A Case Study in Semantic Fieldwork:  
Modality in Tlingit

In this handout, I’ll walk you step-by-step through one small part of a semantic fieldwork project on an understudied language: Tlingit, a Na-Dene language of Alaska and Northwestern Canada.

1. **Background on Modality in English**

   (1) **Modals**

       Modals are lexical items that express *possibility* and/or *necessity*. The following are some modal expressions of English:

       a. **Modal Auxiliary Verbs:** *can, might, may, must, have to*
       b. **Modal Adverbs:** *maybe, possibly, necessarily*

   (2) **Strength of Modals**

       Modals in English (and many other European languages) can be divided into two groups:

       a. **Weak Modals:** Express (mere) possibility.
          Examples: *can, might, may, maybe, possibly*
       b. **Strong Modals:** Express necessity
          Examples: *must, have to, necessarily*

   (3) **Modal Base (Modal ‘Flavors’)**

       When we say that something is ‘necessary’/‘possible’, we usually have in mind that it’s necessary or possible with respect to one of the following considerations:

       a. **Belief:** Necessary / possible with respect to what we know
           (i) Dave *may / must* be home sick today.
       b. **Obligations:** Necessary / possible with respect to the ‘obligations’/‘rules’
           (ii) Dave *may / has to* get a drivers license.
       c. **Circumstances:** Necessary / possible with respect to the ‘circumstances’
           (iii) Dave *may / has to* sneeze.

       Which of these we have in mind in a particular context is the **base** of the modal.
(4) **Fact About English and Many Other (European) Languages**

a. **Strength is Specified in the Lexicon**
The ‘strength’ of a modal in English never varies across contexts. A given modal is always either weak or strong.

b. **Base is Context-Dependent**
   - The ‘base’ of a modal in English can vary across contexts.
   - A particular modal expression (e.g. *may*) can function as either a ‘belief’-modal (3a), an ‘obligation’-modal (3b), or a ‘circumstance’-modal (3c), depending on the context.

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2. **Background on Tlingit and Modality**

(5) **The Tlingit Language (Lingít): A Few Bullet Points**

- Traditional language of the Tlingit people of Southeast Alaska, Northwest British Columbia, Southwest Yukon Territory (shaded area in map below)

![Tlingit Map](http://tlingit.info/)

- Member of the Na-Dene language family; distantly related to Athabaskan languages (e.g. Navajo, Slave, Hupa). Shares the complex morphology of this family.

- Highly endangered; ≤ 200 speakers, all over 60, mostly over 70. Several fluent/near-fluent second language learners; a few raising their children in the language.

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1 Map graphic by X’unei Lance Twitchell. Available at [http://tlingit.info/](http://tlingit.info/).
(6) **Previous Descriptions of Modality in Tlingit**

- When we look into grammars of Tlingit written by documentary linguists, there aren’t any nice, comprehensive chapters on ‘modals’.
  - That’s just not how most grammars are organized.

- Rather, when we look across the grammars, we find that certain morphemes are translated in a way that suggests they have a ‘modal’ meaning.
  
a. **The ‘Dubitative’ Particle Gwál:** “Used to express doubt”

  Gwál seew daak wusitán.
  DUB rain began.to.precipitate
  Maybe it’s raining.

  
b. **The ‘Potential’ Form of the Verb:** “Expresses something that may happen”

  Kwaakasiteen.
  3O.1sgS.POT.see
  I may see it.

  
c. **The ‘Future’ Form of the Verb:**
  According to the grammars, this form of the verb can be used in two ways, one of which seems to have a modal meaning.

  (i) “Expresses something that will happen” (Tense Meaning)

    Yei kkwasatéen.
    1sgS.FUT.see
    I will see it.

  (ii) “Expresses an obligation that someone has” (Modal Meaning)

    Kkwagóot dei.
    1sgS.FUT.go.by.foot now
    I have to go now.

(7) **Natural Hypotheses to Form**

  a. The particle gwál is a weak belief modal (like English maybe)

  b. The potential morphology is a weak circumstances modal (like English might)

  c. The future morphology can mean a strong obligation modal (like English must)
Note:
Even though the translations in (6) definitely suggest the hypotheses in (7), as Matthewson (2004) explains, they are not alone really good evidence for (7).

- To really establish the hypotheses in (7) we need to:
  
  (i) Identify some (further) predictions of those hypotheses.
      **What kinds of contexts will they been accepted/rejected in?**
  
  (ii) Test those predictions with native speakers of the language!

### (8) Some Further Questions to Have in Mind

a. If gwál expresses **weak** belief modality, what expresses **strong** belief modality?

b. If future morphology expresses **strong** obligation modality, what expresses **weak** obligation modality?

### 3. Framing and Testing Predictions of Hypothesis (7a)

#### (9) The Hypothesis:
The particle gwál is a **weak belief modal** (like English *maybe*).

#### (10) Some Predictions
*If* the particle gwál is a weak belief modal, **then**…

a. **Prediction 1:** It should *not* be used as a weak **obligation** modal

b. **Prediction 2:** It should not be used as a **strong** belief modal

#### (11) Testing Prediction 1

Let’s see if speakers of Tlingit can use gwál in contexts where **obligation** modality is what’s at play.

**Scenario:**
You’re at a party. Your son is asking to try some of the herring eggs. One of the other adults asks whether he’s allowed to try them. You want to say that he can, that he is *allowed*. 
(12) **First Question to the Language Consultants:**

   a. **Question:**
      How would you best translate the English sentence “He can eat some herring eggs” in this context?

   b. **Answer from the Consultants:**
      Hél wáa sá utí gáax’w awuxaayí.
      **it.is.OK herring.eggs 3sgS.eat.SUB**
      *It’s OK if he eats herring eggs.*

   c. **Observation:**
      This Tlingit translation doesn’t contain gwál in it!
      But, now we really need to check whether they can’t use gwál here…

(13) **Second Question to the Language Consultants:**

   a. **Question:**
      Could you ever imagine expressing that meaning with the following sentence:

      Gwál gáax’w axá.
      **DUB herring.eggs 3sgS.eat**

   b. **Answer from the Consultants:**
      • No. That’s not giving permission.
      • That says “Maybe he’s eating it.”

(14) **Provisional Conclusion**

   o Prediction 1 is accurate!
   o Speakers can’t use the particle gwál as a weak obligation modal.

   ... But, before we’re 100% confident, we’ll want to test out more scenarios and sentences like this…

(15) **Testing Prediction 2**

Let’s see if speakers of Tlingit can use gwál in contexts where a strong belief modal would be acceptable, and a weak one would be unacceptable.

**Scenario:** You are looking for your cat, who is hiding in one of three baskets: a red one, a yellow one, or a blue one. You’ve checked the red one and the yellow one, and he isn’t hiding there. The only remaining possibility is that he’s hiding in the blue basket. You’re 100% confident that he’s in that basket.
First Question to the Language Consultants:

a. **Question:**
   How would you best translate the English sentence “He must be in the blue basket” in this context?

b. **Answer from the Consultants:**
   
   **Gwál** wé x’èishx’w kákw a tóot áa.
   **DUB** that blue basket inside.it 3sgS.IMPFV.sit
   
   *He must be sitting in that blue basket*

c. **Observation:**
   This Tlingit translation *does* contain *gwál* in it, **contrary to Prediction 2!**

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Provisional Conclusion

- Prediction 2 is **wrong**!
- Speakers *can* use the particle *gwál* as a **strong** belief modal.

... But, again, before we’re 100% confident, we’ll want to test out more scenarios and sentences like this...

Further Conclusion
Since Prediction 2 is wrong, Hypothesis (7a) is also wrong. Hypothesis (7a) **needs to be revised in light of this new data!**

Revised Hypothesis for *Gwál*

The particle *gwál* is a **belief modal**. It can be interpreted as either **weak** or **strong**.

- *Gwál* is ambiguous between either a *may* and a *must* reading.

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Fun Fact About Cross-Linguistic Variation in Modal Semantics

Bearing in mind (4), notice the following contrast between English *may* and Tlingit *gwál*:

a. (i) The **strength** of *may* is specified in the lexicon as **weak**.
   (ii) The **base** of *may* is left open; it’s fixed by context.

b. (i) The **base** of *gwál* is specified in the lexicon as **belief**.
   (ii) The **strength** of *gwál* is left open; it’s fixed by context.

Rullmann, Davis, and Matthewson (2008) have argued that this may be a general contrast between the modal expressions of European languages and those of languages indigenous to the North American Pacific Northwest…
4. Framing and Testing Predictions of Hypothesis (7c)

(21) The Hypothesis:
The future morphology can mean a strong obligation modal (like English must)

(22) Immediate Problem: A Possible Confound in the Data!
The data we presently have which lead to this hypothesis could be interpreted in a different way…

   o We know that future morphology in Tlingit can be used just as a future tense (see examples like (6ci)).

   o The examples where Tlingit future morphology is translated as English have to – examples like (6cii) – are also all ones where the subject of the sentence is going to meet that obligation…

      ▪ Consequently, these are also all contexts where a regular future tense sentence will also be true
      (Notice: If have to leave, you can also say “I’m gonna leave now”)

(23) Competing Hypothesis

   (i) The future morphology in Tlingit only ever means future tense.

   (ii) The cases where it’s translated as a modal in English are just ones where the future event is going to happen because of an obligation the speaker has…

If the competing hypothesis is correct, this is a further object lesson in the fact that translations are not very good evidence as to the actual meanings of expressions...

(24) Deciding Between the Two Hypotheses

   a. General Practice in Science:
      If there’s a confounding factor in the data, control for that confound!
      ▪ If an effect could be due to A or B, try to eliminate B, and see if A alone produces the effect.

   b. Applying the Practice Here:
      Let’s try to cook up a scenario where someone has an obligation, but that obligation is not going to be met in the future
      ▪ Strong Obligation Modal = Acceptable
      ▪ Future Tense = Unacceptable
(25) **Controlling for the Confound**
Let’s see if speakers of Tlingit can use the future morphology in contexts where a *strong obligation modal* would be acceptable, but a *future tense* would be unacceptable.

**Scenario:**
Our friend Joe has just received a notice from the city. It says that he has to paint his house, or else he’s going to get a fine. Joe is upset about all this, and I ask you why. You want to tell me that he’s being made to paint his house.

(26) **First Question to the Language Consultants:**

a. **Question:**
How would you best translate the English sentence “Joe has to paint his house” in this context?

b. **Answer from the Consultants:**
Yéi yawdudzikaa du hidi anganéegwál’
they.told.him his house 3S.paint
He was told to paint his house.

c. **Observation:**
This Tlingit translation doesn’t contain future morphology in it!
But, now we really need to check whether they can’t use future morphology here

(27) **Second Question to the Language Consultants**

a. **Question:**
Could you ever imagine expressing that meaning with the following sentence:

Du hidi akgwanéegwál’
his house 3sgS.FUT.paint

b. **Answer from the Consultants:**
• No. That’s saying that he’s going to paint his house.
• That doesn’t say that he’s being ordered to do it.

(28) **Provisional Conclusion**

- When we control for the confound in (22), future morphology *cannot* be used to translate an English strong obligation modal.
- It seems, then, that the competing hypothesis in (23) is correct!

... *But, before we’re 100% confident, we’ll want to test out more scenarios and sentences like this…*
(29) Further Conclusion

- Since the competing hypothesis in (23) is correct, hypothesis (7c) is incorrect.
- Hypothesis (7c) needs to be revised in light of this new data!

(30) Revised Hypothesis for Future Morphology

Future morphology expresses future tense in Tlingit.
*There is no simple lexical item of Tlingit that expresses strong obligation modality*

(31) An Important Lesson Here

As explained by Matthewson (2004), just because X is translated into English as Y, *that doesn’t mean that X and Y really have (exactly) the same meaning...*

- Translations can be approximate!
- When speakers translate X as Y, that only means that X and Y have a general functional similarity between the two languages.
- Often, if a language lacks an expression meaning the same (exactly) thing as X, speakers won’t just break down and refuse to translate…
  - Rather, they’ll do “the best job possible”, and pick an expression that doesn’t really mean the same thing as X, but “comes close enough”…

*So never complacently assume that because X gets translation Y, it has the same meaning as Y.*