Dynamic semantics with -ka-yo

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1 This talk in 4 bullet points

- -ka-yo marks a mirative-like flavor in Japanese (in the sense of DeLancey (2001); Rett and Murray (2013))
- The semantics of -ka + the semantics of -yo
- Self-answered question + self-posed information down-date/update = `WTF!'
- Modeled in terms of context change potentials (CCP)

2 The phenomenon

(1) a. yoochienji -ka-yo
    preschooler -KA-YO
    `What the hell are you, a preschooler?'

b. sakubun-mondai -ka-yo
    essay-question -KA-YO
    `Ugh, an essay question!'

c. koitsu-ga onaidoshi -ka-yo
    this.guy-NOM same.age -KA-YO
    `The hell, this guy is the same age as me??'

d. (ore-ga) sonna koto suru -ka-yo
    (I-NOM) such thing do -KA-YO
    `Why the hell would I do such a thing?!'

2.1 Facts about -ka

(4) a. roora-wa moderu desu
    Rola-TOP model COP
    `Rola is a model'

b. roora-wa moderu desu -ka?
    Rola-TOP model COP -KA
    `Is Rola a model?'

(5) roora-wa nani-jin desu -ka?
    Rola-TOP WH-nationality COP -KA
    `What nationality is Rola?'

3 The pieces

(2) densha-wa moo kimashita -ka?
    train-TOP already came -KA
    `Has the train come already?'

(3) moo kimashita -yo
    already came -YO
    `(For your information,) it has already come'

3.1 Facts about -ka

(4) a. sakubun-mondai -↑ka?
    essay-question -KA
    `Is it an essay question?' (question)

b. sakubun-mondai -↓ka.
    essay-question -KA
    `An essay question, eh.' (confirmative)

1 Handout available at: http://www.msu.edu/~taniguc7.html
3.2 Facts about -yo

(7) a. Rola-wa totemo majime desu
Rola-TOP very serious COP
‘Rola is very serious’
b. Rola-wa totemo majime desu -yo
Rola-TOP very serious COP -YO
‘FYI, Rola is very serious’

Intuition that the speaker is trying to “guide” the addressee to some action (Davis 2009; McCready 2006):

(8) koko-wa kinen desu -yo
here-TOP no.smoking COP -YO
‘FYI, no smoking here’

Intonational difference (Davis 2009):

(9) Have you seen Star Wars Episode VII yet?
   a. moo mimashita -yo
      already saw -YO
      ‘I’ve seen it already (neutral)’
   b. moo mimashita -yo
      already saw -YO
      ‘Of course I’ve seen it already, why the hell would you ask?’

(10) Adapted from Davis (2009):
    A: mayottanaa... ramu-kadai-ni shiyoo kana, ramu-bindaruu-ni shiyoo kana?

    B: kokono ramu-kadai, oishii desu -yo
    here lamb-kadai good -COP -YO
    ‘(FYI) the lamb kadai here is good’
    B’: # kokono ramu-kadai, oishii desu
    here lamb-kadai good -COP
    ‘The lamb kadai here is good’

Intuition that the speaker is trying to “guide” the addressee to some action (Davis 2009; McCready 2006):

(11) A: mood5ikkii sensee okotte -nai -yone?
    ‘Professor Morzycki isn’t angry, right?’
    B: ee? okotteru -yo
    what is.angry -YO
    ‘What?? (FYI) he’s angry with you’
    B’: # ee? okotteru
    what is.angry
    ‘What?? He’s angry with you’

4 Context Change Potentials (CCP)

- Sentences modeled w.r.t. what they do to the context (Gunlogson 2004; Heim 1982; Stalnaker 1978)
- Common Ground (CG) = PB_{SPKR} \cap PB_{ADDR}
- \langle C; C \rangle: function from a context to another context (i.e., context update)
- One way to think about illocutionary forces
5 -ka-yo

(12) sakubun-mondai -\(\downarrow\)ka -\(\downarrow\)yo
essay-question -KA -YO
‘Crap, an essay question?!’

5.1 Compositional account

(13) \(\downarrow\) -yo \(\downarrow\)

5.2 CCPs and their modifiers

(14) \(\downarrow\) -ka \(\downarrow\)

(15) CCP of \([\text{ASSERT}]\) = \(\lambda p \lambda c. PB_{SPKR}(c) + p\)
(16) CCP of \([q]\) = \(\lambda c. c\)  
via Gunlogson (2002)

(17) \([\downarrow]([q]) = \begin{cases} 
\lambda f \lambda p \lambda c. [[[PB_{ADDR} - \neg p] + p] \land f(p)(c)] & \text{if } f = \text{ASSERT} \\
\lambda f \lambda p \lambda c. f(p)(PB_{SPKR}(c) + p) \land SPKR_C = ADDRC & \text{if } f = Q 
\end{cases}\)

a. Take away \(\neg p\) from the addressee’s public belief set and add \(p\) to it instead (btw I also publicly believe \(p\))

b. Turn the question into an assertion (also I’m talking to myself)

(18) \([\downarrow]([q]) = \begin{cases} 
\lambda f \lambda p \lambda c. f(p)(PB_{SPKR}(c) + p) \land SPKR_C = ADDRC & \text{if } f = Q 
\end{cases}\)

a. \(\lambda f \lambda p \lambda c. [[[PB_{ADDR} - \neg p] + p] \land f(p)(c)]\)  
\(\text{ADDRC}\)

b. \(\lambda p \lambda c. [[PB_{ADDR} - \neg p] + p] \land SPKR_C = ADDRC\)

c. \(\lambda p \lambda c. [[[PB_{ADDR} - \neg p] + p] \land SPKR_C = ADDRC]\)

5.3 p

(20) \(\downarrow\) -ka \(\downarrow\)

(21) \([\text{CCP}}(p) = \begin{cases} 
\lambda p \lambda c. [[[PB_{ADDR} - \neg p] + p] \land PB_{SPKR}(c) + p \land SPKR_C = ADDRC]\(\text{ADDRC}\) & 
\lambda p \lambda c. [[[PB_{ADDR} - \neg essay-question] + essay-question] \land PB_{SPKR}(c) + essay-question \land SPKR_C = ADDRC]\(\text{ADDRC}\)
\end{cases}\)

d. \(\lambda p \lambda c. PB_{SPKR}(c) + p \land SPKR_C = ADDRC\)

\(\text{Technically this doesn’t have to be } \neg p, \text{ just some } q \text{ that isn’t compatible with } p; \text{ I’ve put } \neg p \text{ for readability.}\)
5.4 -yo, yo.

\[ p \xrightarrow[-yo]{-ka} \]

(22)

(23) a. \([yo](C\overline{C}(c))\) is defined iff:
\[ \exists a \in \mathcal{A}(c') \forall w_i, w_j \in \cap CG(c')[(a(addr)(w_i) \wedge w_i <_{c'} w_j) \rightarrow a(addr)(w_j)], \] where \(c' = C\overline{C}(c)\)

b. Where defined, \([yo](C\overline{C}(c)) = C\overline{C}(c)\)

Davis (2009)

Or in simpler terms:

(23’) a. **Presupposition**: All worlds in the post-update context set are ones in which a particular action \(a \in \mathcal{A}\) is optimal (i.e., you should do \(a\))

b. If this presupposition is met, then whatever you said before you attached -yo

(24) essay question -ka-yo

a. conversation goal = maximal truthful information (“What should I believe?”)

b. optimal action = believe \(p\)

c. “You (= I) should accept the fact that this is an essay question (because it’s true)”

5.5 Deriving mirativity and aggression

1. **Mirativity** = Self-posed context update

2. “Aggression” = Speaker’s reluctant downdate+update

(25) isshoni ittekeru-no -ka-yo!

together will.do.favor.of.going-NMLZ -KA-YO

‘You’re gonna go with me?? (Oh thank goodness)’

(26) a. saikoo -ka-yo!

b. kawaisugi -ka-yo!

‘Fucking awesome!!’

‘Too fucking cute!!’

6 The big picture

- Different modes of surprise encoded by language
- Is “mirative” a sentence class? Or really just an interaction of morphemes?

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References


Irene Heim. The semantics of definite and indefinite noun phrases. 1982.


