nominative nominal in its pivot position, whereas the predicational copular clause allows more variety, including adjunct pivots of various category types (18b) and case-marked nominal pivots

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[7] For brevity, we omit any further discussion of clefts; for more details about the connection between (reduced) clefts and the Uzbek SLC, see Gribanova 2013.

(18a). The case-marked remnants in the SLC construction are thus the direct result of the possibility of having a case-marked pivot in a predicational copular clause.

How, then, are these copular clauses reduced? There should be independent properties of Uzbek that allow us to understand the absence of the copula and subject in these constructions. Where the subject is concerned, the situation is fairly simple: subjects in Uzbek are routinely dropped because of *pro* drop. With respect to the copula, the situation is less simple. The copula is historically defective (Sjoberg 1963) and is not pronounced in the present tense.

(19) a. Men O'zbekiston-dan(-*e)-man.
        I   Uzbekistan-ABL(-*COP)-1SG
        'I'm from Uzbekistan.'
    b. Siz talaba(-*e)-siz.
        you student(-*COP)-2SG
        'You're a student.'
    c. U   och   (*e).
        he/she hungry (*COP)
        'He/She is hungry.'

Nonverbal predicates in the past tense demand the pronunciation of a copula (20), and it is optional on verbal predicates as part of the expression of pluperfect tense (21) (Kononov 1960).

(20) a. Men-ga qovoq   kerak   *(e)-di.
        me-DAT pumpkin needed *(COP)-PST.3SG
        'I needed a pumpkin.'
    b. Men o'qituvchi *(e)-di-m.
        I   teacher   *(COP)-PST-1SG
        'I was a teacher.'

(21) a. Men yoz-gan e-di-m.
        I   write-PRF COP-PST-1SG
        'I had written.'
    b. Men yoz-gan-di-m.
        I   write-PRF-PST-1SG
        'I had written.'

The variants in (21) are interchangeable and can be found both in formal speech and in writing (Kononov 1960).

As discussed in Gribanova 2013, nominalized clauses ban the expression of finite tense morphology. If the copula is expressed in nominalized clauses at all, it appears attached to the morpheme *-kan*, which in other contexts expresses past tense evidentiality. In embedded clauses, however, *-kan* is not associated with either past tense or evidentiality, and appears to serve exclusively as the dummy host of the copula. The copula is omissible along with *-kan* inside these clauses, as part of the more general pattern of its nonobligatoriness in environments that do not involve finite past tense.

2.3 Summary

In sum, we arrive at the following picture: copular clauses of at least two types serve as the underlying source of Uzbek SLCs, and the SLC is derived from these structures by the independently attested processes of copula omission and subject drop. We have also demonstrated, via data from possessor agreement in nominalized clauses, that the genuine sluicing account of SLCs is untenable for Uzbek. On a view like that of Merchant (2001), in which genuine sluicing depends on the availability of an operation that would front the *wh*-phrase to the periphery of the clause, none of this is surprising: Uzbek has no such productive strategy and therefore any construction that appears surface-similar to genuine sluicing should be amenable to an alternative explanation.

3 Genuine Sluicing in Hindi-Urdu

3.1 Sluicing in Hindi-Urdu

By contrast with the Uzbek facts, there is significant evidence that SLCs in Hindi-Urdu have the properties of genuine sluices found in more familiar languages. This section briefly presents the characteristics of sluicing in Hindi-Urdu; for a more detailed discussion, see Bhattacharya and Simpson 2012 and Manetta 2013.

Displaced *wh*-phrases in Hindi-Urdu must be marked with the case morphology they would have been assigned in situ.

(22) a. Siita-ne kis-ko/*kis-ne/*kaun   soc-aa   ki Ravii-ne ____ dekh-aa?
     Sita-ERG who-ACC/*who-ERG/*who.NOM think-PFV that Ravi-ERG   see-PFV
     'Who did Sita think that Ravi saw?'

    b. Tum kaun/*kis-ne/*kis-ko   soc-te ho ki ____ aay-egaa?
     2SG who.NOM/*who-ERG/*who-ACC think-HAB AUX that   come-FUT
     'Who do you think will come?'
     (Bhatt 2003:13)

Like Uzbek SLCs, Hindi-Urdu sluices exhibit full case connectivity; the *wh*-remnant must be marked with the same case it would exhibit in the nonelided structure.

(23) a. Main-ne yahaaN kisi-ko   dekh-aa, par mujhe nahiiN pa-taa
     1SG-ERG there   someone-ACC see-PFV but 1SG.OBL NEG know-HAB.M
     kis-ko/*kis-ne/*kaun.
     who-ACC/*who-ERG/*who.NOM
     'I saw someone there, but I don't know who.'

    b. Kisi-ne   Aisha-ko dekh-aa par mujhe nahiiN pa-taa
     someone-ERG Aisha-ACC see-PFV but 1SG.OBL NEG   know-HAB.M
     kis-ne/*kaun/*kis-ko.
     who-ERG/*who.NOM/*who-ACC
     'Someone saw Aisha, but I don't know who.'

However, unlike in Uzbek, there appears to be no potential copular clause source for SLCs that permits case-marked pivots. In Hindi-Urdu, as in many other languages, pivots of copular clauses must be nominative (unmarked) (Merchant 2001, Lasnik 2007, Van Craenenbroeck 2010a). Compare (24)–(25) with the Uzbek examples (18a–b).

(24) Us-ne   koi   gaaṛi fix kii,   magar mujhe   nahiiN pa-taa   vo
     3SG-ERG some car   fix do.PFV.F but   1SG.OBL NEG   know-HAB.M 3SG.NOM
     kaunsii/*kis-ko   thii.
     which.F/*which.one-ACC AUX.PST.F
     'He fixed some car, but I don't know which one it was.'

(25) Us-ne   kisi-ko   paise   diye, magar use   nahiiN pa-taa   vo
     3SG-ERG someone-DAT money gave but   3SG.DAT NEG   know-HAB.M 3SG.NOM
     kaun/*kis-ko   thaa.
     who.NOM/*who-DAT AUX.PST.M
     'He gave money to someone, but he doesn't know who it was.'

Similarly, Hindi-Urdu requires that postpositions be pied-piped in general (26a), and they must also be pied-piped in an SLC (26c).

(26) a. Kis- ke saath aap kaam kar-te   haiN?
         who- with   2PL work do-HAB AUX
         'Who do you work with?'
     b. *Kis aap ke saath kaam kar-te   haiN?
         who 2PL with   work do-HAB AUX
     c. Siita khaana pakaa rahii hai,   par Ali-ko   nahiiN pa-taa
         Sita food   cook PROG AUX.PRS but Ali-DAT NEG   know-HAB.M
         kis-ke liye:/*kis/*kaun.
         who-for/*who.OBL/*who.NOM
         'Sita is cooking but Ali doesn't know for whom.'

Though it has been claimed elsewhere (Manetta 2006) that sluicing in Hindi-Urdu could be the elision of a projection of vP, there is evidence to suggest that a larger (i.e., TP-sized) constituent is elided. The tense auxiliary *hai* (third person singular present tense form of *ho* 'be') (Bhatt 2005) is elided in the apparent sluicing structure (27).

(27) Ali koi   kitaab caah-taa   hai. Ham-eN nahiiN pa-taa   kaunsii ~~Ali~~ _____
     Ali some book   want-HAB.M AUX we-DAT NEG   know-HAB.M which.F Ali _____
     ~~caah-taa   hai.~~
     want-HAB.M AUX
     'Ali wants to buy a book. We don't know which one.'

It is widely assumed by researchers working on the language that the auxiliary *ho* is the overt realization of finite T (Mahajan 1990, Bhatt 2005, Kumar 2006; see also the argumentation in

Davison 2002, Kush 2011).[8] If apparent sluicing structures were indeed the elision of a constituent smaller than TP in Hindi-Urdu, we would expect the auxiliary to grammatically appear in (27).

Additional evidence that the elided constituent is TP-sized comes from the characteristics of negation and adverbials in sluicing structures. Though space does not permit us to review the data here, Manetta (2013) shows that both negation and TP-adjoined adverbials must be interpreted within the ellipsis site in a sluice and cannot felicitously remain alongside the *wh*-remnant.

Unlike those in Uzbek, apparent sluicing structures in Hindi-Urdu do not seem amenable to the reduced-copular-clause analysis. Hindi-Urdu does in fact have a limited cleft strategy, and as in English the pivot of the cleft can be a *wh*-phrase.

(28) Kyaa hai   jo mez kii daayii taraf hai.
     what be.PRS REL table GEN right side be.PRS
     'What is it that is to the right of the table?'

That said, Hindi-Urdu does not generally permit the copula to be dropped—an operation that we might expect to exist independently if apparent sluices in Hindi-Urdu were actually reduced copular clauses. As (29)–(30) show, the copula is required except in the presence of negation.

(29) Siita mer-ii dost   *(he/thii/hog-ii).
     Sita my-F friend.F *(COP.PRS.3SG/AUX.PST.F/COP.FUT-3SG.F)
     'Sita is/was/will be my friend.'

(30) Siita mer-ii dost   nahiiN (he).
     Sita my-F friend.F NEG   (COP.PRS.3SG)
     'Sita is not my friend.'

Given these facts, the basic operations necessary to form a reduced copular clause are not independently present in Hindi-Urdu.

In general, properties of SLCs and reduced copular clauses in Hindi-Urdu diverge. As shown earlier, SLCs require case matching, while copular clauses require nominative *wh*-pivots. Further, sluicing with adjunct *wh*-phrases is grammatical in Hindi-Urdu, but clefting is permitted only with argument pivots, and never with adjunct pivots. Compare (31) and (32).

(31) Us-ne gaṛi-ko   fix kiy-aa,   magar mujhe   nahiiN pa-taa   kese (*thaa).
     he-ERG car-ACC   fix do-PFV.M but   1SG.OBL NEG   know-HAB.M how (*AUX.PST.M)
     'He fixed the car, but I don't know how (*it was).' (e.g., with what tool)

(32) Us-ne koi gaṛi fix kii,   magar mujhe   nahiiN pa-taa   kaunsii
     he-ERG some car fix do.PFV.F but   1SG.OBL NEG   know-HAB.M which.F
     (thii).
     (AUX.PST.F)
     'He fixed some car, but I don't know which one (it was).'

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[8] But see Bhattacharya, Hanybabu, and Sahoo's (2000) antisymmetric account of auxiliaries as light verbs in Hindi-Urdu and other South Asian languages.

For clefts with *wh*-pivots, only an exhaustive reading is available (33a). On the other hand, sluices are compatible with a 'mention-some' nonexhaustive interpretation (33b).

(33) Aap-ko kisi   officer se   baat kar-nii caahiiye.
     2PL-ERG some officer with talk do-INF want
     'You should speak with an officer.'
     a. #Kaun hai, masail   ke tor   par?
        who is   example manner as
        'Who is it, for example?'
     b. Masail ke tor   par, kis-se?
        example manner as   who-INSTR
        'For example, who?'

The data in (29)–(33) suggest that SLCs in Hindi-Urdu are not derived from copular clauses or clefts of any kind, but instead have some other derivation.

Hankamer (2010) proposes that putative instances of sluicing in Turkish can be analyzed as stripping, an ellipsis in which all constituents but one of a second conjunct go missing (Hankamer 1979, Merchant 2003), as in the English example in (34).

(34) Amit left for Delhi, and Jamal too.

First, stripping is not possible in embedded contexts (unless the antecedent clause too is embedded) as in the English example in (35), but Hindi-Urdu SLCs can be embedded, as in (36).

(35) *Amit left for Delhi, and I know Jamal too.

(36) Amit kahiiN   gay-aa, aur mujhe lagtaa hai   ki maiN jaan-tii
     Amit somewhere go-PFV.M and 1SG.OBL strike AUX.3SG that 1SG know-HAB.F
     huN   kahaaN.
     AUX.1SG where
     'Amit went somewhere, and it seems to me that I know where.'

Second, the result of stripping cannot precede its antecedent (backward anaphora), but a sluice in Hindi-Urdu can.

(37) *Jamal too, and Amit left for Delhi.

(38) Mujhe   nahiiN pa-taa   kahaaN, lekin maiN jaan-tii   huN   ki Amit
     1SG.OBL NEG   know-HAB.M where   but   1SG know-HAB.F AUX.1SG that Amit
     kahiiN   gay-aa.
     somewhere go-PFV.M
     'I don't know where, but I know Amit went somewhere.'

Therefore, it seems that SLCs in Hindi-Urdu are not likely to be instances of stripping.

Toosarvandani (2008) claims that sluicing in Persian is fed by movement to a high Focus projection (above TP). There is evidence that this position is independently active in Persian for contrastive focus (Karimi 1999, 2003). However, previous work (Butt and King 1996, Kidwai

1999, 2000) suggests that the unmarked position for both interrogative and noninterrogative focus in Hindi-Urdu is low, immediately preceding the clause-final verb.

(39) Main-ne kamre meN [in-hii   ti:n   laṛkoN-ko] bheeja.
     1SG-ERG room to   [these-FOC three boys-ACC] sent
     'I sent these three boys to the room.'
     (Sharma 2003:69)

(40) KitabeN kal   maiN laaya   thaa.
     books   yesterday 1SG brought AUX.PST.M
     'I brought the books yesterday. (It is I who brought the books yesterday.)'
     (Kidwai 2000:116)

Since we have established above that apparent sluicing in Hindi-Urdu cannot be the ellipsis of a constituent smaller than TP, the movement that feeds sluicing is not movement for focus.

Could it instead be scrambling that feeds sluicing-like ellipsis in Hindi-Urdu?[9] Though the term *scrambling* can refer to various optional displacements in Hindi-Urdu with differing characteristics (Mahajan 1990, 1994, Kidwai 2000), we can show that the movement that precedes apparent sluicing is not scrambling either. The *wh*-word *kyaa* 'what' resists scrambling and in general is most felicitous in preverbal position ((41); see also Bhatt and Dayal 2014).[10]

(41) a. Aap abhi kyaa kar-te   haiN?
         2PL now what do-HAB.PL AUX.PL
         'Now what are you doing?'
     b. #Kyaa aap abhi karte haiN?

In SLCs, however, *kyaa* is a completely felicitous remnant *wh*-word.

(42) Aap abhi kuch   kar-te   haiN, par mujhe   nahiiN pa-taa   kyaa.
     2PL now something do-HAB.PL AUX.PL but 1SG.OBL NEG   know-HAB.M what
     'Now you are doing something, but I don't know what.'

If the movement feeding apparent sluicing were scrambling, we might expect *kyaa* to be a less acceptable *wh*-remnant, contrary to fact. While there certainly appears to be some kind of displacement from the base position in Hindi-Urdu SLCs, it is unlikely that this displacement is either movement to a focus position or scrambling.

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[9] Thanks to Veneeta Dayal and Rajesh Bhatt for bringing this question and these data to our attention. See also Merchant 2001 for similar speculation and rejection thereof.
[10] A reviewer asks whether *wh*-movement and scrambling are so easily distinguished in Hindi-Urdu, pointing out that *wh*-words (like weak indefinites) in many languages resist scrambling. In general, this is not the case in Hindi-Urdu. While the unmarked position for interrogative focus is the preverbal position, it is also possible for *wh*-words to scramble elsewhere for information structure purposes (as in example (25)) (Mahajan 1990, Kidwai 2000). The point made here is restricted to the minimal *wh*-word *kyaa*. Whatever permits *wh*-words to scramble generally in Hindi-Urdu does not permit *kyaa* to do so, and yet *kyaa* makes a natural *wh*-remnant in a sluice.

The data in this section collectively suggest that SLCs in Hindi-Urdu feature a displaced *wh*-remnant at the clause edge and involve elision of a clause-sized constituent. The simplest conclusion is that apparent sluicing structures in Hindi-Urdu are just that: sluicing structures. But there must be something exceptional about them, because there is no (visible) regular process of *wh*-movement to the clause edge in the language. In what follows, we argue that sentences like (3) do indeed feature genuine sluicing, and that what is exceptional in their derivation is the copy of the displaced *wh*-element that is pronounced.

3.2 Top-Copy Sluicing in Hindi-Urdu

We are now presented with a puzzle. Hindi-Urdu behaves as though it is a language with genuine sluicing fed by *wh*-movement to the left edge, but under normal circumstances *wh*-material is not found on the left periphery. One way of resolving this might be to claim that just in this instance (in sluicing structures) an exceptional *wh*-movement takes place in the narrow syntax to the left edge (Malhotra 2009, Bhattacharya and Simpson 2012). For instance, we might claim that the C head that possesses the [E]-feature (marking its TP complement for nonpronunciation as in Merchant 2001) also happens to necessarily be a C head with the EPP feature, though there is no natural explanation for this fact. We will also show in section 4 that this approach would have nothing to say about other facts in Hindi-Urdu which indicate that *wh*-movement occurs in the narrow syntax more generally.

Here, we will pursue an alternative account in which sluicing is an exceptional instance of pronunciation of the top copy in a *wh*-movement chain. A copy theory approach to Hindi-Urdu provides us with the tools to not only explain the properties of sluicing in the language, but also account for a wider range of facts. Under the copy theory of movement (Chomsky 1993), movement is characterized as a copy operation, in which the displaced element is instantiated by multiple instances in discontinuous positions. A productive line of research explores the use of PF constraints in determining which copy or copies are ultimately pronounced (e.g., Pesetsky 1989, Fanselow and Ćavar 2001, Bošković 2002, Nunes 2004, Bošković and Nunes 2007, Van Craenenbroeck and Lipták 2013). The intuition we seek to capture is that what is exceptional in a sluicing structure in Hindi-Urdu is the copy in the chain that is pronounced—that is, the exceptionality resides at PF, driven by the process of ellipsis itself, and not in the narrow syntax (see also the suggestion in Merchant 2001).

In what follows, we adapt the PF-based account of copy realization found in Richards 1997, where the following restrictions on well-formed PF objects are proposed:

(43) a. PF must receive unambiguous instructions concerning which copy in a chain to pronounce.
  b. A strong feature requires that PF pronounce the copy in the derivation that has checked that feature.

On this view, the configurations in (44) constitute well-formed PF objects (where boldface indicates the position of pronunciation), while the configuration in (45) does not.

(44) a. [**strong**]   X

   b. [**strong**]   [weak]   X

   c. **X**

(45) *[**weak**]   X

The extension of this account to *wh*-movement chains in Hindi-Urdu is relatively straightforward once we consider movement chains in which it is the intermediate copy that is flagged for pronunciation, while the highest copy marks the position of interpretation. For the sake of consistency, we will retain the *strong/weak* terminology (see Van Craenenbroeck 2010b:258n6 for the suggestion that the overt/covert asymmetry can be formulated in terms of feature strength and Temmerman 2013 for a similar implementation of this distinction in Dutch).[11]

A typical *wh*-movement chain in Hindi-Urdu would then be as shown in (46), where the intermediate/preverbal copy is associated with strong features on the v head (Manetta 2010), while the highest copy is associated only with weak features on the C head.

(46) [weak]   [**strong**]   X

Richards (1997:14) claims that overt *wh*-movement to check weak features is ''obligatory in all cases in which it is possible''—that is, it is obligatory in all cases in which the PF restrictions in (43) are met. In the typical constituent question in Hindi-Urdu represented by (46), strong features are associated with the pronounced intermediate copy, and these instructions are unambiguous (since there are no other strong features in the chain). The chain formed in (47), on the other hand, is not well-formed according to the restrictions in (43); pronouncing the weak copy would violate (43b).

(47) *[**weak**]   [strong]   X

In Richards's (1997) account, ellipsis represents a special circumstance in which (43b) does not apply and yet (43a) can be satisfied. In the case that a constituent α is marked for nonpronunciation, if a copy associated with a head bearing weak features lies outside that constituent, it may still be pronounced, as PF would receive unambiguous instructions as to which copy to pronounce.
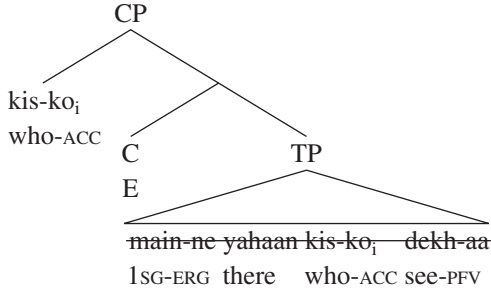
(48) [**weak**]   [α[strong]   X]

Therefore, just in the case of ellipsis, (48) represents a well-formed PF object. A sluicing structure in Hindi-Urdu can then be understood as a marked instance in which the intermediate copy

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[11] As Richards (1997) notes, the strong/weak distinction is not fully explanatory. Ideally, these notions would be understood as some more basic property of syntactic heads; see Richards 2016 for a recent effort of this type.

associated with strong features cannot be pronounced, as it resides in a TP marked for nonpronunciation (because of the [E]-feature on C). The only member of the chain that can be pronounced is the top copy, even though it is the copy associated with a head with weak features.

(49) I saw someone there, but I don't know . . .

Under this account, SLCs in Hindi-Urdu are in fact genuine sluices like those familiar from languages like English. There is full *wh*-movement to the clause edge in the narrow syntax. The C head possesses an [E]-feature that calls for nonpronunciation of its TP complement. The only difference between English and Hindi-Urdu, then, is the manner by which the higher copy in the *wh*-chain comes to be pronounced. In English, this is a matter of course, since English prefers the highest copy in a *wh*-chain to be phonetically realized. In Hindi-Urdu, it is an exception, forced when the copy preferred for phonetic realization, the intermediate copy associated with strong features, is in a clause already marked for nonpronunciation.

This analysis then correctly predicts that Hindi-Urdu sluiced structures have properties quite similar to those of genuine sluices in languages like English. This is in sharp contrast to other *wh*-in-situ languages, which seem to employ other strategies to derive SLCs. Properties such as full case connectivity and postposition pied-piping are explained, since real syntactic *wh*-movement to Spec,CP does in fact take place. Similarly, it is unsurprising that material in the T head is elided in a sluice, since a full TP goes unpronounced as in more familiar languages with genuine sluicing.

3.3 Summary and Analytical Consequences

In this section, we have provided evidence for several claims about Hindi-Urdu SLCs and the behavior of the Hindi-Urdu *wh*-system. We have shown that Hindi-Urdu SLCs instantiate genuine sluicing, in terms of both the size of the elided constituent (TP) and the nature of the movement that results in the stranding of a *wh*-phrase outside the ellipsis site. We also developed an account of how this pattern arises, given that the position of *wh*-phrases in nonelided Hindi-Urdu questions is preverbal, rather than left-peripheral. Building on ideas presented in Richards 1997, we developed the notion that the preverbal *wh*-phrase in nonelided contexts is one link in a movement chain whose highest instance is at the left periphery. This highest copy is not pronounced unless its pronunciation is forced—for example, in cases where the intermediate (preverbal) copy of the *wh*-phrase is inside a constituent marked for ellipsis.

In combination with Richards's (1997) account of the role of ellipsis in the pronunciation of movement chains, our analysis of the Hindi-Urdu *wh*-system provides a challenge for Van Craenenbroeck and Lipták's (2013) approach to sluicing. Their core claim is that the sluicing patterns of a language track the overt syntax of *wh*-movement in that language. We have demonstrated that this does not hold in Hindi-Urdu. The unmarked position for both interrogative and noninterrogative focus is preverbal. As shown above, this position cannot be understood to be a high Focus projection (above TP), as in Hungarian or Persian (Van Craenenbroeck and Lipták 2013, Karimi 2003), but is widely accepted to be lower, at the edge of the verbal domain (see examples (39)–(40)) (Butt and King 1996, Kidwai 2000). Nevertheless, the elided constituent in a sluice must be TP-sized. For instance, neither the tensed auxiliary located in T, nor TP-adjoined adverbials, can remain alongside the *wh*-remnant of a sluice (27). Instead, the facts in Hindi-Urdu suggest that when a constituent as large as a clause is elided, as in sluicing, patterns distinct from those typical of the overt *wh*-syntax emerge. Richards's (1997) analysis of the interaction of ellipsis and movement chains captures this exceptionality in terms of the instructions provided to PF, and indeed suggests that it is precisely in elliptical contexts that atypical *wh*-chain realization should be expected.

Van Craenenbroeck and Lipták's (2013) analysis makes several more incorrect predictions for the *wh*-syntax of Indic languages. First, their typology predicts that languages in which interrogative and noninterrogative focus-checking features occur on the same head (as in Hungarian) should have natural sluicing constructions with non-*wh*-remnants. Though careful experimental testing of this question remains to be done, speakers report that non-*wh*-remnants are not nearly as natural as *wh*-remnants in Hindi-Urdu.

(50) a. ?/*Aisha-ne ek ciiz khariid-ii aur maiN sooc-tii huN (ki) gaaṛi-ko.
Aisha-ERG a thing buy-PFV.F and 1SG think-HAB.F AUX.1SG (KI) car-ACC
'Aisha bought something, and I think (that) (it is) a car.'
b. ?/*Raam-ne kisi-ko kitaab dii-thii, aur mujhe maluum hai (ki)
Ram-ERG someone-DAT book give-PST and 1SG.OBL know AUX (KI)
Atif-ko.
Atif-DAT
'Ram gave someone a book, and I know (that) (it was) Atif.'

Bhattacharya and Simpson (2012:198) claim that sluicing with non-*wh*-remnants in both Hindi-Urdu and Bangla is ''more restricted and less automatic'' than with *wh*-remnants, and place it on par with elliptical constructions in English like (51), which require the strong contrastive stress indicated by italics in order to be acceptable.

(51) She just left with someone, but I don't think with *your* date.

Hindi-Urdu thus seems to pattern neither squarely with what Van Craenenbroeck and Lipták (2013) term focus movement languages like Hungarian, nor with *wh*-in-situ languages like Japanese.

Second, Van Craenenbroeck and Lipták (2013) predict that in a language with multiple *wh*-movement to the left periphery, if the cluster of *wh*-phrases can be split (e.g., by an adverb), then

the language should also permit sluicing with non-*wh*-remnants; otherwise, the language should disallow it. Their reasoning is as follows. In languages that permit intervening material between *wh*-phrases, only one *wh*-phrase is checking [*wh*]-features; the remainder are checking focus features. If this is so, the [E]-feature must be able to check either [*wh*] or focus features in that language, per the *wh*-/sluicing correlation in (2). Van Craenenbroeck and Lipták illustrate this for multiple dialects of Bulgarian with contrasting properties. Kashmiri is unusual among Indic languages in that it is verb-second with obligatory *wh*-movement to the left periphery (the preverbal position). It also permits multiple *wh*-movement (52), but resists material intervening between fronted *wh*-phrases (53)–(54).[12]

(52) Kəmis   kəm   k'a d'ut?
     who.ERG who.DAT what give.PST.F.SG
     'Who gave what to whom?'
     (Wali and Koul 1997:26)

(53) (Pazpəəth) kəmis   kəm   k'a d'ut   (pazpəəth)?
     (really)   who.ERG who.DAT what give.PST.F.SG (really)
     'Really, who gave what to whom?'

(54) a. *Kəmis   pazpəəth kəm   k'a d'ut?
         who.ERG really   who.DAT what give.PST.F.SG
     b. *Kəmis   kəm   pazpəəth k'a d'ut?
         who.ERG who.DAT really   what give.PST.F.SG

Further, the position for noninterrogative focus in Kashmiri is identical to that for interrogative focus (immediately before the second-position verb), and the unmarked word order is (Topic)-(*wh*)Focus-Verb (Wali and Koul 1997, Bhatt 1999).

(55) BI ti goo-s   gari vakht-as peth.
     1SG FOC go.PST-1SG home time-DAT on
     'I too went home on time.'
     (Wali and Koul 1997:142)

(56) Raj-an kəm.is həə-v   nəv kitaab?
     Raj-ERG who.ERG show.PST-F.SG new book
     'To whom did Raj show his new book?'
     (Wali and Koul 1997:12)

Given (54)–(56), Van Craenenbroeck and Lipták's (2013) account would predict Kashmiri to fail to exhibit sluicing with non-*wh*-remnants; yet unlike Hindi-Urdu speakers, Kashmiri speakers find this construction quite natural.

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[12] The facts are the same for parentheticals such as *cen' kin'* 'according to you', which may not intervene between multiple fronted *wh*-words but may appear sentence-initially or in the postverbal domain.

(57) a. Ra:jI rani   ka:Nh.   Me   chu   basaan   naan.
        Raj   cook.FUT something 1SG.NOM AUX.1SG think.PRS.PTCP naan
        'Raj cooked something. I think (it was) naan.'

    b. Kamitani khyav batI. Me   chu   basaan   Raj-an.
       someone ate   food 1SG.NOM AUX.1SG think.PRS.PTCP Raj-ERG
       'Someone ate the food. I think (it was) Raj.'

These empirical shortcomings of the approach developed in Van Craenenbroeck and Lipták 2013 stem from the assumption that the syntactic properties of a sluiced structure should pattern with the surface syntactic properties of a typical constituent *wh*-question. Our analysis of the Hindi-Urdu facts, and the further incorrect predictions for Hindi-Urdu and Kashmiri, demonstrate that this cannot be the case. This discovery shows that languages traditionally understood to be *wh*-in-situ have a vital role to play in elucidating the relationship between the syntax of sluicing and the syntax of *wh*-movement. Only a far more fine-grained approach to different types of *wh*-in-situ, such as we advocate here, will permit sluicing to be used as a diagnostic of *wh*-syntax more generally.

As mentioned above, if Hindi-Urdu is indeed a language with full *wh*-movement in the narrow syntax, evidence of that movement should be found beyond sluicing. In section 4, we explore other constructions associated with *wh*-movement, such as islands and scope taking, which corroborate the account of Hindi-Urdu presented here.

4 The Spectrum of *Wh*-in-Situ

The present examination of Hindi-Urdu and Uzbek has revealed sharply divergent properties associated with their SLC constructions. Hindi-Urdu SLCs appear in all respects to be instances of genuine sluicing, while Uzbek SLCs are most amenable to a reduced-copular-clause analysis. This in and of itself is an interesting observation, but there is more that can now be said about the nature of the *wh*-in-situ behavior exhibited by the two languages.

In the analysis above, we claim that in fact, *wh*-movement takes place in Hindi-Urdu in the narrow syntax. This operation is then obscured by a PF process in which the lower copy in the *wh*-movement chain is pronounced. However, *wh*-movement is visible exceptionally in the sluicing configuration, when the top copy is forcibly pronounced. On the other hand, we have analyzed Uzbek as a language without *wh*-movement in the narrow syntax, the implicit consequence being that this language must establish the relation between the interrogative C head and the *wh*-phrase in another (nonsyntactic) manner. Emerging from this comparison is evidence for two distinctly different types of *wh*-in-situ languages: one with syntactic *wh*-movement (obscured by other factors), and one without.

In this section, we pursue this idea several steps further. If the divergent properties we have observed stem from distinct *wh*-syntaxes in the two languages, we then expect to see differences between Hindi-Urdu and Uzbek, minimally with respect to scope-taking behavior and island sensitivity of various constructions. We demonstrate that Hindi-Urdu uses the tools of narrow syntax to establish matrix scope of a *wh*-phrase out of an embedded clause; this is in line with

the hypothesis that Hindi-Urdu is actually a *wh*-movement language, though this is obscured by PF factors. By contrast, Uzbek *wh*-phrases easily take matrix scope out of embedded clauses while remaining in situ; they show no evidence of a syntactic dependency between the *wh*-phrase and the C domain of the matrix clause. This difference in behavior has the expected consequences for island sensitivity in the two languages: Hindi-Urdu is robustly island-sensitive, while Uzbek is generally not. We suggest that these two *wh*-in-situ languages sit on opposite ends of a spectrum of possible ways of forming a *wh*-dependency that is superficially manifested as *wh*-in-situ.

4.1 Long-Distance Wh-*Dependencies and Scope*

4.1.1 Hindi-Urdu   The way in which Hindi-Urdu forms long-distance *wh*-dependencies provides further evidence that it is indeed a language with *wh*-movement in the narrow syntax. Hindi-Urdu has embedded finite clauses preceded by the optional clause-initial particle *ki*. Embedded *wh*-in-situ cannot take matrix scope (58). If a verb can only take a propositional complement, embedded *wh*-material is impossible (59).

(58) Ali jaan-taa   hai [ki Raam kis-ko   pasand kar-ta   hai]
      Ali know-HAB AUX [KI Ram   who-ACC like   do-HAB AUX]
      Embedded question: 'Ali knows who Ram likes?'
      *Matrix question: 'Who does Ali know Ram likes?'
      (Bhatt 2003:3)

(59) *Ali maan-taa   hai ki Raam kis-ko   pasand kar-ta   hai
       Ali believe-HAB AUX KI Ram   who-ACC like   do-HAB AUX
       *Embedded question: 'Ali believes who Ram likes.'
       *Matrix question: 'Who does Ali believe Ram likes?'
       (Bhatt 2003:3)

Matrix scope can be obtained via *wh*-extraction into the matrix clause (60) or via a *wh*-expletive/scope-marking construction (61).

(60) Ali kis-ko   jaan-taa   hai [ki Raam t pasand kar-ta   hai]?
      Ali who-ACC know-HAB AUX [KI Ram   like   do-HAB AUX]
      Matrix question: 'Who does Ali know Ram likes?'
      (Bhatt 2003:3)

(61) Ali kyaa jaan-taa   hai [ki Raam kis-ko   pasand kar-ta   hai]?
      Ali EXPL know-HAB AUX [KI Ram   who-ACC like   do-HAB AUX]
      Matrix question: 'Who does Ali know Ram likes?'
      (Bhatt 2003:4)

This has long been a puzzle for the traditional, *wh*-in-situ view of Hindi-Urdu. If the language can allow *wh*-phrases to remain in situ and yet have sentential scope in a single clause, why can they not remain in situ and take scope outside finite embedded clauses as well?

Although space limitations do not permit a thorough review of previous approaches to these constructions, these typically fall into two categories. *Indirect dependency* accounts (É. Kiss 1987,

Dayal 1994, 1996, Lahiri 2002) claim that the expletive question word is coindexed with or replaced by the clause containing the contentful question word at the level of LF, while *direct dependency* analyses (e.g., McDaniel 1989, Mahajan 1990, Rizzi 1992) contend that a direct syntactic connection is formed between the expletive question word and the contentful question word, mediated by chains and conditions on chain formation. In both views, matrix scope, which is achieved via the full displacement of the *wh*-question word to the matrix clause, is termed scrambling. The present account, falling squarely into neither the direct nor the indirect dependency approach, suggests that this displacement of the *wh*-word is indeed what it appears to be and that Hindi-Urdu is a language with full *wh*-movement in the narrow syntax.

If this proposal is on the right track, we are left with two questions. First, why would the higher copy of the *wh*-phrase (the copy in the matrix clause) be pronounced in a question like (60) instead of the lower copy? Second, what is the role of the *wh*-expletive structure in (61) under the present approach? These two questions may in fact have the same answer. Following proposals in Manetta 2006, 2011, we maintain that the presence of the *wh*-expletive in the matrix clause (and indeed in every clause between the base position and the scopal position of the *wh*-phrase) is required in Hindi-Urdu to satisfy the EPP feature on an interrogative head. The EPP encodes a syntactic requirement that the head have overt (*wh*-) material occupying an additional specifier beyond those mandated by selection.[13] There are two ways that Hindi-Urdu can meet this requirement: with the full *wh*-phrase or with the *wh*-expletive.

A more detailed account of *wh*-expletive structures as the realization of multiple copies can be found in Manetta 2013. Suffice it to say here that under this view, the expletive *kyaa* would need to be understood as an alternative pronunciation of a higher copy in the *wh*-chain, as Hindi-Urdu does not exhibit canonical multiple-copy realization as in German.[14] Following a particular proposal in Nunes 2004, this alternative pronunciation of the higher *wh*-phrase as *kyaa* in sluicing could result from fusion of an interrogative head (v, according to Manetta 2010) and the moved *wh*-word.

There is one piece of (as yet unexplained) evidence that this view of *kyaa* might be important to pursue further. Hindi-Urdu *wh*-expletive structures seem to exhibit island effects, as addressed in section 4.2.1 (Malhotra and Chandra 2007, Malhotra 2011). On the whole, the fact that Hindi-Urdu only permits an embedded *wh*-XP to take matrix scope if *wh*-material appears in the matrix scopal position suggests that Hindi-Urdu is a language with *wh*-movement in the narrow syntax.

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[13] This requirement could be restated in terms familiar from Richards's (1997) account (i.e., strong/weak features) discussed in section 3.3. See in particular Richards's account of the pronunciation of multiple members of a chain in the case of resumptive pronouns in Yoruba.

[14] A reviewer asks why the *wh*-expletive *kyaa* is not found as the remnant in a Hindi-Urdu sluice (see Merchant's (2001) observations along these lines for German). Following the account in Manetta 2011, the *wh*-expletive is base-generated at the edge of the verbal domain, in Spec,vP, and does not undergo movement. Even if we could construct a sluice containing an embedded question word taking matrix scope, an expletive would always be elided since sluices in Hindi-Urdu are the elision of a TP.

4.1.2 Uzbek   Uzbek contrasts with Hindi-Urdu with respect to scope taking, in that it behaves much more canonically like a ''true'' *wh*-in-situ language. There are two embedding strategies in Uzbek. One involves a head-final C (*deb*), with full finite morphology in the embedded clause; the other is the nominalized-clause strategy illustrated in section 2, in which there are limitations on finite tense and other clause-level morphology. Both strategies allow *wh*-phrases in propositional embedded clauses to take matrix scope, without any special morphological marking or operation; no overt scope marker is present.

(62) a. Siz Hasan nima-ni   o'qi-gan   deb ayt-di-ngiz?
         you Hasan what-ACC read-PST.PF.3SG C   say-PST-2SG
         'What did you say that Hasan read?'

   b. Siz Hasan nima-ni   o'qi-gan   deb eshit-di-ngiz?
         you Hasan what-ACC read-PST.PF.3SG C   hear-PST-2SG
         'What did you hear that Hasan read?'

(63) a. Siz Hasan(-ning) nima-ni   o'qi-gan-lig-i-ga   ishon-di-ngiz?
         you Hasan(-GEN) what-ACC read-PST.PTCP-NMLZ-3SG.POSS-DAT believe-PST-2SG
         'What did you believe that Hasan read?'

   b. Siz Hasan(-ning) nima-ni   o'qi-gan-lig-i-ni   eshit-di-ngiz?
         you Hasan(-GEN) what-ACC read-PST.PTCP-NMLZ-3SG.POSS-ACC hear-PST-2SG
         'What did you hear that Hasan read?'

This sort of evidence suggests that Uzbek is a language in which scope taking takes place via unselective binding (Pesetsky 1987) or LF movement (Aoun, Hornstein, and Sportiche 1981, Huang 1982). As we will demonstrate shortly, however, the general lack of island sensitivity in Uzbek suggests choosing the former analysis over the latter.

4.2 Island Sensitivity

4.2.1 Hindi-Urdu   One of the most-used tests for *wh*-movement is island sensitivity. Hindi-Urdu is in general island-sensitive.

(64) a. *[Raam-ne kyaa kahaa [ki Ravii-ko [yeh baat [ki Miira kyaa khaaye-gii]]
         [Ram-ERG EXPL said   [KI Ravi-ACC [this fact [KI Mira what eat-FUT]
         pa-taa   hai]]?
         know-HAB.M AUX]]
         'What did Ram say that Ravi knows the fact that Mira will eat?'

   b. *Raam-ne kyaa kahaa [ki Siita bazaar jay-egii [kyunki Mohan kyaa nahiiN
         Ram-ERG EXPL said   [KI Sita market go-FUT [because Mohan what NEG
         lay-aa]]?
         bring-PFV]]
         'What did Ram say that Sita will go to the market because Mohan didn't bring?'

The ungrammaticality of the structures in (64) suggests that *wh*-movement must have taken place, triggering island violations. Under the approach to *wh*-expletive constructions proposed here, the full version of the lower copy is pronounced, while a modified/minimal version of the matrix clause copy is realized, in the form of the *wh*-expletive *kyaa*.

  Full *wh*-movement cannot occur out of complex NP islands, adjunct islands, relative clause islands, coordinate structures, or *wh*-islands. Also, *wh*-expletives cannot be extracted from islands (as in (64)) (see Malhotra 2009).

Complex NP islands

(65) Wh-*extraction*
    *[Kyaa Ravii-ko [DP yeh baat [CP ki Miira t khaaye-gii]] pa-taa   hai]?
    [what Ravi-DAT [DP this fact [CP KI Mira   eat-FUT.F]]   know-HAB.M AUX]
    Intended: 'What does Ravi know the fact that Mira will eat?'
    (Malhotra 2009:35)

(66) Wh-*expletive construction*
    *[Raam-ne kyaa kahaa [ki Ravii-ko [yeh baat [ki Miira kyaa khaaye-gii]]
    [Ram-ERG EXPL said   [KI Ravi-DAT [this fact [KI Mira what eat-FUT.F]]
    pa-taa   hai]]?
    know-HAB.M AUX]]
    Intended: 'What did Ram say that Ravi knows the fact that Mira will eat?'
    (Malhotra 2009:32–33)

(67) Wh-*in-situ*
    *Raam-ko ye baat ki Siita kis-se   mili pa-taa   hai?
    Ram-DAT that claim KI Sita who-with met know-HAB.M AUX
    Intended: 'Who does Ram know the claim that Sita met?'

Adjunct islands

(68) Wh-*extraction*
    *Raam-ne kyaa kahaa [ki Siita bazaar jaaye-gii [kyunki Mohan t nahiiN lay-aa]]?
    Ram-ERG what said   [KI Sita market go-FUT   [because Mohan   NEG   bring-PFV]]
    Intended: 'What did Ram say that Sita will go to the market because Mohan didn't bring?'

(69) Wh-*expletive construction*
    *Raam-ne kyaa kahaa [ki Siita bazaar jaaye-gii [kyunki Mohan kyaa nahiiN
    Ram-ERG EXPL said   [KI Sita market go-FUT   [because Mohan what NEG
    lay-aa]]?
    bring-PFV]]
    Intended: 'What did Ram say that Sita will go to the market because Mohan didn't bring?'
    (Malhotra 2009:32–33)

(70) Wh-*in-situ*
    *Raam-ne kahaa [ki Siita bazaar jaaye-gii [kyunki Mohan kyaa nahiiN lay-aa]]?
    Ram-ERG said   [KI Sita market go-FUT   [because Mohan what NEG   bring-PFV]]
    Intended: 'What did Ram say that Sita will go to the market because Mohan didn't
    bring?'

Relative clause islands

(71) Wh-*extraction*
    *Raam-ko kyaa [DP vo   laḍkaa [CP jo t lay-aa]]   pasand hai?
    Ram-DAT what [DP DEM boy   [CP REL bring-PFV]] like   AUX
    Intended: 'What does Ram like the boy that brought?'
    (Malhotra 2009:58)

(72) Wh-*expletive construction*
    *Raam-ko kyaa [DP vo   laḍkaa [CP jo   kyaa lay-aa]]   pasand hai?
    Ram-DAT EXPL [DP DEM boy   [CP REL what bring-PFV]] like   AUX
    Intended: 'What does Ram like the boy that brought?'

(73) Wh-*in-situ*
    *Raam-ko [DP vo   laḍkaa [CP jo   kyaa lay-aa]]   pasand hai?
    Ram-DAT [DP DEM boy   [CP REL what bring-PFV]] like   AUX
    Intended: 'What does Ram like the boy that brought?'

***Wh*-islands**

(74) Wh-*extraction*
    *Raam kaunsaa kamraa pa-taa   kar rahaa hai ki kaunsii laṛkii t kiraaye-par
    Ram which.M room   know-HAB.M do ASP AUX KI which.F girl   rent-LOC
    le-gii?
    take-FUT
    Intended: 'Which room will Ram find out which girl will rent?'

(75) Wh-*extraction*
    *Raam-ne kis-ko   puch-aa ki kyaa   Miira-ne t dekh-aa?
    Ram-ERG who-ACC ask.PFV KI whether Mira-ERG see-PFV
    Intended: 'Who did Ram ask whether Mira saw?'
    (Malhotra 2009:78)

(76) Wh-*expletive construction*
    *Raam-ne kyaa puch-aa [ki kyaa   Miira-ne kis-ko   dekh-aa]?
    Ram-ERG EXPL ask.PFV [KI whether Mira-ERG who-ACC see-PFV]
    Intended: 'Who did Ram ask whether Mira saw?'

(77) Wh-*in-situ*
    *Raam-ne puch-aa [ki kyaa   Miira-ne kis-ko   dekh-aa]?
    Ram-ERG ask.PFV [KI whether Mira-ERG who-ACC see-PFV]
    Intended: 'Who did Ram ask whether Mira saw?'

4.2.2 Uzbek Unlike Hindi-Urdu, Uzbek is selectively island-sensitive, patterning in a few respects like other *wh*-in-situ languages about which much more is known in this regard (e.g., Chinese and Japanese).[15] For example, like Chinese *wh*-phrases (Huang 1982), Uzbek *wh*-phrases can take matrix scope from their in-situ positions. Also as in Chinese, there is an argument-adjunct asymmetry when it comes to relative clauses: argument *wh*-phrases are licensed in relative clauses (78), whereas adjunct *wh*-phrases are not (79).

(78) a. Siz kim kecha   sot-ib ol-gan   kitob-ni o'qi-di-ngiz?
        you who yesterday buy-VN take-PST.PTCP book-ACC read-PST-2SG
        'You read the book that who bought yesterday?'

     b. Siz nima-ni o'qi-gan   kishi-ni   ko'r-di-ngiz?
        you what-ACC read-PST.PTCP person-ACC see-PST-2SG
        'You saw the person who was reading what?'

(79) *Siz Hasan qachon sot-ib ol-gan   kitob-ni o'qi-di-ngiz?
      you Hasan when   buy-VN take-PST.PTCP book-ACC read-PST-2SG
      Intended: 'You read the book that Hasan bought when?'
      (cf. (78a))

Interestingly, this asymmetry also extends to adjunct islands, where *wh*-arguments are licensed (80), but adjunct *wh*-phrases are not (81).

(80) a. Men nima-ni   o'qi-yotgan-im-da,   Farhod kel-di?
        I   what-ACC read-PST.PROG.PTCP-1SG-LOC Farhod come-PST.3SG
        'Farhod came when I was reading what?'

     b. Farhod nima-ni   o'qi-gan-dan   keyin, test-dan o't-di?
        Farhod what-ACC read-PST.PTCP-ABL after   test-ABL pass-PST.3SG
        'Farhod passed the test after reading what?'

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[15] A reviewer notes that there is some possibility that speakers are interpreting the examples in (78)–(86) as echo or quizmaster questions, potentially ameliorating structures that would be unacceptable as true informational questions. The same reviewer points out that the way to eliminate the undesirable readings is to elicit (78)–(86) as embedded questions. (78)–(86) do, in fact, pattern identically both in matrix and embedded environments. For brevity, the embedded examples are not provided in the main text; a few representative examples are given here.

(i) a. Hasan siz kim kecha   sot-ib ol-gan   kitob-ni o'qi-di-ngiz deb so'ra-di.
       Hasan you who yesterday buy-VN take-PST.PTCP book-ACC read-PST-2SG C   ask-PST.3SG
       'Hasan asked you read the book that who bought yesterday.'
       (cf. (78a))

    b. *Zamira siz Hasan qachon sot-ib ol-gan   kitob-ni o'qi-di-ngiz deb so'ra-di.
       Zamira you Hasan when   buy-VN take-PST.PTCP book-ACC read-PST-2SG C   ask-PST.3SG
       Intended: 'Zamira asked you read the book that Hasan bought when.'
       (cf. (79))

    c. *Hasan Farhod qachon dars   qil-gan-dan   keyin test-dan o't-di   deb so'ra-di.
       Hasan Farhod when   lesson do-PST.PTCP-ABL after test-ABL pass-PST.3SG C   ask-PST-3SG
       Intended: 'Hasan asked Farhod passed the test after studying when.'
       (cf. (81a))

    d. *Hasan kim-ning kitob-ni oqi-sh-i-ning   sabab-i   men-ga ma'lum deb ayt-di.
       Hasan who-GEN book-ACC read-VN-3SG.POSS-GEN reason-3SG.POSS I-DAT known C   say-PST.3SG
       Intended: 'Hasan said the reason that who read the book is known to me.'
       (cf. (85b))

   c. Farhod nima-ni o'qi-sh-i-dan   oldin, test-dan o't-di?
      Farhod what-ACC read-VN-3SG.POSS-ABL before test-ABL pass-PST.3SG
      'Farhod passed the test before reading what?'

   d. Hasan nima-ni o'qi-mas-dan test-dan o't-di?
      Hasan what-ACC read-NEG-ABL test-ABL pass-PST.3SG
      'Hasan passed the test without reading what?'

(81) a. *Farhod qachon dars qil-gan-dan   keyin test-dan o't-di?
       Farhod when   lesson do-PST.PTCP-ABL after test-ABL pass-PST.3SG
       Intended: 'Farhod passed the test after studying when?'

     b. *Farhod qayer-da dars qil-gan-dan   keyin test-dan o't-di?
       Farhod where-LOC lesson do-PST.PTCP-ABL after test-ABL pass-PST.3SG
       Intended: 'Farhod passed the test after studying where?'

As for *wh*-islands, these act as islands regardless of the embedding strategy (nominalized clause (82) vs. direct complementation via a C head (83)).

(82) *Siz nima-ni qayer-da ol-gan-imiz-ni   esl-ay-siz?
     you what-ACC where-LOC buy-PST.PTCP-1PL.POSS-ACC remember-PRS-2SG
     Intended: 'What do you remember where we bought (it)?'

(83) *Siz Hasan nima-ni qayer-da o'qi-gan   deb so'ra-di-ngiz?
     you Hasan what-ACC where-LOC read-PST.PF C   ask-PST-2SG
     Intended: 'What did you ask where Hasan read (it)?'

Finally, there are at least two ways to form complex NPs. Complex NPs of the first type involve a noun (below, *sabab* 'reason') that has a genitive-possessive nominalized clause in its specifier position; this explains the two instances of genitive case and possessive agreement marking in (84).

(84) a. Farhod-ning kitob-ni o'qi-sh-i-ning   sabab-i   men-ga ma'alum.
       Farhod-GEN book-ACC read-VN-3SG.POSS-GEN reason-3SG.POSS I-DAT   known
       'The reason that Farhod read that book is known to me.'
       Lit. 'Farhod's reading that book's reason is known to me.'

     b. [[[Farhod-ning kitob-ni o'qi-sh-i ᵥₚ]-ning ₍ₚ] sabab-i ₍ₚ] men-ga ma'alum.

Wh-phrases in such complex NPs trigger island violations, but this is not surprising, since the relevant *wh*-phrase would need to be doubly embedded, which would likely lead to processing difficulties.

(85) a. *Farhod-ning nima-ni o'qi-sh-i-ning   sabab-i   men-ga ma'alum?
       Farhod-GEN what-ACC read-VN-3SG.POSS-GEN reason-3SG.POSS I-DAT   known
       Intended: 'The reason that Farhod read what is known to me?'

     b. *Kim-ning kitob-ni oqi-sh-i-ning   sabab-i   men-ga ma'alum?
       who-GEN book-ACC read-VN-3SG.POSS-GEN reason-3SG.POSS I-DAT   known
       Intended: 'The reason that who read the book is known to me?'

A second type of complex NP is the complement of a postposition (in (86), *haqida* 'about'). *Wh*-phrases in this type of complex NP trigger *no* island violations, as expected.

(86) Zamira Farhod kim-ni   ko'r-gan-lig-i   haqida mishmish
     Zamira Farhod who-ACC see-PST.PTCP-NMLZ-3SG.POSS about   gossip
     tarqat-di?
     spread-PST.3SG
     'Who did Zamira spread the rumor that Farhod saw?'

4.2.3 Interim Summary   While space considerations prohibit us from considering the full range of facts with regard to scope taking and island sensitivity in Hindi-Urdu and Uzbek, the basic pattern is clear. Hindi-Urdu behaves in all relevant respects like a *wh*-movement language, despite some apparent *wh*-in-situ effects. It marks matrix scope overtly by *wh*-movement or via a *wh*-expletive, and it shows the full range of island effects one might expect of a *wh*-movement language. By contrast, Uzbek does not use either *wh*-extraction or scope marking of any kind to reflect matrix scope, and it is island-sensitive in a very limited set of environments, closer to Chinese and Japanese in this respect. These results are consistent with our larger claim that of the two languages, only Hindi-Urdu exhibits *wh*-movement in the narrow syntax, correspondingly licensing genuine sluicing. Uzbek involves no such syntactic dependency and forms its SLCs via the reduced-copular-clause strategy.[16]

4.3 Island Repair and Hindi-Urdu Sluicing

Whether sluicing repairs island violations in Hindi-Urdu has been a controversial question, and to this point the data have appeared inconclusive. The goal of this section is to review the claims in previous literature and report on some new experimental evidence. This work suggests that sluicing does indeed repair island violations in the language. To the extent that Hindi-Urdu SLCs correspond to genuine sluices, we might expect island violations to be repaired under sluicing in Hindi-Urdu. This aligns with Merchant's (2001) analysis in which certain island constraints operate at PF and nonpronunciation of the violating part of the structure voids the violation.

Mahajan (2005) claims that sluicing does not repair certain kinds of island violations in Hindi-Urdu.

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[16] Further support for the present analysis of Hindi-Urdu comes from the availability of parasitic gapping, which is expected if there is genuine *wh*-movement. Manetta (in preparation) shows that although Hindi-Urdu permits both null pronominals and argument ellipsis, true parasitic gaps can be isolated. A parallel investigation has yet to be undertaken for Uzbek, which likewise countenances at least argument drop (if not argument ellipsis), thereby complicating the empirical picture. While further empirical work remains to be done, the existence of parasitic gaps in Hindi-Urdu is further strong evidence that this language has *wh*-movement in the narrow syntax (for similar observations about Romanian, see Bošković 2001).

(87) *Raam-ne Siita aur ek larke-ko saat saat dekh-aa, par mujhe nahiiN pa-taa
Ram-ERG Sita and a boy-ACC with with see-PFV but 1SG.OBL NEG know-HAB.M
ki kis-ko.
KI who-ACC
Intended: 'Ram saw Sita and a boy together, but I don't know who.'
(Mahajan 2005:6; judgment Mahajan's)

By contrast, Chandra and Ince (2007) and Malhotra (2009) claim that sluicing does indeed repair island violations in Hindi-Urdu, on the basis of their own native-speaker intuitions.[17] They provide relatively little data, some of it with grammaticality markings directly conflicting with Mahajan's.

(88) [Ravii-ko [_DP_ yeh baat [_CP_ ki Miira kuch khaaye-gii]] pa-taa hai] par
[Ravi-DAT [_DP_ this fact [_CP_ KI Mira something eat-FUT.F]] know-HAB.M AUX] but
maiN nahiiN jantaa ki kyaa.
1SG NEG know KI what
'Ravi knows the fact that Mira will eat something, but I don't know what.'
(Malhotra 2009:35)

In the most recent contribution to this conversation, Bhattacharya and Simpson (2012) solicited judgments from a small group of native-speaker linguists. Their results were somewhat unsatisfying in that they found significant variation for which they do not have a clear explanation. But they write that, overall, ''adjunct-CP and relative clause examples were accepted or rejected by equal numbers of speakers, and complex-NP and sentential-subject structures were accepted more often than they were rejected'' (Bhattacharya and Simpson 2012:215).

We revamped this experiment, using slightly more colloquial vocabulary and providing context in the form of a scenario preceding each test sentence. We asked 10 native speakers who were not linguists to provide grammaticality judgments for the following: (a) nonsluiced sentences containing island violations, (b) sluices not featuring island violations, and (c) sluicing out of islands. Of these 10 speakers, 9 accepted sluices with extraction out of a relative clause, 8 accepted sluices with extraction out of a coordinate structure, and 8 accepted sluices with extraction out of a complex NP. One speaker spontaneously produced an alternative example of a sluice with extraction out of a complex NP with the finite clause inside the NP extraposed to the right edge of its embedding clause, as in (89).[18]

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[17] As a reviewer points out, sentence (87) could seem odd to a native speaker as a result of the contrast between the descriptive content in the correlate ('a boy') but an open *wh*-word in the sluice ('who'). This contrast is absent from the sentences judged acceptable in (88)–(89).

[18] One speaker consistently did not accept any sluices with island violations; this speaker did not even mark sluiced structures without islands as entirely natural (in contrast to the rest of the group).

(89) Piita-ji   is   afaavah-ko maante haiN ki Raam-ne kisi-ko   chuma hai, par
     Father-HON this rumor-ACC believe AUX KI Ram-ERG someone-ACC kiss   AUX but
     hum nahiiN jaante haiN kis-ko.
     we   NEG   know AUX who-ACC
     'Father believes this rumor that Ram kissed someone, but we don't know who.'

Given these results, and the claims of native-speaker linguists including Shiti Malhotra and Pritha
Chandra, it seems relatively clear that there is at the very least a version of spoken Hindi-Urdu
in which sluicing repairs island violations in the way that it does in a language like English.

5 Conclusion

This article demonstrates that the availability of genuine sluicing in *wh*-in-situ languages corre-
sponds directly to specific properties of their *wh*-systems. The contrasting properties of Hindi-
Urdu and Uzbek SLCs can best be understood to follow from distinct derivations: Hindi-Urdu
SLCs instantiate genuine sluicing, fed by *wh*-movement with exceptional PF (but not syntactic)
properties, while Uzbek SLCs are instances of reduced copular clauses. The analysis of Hindi-
Urdu, in particular, forces a refinement to Van Craenenbroeck and Lipták's (2013) formulation
of the connection between a language's *wh*-system and the availability of genuine sluicing, re-
peated here.

(90) *The* wh-*/sluicing-correlation*
     The syntactic features that the [E]-feature has to check in a language L are identical
     to the strong features a *wh*-phrase has to check in a regular constituent question in L.

Wh-words in Hindi-Urdu constituent questions are typically pronounced preverbally; we take this
to be the pronunciation of an intermediate copy in a chain that reaches to the C domain in this
language. The ellipsis of TP (sluicing) forces the pronunciation of a higher copy of a *wh*-chain
in Hindi-Urdu. If this is correct, it means that the [E]-feature does not check features identical
to strong [*wh*]-features, contra Van Craenenbroeck and Lipták's (2013) proposal. The Hindi-Urdu
facts show that, in one *wh*-chain, there may be a mismatch between the position in which ellipsis
is licensed and the position in which the *wh*-phrase is typically pronounced in the absence of
ellipsis.

     Abstracting away from the particulars of this case study, two more general questions arise
about the interaction of *wh*-systems in *wh*-in-situ languages and sluicing. First, it is important to
work toward a more general theory of how the decision about which copy in a chain to pronounce
interacts with constituent ellipsis. In the case presented here, only when a lower *wh*-copy—bearing
strong features—is elided does the higher copy (the copy bearing weak features) appear. A similar
case is discussed in Temmerman 2013, where focus movement is licensed to the left periphery
only in a certain type of Dutch embedded fragment answer that involves TP-ellipsis, but not
otherwise (because the focus features are weak). On the basis of examples like these, it is perhaps
more appropriate to suggest that the original formulation of the *wh*-/sluicing correlation is too
strong: what matters is that the features that the [E]-feature has to check must be identical to
features (strong *or* weak) that the *wh*-phrase has to check in a regular constituent question. Whether
strong or weak features are at play is apparently subject to variation across languages.

Second, we need to extend the crosslinguistic claims made here to a diverse range of *wh*-in-situ languages. Our account would predict that clear patterns should emerge with respect to the relation between the establishment of *wh*-scope in a *wh*-in-situ language and the strategies by which SLCs may be derived. For instance, Chinese, like Uzbek, allows *wh*-phrases in embedded clauses to take matrix scope and is only selectively island-sensitive. In our view, it is not at all surprising to find that Chinese is also a reduced-copular-clause language (Wang Adams and Tomioka 2012); this is what our account would lead one to expect. That said, the detailed facts concerning island sensitivity in the two languages are not identical, and more delicate work must be done. In turn, comparing Chinese with Japanese, the island facts are once again significantly different, and whether SLCs are instantiated via genuine sluicing or reduced copular clauses in Japanese is far less clear. On the other hand, Bangla, like Hindi-Urdu, has been claimed to be a true *wh*-movement language, though that movement is often superficially obscured (Simpson and Bhattacharya 2003). And like Hindi-Urdu, Bangla appears to exhibit island sensitivity and to implement genuine sluicing (Bhattacharya and Simpson 2012). Whether the two languages exhibit differences between *wh*-scoping and the potential for island violation repair is a topic for additional investigation.

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