Acquaintance inferences as evidential effects

Abstract: Bare assertions of predications with experiential predicates by default commit their speakers to having direct experience of a certain sort with the subject of predication. I provide a derivation of these so-called acquaintance inferences, casting them as evidential effects: they arise because in virtue of asserting experiential predications, speakers incur a not-at-issue commitment to believing them on the basis of a perceptual source of evidence. I show how these inferences arise due to the interaction of belief, perceptual evidentiality, and the semantics of experiential predicates, first by showing how they behave with grammaticized direct evidentials in languages that have them, using Tibetan as an exemplar language, and then extending the account to languages that do not grammaticize direct evidentiality, using English as an exemplar. I show that commitment to belief in an experiential predication on evidentially-neutral grounds in effect requires a perceptual source of evidence for the belief, due to quirks in the semantics of experiential predicates.

1 Introduction: Acquaintance inferences

Certain predicative assertions by default commit their speakers to direct experience of a specific sort with the subject of predication. This is exemplified by bare assertions of adjectival predications, where the predicate is experiential, or semantically pertains to the production of a certain kind of experience by a stimulus subject. Examples of such experiential predicates include tasty and frightening.¹

¹Special thanks to [redacted], for teaching me the rudiments of Tibetan, and for help with the construction and judgment of examples (thugs rje che). Thanks also to [redacted], with whom I discussed this work most, and to the audience at the [redacted], at which an earlier version of this work was presented, and especially for comments made there by [redacted]. Thanks finally to the anonymous reviewers at Journal of Semantics for their help and suggestions. All Tibetan glosses are mine. All other glosses are lifted directly from the cited source material. Tibetan examples are not phonetic, but transliterated to Roman from the Tibetan script using the Wylie system; I use spaces to represent breaks in glossing, and periods to represent syllable breaks without distinct glosses. Key to the Tibetan glosses: 1 = first person; 3 = third person; EGO = egophoric evidential; ERG = ergative; EXP.PERF = experiential perfect; FAC = factual evidential; GEN = genitive; IPFV = imperfective; NEG = negation; OBL = oblique; PER = perceptual evidential; PERF = perfect; PFV = perfective; POS = positive degree morphology; Q = polar question; QUOT = quotative.

The literature on acquaintance inferences often describes the predicates triggering such inferences in different terms, e.g. as ‘predicates of personal taste’ or ‘aesthetic predicates.’ These are not the right targets, since acquaintance inferences arise with all experiential predicates, in the sense of Rudolph (2020), whether or not they have to do with personal taste or aesthetics. While I stick to just a couple exemplars of experiential predicates in this paper, the class includes many more, including at least sensory verbs like look, as in Mary looks tired. I make no claims as to the exact extent of this class here, but do predict that any predicate with an experiential semantics as outlined in Section 2.2 will trigger acquaintance inferences.
(1) This food is tasty.
   \(\rightarrow\) The speaker has tasted the food.
   \(\rightarrow\) The speaker likes the food’s taste.

(2) This movie is frightening.
   \(\rightarrow\) The speaker has watched the movie.
   \(\rightarrow\) The speaker has experienced fear of the movie.

Following the terminology adapted from Wollheim (1980) by Ninan (2014), we call inferences like those in (1) and (2) acquaintance inferences (see also Pearson 2013, Bylinina 2017, Anand & Korotkova 2018, Rudolph 2019, and Kennedy & Willer 2019). In languages like English, where bare assertions are typically evidentially neutral, assertion of a predication does not typically commit the speaker to any particular contact with the subject of predication. Stimuli of experiential predicates are unusual in this regard, and it is an outstanding puzzle why these predicates in particular trigger this default commitment to direct experience.

Acquaintance inferences are tied to the lexical semantics of the triggering predicates, as shown by the fact that the content of the inference is totally predictable from this semantics. Acquaintance inferences have two components, reflected by the two arrows beneath examples (1) and (2): they require experiential contact of a specific sort with the stimulus, and they require production of experience of a specific quality by the stimulus in the speaker. Some predicates, like tasty, lexically encode a certain sensory modality, while others, like frightening, do not. Thus, inferences with tasty require tasting the stimulus specifically, while inferences with frightening require experience through no particular modality.\(^2\) The kind of experience encoded by the predicate is then the kind that the speaker commits to experiencing via the stimulus: gustatory pleasure for tasty, and fear for frightening.

The following provides a derivation of acquaintance inferences from the lexical semantics of experiential predicates in concert with a number of other semantic and pragmatic mechanisms. Broadly, I propose that acquaintance inferences generally result from speakers committing to belief in an experiential predication on perceptual evidential grounds. The notion of perceptual evidentiality invoked here is the same one encoded by grammaticized perceptual evidentials in languages that have them. I demonstrate the relation between experiential semantics, belief, and perceptual evidentiality by showing first how acquaintance inferences arise in languages that have grammatical markers for direct perception, using ‘Standard’ Tibetan as an exemplar, and then by demonstrating how in non-evidential-marking languages like English, commitment to belief in experiential predications on neutral evidential grounds effectively requires a perceptual source of evidence in the same sense, due to certain quirks of the semantics of experiential predicates.

The rest of this section lays out the starting point for the proposal: that speakers trigger acquaintance inferences by committing to belief in an experiential predication on perceptual evidential grounds. Section 1.1 clarifies the notion of acquaintance as arising from a speaker’s not-at-issue commitment to belief that accompanies assertion, and Section 1.2 gives grounds

\(^2\)The inference to watching the movie as in (2) is only a default derived from world-knowledge of the appropriate channels though which one typically experiences fear of a movie. Depending on the stimulus, and the plausibility of the scenario, fear as encoded by frightening’s acquaintance inference might be experienced through any modality, or even just the imagination.
for considering acquaintance inferences to be evidential effects, drawing on the behavior of acquaintance inferences and perceptual evidentials in Tibetan.

Section 2 then lays the formal groundwork for the derivation of the inferences themselves, providing a working notion of the interaction of perceptual evidence and belief, and a provisional semantics for experiential predicates. The remaining sections then show how perceptual evidentiality and experiential semantics interact to yield the inferences, first in a language that marks perceptual evidentiality overtly in Section 3, and then extended to a language whose commitments on assertion are by default evidential-neutral in Section 4. Section 5 concludes.

1.1 Acquaintance as not-at-issue attitudinal commitment

The point of departure for the following is that acquaintance inferences like those in Section 1 arise as the result of not-at-issue attitudinal commitments that speakers make in virtue of asserting experiential predications. In particular, in asserting something like (1) or (2), the speaker commits to believing the asserted proposition in a certain way, and this commitment entails commitment to direct experience of the stimulus of the predication.

This view is opposed to the idea, put forward by Pearson (2013: 122), that experiential predicates trigger acquaintance inferences because: (i) these predicates occur with experiencer arguments that impose presuppositions of direct experience between the stimulus and experiencer, and (ii) the value of the experiencer when left implicit anchors by default to the speaker. A denotation for tasty might then be as in (3), and the inference of direct experience in (1) above is taken to arise for the same reasons as that in (4).

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(3) \[\text{tasty}^w = \lambda x.e.\lambda y.e : y \text{ has tasted } x.y \text{ likes the taste of } x\]

(4) This food is tasty to me.
   \(\Rightarrow\) The speaker has tasted the food.
   \(\Rightarrow\) The speaker likes the food’s taste.

That the tasting requirement is presuppositional is meant to account for the fact that negated experiential predications with no overt experiencer preserve the acquaintance inference, but invert the character of the experience, just like negations of predications with overt speaker-anchored experiencers (5), and that neither sort of inference can be overtly canceled (6).

(5) a. This food isn’t tasty.
   \(\Rightarrow\) The speaker has tasted the food.
   \(\Rightarrow\) The speaker doesn’t like the food’s taste.

b. This food isn’t tasty to me.
   \(\Rightarrow\) The speaker has tasted the food.
   \(\Rightarrow\) The speaker doesn’t like the food’s taste.

(6) a. #This food is tasty to me, but I haven’t tasted it.
   b. #This food is tasty, but I haven’t tasted it.

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3 Pearson’s (2013) own fully-worked out view as to the semantics of such expressions is much more complex than this. See Ninan (2014) Anand & Korotkova (2018: §3.2) for comments and criticism.
There are two sorts of evidence that acquaintance inferences don’t result from experiential predicates anchoring the value of an experiencer to the speaker in this way. First, acquaintance inferences anchored to the speaker appear even where the content of the predicate is not speaker-oriented, as diagnosed by discourse moves that operate on the content of the predicate as an antecedent, like ellipsis sites and propositional anaphora.

(7) a. A: This food is tasty to me.
    B: No, it’s not $\varnothing_E$.

b. A: This food is tasty.
    B: No, it’s not $\varnothing_E$.

Where B’s denials in (7) are echoic, the denied content in (7a) must be that the food is tasty to A, while the denied content in (7b) need not be. In (7b), the property that the ellipsis site takes as its antecedent therefore need not be speaker-oriented (anchored to A), as it is in (7a). Yet in (7b), A’s utterance typically yields an acquaintance inference, even in these non-speaker-oriented dialogues: it still typically implies that A has tasted the food and likes its taste. The presence of the inference therefore cannot depend on the content of the predicate being speaker-oriented.

The story is the same where the denied content is diagnosed by a propositional anaphor like that as opposed to an ellipsis site.

(8) a. A: This food is tasty to me.
    B: That’s not true.

b. A: This food is tasty.
    B: That’s not true.

The denied content in (8b) need not be speaker-oriented (anchored to A), as it must be in (8a). Yet even in this scenario, A’s assertion in (8b) typically carries an acquaintance inference, as before, so again the inference cannot be due to speaker-orientation of the predicate.4

Second, as argued by Ninan (2014) and Anand & Korotkova (2018), acquaintance inferences show embedding and projectional behavior different from presuppositions on at-issue content of all kinds. This includes speaker-oriented presuppositions introduced by experiencer arguments, as in (4). Witness the different ways implications pertaining to experience behave with epistemic modals like must (9), futurate operators like will ((10); cf. Klecha 2014: §1.3), polar questions (11), and antecedents of conditionals (12), with versus without an overt speaker-oriented experiencer.

(9) a. This food must be tasty to me.
    $\rightarrow$ The speaker must have tasted the food.

b. This food must be tasty.
    $\leftrightarrow$ The speaker must have tasted the food.

4Note also that in (7b) and (8b), B’s utterance typically triggers a new acquaintance inference, to the effect that B has tasted the food and doesn’t like its taste, but only if the predicate is not anchored to A. It is therefore the non-speaker-oriented predicate that triggers the inference for both parties, whereas the speaker-oriented predicate simply presupposes direct experience on the part of the experiencer encoded by the predicate.
(10)  a. This food will be tasty to me.
    $\rightarrow$ The speaker will taste the food.
  
b. This food will be tasty.
    $\leftrightarrow$ The speaker will taste the food.

(11)  a. Is this food tasty to me?
    Asked: Has the speaker tasted the food (and liked its taste)?
  
b. Is this food tasty?
    Not asked: Has the speaker tasted the food (and liked its taste)?

(12)  a. If this food is tasty to me, I’ll buy some.
    $\rightarrow$ If the speaker tastes the food (and likes its taste), they will buy some.
  
b. If this food is tasty, I’ll buy some.
    $\leftrightarrow$ If the speaker tastes the food (and likes its taste), they will buy some.

Anand & Korotkova (2018) show, using a wider range of diagnostics, that commitments to direct experience placed by experiential predicates fall into two broad categories. Use of overt experiencers, whether they refer to the speaker or not, anchor the content of the predicate to a definite experiencer, and give rise to presuppositions of direct experience on the at-issue content of the predication, as in (4) above.\textsuperscript{5} ‘Bare’ experiential predicates, by contrast, make no reference to a definite experiencer, and give rise to acquaintance inferences anchored to the speaker. The behavior of these two classes is utterly different with a range of semantic operators, both with respect to whether the acquaintance inference can be obviated in various semantic environments, and what happens to the inference when it is obviated.\textsuperscript{6}

The picture that emerges is therefore that acquaintance inferences are specifically the effect of these ‘bare’ experiential predications, and are a different matter from direct experience presuppositions encoded by experiencer arguments. Roughly, a speaker commits to having tasted something in the way peculiar to an acquaintance inference when asserting that it is or isn’t tasty ‘\textit{simpliciter},’ as opposed to asserting that it is or isn’t tasty to some definite experiencer (see Section 2.2 for an implementation of these distinct notions). So to say unqualified what the experiential properties of a stimulus are \textit{simpliciter} via bare assertion is typically to commit to direct experience with the stimulus.

From the fact that acquaintance inferences do not behave like speaker-anchored presuppositions on the at-issue content of assertions, Ninan (2014) concludes that these effects result instead from speakers committing not-at-issue to certain attitudes directed at (bare) experiential predications, in virtue of asserting them. Acquaintance inferences are therefore

\textsuperscript{5}This is also true of so-called ‘exocentric’ uses of experiential predicates, which do not have an overt experiencer, but anchor to a contextually relevant experiencer nonetheless: see Section 2.2. The crucial difference is therefore between experiential predicates that encode a definite experiencer, whether overt or covert, and those that do not. Note that it is possible, on this classification, for the speaker also to be a covert definite experiencer as well: this happens, for example, when interlocutors are arguing over what is tasty to the speaker specifically.

\textsuperscript{6}These issues touch on a massive literature regarding how these predicates encode values for experiencers that I cannot do justice to here. A defense of the idea that a distinction must be made between ‘bare’ uses of experiential predicates, and those that make reference to a definite experiencer is in Muñoz (2019: Ch. 1).
special requirements attending the usual commitments accompanying assertion. The following adopts this line of thought, with some alteration: while Ninan proposes that acquaintance inferences follow from speakers committing to knowing an experiential predication, I will argue that they are instead the result of the speaker committing to belief in the predication on the basis of perceptual evidence.

1.2 Acquaintance as a perceptual evidential effect

In the spirit of Anand & Korotkova (2018), the following derivation of acquaintance inferences is rooted in the idea that they are evidential effects, and arise as the result of a speaker committing to belief in an experiential predication on the basis of perceptual evidence. This notion of perceptual evidence is the one tracked grammatically in evidential-marking languages by overt markers of perceptual evidence of an event itself, and so one expects perceptual evidential markers to track the acquaintance inference. How this happens will be illustrated in ‘Standard’ Tibetan, a language with a verbal system that prominently encodes grammaticized perceptual evidentiality.

Tibetan is an ideal exemplar language for illustrating acquaintance inferences based on a commitment to perceptual evidence, for three reasons. First, it contains overt, grammaticized markers of perceptual evidentiality: this allows us to avoid the theoretical problem of whether the commitment to perceptual evidence is attended by the lack of an evidential or an unpronounced zero-member of an evidential paradigm, as well as the problem of whether commitment to perceptual evidence is grammatically encoded or just implicated in some other way. Second, its evidentials can serve as copulas that are active in adjectival predication (see below), meaning that this most commonly studied construction relevant to acquaintance inferences can be addressed directly. Third, Tibetan has other features helpful to illustrating the derivation of acquaintance inferences, as shown in Section 3 below.

Tibetan finite clauses are composed using a series of typically clause-final auxiliary verbs that have a variety of functions depending on the construction. In copular constructions, they can mark predication, identity, or existence-location-possession; in verbal constructions, they are associated with tense-aspect information; and they interact compositionally with a complex system of epistemic modals (see Caplow 2017). When performing any of the above functions (save for perhaps the epistemic modal ones, depending on what one thinks

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7 Anand & Korotkova (2018) themselves take this evidential requirement to be hard-coded into the lexical semantics of any expression that triggers acquaintance inferences. The problem is then that the evidential requirement, as shown in Section 1.1, appears only in very specific grammatical constructions: and so their account requires that every operator voiding the inference must compositionally undo this lexical requirement. In what follows I take the inference to result from the lexical semantics of the predicate in a more indirect way, as it interacts with various other mechanisms to surface.

8 The ‘Standard’ Tibetan referred to here, following the terminology of Tournadre & Dorje (2003), is a standardized dialect rooted in the colloquial speech of Central Tibet, used as a lingua franca in the Tibetosphere and diaspora. Fine-grained dialectal features of the varieties of Central (U-Tsang) Tibetan are so far as I know not relevant to the present paper. The terminology surrounding the Tibetan (i.e. Tibetic, or Central Bodish) languages is disorienting, and I avoid it by referring to this language, as its speakers typically do, simply as ‘Tibetan.’ The reader should bear in mind that the term ‘Tibetan’ is also used to refer to the entire family of languages descended from Old and Classical Tibetan, or to the latter themselves, and what’s described here is not meant to extend to other Tibetan languages in this sense.
is the exact interaction between evidentiality and epistemic modality), these auxiliaries can additionally encode evidential information, marking the source of evidence controlling the associated clause.  

Evidentials in several Tibetan constructions are mentioned in passing in the following, but the focus of the present paper is predication with experiential adjectives, and so evidentiality in adjectival predication is the feature of the Tibetan verbal system on which we focus. There are five basic auxiliaries used as copulas with adjectives, shown in Table 1 below. These are split into two classes, each of which internally encodes evidential distinctions. Following Tournadre & Dorje (2003), we call first two ‘essential,’ and the latter three ‘existential.’

Table 1. Tibetan adjectival copulas

<table>
<thead>
<tr>
<th>ESSENTIAL</th>
<th>ཡིན (yin)</th>
<th>རེད (red)</th>
</tr>
</thead>
<tbody>
<tr>
<td>egophoric</td>
<td></td>
<td>non-egophoric</td>
</tr>
<tr>
<td>EXISTENTIAL</td>
<td>ཨོད (yod)</td>
<td>བཛུག (‘dug)</td>
</tr>
<tr>
<td>egophoric</td>
<td>perceptual</td>
<td>factual</td>
</tr>
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Tibetan has three basic evidential categories, exemplified in the existential paradigm: the egophoric, the perceptual, and the factual. Egophoric evidentiality encodes intimate, familiar, or unlearned information, and prototypically information about oneself. Perceptual evidentiality encodes direct perception of an event or property itself, through any sensory modality (and not merely perception of the results of the event or property). Factual evidentiality encodes general, ‘factual’ information of any sort: the factual evidential is used to report general or ‘objective’ truths, and is the default choice when reporting non-witnessed information not about oneself. It therefore can convey paradigmatically ‘indirect’ evidence of all kinds, including by inference and report, and inferential and reportative glosses on the factual evidential are often spontaneously offered by speakers, though it is not clear whether this category ‘indirective’ in the exact sense typically meant in evidentiality studies.

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9 Whether the auxiliaries carry evidential information in a certain construction correlates with whether multiple such auxiliaries exist in a paradigmatic contrast in that construction. Some dependent clauses are evidentially neutral, and so lack a paradigmatic choice of evidential. Other nonfinite dependent clauses simply contain no auxiliary, and so do not encode evidentiality at all. Matrix finite clauses must be marked by evidentiality or epistemic modality, and the possible evidential values correlate with how many members are in paradigmatic contrast in that construction: for most constructions, the three-way evidential contrast listed below (egophoric, perceptual, factual) is active, but in the future and with ‘essential’ copulas, there is a two-way contrast (egophoric, non-egophoric / ‘alterphoric’).

10 A sixth, རེད་བུ་ཛུག (red.bzhag), also appears, which has connotations of inference by perception of results and mirativity. I leave it to the side here, as it is not clear to me whether it is a complex construction.

11 For a classic exposition of the Tibetan verbal system as spoken in Lhasa during the 1970s, including a description of its basic evidential distinctions, see Yukawa (2017 [1975]). See Garrett (2001) for an in-
We are interested in the perceptual evidential, and how it interacts with acquaintance inferences. As can be seen from Table 1, only the existential paradigm has a marker dedicated to perceptual evidentiality, མཉེན་པོ་ (‘dug’). It is therefore on this paradigm that we will focus, and མཉེན་པོ་ (‘dug’) in particular, as well as its cross-constructional counterparts, is what will be used to illustrate the effect of acquaintance inferences below. The non-perceptual evidential ནོད་ཤེས་ (yod.red) is also used for illustration of contrast, to show where acquaintance inferences don’t appear in the absence of commitment to perceptual evidence.

When མཉེན་པོ་ (‘dug’) is used for adjectival predication in an assertion, this generally requires the speaker to have witnessed that the subject has the relevant property.

(13)  བཀྲ་མ་གཅིག་པོ་རིང་པོ་ ‘dug
Trashi body long POS PER

‘Trashi is tall.’

⇒ The speaker has witnessed Trashi’s height.

The key observation is then that whether the assertion of experiential predications in Tibetan trigger an acquaintance inference is tracked by whether the perceptual evidential is used. With བློ་གྲེ་ཆེན་པོ་ (bro.ba chen po) ‘tasty’ and བླེ་སྨིང་ཐ་པོ་ (zhed snang tsha po) ‘frightening,’ for instance, the resulting inferences with མཉེན་པོ་ (‘dug’) are exactly what was seen in Section 1 above (cf. Hill & Gawne 2017: 16, ex. 10c).

depth discussion of the three basic evidential categories, Oisel (2017) for a contemporary exposition of Lhasa Tibetan evidentials (with a focus on egophoric effects), and Hill & Gawne (2017) for a contemporary exposition of the role of the Tibetan languages more broadly in the study of evidentiality (again with a focus on Lhasa Tibetan). With respect to indirective readings, Tibetan has numerous ways to convey indirectivity besides the factual evidential, including quotative markers not part of the evidential paradigm, and a vast array of epistemic modals.

It is not clear what the difference is between deciding to use an essential or existential copula in predication with adjectives, aside from the way they carve up the evidential domain differently. There are subtle interpretational effects, but both speakers and the literature are inconsistent in describing them. Some adjectives, like color predicates, prefer the essential, but even here I have found no consensus. Experiential adjectives so far as I know are always happy with the existential. See Garrett (2001: 68 ff.) for some discussion.

I leave to the side here the complex category of egophoric evidentiality, though ultimately its interaction with the perceptual and inferences about direct experience ought to be clarified. A reviewer wonders whether the egophoric does not also imply direct perception of events: this is often the case, but it is not true in general, and the two categories relate to one’s own experience extremely differently. To take one example relevant to the present paper: predication of ‘tasty’ with the egophoric, in a construction like (14a) below (kha.lag ‘di bro.ba chen po yod: ‘this food is tasty [egophoric evidence]’) might imply that the speaker has tasted the food, but it has another prominent reading, on which the speaker is the one that made the food, and knows it is tasty because they are a good cook. These constructions are in general puzzling, and I know of no satisfying treatment of them: see DeLancey (1986) for an early sketch of some similar sentences.

A reviewer suggests that the occurrence of the acquaintance inference with perceptual evidentials is unsurprising, and asks what alternatives we might expect to this happening. I must object strongly here: that the acquaintance inference as it arises with perceptual evidentials displays the same behavior as the evidential-neutral acquaintance inference in non-evidential languages is not at all a trivial fact: they both track the lexical semantics of the predicate in the same way, display the same projective behavior, and track
(14) a.  མ་ལག་འི་བོ་བ་གཞན་པོ་འདུག
kha.lag ‘di bro.ba chen po ‘dug
food this taste big POS PER
‘This food is tasty.’
⇒ The speaker has tasted the food.
⇒ The speaker likes the food’s taste.

b.  གལོག་བོན་པ་འི་ཞེད་སྤན་ཅི་ལྷང་POS PER
food this fear appear hot POS PER
‘This movie is frightening.’
⇒ The speaker has seen the movie.
⇒ The speaker has experienced fear of the movie.

But the inference does not arise with the factual evidential གཞན་ཡོད་ (yod.red), and in fact its use may implicate a counter-acquaintance inference to the contrary (cf. Chang & Chang 1984: 619, ex. 41). 15

(15) མ་ལག་འི་བོ་བ་གཞན་པོ་ཡོད་རེ་
kha.lag ‘di bro.ba chen po yod.red
food this taste big POS FAC
‘This food is tasty.’
⇒ The speaker has tasted the food.
⇒ The speaker has not tasted the food.

The inference with the perceptual evidential also has the superficial projective qualities of the acquaintance inference mentioned in Section 1.1: it projects out of negation but flips the quality of the experience (16), and can’t be overtly canceled (17).

(16) a.  མ་ལག་འི་བོ་བ་གཞན་པོ་མི་‘དུག
kha.lag ‘di bro.ba chen po mi ‘dug
food this taste big POS NEG PER
‘This food isn’t tasty.’
⇒ The speaker has tasted the food.
⇒ The speaker doesn’t like the food’s taste.

who the evidential anchor is via the speech act (assertion vs. question). None of this is knowable a priori, and is extremely important for understanding how these inferences function. As to what other alternatives could be expected, there are many: a perceptual evidential on ‘tasty’ might have been felicitous on e.g. witnessing a clearly delicious food, seeing someone else enjoying its taste, and so on: but instead, we see that only placing oneself in the role of experiencer of the predicate suffices. Comparison with these imaginable alternatives will help with the non-trivial question whether cross-linguistically all languages encode perceptual evidence of experiential predicates in just this way, and to what extent the effect is mediated or disappears in readings of evidentials that require inference by perception of results.

15I make no commitment as to how the counter-acquaintance inference arises, other than to note it is likely an implicature of some sort, and that such effects are common in hierarchies of preferred evidentials in paradigmatic contrast (see Barnes 1984 and de Haan 1999, a.m.o.).
b. 
\[ \text{glog.brnyan } 'd\text{i } \text{zhed snang tsha po mi } '\text{dug} \]
\[ \text{movie } \text{this fear appear hot } \text{POS NEG PER} \]
\[ \text{‘This movie isn’t frightening.’} \]
\[ \rightarrow \text{The speaker has seen the movie.} \]
\[ \rightarrow \text{The speaker has not experienced fear of the movie.} \]

Further, whether the acquaintance inference anchors to the speaker or addressee tracks whether the commitment of the perceptual evidential does. This is shown in questions, since perceptual evidentials in Tibetan undergo interrogative flip (cf. Aikhenvald 2004: 245-248, McCready 2007, and Murray 2017: §2.3): questioned perceptual evidentials make no commitment on the speaker, but rather presuppose that the addressee has perceptual evidence for the answer to the question. In a polar question of an experiential predication, the acquaintance inference is voided on the speaker, and is transferred to a presupposition on the addressee.

\[ \text{glog.brnyan } 'd\text{i } \text{zhed snang tsha po } '\text{dug yin.na'i blta ma myong} \]
\[ \text{movie } \text{this fear appear hot } \text{POS PER but } \text{1-ERG taste looked NEG-EGO-PERF} \]
\[ \# ‘This movie is frightening, but I’ve never watched it.’ \]

This is also how the inference behaves even in non-evidential-marking languages: where the addressee is expected to answer the question, this places an acquaintance commitment on the answerer, not the asker (cf. Lasersohn 2005: 673-674).

\[ \text{Is this food tasty?} \]
\[ \rightarrow \text{The addressee has tasted the food.} \]
\[ \rightarrow \text{The addressee does or doesn’t like the food’s taste.} \]

As to how the acquaintance inference is obviated in Tibetan, this is difficult to determine. Because many Tibetan correlates of the obviating constructions in English are not syntactically compatible with the presence of a perceptual evidential, the question may not coherently transfer across languages. But it’s worth noting, in sympathy with the observations for English in Section 1.1, that epistemic modals most naturally translatable as English
counterparts, e.g. རོ་ རྒྱ་ (yod.sa.red) \(\approx\) ‘must’ do not co-occur with the perceptual evidential, and so do not trigger the inference, and that the construction commonly used for future predication, using རོ་ (yong) \(\approx\) ‘(be)come,’ cannot receive a genuinely futurate interpretation, and so one cannot claim to have future acquaintance of an experiential predication.\(^{16}\)

In what follows, I explore the idea that acquaintance inferences are evidential effects, and that they arise when an agent commits to believing an experiential predication on perceptual evidential grounds. Before doing so, it’s finally worth noting that while Ninan (2014) suggests that the attitude to which speakers commit that drives acquaintance inferences is knowledge, there is preliminary evidence in Tibetan to suggest that this isn’t so.

It’s a feature of Tibetan evidentials that none of them allow any disavowal of the ordinary commitments on knowledge or certainty that attend bare assertion (cf. Garrett 2001: 37 and Tournadre & Dorje 2003: 110). This includes factual evidentials like རོ་ རྒྱ་ (yod.red) used with adjectives: a speaker can’t felicitously deny knowledge of an adjectival predication made using such an evidential, even where its use has indirective connotations.

\[
(20) \quad \text{bkra.shis spyang po yod.red yin.na'i spyang po yod.med shes kyi med}
\]

Trashi smart POS FAC but smart POS be-not-be know IPFV NEG-EGO

#‘Trashi is smart, but I don’t know whether he’s smart.’

This means that commitment to perceptual evidence and commitment to knowledge pattern apart in Tibetan, and that commitment to non-perceptual evidence, which voids acquaintance inferences, often still requires commitment to knowledge. Interestingly, in experiential predications using the factual evidential, we therefore have a case where acquaintance is not committed to, but knowledge is. The adjectival predication in these cases is compatible with affirmation of knowledge (21a), even in the absence of acquaintance, and the knowledge cannot be felicitously disavowed (21b).\(^{17}\)

\[
(21) \quad \text{a. kha.lag ‘di bro.ba chen po yod.red ngas shes kyi yod}
\]

food this taste big POS FAC 1-ERG know IPFV EGO

‘This food is tasty. I know it.’

\(^{16}\)The interpretation of an experiential predication with the verbalizing རོ་ (yong), e.g. kha.lag ‘di bro.ba chen po yong gi ‘dug ‘This food is becoming tasty [perceptual evidence].’ is that the speaker has perceptual evidence that the food is in the process of becoming tasty (say, in virtue of sampling it while it’s cooking). In the Tibetan verbal paradigm, the perceptual evidential is simply missing in the future. See Garrett (2001: §7.3.3.2) for discussion of the perceptual evidential in conditional antecedents, where some of its effects are neutralized.

\(^{17}\)Unfortunately, these knowledge avowals and disavowals can’t be tested more directly than in the paratactic constructions here: for instance, one cannot see whether ‘Trashi knows that this food is tasty.’ with a factual evidential controlling the embedded clause, is felicitous, to demonstrate that the subject (Trashi) can be felicitously said to know the content of the embedded clause on the basis of non-perceptual evidence. The reason for this is that verbs of knowing in Tibetan do not encode evidential distinctions in embedded clauses, unlike verbs of speech and some verbs of belief (see Section 3.1).
This pattern is the opposite of what a knowledge-centered account predicts, and shows that speakers take knowledge of experiential predications to be possible in the absence of acquaintance. I therefore suggest that the relevant speaker commitment is a more narrowly evidential one, and not epistemic.

2 Perceptual evidence and experiential predicates

The account of acquaintance inferences to follow relies crucially on the interaction between the lexical semantics of experiential predicates, and the notion of perceptual evidentiality, or belief grounded in a perceptual source of evidence. We now introduce both of these notions, and offering a preliminary formal treatment of them, which will allow us to derive acquaintance inferences explicitly. Section 2.1 deals with the notion of perceptual evidence, and belief grounded therein, while Section 2.2 deals with the semantics of experiential predicates.

2.1 Perceptual evidence

We first need a way to represent belief held by an agent on the basis of perceptual evidence, and a working treatment of the perceptual evidential that encodes that source of evidence. Formal treatments of evidentiality are still young and unsettled: I adopt here a treatment of belief grounded in a perceptual evidential source tailored to the purposes of analyzing Tibetan.\(^\text{18}\)

Let \(\text{Dox}_{x,w,\text{PER}}\) be the set of \(x\)'s doxastic alternatives at \(w\) grounded in perception. This is the set of worlds compatible with what \(x\) takes itself (de se) to have perceived at \(w\), or the set of just those worlds that make true whatever \(x\) thinks it has perceived at \(w\).

\[
(22) \quad \text{Dox}_{x,w,\text{PER}} := \{w' : \forall \phi, \psi[[\phi = \lambda w'' \text{perceive}(w'')(\psi)(x) \land \text{believe}(w)(\phi)(x)] \rightarrow \psi(w')\}\}
\]

We say that \(\text{perceive}(w)(\phi)(x)\) is true just in case \(x\) has perceived that \(\phi\) at \(w\). This notion of perception won't be analyzed further here, except to note that it is factive, such

---

\(^{18}\)Perceptual evidentials are seldom given formal treatment. Lee (2011) offers a Kratzerian modal analysis of -te in Korean. I do not adopt this treatment, as the behavior of Tibetan and Korean evidentials differs, and I know of no reason to think that Tibetan perceptual evidentials are modal in this sense. Murray (2017) offers a cross-linguistic treatment of 'direct' evidentials, which are often read perceptually, as contributing to not-at-issue asserted content. This account is ill-suited to treating evidentials in embedded clauses of the sort to be discussed in Section 3 below. See Garrett (2001) for another treatment of Tibetan perceptual evidentials, which decomposes its perceptual/demonstrative and certainty components.
that what is perceived is true: that is, $\text{perceive}(w)(\phi)(x) \rightarrow \phi(w)$. The reason for this is that committing to having perceived something using a perceptual evidential in Tibetan requires committing to its truth (as with all Tibetan evidentials: see Section 1.2). $\text{perceive}$ can therefore be read as a function encoding learning by perception, and $\text{Dox}_{x,w,\text{PER}}$ can be taken as the set of worlds at which everything $x$ thinks it has has come to know by perception at $w$ is true.\footnote{Factivity may not be a universal feature of perceptual evidentials cross-linguistically: see Chung (2010) on Korean perceptual evidentials as presentative, in the sense of Faller (2002). Languages generally probably don’t encode a notion of perception as a primitive in evidentials like this: see the discussion of Cuzco Quechua -mi in Faller (2002), which manipulates strength or authority of evidence, and the discussion of Korean -te in Lee (2011), which manipulates time of acquisition of evidence. Both can result in perceptual readings, though they may not be intrinsically perceptual. \text{perceive} can be taken as an abbreviation for the perceptual commitments on an evidential, however they arise. It’s not clear whether Tibetan perceptual evidentiality results from anything more grammatically primitive: see DeLancey (1986) for a treatment of it as basically pertaining to ‘new knowledge,’ and Garrett (2001) for a treatment of it as basically demonstrative.}

We can then offer a treatment of the contribution of the Tibetan perceptual evidential, which often surfaces as इदिङ (‘dug). We allow the evidential to take scope over a proposition, and return an ordered pair consisting of that proposition plus a perceptual source of evidence \text{PER}, as follows.

\begin{equation}
(23) \quad \square \llbracket \text{‘dug} \rrbracket w = \lambda \phi_{st} . (\phi(w), \text{PER})
\end{equation}

The ordered pair represents a pairing of ordinary compositional content on the left, along with the evidential contribution on the right, separating the two in the rough spirit of Murray (2017). The function of the right member of the ordered pair, and how it relates to the belief machinery, will be made clear in Section 3.1 below.

This is a simplification of the function of इदिङ (‘dug), in that the auxiliary has other non-evidential functions: in copular constructions, it can be used for existential and locative purposes, and in verbal constructions, it is associated with tense-aspectual information. But these contributions are carried equally by the other existential auxiliaries noted in Section 1.2, and so the perceptual evidential requirement is the unique contribution of इदिङ (‘dug) as opposed to these.

The above treatment of the perceptual evidential, and belief grounded in a perceptual source of evidence, can then be generalized to other sorts of evidence: simply replace \text{PER} with another sort of information source.\footnote{This is in line with the way Murray (2017) treats the distinction between different kinds of evidentials, as encoding primitive kinds information source, like ‘direct’ or ‘reportative.’ I doubt this is the way evidentials actually work: as noted in fn. 19 above for perception, source of information is probably not generally a linguistic primitive. The treatment here is a placeholder for a more serious decomposition of what surfaces as the encoding of distinct information sources.} So a Tibetan factual evidential like ओड़ि (yod.red) might have a denotation like (23), except that it contributes \text{FAC} as the right member of an ordered pair, while $\text{Dox}_{x,w,\text{FAC}}$ might represent all the worlds compatible with what $x$ takes itself to have learned by general ‘factual’ means at $w$, and so on.
2.2 Experiential predicates

We next need a working treatment of what I’ve called experiential predicates. This means that we have to: (i) delineate the class of experiential predicates, and (ii) offer a preliminary treatment of their compositional semantics.

By an experiential predicate, I mean a predicate that: (i) takes a stimulus of experience as its external argument; (ii) may be the result of composing with an overt experiencer; (iii) when occurring with an overt experiencer, is true of the stimulus just in case the stimulus produces experience of a specific sort in that experiencer; and (iv) absent an overt experiencer, may receive a generic interpretation as an individual-level predicate, true of the stimulus just in case the stimulus tends to produce that same sort of experience in experiencers ‘generally.’

Characterized this way, experiential predicates are a cross-categorial semantic natural class: English examples include e.g. *look tired (to x)*, pertaining to visual experience produced by the stimulus evidencing that it is tired, *funny (to x)*, pertaining to comical experience produced by the stimulus, and so on. What follows will make use only of adjectival experiential predicates whose experiential status is morphologically explicit, by derivation from a nominal denoting either a kind of experience (e.g. *fright*) or a sensory modality (e.g. *taste*). In English, we stick to *frightening* and *tasty*, which pertain to fear and gustatory pleasure produced by the stimulus, respectively. For Tibetan, we stick to their counterparts 甥 in tsha po (zhed snang tsha po) ‘frightening’ and ན་ བ་ ཆ ས བ བ ་ (bro.ba chen po) ‘tasty,’ which are derived from ཊ བ ་ ར ཥ (zhed snang) ‘fright’ and ཏ བ ་ ར (bro.ba) ‘taste,’ respectively.

The semantics of these expressions is unsettled: the following adopts as standard a treatment of them as possible. We assume, following Pearson (2013) and Snyder (2013), that experiential predicates (i) semantically take an experiencer argument and a stimulus argument, to return the appropriate truth conditions, and (ii) that the experiencer argument may covertly appear as the value of a variable, which can then either be left free, or be bound off by a generic operator, in the spirit of the treatment of individual-level predicates in Chierchia (1995). An entry for *frightening* is as follows.

21 Additionally, experiential predicates in the construction described in (iv) tend to be assessed ‘autocentrically,’ to use Lasersohn’s (2005) term, meaning that their generic interpretation without an overt experiencer is evaluated truth-conditionally relative to a speaker’s own experiences. Experiences may differ from speaker to speaker, yielding distinct treatments of the truth conditions of a single generic predicate across the population. For this reason, experiential predicates are sometimes thought of as ‘subjective,’ or part of the class of ‘predicates of personal taste.’ This paper is not about that topic, though the material in Section 4.2.2 appeals to something like autocentricity in the reliability principle.

22 Some authors treat these predicates as lacking internal arguments, and treat overt experiencers as adjuncts (e.g. MacFarlane 2014: §7.2.5 and Lasersohn 2017: §5.5). It doesn’t matter for the present account whether experiential predicates have internal arguments or not: someone who thinks they don’t can just take the meaning of the predicate *simpliciter* (with no argument or adjunct) to be the meaning of the predicate given below after the generic operator has bound off the experiencer, and nothing changes. In the literature on ‘predicates of personal taste,’ the issue of whether some such predicates have internal arguments, at whatever level of syntactic/semantic description, is often conflated with the issue of whether they ought to be treated with a ‘contextualist’ or ‘relativist’ semantics, but these are orthogonal issues, as the example of Stephenson (2007a) demonstrates. The behavior of these experiencers shows both argument-like and adjunct-like behavior, and all our present treatments of them are likely inadequate. On the syntactic status of experiencers, see Rákosi (2006) and Collins (2013).
(24) \[ [\text{frightening}]^w = \lambda x_e. \lambda y_e. \exists z [\text{fear}'(w)(z) \land \text{exp}''(w)(z)(x) \land \text{stim}''(w)(z)(y)] \]

Here, ‘\text{fear}'(w)(z)’ is to be read as ‘z is (a portion of) fear at w,’ ‘\text{exp}''(w)(z)(x)’ as ‘x is the experiencer of z at w,’ and ‘\text{stim}''(w)(z)(y)’ as ‘y is the stimulus of z at w.’ And so with an overt experiencer like to Mary, as in (25), we get the interpretation in (26).

(25) The movie is frightening to Mary.
(26) \[ [\text{The movie is frightening to Mary}]^w = [\text{frightening}]^w([\text{to Mary}]^w) = [\text{the movie}]^w = \exists z [\text{fear}'(w)(z) \land \text{exp}''(w)(z)(m) \land \text{stim}''(w)(z)(\iota q[\text{movie}'(w)(q)])] \]

That is, \textit{The movie is frightening to Mary} is true at w just in case at w, there is fear stimulated by the movie and experienced by Mary. This correctly requires that Mary have actually experienced fear stimulated by the movie.\(^23\)

In \textit{exocentric} constructions like (27), where no overt experiencer appears, but the predicate is interpreted as anchored to a contextually salient experiencer (here, Mary), the predicate takes the covert argument \(x_e\), which is assigned a value \(g(\epsilon)\) by an assignment function \(g\). This in turn is interpreted as a contextually relevant experiencer in the context of utterance, yielding an indexical reading, as ordinary for definite implicit arguments (cf. Stojanovic 2007).\(^24\)

(27) Mary went to the theater and saw a movie. The movie was frightening.

(28) \[ [\text{The movie was frightening } x_e]^{w,g} = [\text{frightening}]^{w,g}([x_e]^{w,g})([\text{the movie}]^{w,g}) = \exists z [\text{fear}'(w)(x) \land \text{exp}''(w)(z)(g(\epsilon)) \land \text{stim}''(w)(z)(\iota q[\text{movie}'(w)(q)])] \]

And so (ignoring tense for simplicity), \textit{The movie was frightening} on this reading is true at \(w\) and \(g\) just in case at \(w\), there is fear stimulated by the movie and experienced by \(g(\epsilon)\). Assuming that \(g(\epsilon)\) is Mary in the relevant context, this requires as above that Mary have actually experienced fright stimulated by the movie.

The above two interpretations are not those that are crucial for the present: they do not give rise to speaker-directed acquaintance inferences, but only enforce direct experience requirements on a definite experiencer (e.g. in requiring that the experiencer has experienced fear of the movie). The third possible interpretation of the experiential predicate, which occurs when a speaker attributes the property of tending to stimulate an experience ‘\textit{simpliciter},’ is the one that yields the inference, and this reading is represented by having a generic operator \(\text{GEN}_\epsilon\) bind off an implicit experiencer argument as follows, where ‘\(\emptyset\)’ is a generic quantifier, and \(a\) is the type of assignment functions.\(^25\)

\(^{23}\)There are a lot of things this denotation leaves unresolved, as to when and in what way this experience occurs, and is disposed to occur again in virtue of the stimulus and experiencer’s dispositions. But the above is all that is needed to capture the formal features relevant for the present.

\(^{24}\)Exocentric readings as in (27) prefer certain aspectual and discourse environments. I won’t explicate why here – I only note that this reading is possible, and needs to be generated by the semantics. Where it is not relevant, I suppress \(g\) as a parameter in denotations.

\(^{25}\)I won’t specify the exact contribution of generic quantification: I take it that, following Pearson (2013), Snyder (2013), and Anthony (2016), it will have a modal force related to ideally normal conditions under
The movie is frightening.

\[
\text{the movie} \quad \text{GEN}_{x} \quad \text{is} \quad \text{frightening} \quad x_{\epsilon}
\]

\[
\begin{align*}
&[\text{GEN}_{x}]^{w,g} = \lambda P_{a,(s,e,t)} \cdot \lambda x_{e} \cdot \exists y, w'[P(g[y \to e])(w')(x)] \\
&[\text{the movie} \text{GEN}_{x} \text{is frightening} x_{\epsilon}]^{w,g} = \exists y, w'[\exists z [\text{fear}'(w')(z) \land \text{exp}''(w')(y) \land \text{stim}''(w')(z)(\text{movie}'(w')(q))]]
\end{align*}
\]

The typical interpretation of (29) is that the movie is frightening \textit{simpliciter}, not to any one definite experiencer.\(^{26}\) The compositional structure of the sentence with this interpretation is as in (30), with the generic operator scoping over the original predicate. This operator takes the intension of a property and binds off the experiencer variable, returning a modified property that applies generically to an accessible world and experiencer (31). Putting it all together, the interpretation of \textit{The movie is frightening} is as in (32): it is true at \(w\) just in case at any world \(w'\) generically accessible from \(w\), and for any generically relevant experiencer \(y\), the movie stimulates an experience of fear in \(y\). See Anthony (2016) for a kindred account of the various interpretations of the experiential predicate outlined above, using similar methods.

Only experiential predicates interpreted as in (29) trigger acquaintance inferences, so this interpretation, and the sort of denotation in (32), is what is relevant for the rest of the account. The denotation is analogous for other experiential predicates, simply replacing the fear-predicate with one of the appropriate experiential sort, and I assume the semantics is invariant across English and Tibetan.

In what follows, it will be useful to adopt an abbreviation for this sort of generic predicate: we therefore say, for instance, that \(\text{fear}'(w)(x)\) is true just in case \(x\) is generically disposed to produce fear at \(w\), in the above sense, that \(\text{gus}'(w)(x)\) is true just in case \(x\) is generically disposed to produce gustatory pleasure, and so on. These small-caps predicates therefore denote the property of producing a certain kind of experience \textit{simpliciter}, not relative to a particular experiencer.

\(^{26}\)\(\text{(29)}\) can sometimes be interpreted exocentrically as well, but this requires a special extralinguistic context (cf. Stephenson 2007a). We’re to imagine (29) as being uttered in the ‘normal’ situation where the speaker has seen the movie, been frightened by it, and is voicing the opinion that the movie is frightening \textit{simpliciter} (and not just to himself) based on this experience (such that others might disagree with what the speaker said, if they saw it and were not frightened).

---

\(^{26}\)
One would ultimately like to decompose these predicates further, down to the constituents that actually introduce the experiential semantics itself, so that the acquaintance inference can be traced to its lexical roots. One might do this for *frightening*, for instance, by composing the mass noun *fright* with the verbalizer *-en* and the deverbal marker *-ing* that attaches to object-experiencer psych verbs, as in the following placeholder for a more serious decomposition.

\[
\begin{align*}
gus'(w)(x) := 
\exists y, w'[\exists z [gus.pl'(w')(z) \land \exp''(w')(z)(y) \land \text{stim}''(w')(x)]]
\end{align*}
\]

It would then be clear, from the following account, where the experiential semantics, and so thus acquaintance inference, ultimately comes from. This would highlight the extent to which the tendency to trigger acquaintance inferences is systematically predictable from lexical composition.\(^{27}\)

3 Acquaintance inferences with perceptual evidential marking

In this section, the acquaintance inference is derived in constructions that overtly mark grammaticized perceptual evidentiality, using Tibetan as an exemplar language. The inference is shown to arise both in belief reports and assertions involving experiential predications for the same reason: perceptual evidentials commit subjects and speakers to belief in the proposition represented by such a predication on perceptual grounds.

Section 3.1 first establishes that the notion of belief grounded in perceptual evidence is active in Tibetan, and so is required to analyze the language, independently of concerns with acquaintance inferences. Section 3.2 then derives the inference itself, using the machinery from Section 2 along with some further empirical observations.

\(^{27}\)In some cases it isn’t clear how to proceed with this: decomposing *tasty*, for instance, presents a problem in that it is unclear how the adjectival suffix *-y* relates to similar markers found e.g. in *smelly* or *salty* (cf. Kennedy 2016). It is also not clear for what reason *taste* and *-y* come compositionally to encode pleasant gustatory experience, though for some reason cross-linguistically predicates meaning ‘big taste’ or ‘full of taste’ tend to be interpreted as ‘pleasant-tasting.’ These are the sorts of questions that need to be answered to understand how various predicates create experiential (and so often ‘subjective’) commitments in speakers, and they have not so far been taken seriously in discussion of such predicates, where the nuances of lexical semantics get lost in an attempt to give a general account of predicates of ‘opinion.’
3.1 Belief grounded in perceptual evidence

To demonstrate that the notion of belief grounded in a source of evidence is active in Tibetan generally, it is necessary to demonstrate that this notion is explicitly encoded by attitude verbs of belief and the way they relate to their evidentially marked complement clauses. This shows that the notion is independently required for an adequate semantic treatment of attitude verbs, and how they relate to their objects, in the language. The move to belief grounded in a source of evidence for unembedded clauses then follows automatically, on standard assumptions that a speaker commits to believing what is asserted.

In Tibetan, evidential distinctions are marked on typically sentence-final auxiliaries in matrix finite clauses, which often resemble the copulas described in Section 1.2 in form and function; this is true both of copular constructions with nouns and adjectives, and of verbal constructions, where the auxiliaries also encode tense-aspect information.

Embedded finite clauses also sometimes appear evidentially marked. Where this happens, the embedded evidential marks the evidential source for the embedded clause alone, as it relates to the subject of the embedding verb. The matrix clause can then include another evidential, which marks the evidential source for the content of the sentence as a whole. This happens, for instance, with verbs of reported speech, including བོ ཐ ཀ ཤ ཉ ག ཆ ག ར བ ཀ ཐ ག ར བ ཀ (lab) ‘say.’

(39) བཀྲ་ཤིས་ཀྱིས་བྱ་བ་ཁྲོམ་ལ་ཕྱིན་སོང་བ་ལབ་པ་རེད
Trashi  ERG Dawa market OBL went PFV.PER QUOT say PFV FAC
‘Trashi said that Dawa went to the market.’
→ Trashi said this on the basis of perceptual evidence.

(40) བཀྲ་ཤིས་ཀྱིས་ཁ་ལ་འདི་འབྲེལ་བ་ཤེས་པ་འདི་དུག་བ་ལབ་པ་རེད
Trashi  ERG food this taste big POS PER QUOT say PFV FAC
‘Trashi said that this food is tasty.’
→ Trashi said this on the basis of perceptual evidence.
→ Trashi claimed to have tasted the food, and liked its taste.

In past perfective verbal constructions, བོ ཐ ཀ ཤ ཉ ག ཆ ག ར བ ཀ (song) is a marker of perceptual evidence, and ང་ རེ་ (pa red) is a marker of factual evidence. The evidential markers on the embedded clauses in (39) and (40) mark the evidence on the basis of which Trashi made his original report, so that Trashi was committed in saying these things to having perceptual evidence for what he said. This will often mean that Trashi himself, in making the initial report, used the corresponding perceptual evidential in a matrix clause: note the reported acquaintance inference anchored to Trashi in (40).28 The evidential marker on the matrix clause then commits the speaker to knowing about Trashi’s original report on the basis of factual evidence, which will often imply that she didn’t witness Trashi saying this.

28The anchoring of the embedded evidential to the subject of the speech report isn’t just due to quoting the sentence that the subject said directly, including the evidential the subject used. It persists in indirect speech reports, where the embedded clause shifts indexical values, and so on (cf. Tournadre & Dorje 2003: 214-216).
This pattern of embedded evidentials isn’t limited to speech reports, but extends to attitude reports as well. Most attitude verbs in Tibetan do not encode evidential distinctions in an embedded clause, preferring strategies that avoid such marking, by taking a DP complement, or a nonfinite complement with no auxiliary, which voids the need for evidential distinctions. But the verb བོས། (bsam) ‘think’ does allow finite, evidentially-marked clauses as its complement.29 Where this happens, the evidential in the embedded clause marks the source of evidence that the attitude-holder, the subject, takes himself to have for believing the content of the lower clause.30

(41) bkra.shis zla.ba khrom la phyin song bsam gyi yod.red
Trashi Dawa market OBL went PFV.PER think IPFV FAC
‘Trashi thinks that Dawa went to the market.’
⇒ Trashi thinks this on the basis of perceptual evidence.

(42) bkra.shis kha.lag ‘di bro.ba chen po ‘dug bsam gyi yod.red
Trashi food this taste big POS PER think IPFV FAC
‘Trashi thinks that this food is tasty.’
⇒ Trashi thinks this on the basis of perceptual evidence.
⇒ Trashi takes himself to have tasted the food, and liked its taste.

In other words, the attitude verb encodes exactly the notion alluded to at the start of this paper, belief on the basis of a source of evidence (here, a perceptual source, but others are possible as well). Note further that where an experiential predication is embedded, as in (42), the acquaintance inference arises, anchored not to the speaker, but rather to the subject or attitude-holder. Here the language is explicit about the fact that belief in an experiential predication on the basis of a perceptual evidential source is what triggers the inference, in line with our hypothesis.

That a perceptual source of evidence specifically is required is also shown by the fact that where the embedded predication does not make use of བུད། (‘dug), the subject-anchored inference disappears, and a counter-acquaintance inference may be implicated, again anchored to the subject.

(43) bkra.shis kha.lag ‘di bro.ba chen po yod.red bsam gyi yod.red
Trashi food this taste big POS FAC think IPFV FAC
‘Trashi thinks that this food is tasty.’
⇒ Trashi thinks this on the basis of factual evidence.
⇒ Trashi takes himself not to have tasted the food.

29The same is true of ལ་ཀྱི (snyam) ‘think,’ which is a literary counterpart of the former.
30‘Takes himself to have,’ because reports like (41) and (42) are appropriate even where Trashi is mistaken in his perceptions or misremembering that he had a certain perception.
We can capture this by allowing \( \texttt{bsxm} \) (\( \texttt{bsam} \)) to compose with the content of an evidentially-marked clause, as laid out in Section 2.1: that is, it takes the intension of an ordered pair consisting of a truth value and a type of evidential source. It also takes an agent subject, and returns the truth conditions alluded to in that section, attributing belief to the subject grounded in the kind of evidential source encoded by the embedded clause. Where \( (t; \mathcal{V}) \) is the type of an ordered pair consisting of a truth value and kind of evidential source, and \( \text{LEFT}(\psi) \) and \( \text{RIGHT}(\psi) \) are the left and right members of such an ordered pair \( \psi \), respectively:

\[
(44) \quad \text{bsam}^w = \lambda \Psi_{s,(t;\mathcal{V})}.\lambda x.e.\forall w' \in \text{Dox}_{t,w,\text{RIGHT}(\Psi(w))} [\text{LEFT}(\Psi(w'))]
\]

The composition of (42), for example, is as follows, where \( f \) is the food, \( t \) is Trashi, and irrelevant compositional details are glossed over, including the aspectual marker \( \texttt{gyi} \). Note that the order of bracketing is in some places changed from the English, as Tibetan is head-final.

\[
(45) \begin{align*}
\text{a.} &\quad [kha.lag] \text{di}'x\epsilon \text{bro.ba chen po} \text{GEN}_e \text{dag}]^w = \\
&\quad \text{dag}^w([\text{GEN}_e]^w([x_\epsilon \text{bro ba chen po}]^w) )^w (kha lag \text{di}^w) = \\
&\quad \langle \text{GUS}'(w)(f), \text{PER} \rangle \text{‘This food is tasty.’} \\
&\quad \text{(perceptual source of evidence)} \\
\text{b.} &\quad [bkra.shis \text{bsam}(\text{27a}) \text{gyi} \text{yod.red}]^w = \\
&\quad \text{yod.red}^w(\text{bsam}^w((\text{27a})) ([bkra.shis]^w)) = \\
&\quad \forall w' \in \text{Dox}_{t,w,\text{PER}} \langle \text{GUS}'(w')(f), \text{FAC} \rangle \text{‘Trashi thinks this food is tasty (grounded in a perceptual source of evidence).’} \\
&\quad \text{(factual source of evidence)}
\end{align*}
\]

Thus, (45b) is true just in case Trashi believes, on the basis of a perceptual evidential source, that the food is tasty. The truth conditions for the belief report as a whole are also accompanied by the factual source of evidence \( \text{FAC} \) for the matrix clause, due to the matrix factual evidential \( \text{yod.red} \), which specifies the source of evidence that Trashi has this perceptual belief. The result will be likewise for other embedded evidentials, just changing the associated evidential base.

Since evidentially-marked matrix clauses encode a source of evidence, it follows that if assertions made using these clauses commit their speakers to belief in what is asserted, then the speaker incurs the relevant evidential commitment automatically. This is so if belief commitments incurred by assertion function like belief verbs such as \( \texttt{bsxm} \) (\( \texttt{bsam} \)) ‘think,’ composing with the ordered pair containing the evidential source in the same way. I take for granted that assertions incur these not-at-issue belief commitments, while remaining theoretically theoretically neutral as to how this occurs.\(^{31}\) Supposing that our speaker is Dawa (\( d \)), for instance:

\(^{31}\)Not all languages with evidentials incur belief commitments on assertion: it often depends on which evi-
Where Dawa asserts $\Psi$ at $w$,
she commits to the truth of $\lambda w'. \forall w'' \in Dax_{d,w',\text{RIGHT}(\Psi(w'))}[\text{LEFT}(\Psi(w''))]$.

That is, a speaker asserting a proposition accompanied by evidential source commits to believing the proposition in question on the basis of that evidential source, and this happens as a not-at-issue commitment accompanying assertion generally. For the case of the experiential predication in particular, e.g. if Dawa says that the food is tasty on the basis of a perceptual source of evidence using (14a) (‘this food is tasty’ with a perceptual evidential), we have:

Where Dawa asserts $\lambda w'. \langle \text{GUS}'(w')(f), \text{PER} \rangle$ at $w$,
she commits to the truth of $\lambda w'. \forall w'' \in Dax_{d,w',\text{PER}}[\text{GUS}'(w'')(f)]$.

That is, in asserting that the food is tasty on the basis of a perceptual source of evidence, the speaker commits, not-at-issue, to believing that the food is tasty on the basis of a perceptual source of evidence. This holds for assertions generally, and derives the usual speaker-oriented not-at-issue evidential commitments on assertion. For experiential predications specifically, it will then derive the acquaintance inference, as described in Section 1: to believe such a thing on the basis of perceptual evidence is to commit to having tasted the food and liked its taste, and so on. The goal now is to describe how this happens, on the basis of the semantics of experiential predicates, and the nature of belief grounded in perceptual evidence outlined above.

### 3.2 Deriving the inference

With the notion of belief grounded in a perceptual source of evidence in place, we are ready to derive the acquaintance inference in Tibetan, our exemplar of a language that overtly marks perceptual evidentiality. The basic derivation is as follows: (i) use of a perceptual evidential requires commitment to belief in the scope proposition grounded in a perceptual source; (ii) this in turn requires committing to having perceived that the scope proposition is true; (iii) this in turn requires perceiving the manifestation of a generic experiential property, i.e. that the stimulus has actually stimulated experience in some experiencer; (iv) one can only perceive this with respect to oneself, and so one commits by use of the evidential to perceiving that the stimulus has stimulated the experience in oneself. This in turn entails, due to the factivity of perception and the lexical semantics of the experiential predicate, the acquaintance inference.

Section 3.2.1 first establishes that committing to believing a generic proposition on the basis of perceptual evidence requires committing to having perceived one of its manifestations. Section 3.2.2 then shows that as perceptual evidentiality is encoded in Tibetan (and many other languages), one can only perceive such a manifestation with respect to oneself as experiencer. Section 3.2.3 then derives the inference, first for belief reports with perceptual evidentials, and then for bare assertions with these evidentials, due to the commitment to belief enforced by assertion.

dential is used, and in particular, reportative evidentials often void commitment to belief cross-linguistically (see AnderBois 2014). As noted above, this is not so for Tibetan, where reportative markers are not part of the evidential paradigm, and where all markers in the evidential paradigm require belief and certainty.
3.2.1 Step 1: Perception of generics and their manifestations

In Tibetan, it is possible to felicitously assert that an individual has a dispositional property on the basis of perceptual evidence. Where these dispositions are thought of as generic tendencies to manifest the property, use of the perceptual evidential requires that the evidence-holder has witnessed some such manifestation. To take a simple example, suppose that one asserts that Trashi is smart, using the adjective སྤྱི་གྲོ (spyang po) ‘smart’ and the perceptual evidential.

(48) བཀྲ་ིས་སྤྱི་གྲོ་ 'འདུག

bkra.shis spyang po ‘dug
Trashi smart POS PER
‘Trashi is smart.’
(perceptual source of evidence)

An assertion of (48) implies not just that the speaker has seen or heard Trashi, but also that she has actually witnessed Trashi behaving cleverly, or in other words manifesting a disposition to clever behavior. For instance, the speaker might have seen Trashi solving a math problem. It is not enough that the speaker infer Trashi’s tendencies by observing some result of clever behavior, e.g. by seeing a paper full of Trashi’s mathematical work, from which it is clear he solved that same problem. Only witnessing an eventuality that itself constitutes a manifestation of his intelligence counts.

This is a general feature of ང་འདུག (‘dug), not just active in adjectival predication. For instance, the perceptual evidential can be used in present imperfective verbal constructions, e.g. to report on the fact that Trashi is currently in the habit of writing letters to his younger brother. Such a habitual, present-tense interpretation can be coerced by the use of a temporal adverbial like སྣང་དོན (deng.sang) ‘these days.’

(49) དེ་ཐོས་ཤེས་ཀྱིས་ཁོང་གི་ ‘ཞུན་འྲི་ལ་འབྲི་གེ་འབྲི་ ‘འདུག

deng.sang bkra.shis kyis khong gi ‘og.ma la yi.ge ‘bris gi ‘dug
deng.sang Trashi ERG 3 GEN little-brother OBL letter write IPFV PER
‘These days, Trashi writes letters to his little brother.’
(perceptual source of evidence)

Here, the perceptual evidential is very strict: the speaker must witness some eventuality constituting a manifestation of this present disposition or habit, i.e. she must witness Trashi actually writing a letter to his younger brother. It is not enough, for example, to witness his younger brother receiving a letter written by Trashi. In general, then, we say that

32In fact, the strictness goes beyond this: there is the question of how many times one must witness a writing in order for the perceptual evidential to be justified. Generic habits can be witnessed, but the fact that they can only be witnessed in virtue of witnessing their manifestations means that for verbal reports, speakers will typically imply they have seen the sort of eventuality in question repeatedly by using the perceptual evidential, if a long present span of time is supposed. This requirement appears not to hold in the adjectival case, where e.g. witnessing one manifestation of Trashi’s intelligence seems to be enough to secure the report (and likewise with experiential adjectives, where e.g. one taste can be enough to pronounce something tasty).
where the perceptual evidential is used to report a generic or habitual property, the speaker is committed to witnessing at least one of its manifestations.

For the case of experiential predicates like 'tasty' and 'frightening,' given the dispositional semantics ascribed to them in Section 2.2, this means that making generic attributions grounded in perceptual evidence with these adjectives requires that the speaker have witnessed the stimulus producing experience of the relevant sort, in some experiencer or other.

### 3.2.2 Step 2: Unobservability of others’ experiential states

In many languages, it is infelicitous to make assertions about the experiential state of someone other than oneself on the basis of perceptual evidence. As Sun (1993: §4.2.3) puts it, such states are unobservable: they are perceptually accessible only via what Tournadre & La Polla (2014: 242) call endopathic access, i.e. perceptual evidence held by the experiencer of the state in question.

For instance, Korean contains predicates of experiencers that are typically infelicitous to use with the perceptual evidential -te and a non-first-person subject.33 Lee (2013: 419, ex. 19a) demonstrates with ‘dizzy:’

(50) *Ku-nun ecierep-te-ra
   he-TOP dizzy-TE-DEC
   ‘[I directly perceived] he was dizzy.’

[Korean. Lee 2013: 419, ex. 19a]

By contrast, the use of a non-first-person subject with a reportative marker that voids commitment to perceptual evidence is acceptable (Lee ibid. 417, ex. 9).

(51) Mary-ka ecierep-tay
    Mary-SUBJ dizzy-REP
    ‘Mary says she is dizzy.’
    ‘Mary is said to be dizzy.’

[Korean. Lee ibid. 417, ex. 9]

This is a property of predicates that encode experience generally, including those that take stimulus subjects, but also combine with experiencers. Lee (2012: 257, ex. 9b) demonstrates this with ‘tasty:’ here, the infelicity of a non-first-person subject with the perceptual evidential appears again.34

33Korean -te has disanalogies with the uses of Tibetan  ཉན་གྲགས (“dug) explored in this paper. For instance, Lee (2011) shows how -te interacts with tense to indicate perception of the results of a past eventuality, or perception of something on the basis of which a future eventuality is predicted. It therefore differs from the ‘pure’ uses of  ཉན་གྲགས (“dug) described in this paper, which require perception of an eventuality itself, and cannot be used predictively. It will be important to get clear in the future on how unobservability might or might not vary typologically, as well as on how perceptual-inference evidentials interact with acquaintance inferences.

34The first clause of this example has the speaker explicitly commit to having seen the experiencer eat the meat, to show that this commitment doesn’t rescue the use of the perceptual evidential.
Lee (ibid.) goes on to note that ‘If the subjects [...] are replaced with the first-person subject, the sentence is well-formed even without a context.’ Crucially for the present account, experiential predicates with stimulus subjects trigger unobservability restrictions in the relevant languages, where an overt experiencer appears.

This parallels the well-known facts from Japanese, regarding adjectival predicates like ‘hot’ (predicated of an experiencer, rather than of a stimulus), ‘lonely,’ and ‘sad’ (Kuroda 1973: 378 ff.; Tenny 2006: 247 ff., a.m.o.). Bylinina (2017: 301, ex. 32) again extends these observations to experiential predicates with stimulus subjects, like ‘tasty;’ here again, a first-person experiencer is strange, unless some evidential or epistemic marker voiding commitment to perceptual evidence is included.35

These features of unobservability and perceptual evidence are robust in the Tibetic languages as well,36 including in the ‘Standard’ Tibetan described here, as Garrett (2001: §§1.4.2.3, 3.4) observes. The experiential semantics is what drives the effect, regardless of category: ‘unobservable’ predicates include the verbal གིག མཛད ཇྱག (’khyag) ‘be cold’ and the adjectival གིག མཛད དཔེ་ (skyid po) ‘happy.’ To illustrate with the former: as expected, a third-person report is odd with a perceptual evidential (54a), but repaired if a marker making no commitment to perceptual evidence is used instead, such as a factual evidential, or the epistemic modal གིག མཛན དཔེ་ (yod.sa.red) (54b) ‘≈ must.’ The assertion is felicitous with a perceptual evidential and the first-person pronoun མ་ (nga) as subject (54c).

35The Japanese case is more complicated than that of Korean or Tibetan, since in Japanese the odd constructions with a non-first-person experiencer lack an overt perceptual evidential. Typically across languages, evidence-neutral assertions regarding others’ experiential states are fine – so it may be that the Japanese restriction comes from a default to perceptual evidence here, in a construction where an unmarked assertion is in complimentary distribution with an indirective, or it may be that Japanese evidential mechanisms are somehow unique in this regard. Interestingly, Korean allows for both an overtly-marked commitment to perceptual evidence in these constructions, as well as an evidence-neutral alternative: according to Lee (2012: 254-255), the evidence-neutral option might be pragmatically odd depending on the context, but there is no grammatical restriction on it. Tenny (2006: 248, fn. 4) implies that something similar may happen in Japanese with ‘younger’ speakers.

36For comments on unobservability in Amdo Tibetan, see Sun (1993: §2.4.3); for comments on Lamjung Yolmo, see Gawne (2014: §2.4). Caplow (2000: 23) also seems to imply the same pattern holds in a variety of ‘Dokpa’ Tibetan spoken by speaker from the Tibetan diaspora, but the comments are brief, and no ungrammatical examples of sentences with non-first-person subjects and perceptual evidentials are given.
This behavior also extends, as in Korean and Japanese, to experiential predicates that take stimuli subjects as well as combining with experiencers, like "food this taste big" (bro.ba chen po) ‘tasty.’ This is shown below, where the oblique particle appearing with the experiencer. It is odd for the experiencer to be specified as a third person with a perceptual evidential (55a), but the factual evidential is permissible (55b), as is a first-person experiencer with the perceptual evidential (55c).

(55) a. ?kha.lag 'di bkra.shis la bro.ba chen po 'dug
food this Trashi OBL taste big POS PER
?'This food is tasty to Trashi.'
(perceptual source of evidence)

b. kha.lag 'di bkra.shis la bro.ba chen po yod red
food this Trashi OBL taste big POS FAC
‘This food is tasty to Trashi.’
(factual source of evidence)

c. kha.lag 'di nga la bro.ba chen po 'dug
food this I OBL taste big POS PER
‘This food is tasty to me.’
(perceptual source of evidence)

37 For a related example with 'be hungry,' see Garrett (2001: 20, ex. 17).
Similar facts hold for "zhed snang tsha po" (frightening). This suggests the following general principle in Tibetan: to perceive that an experience is present within an experiencer is only possible where the perceiver and the experiencer are identical. We formulate this as follows, where ‘E’ is a metavariable over predicates of kinds of experience (like ‘fear’). This principle can be seen as a postulate governing the meaning of perceive, and so a restriction on the interpretation of the perceptual evidentials that encode this function in the language.

\[
\text{perceive}(w)(\lambda w'_{y_z} \exists z [E(w')(z) \land exp''(w')(x)(z) \land stim''(w')(y)(z)])(u) \\
\rightarrow u = x
\]

Given that the unobservability of experiential states is not an isolated phenomenon, I propose to take this principle as active generally cross-linguistically. Individual languages may then differ in whether they lexicalize specific predicates as experiential, and therefore ‘unobservable’ in the relevant sense, and they may differ in how their evidential mechanisms relate to perceive.

From the above we can see how the principle in (56) results in infelicity for non-first-person experiential ascriptions with a perceptual evidential. Beginning with an entry for "bro.ba chen po" (tasty) that parallels (24) in Section 2.2, where gus.pl'(w)(x) iff x is (a portion of) gustatory pleasure at w, and where the experiencer is not bound by GEN, since the predicate takes an overt experiencer:

\[
\text{[bro.ba chen po]}^w = \lambda x. \lambda y. \exists z [gus.pl'(w)(z) \land exp''(w)(x)(z) \land stim''(w)(y)(z)]
\]

'tasty'

Composing the report that the food is tasty to Trashi using the perceptual evidential then turns out as follows, given the denotation for "byung 'dug" in Section 2.1.

\[
\text{[kha.lag 'di bkra.shis la bro.ba chen po 'dug]}^w = \\
(\exists z [gus.pl'(w)(z) \land exp''(w)(t)(z) \land stim''(w)(f)(z)], \text{PER})
\]

'This food is tasty to Trashi.'
(perceptual source of evidence)

As noted in Section 3.1, an assertion of (58) commits the speaker s to believing the intension of the left member of the ordered pair, grounded in the source of evidence acting as the right member. So, where s asserts (58) at w, the belief commitment is as follows.

38 Use of "zhed snang tsha po" with the first-person experiencer is best during or right after an event of the speaker/experiencer being scared: a report of a long-past event, or a habitual tendency, may prefer the receptive egophoric evidential (typically active in first-person non-volitional ascriptions) rather than the perceptual. The form of this evidential, "byung 'undergo' can also be used as an auxiliary verb in non-egophoric constructions, and with it one can report directly perceiving the results of another experiencer’s fear, etc. (e.g., if they are visibly afraid) by stacking it with the perceptual evidential, i.e. "byung 'dug. This use of the perceptual evidential for perception of results is not possible with the use of "byung 'dug alone.

39 For simplicity, the principle includes reference to a stimulus: one would ultimately like to delete this, to capture those predicates above that have experiencer subjects and no stimulus. Roughly, one wants to say that to perceive anything that entails an experience being in an individual in some suitably ‘immediate’ way requires identity of the experiencer and perceiver.
∀w′ ∈ Dox_s,w,per [∃z [gus.pl′(w)(z) ∧ exp′′(w)(t)(z) ∧ stim′′(w)(f)(z)]]

Where this belief is grounded in a perceptual source, by the definition in (22) and its appeal to believe, it requires that the speaker believe herself to have perceived the asserted proposition.\(^{40}\) Since this belief is evidence-neutral, it is represented using Dox_s,w, or the ‘ordinary’ set of doxastic alternatives for s at w, unspecified for a source of evidence.

\[
\text{Dox}_{x,w} := \{w′: w′ \text{ is compatible with } x′\text{’s beliefs at } w\}
\]

(60) \(\text{Dox}_{x,w} := \{w′: w′ \text{ is compatible with } x′\text{’s beliefs at } w\}\)

\[\forall w′ ∈ \text{Dox}_{x,w} \text{[perceive}(w′)(λw″.∃z[∃z [gus.pl′(w″)(z) ∧ exp′′(w″)(t)(z) ∧ stim′′(w″)(f)(z)])](s)]\]

From this and (56), it follows that \(∀ w′ ∈ \text{Dox}_{s,w}[s = t]\). So in order for the commitment to hold, the speaker must take herself to be Trashi; and since the use of a third-person form to refer to Trashi typically implies that she does not, the sentence is systematically bizarre due to a violation of (56) in ordinary circumstances.

3.2.3 Putting the pieces together

With the above said, it is now possible to derive the acquaintance inference required by ‘dug’ with experiential predicates in Tibetan. Recall the phenomenon, repeated from (14a).

\[
kha.lag ‘di bro.ba chen po ‘dug
\]

food this taste big POS PER

‘This food is tasty.’

(perceptual source of evidence)

\(\implies\) The speaker takes herself to have tasted the food.

\(\implies\) The speaker takes her gustatory experience of the food to be pleasant.

Recall the denotation for the claim that the food is (generically) tasty, grounded in a perceptual source of evidence (63), and the commitment to belief that comes from asserting this at w on the part of the speaker, s (64). This in turn requires that the speaker take herself to have perceived this (65).

\[
[kha.lag ‘di bro.ba chen po ‘dug]w = \langle\text{GUS}'(w), \text{PER}\rangle
\]

‘This food is tasty.’

(perceptual source of evidence)

\[∀ w′ ∈ \text{Dox}_{s,w,\text{PER}}[\text{GUS}'(w′)](f)\]

\(^{40}\text{Strictly, given the above machinery, it requires only that she take herself to have perceived some set of propositions that jointly entail this proposition. For simplicity, I will assume that perceive is structured in such a way that it is not possible to perceive something entailing that an experiencer is in an experiential state without perceiving that the experiencer is in that state. Nothing serious hinges on this; if it is troublesome, then to keep the result below, (56) can be changed to require that perceiving something entailing that an experiencer is in some experiential state is impossible without identity between perceiver and experiencer (which may be a more accurate generalization anyhow).}\]
experiential statements we are interested in.

For simplicity, we coin the following shorthand for the instantiation \( \tilde{\varphi} \) of a generic, with respect to a world and experiencer: the instantiation states the truth of the scope of the generic operator, with respect to some world \( w'' \) and experiencer \( u \), which we say instantiate the generic truth. Here we just define a generic instantiation in terms of the sorts of generic experiential statements we are interested in.

\[
\text{perceive}(w')(\lambda w''_s . \text{GUS}'(w'')(f))(s)
\]

But from the comments in Section 3.2.2, it follows that the speaker must therefore take herself to have witnessed a manifestation of the food’s generic tendency to stimulate gustatory pleasure directed at it. This requires perceiving that there is gustatory pleasure in some experiencer or other, directed at the food.

For simplicity, we coin the following shorthand for the instantiation \( \tilde{\varphi} \) of a generic, with respect to a world and experiencer: the instantiation states the truth of the scope of the generic operator, with respect to some world \( w'' \) and experiencer \( u \), which we say instantiate the generic truth. Here we just define a generic instantiation in terms of the sorts of generic experiential statements we are interested in.

\[
\forall w' \in \text{Dox}_{s,w}[\text{perceive}(w')(\lambda w''_s . \text{GUS}'(w'')(f))(s)]
\]

So the generic instantiation of the proposition that \( y \) is generically disposed to stimulate experience of the sort \( E \), instantiated with respect to experiencer \( u \) and world \( w'' \), is true just in case at \( w'' \), \( u \) has an experience of of the sort \( E \) stimulated by \( y \), and so on. Expanding the proposition perceived, as noted in (65), the requirement is therefore as follows: there is some experiencer, such that the speaker commits to having perceived that there is gustatory pleasure in that experiencer, stimulated by the food.

\[
\exists x \forall w' \in \text{Dox}_{s,w} \quad [\text{perceive}(w')(\lambda w''_s . \text{GUS}'(w'')(f))(w''(x))(s)]
= \exists x \forall w' \in \text{Dox}_{s,w} \quad [\text{perceive}(w')(\lambda w''_s . \exists z [\text{gus.pl}'(w'')(z) \land \exp''(w''(x))(z) \land \text{stim}''(w''(f))(z))])(s)]
\]

But from the comments in Section 3.2.2, it follows that the only individual that the speaker can take as an experiencer with respect to which she has perceived this instantiation, is the speaker herself: it must be that \( x = s \) in all the speaker’s doxastic alternatives, or (56) is violated. So we end up with the following.

\[
\forall w' \in \text{Dox}_{s,w} \quad [\text{perceive}(w')(\lambda w''_s . \exists z [\text{gus.pl}'(w'')(z) \land \exp''(w''(s))(z) \land \text{stim}''(w''(f))(z))])(s)]
\]

That is, since the speaker is the only viable experiencer to meet the requirement, it follows that what the speaker takes herself to have perceived is that there is gustatory pleasure in herself, directed at the food. But then it follows due to the factivity of perception that in all the speaker’s doxastic alternatives, the speaker actually has this gustatory pleasure.

\[
\forall w' \in \text{Dox}_{s,w} \quad [\exists z [\text{gus.pl}'(w')(z) \land \exp''(w'(s))(z) \land \text{stim}''(w'(f))(z)]]
\]

But this is just to say that the speaker takes herself to have tasted the food, and liked its taste. This is the acquaintance inference, recast as a speaker commitment, and insofar as the speaker is knowledgable and competent, the audience will take her to have actually had this experience. Since this was all the result of the belief commitments attending the assertion that the food is tasty on the basis of a perceptual source of evidence, we see that
use of the perceptual evidential in an adjectival predication with an experiential predicate yields the desired inference, in a way appropriate to the lexical semantics of the predicate. Further, since the commitment is made based on evidential commitments on assertion, which are not-at-issue, the not-at-issue character of the acquaintance inference itself is captured.

As the reader can confirm, the result is similar with 

\[
\text{zhed snang tsha po}
\]

given a denotation like (24) for English *frightening*, the speaker in asserting that something is frightening grounded in perceptual evidence must take herself to have experienced fear of the stimulus, and hence to have experienced the stimulus in whatever modality-unspecific way is appropriate to that. This is the derivation of the acquaintance inference in Tibetan. Insofar as the semantics of experiential predicates, and the function of the perceptual evidential, are cross-linguistically stable, the same explanation will hold in other languages which carry perceptual evidentials performing a function analogous to \(\text{dug}\), and in these languages, acquaintance inferences are therefore perceptual evidential effects in the relevant construction.

Note finally that the acquaintance inference will not occur if the perceptual evidential is not used: neither anchored to the subject in a belief report, where the lower clause doesn’t make use of it, nor anchored to the speaker, where the matrix clause doesn’t make use of it. The reason for this is that the above derivation relies on the doxastic base \(\text{Dox}_{s,w,\text{PER}}\) of the speaker \(s\) at \(w\): belief grounded in such a base requires that the believer take itself to have perceived the proposition in question, which is where the effect comes from. Other doxastic bases, such as \(\text{Dox}_{s,w,\text{FAC}}\), as tracked by the Tibetan factual evidential, will track only what \(s\) takes itself to have learned by ‘general,’ typically non-perceptual means, and so no such commitment to perception arises in virtue of holding such a belief.

4 Acquaintance inferences in non-evidential languages

We’ve seen how acquaintance inferences arise in languages that overtly encode commitments to perceptual evidence, both in bare assertions governed by perceptual evidentials, and belief reports whose embedded clauses are so governed. We now want to make use of the machinery outlined above to explain the original puzzle, which is why these inferences also arise in languages that do not grammatically mark evidentiality. We’ll show that here the acquaintance inference is also due to commitment to belief, both in assertion and belief reports, but that it arises due to commitment to what is typically an evidential-neutral belief: with experiential predications specifically, such belief is effectively required to be grounded in a perceptual evidential source.

In Section 4.1, I show that even in English, acquaintance inferences are tracked by belief reports, and that whether the inference arises depends on how the report specifies a source of evidence for a belief. Section 4.2 then derives the inference in evidentially neutral constructions, due to the behavior of experiential predicates and speaker attitudes towards generic experiential properties.
4.1 Evidentiality still active

In English, like in Tibetan, acquaintance inferences appear not only directed at the speaker in assertions of experiential predications, but also directed at the subject of verbs of belief that embed such predications. This can be seen with think-reports, which trigger similar inferences as bsam-report in Tibetan that embed finite clauses encoding perceptual evidentiality, and which have similar projective behavior.

(70) a. Mary thinks this food is tasty.
   → Mary takes herself to have tasted the food.
   → Mary takes her gustatory experience of the food to be pleasant.

b. Mary thinks this food isn’t tasty.
   → Mary takes herself to have tasted the food.
   → Mary takes her gustatory experience of the food not to be pleasant.

And as with Tibetan, whether an acquaintance inference is triggered by an English belief report is dependent on the evidential source that the attitude report encodes. English cannot mark such a source grammatically in the embedded clause, but it can do so lexically, on the verb: in particular, the verb believe can take an argument for a reportative source of evidence, and when it does, the result is a commitment on the part of the subject to a belief grounded in reports from that specific evidential source (71).41 This is not a feature of think-reports, which are evidentially neutral (72).

(71) a. Mary believes John.
   b. Mary believes John that this food is tasty.

(72) a. *Mary thinks John.
   b. *Mary thinks John that this food is tasty.

Further, whether the acquaintance inference appears is typically predictable from the verb: (71b) does not require Mary to have tasted the food, and in fact the report often triggers a counter-acquaintance inference to the contrary. This is in line with the observations above in Tibetan: where an indirect source of evidence for the attitude is signaled, the acquaintance inference disappears.

(71b) requires that John has told Mary that the food is tasty (or at least something that clearly entails this), that Mary takes herself to have this reportative evidence, and that she takes it to reliably indicate that the food really is tasty. Believe can then be treated as follows, where Doxy,w,rep,x is the set of worlds compatible with y’s beliefs at w grounded in reports given by x, and report(w)(φ)(y)(x) is true just in case at w, x has reported that φ to y (where reports are non-factive). These beliefs are defined in terms of the doxastic base in a way analogous to the case of perceptually-grounded beliefs from Section 2.1: Doxy,w,rep,x includes just those worlds compatible with what y takes x to have truly told her at w. We

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41 Believe does not need to take a reportative argument, as in Mary believes that this food is tasty. In these cases, I suspect that some form of indirect evidentiality is still active, though it does not target a specific source, and doesn’t need to be reportative. Stephenson (2007b: §5.2) has pointed out that believe-reports generally prefer non-perceptual grounds for belief.
assume for simplicity that propositional attitude verbs in non-evidential-marking languages
take ordinary propositions as arguments, not ordered pairs.\(^{42}\)

\[
\begin{align*}
\text{(73) } \{\text{believe}\}^w & = \lambda x_e.\phi_{st}.\lambda y_e : \text{report}(w)(\phi)(y)(x).\forall w' \in D_{ox,y,w,REP,x}[\phi(w')] \\
\text{(74) } \{\text{Mary believes John that this food is tasty}\}^w & = \forall w' \in D_{ox,m,w,REP,j}[\text{GUS}'(w')(f)], \\
& \text{if } \text{report}(w)(\lambda w'_s.\text{GUS}'(w')(f))(m)(j); \text{ else undefined}
\end{align*}
\]

The truth conditions in (74) require no acquaintance inference, for the same reason that
\(\text{bsxm, (bsam)}\)-reports embedding clauses with the indirect \(\text{yod red}\) do not require
one (see Section 3.2.3): nothing about such a reportative doxastic base requires commit to
belief in perception of a generic experiential proposition.

So we see that even in languages without grammaticized evidentiality, evidential mecha-
nisms are still active, and they still drive a lack of acquaintance inferences in the same way,
where the evidential source can be lexically encoded. The question now is why \textit{think}-reports
in English do trigger acquaintance inferences: since the explanation for Tibetan inferences
with attitude reports crucially relied on the appearance of a perceptual evidential in the com-
plement clause, an explanation is required for why an evidentially neutral verb also triggers
the inference, and in turn why assertion of the relevant predication triggers the inference as
well, when assertion typically commits one to belief evidence-neutrally in English.

4.2 The default to perceptual evidence

We want to account for the fact that evidentially neutral constructions, including bare asser-
tions and neutral belief reports in languages without grammaticized evidentiality, by default
commit the speaker or attitude holder respectively to a perceptual source of evidence for
belief in an experiential predication, which in turn amounts to triggering an acquaintance
inference directed at the evidence-holder.

The explanation requires two preliminary moves. First, in Section 4.2.1 we modify the
lexical entries for experiential predicates, to account for their presuppositional requirements
related to direct experience. Second, in Section 4.2.2 we describe how speakers by default
take their own experiences to reliably track whether they have perceived generic truths about
experiential properties. Finally, the inference itself is derived in Section 4.2.3. The desired
result follows from taking these factors together with what has already been said above.

4.2.1 Step I: Direct experience presuppositions

As mentioned in Section 1.1, experiential predicates carry presuppositions of direct experi-
ence with respect to their experiencer arguments (cf. Pearson 2013 and Anand & Korkotkova

\(^{42}\)The domain restriction on the agent in (73) ensures that the report presupposes that the evidential
source really has made the report to the agent. Unlike with \textit{think} and \textit{bsam} (bsam), \textit{believe} apparently
requires that the evidence actually be present, not just that the agent take it to be: and this requirement
projects in the ways typical of a presupposition (thus, \textit{Mary doesn’t believe John that this food is tasty} also
typically requires that John has made the report, but Mary doesn’t take it to be reliable).
On taking an overt experiencer argument, they introduce presuppositions to the effect that the experiencer has had direct experience of the relevant sort of the stimulus. The presupposition has the same content as that of an acquaintance inference, but (i) it pertains to experiencers’ actual experiences, not merely what they take them to be,\(^{43}\) and (ii) unlike the acquaintance inference triggered by bare assertions, it is located in the presuppositional constraints on the at-issue content of the expression.\(^{44}\)

\[(75)\]

- a. This food is tasty to Mary.
  \(\rightarrow\) Mary has tasted the food.
  \(\rightarrow\) Mary’s gustatory experience of the food is pleasant.

- b. This food is not tasty to Mary.
  \(\rightarrow\) Mary has tasted the food.
  \(\rightarrow\) Mary’s gustatory experience of the food is not pleasant.

- c. This movie is frightening to Mary.
  \(\rightarrow\) Mary has watched the movie.
  \(\rightarrow\) Mary’s experience of the movie is one of fear.

- d. This movie is not frightening to Mary.
  \(\rightarrow\) Mary has watched the movie.
  \(\rightarrow\) Mary’s experience of the movie is not one of fear.

For none of the sentences in (75) is it sufficient that Mary merely be disposed to experience the food or the movie in a certain way (pace Anthony 2016) – she must have actually done so, and if she hasn’t, then making the experiential predication with her as experiencer is bizarre, regardless of polarity. This is a feature not just of experiencer arguments to adjectives, but of experiencer arguments generally, as can be seen from verbal counterparts to tasty and frightening, which carry the same presuppositions.

\[(76)\]

- a. This food \{tastes good / doesn’t taste good\} to Mary.

- b. This movie \{frightens / doesn’t frighten\} Mary.

To capture this, the lexical entries for experiential predicates must be modified from those given in Section 2.2. We do this by introducing a definite description-like element into the denotation, which refers to the experience that the experiencer has, and that is directed at the stimulus – where there is no such experience, presupposition failure results. The \(\iota\)-operator in these denotations is therefore to be read presuppositionally, such that if no individual verifies its scope, then the \(\iota\)-term is undefined (and similar adjustments could be made to the corresponding Tibetan entries). Where \(gus'(w)(z)\) is true just in case \(z\) is gustatory experience at \(w\):

\(^{43}\)Thus, if Mary has tasted the food and liked its taste, then it is tasty to her, even if she thinks that it isn’t tasty, or mistakenly thinks that it isn’t tasty to her – she is just wrong about her own experiences in such a case, possibly due to forgetfulness.

\(^{44}\)This presuppositional requirement extends to covert experiencer arguments in exocentric readings of experiential predicates. For generic readings, where the experiencer argument has been bound off, the modal interpretation, as suggested in Section 2.2, shifts the direct experience presupposition to worlds at which the felicity conditions of the generic (involving the right sort of experiencer coming into contact with the stimulus under the right conditions) are fulfilled. Since the felicity conditions ensure this experiential contact anyway, the effect of the presupposition is effectively neutralized in this construction, as desired.
(77) a. \[ \text{[tasty]}^w = \lambda x_e. \lambda y_e. \text{pleasure}'(w)(\iota z[\text{gus}'(w)(z) \land \text{exp}''(w)(x)(z) \land \text{stim}''(w)(y)(z)]) \]

b. \[ \text{[frightening]}^w = \lambda x_e. \lambda y_e. \text{fear}'(w)(\iota z[\text{exp}''(w)(x)(z) \land \text{stim}''(w)(y)(z)]) \]

And so, for instance, (77a) takes an experiencer and stimulus, and returns undefined where there is no gustatory experience in the experiencer directed at the stimulus (hence if the experiencer has not tasted the stimulus), and where defined returns true just in case that experience contains a portion of pleasure.

Note that the entry for frightening in (77b) makes no reference to a sensory modality, since the predicate requires only stimulated experience of some sort, not tied to any particular sense. Note also that in (77a), the contribution of the sensory modality (gustatory) is presuppositional, while the contribution of the quality of the experience (pleasant) is not; this reflects the projection behavior of the direct experience presupposition correctly, and represents the fact that in sensory constructions (like tasty and taste good), the sensory modality and quality are contributed by distinct morphemes. We ultimately want to account for these separate contributions compositionally.

Thus for example, This food is not tasty to Mary presupposes that Mary has tasted the food, and where the presupposition is met, is true just in case Mary’s gustatory experience of the food is not pleasant, as desired.

(78) \[ [\text{This food is not tasty to Mary}]^w = \neg \text{pleasure}'(w)(\iota z[\text{gus}'(w)(z) \land \text{exp}''(w)(m)(z) \land \text{stim}''(w)(f)(z)]) \]

### 4.2.2 Step 2: Experiences tracking experiential properties

Speakers take their own experiences with stimuli to track their perceptions of generic truths about experiential properties in a certain way. Roughly, they typically take the presence or lack of a certain experience in themselves from a stimulus to be indicative of what they have perceived about the sort of experience that the stimulus is disposed, or not disposed, to produce simpliciter.

This can be summarized in the principle in (80), using the notation of instantiations of a generic from Section 3.2.3. We say that \( \phi \) is a generic experiential proposition where \( \phi \) is true just in case some particular stimulus is generically disposed to produce experience of a certain sort (79). We refer again to \( \text{Dox}_{x,w} \), the evidentially neutral doxastic alternatives of an agent \( x \) at \( w \), in order to describe what an agent believes in general, without reference to a particular evidential source.

(79) Where ‘\( \mathcal{E} \)’ is a metavariable over generic experiential predicates like ‘\( \text{gus}' \):
\( \phi \) is a generic experiential proposition iff: \( \exists x, \mathcal{E}[\phi = \lambda w'_x, \mathcal{E}(w')(x)] \).

(80) Where \( \phi \) is a generic experiential proposition:
\( \forall w' \in \text{Dox}_{x,w} [\text{perceive}(w')(\lambda w''_x, \phi(w'')) = \mathcal{E}(\phi(x))(w'))(x)] \)

What (80) says is that speakers take themselves to have perceived that the truth value of a generic experiential proposition is equal to the truth value of its generic instantiation with respect to themselves as experiencer. This effectively means that speakers take their own experiences of stimuli to track the associated generic experiential property.
This principle in effect has two components: a left-to-right one, and a right-to-left one. The left-to-right component says that speakers take their having perceived that a stimulus has a certain generic experiential property to entail that the corresponding sort of experience is present in themselves and directed at the stimulus. So for instance, they assume that their perceiving that the food is tasty entails that they have experienced gustatory pleasure stimulated by the food, and that their perceiving that the food is not tasty entails their having tasted it and not experienced any gustatory pleasure stimulated by it.

Call this the privacy principle: it requires that speakers treat perception of generic experiential properties to be attended by the right sort of experience in oneself. It has already been justified on grammatical grounds above, in Section 3, due to the behavior of perception of generics and unobservable predicates: any speaker abiding by (56) will take a perception of a generic experiential property to require having the associated sort of experience themselves.

The right-to-left component is novel, and states the reverse: speakers take the truth value of the proposition that they have had a certain experience, as stimulated by a stimulus, to track the truth value of what they have perceived the value of the corresponding generic experiential proposition to be. Thus, if they experience gustatory pleasure stimulated by the food, they take themselves to have perceived that the food is tasty, and if they taste it and don’t like its taste, they take themselves to have perceived that it is not tasty.

Call this the reliability principle: it requires that speakers take their own experiences as a reliable guide to generic experiential properties. Unlike the privacy principle, I believe that this principle is not grammatical, but merely serves as a robust but defeasible default. It is empirically justified on the grounds that, in non-evidential-marking languages, one is typically licensed, and indeed generally expected, to assert generic experiential propositions solely on the basis of one’s own experiences in just this way.

4.2.3 Deriving the inference

We’re now in a position to derive the acquaintance inference in evidentially neutral constructions. Start with a think-report, as in Section 4.1 (70).

(81) Mary thinks that this food is tasty.

To represent that think is evidentially neutral, we have it reference the neutral set of doxastic alternatives introduced in Section 3.2.2. The verb then takes a proposition and agent as usual.

(82) \[\text{[think]}^w = \lambda \phi. \lambda x. \forall w' \in Dox_x[w][\phi(w')]\]

And so \(x\) thinks that \(\phi\) at \(w\) just in case \(\phi\) is true at all of \(x\)’s evidentially neutral, or evidentially indiscriminate, doxastic alternatives at \(w\). Now the truth conditions of the report in (81) come out as expected.

(83) \[\text{[Mary thinks that this food is tasty]}^w = \forall w' \in Dox_m[w'][\text{gus}'(w')(f)]\]

Further suppose that at \(w\), Mary takes herself not to have tasted the food. This is to say that her (neutral) doxastic alternatives all verify that she has not.
∀w′ ∈ Dox_m,w[¬∃z[gus′(w′)(z) ∧ exp′′(w′)(m)(z) ∧ stim′′(w′)(f)(z)]]

This means that at all Mary’s doxastic alternatives, the generic instantiation with respect
 to w and Mary as experiencer of the denotation of the complement clause, this food is tasty,
 is undefined. This follows from the presuppositional constrains on tasty (see section [ ]).

(85) 
  a. gus′(w)(f) := (∃x, w′[pleasure′(w)(ix[gus′(w′)(z) ∧ exp′′(w′)(x)(z) ∧ stim′′(w′)(f)(z)])]
  b. I(λw′ s.gus′(w′)(f))(w)(m) := pleasure′(w)(ix[gus′(w′)(z) ∧ exp′′(w)(m)(z) ∧ stim′′(w)(f)(z)])

Where Mary has not tasted the food at w (84), the i-term in the second line of (85b) is
 undefined (there is no such gustatory experience), and so the formula as a whole is. So,
 in all Mary’s doxastic alternatives, the generic instantiation is undefined. Where ? is the
 undefined truth value:

∀w′ ∈ Dox_m,w[I(λw′ s.gus′(w′)(f))(w′)(m) = ?]

This is the same as to say that, as far as Mary’s evidence-neutral beliefs are concerned,
 it is neither true nor false that the food is tasty to Mary, since either truth or falsity of this
 proposition would require Mary having tasted the food, and she thinks (rightly or wrongly)
 that she hasn’t.

But then, by the combined privacy and reliability principles in Section 4.2.2, it follows
 that in all Mary’s doxastic alternatives, she has perceived that it is undefined whether
 the food is tasty. This follows from the principle in (80): since the generic instantiation is
 undefined with respect to her, what she is compelled to take herself as perceiving is that it
 is undefined whether the food is tasty.

(87) 
  a. ∀w′ ∈ Dox_m,w[perceive(w′)(λw′ s.gus′(w′)(f) = I(λw′ s.gus′(w′)(f)))(w′)(m)]
  b. ∀w′ ∈ Dox_m,w[perceive(w′)(λw′ s.gus′(w′)(f) = ?)(m)]

But then, due to the factivity of perception, the proposition that it is undefined whether
 the food is tasty must be true in all Mary’s doxastic alternatives as well: if she takes herself
to have perceived this, she must also take it to be true.

∀w′ ∈ Dox_m,w[gus′(w′)(f) = ?]

What this means is that the principles laid out above, in combination with the semantics
 of experiential predicates, force Mary (so long as she adheres to the reliability principle) to
 believe on evidence-neutral grounds that whether the food is tasty is undefined, in virtue of
 her not having any gustatory experience of the food. But now there is a problem, since the
 truth conditions of the report in (83) are again as follows.

(89) ∀w′ ∈ Dox_m,w[gus′(w′)(f)]

Since from the above, it must be that gus′(w′)(f) is undefined for all Mary’s doxastic
 alternatives w′, the truth conditions crash, if the universal quantifier can’t return a binary
The only way to rescue the report from presupposition failure is to suppose that Mary has indeed tasted the food. Then there is no issue: the generic instantiation of the experiential proposition is defined for her, and so long as Mary adheres to the reliability principle, her doxastic alternatives will decide that the food is tasty, or that it is not, in line with her experience. The acquaintance inference therefore arises presuppositionally, and is anchored to the attitude holder.

This inference does not arise with non-neutral evidential bases, since the principle in (80) appeals to speakers’ evidentially neutral beliefs, or beliefs ‘all things considered.’ This is important, because it shows that belief as encoded by the language can incur different commitments depending on what evidential source it is grounded in: and so neutral belief specifically triggers the inference (along with perceptual belief as encoded by perceptual evidentials). The inference also does not arise with non-experiential predicates, since these lack an experiential semantics, and therefore do not interact with the privacy or reliability principles, and do not have the relevant presuppositional constraints.

Finally, with all the above said, we reach the original acquaintance inference initially introduced in Section 1, where the unembedded experiential predication is asserted. Repeating from (1), and recasting the inference in terms of speaker commitment:

\[\text{This food is tasty.}\]
\[\rightarrow \text{The speaker takes herself to have tasted the food.}\]
\[\leftrightarrow \text{The speaker takes her gustatory experience of the food to be pleasant.}\]

As in Section 3.1, we take for granted, with no special theoretical commitment as to how this occurs, that bare assertion of a proposition commits its speaker to not-at-issue belief in it. Where our speaker is Mary, we thus have the following, given that bare assertion is evidentially neutral in the same way that think-reports are.

\[\text{a. Where Mary asserts } \phi \text{ at } w,\]
\[\text{she commits to the truth of } \lambda w'_s.\forall w'' \in Dox_{m,w} [\phi(w'')].\]
\[\text{b. Where Mary asserts } \lambda w'_s.\text{GUS}'(w')(f) \text{ at } w,\]
\[\text{she commits to the truth of } \lambda w'_s.\forall w'' \in Dox_{m,w}[\text{GUS}'(w'')(f)].\]

But then, what she commits herself to is just the content of the think-report with her as agent, and so the inference arises for the same reasons. For it to be true that she thinks the food is tasty, the definedness conditions require her to take herself to have tasted the food, and its truth conditions given that it is defined require her to take her gustatory experience

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45. This is the behavior of belief reports generally: where definite descriptions are read presuppositionally, for example, there is a presupposition failure due to undefinedness in the de dicto reading of Mary thinks John’s son is at school, unless we rescue it by supposing that Mary thinks John has a son, making the truth conditions of John’s son is at school defined in all her doxastic alternatives. The same thing happens here: to rescue the report from failure, we must suppose that Mary takes herself to have tasted the food. I take it that external or presupposition-cancelling negation in the matrix clause can void these presuppositions in the usual way, e.g. in Mary doesn’t think this food is(n’l) tasty, because she hasn’t tasted it.

46. And if she is not sure whether a food is tasty, even after tasting it, this will be tracked by the fact that her doxastic alternatives are heterogeneous as to whether or not that food has stimulated gustatory pleasure in her (either due to forgetfulness, or subtlety or strangeness of taste).
of the food to be pleasant. Insofar as Mary is competent and reliable, the audience infers that she actually has tasted the food, and really does like its taste. This is just the acquaintance inference, and mutatis mutandis for other experiential predicates.

Given this result, do we end up with a speaker-oriented presuppositional account, of the sort that was rejected in Section 1.1? Not for bare assertions. There is a presupposition on the at-issue content of the think-report with Mary as subject, which displays the ordinary behavior of such a presupposition. But the unembedded case is different: whereas the attitude report asserts that Mary has a belief, the bare case only commits her to this belief in virtue of making the assertion. There is nothing in the at-issue content of the assertion about Mary at all: what she asserts is just about the generic experiential properties of the food, and this no more presupposes that Mary has tasted or liked anything than it presupposes that she believes anything.

The not-at-issue commitment that she makes in virtue of committing to belief in what she asserts is what drives the inference. It is not-at-issue because commitments to belief in what one asserts are not-at-issue, and so Ninan (2014) is right to claim that acquaintance inferences display the same sort of behavior as commitments on assertion: we have just taken these to result from commitments to belief on the basis of a source of evidence, rather than from commitments to knowledge. These not-at-issue commitments display similar behavior to the evidential commitments on the part of the speaker in evidential-marking languages. This is why we say that even in non-evidential-marking languages, acquaintance inferences are reflexes of perceptual evidentiality: they come from a not-at-issue commitment to belief grounded in a neutral evidential source, which due to various quirks of experiential semantics ends up requiring a perceptual source where experiential predicates are involved.

5 Conclusion

Acquaintance inferences arise when speakers commit themselves on the basis of perceptual evidence to believing an experiential predication. In attitude reports that embed such predications, these inferences are presuppositional on the at-issue content of the report, and anchor to the subject. In matrix declaratives, these predications are not-at-issue in for the same reason that commitment to belief on assertion is, and they anchor to the speaker.

Whether the inference appears is tracked by the occurrence of evidential markers in languages with perceptual evidentials – the occurrence of a perceptual evidential controlling the clause with the experiential predication predicts the occurrence of the inference. In languages without grammaticized evidentials, and in evidentially neutral constructions generally, the inference arises due to the interaction between neutral or indiscriminate evidentiality with the semantics of experiential predicates.

In both cases, the inference arises due to belief grounded in a perceptual evidential source. Where this is grammaticized due to the appearance of an evidential, it is encoded by the semantics of the expressions used. Where it is not grammaticized, and occurs in evidentially neutral constructions, it requires additionally adherence to a defeasible non-grammatical default, which bids speakers to take their own experiences to track generic experiential truths.

The foregoing account casts acquaintance inferences as the result of a complex conspir-
acy of linguistic factors, including the presuppositions of direct experience on experiencer arguments, the unobservability of experiential states, principles governing the perception of generics, the relation between belief and evidential source, and the pragmatics of assertion. I think that acquaintance inferences are highly complex in just this way, and cannot be understood without reference to all these factors. A virtue of the present account is that it has many moving pieces, all of which are ripe for further cross-linguistic investigation and potential verification and falsification. While I’ve used Tibetan and English as exemplar languages, my hope is that the material here will find echoes in numerous places cross-linguistically, and allow us to better understand the complex facts surrounding how natural languages encode commitment to experience.

I have not attempted here to derive every subtlety of the projectional behavior of acquaintance inferences, nor their interaction with every sort of operator that might preserve, re-anchor, or obviate the inference. Its core projectional features in bare assertions as examined in Ninan (2014) are captured, in virtue of the not-at-issue nature of commitment to belief from assertion, and its core projectional features in attitude reports follow from the fact that the inference is here classically presuppositional. But it will take an independent account of how a lot of operators interact, including negation, questions, and genericity on individual-level predicates, to sort out exactly how all these pieces fit together. I also take it that an independent account of epistemic modality, hedges, and so on will ultimately explain obviation of the inference in assertions (see Anand & Korotkova 2018).

The most speculative of the moving pieces alluded to above, and most difficult to falsify (since it is not a grammatical principle), is the one introduced at the final step: the reliability principle in Section 4.2.2. Why speakers adhere to this principle is perhaps a deep question, and I don’t know the answer to it, though I suspect it is related to the fact that speakers evaluate many predicates that have generically bound internal arguments with reference to their own experiences (‘autocentrically,’ in the terms of Lasersohn 2005).\textsuperscript{47} There is something right about this principle, but it is unclear whether it has deeper linguistic origins, or is strictly outside the domain of semantics.

With respect to the reliability principle, the above account predicts that in languages where perceptual belief is not grammatically encoded, and depends on this principle, that acquaintance inferences ought to be potentially voided where the principle gives out. This is a promising prediction, and one that I think may be borne out in a number of cases: acquaintance inferences on bare assertions of experiential predica-tions are highly robust, but not absolutely obligatory in all circumstances, and we ought to figure out where they can disappear. I leave these more difficult questions for the future.

References


\textsuperscript{47}This is true not just of experiential predicates in the sense of this paper, but also of things like easy and persuasive: speakers typically pronounce easy \textit{simpliciter} things that are easy to them when they expend effort on them, and pronounce persuasive \textit{simpliciter} things that actually persuade them when they hear them.


