Cantonese Exclusive Particles

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1 Empirical Background

Exclusive particles

- Exclusive particles convey a form of restriction (Horn, 1972).

- In English, the usage of the exclusive adverb *only* conveys both an exclusive component (1-a) and the truth of its *prejacent* (1-b)

  (1)   Lemmy only drinks Jack Daniels.
    a.   ⤳Lemmy drinks nothing apart from JD.
    b.   ⤳Lemmy drinks JD.

- The exclusion in (1-a) is relative to a set of alternatives determined by focus, and is the main content of (1).

- The informational status of the prejacent is debated:

    - As a main content (Atlas, 1993) (and Pierre d'Espagne)
    - As a presupposition (Horn, 1972; Rooth, 1992; Klinedinst, 2005; Singh, 2008; Beaver & Clark, 2008; Beyssade, 2010)
    - As a scalar implicature (van Rooij & Schulz, 2004)
    - Both as a standard and a weak presupposition (Zeevat, 2011)

Exclusives in Cantonese

- To convey exclusion, Cantonese uses:

    - Several adverbs:
        * *jihnghaih, jíhaih* (∼*only*, often used in combinations with SFP)
        * *dāk, jíbātgwo* (∼*just*, *dāk* also works as a verb meaning *only have*).
        * probably others . . .
    - An unidentified number of sentence final particles.

- Authors do not agree on the case of SFP:

    - Some particles are not always analyzed as exclusives
    - The set of identified particles is not stable (but never debated)

1.1 Exclusive SFP in Cantonese

Exclusive SFP in Cantonese

- The variability in the description of Cantonese exclusive SFP is mainly due to:

  1. What counts as an exclusive element
  2. What counts as a primitive particle: SFP clusters are frequent in Cantonese, and particles can fuse together.

- This variability is also mirrored in the choice of characters to represent the particles which is highly inconsistent accross publications (usually a selection of the following characters are used: 啫, 咋, 呋, 唧, 嘛).

Matthews & Yip (2011)

- Apparently distinguish two elements meaning *only* (both written 啫),which apparently have semantic difference:

  - *jē* ([tsɛ˥])
  - *je* ([tsə˧])

- The last one combines with other particles to add nuances in meaning:

  - *je* + *ā* = *já* (lively statement/question/request)
  - *je* + *a* = *ja* (softening statement/question)
  - *je* + *àh* = *jàh* (disapproving, surprised, suspicious)
  - *je* + *āma* = *jāma/jīma* (obvious statement)

⇒ Some corpora transcribe *ja* as啫呀 (e.g. here).

- The particle *jēk* (唧) is mentioned next to the other two, but with no mention of its exclusive nature.

Kwok (1984)

- Distinguishes two exclusive SFP.

- While both are exclusive SFP and to some degree interchangeable, there are differences in interpretation:

  - *ja*/咋:

    (2)   kéuih juhng jouh léuhng go yuht   tīm ja.
           she   still   work two   CL month TIM JA
           She's going to work for you for only two more months (she won't stay any longer, so finish the project soon).

  - *jē*/啫:

    (3)   kéuih juhng jouh léuhng go yuht   tīm jē.
           she   still   work two   CL month TIM JE
           She's going to work for you for only two more months (not such a long time to suffer her).

- (Surprisingly) she does not analyze *ja* as the fusion of *jē* and *a*, even though she analyzes other particles in this way (e.g. *ga = ge+a*)

Fung (2000)

- One of the most comprehensive study of exclusive SFP

- Main claim: all particles that involve the *j*/[ts] onset are exclusives. She distinguishes 7 elements (*jē*, *jaa*, *jēk*, *jàah*, *jāak*, *jèh*, *jáah*).

- The particles differ in terms of:

    - the type of elements they associate with ($t, e\ldots$)
    - which function the particle can mark
    - what kind of alternatives can be excluded

- For example *jēk* is supposed to:

    - associate with propositions
    - be used to exhort or mark excitement
    - exclude alternatives ranked higher

    (4)   sahpsāam mān   jēk, juhng hái daaih gūngsī   máaih ga!
          thirteen   dollars JEK even at big   company buy   SFP
          Only thirteen dollars, and they're even bought at a big department store.

- No explanation is given on *how* the particles are formed.

Recap

	jē	*ja*	*jēk*	others
Matthews & Yip (2011)	Y	fusion	non-excl.	N
Kwok (1984)	Y	Y	non-excl.	N
Fung (2000)	Y	Y	Y	Y

Table 1: Exclusive SFP in the literature

- *jē* and *ja* appear in all works

- Among the particles cited by Fung, a lot are dubious (according to my informants)

- The status of *jek* as an exclusive is uncertain

Jēk

- Fung (2000) mentions that 85% of the data in her corpus is used for exhorting, without a clear exclusive reading:

    (5)   Ayia, māt néih gam m̀hgóng   douhléih ge   jēk?
          oh   why you so   not-speak reason   SFP JEK
          Oh, how can you be so unreasonable?

- *jēk*/呃 is mentioned by Kwok (1984) as a particle which conveys "coyness" between participants, but not as an exclusive.

(6)   ṁhhóu lei   kéuih jēk.
       don't   mind he   JEK
       Don't pay attention to him (given as advice).

- Other works on *jēk* usually deal with its gender bias (Chan, 2002), although Fung claims this bias has recently disappeared.

For today

- Ignore *jēk*, even though it might originally have existed as an exclusive
- Focus on *jē* and *ja*:
    - What is their meaning?
    - What is the difference between the two?
- Spoilers:
    - *ja* is a non-scalar exclusive, almost identical to *only*
    - *jē* is better analyzed as an *adversative* marker of *irrelevance*, from which an exclusive reading can be derived

2   Ja

- Characteristics given for *ja*:
    - Does not associate with full propositions, i.e. mostly with VPs or NPs. The associate is indicated by prosodic focus (Kwok, 1984).
    - Is *scalar*:
        * It assumes an *ordered* set of alternatives
        * Its associate must be low on that scale
- This matches most descriptions of *only*
    - Winterstein (2012) challenges the scalarity of *only*
    - What about *ja*?

Scalarity of *ja*

Frequently the particle *ja* seems to have a negative value in the sense that its presence indicates that what is being stated is not more, or bigger, or longer, or better or more desirable and so on.[. . .] Because *ja* seems very often to carry a negative meaning, it can quite easily be made to convey the idea of insufficiency, and to suggest that something is not long enough, not big enough or not good enough.   (Kwok, 1984, pp. 51,53)

(7)   kéuih gōu ngóh hóu síu   ja.
       he   tall I   very little JA
       He's taller than me by only a little bit.

(8)   ngóh tùhng ngóh bàhbā heui ja.
       I   with   my   father go   JA
       I'm only going with my father (*int:* I could go with someone more exciting).

Scalarity of *only*

- *only* is said to be scalar in order to account for examples like (9)

  (9)   a. #Lemmy only has a royal flush.
          b. #It only costs two euros, and two euros that's a lot.   (Beyssade, 2010)

- The exclusion is only about elements located *higher up* on the scale

  (10)   Lemmy only has a master's degree.
          a.   ↛Lemmy has no bachelor's degree.

- Many proposals in this vein (van Rooij & Schulz, 2004; Klinedinst, 2005; Raynal, 2008; Singh, 2008; Beaver & Clark, 2008; Beyssade, 2010; Zeevat, 2011) about *only* and various operators marking restriction in French (*seul, ne que. . .*)

Scalarity of *only* and *ja*

- The observations about *only* are also valid for *ja*:

  (11) #kéuih yáuh tùhngfāséun ja
         he   have royal flush   JA
         He only has a royal flush

- ⇒ the same arguments used against the scalarity of *only* can be used against the scalarity of *ja*.

Non-scalar *only*: the core example

(12)   Ronnie likes good whisky.
        a.   He drinks single malt scotches.
        b.   He only drinks single malt scotches.

- The case of (12-b) is problematic for scalar approaches of *only*:

  - single malt are (supposedly) at the top of their scale (e.g. the scale of quality of whiskies)
  - the exclusion therefore goes downward, only *lower* elements are excluded

Inverted scale?

- Of course, one can postulate an inverted scale for the whisky case, i.e. a scale of badness of the whiskies

  - ⟨*Bad whisky, Moderate whisky, Good whisky*⟩: no problem.

- Then, in (12), *only* would mark that it is expected that Ronnie owns lower quality whiskies/that Ronnie is low on a scale of liking bad whiskies.

- But the same analysis should therefore work with the scale in (13-a).

  (13) #Lemmy only has a royal flush.
         a.   Scale: ⟨*Nothing, one pair,. . . , royal flush*⟩

- *Only* marks an exclusion, but does not encode anything about the scalarity of the elements it excludes.

- To interpret *only*, it is sufficient to determine which elements are excluded.

- Determining what is excluded is a matter of context:

  - Elements that are entailed by the associate, either logically or through world-knowledge are not excluded: *having only a master's degree* does not exclude having a bachelor's degree.
  - Only elements comparable with the associate are excluded: *having read only "War and Peace"* does not (usually) exclude having read the TV guide.
  - Elements excluded can be of different types: entities, propositions, arguments...

- *only* is analyzed as in Zeevat (2011):

  (14)　　Only $P(x)$:
  　　　　$x, Px, \mathrm{superweak}(x, y, Px, Py, \mathrm{distinct}(x, y)) : \neg Py$

Accounting for the examples

(15)　　a. #Lemmy only has a royal flush.
　　　　b.　Lemmy only has a pair.

- (15-a) is bad because there is no *distinct* alternative that *only* can exclude

  - having a royal flush, by itself, already excludes having other hands, one does not need *only* to exclude them
  - hypothesis: in (15-b) *only* is used to indicate that Lemmy cannot do better than a pair, i.e. it excludes hands that would give Lemmy a better chance of winning. A hand A will be distinct from a hand B iff A is a better hand than B.

- In this precise case, the distinctness relation is scalar, but this is a contextual problem, not a constraint of *only*.

- In (12) the elements considered are not mutually exclusive, so it is not necessary to assume a more complex distinctiveness relation

Non-scalar *ja*

- *ja* behaves as *only*: it can be used to "improve" an argument:

  (16)　　Lemmy jūngyi lengnéui.
  　　　　Lemmy like　　pretty girls
  　　　　Lemmy likes pretty girls.
  　　　　　a.　Kéuih jūngyi kāu　model.
  　　　　　　　he　　like　　date model
  　　　　　　　He likes to date models.
  　　　　　b.　Kéuih jūngyi kāu　model ge　ja.
  　　　　　　　he　　like　　date model SFP JA
  　　　　　　　He likes to date models only.
  　　　　　c.　Kéuih jihnghaih jūngyi kāu　model (ge　ja).
  　　　　　　　he　　only　　　like　　date model SFP JA
  　　　　　　　He likes to date models only.

- Thus the same reasoning as for *only* applies, i.e. a non-scalar analysis of *ja* is possible and preferable.

Scalar exclusives

- Unlike *only*, some exclusives appear to be intrinsically scalar, e.g. *merely, just*.

  (17) a. Ronnie is a real connaisseur. # He *merely* drinks single malt scotches.
        b. Ronnie is a real connaisseur. ? He *just* drinks single malt scotches.
        c. Ronnie est un connaisseur. # Il boit *juste* du scotch single malt.

- One way to handle this is to assume a scalar constraint in the semantics of these elements

- Cantonese data suggest that a more nuanced approach might be preferable

ja vs. other exclusives

- Besides *ja*, Cantonese also uses adverbs to express restriction.

  (18) ngóh jyújó gāiyihk   ja.
        I   cooked chicken wings JA
        I only cooked chicken wings

  (19) ngóh jihnghaih jyújó gāiyihk.
        I   only   cooked chicken wings
        I only cooked chicken wings

- (18) is best in a context where the speaker was expected to cook more than chicken wings, i.e. the default reading appears scalar

- (19) is more neutral, no specific expectation is present, the default reading is not scalar

⇒ while neither *ja* nor *jihnghaih* encode a hard scalar constraint, the former appears to preferentially work with ordered alternatives, i.e. exclusive particles might encode preferences on how to build sets of alternatives.

3 Jē

- Usually, *jē* is also described as being an equivalent of *only*.

- It associates with full propositions and takes a complete utterance as its argument:

  (20) Bob jīdou Mary gitfān jē.
        Bob know Mary marry JE.
        Bob "only" knows Dick got married. * Bob knows only Dick got married.

  (21) Bob wah Richard haih hóuyàhn jē.
        Bob say Richard is   good man JE
        "Only" Bob says Richard is a good man. * Bob says Richard is just a good man.

- *jē* is also described as *scalar*:

  > Whereas *ja* seems to indicate that something is not bigger, or better, or more, and may suggest the idea of 'not enough', *jē* carries the meaning of 'not excessive' or 'not too much'. (Kwok, 1984)

  – Basic contrast:

(22) a. baat mān   ja.
          eight dollars JA
          only eight dollars (it's quite cheap)
      b. baat mān   jē.
          eight dollars JE
          only eight dollars (it's not that expensive)

– Both versions appear to exclude higher prices, but with different rhetorical effects.

Non-exclusive and adversative *jē*

- Some usages of *jē* are not so easily construed as exclusive and involve "downplaying" or adversative readings.

(23) kéuih yìhgā hóu saigo jē.
      he   now   very young JE
      He (still) is very young (so it's ok if he cannot walk).

(24) ngóh jau m̀hhaih yiu gam do   ge jē.
      I   then don't   need so   many SFP JE
      I don't want that much (after being offered a lot of it).

(25) gaan nguk hóu daaih jē.
      CL   house very big   JE
      The flat is very big (not as small as reported/expected)

(26) Chēut Nature jauh wah làhn   jē, chēut newsletter jauh gánghaih dāk lā.
      publish nature then say difficult JE publish newsletter then surely   can SFP
      I can't publish in Nature, (but) surely I can publish in the newsletter.

The issues

- How to account for the differences in meaning between *jē* and *ja*?

- Can we give a unified description of *jē* that accounts for its exclusive and non-exclusive readings?

- **Proposal**:

    - *jē* is not an exclusive particle
    - *jē* is essentially an adversative particle that marks the irrelevance of other arguments.
    - its exclusive readings are a consequence of its adversative meaning
    - a probabilistic argumentative framework is used (Anscombre & Ducrot, 1983; Merin, 1999).

Probabilistic framework

- Framework based on classical intensional logic:

    - Basic ontology: set of information points (worlds, situations...)
    - Worlds are related by a compatibility relation.
    - A proposition is a set of worlds: the worlds in which the proposition is true.

- A *probability measure* is added to the basic ontology: it represents the speaker's *degrees of belief*:

    - The sum of the probabilities of individual worlds is 1.
    - The probability of a proposition is the probability of the corresponding set of worlds.

- *Belief update* is modeled by conditioning: upon learning that φ is true, the probability measure P is replaced by P' such that $\lambda x.P'(x) = \lambda x.P(x|\varphi)$.

Argumentation in a Probabilistic setting

- In technical terms: an utterance of content p is an argument for a conclusion H iff $P(H|p) > P(H)$.

- The strength of an argument can be measured by a variety of means (Merin, 1999; van Rooij, 2004):

  - A usual measure is *relevance* (not the same as in Relevance Theory (Sperber & Wilson, 1986; Merin, 1999)).
  - p is an argument for H iff $\mathrm{r}(p, H) > 0$, the higher $\mathrm{r}(p, H)$ the better the argument.
  - If $\mathrm{r}(p, H)$ is negative, then p is a *counter-argument* for H.

- Argumentation is inscribed in the semantics of some elements in language:

  - *but* marks an argumentative opposition
  - *only* reverses the orientation of its host
  - . . .

The argumentative meaning of *but*

- Anscombre & Ducrot (1977): an utterance "*p but q*" is such that:

  - p argues for a conclusion H
  - q argues against H, i.e. for $\neg H$
  - q must be a better argument for $\neg H$ than p is for H

- In probabilistic terms:

  - $r(p, H) > 0$
  - $r(q, H) < 0$
  - $|r(q, H)| > |r(p, H)|$

- **Example**:

  (27)   This car is nice but expensive.

  - $H =$ *We should buy the car*
  - p makes H more probable
  - q makes H less probable and "wins" over p: the speaker will (probably) not buy the car after uttering (27).

Adversatives and Exclusives

- An overlap between adversative and exclusive meaning is expected.

  - Ducrot (1973, pp. 272–273): French *seulement* (=*only*) is an argumentative operator, it marks an inversion of the orientation of its prejacent.

    (28)   a.   Lemmy has a master's degree. $\underset{arg}{\rightsquigarrow}$ Hire him.
            b.   Lemmy only has a master's degree. $\underset{arg}{\rightsquigarrow}$ Do not hire him.

  - To be interpreted *only* needs to exclude some alternatives (at least one).

- The exclusion negates a stronger proposition, for which we can assume that it is argumentatively stronger than p, the prejacent: $\exists z(z > p \land \neg z)$
- Negation is an argumentative operator that inverts the orientation of its argument.
- Negating elements argumentatively stronger than the prejacent means inverting the orientation of the prejacent: if p argues for r, then $\neg p'$ argues against r, for $p' > p$.
- The argumentative reversal is a consequence of the exclusive reading.

The argumentative meaning of *jē*

- An utterance involving *jē* relies on an argumentative goal H that is under debate.

- It indicates that its prejacent is a counter-argument to H.

- It indicates the all other arguments are irrelevant

- Formally: an utterance $je(p)$ is such that:

  - p is given as an argument for a conclusion $\neg H$
  - there must be contextually accessible arguments that have been given in favor of H, these form the set $\mathfrak{A}_H$
  - $\forall A \in \mathfrak{A}_H : rel(A, H) \approx 0$

Irrelevance

- How can an argument be irrelevant?

- $rel(p, H) = ln(\frac{P(p|H)}{P(p|\neg H)}) = 0$ (definition of relevance taken from Merin (1999))

  1. p is false/*impossible*: $P(p) = 0$
  2. p is true/*certain*: $P(p) = 1$
  3. p and H are *independent*: in which case $P(p|H) = P(p|\neg H)$

Examples explained

- (29) is best used a reply to somebody who does not want to buy the thing in question, $H = I\ don't\ want\ to\ buy\ the\ thing.$

  (29)   baat mān   jē.
          eight dollars JE
          only eight dollars (it's not that expensive)

- (30) is used in a context in which the addressee complains about not liking Japan (the destination of the speaker), $H = the\ trip\ is\ a\ bad\ idea.$

  (30)   ngóh tùhng ngóh bàhbā heui jē.
          I   with my   father go   JE
          I'm only going with my father (*int:* not you, so you shouldn't bother me).

Examples explained (II)

- (31) is uttered in reply to someone observing that a child cannot walk, which argues for $H =$*you should be worried about your child.* *jē* indicates that the speaker considers this and the worries to be independent.

  (31) kéuih yìhgā hóu saigo jē.
         he   now   very young JE
         He (still) is very young.

- (32) is uttered upon seeing a flat the speaker expected to be small, $H =$*The apartment is bad.* *jē* indicates that a previous belief is false (i.e. about the size).

  (32) gaan nguk hóu daaih jē.
         CL   house very big   JE
         The flat is very big (not as small as reported/expected)

The adversative flavor

- The adversative nature of *jē* is confirmed by the fact that an adversative connective such as *daahnhaih* or *bātgwo* can be added to introduce the sentence:

  (33) bātgwo kéuih sīngjīk   m̀hhaih hóu chēutkèih jē.
         but   he   get promoted not   very surprising JE
         but it's actually not that surprising that he got promoted (after learning he got promoted again and not the speaker)

The exclusive reading

- How can one derive the exclusive readings?

- Tentative answer:

  - One of the ways of marking irrelevance is to set the probability of alternative arguments to 0.
  - This yields an exclusive reading.
  - In (34), the alternative set might contain other people who praised Richard

    (34) Bob wah Richard haih hóuyàhn jē.
          Bob say Richard is   good man JE
          "Only" Bob says Richard is a good man.

  - The use of *jē* indicates that none of these other people praised Richard.

Adversative and exclusives in other languages

- French also uses one of its exclusives (*seulement*) as an adversative:

  (35) Je voudrais venir, seulement j'ai un rendez-vous important. *I'd like to come, only I have an important meeting.*

  (36) Il est beau, seulement il est bête. *He's gorgeous, only he's dumb.*

- Here, *seulement* functions as conjunction (unlike *jē*) and is not compatible with *mais*, the most common adversative connective.

- Unlike *jē*, the argument introduced by *seulement* is definitive: whatever the weight of the left argument, the right one wins.

- English uses *the only thing* in a similar way:

  (37)   He's gorgeous, the only thing is: he's dumb.

- These readings are not properly exclusive

Summary

- The particles *jē* and *ja* have distinct meanings:
  - *ja* is a *non-scalar exclusive* particle close to *only*
  - *jē* is an adversative marker that downplays the relevance of its host

- The case of *jē* hints at the relation between exclusive and adversative particles which should be cross-linguistically explored in more details.

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