Vajon kérdés-e, vagy nem?
`Is it a question or not, I wonder'

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International Conference on the Structure of Hungarian (ICSH 11)
2013

Dramatis personae

-e	polar (=yes/no) question particle alternates with rising intonation in main clauses suffixed to the finite V (or to the focus, when that V is null)
vagy nem	`or not'
vajon	optional question-modifier to be dubbed "puzzle particle"

8 ways of saying, `Is he/she asleep?'

Alszik?	[rising yes/no q. intonation]
Alszik-e?	[falling declarative int.]
Alszik vagy nem?	(sem)
Alszik-e vagy nem?	(sem)
Vajon alszik?	[rising yes/no q. intonation]
Vajon alszik-e?	[falling declarative int.]
Vajon alszik vagy nem?	(sem)
Vajon alszik-e vagy nem?	(sem)

6 ways of saying, `We were making guesses at whether he/she was asleep'

* Találgattuk, hogy alszik.	
Találgattuk, hogy alszik-e.	
Találgattuk, hogy alszik vagy nem.	(sem)
Találgattuk, hogy alszik-e vagy nem.	(sem)
* Találgattuk, hogy vajon alszik.	
Találgattuk, hogy vajon alszik-e.	
Találgattuk, hogy vajon alszik vagy nem.	(sem)
Találgattuk, hogy vajon alszik-e vagy nem.	(sem)

What is the role of -e?
What makes a (yes/no) question?
What is the role of vajon?

Are -e and vajon just two question-related particles, or do they belong to a larger family? If yes, what family?

I'll argue that...

- -e does **not create** a polar interrogative meaning. But it **ensures** that its clause is a polar interrogative, by **requiring** to be in a local environment of multiple alternatives.
- vajon **prevents** the interrogative it attaches to from being answer-seeking, by **requiring** to be in a local environment of multiple alternatives.
- Formalized using Inquisitive Semantics, both particles want to be in a "**possibility-preserving** environment."
- Both -e and vaj(j)on belong to a **family** of morphemes with basically the same requirement. Other members are valaki, valami fa, X vagy Y, vagy X vagy Y, valami száz kiló, vagy száz kiló, való, vagyok, vagyon>van.

Hamblin and Karttunen

whether John walks / Does John walk?
{{w: walk(w)(j), {w: ¬walk(w)(j)}} *equivalently,*
{p : p = ^John walks ∨ p=^John doesn't walk}

Predicts that polar questions can be formed with a whether-like particle/V-to-C/prosody, or with "or not".

If α is a sentence, the proto-question ?α is λp[ˇp ∧ p=α].
If β is a proto-question, whether β is λp[β(p) v [¬∃q[β(q) & p=^¬∃q[β(q)]]]]

Indeed

(same for Russian with -li)

Alszik? ↗	Alszik-e? ↘	Alszik vagy nem?
sleeps	sleeps-E	sleeps or no(t)

Találgattuk,	hogy	alszik-e.
were.guessing.we	SUBORD	sleeps-E

Találgattuk,	hogy	alszik	vagy	nem
were.guessing.we	SUBORD	sleeps	or	no(t)

But also

(same for Russian with -li)

Alszik-e	vagy	nem?
sleeps-E	or	no(t)

Találgattuk,	hogy	alszik-e	vagy	nem.
were.guessing.we	SUBORD	sleeps-E	or	no(t)

	whether/if he was asleep.
We wondered	whether/if he was asleep or not.
	whether/*if or not he was asleep.

Embarras de richesses

Too many actors for the same role.
If the meaning of whether/-e/-li is "or not",
how can the particles co-occur with or not?

How to avoid the embarrassment?

The particles require that the node above be interpreted as a yes/no disjunction, but neither bring this about, nor care how it is brought about.

Three possible ways to satisfy the requirement of -e

`he's asleep or not' *"or not" is accommodated*

Alszik -e
`he's asleep'

`he's asleep or not'

Alszik vagy nem
`he's asleep' `or not'

`he's asleep or not'

Alszik -e vagy nem
`he's asleep' `or not'

Agenda

Is -e the only grammatical morpheme that poses a requirement of this sort, without doing the job itself?

If not, what other morphemes do that?

What is the general form of their requirement?

What makes accommodation of "or not" possible?

Disjunctions in Sinhala
(Slade 2011)

(24) Gunəpālə **də** Chitra **də** gamətə giyē?
Gunapala ***də*** Chitra ***də*** village.DAT go.PAST.E
'Was it Gunapala or Chitra who went to the village?'

(26) Gunəpālə **hari** Chitra **hari** gamətə giyā.
Gunapala ***hari*** Chitra ***hari*** village.DAT go.PAST.A
'Gunapala or Chitra went to the village.'

Same problem as with -e.
How does XP-or YP-or get interpreted as `XP or YP'?

Note: plain-vanilla disjunctions

XP-hari/də YP-hari/də

are not exclusive disjunctions of the sort

vagy XP vagy YP
ili XP ili YP `either XP or YP, not both'
ou XP ou YP

(Same for Malayalam: "Plain 'X-*oo* Y-*oo* Z-*oo* is not exclusive. But Dravidian has a way of expressing exclusive disjunction, using *illa*."
K. A. Jayaseelan, p.c. March 2013)

Theoretical options for "morpheme -OR"

- -OR is meaningful, but its purpose in the compositional process is not directly related to ∨ .It is a choice function variable; Hagstrom 1998, Yatushiro 2002, 2009, Cable 2010 , Slade 2011.
- -OR is a meaningless syntactic element that points to (possibly silent) meaningful ∨. Compare +/- interpretable features. Not yet proposed, but in the spirit of Carlson 1983, 2006; Ladusaw 1992; etc.
- -OR is a meaningful element that points to joins in a semantic way. Compare presuppositions. Szabolcsi 2013, using Inquisitive Semantics.

To be explored in this talk.

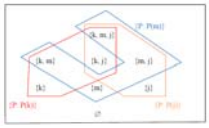
Inquisitive semantic toolkit

- All sentences are interpreted as **issues**: sets of possibilities. A **possibility** is a set of worlds.
- A **maximal possibility** corresponds to a classical proposition that plays the role of a linguistic **alternative**.
- Inquisitive and non-inquisitive issues are of the same logical type. They differ in that **inquisitive issues** are **non-singleton** sets of maximal possibilities (alternatives), whereas **non-inquisitive** ones are **singleton** sets of maximal possibilities (alternatives).

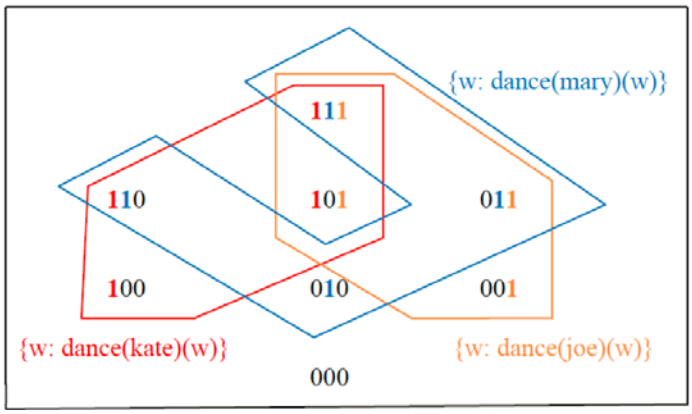
More precisely, an **issue** is non-empty, **downward closed** set of sets of worlds that jointly cover what we may call the world-universe of discourse.

Downward closure: If $t \in I$ and $t' \subseteq t$, then $t' \in I$.

- In the diagram in the next slide, every world is represented with three digits that specify the truth values of three atomic sentences, the only sentences that we care about.
- For example, "100" stands for "Kate dances, Mary does not, Joe does not," and the red box encloses the set of all those worlds in which Kate dances is true.
- Each of the boxed areas constitutes a max. possibility (alternative), and the three max. possibilities (alternatives) together constitute the issue: we are uncertain as to which area the actual world lies in.
- Compare the isomorphic diagram with GQs:

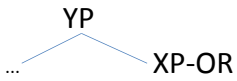


An issue with three max. possibilities (=alternatives)



Proposal: -OR wants to be in a "possibility-increasing" environment.

- Let XP and YP denote (be interpreted as) the issues [[XP]] and [[YP]]. -OR attaches to XP, and YP is the next issue-denoter above.
- We say that -OR is in a **possibility-increasing environment** if all the possibilities in [[XP]] are preserved in [[YP]], and [[YP]] contains other possibilities as well:
  [[XP]]⊂[[YP]]



✓XP-OR, if YP is a disjunction: [[XP]]⊂[[YP]]

[[Joe dances]] = { POW{w: dance(w)(joe)} }
= { POW{001, 011, 101, 111} } =
= {{001}, {011}, {101}, {111},
…, {001, 011, 101, 111}}

[[Joe dances or Kate dances]] =
= { POW{w: dance(w)(joe)},
POW{w: dance(w)(kate)} }

Notation: POW `powerset (=the set of all subsets) minus ∅' . Needed b/c of downward closure.

#XP-OR, if YP is a conjunction: [[XP]]⊄[[YP]]

[[Joe dances]] = { POW{w: dance(w)(joe)} }
= { POW{001, 011, 101, 111} }
= {{001}, {011}, {101}, {111},
…, {001, 011, 101, 111}}

[[Joe dances and Kate dances]] =
= { POW{w: dance(w)(joe) & dance(w)(kate)} }
= { POW{w: dance(w)(joe) ∩ POW{w: dance(w)(kate)} }
= { POW{101, 111} }

E.g. {001} ∈ [[J dances]] but ∉ [[J dances & K dances]]

The bigger family: Multiple alternatives

whether Joe dances à la Hamblin/Karttunen:
{p: p=^dance(j) ∨ p=^not-dance(j)}
same as {^dance(j), ^not-dance(j)}

Who dances? à la Hamblin/Karttunen:
{p: p=^dance(k) ∨ p=^dance(m) ∨ p=^dance(j)}
same as {^dance(k), ^dance(m), ^dance(j)}

Kate dances, or Mary dances, or Joe dances,
re-interpreted by Alonso-Ovalle:
{^dance(k), ^dance(m), ^dance(j)}

Someone dances re-interpreted by AnderBois:
{^dance(k), ^dance(m), ^dance(j)}

	Mod. Sinh	Old Mal	Mod Mal	Tlin	Jap
y/n-ques.	də	-oo	-oo	gé	ka, no, kai, kadooka
wh-ques.	də	-oo	–	sá	ka, no, ndai
wh-indef.	də (aff.), hari (aff.), vat(neg.)	-oo	-oo	sá	ka
decl. disj.	hari (aff.), vat (neg.)	-oo	-oo	khach'u	ka
interr. disj.	də	-oo	-oo	gé… gwáa	[ka]

Slade 2011

Distribution of Q-particles in Sinhala, Malayalam, Tlingit, and Japanese

Hungarian

(list not yet complete)

vala-ki	'someone'
vala-mi diák	'some student (= identity is unknown or irrelevant)'
vala-mi tíz kiló	'some 10 kg (=approx. 10)'
Kati **vagy** Mari	'Kate or Mary'
vagy Kati **vagy** Mari	'either Kate or Mary, not both'
vagy tíz kiló	'some 10 kg (=approx./at least)'
vagy-, **val**-	allomorphs of 'be' (existential, locative, predicative copula)

Plus an item that is etymologically unrelated:

-e	`yes/no particle'

vajon

To policeman: (# Vajon) Merre van az Erzsébet-híd?
`Which way is the Elizabeth Bridge (# I wonder)'

(# Vajon) Mi a neved?
`What is your name (# I wonder)'

(Vajon) Mit fogsz csinálni tíz év múLVA?'
`What will you be doing ten years from now (I wonder)'

Gärtner & Gyuris 2012
vajon "puts an issue on the table" in the sense of Farkas and Bruce 2010, so answering it is optional.

Farkas & Bruce 2010

"(14) Oare Petru a sosit deja?
oare Peter has arrived already
Has Peter arrived already?

We can accommodate oare questions in our system by assuming that the output *ps* includes not only projected common grounds in which the question is decided but also a copy of the elements of the input *ps*, thereby indicating that not answering the question is one of the projected discourse futures. Such questions are special in that for them removal from the Table without change in the current *cg* is a projected option. Our characterization correctly predicts that oare questions are not appropriate on forms, as exam questions or as questions asked in court or by a policeman."

Verbs that happily embed vajon-interrogatives

Kíváncsi vagyok `I am curious' Szeretném tudni `I'd like to know' Találgattuk `we were making guesses at '	hogy (vajon) félnek-e. subord VAJON afraid.3pl-Y/N `whether they are afraid'
Kíváncsi vagyok `I am curious' Szeretném tudni `I'd like to know' Találgattuk `we were making guesses at '	hogy (vajon) ki fél. subord VAJON who afraid.3sg `who is afraid'

Verbs that do not embed vajon-interrogatives (unless "embedded main clauses")

Tudom `I know' Mondd meg `tell me' Megkérdeztem `I asked' Megtudakoltam `I inquired and found out'	hogy (# vajon) félnek-e. subord VAJON afraid.3pl-Y/N whether they are afraid'
Tudom `I know' Mondd meg `tell me' Megkérdeztem `I asked' Megtudakoltam `I inquired and found out'	hogy (# vajon) ki fél. subord VAJON who afraid.3sg `who is afraid'

Felsoroltam, hogy (### vajon) ki volt jelen.
enumerated-1sg that VAJON who was present

Not the same as G&S's extensional vs. intensional complements

G&S complements of tell, know, etc.:
λi[λx[f(x)(i)]=λx[f(x)(w*)]]

G&S complements of be curious, wonder, ask, etc.:
λjλi[λx[f(x)(i)]=λx[f(x)(j)]]

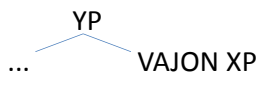
Megkérdez and megtudakol take only interrogative complements, but they are answer-seeking, hence vajon is not appropriate.

Strengthen the F&B—G&G analysis and bring vajon into the fold

I propose that vajon-questions want *not* to be answered; answering isn't just optional.

If answering amounts to eliminating alternatives, then vajon's requirement is that its environment be at least possibility-preserving:

[[XP]]⊆[[YP]]



A member of the vala/vagy family

vaj -j -on
be subjunctive 3sg

Vajon is the interrogative version of epistemic might.

Relatives: perhaps, misschien, kansk, ...
`happen + subjunctive' (den Dikken, p.c.)

Revisit the agenda

Is -e the only grammatical morpheme that poses a requirement of this sort, without doing the job?
If not, what other morphemes do that?
Members of the vala-, vagy-, vaj- family, all related to the stem of the existential verb in Hungarian.

What is the general form of their requirement?
Possibility-preservation / -increasingness.

In the existential verb version, the morpheme is composed with !, the informative closure operator.

Remaining question

What makes accommodation of "or not" possible?

Questions present mutually exclusive alternatives.
In alternative questions and in wh-questions the presence of focus-associating EXH ensures that.

Yes/no questions do not need EXH and focus:
"p" and "not p" are automatically mutually exclusive.

Moreover, "not p" is the only such alternative to "p", and so the grammar can "guess" it.

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