Copy theory in wh-in-situ languages: Sluicing in Hindi-Urdu

As has been widely reported in the literature, Hindi-Urdu, traditionally understood to be a wh-in-situ language, features a construction that appears to be sluicing:

(1) MaiN-ne yahaaN kisi-ko   dekh-aa lekin mujjhe nahiiN pat-aa   kis-ko.
     1SG-ERG there   someone-ACC see-PFV but 1SG.DAT not   know-PFV who-ACC
     'I saw someone there, but I don't know who.'

Many have suggested that apparent sluicing in wh-in-situ languages challenges the influential approach to sluicing which posits that the syntax of a sluice is the syntax of an ordinary wh-question (Ross 1969, Merchant 2001), and have proposed alternative strategies for deriving the sluicing-like string, including reduced copular clauses (RCCs) (Kizu 1997, Merchant 1998, *i.a*), exceptional focus fronting (Toosarvandani 2008, Malhotra 2009), and ellipsis of constituents smaller than a clause (Manetta 2006).

   This paper instead proposes that apparent sluicing in a wh-in-situ language like Hindi-Urdu can in fact be analyzed in a manner consistent with Merchant's (2001) core approach. Recent work on processes of rescue-under-PF-deletion (Bošković 2011) has highlighted the relevance of the copy theory of movement (Chomsky and Lasnik 1993, Chomsky 1993, *i.a.*) in ellipsis contexts. If sluicing in Hindi-Urdu is an exceptional instance of the pronunciation of the top copy in a wh-chain (located in Spec, CP) under pressure from Recoverability (Pesetsky 1998), then regular wh-questions and sluiced structures in Hindi-Urdu will only be differentiated at PF (strikethrough represents non-pronunciation).

(2) I saw someone there, but I don't know…
     a. …~~kis-ko~~   main-ne yahaan kis-ko   dekh-aa   REGULAR WH
     b. …kis-ko   ~~main-ne yahaan kis-ko   dekh-aa~~   SLUICE
          who-ACC 1SG-ERG there   who-ACC see-PFV
       '…who (I saw there)'.

There is significant evidence that apparent sluicing in Hindi-Urdu is the elision of a clause-sized constituent following wh-movement. Hindi-Urdu exhibits full case-connectivity ((1) & (3)), requires post-position pied-piping (4), and the tense auxiliary *hai*, located in T (Bhatt 2005), is elided in a sluice (5).

(3) Kisi-ne   Aisha-ko dekh-aa par mujhe nahiiN pa-taa   kis-ne/*kaun
     Someone-ERG Aisha-ACC see-PFV but 1SG.DAT not   know-HAB who-ERG/*NOM
     'Someone saw Aisha, but I don't know who.'

(4) Sita khaana pakaa rahii hai,   par Ali-ko nahiiN pa-taa   kis-ke liye:/*kis/*kaun
     Sita food   cook PROG AUX.PRS but Ali-DAT NEG know-HAB who-for/who.OBL/who.NOM
     'Sita is cooking but Ali doesn't know for whom'.

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

Malhotra 2009 and Manetta 2011 provide further evidence that apparent sluicing in Hindi-Urdu is not plausibly an RCC, stripping (Hankamer 1979, Lobeck 1995), or the elision of a projection of vP (c.f. Manetta 2006). Sluicing in Hindi-Urdu is also unlikely to be best understood as deletion following movement to a high focus projection (above TP); previous work (Kidwai 2000) suggests that the position for both interrogative and non-interrogative focus in Hindi-Urdu is preverbal. However, since under any account Hindi-Urdu does not have regular overt wh-movement to the clausal periphery, something exceptional must underlie the derivation of apparent cases of genuine sluicing as in (1). In the analysis proposed in this paper, that exceptionality rests in which copy is pronounced at PF; this dovetails well with the account of sluicing more generally as a PF-deletion phenomenon. Merchant's (2001) account of sluicing requires wh-movement to a clause peripheral position and subsequent PF-deletion of that clause under certain semantic identity conditions with an antecedent. Technically, this is implemented by the presence of the feature [E] on the C head of the sluiced clause, providing instructions for the non-pronunciation of the TP complement of C at PF (leaving only the wh-remnant in Spec, CP).

   Under copy theory, wh-movement operations are understood as copying operations, leaving behind (potentially) multiple copies of the displaced constituent. Among languages that exhibit wh-in-situ characteristics, recent work has explored the possibility that the copy privileged for phonological

realization might be the lowest copy in a wh-chain (Groat and O'Neil 1996; Reintges, Lesourd, & Chung 2006; Reintges 2007; *i.a*). Further, we will follow Franks (1998) (see also e.g. Bošković and Nunes 2007, Bošković 2011) in assuming that in a given language the pronunciation of a particular copy in a wh-chain at PF is a matter of preference, which can be overridden if pronunciation in the preferred position leads to a PF violation.

A sluicing structure in Hindi-Urdu is a marked instance in which the lower copy cannot be pronounced, as it resides in a TP marked for non-pronunciation (due to the [E] feature on C). For this reason, the top copy must be pronounced or else the sluiced structure will violate RECOVERABILITY ("A syntactic unit with semantic content must be pronounced unless it has a sufficiently local antecedent (Pesetsky 1998:342)"). (6a) schematizes the PF deletion of the sluiced TP, as well as the preferential deletion of the top copy of the wh-movement dependency, violating recoverability of the wh-phrase. (6b) is the favored output, as the preference for non-pronunciation of the top copy in Hindi-Urdu is overridden by the need to pronounce the syntactic unit with semantic content.

(6) I saw someone there, but I don't know…
   a. …~~kis-ko~~ ~~main-ne yahaan kis-ko~~ ~~dekh-aa~~   *RECOVERABLE
   b. …kis-ko   ~~main-ne yahaan kis-ko~~ ~~dekh-aa~~   SLUICE
      who-ACC 1SG-ERG there   who-ACC see-PFV
   '…who ~~I saw there~~'.

This analysis then correctly predicts that Hindi-Urdu sluiced structures have properties quite similar to genuine sluices in languages like English (unlike wh-in-situ languages which employ other strategies to derive sluicing-like strings – see e.g. Gribanova 2011 for the use of the RCC strategy in Uzbek). Case connectivity, post-position pied-piping, some degree of island repair (Malhotra 2009), and the elision of material in the Tense head, among other properties, find clear explanation in this analysis. This paper pursues a continued refinement in the implementation of copy theory in wh-in-situ languages and importantly, contributes to the current line of work investigating intra-linguistic variation among types of wh-in-situ languages and the ways in which certain constellations of properties of wh-dependencies and ellipsis processes in these languages are best understood.

Selected References: **Bošković, Ž**. 2011. Rescue by PF Deletion, Traces as (Non)interveners, and the *That*-Trace Effect. *Linguistic Inquiry* 42:1. **Bošković, Ž., and J. Nunes**. 2007. The copy theory of movement: A view from PF. in N. Corver and J. Nunes (eds) *The copy theory of movement*, 13-74. Amsterdam: John Benjamins. **Bhatt, R.** 2005. Long Distance Agreement in Hindi-Urdu. *Natural Language and Linguistic Theory* 23: 757-807. **Chomsky, N. and Lasnik, H**. 1993. The theory of principles and parameters. In *Syntax: an international handbook of contemporary research.* von Stechow, J. Jacobs A., Sternefeld, W. & Vennemann, T. (eds.). Berlin: De Gruyter. **Franks, S**.1998. Clitics in Slavic. Position paper for Comparative Slavic Morphosyntax workshop, held at McCormick's Creek State Park, 5–7 June. **Gribanova, V.** 2010. Two types of reduced copular constructions in Uzbek nominalized clauses. Presented at the *7th Workshop on Altaic Formal Linguistics*, USC. **Manetta, E**. 2011. *Peripheries in Kashmiri and Hindi-Urdu: The Syntax of Discourse-Driven Movement.* John Benjamins. **Malhotra, S**. 2009. Sluicing in Hindi-Urdu. Presented at South Asian Languages Analysis Roundtable; University of North Texas, October, 2009. **Toosarvandani, M**. 2008. Wh-movement and the syntax of sluicing. *Journal of Linguistics* 44:677–722. **Merchant, J.** 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press**. Pesetsky, D. 1998.** Some Optimality Principles of Sentence Pronunciation. In *Is the Best Good Enough*? Barbosa, Fox, Hagstrom, McGinnis & Pesetsky (eds) , Cambridge: MIT Press. 337–383**. Reintges C., P. LeSourd, & S. Chung. 2006.** Movement, Wh-Agreement, and Apparent Wh-in-situ. *Wh-Movement Moving On*. L. L.-Sh. Cheng et N. Corver (eds.), Cambridge MA: MIT Press, 165-194. **Reintges, C.** 2007. Variable Pronunciation Sites and Types of Wh-in-Situ. *The Copy Theory of Movement*. J. Nunes et N. Corver (eds) Amsterdam: John Benjamins, 249-287. **Ross, J.** 1969. GUESS WHO? In R. Binnick, A. Davidson, G. Green, and J. Morgan (Eds.), *Papers from the 5th Regional Meeting of the Chicago Linguistic Society*, 252–286, Chicago, IL. Chicago Linguistic Society.