



# Denials and Negative Emotions: A Unified Analysis of the Cantonese Expressive *Gwai2*

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**Abstract.** This paper deals with the Cantonese morpheme *gwai2* (鬼, lit. ‘ghost’) which, besides its spooky nominal use, also conveys expressive meaning when modifying a wide range of expressions: adjectives, verbs, wh-pronouns, etc. We begin by reviewing the empirical domain of *gwai2* and different claims of the literature concerning its dual nature as an intensifier and a mixed-expressive conveying at-issue negation. We discuss both of these claims, showing that *gwai2* cannot be treated as an intensifier in the usual sense, and that it does not contribute a truth-conditional negation, but rather a form of denial. We then propose a unified analysis of the morpheme based on the assumption that it indicates a negative attitude of the speaker towards its argument, notably by showing how to derive denials from this negative attitude.

**Keywords:** Cantonese · Expressive content · Denial · Intensification

## 1 Introduction

This paper deals with the semantic contribution of the Cantonese morpheme *gwai2* (鬼). Literally, the term means “ghost” and can be used as a noun with this meaning. Besides that spooky nominal use, *gwai2* also modifies a wide range of expressions (adjectives, verbs, wh-pronouns, etc.) In those uses, which are the ones of interest to us, *gwai2* conveys an expressive meaning with hazy contours: it apparently either intensifies the expression it modifies or negates it.

*Gwai2* has already attracted attention in the literature. Lee and Chin (2007) provide a detailed description of the syntactic distribution of *gwai2* and the meaning conveyed by *gwai2* in the various positions it can occupy. Beltrama and Lee (2015) show that *gwai2* conveys expressive meaning à la Potts (2005,

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2007), and analyze one of its uses as a form of mixed expressive (McCready 2010).

These works agree on distinguishing two main uses for *gwai2*: one in which *gwai2* is usually described as an *intensifier*, and another in which it is a *negator* (in addition to its nominal, literal use which we ignore here). While these two uses appear to be in near complementary distribution, they have in common the fact that *gwai2* always conveys a form of heightened emotion of the speaker. This expressive component is not perceived as particularly rude (e.g. *gwai2* is heard on public radio), and is comparable to the English expressive (*like*) *hell*.

Besides *gwai2*, other elements in Cantonese have similar distributions and contributions. Notable elements (because of their frequency) are *lan2* (關/撚, lit. ‘*dick/penis*’) and *gau1* (閘/鳩, lit. ‘*cock/penis*’), which share most of the characteristics of *gwai2*, but in a much ruder and marked register. The letters *X* and *Q* are also frequently substituted for *gwai2/lan2* (Matthews and Yip 2011).

Our goal in this paper is to provide a unified analysis of *gwai2*, which so far has not been attempted. We begin by reviewing both of the readings commonly attributed to *gwai2*. In Sect. 2, we discuss the “negator” use of *gwai2* and show that it does not convey a simple at-issue negation, as previously claimed, but is rather an instance of denial. Section 3 focuses on the so-called “intensifier” reading. There we contend that intensification is not the core contribution of *gwai2*, which we analyze as a pure expressive. Section 4 brings the observations of the preceding sections together and we propose that the two readings are manifestations of the expressive component of *gwai2*. We argue that this meaning conventionally encodes a form of negative affect. Depending on the nature of the element modified by *gwai2*, this affect is interpreted differently. We conclude by comparing *gwai2* to expressives in other languages.

## 2 *Gwai2* as a Marker of Denial

In this section we begin by reviewing the distribution of *gwai2* in what is customarily called its “negator” reading (Sect. 2.1). There the main effect of *gwai2* seems to be to negate the content of its prejacent (i.e. its host sentence). A basic contrast is shown in (1)–(2).

- |     |   |     |   |
|-----|---|-----|---|
| (1) | keoi5 sik1.<br>s/he know<br>S/he knows. | (2) | keoi5 gwai2 sik1.<br>s/he GWAI know<br>Like hell s/he knows.<br>= s/he doesn't know |
|-----|---|-----|---|

The translation of (2) reflects the hypothesis we defend in Sect. 2.2: while it is correct that *gwai2* conveys a form of negation there, it is best seen as a denial of a previous statement rather than a standard descriptive negation.

### 2.1 Empirical Domain

The negator reading of *gwai2* is typically observed when *gwai2* is prefixed to a verb phrase, or suffixed to a bare predicate (verbal or adjectival) in the

absence of any aspect marker or other suffixes on the predicate. In such cases, *gwai2* is understood as negating the predicate it attaches to. If an overt subject is missing, *gwai2* can also be interpreted as conveying negative quantification (akin to *nobody*), cf. the two possible translations of (3).<sup>1</sup> The negator reading is also possible when *gwai2* is infixes in disyllabic predicates: (4).

- |     |   |     |  |
|-----|---|-----|--|
| (3) | gwai2 sik1.<br>GWAI know<br><i>Nobody knows / I don't know.</i> | (4) | keoi5 cung1-gwai2-ming4<br>he smart-gwai<br><i>Like hell he's smart.</i> |
|-----|---|-----|--|

In its negator uses, *gwai2* needs to scope over its whole host. It cannot, for example, be used in embedded clauses such as relative clauses (5).

- (5) \*keoi5 gaan2 zo2 di1 gwai2-sik1 tek3bo1 ge3 jan4.  
he pick PFV CL GWAI-know soccer-playing GEN person  
*(int.) He picked players who goddamn don't know how to play.*

Finally, to convey negation, *gwai2* needs to scope over a state-denoting utterance.<sup>2</sup> This means that if an episodic sentence is denied, it has to be embedded in a *hai6/jau5* construction (equivalent to saying “It the case that”): (6)–(7).

- |     |  |     |  |
|-----|--|-----|--|
| (6) | ngo5 hai6-gwai2 sik6zo2faan2<br>I is-GWAI eat-PFV<br><i>Like hell I ate.</i> | (7) | ngo5 (*gwai2) sik6zo2faan2 (*gwai2)<br>I GWAI eat-PFV GWAI<br><i>(int.) Like hell I ate.</i> |
|-----|--|-----|--|

If *gwai2* modifies a predicate that does not denote a state, then the negator reading is not accessible, e.g. with semelfactive verbs as in (8), as already observed by Lee and Chin (2007).

- (8) ngo5 da2 gwai2 nei5  
I hit GWAI you  
*I will goddamn hit you.*

## 2.2 Against a Standard Descriptive Negation

Beltrama and Lee (2015) analyze *gwai2* in its negator readings as a mixed-expressive (McCready 2010) that conveys:

<sup>1</sup> Beltrama and Lee 2015 argue that the “*nobody*” usage diachronically came first, with *gwai2* acting as a subject NP, later reanalysed as a pro-drop construction, thus yielding the second reading. According to them, the “*nobody*” reading was pragmatically derived from the fact that ghosts do not exist, which entails that nobody knows. For reasons of space we will not evaluate that proposal.

<sup>2</sup> This does not mean *gwai2* necessarily convey negation if it modifies a state-denoting utterance. For example, if it is infixes between a verb stem and the non-progressive continuous aspect marker *zyu6*, *gwai2* does not mark denial but only its expressive meaning (cf. next section).

- (i) zoek3 gwai2 zyu6 tiu4 ngau4zai1fu3.  
wear GWAI ASP CL jeans  
*s/he bloody wore jeans.*

- an expressive content indicating the heightened emotional state of the speaker (similar to the one described by Potts 2005)
- a standard, descriptive at-issue negation.

We agree with their claims about the expressive content, and the arguments they use (i.e. it meets the usual tests of scopelessness, impossibility to be bound, behavior with denials and general ineffability). However, we argue that the negation conveyed by *gwai2* is a form of non at-issue dialogical denial, a hypothesis already evoked by Lee and Chin 2007.

First, the negation contribution by *gwai2* is not affected by usual truth-conditional affecting environments, e.g. questions, antecedents of conditionals, or modal operators. In those environments, the standard marker of descriptive negation, *m4*, is felicitous. If *gwai2* contributed a standard negation, we would expect these environments to license it, only adding its expressive component in the picture. Instead, it can be shown that *gwai2* cannot be embedded in any of these environments: (9).

- (9) a. \*keoi5 hai6m4hai6 gwai2sik1 aa3?  
 s/he is-not-is GWAI-know SFP  
*(int.) Doesn't he (goddamn) know ?*
- b. \*jyu4gwo2 keoi5 gwai2 sik1, nei5 zau6 jiu3 gong2 bei2 keoi5 zi1.  
 if s/he GWAI know, you then need tell give s/he know  
*(int.) If he doesn't goddamn know, you need to tell him/her.*
- c. \*waak6ze2 keoi5 gwai2 sik1.  
 maybe s/he GWAI know  
*(int.) Maybe s/he doesn't goddamn know.*

In addition, an utterance of the form *gwai2<sub>neg</sub>p* is only possible if *p* has been previously evoked in the discourse. Thus, in (10), even though there is a general assumption that the coffee served at a coffee place should be hot, negator-*gwai2* is not licensed, whereas the standard negation *m4* is:

- (10) [At a coffee place, the speaker just picked up his cup.]
- a. ni1 buil gaa3fel (m4/# gwai2) jit6 ge2!  
 DEM CL coffee NOT/GWAI hot SFP  
*This coffee's not hot.*

On the other hand, if the content has been previously conveyed (either in an at-issue or not way), it can be targeted by *gwai2*:<sup>3</sup>

<sup>3</sup> Note that the content target can itself involve a negation, e.g. (i) (suggested by a reviewer).

- (i) A: Siu-ming, who is not a linguist, could not understand the importance of his own dialect.  
 B: keoi5 hai6 gwai2 m4 hai6 linguist.  
 he is GWAI NEG is linguist  
*Like hell he's not a linguist.*

- (11) A: Siu-ming, the linguist, came to the party.  
 B: keoi5 hai6 gwai2 linguist.  
     he is GWAI linguist  
     *Like hell he's a linguist.*

This behavior of negator-*gwai2* seems to place it in the category of “*bullshit*” operators (Spender and Maier 2009) (hence our choice of translation by *like hell*). However, there appears to be a restriction on the ability of *gwai2* to target some conversational implicatures. While *gwai2* can deny quantity implicatures, it has more difficulties targeting other conversationally conveyed content, notably manner implicatures (12).

- (12) A: keoi5 dou6zi3 ta1jan4 sei2mong4 wo5.  
       s/he caused other death EVI-SFP  
       *I heard s/he caused the death of someone.*  
 B: #hai6 gwai2, keoi5 hai6 mau4saat3 aa3  
     is GWAI s/he COP murder SFP  
     (int.) *Like hell s/he did, s/he murdered someone.*

We assume that these effects are related to the larger question of the accessibility of these conversational implicatures and other conversational features, and not inherent to *gwai2*, and we will therefore not deal with these facts here.

*Gwai2* can also come as an answer to a question, biased or not. In (13), A's question can be neutral (marked with the SFP *aa4*), biased towards a positive answer (SFP *ho2*) or a negative one (SFP *me1*, see Hara 2014 for an overview of biased questions in Cantonese), and allow B as an answer.

- (13) A: keoi5 jau5 cin4 me1/aa3 ho2/aa4?  
       he have money SFP  
       *He has money, (does he/doesn't he)?*  
 B: jau5 gwai2.  
     have GWAI  
     *like hell he does (= he has no money)*

Finally, *gwai2* does not interact with the interrogative Sentence Final Particle (SFP) *me1* as regular negation does (Lee and Chin 2007). The SFP *me1* turns declarative sentences into interrogatives, conveying in addition the low belief of the speaker in a positive answer (Kwok 1984; Matthews and Yip 2011; Hara 2014). When *me1* is used with a standard negation of a content *p*, it thus conveys the belief of the speaker in *p* (14), but the opposite happens with (15). There *gwai2* only seems to convey an emotional content and the speaker is understood to believe  $\neg p$ .

- |      |  |      |  |
|------|--|------|--|
| (14) | keoi5 m4-zi1 me1?<br>s/he NEG-know SFP<br><i>He knows, doesn't he?</i> | (15) | keoi5 gwai2-zi1 me1?<br>s/he GWAI-know SFP<br><i>He wouldn't know, would he?</i> |
|------|--|------|--|

The contrast in (14)–(15) is accounted for by the fact that both denial-*gwai2* and the SFP *me1* require a previous evocation of their prejacent in order to

indicate that the speaker does not believe in it. Therefore, instead of involving a case of double negation, (15) is rather an example of harmony between the constraints of *gwai2* and *me1*.

Taking stock, in its denial uses:

- *gwai2* takes scope over a whole utterance denoting a state
- the content of the prejacent must be *echoic*: it must have been previously evoked in the discourse (conveyed by a speaker, or evoked via a previous question)

On a final note, the echoic property of the denial cases is reminiscent of what Carston (1996) considers to be the central feature of (English) metalinguistic negation. The parallel between the denial conveyed by *gwai2* and metalinguistic negation appears sensible enough, but they differ in several aspects. First, the behavior of *gwai2* as an answer to questions differs from that metalinguistic negation, and second, *gwai2* is unable to target aspects like pronunciation which are accessible to metalinguistic negation.

### 3 *Gwai2* as a Pure Expressive

In its non-negator uses *gwai2* has been described as an *intensifier*. In Sect. 3.1 we illustrate the different environments in which *gwai2* can appear with this reading. Then we argue that *gwai2* does not necessarily convey a form of intensification in those environments (Sect. 3.2). Instead, we show it is better treated as a pure expressive.

#### 3.1 Empirical Domain

Lee and Chin (2007) describe *gwai2* as an intensifier when it appears between an adverb and an adjective (16), is used in verbal compounds (between the verb stem and affixes) (17).

- (16) go3 pi1sa4 hou2 gwai2 hou2sik6!  
 CL pizza very GWAI delicious  
*The pizza is damn delicious.*
- (17) keoi5 sik6 gwai2 zo2 ngo5 di1 tong2  
 he eat GWAI PFV my CL candy  
*He fucking ate my candy.*

That interpretation of *gwai2* is also triggered when *gwai2* is infixes in interrogative words (18)–(19), quantifier phrases (20)–(21) and in some adjectives (22) (compare with (4) above, and refer to Sect. 4.1 for more details about the cases of infixation).

- (18) bin1-gwai2-go3 lai2-zo2 aa3?  
 who-GWAI come-PFV SFP  
*Who the hell came?*

- (19) dim2-gwai2-joeng2 zou6 ga3?  
How-GWAI do SFP  
*How the hell do you do it?*
- (20) mou5-gwai2-jan4 lei4  
nobody-GWAI come  
*Not a soul came.*
- (21) ni1 gaan1 fong2 zeoi3-gwai2-do1 ho2ji3 co5 sei3sap6 go3 jan4.  
this CL room most-GWAI can sit forty CL people  
*Forty people at (damn) most can sit in this room.*
- (22) hou2 maa4-gwai2-faan4!  
very GWAI-annoying  
*[This/He] is damn annoying.*

### 3.2 *Gwai2* as a Pure Expressive

A standard view on intensifiers is that they are “linguistic devices that boost the meaning of a property upwards from an assumed norm” (Quirk et al. 1985), or that they require a scalar dimension they can modulate by indicating some higher-than-usual degree on the scale (Eckardt 2009).

Some of the expressions above do not readily involve a scalar dimension which could be manipulated by *gwai2*, and do not trigger a denial reading either. A case in point is the infixation in interrogative words (18)–(19). There, it is not clear which degree should be intensified. Instead, *gwai2*’s main contribution is the indication of the emotional agitation of the speaker. Similarly, *gwai2* can also modify non-gradable elements. In (23), the use of *gwai2* is again limited to a display of emotion by the speaker, but does not convey (for example) an indication of great age of A-Wai.

- (23) A3-Wai5 sing4-gwai2-zo2-nin4 laa3.  
A-Wai of-age-GWAI-PFV SFP  
*A-Wai is goddamn of age.*

By itself, the fact that *gwai2* associates with non-gradable predicates is not proof that it is not an intensifier. English *totally* and *very* also have this property; when they are used with a non-gradable item, they are able to operate on some non-lexical, pragmatically obtained scale. In their non-gradable uses, these elements are usually described as slack regulators (cf. *very*: Bylinina and Sudo 2015) or as indicating a form of strong commitment about an open issue (cf. *totally*: Beltrama 2016). These analyses however do not apply to *gwai2*. For one, *gwai2* in (23) does not convey a sense that its argument is a clear prototypical case of the property in question (as in *very first time*), or some notion of precisification (as in *very center*) or any comparable value. *Gwai2* also does not seem amenable to an analysis that would treat it like *totally*: it cannot come as a reply to a question, nor to confirm the prior assertion of a subjective property (as described by Beltrama 2016).

Therefore, we will consider that in the uses discussed in these sections, *gwai2* is a pure expressive which conveys the heightened emotion of the speaker. This emotion is specific to the argument of *gwai2*, which we illustrate in (24).

- (24) a. bin1-gwai2-go3 jam2-zo2 ngo5 zi1 be1zau2 aa3?  
 who-GWAI drink-PFV my CL beer SFP  
*Who the hell drank my beer?*
- b. bin1go3 jam2-gwai2-zo2 ngo5 zi1 be1zau2 aa3?  
 who drink-GWAI-PFV my CL beer SFP  
*Who fucking drank my beer?*

In (24-a) the speaker is understood to be angry at the person who drank their beer, while in (24-b) the emotion of the speaker is related to the fact that his beer was drunk, i.e. those are not cases of isolated conventional implicatures (in the terms of Potts 2005).

To summarize, we have argued that what ties all the uses of *gwai2* considered here is its expressive component, rather than a form of intensification. The next section investigates the content of this component in more detail.

## 4 Unifying *Gwai2*

In this section we propose a unified analysis for *gwai2*. In a nutshell, we argue that the interpretation of *gwai2* is due to the nature of its expressive content. Our analysis will scavenge and adapt bits and pieces from other approaches to expressives and their affective (or emotive) orientation.

In terms of semantic contribution, our proposal is not very different from the original proposition by Potts (2005, p. 167) for expressives like the English *damn/fucking*, i.e. we assume a representation as in (25).

$$(25) \quad \llbracket gwai2 \rrbracket = \lambda X. \mathbf{negAffect}(\cap' X) : \langle \langle \tau^a, t^a \rangle, t^c \rangle$$

The  $\cap'$  operation shifts the type of the argument to its ideal, i.e. an element of the appropriate type for the evaluation conveyed by the predicate **negAffect**. This operation is similar to the one used by Potts, but needs to be slightly more versatile. Minimally it should allow the shift from the denotatum of wh-pronouns, and also recognize echoic statements as a type in its own right (cf. below). Since our goal lies more in the constraint encoded by *gwai2* than its compositional properties, we will leave those details aside (for the modification of echoic propositions, see for example the propositions of McCready 2008 about *man* and the modification of contextually salient propositions).

The description in (25) relies on the predicate **negAffect**. This predicate is meant to indicate a (default) negative attitude of the speaker towards the argument of *gwai2*. We argue for this analysis in Sect. 4.1. This is one departure from the usual view on expressives, which are often seen as underspecified for the emotion they encode, and paraphrased as “indicating the speaker’s heightened emotional state” (Potts 2005; Constant et al. 2009; McCready 2012). Assuming that *gwai2* lexically encodes a negative attitude accounts for a number of



its properties, notably its denial reading. We show how to go from a negative attitude to denial in Sect. 4.2. It however opens one issue: in some cases, that negative affect reading of *gwai2* is absent, and *gwai2* is rather understood as positive. We deal with those cases in Sect. 4.3, where we use the approach of McCready (2012) based on default logic to explain them.

#### 4.1 *Gwai2* Encodes Negative Affect

When dealing with the affective orientation of expressives like English *fucking*, McCready (2012) argues that this orientation is underspecified: depending on contextual elements, it can be either positive or negative. For the case of *gwai2*, we will argue that this orientation is lexically biased towards the negative. This is based on the observation that in several contexts, *gwai2* can only be used to indicate a degree of negative emotion. Infixation in wh-words is a case in point: (26) can be uttered by a speaker at their birthday party only after opening an unpleasant/joke gift, but not to show genuine delight.

- (26) ni1 joeng6 bin1-gwai2-go3 sung3 gaa3?  
 DEM CL who-GWAI offer SFP  
*Who the hell got me this one?*

To further show the affinity of *gwai2* with negative affect, we investigated the effects of the infixation of *gwai2* in Cantonese disyllabic adjectives. As mentioned above, in such cases *gwai2* can either convey the denial of its prejacent, or the more simple pure expressive content. Lee and Chin (2007) observe that there seems to be a correlation between the affect associated with the adjective and the interpretation of infix-*gwai2*. Adjectives with positive connotations tend to get denied, whereas negatives ones do not. The pair in (27)-(28) illustrates this: the positive sounding adjective *useful* with infixed *gwai2* is interpreted as the denial of a previous statement, contrary to infixation in *useless*.

- |      |   |      |   |
|------|---|------|---|
| (27) | jau5-gwai2-jung6!<br>useful-GWAI<br><i>Like hell it's useful.</i> | (28) | mou5-gwai2-jung6!<br>useless-GWAI<br><i>This is damn useless!</i> |
|------|---|------|---|

We asked 11 native Cantonese speakers to annotate a list of 2047 disyllabic adjectives (extracted from a MOR grammar for CHAT Data obtained at <http://talkbank.org/morgrams/>). One group was instructed to indicate the effect of the infixation of *gwai2* in the adjective as either: a denial, an intensification (used as way to refer to non-denial cases), both, or an ungrammatical result. Another group had to indicate whether they thought the adjectives have a positive, negative, or neutral connotation. Each adjective was annotated by two annotators in each task. 407 received concordant annotations, the rest is ignored here, but our theoretical solution offers a way to account for the discrepancies in annotation on those ignored items. The results are summarized in Table 1.

The results show that where annotators agree on the effect of *gwai2*, the non-denial readings of *gwai2* mostly involve adjectives with no clear positive polarity i.e. neutral and negative ones. The exceptions in the table are:

**Table 1.** Correlation of subjective adjective connotation and effect of *gwai2*-infixation

|                 | Neg. connotation | Pos. connotation | Neut. connotation | Tot. |
|-----------------|------------------|------------------|-------------------|------|
| Intensification | 116 (81.7%)      | 4 (2.8%)         | 22 (15.5%)        | 142  |
| Denial          | 12 (5.2%)        | 164 (71.6%)      | 53 (23.1%)        | 229  |
| Both            | 10 (27.8%)       | 17 (47.2%)       | 9 (25.0%)         | 36   |

- Adjectives like *waan4koeng4* (‘tenacious’), *daai6lik6* (‘strong’), *haak3hei3* (‘polite’), *hou2je5* (‘excellent’) that have positive connotation and get intensified rather than denied. However the effect of *gwai2* there is not perceived as positive, rather its interpretation is that the property holds at a too high degree (e.g. “*too polite*”).
- Adjectives like *ciu4sei5* (‘haggard, gaunt’), *hung1heoi1* (‘hollow, void’) which are negative and do not get intensified. Those are not very colloquial adjectives, and the annotators (along with these authors) recognize their intuitions are vague about them.

Beyond infixation, non-denial cases also normally involve a negative attitude of the speaker. This is of course the case when the argument of *gwai2* is negatively connotated. This is also in a case like (29), where, even though pallor can be seen as a positive attribute in Chinese culture, it can also be a sign of poor health and this reading appears more prevalent in combination with *gwai2*.

- (29) keoi5 hou2 gwai2 baak6!  
 s/he very GWAI white  
*S/he’s damn white.*

To summarize: when *gwai2* modifies elements that have no intrinsic connotation (such as wh-pronouns or neutral adjectives), it necessarily conveys a negative attitude of the speaker. It does so too when its argument is negative. In the case of adjective infixation, if its host is positively connotated, the most obvious reading of *gwai2* is one of denial. In the next section, we argue such denials can be derived from the negative attitude of the speaker, thus supporting our hypothesis that by default *gwai2* encodes such a negative attitude.

## 4.2 From Negative Attitude to Denial

The general picture we drew is that *gwai2* conveys a denial when it scopes over a whole utterance (as an affix on the main predicate of a sentence) and when that utterance is echoic, i.e. has been evoked previously in the discourse by an agent different from the current speaker. The denial reading also conveys an expressive component, akin to the one conveyed in the non-denial cases. It thus seems reasonable to try and see whether the perceived intensification and negation cases can be derived from this expressive component.

The cases of denial discussed in Sect. 2.2 have one thing in common: they all involve a proposition *C* such that a speaker *S*<sub>1</sub>, distinct from the *gwai2*-speaker

$S_2$ , has a non-null degree of belief in  $C$ , which we will write as  $P_{S_1}(C) > 0$  (we equate degrees of belief with probabilities, in typical Bayesian fashion, see e.g. Jeffrey 2004). We analyze the echoic property by considering that  $S_1$  has made a conversational move that involves *grounding* the possibility that  $C$  is true, i.e. that  $P(C) > 0$  (see Clark 1996 and Ginzburg 2012 a.o. for elaborate considerations). Such a move is trivial in the case of assertions and with any content conventionally conveyed by  $S_1$  (though conveying non at-issue content does not usually involve a call on the addressee to ground the content in question). In those cases the belief of  $S_1$  is usually much higher than 0, but not necessarily equal to 1. The case of questions also involves such a move. If  $S_1$  asks whether  $C$  is true, they are pushing  $C?$  on the stack of Questions Under Discussion (QUD) and ask the addressee to do the same (Ginzburg 2012). Doing so entails recognizing that both  $C$  and  $\neg C$  are possible. So both questions and assertions have in common that a content  $C$  has been uttered in a way that calls on the addressee to recognize that  $P(C) > 0$  (at least before  $S_2$  makes their move).

In the denial cases *gwai2* therefore takes as its argument a content like  $C' = \text{GROUND}(S_1, P(C) > 0)$ , which we mean to denote a move made by  $S_1$  to add  $P(C) > 0$  to the Common Ground.

What does it mean to have a negative attitude towards such a content? By itself, a move to ground content calls for two possible actions: acceptance/grounding by the hearer or a refusal to do so. Under this assumption, a negative attitude of the speaker is best interpreted as a signal for the second option: the speaker (emphatically) refuses  $C'$ , i.e. to accept  $C$  as part of the common ground.

The case of the different types of questions introduced in (13) helps to illustrate this. In those examples speaker  $A$  is our  $S_1$  and  $B$  is  $S_2$ .  $S_1$  is asking whether  $C$  is the case, where  $C =$  “he has money”.

Depending on which question particle  $S_1$  uses, their beliefs in  $C$  will be of various strengths, but always allowing room for  $C$  to be true or false. More precisely:

- The unbiased question particle *aa4* indicates comparable beliefs in both options:  $P_{S_1}(C) \sim P_{S_1}(\neg C) \sim 0.5$
- The particle *me1* is biased towards a negative answer:  $P_{S_1}(\neg C) > P_{S_1}(C) > 0$
- The particle *ho2* is biased towards a positive answer:  $P_{S_1}(C) > P_{S_1}(\neg C) > 0$

Thus irrespective of the bias of  $S_1$ , their questioning move always involves adding the possibility of  $C$  to the Common Ground as part of the accepting the question. Of course  $S_2$  might have beliefs about  $P(C)$  and will convey it by answering the question, but before doing it,  $S_2$  needs to ground the question and what comes with it. This is what  $S_2$  refuses to do when using *gwai2*. Note that  $S_2$  cannot deny  $\neg C$  because  $\neg C$  would not be echoic in that example i.e. has no linguistic reflex in  $S_1$ 's utterance.

If *gwai2* can deny the commitments conveyed by an assertion or a question, one might wonder about other illocutionary moves. So far we only considered adding a non null belief to the common ground, but it seems that *gwai2* may

also target other contents. While *gwai2* cannot be used to refuse a direct order (30), it is felicitous when refusing an invitation or suggestion (31).

- (30) a. zap1 fong2!  
         clean room  
         Clean your room!
- b. #gwai2 zap1.  
         GWAI clean  
         (int.) *Like hell I will*
- (31) a. jat1cai4 waan2 laa1  
         together play SFP  
         *Let's play together*
- b. gwai2 tung4 nei5 waan2  
         GWAI with you play  
         *Like hell I'll play with you.*

Both moves above involve a commitment to an *outcome* (Ginzburg and Sag 2000), i.e. the future realization of a propositional content. The contrast in (30)–(31) suggests that the content of the outcome is only accessible in the case of invitations. One way to explain the contrast is to consider that beyond the commitment to an outcome, invitations also involve a call on addressee to answer the invitation, whereas orders do not convey this. To capture that difference between invitations and direct imperatives, one could use a Dialogue Game Board approach in the vein of that of Ginzburg (2012) and predecessors. We will not pursue that line of inquiry here and leave it to further work.

Taking stock we have seen how to derive denials from the negative attitude of the speaker encoded by *gwai2*. That reading is triggered only in echoic cases. Going back to the case of infixation in disyllabic adjectives, we can explain the results in a new light. The scope of *gwai2* in the infixation cases is ambiguous: it can either (i) take scope on the predicate alone, in which case the utterance will convey its prejacent along with a negative expressive component, or (ii) convey a denial if the host of *gwai2* is echoic. Case (i) is not readily compatible with positive adjectives: there is a clash between the positive connotation of the adjective and the constraint conveyed by *gwai2*. This explains the preference to read those cases as instances of denial. When the adjective is not overtly positive, the non-denial readings are accessible to intuition, which accounts for the results.

### 4.3 *Gwai2* and Positive Attitudes

To finish this section we will look at cases that involve the use of *gwai2* without conveying a negative attitude of the speaker. Those are potential counterexamples to our claim that this negative attitude is the core contribution of *gwai2*. An example of that sort is given in (32).

- (32) keoi5 hou2 gwai2 leng3!  
 she very GWAI pretty  
*She's damn pretty.*

In (32), the use of *gwai2* does not necessarily convey any sort of negative attitude of the speaker regarding the prettiness in question. It therefore seems to behave there much as English *damn* or *fucking* would. Note that a denial reading is not accessible here because of the predicate-internal position occupied by *gwai2* which prevents it to scope over the whole utterance.

We argue that in a case like (32), the content of *gwai2* clashes with the connotation attributed to prettiness. A similar issue has been addressed by McCready (2012) who shows that some expressives are underspecified in terms of the emotion they convey (e.g. *fucking*, *damn*, or Japanese *kuso*). To model how the affective orientation of such expressives is determined, McCready uses a mixture of nonmonotonic inference and game-theoretical considerations on how communication proceeds. What is of interest here is his hypothesis that lexically encoded information supersedes other sources from which to infer affective information, while remaining defeasible by other information.

In a case like (32), we then assume that two indications of affect are at odds: the negative one marked by *gwai2*, and the positive indication that comes with *pretty*. We assume that in such cases, the “stronger” of the two survives, meaning that if the positive affect associated with the argument of *gwai2* is strong enough, it can override the negative bias of *gwai2*.

This predicts a number of things. First, there should be predicates that are only weakly positive, i.e. whose positive constraint “loses” against *gwai2*. A case like (33) is such a case: if uttered, it will convey a degree of scorn of the speaker towards the elegance rather than a fully positive appraisal as in (32) (see also the cases discussed at the end of Sect. 4.1). In other words, the predicate *elegant* is intensified in (33), but this is not understood as a positive thing.

- (33) keoi5 hou2 gwai2 gou1gwai3  
 he very GWAI elegant  
*He's damn elegant.*

Second, the same positive override should be observable when *gwai2* appears in other positions. This is indeed the case: see for example (34) which involves a highly positive property and a correspondingly positive attitude of the speaker conveyed by *gwai2*.

- (34) ngo5 zung3 gwai2 zo2 luk6hap6coi2  
 I won GWAI ASP lottery  
*I fucking won the lottery.*

Finally, we should find speaker variation in the interpretation of some examples, since different speakers might attribute different degrees of positivity to the same predicate. This could lead to some miscommunication problems. The annotation task mentioned previously supports this prediction: the annotators disagreed on a number of cases, and cases like (33) are not clear-cut for some speakers. Some

understand it as a negative thing, others, probably more sensitive to matters of elegance, see it as a positive statement.

## 5 Conclusion: Beyond *Gwai2*

We have offered an analysis of *gwai2* that rests on the idea that it encodes a (strong) default indication that the speaker is feeling negative. We argued that when *gwai2* scopes over a whole echoic utterance, that negative attitude amounts to a denial. Though we argue that this negativity is conventionally attached to *gwai2*, distinguishing it from expressives such as English *fuck*, it can be overridden when the argument of *gwai2* encodes a strong positive affect. This override only happens when *gwai2* modifies sub-sentential elements. When its argument is echoic, its scope is at the speech-act level and there is no sense in which a positive aspect could override the negativity of *gwai2*.

The particle *gwai2* is by far not unique in the world of expressives: it intensifies in the same way as other expressives like English *damn*, and it negates in the same way as other expressives such as *bullshit*. In some respect *gwai2* resembles the (equally netherworldly) expressive *like hell* which is also described as an intensifier (*It hurt like hell*) and has denying properties when used as a reply. It is however not clear whether *like hell* also matches the lexically encoded negative attitude that we argue characterizes *gwai2*.

There are elements with such inherent negative properties, but they often have a more restricted distribution than *gwai2* (e.g. slurs typically encode negative attitudes about their referent McCready 2010, 2012). One element that appears similar to *gwai2* is the family of French expressives derived from the adjective *sale* ('dirty'). The adjective can only modify nouns by indicating a negative attitude of the speaker (e.g. *sale flic* 'damn cop', *sale prof* 'damn teacher', or *sale ami* 'fucking friend' which can only have a negative reading).<sup>4</sup> The derived adverb (*salement*, 'dirtily') however can modify properties in a positive way (e.g. *salement bon*, 'damn good (to eat)') much like *gwai2* can. In spite of this, *sale* (or its derived forms) cannot be used for denials.

One element that allows denials and which could be problematic for our analysis is English *fuck*, which is not considered to be inherently negative. While the denial use of *fuck* has not been dealt with (to our knowledge) in the literature before, this element has similar properties to *gwai2* in an utterance like (35) (taken from the British National Corpus).

- (35) "Why?" Hitch shrugged. "Fuck knows. Like I said, I'm just doing what I'm told."

It is not clear that this use extends beyond the verb *know*, and how widespread that use is. It appears to be mostly a British English phenomenon: there are 9 occurrences in the British National Corpus, against only 3 in the Corpus of

<sup>4</sup> Compare with the case of French *vache/vachement* ('bovine/cowish' and its derived adverb) which are underspecified in a similar way as English *fucking*.

Contemporary American English which is 5 times bigger. The use in question could conceivably be traced back to a time when *fuck* was negative, only to be bleached at a later time, or that use could have a different origin altogether.

This all suggests dimensions along which expressives can be compared cross-linguistically, namely their inherent connotation (or absence of), and their scopal properties notably their ability to modify echoic content. We leave such considerations to future work.

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