Conditional *wh*-questions with VP Ellipsis

Introduction. (1,2) are examples of *conditional* wh-*questions with VP Ellipsis*, i.e., *wh*-questions modified with an *if*-clause in which there is VP Ellipsis. The elided object has a (*wh*-)bound reading in (1) and an indefinite reading in (2).

(1) What museum would you visit if $[\text{Sally}]_F$ would?
LF: $[\text{What museum}]_1$ would you visit t_1 if $[\text{Sally}]_F$ would <visit it_1>?

(2) If you $[\text{could}]_F$, what advice would you give to your younger self?
LF: If you $[\text{could}]_F$ <give some advice to your younger self>,
what advice would you give to your younger self?

I ask two questions: **(Q1)** What are the distributions of the bound and indefinite readings, and why? **(Q2)** How does VP Ellipsis result in the two readings? For (Q1), I show that the bound reading results from an final *if*-clause, and the indefinite reading from an initial one. I argue that the interpretation of the elided object depends on whether the *if*-clause is interpreted inside (bound) or outside (indefinite) the *wh*-question. (Q2) is interesting because the indefinite reading constitutes new evidence that VP Ellipsis allows a mismatch between an antecedent *wh*-phrase and an elided indefinite, and supports treatments of *wh*-phrases that take them to share denotations with indefinites. I explain this mismatch using a VP Ellipsis licensing condition based on semantic identity (Heim 1997) and a Hamblin (1973) semantics for questions, whereby *wh*-phrases and indefinites are both alternative generators.

The readings are distinct. Given the context (3), different responses are felicitous to the bound (4a) and indefinite (4b) readings of the same question. Thus, the two readings deserve their own LFs.

(3) Bob likes Kraftwerk and is a contrarian. If you ask him to play a specific Kraftwerk song, he will play something else. If you let him choose, he will play "Autobahn."

(4) a. - $[\text{Which Kraftwerk song}]_1$ would Bob play t_1 if he were asked to?
- No song. / #"Autobahn."

b. - If Bob were asked to, which Kraftwerk song would he play?
- #No song. / "Autobahn."

Q1: Bound iff *if*-clause is inside the *wh*-question. Note that the indefinite reading is not available in (1), nor is the bound reading available in (2) as long as the *if*-clause is understood as the premise of the *wh*-question (Haegeman 2003). I claim that the elided object must have the bound reading if the *if*-clause is interpreted low, i.e., inside the *wh*-question (5), while it must have an indefinite reading if the *if*-clause is interpreted high, i.e., outside the *wh*-question (6). The bound reading with a high *if*-clause (6) is ruled out simply because the elided object cannot be bound by the *wh*-phrase. Later, I will explain how the indefinite reading with a low *if*-clause (5) is ruled out.

(5) $[_{CP}$ [which museum]$_1$ $[_{TP}$ $[_{TP}$ would $[_{vP}$ you visit t_1]]
$[_{CP}$ if Sally did <visit {it_1/*some museum}>]]]

(6) $[_{CP}$ $[_{CP}$ if you could <give {some advice/*it_1} to your younger self>]
$[_{CP}$ [what advice]$_1$ would you give t_1 to your younger self]]

Three predictions verify my claim. First, a quantificational subject of the *wh*-question can bind into the *if*-clause iff the elided object has the bound reading (7,8). The intended indefinite reading of (8) is not problematic on its own, as (8) would have been grammatical if there were no VP Ellipsis.

(7) $[\text{Which book}]_1$ would $[\text{no man}]_2$ read t_1 if his_2 parents told him_2 not to <read it_1>?

(8) *If she_2 could <give some advice to her_2 younger self>,
what advice would $[\text{no woman}]_2$ give to her_2 younger self?

Second, if the subject of the *wh*-question corefers with a proper name in the *if*-clause, a Condition C violation arises iff the elided object has the bound reading (9,10).

(9) *$[\text{Which book}]_1$ wouldn't he_2 read t_1 if John_2 was told by his_2 parents not to <read it_1>?

(10) If Sally_2 could <give some advice to her_2 younger self>,
what advice would she_2 give to her_2 younger self?

Third, assume the *if*-clause in constructions of the form *if P then Q* is base-generated above the *then*-clause (Bhatt & Pancheva 2006, Iatridou 1991). A conditional *wh*-question whose *wh*-question is prefixed with *then* would then force a high interpretation of the *if*-clause, ruling out the bound reading but not the indefinite reading. This prediction is borne out by (11,12).

(11) *If Sally did <visit it_1>, then [which museum]$_1$ would you visit t_1?

(12) If you could <give some advice to your younger self>,
then what advice would you give to your younger self?

Q2: Ellipsis licensing. I adopt Heim's (1997) VP Ellipsis licensing condition based on semantic identity: VP_E may be elided iff VP_E is contained in a constituent E that contrasts with a constituent A that contains VP_A, the antecedent of VP_E. E *contrasts with* A if neither contains the other and they have equal denotations except focus-marked parts. I adopt Hamblin semantics, whereby *wh*-phrases and indefinites are both alternative generators. *Wh*-phrases are associated with Q, the interrogative C head. Indefinites are associated with the $\exists$ operator, whose interpretation is defined syncategorematically in (13). $\exists$ existentially closes the alternative propositions propagated from indefinites. The operators effectively mark the scope of the alternative generators. Thus, Parallelism (Williams 1977), a robust generalization about ellipsis, may be derived by constraining the definition of contrast with the condition (14). I assume syntactic reconstruction of subject and head movement.

(13) $[\![\exists\ \alpha]\!]^g = \{\ \lambda w_s\ .\ \exists p_{st} \in [\![\alpha]\!]^g\ .\ p\ (w)\ \}$

(14) If E and A respectively contain alternative generators X_E and X_A, which are associated with operators Op_E and Op_A respectively, then E must contain Op_E and A must contain Op_A.

Consider the indefinite reading (2), whose LF is (15). Focus-marking on the modal *could* allows us to find *would* as its focus alternative, thus contrasting E with A and predicting ellipsis licensing.

(15) $[_{CP}\ [_{CP}$ if $\mathbf{[}_E\ \exists$ $[\text{could}]_F$ you <give some advice to your younger self> $_E\mathbf{]}$]
$[_{CP}\ \mathbf{[}_A$ Q would you give [what advice] to your younger self $_A\mathbf{]}$]]

As I promised earlier, I show how an indefinite reading is predicted to be impossible with a low *if*-clause (5). Its LF (16) shows unescapable antecedent containment, as the *if*-clause is interpreted at its base position between the *wh*-phrase and its associated operator Q, i.e., inside A.

(16) $*\mathbf{[}_A\ [_{CP}$ Q $[_{TP}\ [_{TP}$ would $[_{vP}$ you visit [which museum]]]
$[_{CP}$ if $\mathbf{[}_E\ \exists$ $[\text{Sally}]_F$ would <visit some museum> $_E\mathbf{]}$]]] $_A\mathbf{]}$

The bound reading displays a *Co-binding* configuration (Takahashi & Fox 2005). Consider an LF (17) where the *wh*-phrase QRs and semantically binds the elided object. Ellipsis licensing is predicted by contrasting the elided and antecedent VPs.

(17) $[_{CP}$ [which museum] $\lambda 1$ $[_{TP}\ [_{TP}$ would $[_{vP}$ you $\mathbf{[}_A$ visit t_1 $_A\mathbf{]}$]]
$[_{CP}$ if Sally did $\mathbf{[}_E$ <visit it_1> $_E\mathbf{]}$]]]

Conclusion. I introduce a new construction – conditional *wh*-questions with VP Ellipsis – and show that VP Ellipsis allows a mismatch between an antecedent *wh*-phrase and an elided indefinite. This supports the view that ellipsis licensing is driven by a semantic identity condition (Merchant 2019), and provides direct evidence that *wh*-phrases and indefinites have the same denotation in English, a popular assumption in question semantics. In the paper, I go over ellipsis licensing in more detail, providing denotations for E's and A's, and I discuss why all the indefinite readings mentioned in this abstract seem to require embedding under a modal in a conditional.

Refs. **Heim**, I. 1997. "Predicates or formulas? Evidence from ellipsis." *SALT 7.* **Haegeman**, L. 2003. "Conditional clauses: external and internal syntax." *Mind & Lang* 18(4). **Bhatt**, R. & R. **Pancheva**. 2006. "Conditionals." *Blackwell Companion to Syntax,* Blackwell. **Iatridou**, S. 1991. "Topics in conditionals." MIT diss. **Williams**, E. 1977. "Discourse and logical form." *LI* 8(1). **Takahashi**, S. & D. **Fox**, 2005. "MaxElide and the Re-binding problem." *SALT 15.* **Merchant**, J. 2019. "Ellipsis: a survey of analytical approaches." *Oxford Handbook of Ellipsis*, OUP.