

Ellipsis in wh-in-situ languages: deriving apparent sluicing in Hindi-Urdu and Uzbek*

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Abstract

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 a language's WH-questions in non-elliptical contexts. We refine this formulation by considering SLCs in two contrasting WH-*in-situ* languages, Uzbek and Hindi-Urdu. 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 non-elliptical environments; the head of the WH-chain is then pronounced only in combination with ellipsis, but not otherwise. 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, 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 clause, WH-movement

1 Introduction

Since Ross' (1969) original exploration of sluicing ellipsis constructions (1), a growing collection of cross-linguistic 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 paper 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' 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*

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for strings that demonstrably arise from WH-movement (or another A-bar movement to the left periphery) in combination with clausal ellipsis. The Ross/Merchant analysis makes a broad typological prediction, which is that it should be possible to explain the properties of an SLC in a given language by appealing to two independent properties of a linguistic system: first, the syntax of its WH-system, and second, the mechanisms the language has at its disposal to achieve non-pronunciation, 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 that follows from this is that there should be numerous types of movement that allow a WH-phrase to escape the elided constituent across languages, and correspondingly some cross-linguistic diversity when it comes to the syntactico-semantic properties of SLCs. Sure enough, there is good evidence that Russian (Grebnyova, 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 which itself undergoes elision. Clefts and copular clauses have often been taken to be the underlying source of SLCs as well, for example in Turkish (Hankamer, 2010; Kizu, 2000, 1997), Japanese (Merchant, 1998; Shimoyama, 1995; Fukaya and Hoji, 1999; Nishiyama et al., 1996; Kuwabara, 1996; Hiraiwa and Ishihara, 2002), Chinese (Wang Adams and Tomioka, 2012), English (Van Craenenbroeck, 2008, 2010), Polish (Szczegielniak, 2008), Spanish, and Brazilian Portuguese (Rodrigues et al., 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 non-pronunciation (e.g. *pro* drop, copula drop).

WH-*in-situ* languages have a special role to play in this discussion, for two reasons. First, the prediction above 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; Lappin, 1999; Chung et al., 1995; Merchant, 2001), and those that posit 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 2013 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 accounts in the Ginzburg and Sag (2000) and Culicover and Jackendoff (2005) family, because genuine sluicing for those accounts is not predicated on there being an underlying syntactic structure in the sluice, nor is it predicated on the availability of syntactic movement of the remnant phrase. To the extent that the availability or non-availability 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 (2):

- (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.

Another way to phrase this formulation is that 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 paper we explore the typological consequences of this prediction for two WH-*in-situ* languages, Uzbek (Turkic) and Hindi-Urdu (Indo-Iranian). Both languages exhibit SLC patterns, though they are considered WH-*in-situ*.

- (3) Aisha-ne ek ciiz khariid-ii par mujhe nahiiN pa-taa kyaa.
 Aisha-ERG a thing buy-PERF.F but 1SG.DAT NEG know-HAB.M what
 ‘Aisha bought something, but I don’t know what.’ HINDI-URDU
- (4) 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.’ UZBEK

Proceeding from the Ross/Merchant analysis, the formulation in (2) would predict that genuine sluicing should never be available in these languages, since the surface position of WH-material in a typical constituent question will not be in the right position to be stranded under genuine sluicing. What we demonstrate is 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 varies significantly (see Cheng 2009 for a useful review), with a corresponding diversity in analyses, from LF movement accounts (Aoun et al., 1981; Huang, 1982) to unselective binding (Pesetsky, 1987), to accounts in which a syntactic movement is obscured by other movements (Simpson and Bhattacharya, 2003), among others. We argue — based on 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 (Bhattacharya and Simpson, 2012; Manetta, 2011; Toosarvandani, 2008), 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 syntactic 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 paper is structured as follows. §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. §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 that dependency is pronounced. In §4, we broaden the discussion by comparing the syntactic properties of each languages' WH-system, and demonstrate that only Hindi-Urdu, and not Uzbek, exhibits evidence of narrow syntax WH-dependencies. Uzbek is best analyzed as a language which makes use of unselective binding, and exhibits the corresponding lack of island sensitivities. §5 concludes by discussing how the comparative analytical strategy undertaken 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 about which there has been major debate with respect to the correct analysis of their SLCs. For genuine sluicing analyses see Takahashi 1994 for Japanese and Ince 2006, 2012 for Turkish; for reduced cleft analyses see Shimoyama 1995, Merchant 1998, Fukaya and Hoji 1999, Nishiyama et al. 1996, Kuwabara 1996, Hiraiwa and Ishihara 2002 and Kizu 1997, 2000; finally, for claims that both structures are instantiated in Japanese, see Hasegawa 2008 and Iseda 2007.

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 below.

- (5) Siz kim-ga-dir pul ber-a-siz, lekin (u) kim
 You some-DAT-one money give-PRS-2SG but (3SG) who
 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 who it was.'

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 who.'

Ross' (1969) original observation was that in sluicing structures, the remnant WH-phrase bears the case marking that it would bear in the corresponding non-elliptical 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; Van Craenenbroeck, 2010; Lasnik, 2007). 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 which permit the appearance of a case marker 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 co-occur with a copula in the nominalized, embedded clause.

- (8) Siz kim-ga-dir pul ber-a-siz, lekin kim(-ga)
 You some-DAT-one money give-PRS-2SG but 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 is).’
- (9) Siz kim-dan-dir pul ol-a-siz, lekin kim(-dan)
 You some-ABL-one money take-PRS-2SG but 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 is).’

Copulas in Uzbek require a host (Sjoberg, 1963; Kononov, 1960), and thus will appear inside embedded clauses attached to the host *-kan* (KAN), the identity of which 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.

- (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 which survives the omission process in embedded nominalized

¹For reasons of space, we cite only a subset of the arguments presented in Gribanova’s 2013 paper. The empirical picture is actually more complicated than the discussion here reflects, though this does not impact the logic of our argument. There are several possible copular sources for the Uzbek SLC, some of them copular and some of them clefts. We refer to the reader to that paper for a more complete picture.

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 ((s)he/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.'

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 non-reduced 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, consistent with the subject's being a third person pronoun which matches the pivot in either an equative (12) or a predicative (13) copular clause.^{3,4}

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 amendable 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).'

²See 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.

³A 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 noted by the reviewer, the important point about the Uzbek is that agreement in (12a,13a) is retained, but invariably third person singular.

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

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

- 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 who (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
 Farhod some-ACC-one see-PST.3SG, but who-ACC
 (e-kan)-lig-i-ni bil-ma-y-man.
 (COP-KAN)-COMP-3SG.POSS-ACC know-NEG-PRS-1SG
 ‘Farhod saw someone, but I don’t know who (it is).’
 b. A: Farhod kim-ni-dir ko’r-di.
 A: Farhod some-ACC-one see-PST.3SG
 A: ‘Farhod saw someone.’
 ◊B: Siz-ni (e-kan)-lig-i-ni bil-a-man.
 B: you-ACC (COP-KAN)-COMP-3SG.POSS-ACC know-PRS-1SG
 B: ‘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.

A final note is due here with respect to 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 that are elaborated in §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 a accusative pivot in a cleft construction (15a).

- (16) A: Farhod kim-ni-dir ko’r-di.
 A: Farhod some-ACC-one see-PST.3SG
 A: ‘Farhod saw someone.’
 ◊B: Kimni?
 B: who-ACC
 ‘Whom?’

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 independent of each other, it also appears that the omission mechanism by which we arrive at the SLC is not ellipsis.

⁶Our thanks to a reviewer for pointing this out.

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 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 these processes are, the approach to SLCs adopted here leads us to expect that they should be attested in the language independent of this particular construction.

The subset of examples discussed here involves two types of copular clauses: *equative* and *predicative*.⁷ The equative copular clauses (17) establish the identity of an individual by matching that individual (in subject position) with the pivot. The predicative 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 ((s)he 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 who it (the money) is.’
- b. Siz yo’qolib ket-di-ngiz, va (siz-ning) qayer-da
 you disappeared-PST-2SG and (you-GEN) where-LOC
 (e-kan)-lig-ingiz-ni bil-ma-y-man.
 (COP-KAN)-COMP-2SG.POSS-ACC 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 (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 due to *pro*-drop. With respect to the copula, the situation is less simple. The copula is historically defective (Sjoberg, 1963), and not pronounced in the present tense.

- (19) a. Men O’zbekiston-dan-(*e-)man.
 I Uzbekistan-ABL-(*COP-)1SG
 ‘I’m from Uzbekistan.’

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

- b. Siz talaba-(*e-)siz.
you student-(*COP-)2SG
'You're a student.'
- c. U och (*e).
he/she hungry (*COP)
'He is hungry.'

Non-verbal 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 wrote-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 writing (Kononov, 1960).

As discussed in Gribanova 2013, nominalized clauses put a ban on 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 serves as the expression of past tense evidentiality. In embedded clauses, however, *-kan* is not associated with either past tense or evidentiality, and appears to be serving 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 non-obligatoriness 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 the 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 from 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).

- (22) a. Sita-ne kis-ko/*kis-ne/*kaun socaa ki Ravii-ne _____ dekhaa?
 Sita-ERG who-ACC/who-ERG/who.NOM thought that Ravi-ERG saw
 ‘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?’ (Srivstav (Dayal) 1991)

As in Uzbek SLCs, Hindi-Urdu exhibits full case-connectivity; the WH-remnant must be marked with the same case it would exhibit in the non-elided structure (23):

- (23) a. MaiN-ne yahaaN kisi-ko dekh-aa, par mujhe nahiiN pat-aa
 1SG-ERG there someone-ACC see-PFV but 1SG.DAT not know-PFV
 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.DAT not know-HAB
 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 which permits case-marked pivots. In Hindi-Urdu, as in many other languages, pivots of copular clauses must be nominative (unmarked) (Merchant, 2001; Van Craenenbroeck, 2010; Lasnik, 2007). Compare (24–25) with the Uzbek (18) above:

- (24) Us-ne koi gaaRi fix kii, magar mujhe nahiiN pa-taa vo
 3SG-ERG some car fix do.PRF.F but 1SG.DAT NEG know-HAB.M 3SG.NOM
 *kis-ko/kaunsii thii.
 which.one-ACC/which.one(NOM) 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 pat-aa vo
 3SG-ERG someone-DAT money gave, but 3SG-DAT NEG know-PRF 3SG.NOM
 *kis-ko/kaun thaa.
 who-DAT/who.NOM AUX.PST.M
 ‘They gave money to someone, but they don’t know who it was.’

Similarly, Hindi-Urdu requires that post-positions 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. Sita khaana pakaa rahii hai, par Ali-ko nahiiN pa-taa
 Sita food cook PROG AUX.PRS but Ali-DAT NEG know-HAB
 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 (that is, TP-sized) constituent is elided. The tense auxiliary *hai* (third person singular present tense form of *ho* ‘be’) (Bhatt, 2005), is elided in an apparent sluicing structure (27):

- (27) Ali koi kitaab caah-taa hai. Ham-eN nahiiN pa-taa kaunsii
 Ali some book want-HAB AUX. we-DAT NEG know-HAB which.F
~~Ali --caah-taa hai.~~
 Ali -- want-HAB 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 indeed apparent sluicing structures were the elision of a constituent smaller than TP in Hindi-Urdu, we would expect the auxiliary to grammatically appear in (27) above.

There is 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 in Uzbek, Hindi-Urdu apparent sluicing structures 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 (in (28)).

- (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 Hindi-Urdu sluices were actually reduced copular clauses. As (29)-(30) show, the copula is required except in the presence of negation.

- (29) Siitaa mer-ii dost *(he/thii/hog-ii).
 Sita my-F friend.F *(COP.PRES.3SG/COP.PAST-3SGF/COP.FUT-3SGF)
 ‘Sita is/was/will be my friend.’
- (30) Siitaa mer-ii dost nahiiN (he).
 Sita my-F friend.F NEG COP.PRES.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 we have seen above, 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 gaRi-ko fix kiy-aa, magar mujhe nahiin pa-taa kese (*thaa).
 He-ERG car-ACC fix do-PRF.M but 1SG.DAT NEG know-HAB.M how (*was)
 ‘He fixed the car, but I dont know how (*it was).’ (e.g. with what tool)
- (32) Us-ne koi gaRi fix kii, magar mujhe nahiin pa-taa kaunsii (thii).
 He-ERG some car fix do-PRF.F but 1SG.DAT NEG know-HAB.M which one (was)
 ‘He fixed some car, but I dont know which one (it was).’

For clefts with WH-pivots, only an exhaustive reading is available (33a). On the other hand, sluices are compatible with a ‘mention-some’ non-exhaustive interpretation (33b).

⁸C.f. Bhattacharya et al. (2000), who present an antisymmetric account of auxiliaries as light verbs in Hindi-Urdu and other South Asian languages.

- (33) Aap-ko kisi officer se baat karnii 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 jaantii huN
 Amit somewhere go-PFV.M and I.OBL strike AUX.3SG that I.NOM know AUX.1SG
 kahaaN.
 where
 ‘Amit went somewhere, and it seems to me that I know where.’

Second, stripping cannot precede its antecedent (backward anaphora), as in (37). Sluicing in Hindi-Urdu, on the other hand, can.

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

- (38) mujhe nahiiN pat-aa kahaaN, lekin maiN jaant-ii huN ki Amit
 1SG.OBL NEG know-PFV.M where but I.NOM know-PFV.F AUX.1SG that Amit
 kahiiN gay-aa.
 somewhere go-PFV.M
 ‘I dont 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, Karimi 2003). However, previous work (Butt and King 1996; Kidwai 1999, Kidwai 2000) suggests that the unmarked position for both interrogative and non-interrogative focus in Hindi-Urdu is low, immediately preceding the clause-final verb.

- (39) MaiN-ne kamre meN [in-hii ti:n laRkoN-ko] bheeja.
 1SG-ERG room to [these-FOC three boys-ACC] sent
 ‘I sent these three boys to the room.’ (Butt and King 1996)
- (40) KitabeN kal maiN laaya thaa.
 books yesterday 1SG brought AUX
 ‘I brought the books yesterday. (It is I who brought the books yesterday.)’ (Kidwai 2000)

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

Could it instead be scrambling which feeds sluicing-like ellipsis in Hindi-Urdu?⁹ Though the term scrambling can refer to a range of optional displacements in Hindi-Urdu with differing characteristics (Mahajan 1990, Mahajan 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 the 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).

- (42) Aap abhi kuch kar-te haiN, par mujjhe nahiiN pat-aa *kyaa*.
 2PL now something do-HAB.PL AUX.PL but 1SG.DAT not know-PFV what
 ‘Now you are doing something, but I don’t know what.’

If the movement feeding apparent sluicing was 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.

The data in this section collectively suggests that SLCs in Hindi-Urdu feature a displaced WH-remnant at the clause edge and involve elision of 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) we have an exceptional WH-movement in the narrow syntax to the left edge (Malhotra 2009, Bhattacharya and Simpson 2012). For instance, we might claim that the C head which possesses the [E] feature (marking its TP complement for non-pronunciation as in Merchant 2001) also happens to necessarily be a C head with the EPP feature, though there is no natural explanation as to why this should be so. We will also see in §4 below that this approach would have nothing to say about an additional set of 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 theoretic approach to Hindi-Urdu provides us with the tools to explain not only the properties of sluicing in the language, but also to account for a wider range of facts. Under the copy theory of movement

⁹Thanks to Veneeta Dayal and Rajesh Bhatt for bringing this question and this data to my attention. See also Merchant 2001 for a similar speculation and rejection thereof.

¹⁰A 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 pre-verbal position, it is also possible for WH-words to scramble elsewhere for information-structural 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.

(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 (Pesetsky, 1989; Fanselow and Čavar, 2001; Bošković, 2002; Nunes, 2004; Bošković and Nunes, 2007; Van Craenenbroeck and Lipták, 2013, i.a.). 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 lies 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, in which 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) is not licit:

- (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 position of interpretation. For the sake of consistency we will retain the strong/weak terminology in what follows (see Van Craenenbroeck 2010, fn. 6 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 in (46), in which the intermediate/preverbal copy is associated with strong features on the *v* head (Manetta, 2010), while the highest copy is associated with only 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) above 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
 ↑ ↑
 | |

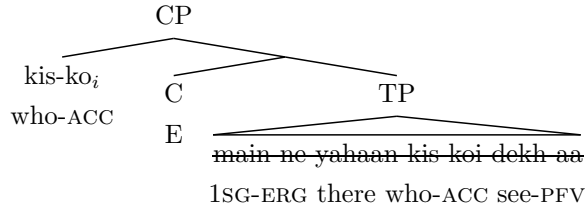
In Richards’ (1997) account, ellipsis represents a special circumstance in which (43b) does not apply and yet (43a) can be satisfied nevertheless. In the case that a constituent α is marked for non-pronunciation, if a copy associated with a head bearing weak features rests outside that constituent, it may still be pronounced, as PF would receive unambiguous instructions as to which copy to pronounce.

¹¹As 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 2014 for a recent effort of this type.

$$(48) \quad [\text{weak}] \quad \overbrace{[\alpha[\text{strong}]] \text{ X}}^{\uparrow}$$

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 associated with strong features cannot be pronounced, as it resides in a TP marked for non-pronunciation (due to the [E] feature on C (Merchant, 2001)). 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 non-pronunciation of its TP complement. The only difference between English and Hindi-Urdu is then 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 non-pronunciation.

This analysis then correctly predicts that Hindi-Urdu sluiced structures have properties quite similar to genuine sluices in languages like English, 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 post-position pied-piping find explanation in the present account, since real syntactic WH-movement to [spec, CP] does in fact take place. Similarly, it is unsurprising that material in the Tense 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

The discussion above has provided evidence for several claims about Hindi SLCs and the behavior of its WH-system. We have shown that Hindi-Urdu SLCs instantiate genuine sluicing, in terms of both the size of the constituent elided (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 non-elided Hindi-Urdu questions is pre-verbal, rather than left-peripheral. Building on ideas presented in Richards 1997, we develop the notion that the pre-verbal WH-phrase in non-elided 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 (pre-verbal) copy of the WH-phrase is inside a constituent marked for ellipsis.

In combination with Richards' (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. The core claim they make is that the sluicing patterns of a language track the overt syntax of WH-movement in that language. We have seen above that this does not hold in Hindi-Urdu. The unmarked position for both interrogative and non-interrogative focus is preverbal. As addressed above, this position cannot be understood to be a high focus projection (above TP), as in Hungarian or Farsi (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,

we have shown above that 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 in the case of eliding a constituent as large as a clause, as in sluicing, patterns distinct from those typical of the overt WH-syntax emerge. Richards’ (1997) analysis of the interaction of ellipsis and chains of movement captures this exceptionality in terms of the instructions provided to PF, and indeed suggests to us that it is precisely in elliptical contexts that we expect atypical WH-chain realization.

Van Craenenbroeck and Lipták’s (2013) analysis makes a number of further incorrect predictions for the WH-syntax of Indic languages. First, their typology predicts that languages in which we find interrogative and non-interrogative focus checking features 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 sooctii huN (ki) gaaRi-ko.
 Aisha-ERG a thing buy-PERF.F and I.NOM think-HAB.F AUX.1SG that 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) Atif-ko.
 Ram-ERG someone-DAT book give-PST and me.OBL know AUX that 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 as in (51) below, which require the strong contrastive stress indicated by italics in order to be acceptable.

- (51) She just left with someone, but I dont 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 languages with multiple WH-movement to the left periphery, if the cluster of WH-phrases can be split (for instance by an adverb), then the language should also permit sluicing with non-WH-remnants. Otherwise, the language should disallow sluicing with non-WH-remnants. Their reasoning is as follows: in languages which 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 above in (2). They 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.FSG
 ‘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.FSG really
 ‘Really, who gave what to whom?’
- (54) a. *kəmis pazpəəth kəm k’a d’ut?
 who.ERG really who-DAT what give-PST.FSG
 b. *kəmis kəm pazpəəth k’a d’ut?
 who.ERG who-DAT really what give-PST.FSG

¹²The 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 post-verbal domain.

Further, the position for non-interrogative focus in Kashmiri is identical to that of interrogative focus (immediately before the second-position verb), and the unmarked word order is (TOPIC)-(WH)FOCUS-VERB (Bhatt, 1999; Wali and Koul, 1997).

- (55) bI ti goo-s gari vakht-as peth.
 1SG FOC go.PST-1SG home time-DAT on
 ‘I too went home on time.’ (Bhatt, 1999)
- (56) Raj-an kəm-is həə-v nəv kitaab?
 Raj-ERG who.DAT show.PST-FSG 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 in contrast to Hindi-Urdu, Kashmiri speakers find this construction quite natural.

- (57) a. Ra:ʃI rani ka:Nh. Me chu basaan naan.
 Raj cook.FUT something 1SG.NOM AUX.1SG think.PRP 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.PRP 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 us 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*, as advocated for in the present paper, will permit us to use sluicing 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, we should expect to see evidence of that movement beyond sluicing. In §4 we explore other constructions associated with WH-movement, such as islands, parasitic gaps 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 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 WH-*in-situ* behavior we find in the two languages.

In the analysis above, we claim that Hindi-Urdu is in fact a WH-movement language in the narrow syntax. This process is then obscured by a PF 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 (non-syntactic) 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 manifest 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?’

- (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 knows who Ram likes.’
 *Matrix question: ‘Who does Ali know Ram likes?’ (Bhatt 2003)

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?’
- (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?’

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 scope outside finite embedded clauses as well?

Space limitations do not permit a thorough review of previous approaches to these constructions, though these typically fall into two categories. So-called ‘indirect dependency’ accounts (Kiss, 1987; Dayal, 1994, 1996; Lahiri, 2002) claim that the expletive question word is co-indexed with or replaced by the clause containing the contentful question word at the level of Logical Form (LF), while ‘direct dependency’ analyses (McDaniel, 1989; Rizzi, 1992; Mahajan, 1990, *inter alia*) 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 indirect dependency approaches, suggests that this the 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 is on the right track, we are left with two questions. First, why would the higher copy of WH-phrase be pronounced (the copy in the matrix clause) in a question like (60) instead of simply pronouncing the lower copy? And 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 Manetta 2006, 2011, we maintain that the presence of the WH-expletive in the matrix clause (and indeed in every clause in between the base position and scopal position of the WH-phrase) is required in Hindi-Urdu to satisfy the EPP 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 alternate 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 alternate pronunciation of the higher WH-phrase as *kyaa* in sluicing could be the result of 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 §4.2.1 (Malhotra and Chandra 2007, Malhotra 2011). On the whole, the fact that Hindi-Urdu only permits matrix scope of an embedded WH-XP if WH-material appears in the matrix scopal position suggests that Hindi-Urdu is a language with WH-movement in the narrow syntax.

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 we have already seen in §2, in which there are limitations on finite tense and other clause-level morphology. Both types 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 hope-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?’

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

¹⁴A reviewer asks why we do not find the WH-expletive *kyaa* 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, *v*P], and does not undergo movement. Even if we could construct a sluice containing an embedded question word taking matrix scope, since sluices in Hindi-Urdu are the elision of a TP, an expletive would always be elided.

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 et al., 1981; Huang, 1982). As we will demonstrate shortly, however, the general lack of island sensitivity in Uzbek suggests a choice of 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 miiraa kyaa khaaye-gii] pataa hai]]?*
 Ram-ERG EXPL said that Ravi-ACC this fact that Mira what eat-FUT
 know AUX
 ‘What did Ram say that Ravi knows the fact that Mira will eat?’
- b. **Raam-ne kyaa kahaa [ki siitaaa bazaar jay-egii [kyunki mohan kyaa nahiiN lay-aa]?*
 Ram-ERG EXPL said that Sita bazaar go-FUT because Mohan what NEG
 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 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 noun phrase islands, adjunct islands, relative clause islands, coordinate structures, or WH-islands. WH-expletive constructions out of islands are also ill-formed (as in (64) above) (see Malhotra 2009).

CNP-ISLAND

WH-extraction

- (65) **[kyaa ravii-ko [DP yeh baat [CP ki Miiraa t khaaye-gii]] pataa hai]?*
 what Ravi-DAT this fact ki Mira eat-FUT.F know AUX
intended: ‘What does Ravi know the fact that Mira will eat?’ (Malhotra, 2009, 35)

WH-expletive construction

- (66) **[Raam-ne kyaa kahaa [ki ravii-ko [yeh baat [ki miiraa kyaa khaaye-gii] pataa hai]]*
 Ram-ERG EXPL said ki Ravi-DAT this fact ki Mira what eat-FUT.F know AUX
intended: What did Ram say that Ravi knows the fact that Mira will eat? (Malhotra, 2009, 32-33)

WH-in-situ

- (67) **Raam-ko ye baat ki Siita kis-se mili pata hai?*
 Ram-DAT that claim ki Sita who-with met know AUX
intended: ‘Who does Ram know the claim that Sita met?’

ADJUNCTS

WH-extraction

- (68) **Raam-ne kyaa kahaa [ki siitaaa bazaar jaayegii [kyunki mohan t nahiiN laayaa]]*
 Ram-ERG what said ki Sita market go-FUT because Mohan not brought
intended: ‘What did Ram say that Sita will go to the market because Mohan didn’t bring?’

WH-expletive construction

- (69) *Raam-ne kyaa kaha [ki siitaaa bazaar jaayegii [kyunki mohan kyaa nahiiN laayaa]]
Ram-ERG EXPL said ki Sita market go-FUT because Mohan what not brought
intended: ‘What did Ram say that Sita will go to the market because Mohan didn’t
bring?’ (Malhotra, 2009, 32-33)

WH-in-situ

- (70) *Raam-ne kaha [ki siitaaa bazaar jaayegii [kyunki mohan kyaa nahiN lay-aa]]
Ram-ERG said ki Sita market go-FUT because Mohan what not brought-PRF
intended: ‘What did Ram say that Sita will go to the market because Mohan didn’t
bring?’

RELATIVE CLAUSE

WH-extraction

- (71) *Raam-ko kyaa [DP vo laDkaa [CP jo t laayaa]] pasand hai
Ram-DAT what DEM boy REL bought like AUX
intended: ‘What does Ram like the boy that bought?’ (Malhotra, 2009, 58)

WH-expletive construction

- (72) *Raam-ko kyaa [DP vo laDkaa [CP jo kyaa lay-aa]] pasand hai
Ram-DAT EXPL DEM boy REL what bought-PRF like AUX
intended: ‘What does Ram like the boy that bought?’

WH-in-situ

- (73) *Raam-ko [DP vo laDkaa [CP jo kyaa lay-aa]] pasand hai
Ram-DAT DEM boy REL what bought-PRF like AUX
intended: ‘What does Ram like the boy that bought?’

WH-ISLAND

WH-extraction

- (74) *Raam kaunsaa kamraa pataa kar rahaa hai ki kaunsii laRkii t kiraaye-par le-gii
Ram which room know do ASP AUX ki which girl rent-LOC take-FUT
intended: ‘Which room will Ram find out which girl will rent?’
- (75) *Raam-ne kis-ko puchaa ki kyaa miiraa-ne t dekhaa
Ram-ERG who-ACC asked ki whether Mira-ERG saw
intended: ‘Who did Ram ask whether Mira saw?’ (Malhotra 2009: 78)

WH-expletive construction

- (76) *Raam-ne kyaa puchaa [ki kyaa miiraa-ne kis-ko dekh-aa]
Ram-ERG EXPL asked ki whether Mira-ERG who-ACC saw-PFV
intended: ‘Who did Ram ask whether Mira saw?’

WH-in-situ

- (77) *Raam-ne puchaa [ki kyaa miiraa-ne kis-ko dekh-aa]
Ram-ERG asked ki whether Mira-ERG who-ACC saw-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 (Huang, 1982), Uzbek WH-phrases can take matrix scope from their *in-situ* positions. Also like Chinese, there is an argument-adjunct asymmetry when it comes to relative clauses: adjunct WH-phrases in relative clauses are not licensed (80), whereas argument WH-phrases are (79).

- (79) a. Siz kim kecha sot-ib ol-gan kitob-ni o'qi-di-ngiz?
 you who yesterday buy-CONV 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?'
- (80) *Siz Hasan qachon sotib 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?' c.f. (79a)

Interestingly, this asymmetry also extends to other kinds of islands, namely adjunct islands, where WH-arguments are licensed (81), but adjunct WH-phrases are not (82):

- (81) 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?'
 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?'
- (82) 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?'

¹⁵A reviewer points to there being some possibility that speakers are interpreting the examples in (79)–(87) as echo or quizmaster questions, potentially ameliorating structures which would be unacceptable as true informational questions. The same reviewer points out that the way to eliminate the undesirable readings is to elicit (79)–(87) as embedded questions. (79)–(87) 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 provided below.

- (78) a. Hasan siz kim kecha sotib olgan kitobni o'qidingiz deb so'ra-di.
 Hasan you who yesterday buy-CONV take-PST.PTCP book-ACC read-PST-2SG C ask-PST.3SG
 'Hasan asked you read the book that who bought yesterday.' c.f. (79a)
 b. *Zamira siz Hasan qachon sotib 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.' c.f. (80)
 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.' c.f. (82a)
 d. *Hasan kim-ning kitobni o'qi-sh-i-ning sabab-i men-ga ma'alum 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.' c.f. (86b)

- 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 irrelevant of the embedding strategy (nominalized clause (83) versus direct complementation via a C head (84)).

- (83) *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)?'
- (84) *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 noun phrases of the first type involve a noun (below, *sabab* 'reason') which has a genitive-possessive nominalized clause in its specifier position; this explains the two instances of genitive case and possessive agreement marking below.

- (85) 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]_{NP}]-ning_{DP}] sabab-i_{DP} men-ga ma'alum.

WH-phrases in such complex noun phrases 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.

- (86) 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
 ma'alum?
 known
intended: 'The reason that Farhod read what is known to me?'
- b. *Kim-ning kitobn-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?'

There is a second type of complex noun phrase which is the complement of a postposition (below, *haqida* 'about'). WH-phrases in this type of complex NP trigger *no* island violations, as expected.

- (87) 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 we 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 is island sensitive in a very limited set of environments, closer to what we

find in Chinese and Japanese. 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

The question of whether sluicing repairs island violations in Hindi-Urdu has been controversial, and to this point the data has 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 non-pronunciation 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.

- (88) *Ram-ne Sita aur ek larke-ko saat saat dekhaa, par mujhe nahiiN pataa ki kis-ko.
 Ram-ERG Sita and a boy-ACC with with saw but I.DAT not know ki who-ACC
intended: ‘Ram saw Sita and a boy together, but I dont know who.’ (judgment Mahajan’s)

By contrast, Malhotra (2009) and Chandra and Ince (2007) 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 in direct conflict with Mahajan’s:

- (89) Ravii-ko [DP yeh baat [CP ki Miiraa kuch khaaye-gii]] pataa hai] par maiN
 Ravi-DAT this fact ki Mira something eat-FUT.F know AUX but I
 nahiiN jantaa ki kyaa
 not know ki what
 ‘Ravi knows the fact that Mira will eat something, but I dont 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 clear explanation. But overall they write: “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 non-linguists to provide grammaticality judgments for the following: (a) non-sluiced sentences containing island violations, (b) sluices not featuring island violations, and (c) sluicing out of islands. Of these ten speakers, nine accepted sluices with extraction out of a relative

¹⁶Further 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 Hindi-Urdu has WH-movement in the narrow syntax (for similar observations for Romanian, see Bošković 2001).

¹⁷As a reviewer points out, this sentence 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 (89)–(90).

clause, eight accepted sluices with extraction out of a coordinate structure, and eight accepted sluices with extraction out of a complex noun phrase. One speaker spontaneously produced an alternative example of a sluice with extraction out of a complex noun phrase with the finite clause inside the noun phrase extraposed to the right edge of its embedding clause, as in (90).¹⁸

- (90) Piita-ji is afaavah-ko maante haiN ki Ram-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 not know AUX who-ACC
 ‘Father believes this rumor that Ram kissed someone, but we dont 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 corresponds 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 the Van Craenenbroeck and Lipták (2013) formulation of the connection between a language’s *WH*-system and the availability of genuine sluicing, repeated below.

- (91) 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 pre-verbally — we take this to be the pronunciation of an intermediate copy in a chain that spans 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 the features identical to strong *WH*-features, contra Van Craenenbroeck and Lipták (2013). The Hindi-Urdu facts show us 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). Based on 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.

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

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 to Japanese, the island facts are once again significantly different, and the analysis of 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 recently 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 there are differences between WH-scoping and the potential for island-violation repair between the two languages is a topic for additional investigation.

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