

Ingredients of excess: A study of Vietnamese *quá*

Excessive constructions such as the English (1) have truth conditions as in (1a) (see Meier 2003, Schwarzschild 2008). They also often express a negative affect, informally as in (1b).

- (1) Sarah is too _[predicate G tall] _[purpose P PRO_(Sarah) to ride the bus for free].
- Sarah's height [=max(λd . Sarah is d -tall)] > max($\lambda d'$. if Sarah is d' -tall, CAN P)
 - Sarah's height is high enough to negatively affect the speaker.

(1b) has been discussed less, although see Nouwen 2018: “at some indeterminate level of analysis, excess is bad and sufficiency is good... Excessives are negative because they do not reach goals.”

We study the Vietnamese morpheme *quá*, which can precede or follow gradable predicates (glossed QUAPRE vs QUAPOST). At first glance, both of these resulting meanings are excessives:

- (2) Cái bàn kia {quá to / to quá}. (...I need a smaller one.)
 CL table that QUAPRE big big QUAPOST
 ‘That table is too big.’

We will show that these two *quá* constructions (QUAPRE vs QUAPOST) reflect *two different semantic approaches to the expression of excess*. In many cases, QUAPRE expresses a purpose-oriented excessive meaning as in (1a), but in certain cases can express a purpose-oriented but non-excessive meaning. This has implications for the compositional semantics of excessives with purpose phrases (P). In contrast, QUAPOST is in fact a comparative which conventionally encodes negative affect (1b).

QUAPRE: QUAPRE requires a degree greater than a threshold determined by a purpose P. In (3), the threshold is the maximum compatible with P. P is contextually determined or introduced with *để*.

- (3) Cái bàn kia quá to (để _[purpose P (có thể) cho vào trong xe]).
 CL table that QUAPRE big DE can put in car
 ‘That table is too big (to (be able to) fit in the car).’

However, unlike English *too*, QUAPRE can also be used with purposes which have a *minimum* degree, i.e. that the degree exceeds this *lower* bound. In this case, the purpose cannot be stated with *để*.

- (4) A: Cái bàn này có đủ to không? B: Quá to (*để ...). (...I like it.)
 CL table this CO enough big NEG QUAPRE big
 ‘Is this table big enough?’ ‘It’s more than big enough.’

In (4B), the table’s size exceeds the *minimum* for this contextually determined purpose. But (4B) is not a sufficiency construction. The sufficiency construction with *đủ* ‘enough’ requires *meeting* the minimum threshold (\geq); (4B) requires *exceeding* the minimum threshold ($>$).

(5) summarizes the patterns of meanings observed. (Let G be a degree description ($\langle d, t \rangle$) including the predicate-internal subject; e.g. λd . the table is d -big.) The meaning in (5d) — informally, meeting or exceeding the maximum degree possible to P — is to our knowledge unattested.

- (5) a. *quá* G (*để* P) “too G (to P)” max(G) > **max**($\lambda d'$. if $\wedge G(d')$, CAN P) (3)
 b. *quá* G (**để* P) “more than G enough” max(G) > **min**($\lambda d'$. if $\wedge G(d')$, CAN P) (4B)
 c. *đủ* G (*để* P) “G enough (to P)” max(G) \geq **min**($\lambda d'$. if $\wedge G(d')$, CAN P)
 d. **đủ* G (*để* P) max(G) \geq **max**($\lambda d'$. if $\wedge G(d')$, CAN P)

Proposal for QUAPRE and đê: We propose that the $>$ or \geq relations in excessive and sufficiency constructions (QUAPRE and đú) must be logically separated from the computation of the maximum or minimum degree which makes the purpose P possible. In (6), we give the logical ingredients in the system. Our presentation follows Meier 2003; type d is for degrees (extents); type $p = \langle s, t \rangle$.

- (6) a. [[QUAPRE]] = $\lambda M_{\langle \langle d, p \rangle, d \rangle} . \lambda G_{\langle d, t \rangle} . \max(G) > M(G)$ $M = \text{MAX}(P)$ or $\text{MIN}(P)$
 b. [[đú]] = $\lambda M_{\langle \langle d, p \rangle, d \rangle} . \lambda G_{\langle d, t \rangle} . \max(G) \geq M(G)$
 c. [[MAX]] = $\lambda P_p . \lambda D_{\langle d, p \rangle} . \mathbf{max}(\text{if } \wedge G(d'), \text{CAN } P)$
 d. [[MIN]] = $\lambda P_p . \lambda D_{\langle d, p \rangle} . \mathbf{min}(\text{if } \wedge G(d'), \text{CAN } P)$

Now consider the purpose-introducing morpheme đê. The canonical combinations ('too...to' (5a) and 'enough...to' (5c)) correspond to the use of QUAPRE ... MAX and đú ... MIN, respectively. We propose that đê can be the realization of MAX in the context of QUAPRE, or MIN in the context of đú. These combinations are encoded in the Vocabulary Items in (A:1) on page 3.

Covert versions of MAX and MIN also exist, but their entire projections ([MAX P] and [MIN P]) are unpronounced. This allows for the use of the QUAPRE ... MIN combination in (5b), but only with an unpronounced purpose P. This purpose P must then be contextually determined.

Unless further restricted, the ingredients we propose in (6) also predict the availability of the đú ... MAX meaning in (5d), with an unpronounced đê purpose phrase. We propose that this meaning is ruled out on pragmatic grounds: The use of excessive and sufficiency constructions is licensed in discourses that attempt to determine whether P is possible or not. However, the assertion of (5d) is uninformative as to whether P is possible or not.

QUAPOST: QUAPOST also has another, non-excessive function, in exclamatives. The exclamative use in (A:2) is felicitous if the size is surprising, but need not be too large for any purpose.

In contrast to QUAPRE, QUAPOST can *never* take a đê-purpose phrase, but it can instead take a measure phrase (A:3). (A:3) differs from the comparative in (A:4) in expressing a negative affect. For example, (A:3) is appropriate in a context where we are looking for someone under 1.5m tall.

Proposal for QUAPOST: QUAPOST is uniformly a comparative which conventionally expresses a negative affect. The ambiguity between the excessive (2) and the exclamative (A:3) is due to an underspecification of the measure, which can be made explicit as in (A:5). In the excessive (A:5a), negative affect is felicitous because some purpose of the speaker cannot be satisfied. In the exclamative (A:5b), negative affect reflects the necessity for the speaker to revise their prior belief about possible degrees (of the bigness of tables).

Conclusions: This study of the uses of Vietnamese *quá* shows that two possible paths to excessive meaning are possible in natural language: first, exceeding a (maximum or minimum) degree for a particular *purpose*, and second, exceeding a particular *threshold*, but with *negative affect*. These two aspects of excessive meaning can be teased apart in the two uses of Vietnamese *quá*.

Moreover, the 'more than enough' use of the excessive QUAPRE in (5b) motivates a decomposition of canonical excessive meaning into two separate components for the $>$ relation and MAX threshold computation, contra approaches which bundle these meanings (Meier 2003, Hacquard 2006, a.o.).

Additional examples:

- (A:1) a. *đế* ↔ MAX/ QUAPRE ___
b. *đủ* ↔ MIN / *đủ* ___

(A:2) Cái bàn kia to quá! (...I didn't know tables could be that big.)
CL table that big QUAPOST
≈ 'That table is so big!' (cf (2))

(A:3) Minh cao quá [measure 1.5m].
Minh tall QUAPOST 1.5m
≈ 'Minh is unfortunately taller than 1.5m.'

(A:4) Minh cao hơn [measure 1.5m].
Minh tall MORE 1.5m
'Minh is taller than 1.5m.'

- (A:5) a. Cái bàn to quá [mức cho phép].
CL table big QUAPOST level allow
≈ 'The table is unfortunately bigger than allowed.'
b. Cái bàn to quá [mức tưởng tượng].
CL table big QUAPOST level imagine
≈ 'The table is unfortunately bigger than imagined.'

References:

- Hacquard 2006 "Aspects of *too* and *enough* constructions," SALT 15
Meier 2003 "The meaning of *too*, *enough*, and *so...that*," *Natural Language Semantics* 11
Nouwen 2018 "Notes on moderate excess" in *A Coat of Many Colors*
Schwarzschild 2008 "The Semantics of Comparatives and Other Degree Constructions,"
Language & Linguistics Compass 2

Other presentations:

A version of this abstract has also been submitted for possible presentation at a regional workshop on degree semantics in East Asian languages, at Nanjing University, March 2019. Notifications for this workshop will be sent out in January 2019. No portion of this work has been presented thus far, and no other presentations are planned.