Targeted Construction Storyboards in Semantic Fieldwork
Strang Burton and Lisa Matthewson

1 Introduction

The goal of this paper is to describe, illustrate, and advocate for the targeted construction storyboard methodology for semantic fieldwork. Storyboards are pictorial representations of stories, which consultants are asked to tell in their own words. The criterial property of targeted construction storyboards is that the story is designed to include at least one targeted context that can be used to test hypotheses about the relation between linguistic forms and that context. The storyboards thus combine the advantages of spontaneous speech with the benefit of being able to test hypotheses about particular linguistic elements or constructions. The findings reported here draw on an ongoing storyboard project by researchers at the University of British Columbia; sample storyboards created for that project are available for download at http://www.totemfieldstoryboards.org/.

In section 2, we outline the motivation for using targeted construction storyboards, illustrating our claims with a case study where the storyboard technique has proved useful. Section 3 gives a detailed description of the storyboard methodology, including how to create the storyboards and how to use them in a fieldwork setting. In section 4 we illustrate further results of our methodology, as it has been used in testing hypotheses about modals in three unrelated languages: Gitksan...
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(Tsimshianic), St’át’imcets (Salish), and Blackfoot (Algonquian). Section 5 reports on a pilot experiment designed to test the naturalness of the speech produced using storyboards (as perceived by native speakers); the result is that storyboard speech is judged to be either as natural, or only marginally less natural, than spontaneous speech. Section 6 concludes.

2 Why Storyboard?

In this section we present the motivations for the targeted construction storyboard methodology, illustrating the discussion with one particular storyboard, “Feeding Fluffy.”

We take it as given that useful fieldwork on semantics must be hypothesis-driven—that is, it must seek to answer some research question. In some cases, the fieldworker begins with an initial hypothesis (based, for example, on prior results on other languages) and attempts to falsify that hypothesis via empirical testing. In other cases, the fieldworker begins with a “fishing” expedition by gathering some data in the language under investigation, and then forms an initial hypothesis. In either case, however, hypothesis-formation is a critical step that drives further testing, because it makes concrete empirical predictions (see also Murray this volume for this point).

Suppose, for example, that the research question we are interested in is whether epistemic modals can have a past temporal perspective. The relevant readings for this question are those where a situation was possible or necessary given the agent’s epistemic state at some past time (but potentially no longer at the utterance time). For example, can (1) be uttered if the speaker’s knowledge at some past time was consistent with them having won the game, but the speaker knows at the utterance time that they lost?

(1) They might have won the game.  

These past epistemic readings are usually claimed to be absent for English (Groenendijk and Stokhof 1975, Cinque 1999, Drubig 2001, Condoravdi 2002, Stowell 2004, Hacquard 2006, 2011, Borgono and Cummins 2007, Demirdache and Uribe-Etxebarría 2008, Laca 2008, among others), although a small minority of authors argue that they are possible (von Fintel and Gillies 2008, Matthewson and Rullmann 2012, Rullmann and Matthewson 2012 (see also Iatridou 1990 on related constructions)). Beyond English, epistemic modals with a past temporal perspective have been argued to exist in languages such as French, Norwegian, Dutch, and German (Fagan 2001, Boogaart 2007, Eide 2003, Homer 2010, Martin 2011, among others; see also Portner 2009:222–236 for discussion). There is very limited discussion of the issue beyond Indo-European, and the disagreement about even the English facts shows the difficulty and delicacy of the judgments.

If we are interested in whether epistemic modals in a fieldwork language can have past temporal perspectives, a useful initial hypothesis is that they do
such readings. We will then attempt to elicit such readings, and if we find that the relevant sentences are rejected in the past epistemic contexts, we will have to revise (or completely throw out) our initial hypothesis.

This leads to a second important desideratum for fieldwork methodology: it must enable the generation of negative data. That is, the methodology must enable the researcher to discover what sentences cannot mean, as well as what they can, and the situations in which utterances are infelicitous, as well as felicitous. For arguments in support of both these desiderata, see Davis et al. (in press), and the introduction to this volume, among many others.

Given these desiderata for data-collection methodology, targeted fieldwork is not only a legitimate, but also an indispensable, part of the semanticist’s methodological toolbox. If we are following a scientific approach that consists of testing hypotheses about semantics, we cannot proceed by gathering only spontaneously created material. The researcher must be able to target particular forms and obtain information about their (in)felicity in a specified range of discourse contexts. Our methodology satisfies both these desiderata because it crucially involves targeted storyboards; it differs from, for example, Chafe’s (1980) pear stories or Berman and Slobin’s (1994) frog stories, which elicit narratives without targeting particular linguistic structures. And our methodology allows the collection of negative evidence, through follow-up elicitation.

However, there are non-trivial challenges and drawbacks to traditional direct elicitation methodologies, especially when one is researching discourse-sensitive semantic phenomena like the possibility for past temporal perspectives for modals. Standard semantic elicitation techniques include three main types of tasks (setting aside here, for the reasons given above, the collection of “spontaneous” untargeted narratives). First, we have translation tasks: the speaker is asked to translate a sentence from the contact language into their native language, or vice versa. Second, we have judgment tasks, where the speaker is asked to judge whether a sentence sounds acceptable and/or true in a specific discourse context. Third, there are elicited production tasks, in which the speaker is asked to produce an utterance in their language as a response to some stimulus.

All three of these tasks require the researcher to convey to the consultant a discourse context or a stimulus of some sort. Note that this is true even of translation tasks in most cases, because a semantic fieldworker almost never asks for a translation of a sentence given in isolation. While describing a discourse context verbally works fairly well with many consultants, the descriptions can become very complex, particularly when discourse-sensitive phenomena are being investigated, as the past-epistemic case noted above illustrates. Lengthy descriptions can tax the consultants’ memory, and/or be difficult to understand. It can be difficult even to explain some necessary aspects of the context, as these may have to do

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2This includes both truly spontaneous material, as well as “spontaneous” narratives elicited during fieldwork. See Bohnemeyer (this volume) and Cover (this volume) for discussion.
with what knowledge all the interlocutors already have, or what has been under discussion so far.

With verbal context descriptions, the issue also arises of which language to present the context in. Some researchers have argued that a discourse context or stimulus presented in the contact language does not tarnish the results (Matthewson 2004, Krifka 2011). AnderBois and Henderson (this volume) argue that this claim is partially correct. They provide evidence that in some cases, elicited production data can be influenced by a contact-language context description. The alternative—presenting contextual discussion in the language targeted for investigation—carries its own risks, including the difficulty of avoiding priming of lexical items or structures.

A typical verbal context description is illustrated in (2) for our case study. (2) presents data from Gitksan, a highly endangered Interior Tsimshianic language spoken in Northern British Columbia. The elicitor here chose to present the discourse context in English.3

(2) Context: The Canucks were playing last night. You weren't watching the game but you heard your son sounding excited and happy from the living room where he was watching the game, so you thought they were winning. You found out after the game that the Canucks lost 20–0, and your son was happy about something else that his friend had told him on his cellphone.

\[
\text{yugw=ima}=\text{hl xsd}_{-}\text{diit}
\]
\[
\text{PROG}=\text{EPIS}=\text{CN win-3PL.II}
\]

“They might have been winning.” [according to my evidence last night]

The context for (2) makes clear that it is no longer compatible with the speaker’s knowledge at the utterance time that the Canucks were winning last night. The acceptance of the sentence in this context therefore suggests that the epistemic modal imaa does allow a past temporal perspective.

What are the drawbacks to this verbal elicitation method? One issue is that the reading we are trying to get may not exist for the English sentence (given that it is controversial whether English allows past-temporal perspectives for epistemic modals like might). This means that the elicitor is hard-pressed to provide an English version of the sentence they are testing, and there is the potential for confusion for the consultant. Other problems relate to the required complexity and length of the context description. For these reasons, we have found that fieldworkers often feel un-confident about the results obtained by the methodology in (2). As pointed out also by Louie (this volume), consultants may show signs of having

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misunderstood the intended discourse context. Consultants may accept the sentences in the context given, but then offer comments suggesting they are thinking of a slightly different context. Or they may offer English translations that do not match the intended meaning.

There is one final issue that arises particularly with production data collected via direct elicitation. While such data are in a sense spontaneously produced and while they are likely to be fully grammatical and appropriate, they are nonetheless open to the charge of non-naturalness. Among other issues, the task requires the consultant to imagine themselves in a context they are not in, to imagine what they would say if they were in that different context. This introduces a certain amount of doubt about whether the response given is what the speaker would actually say, were they to find themselves in that context.

The solution, we believe, to all these challenges is to supplement standard elicitation techniques with targeted construction storyboard elicitations. As we show in this paper, storyboards enable the gathering of spontaneous, natural utterances, with minimal or no contact-language influence or translation interference. Targeted construction storyboards preserve the advantages of enabling the researcher to target particular forms, and, when combined with follow-up elicitation, they allow the collection of negative data. Storyboard elicitations therefore allow hypothesis-testing, while minimizing contact-language influence and maximizing naturalness of the utterances produced.

The targeted construction storyboard methodology also goes at least some way toward solving the problems of verbal context descriptions. As the storyboard method conveys the discourse context via pictures rather than verbally, it can be more efficient at characterizing a context precisely. This means that we can minimize the extent to which the context can be misunderstood, as well as the extent to which consultants silently extrapolate from the context description. The issue of which language the context is presented in is minimized (although not completely eliminated). As will be seen in section 3, the storyboard methodology does contain some discussion of the story in the contact language, to ensure understanding. However, when consultants actually tell the story, they rely only on the visual presentation of the context (or at least, they are not prompted or otherwise spoken to during the storytelling by the researcher).

Let’s now see how the targeted construction storyboard technique helps with our epistemic modals case study. The storyboard “Feeding Fluffy” was designed to create a context in which it is absolutely clear that the speaker believed at some earlier time that something was possible, but no longer believes it at the speech time. In “Feeding Fluffy,” Pat asks his friend Stacey to pet-sit for him while he is away. Stacey visits the store and realizes she doesn’t know what kind of pet Pat

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4For example, Mosel (2012) writes that “there is always the danger that created examples sound unnatural,” and “by definition, elicitation only provides examples of decontextualized isolated sentences, whereas natural speech is always embedded in the context of a particular speech situation.”
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has. She thinks it could be a cat, a dog, or a rabbit, so she buys food for all those animals. She later finds out that Fluffy is actually a snake. When Pat questions her about why she bought cat-, dog- and rabbit-food, she replies that Fluffy might have been a cat, a dog, or a rabbit.

Three pictures from "Feeding Fluffy" are illustrated in Figure 5.1 (in reduced size). (For the full storyboard, see http://www.totemfieldstoryboards.org/stories/feeding_fluffy/.) These panels show Stacey in the pet store thinking that Fluffy might be a dog, deciding to buy a bone, and telling Pat afterward that Fluffy might have been a dog.
Some Gitksan results for “Feeding Fluffy” are given in (3–4). In this language, epistemic modals are easily obtained at the relevant spots. They are sometimes spontaneously offered, but if not, are accepted on follow-up elicitation. Although there is no overt past-tense morphology in the sentences (because there is no overt past-tense morphology in the language), the storyboard context ensures that the modal is interpreted at a past time.⁵

(3) yugw=imaa=hl duus-t diya-t Stacey
\[\text{IMP}=\text{EPIS} = \text{CN cat-3SG.II say-3SG.II} \text{ Stacey}\]

“He might have been a cat,” said Stacey. (Feeding Fluffy)

(4) yugw=imaa=hl gax
\[\text{IMP}=\text{EPIS} = \text{CN rabbit-3SG.II}\]

“He might have been a rabbit.” (Feeding Fluffy)

Based on “Feeding Fluffy,” we are confident that the epistemic modal *imaa* in Gitksan allows a past temporal perspective.

Blackfoot (Algonquian) is another language in which “Feeding Fluffy” has been tested. The consultant does not spontaneously offer plain epistemic modals when telling the “Feeding Fluffy” story. Instead, she offers the modal embedded under a higher attitude verb. However, on follow-up elicitation the consultant accepts an unembedded epistemic modal, as shown in (5) (thanks to Meagan Louie for the data).

(5) matonni nimaatsksini’pa otaanista’pssi piiksiksinaa matonni ni-maat-sksini’-p-wa ot-aanist-a’pssi-wa piiksiksinaa-wa yesterday 1-NEG-know.VTI-LOC:0-NONAFF 3-manner-be.VAI-3 snake-3

“Yesterday, I didn’t know it was a snake,”

aahkamomitaa
\[\text{EPIS}=\text{dog-3}\]

“I thought it was a dog.”

Blackfoot researchers consistently report that pictures are important for obtaining these past epistemic readings with confidence.

The comparison between Gitksan and Blackfoot highlights another advantage of the storyboard methodology, namely that it allows entirely consistent contexts

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⁵English translations of data throughout the paper were either offered or agreed to by the consultant in a subsequent elicitation session.
to be presented to different speakers, even in different languages and by different researchers. The methodology therefore meets the important scientific criterion of the potential for replicability.\textsuperscript{6}

Storyboard elicitations have two further advantages that do not relate directly to the scientific endeavor but which are welcome side-effects. The first is that they enable fast transfer to teaching materials. Language learners benefit from and enjoy reading and hearing connected text, and storyboards provide pre-illustrated stories that can quickly be integrated into language-teaching curricula. Finally, storyboards are fun, not only for language learners, but for consultants during the elicitation itself. Most of our stories contain an amusing twist, and consultants often smile or laugh while telling the stories.

Table 5.1 summarizes the claims of this section. The “Standard elicitations” column refers to research conducted only via standard techniques (excluding asking for “spontaneous” narratives). The storyboard methodology includes a standard elicitation sub-part; we are therefore not advocating abandoning standard elicitation techniques. Recall also that both standard elicitations and storyboard elicitations share the core advantages of being able to support hypothesis-driven testing and to provide negative data.

3 Targeted Construction Storyboard Methodology

As noted above, the crucial feature of a targeted construction storyboard is that it presents a story in pictures that leads up to and establishes a desired narrative

\textsuperscript{6}There is a proviso here: it is difficult to draw pictures that are fully culturally neutral. Researchers may need to redraw storyboards for use in certain cultural contexts. In some cases, the story itself may need to be altered to suit local traditions or technologies. However, the core plot of the story, and the critical aspects of the context, can usually be preserved.
context; having built up to that context, the linguist can then elicit positive and negative data from the speaker about permissible forms in that context. This section explains from a practical perspective how to construct and use storyboards of this type. We outline first how the storyboards are created and organized, and then the methodology for using them.

3.1 ORGANIZING STORYBOARDS INTO NARRATIVES

Although it is often possible to present a context in targeted construction storyboards with just one or two pictures, we have found that speakers generally respond better to stories, i.e., presentations with a simple narrative arc. Although there are certainly many effective narrative structures, our targeted storyboards generally follow this narrative pattern, which seems to work reasonably well for a variety of speakers and cultures:

- An *introduction to the characters*, ideally in a relationship the speaker can relate to, such as a family or friend relationship; for example, Figure 5.2 shows (in reduced size) the introductory frames for “Woodchopper” (http://www.totemfieldstoryboards.org/stories/woodchopper/), in which we introduce the two characters and explain that their house is beside a river.

![Figure 5.2 Introductory panels for Woodchopper](image)

- A logical series of events that *leads up* to the targeted structure. For example, Figure 5.3 shows the lead-in from “Woodchopper”: John says he’s going to chop some wood to make fire; Mary says don’t do it, as he’ll drop some wood and she’ll fall in the river; John ignores her, and chops the wood anyway; he does drop a piece on the path, and when she goes out at night she trips over it and falls in the river.
Figure 5.3 Lead up to the targeted structure
One or more iterations of the targeted narrative context (often we find three repetitions works well, in a reasonably short story). For example, Figure 5.4 shows two panels that target past-counterfactual forms like *If you hadn’t chopped the wood, I wouldn’t have fallen in the river, and I wouldn’t have gone over the waterfall.*

As a reviewer points out, repetitions may not strictly speaking lead to independent data points, due to potential priming effects. For example, a speaker may choose one modal over another in the first iteration, and then continue to use the same one in subsequent repetitions, even though an alternative modal would also have been felicitous. However, repetitions do provide examples of the construction with more than one set of lexical items; this is important in case particular lexical items have idiosyncrasies. Priming effects can be mitigated during follow-up elicitation, by asking the consultant to substitute the alternative form.

An engaging conclusion such as a simple plot twist on the third repetition of the context. For example, Figure 5.5 shows the conclusion to “Woodchopper,” where John says something like “Well, if I hadn’t chopped the wood, you wouldn’t have (had) this nice fire to get warm with!” (in this case again potentially eliciting another past counterfactual in the appropriate context).
Generally we find that a simple story of this pattern can be told in a series of 10–20 images, which leads to roughly 1–2 minutes of narrative. Although the establishment of a full story takes slightly longer than just presentation of a context in one or two pictures, we believe the added effort is worthwhile: by engaging the speaker, we ensure that they become involved in telling the story, rather than focusing on the linguistic issues, and the storytelling comes more naturally.

3.2 CREATING STORYBOARDS

The following steps are an effective way to develop new targeted structure storyboards.

1. Decide on the targeted structure, and plan out a narrative (in notes, without drawings) that you think will work well to elicit that structure.
2. Do quick and rough drawings, such as stick-figure drawings, and try them with a speaker.
3. Adjust the rough drawings, adding and removing frames that did not work well with the narrative, and test again with a speaker to confirm they are working well.
4. If you find you have a highly effective storyboard, consider arranging higher-quality drawings, and sharing them with other linguists for cross-linguistic comparisons.

The initial rough drawings can be done simply on paper, and no real artistic talent is required at that stage: speakers can generally follow stories even drawn with stick figures.

3.3 PRESENTING STORYBOARDS TO SPEAKERS

In the methodology we have used with targeted construction storyboards, we have found the following series of steps to be generally effective.

1. First, the linguist goes through the pictures while telling the story to the speaker in the contact language. This helps the speaker to see what is intended in each picture.
2. Optional: The speaker practices telling their own version in the target language. At this stage the speaker may need to reflect for a short time on vocabulary items and phrasing.
3. Once the speaker is comfortable telling the story, the linguist records the story with the speaker.
4. The linguist will then usually have follow-up questions, going back through the story eliciting further positive and negative data at various points; these follow-up questions may be done immediately, or at the next elicitation session, or a combination.
Follow-up elicitation usually starts with reminding the consultant about the story, and reviewing the sentence they originally gave. Speakers almost always have good recall of the plotline of the stories, as they are much more memorable than unconnected standard elicitation; thus it becomes relatively very easy to reproduce the same context, and ask follow-up questions where the speaker judges whether alternative versions of the sentence are also acceptable in the context.

4 Further Examples of Results

The Totem Fields Storyboards project can be found at http://www.totemfieldstoryboards.org/. A sub-set of the Totem Fields storyboards (called the Hampton Storyboard Collection) is a set of storyboards designed to test questions about modality. “Feeding Fluffy,” discussed in section 2, belongs to this collection. In this section we summarize some empirical and theoretical results obtained via two more Hampton storyboards: “Chore Girl” (http://www.totemfieldstoryboards.org/stories/chore_girl/) and “Sick Girl” (http://www.totemfieldstoryboards.org/stories/sick_girl/).

4.1 “CHORE GIRL” AND “SICK GIRL”

“Chore Girl” and “Sick Girl” are designed to investigate whether and how languages distinguish between different types of modality and different strengths of modality. Thus, these storyboards elicit the contrast (or lack of one) between deontic possibility (permission, as in (6a)), non-deontic circumstantial possibility (ability, as in (6b)), and deontic necessity (obligation, as in (6c)). Both storyboards also elicit interactions of modals with negation.

(6) a. I can come out to play (I am allowed to).
   b. I can come out to play (I’m not sick or injured).
   c. I have to do my chores.

The basic plot line of both “Chore Girl” and “Sick Girl” involves a girl whose friends repeatedly ask her to come out and play. In “Chore Girl,” she is not allowed by her mother to go out and play until after she has done her three chores. After she finally completes her chores, she falls down and breaks her leg. At this point, she is permitted to play, but is physically unable to play. The three final pictures from this storyboard are given in Figure 5.6 (in reduced size) for illustration. When asked by her friends to come out and play, the girl reports that her mother has allowed her to go, but she is unable to, due to her broken leg.
In “Sick Girl,” a girl repeatedly injures herself or gets sick, so is unable to go out to play. When she finally recovers from all her ailments, she is physically *able* to play, but is now *not permitted* to go out and play, because her mother says she *has to* do her homework. Three sample pictures from this storyboard are illustrated in Figure 5.7 in reduced size.
“Chore Girl” and “Sick Girl” have been elicited by the Totem Field Storyboards team in American Sign Language, Atayal (Formosan), Blackfoot (Algonquian), Coeur D'Alene (Salish), English, German, Gitksan (Tsimshianic), Halkomelem (Salish), Kwak’wala (Wakashan), Mandarin, Okanagan (Salish), Russian, and St’át’imcets (Salish). Results from “Chore Girl” and “Sick Girl” are also being used by a number of other researchers; see for example Vander Klok (2012) on Javanese.

Through using “Chore Girl” and “Sick Girl,” our team has found that many of the languages we investigated possess a general circumstantial possibility modal, which can cover both ability and permission readings. Such languages may also
possess a separate dedicated permission modal (cf. English *can* vs. *be able to*). We have also established that in almost all the languages looked at, negation scopes over a possibility modal. That is, negation plus a possibility modal has the interpretation “not possible” (not permitted / not able), rather than the interpretation “possibly not” (permitted not to / able not to). In our sample, the one exception to this generalization was ASL, in which there is a separate lexical item for negated circumstantial possibility.

If the storyboards do not initially elicit any distinction between ability and permission, follow-up elicitation is used to elicit the dedicated permission modal. If distinct modals are obtained within the stories, follow-up elicitation will try to switch the two forms in the relevant sentences (to obtain negative evidence about what each modal cannot do).

In the following sections we briefly report on specific results from two languages: Gitksan and St‘át’imcets. For results from other languages, including ASL, Atayal, Kwak’wala, Mandarin, and Russian, see Burton and Matthewson (2011).

4.1.1 Gitksan

“Chore Girl” and “Sick Girl” reveal that Gitksan has a lexical distinction between permission (marked by the verb *anook*) and ability (marked by the verb *da’akxw*), and that the plain prospective aspect marker *dim* is often used for deontic necessity (obligation). Permission is shown in (7), and ability in (8).)

(7) a. ii-t anook-s nox-t
   and-3SG.II DEON.Possib-PN mother-3SG.II
   “And her mother let her.” (Sick Girl)

b. ii-t anook-s nox-t dim ma’us-t galk
   and=3SG.II DEON.Possib-PN mother-3SG.II PROSP play-3SG.II outside
   “Her mother let her play outside.” (Sick Girl)

(8) a. ii nee=dii da’akxw dim ma’us-t
   and NEG=contr CIRC.Possib PROSP play-3SG.II
   “And she was not able to play.” (Sick Girl)

b. ii nee-dii-n da’akxw dim xsaw-’y
   and NEG-contr-1SG.I CIRC.Possib PROSP go.out-1SG.II
   “And I am not able to go out.” (Chore Girl)

(9) shows that the modal *da’akxw* can be used for permission as well as ability. We analyze this element as a general circumstantial possibility modal (Matthewson 2013).

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7The same consultant offered (7a, 7b and 8a) in a single telling of the *Sick Girl* story, and (8b, 9, 10a and 10b) in a single telling of the “Chore Girl” story.
(9) ii he-s Mary: “mahl-d-i-s no‘o-‘y dim da’akxw dim
and say-PN Mary tell-T-TR-PN mum-1SG.II PROSP CIRC.POSSIB PROSP
ma‘us-‘y.”
play-1SG.II
“And Mary said: ‘My mother told me I could play.’” (Chore Girl)

(10) shows that the ordinary prospective aspect marker *dim* can be used in contexts of deontic necessity (obligation). Whether *dim* actually expresses deontic necessity in its lexical semantics is a matter of ongoing investigation; see Peterson (2011), Matthewson (2013). In follow-up elicitation, the sentence in (11) containing the dedicated circumstantial necessity modal, *sgi*, was offered to the consultant in the context of the story and accepted.

(10) a. *dim* saks-in-n=hl no‘ohl
PROSP clean-CAUS-SG.II=CN dishes
“You will wash the dishes.” [Target: “You have to . . .”] (Chore Girl)

b. ii he-s Mary: “yukw *dim* yats=hl lakw,”
and say-PN Mary PROSP PROSP chop=CN fuel
“And Mary said: ‘I’m going to chop wood.’”
[Target: I have to . . .] (Chore Girl)

(11) *sgi* mi=dim saks-in=hl no‘ohl
CIRC.NECESS 2SG.I=PROSP clean-CAUS=CN dishes
“You have to do the dishes.”

4.1.2 St’át’imcets

St’át’imcets (a.k.a. Lilooet) is a highly endangered Northern Interior Salish language spoken in the southern interior of British Columbia. “Chore Girl” and “Sick Girl” show that in St’át’imcets, the circumfix *ka- . . . -a* is used in both permission and ability contexts. This is illustrated in (12–14).

(12) tsut ta=skicza7-s=a cw7áoz=ka séna7 kw=á=su
say DET=mother-3SG.POSS=EXIS NEG=IRR COUNTER DET=IPFV=2SG.POSS
ka-sáy’sez’-a t’u tsekw-tsu kw=i=kalhás=a
CIRC-play-CIRC until RED-finish DET.PL=three=EXIS
s–7áltkt-su
NMLZ-work-2SG.POSS
“Her mother said, ‘You can’t play until your three chores are finished.’” (Chore Girl)
Two different speakers consistently expressed obligation in these storyboards by using the prospective aspect marker *huy’*, rather than the deontic modal *ka*. Although *ka* is independently known to allow obligation readings, findings such as these can reveal information about alternative ways to express obligation.

(13) \( \text{tsut } s=\text{Mary, } \text{wa7 } \text{tsut } ta=n\text{-skícez7=a} \) say NMLZ=Mary IPFV say DET=1SG.Poss-mother=EXIS kw=en=s=wa7 \( \text{ka-nás-a } \) sáy’sez’ DET=1SG.Poss=NMLZ=IPFV CIRC-go-CIRC play “Mary said, ‘My mother said I could go play.’” (Chore Girl)

(14) \( \text{t’u7 } \text{cw7aoz } \text{kw=en=wa7 } \text{ka-sáy’sez’-a, } \text{xán’=lhkan } \text{nilh} \) but NEG DET=1SG.Poss=IPFV CIRC-play-CIRC hurt=1SG.SBJ FOC s=qácwecw n-síqwáxt=a NMLZ=break 1SG.Poss-foot=EXIS “But I can’t play, I hurt myself and broke my foot.” (Chore Girl)

4.1.3 Summary of “Chore Girl” and “Sick Girl”

We have found the “Chore Girl” and “Sick Girl” storyboards to be very useful in determining how a language can mark the notions of deontic possibility, deontic necessity, and ability, as well as negated ability and permission. The results include negative data, not given here for reasons of space; the fieldworker can easily, for example, establish that a dedicated obligation modal is inappropriate in a permission context.

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8 As in, for example, (i).

(i) \( \text{qwatsáts}=\text{ka } \text{ta=sísqa7-sw=a} \) leave=DEON.NECESS DET=uncle-2SG.Poss=EXIS “Your uncle should leave.” (Davis 2006, ch. 24)
5 Pilot Study on Naturalness

Because storyboard elicitations involve a distinct form of interaction with the speaker, the question arises of how natural storyboarded data samples are in comparison with other forms of elicitation. Specifically, we may wonder how the results of the storyboard methodology compare with other narratives with respect to factors including intonation patterns, vocabulary choice, narrative connectives, and discourse particles. Because our methodology involves a presentation of the story in the communication language, prior to the elicitation, the question also arises of whether translation interference may arise.

As a preliminary exploration of the comparative naturalness of storyboards, we have therefore conducted a small pilot study, comparing a narrative elicited with storyboards with a narrative elicited without storyboard prompts. For this pilot, we used the following methodology. Using a native-speaking Japanese consultant, with English as the communication language between the recorder and the speaker, we recorded two short narratives, of similar length. One story was recorded using the “Woodchopper” storyboard, following the methodology described above in this paper. The other story was a more “spontaneous” narrative, recorded by asking the speaker to recollect a series of events from recent memory. The story was recorded with no prompts (though, as with storyboards, the speaker was allowed to practice until she was comfortable prior to recording).

We then asked five other native Japanese speakers to listen and compare the audio recordings for the two narratives, and to evaluate the naturalness of the recordings, defining “natural” to mean that the narrative contained forms that they felt a Japanese speaker would normally use in that context. We specifically asked the evaluators to evaluate each of the two narratives for naturalness (as defined here) with respect to four factors: (i) vocabulary choice, (ii) intonation patterns, (iii) narrative transitions, (iv) use of discourse sensitive markers such as discourse particles. Because our storyboard methodology involves some discussion in English prior to recording, we also asked the reviewers to evaluate whether they could detect translation interference in either narrative. On each item, for both forms of elicitations, reviewers were asked to rate the narrative on a scale of a–d, where “a” is completely natural, and “d” is clearly unnatural and distorted speech. (The reviewers were also asked to identify and comment on specific issues identified in the narratives, though those comments are not reproduced here.) Because we referred in our study to linguistic terms, the reviewers for this pilot study were all linguists.

The results of the pilot study are presented in Table 5.2. In the table, FM = From Memory, FS = From Storyboard. The response “a” marks most natural, while “d” marks very unnatural usage.

The results suggest that the storyboarded narrative, though somewhat less “natural” overall than narratives elicited from memory, is quite close, and comparable. In 16 out of 24 comparisons, the storyboarded narrative was rated as the
same or higher in naturalness than the completely spontaneous narratives; in all but one case it was rated as within one point; and in just one case it was rated two points lower than the story from memory. The storyboard story was rated higher in naturalness than the story from memory in 3 out of 24 cases.

Table 5.3 summarizes the pilot study results numerically. We assigned all “a” responses a value of 1, “b” responses a value of 2, and so on, and then averaged the responses over all five participants. Cases where the storyboard narrative were on average rated as more natural than the original narrative are highlighted.

Unfortunately, for this pilot study we were not able compare the two narratives with narratives obtained via other elicitation methods, such as phrase-by-phrase translations from English, but it seems plausible that the storyboard technique will give better results than this method. If correct, this suggests that storyboarded narratives are at a high intermediate level of naturalness, not quite as natural as speech with no prompt, but also not highly degraded from it, and plausibly much more natural than speech elicited phrase by phrase.

### 6 Conclusion

Good linguistic fieldwork will always involve a variety of elicitation methods, each with advantages and limitations; in this paper, we have outlined how targeted construction storyboards can add to that variety. The advantages of this methodology include the fact that it allows us to collect relatively spontaneous speech while
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targeting specific linguistic constructions, and in contexts that other researchers can easily reproduce in any language. Using a follow-up elicitation, the same storyboards can also be used to collect negative evidence. And finally, perhaps most important of all, many consultants find that storyboards are an easy, even fun, way for them to work with linguistic researchers.

References


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