What to do about what to do? *Wh*-infinitives as topic-setting questions

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Goals and main claims

Research topic: how do root *wh*-infinitives (INFQs) function as speech acts:

(1) [Staring at the menu]   (2) [Discussing journals with your co-author]
     (Hmm,) What to eat?   (Hmm,) Where to send our manuscript?

We analyze INFQs as **topic-setting questions**: Speaker assumes that no salient answer is currently available to resolve the issue raised by the question, but prompts collective deliberation toward a resolution.

N.B. We set aside non-information seeking *wh*-infinitives:

(3) The emergency room: when to go, and when not to.

Pragmatic properties

Assumptions accompanying canonical question acts (Farkas, 2022):

Canonical question property	INFQS
Speaker ignorance	✓
Addressee competence	weakened
Addressee compliance	✓
Issue resolution goal	✓

Sp does not assume the Ad knows the answer to an INFQ:

(4) Where to stay in Vancouver? #I know you know!

INFQs are not Conjectural Questions (e.g. Littell et al., 2010; Eckardt, 2020). They are not used solely as statements of curiosity.

(5) [Realizing after a while that you got on the wrong bus]
     a. (I wonder) where we might be going. . .   b. #Where to go?

Semantic properties

True questions: INFQs embed under canonical question-embedding predicates (Bhatt, 1999); they can coordinate with finite questions.

(6) a. {I asked/I know/the question is} where to go next.
     b. Where to go next and how are we getting there?

Wh-word restriction: INFQs are incompatible with *why*:

(7) a. Hmmm {**what / who / which dish**} to bring to the party?
     b. Hmmm {**whether / where / when / how**} to throw the party?
     c. #Hmmm **why** to throw the party?

Modal constraints: INFQs are modal. They have a circumstantial base, often with a bouletic or teleological ordering source. They are never epistemic.

(8) a. What to teach next year? ≈ What {could/should} I teach next year?
     ≠ What {will/might} I teach next year?

Future reading: INFQs are future-oriented. They are incompatible with adverbials such as *yesterday*:

(9) a. #What to teach yesterday? b. What should I have taught yesterday?

Semantic analysis

Hamblin-Karttunen semantics for questions as a set of possible answers. The *wh*-word binds the variable denoted by the trace.

(10) $\llbracket PRO\ to\ eat\ t_1 \rrbracket^g = \lambda t\,\lambda w\,.\,\textbf{eat}(g(1))(PRO)(t)(w)$

Partial-control infinitives (Landau, 2000): PRO is interpreted as Sp by default or a superset including Sp/controller.

(11) a. # **I** will meet.

      b. The board informed **me** [when to meet next].

      c. [We are adjourning our meeting, I ask the chair:]
         When to meet next?

Future orientation: We propose a version of Abusch (1985)'s WOLL that composes with the *v*P layer—a move Wurmbrand (2004) also implements to represent future-oriented infinitives more generally. It existentially closes the time of the *v*P t and introduces another time t' that precedes t:

(12) $\llbracket \text{WOLL}\ PRO\ to\ eat\ t_1 \rrbracket^g = \lambda t'\,\lambda w\,.\,\exists t[t' < t \wedge \textbf{eat}(g(1))(PRO)(t)(w)]$

Modality: The modality of INFQs is situated in the specifier of the infinitival [+Q] complementizer (Bhatt, 1999). We implement BEST which yields worlds via the modal base f and ordering source g (Kratzer, 1977, 1981). BEST is defined iff f is a circumstantial base. C$_{[+Q]}$ also shifts the proposition into a proposition set, and *who* then binds the variable denoted by its trace:

(13) $\llbracket what\ C_{[+Q]}\ \text{WOLL}\ PRO\ to\ eat\ t_1 \rrbracket = \{p : \exists x[p = \lambda w.\exists w' \in \text{BEST}(f(w), g(w)):$
      $\exists t[t_c < t \wedge \textbf{eat}(x)(PRO)(t)(w)]]\}$

In words: *a set of propositions p that varies with respect to an individual x eaten by PRO at time t that follows the utterance time t_c in worlds w that are circumstantially optimal.*

This denotation does **not** account for INFQs as topic-setting questions.

The Table model of Farkas and Bruce (2010)

We model the discourse effects of uttering an INFQ using the Table Model, which consists of the following components (definitions from Farkas and Bruce 2010; Farkas 2022; Woods and Haegeman 2023).

- The denotation of a sentence is a set of propositions/an *issue I*. **Info(I)** is the informative content of I: $\cup I$.
- **Discourse commitments** of each discourse participant x, DC$_x$, is the set of propositions x has publicly committed to in the current conversation.
- **The Table:** a set of active issues awaiting resolution.
- **The projected set (ps):** a set of preferred discourse moves/commitments as envisioned by Sp upon making a particular utterance.

DC$_{Sp}$	Table	DC$_{Ad}$
Info(I)	$\{p_1, p_2, p_3, \dots\}$	
	ps: {DC$_{Ad}$ ∪ $\{p_1\}$, DC$_{Ad}$ ∪ $\{p_2\}$, DC$_{Ad}$ ∪ $\{p_3\}$, ...}	

Fig. 1: Conversational state following the utterance of a wh-interrogative.

INFQS as marked questions

A neo-Gricean pragmatics: in comparison to canonical *wh*-questions (as in Fig. 1), INFQs are *marked* question constructions.

Their markedness stems from being **insubordinate structures**: root-level utterances with subordinate-clause syntax (cf. Evans, 2007). This is shown in the markedness relation in (14).

(14) *Wh*-questions < INFQS

Elsewhere, non-finite root clauses also have conventionalized (expressive/exclamative) discourse effects:

(15) Oh, to be in England Now that April's there! (Robert Browning, *Home Thoughts from Abroad*, cited in Jespersen (1933); Kjellmer (1982))

Proposal: We take from Farkas's (to appear) work on Rhetorical Questions the idea that certain speech acts can be associated with a *mandatory conversational implicature* (CI) (Lauer, 2014). The CI associated with INFQs is given in (16).

(16) **Immediate public goal when asking an INFQ with the propositional content** I: When asking an INFQ, Sp's immediate public goal is to collectively resolve the issue I.

INFQS in the Table: INFQs place Info(I) on the Table and signal that both Sp and Ad should **jointly** commit to a subset of Info(I) in order to resolve it—contrast with Fig. 1, where only Ad participates in the projected set.

DC$_{Sp}$	Table	DC$_{Ad}$
Info(I)	$\{p_1, p_2, p_3, \dots\}$	
	ps: {DC$_{Sp}$ ∪ DC$_{Ad}$ ∪ $\{p_1\}$, DC$_{Sp}$ ∪ DC$_{Ad}$ ∪ $\{p_2\}$, ...}	

Fig. 2: Conversational state following the utterance of an INFQ.

It follows that INFQs are not felicitous in contexts where Sp assumes Ad can immediately resolve the issue on their own, as in (17).

(17) [Detective D is interrogating Suspect S]
      a. Tell me where to find the stolen jewels!
      b. #Where to find the stolen jewels?

Taking Stock

- We include INFQs among the types of non-canonical questions that involve the weakening of Addressee competence (see Farkas 2022 and Woods and Haegeman 2023). INFQs signal that all discourse participants should jointly deliberate toward resolving the issue they introduce, thereby functioning as topic-setting questions.

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