Explaining Pathways in the Central Kalahari

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INTRODUCTION

This study focused on two neighboring language groups, the ǀGui and the ǁGana. These two groups belong to the San (also known as Bushmen), a cluster of indigenous people across southern Africa. The geographical remoteness of their location notwithstanding, the ǀGui and the ǁGana are relatively well-known because of several interdisciplinary studies published on them (Silberbauer, 1965; Tanaka 1980; Tanaka and Sugawara, 1996). Evidence at many levels, including aspects of kinship, language, rituals, and folk knowledge, indicates a close relationship between the groups (Tanaka 1980; Barnard 1992). In this paper, they are considered as one unit because of the similarities in their navigational practices, although it must be noted that recent social changes have generated considerable economic, political, and identity differences between them (Takada 2002).

The ǀGui/ǁGana have lived a nomadic life within the central part of the Kalahari Desert (Figure 1). The lifestyle demanded adaptability to a huge living area, now encompassed by the Central Kalahari Game Reserve (CKGR). Like San all over southern Africa, the lifestyle of the ǀGui/ǁGana also underwent drastic changes. The Remote Area Development Program launched in the 1970s reached most of the San living in the Republic of Botswana, and local infrastructure such as wells, schools, and clinics were developed at several settlement sites. !Koi!kom, which is administratively called Xade, became the largest ǀGui and ǁGana settlement. In 1986, the government encouraged CKGR residents to resettle outside the reserve, and 11 years later, those who favored relocation began to move to *Kx'ôẽsakéne* (known as New Xade for administrative purposes), a new settlement outside the CKGR. The migration grew steadily, and most !Koi!kom residents resettled there. The latest residential as well as socioeconomic developments in the new settlement have been described in great detail by Maruyama (2003).

A community feature often emphasized in the literature is the adaptability of the ǀGui/ǁGana to the arid environment of the Kalahari Desert. Of their many outstanding attributes, the one receiving particular admiration is their well-developed sense of orientation (Silberbauer 1965: 109–110), a trait based on the

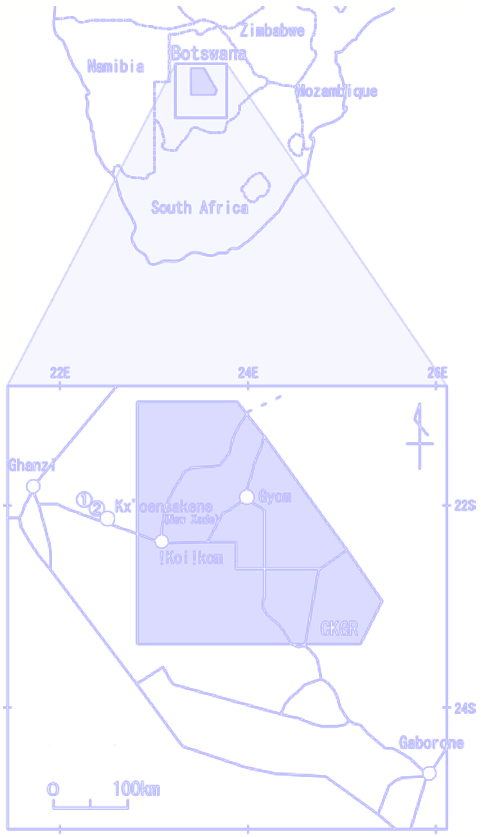


Figure 1 Research Area
①, ② indicate |Gãma, ǁQâots'ii, respectively

amalgamation of several skills (Nonaka and Takada 2004). In this respect, the main point is that their spatial cognition is complemented by a multi-scaled integration of folk knowledge, through which the |Gui/ǁGana transform "nature" into "culture" (Goodwin 2000: 170). The key points regarding their specialized knowledge are their ability to recognize places with few obstacles (the |Gui/ǁGana find these areas effortlessly when they move through the bushveld); an immense knowledge of specific trees, used as landmarks in the bushveld; understanding woodlands and basins as nodes in the environment (these areas provide valuable resources for the |Gui/ǁGana and serve as campsites during their nomadic travels); and conceptualization of sequences of woodlands and/or basins with reference to ecological features (such sequences are sometimes employed as a route for nomadic movement).

The discussion of this paper is based on the analyses of face-to-face interactions between the author and the |Gui/ǁGana during their daily activities, when their "detailed knowledge of specific trees," and "understanding of woodlands and basins" were discussed[1)2)]. The objective of this analysis was to deduce the

conditions under which the above knowledge can be put into practice. Two mutually related justifications exist to using this approach. First, it constitutes a key strategy of linguistic anthropology, in which everyday talk is used as the source of information to explicate the making of social reality, or in other words, an essential aspect of culture. It follows that the proper locus for the study of culture is through the local activities within which appropriate cultural structures are situated (Goodenough 1981: 102–103). The analysis of face-to-face interactions thus provides an opportunity to study language, social organization, and culture from an integrated perspective (Goodwin 1990: 2). Second, this approach can offer a basis for "adequate representation of other voices or points of view across cultural boundaries" (Marcus and Fischer 1986: 2). The challenges faced by anthropologists are often related to writing and understanding other cultures, which frequently leads them to view cross-cultural understanding as "an approximation, which is variably achieved through dialogue" (ibid. 29). Marcus and Fischer (1986: 68) promote the view that dialogue "refer[s] to the practical efforts to present multiple voices within a text, and to encourage readings from diverse perspectives." From this, they postulate that we can continuously upgrade the understanding of culture. Here, dialogue, and not just text, is used as a metaphor. As an analogous approach, we focus on actual conversation between the researcher and participants in the conversation. The study empirically explicates the interwoven relationships among the content of the conversation, the actions displayed during, and the participation framework in which the conversation took place. We seek to understand the process of meaning construction among all the participants, including the researcher.

IMMENSE KNOWLEDGE ABOUT INDIVIDUAL TREES

Despite the mean deficit and absence of surface water, the Kalahari is a well-vegetated desert (Thomas and Shaw 1991: 11). Much of the vegetation is commonly described as savannah (ibid. 98). Although the bushveld is mostly covered by species of grass (*Aristida, Eragrostis*, and *Stipagrostis)*, a few trees and shrubs (mostly of the genera *Acacia, Commiphora, Colophospermum*, and *Terminalis*) also are present (ibid. 103–104).

The trees (*ǂǂi*) provide the ǀGui/ǁGana with places for conversation, rest, setting rope snares, and cleaning and skinning hunted prey (cf., Tanaka 1980). Furthermore, when the ǀGui/ǁGana move through the bushveld, they use the trees as landmarks (Ikeya 1989: 314–318; Ikeya 1994; Sugawara 1998: 185–187; Nonaka and Takada 2004). They can recognize specific trees despite the huge area over which they range. When we asked people to reenact the migration, they showed us trees that were within a few kilometers from each other. In other words, these landmarks were situated at the extremity of one's eyesight. They also referred to episodes in relation to these trees. After passing several such landmarks, we eventually arrived at the destination, a basin surrounded by woods (Nonaka and Takada 2004: 39–41).

Distinctive trees are so crucial to the |Gui/‖Gana navigation that they will often lose their way if these landmarks are removed. An example is given below, in excerpt 1, which was taken from a conversation recorded in *Kx'ôẽsakéne*. Three days before the recording I met O and B, both residents of *Kx'ôẽsakéne*, on our way to a nearby town called *Ghanzi* (Figure 1). Later, I visited O with my informants G and T. According to O, he and B had transported several horses belonging to an acquaintance from *Kx'ôẽsakéne* to a cattle ranch near *Ghanzi*. As they returned home it became dark, but they kept moving, as they wished to get home as soon as possible. Eventually they found the gravel road that ran between *Ghanzi* and their home. O explained the situation to the author (A) as follows.

Excerpt 1 [3)4)]

1 O: e:i (1.8) ʔîtsebi ʔîtsebi mee aa aa rampe-zi xoa ‖ʔâaxo (‖)ʔae-ki-siʔii
Yeah (1.8), we, we thought those, those lights in that direction would be home.
2 A(Author): e:i
Yeah.
(2.0)
3 O: ʔîtsebi aa ya ǂkáno ǂkáno[5)]
We went straight there.
4 A: n:
mhm
5 O: ! kôõ
((We)) went
6 A: e:i
Yeah
(1.2)
7 O: ! kō-wã ! kō-wã ! kō-wã ! kō-wã ! kō-wã ya [sáa-ku]
((We)) went, went, went, went, and went [far].
8 A: [n:]
[mhm]
9 O: sáa-ko ‖kàbi-sa ! ʔâbo
((We went)) far and climbed up a hill
10 A: e:i
Yeah
(1.0)
11 O: ‖náã-sho ! ʔâbo ya cie-si ʔêzi môõ
((We)) climbed up there, and then ((we)) stood and saw them ((i.e., the lights)).
12 A: n:=
mhm =
13 O: =ʔàbe mee éẽʔè (0.9) |néẽ ʔîtsam ‖ʔae chèma:=
=He ((the companion)) said, "No. (0.9) This is not our home."=
14 A: =n:

= mhm
(2.2)
15 O: ʔitsam ǁʔae chèma
((It was)) not our home.
16 A: e:i
Yeah

The excerpt shows that O and B tried to go home by walking toward the lights, which they had interpreted as being those of *Kx'ôẽsakéne* (line 1). In fact, however, they were traveling in the opposite direction, even though the road was lit by moonlight. They did not notice that they had gone in the wrong direction until they positively identified the lights as distinctive town illuminations and not those of home (line 13). This incident demonstrates how the ǀGui/ǁGana people can get lost in an unfamiliar environment.

A sequential organization of the above interaction reflects the setting of the interview. A has been the principal addressee of O's narrative here. This is partly because A, as a researcher, avoided leading questions, and also because of his lack of fluency in the ǀGui/ǁGana languages. He repeatedly uttered affirmatives *e:i* (lines 2, 6, 10, and 16) and interjections *n:* (lines 4, 8, 12, and 14) near the end of the phrases or clauses given by O. In other words, A inserted these affirmatives and interjections at the possible completion points (Schegloff 1984: 45–46) of O's turns. A detailed analysis of these actions makes it possible to break down the participation framework of the interactions.

Lines 1–5

When asked to describe the situation when they became lost, O explained the pathway of their trip (not shown in the excerpt). After losing their way in the bush, they finally found the gravel road that connects *Kx'ôẽsakéne* and *Ghanzi*. They walked along the road and found the lights.

The utterance in line 1 summed up the preceding utterances, which mentioned that they found lights, and thereby prepared the punch line. It suggests that they misinterpreted the lights of *Ghanzi* as those of their home. The verb "*mee* " (say) made it a composite complex sentence, which framed this utterance as one step in the course of actions. The framing implies that the story was not over and would go on the next step. The grammatical particle "*ki* " functions to focus on the nominal, in which the particle is embedded. In this case, "ǁ*ʔae-si* " ("home" + a suffix to indicate female, single, and nominative) was emphasized by the particle. These grammatical devises project that the belief at that time (= the lights belong to their home village) would eventually be proved wrong.

The following affirmative "*e:i*" (yeah) in line 2 was an acknowledgment to the prior utterance. A was expected to express his understanding of O's statement that summed up the preceding sentences. However, the extent of A's understanding is ambiguous by the simple expression "*e:i*." He could have expressed an opinion or

reflected on the story but did not. Consequently, a relatively long pause (for 2.0 sec) occurred after line 2.

Thereafter, O followed up on his prior utterance and described how they realized that the lights were not of their home village *Kx'ôẽsakéne*. It is noteworthy that O did not question A's understanding of what he had spoken. Instead, he continued to narrate his story from where he had left off. That is, they "thought that those lights would be home" at that time and thereafter they "went straight there." This indicates that despite the extended pause, O recognized that A understood his narration and he could continue with his story.

The following interjection "*n:"* in line 4 indicates that A recognized O's utterance in line 3 as incomplete and encouraged him further by not speaking much but merely expressing what Schegloff (1982) called a "continuer" of the narration. And O immediately derived the word "*! kôõ*" (go), which strengthened the prior utterance (line 3), in line 5.

Lines 6–16

The next affirmative "*e:i* " (yeah) in line 6 again expresses an acknowledgment for the prior utterance. However, A's response does not express his view of the situation or his reaction to the unfolding drama. After a 1.2-sec pause, O continued his narration. This time, O not only narrated the story as it had happened but also enacted the scenes as could be understood by the repetition of "*! kō-wã̄*" ("go" + post position that means "in"). Within the same turn, he summed up the enacted move with the word "*sáa-ku*" (far). On receiving a continuer from A, which overlapped with the word "*sáa-ku*," O rephrased the summation and described their next move at that time (= we climbed up a hill).

A then offered an affirmative "*e:i*" (yeah) in line 10. While this served as an acknowledgment of O's narration, it was a weak response with no indication of his reaction to it. Consequently, a 1.0-sec pause occurred and O rephrased the move (= we climbed up there) in the former part of line 11, and described their next move (= we stood on the hill and saw the lights).

On receiving a continuer-type response (line 12), O enacted the situations, again (line 13). He delivered the quoted speech, which emphasized the sense of presence for A, whose extent of understanding was still unclear. After the verb "*mee*" (say), O began to narrate the words of his companion B. He used a proximal demonstrative "/*néẽ*" (this), (line 13), which usually refers to a person or thing that is near you in position or time. However, the referent was not perceived as being part of the conversation but away from *Kx'ôẽsakéne* at the time of interview. The proximal demonstrative thus indicates that O shifted his perspective to B, an actor in the story.

The quoted speech definitely stated that the lights were not those of their home village. The distinctive town illuminations led them to realize that they had gone in the wrong direction. This sounded like the punch line of the story, indicating the end of narration, which then required an adequate response from the addressee to

indicate active involvement with the storytelling, such as the appreciation of story completion (Schegloff 1984) or an assessment of the story (Goodwin and Goodwin 1987). Although a mere continuer or acknowledgment was not sufficient at this point, A gave all but the superficial interjection "*n:"* in line14, which led to a longer pause of 2.2 sec. Moreover, O repeated the concluding phrase "*ʔîtsam ǁ ʔae chèma*" ((It was) not our home) to reiterate that the story reached completion.

Discussion

The above analyses indicate that the sequential organization of conversation is constrained by the social roles of the participants. By avoiding leading questions to the informant, the researcher did not deploy topics in the conversation. Therefore, a form of asymmetry was built into the participation framework of the above conversation. However, the sequential organization of conversation is structured by the local rules of ordinary dialogue. For example, the silence of the addressee was initially recognized as his comprehension of the narration and the speaker continued (lines 2 and 3), but subsequently, O began enacting situations, as if to reinforce the understanding of the addressee (lines 7 and 13), and finally used repetition (in the concluding phrase) to confirm the completion of the story (lines 14 and 15). These were sequentially appropriate reactions to A's responses, which were ambiguous and did not display the extent of his understanding. In brief, demands originated from social roles are realized according to the rules of ordinary dialogue.

My principal informant G was a silent participant (hearer) in the above interaction while the author as an addressee. The listener does not necessarily coincide with addressee. The 'addressee' is a speaker's view of a recipient, whereas the 'hearer' is a party other than the speaker who participates in a portion of the talk (Goffman 1981: 131–133; Goodwin and Goodwin 2004). Accordingly, G did not reply to O or A's statements. In excerpt 2, however, we see that in the latter part of the interview G began describing their route with no prompt from anyone. It must also be noted that G is an experienced hunter and is knowledgeable about the geography around *Kx'ôẽsakéne*.

Excerpt 2[6)]

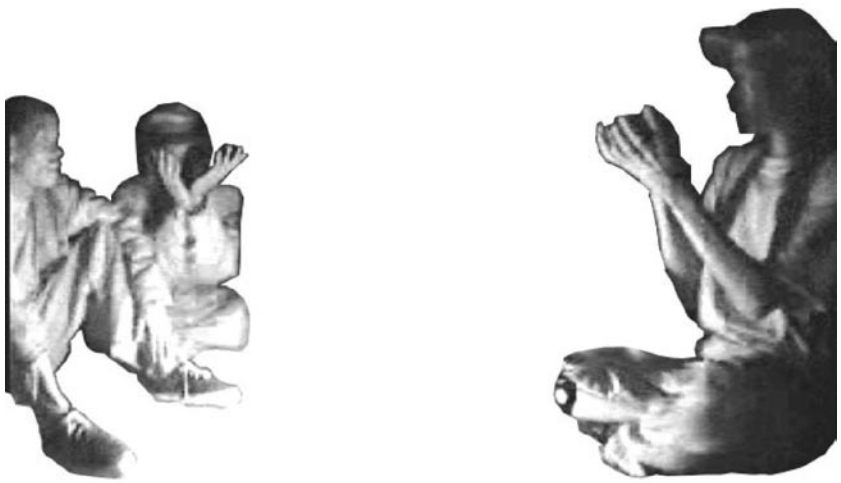
1 G: kero itso ǁ nhám kâma[7)]
And then, you'll go over there
2 T: |Gāma-mka ǁ nhám=
Beyond /*Gāma* =
3 G: =[àe]
=[Yes]
4 O: =[ǁ nhám itsebe] ǁ nhám itsebeya ya xa kx'o ǃ kâma
=[we ((should have gone)) over there], we should have gone over there
5 A: n:=
mhm =
6 O: =itsam ka xa kx'o |Gāma-m wa ǂkāã itsebe xa kx'o ǃ ʔan

Picture 1 A |*nŏne* tree: the first landmark from *Kx'ôẽsakéne*

=((then)) we could have arrived at /*Gāma*, we could have seen ((the location of /*Gāma*))
7 A: n:=
mhm =
8 O: =[gyiyano] [itsebe ! nǫ́m |xòa ! kôõ]
=[then] [We'll go through the area without a tree]
9 G: =[kua itso] ǁnhám za [itso |nŏne-m za kâma]
=[you], at that place, [you should go for the |*nŏne* tree]
10 O: e he:i
Oh
11 A: n:=
mhm =
12 O: =! nǫ́m |xòa=
= Go through the area without a tree =
13 G: =a he:i aa ǁkâra (gao) aa |gēisi ǁkâra-si hicire itso aaxo itso aa ǂqx'óraha-m ka=
=Yeah. That (big) ǁ*kâra* tree, the tall ǁ*kâra* tree. And then you'll go there ((i.e., to the ǁ*kâra* tree)), you'll ((go)) straight to the place =
14 O: =n
= mhm

15 G: ǂkhêu-m ka itso aa sii ya aa xoa dâo-ma tsxōre ci itso aa |gēisi ǁkâra sii
When you arrive at the ǂ*khêu* tree, you'll see the way over there. After you arrive at the tall ǁ*kâra* tree,
16 A: n:
mhm
17 G: ǁkâra sii ka [itso]
When ((you)) arrive at the ǁ*kâra* tree, [you]
18 O: [sii] siiʔowa ka itsebe sii [ǂqx'óa]
[arrive], arrive, when we arrive, ((we will)) [see] ((the ǁ*kâra* tree))
19 G: [e:] sii ʔowa xa itso ʔo ǂqx'óa (1.2)
[kua xa itso]
[eh] when ((you)) arrive, you'll see ((the ǁ*kâra* tree))(1.2), [you]
20 O: [aa] aa |néẽ ca ʔii ǁkâra-si=
[that], that ǁ*kâra* tree like this=
21 G: =àe |néẽ ta ʔii ǁkâra-si
=Yes, ǁ*kâra* tree like this

In this excerpt, G describes the route between *Kx'ôẽsakéne* and a basin called */Gāma* (Figure 1). The route was as follows: *Kx'ôẽsakéne* (22˚06–712' S, 022˚ 25–317' E) — the road that goes north from *Kx'ôẽsakéne* —|*nŏne* tree (22˚00–547' S, 022˚24–613' E) — */Gāma* (22˚00–715' S, 022˚19–604' E) — ǁ*kâra* tree (unmeasured) — ǂ*khêu* trees (22˚04–882' S, 022˚12–914' E) — the road for vehicle (—*Kx'ôẽsakéne*)[8]. G used specific trees as landmarks to describe the route between *Kx'ôẽsakéne* and */Gāma*. Trees are usually denoted by common nouns that indicate



Picture 2 G (center) repeated the utterance/gesture of O's (right) previous turn almost perfectly.

the species. Additionally, various definitives such as physical features are used to identify these trees. In contrast, both *Kx'ôẽsakéne* and */Gāma* were referred to by their proper names. The sequence of conversation is analyzed below.

Lines 1–3

Earlier, we had mentioned names of places. According to G, around *Kx'ôẽsakéne*, few places were named, but */Gāma* was an exception. G had known */Gāma,* since the time he went there on hunting trips. To indicate the direction of */Gāma* seen from *Kx'ôẽsakéne*, G moved his right hand from the back to the front. The gesture seems to index the movement from *Kx'ôẽsakéne* to */Gāma* (line 1). The movement was also expressed by the phrase "‖*nhám kâma*" (go over there). T complemented G's utterance by adding the adjective phrase to the word "‖*nhám"* (over there) (line 2). The proper noun */Gāma* specified the place that G indicated by the word "‖*nhám.*" Without delay, G confirmed the prior utterances by T (line 3). These interchanges indicate that G and T immediately achieved a mutual understanding through their conversation.

Lines 4–8

Simultaneously, with G's acknowledgement, O began paraphrasing G (line 1) and T's (line 2) statements. In the beginning, he resolved the overlap by repeating the phrase "‖*nhám itsebe*" (we (should have gone) over there). He stated that they should have gone in the direction that G indicated (line 4) and then they would have arrived at and have seen */Gāma* (line 6). These indicate that O reiterated information given by G and T. Additionally O used "*xa*" (a grammatical particle that indicates possibility) and "*kx'o*" (a tense marker that indicates distant past) in his speech, thereby expressing his counterfactual wish. Thus, O added modality to the information given by G and T. As in the previous section, A's interjections "*n:"* in lines 5 and 7 worked as continuers to O's narration. Because A treated O's statements in lines 4 and 6 as incomplete, O continued his narration after the interjections.

In line 8, O tried to describe the migratory route, providing information regarding his navigational skills. He requested confirmation of his knowledge that they would go through "the area without a tree" when they started from *Kx'ôẽsakéne* and traveled in this direction. By doing so, he recognized both G and T as instructing him in the migratory route. "The area without a tree" is an English translation of the word "*!nǫ́m*," which indicates the road that goes north from *Kx'ôẽsakéne*. Little vegetation occurs along the road because of heavy trampling by vehicles and donkeys.

Lines 9–12

Coinciding with O's sentence in line 8, G added further information on the route in line 9. He mentioned a |*nŏne* tree (*Boscia albitrunca*), which stands a little west from the road. By this he meant that, on moving away from the road, one

should head for the |*nŏne* tree, as */Gāma* is located beyond it. O then gave an interjection "*e he:i*" (line 10) that displays his "change of state" (Heritage, 1984). He thereby resolved the overlap, and simultaneously, acknowledged the information given by G. Following A's continuer *n:* (line 11), O restated the phrase "*! nq̀m /xòa*" (go through the area without tree). This redoing of the confirmation request is seen as an overlap resolution. In addition, O reconfirmed that he possessed some knowledge on the migratory direction.

Lines 13–16

Accordingly, G acknowledged O's statement (line 13). This is seen as the closure of the side sequence, when G provides information and requests a confirmation of his knowledge. Within the same turn, G provided additional information regarding the route. He suggested that after passing through */Gāma,* one would first find a large ǁ*kâra* tree (*Acacia erioloba*). The remark used by G is a distal demonstrative "*aa*" (that) to indicate a specific tree. A distal demonstrative requires that the interactants have sufficient background knowledge to infer the referent that the speaker assumes (Hanks 1992: 59). Therefore, the use of the distal demonstrative indicated that G regarded O as knowing the large ǁ*kâra* tree.

On receiving the continuer by O (line 14), G kept up his narration. After passing through the large ǁ*kâra* tree, one would reach the ǂ*khêu* trees beside the road (line 15). The ǁ*kâra* tree stood west of */Gāma*, and three dead ǂ*khêu* trees occur along the vehicle road running between *Kx'ôẽsakéne* and *Ghanzi*. On arriving at the ǂ*khêu* trees, one would be able to return to *Kx'ôẽsakéne* easily by following the road.

Remember that the route described originally by G was as follows: *Kx'ôẽsakéne* — the road that goes north from *Kx'ôẽsakéne* — |*nŏne* tree — */Gāma* — ǁ*kâra* tree — ǂ*khêu* trees — the road for vehicle (—*Kx'ôẽsakéne*). By the middle of line 15, he had described the entire route. Later, when he began to describe the route again, he used the clause "*itso aa /gēisi* ǁ*kâra sii*" (after you arrive at the tall ǁ*kâra* tree) in line 15 which mentions the same large ǁ*kâra* tree as in line 13.

Lines 17–19

As G mentioned the phrase "ǁ*kâra sii-ka*" (when (you) arrive at the ǁ*kâra* tree) in line 17, he was interrupted by O (line 18), who paraphrased the previous description of the large ǁ*kâra* tree. O thereby displayed an understanding of the route toward the large ǁ*kâra* tree. Consequently, G acknowledged O's statement with an affirmative "*e:*" followed by a statement whose contents and prosody are almost the same as those given by O (line 19). This repetition showed G's agreement with O's understanding.

Lines 20–21

The mutual understanding between G and O increased in intensity when they agreed on the shape of the large ǁ*kâra* tree in lines 20 and 21. In the beginning of

line 20, O refers to the large ǁ*kâra* tree by a distal demonstrative "*aa*" (that) for two times. The second "*aa*" was expressed as an overlap resolution. Using a proximal demonstrative "/*néẽ*" (this), he then depicted the shape of the ǁ*kâra* tree by holding up both his hands with the palms spread. Consequently, the referent became visible to the interactants. This made it easier for the interactants to use the referent as a resource of interaction. In the following turn, G also gave a depicting gesture that was quite similar to O's. After expressing acknowledgment using an affirmative (*i.e.*, *àe*) as well as a gesture (*i.e.*, nodding), G almost mirrored O's previous turn (picture 2). Furthermore, G placed particular stress on the utterance/gesture, conveying his delight. This is interpreted as G showing agreement with the previous turn by O and thereby acknowledging his understanding of the route.

Discussion

The participants of the above conversation were motivated to talk about their navigation practices. In this sequence, each participant took a different stance to take part in the interactions. The principal informant G actively engaged in providing instructions regarding the migratory route. The junior informant T complemented his statements. The interviewee O was involved in the conversation mainly as a recipient of information provided by G and T. In addition, O requested confirmation of his knowledge from G and T. Together, G, T, and O provided details of the migratory route in the course of interactions. In contrast, the researcher A remained as an addressee or hearer and did not deploy topics in the conversation .

The sequence of conversation is also seen as a process of accumulating mutual understanding among the interactants. It is noteworthy that this process was structured by the local rules of ordinary conversation. In the initial part of the sequence, T complemented G's expressions and they achieved mutual understanding immediately (lines 1–3). O tried to clearly elucidate the migratory route by paraphrasing their utterances (lines 4–6), but subsequently requested confirmation of his knowledge. G provided this confirmation, and therefore this knowledge was recognized among the interactants (lines 8–15). When G began to repeat the route, O cut him off, and displayed his recognition and understanding of the route (toward the large ǁ*kâra* tree). G agreed with him and thereby acknowledged this fact (lines 18–21).

As seen above, the interactants arrived at a mutual understanding at certain points in their interaction. Displaying agreement is a key to mutual understanding, which enables their navigational skills. This may take the form of symmetrical demonstration of knowledge, and was beautifully realized in the above example by mentioning as well as depicting the shape of the large ǁ*kâra* tree that was out of their sights (lines 20 and 21).

WOODLANDS AND BASINS AS NODES IN THE ENVIRONMENT

We term landmarks like trees as *complementary points* and places referred to by

their proper name as *stops* (Nonaka and Takada 2004) to describe the moving route of the ǀGui/ǁGana. When ǀGui/ǁGana travel long distances, they have several stops on the way. As seen in excerpt 2, they describe their route by enumerating the names of stops. Complementary points are scattered between adjacent stops.

The use of stops in navigation is highly relevant to the natural environment of the Kalahari Desert, which includes distinctive landforms such as sand dunes and pans. The dunes are distributed all over southern Africa. Investigations have been conducted to determine whether the presence of dunes indicates that the area was previously drier than it is now (Wiggs *et al.*, 1995; Bullard *et al*., 1997). Pans are thought to be the result of a concentration of groundwater and the subsequent formation of duricrust at or near the earth's surface (this crust consists of a hardened accumulation of silica (SiO_2), alumina (Al_2O_3), and iron oxide (Fe_2O_3), in varying proportions; Shaw and Thomas 1993). Woodlands often form in the ridges of dunes, and also around pans (Tanaka 1980: 22–23). Trees and shrubs occur in dense thickets, often dominated by stunted *Acacia elioloba, Acacia mellifera*, and *Boscia albitrunca* (Thomas and Shaw 1991: 105). Plants that provide shade can be found there, as well as firewood, places for setting snares, and food for people and herbivores. In the rainy season, basins appear at the center of the pan. According to the Department of Surveys and Mapping (2001), "mostly the surface of the pans is comprised of silt or salt encrustations, which prohibit plant growth. Wildlife is attracted to the pans because they provide intermittent water sources (freshwater collects in hollows after rains) and also because of the minerals (mainly salt) found in the pan sediments (p.76)." People come to hunt the wildlife that gather in the basins.

Woodlands and basins are extremely useful in the nomadic lifestyle of the ǀGui/ǁGana since these areas provide campsites, hunting grounds, and gathering places. The ǀGui/ǁGana conceptualize woodlands and basins as "ǁ*xau*" and "*!kûu*," respectively. The places around "ǁ*xau*" and "*!kûu*" are used as stops when groups of people travel long distances. Their total living area can thus be represented as a network of stops. We have shown that several "ǁ*xau*" and "*!kûu*," all of which constitute stops, occur on the route between *!Koi!kom* and *Gyom* (Figure 1). These stops are important to the conceptual and structural aspects of ǀGui/ǁGana knowledge of the environment. The ǀGui/ǁGana usually explain the route by enumerating the names of these stops (Nonaka and Takada 2004).

The stops have proper names, often associated with an event or episode that occurred there, and the origin of these names is of special interest. Place names usually consist of several lexical elements. Interestingly, a functional similarity exists between the naming of places and naming babies. The ǀGui/ǁGana name newborns after conspicuous incidents that occurred during pregnancy or infancy. Sugawara (1997) suggested that personal names function as mnemonic devices for ǀGui/ǁGana, and our results imply that place names may also function as such for the ǀGui/ǁGana. However, stories associated with the origin of place names are context-sensitive, and a variety of explanations may exist depending on the

individuals present, the place, and the time of the interview. Moreover, while some episodes are connected with specific individuals, others are understood as a deed of "‖*Gama*" (the god). It is a difficult task, therefore, to assess the "truth" of these stories. While scientists may be motivated by facts, not all may want to follow this path. It is possible that the |Gui/‖Gana people think it important that the episodes they are referring to should be expressed live, or in real time, reflecting the setting of interactions in progress.

This presumption is examined more closely in excerpt 3, which was taken from a conversation recorded during a field trip to a place called ‖*Qâots'ii* (Figure 1). ‖*Qâots'ii* is northwest of *Kx'ôẽsakéne* and has a basin (picture 3) at its center (22˚ 04–475' S, 022˚22–984' E). Although ‖*Qâots'ii* is outside the CKGR, it has a proper name because the basin has been used for hunting ever since |Gui/‖Gana people have lived in *!Koi!kom*. ‖*Qâots'ii* was familiar because they often went near there to collect firewood. The topic of excerpts 3–5 is the origin of the name ‖*Qâots'ii*. The conversation was transcribed from a video clip. Three informants (G, K, and T) and the author (A) speak in this excerpt. During the conversation, K sat on the ground and set up a rod for springhare hunting[9)], while G, T, and A were out of the video frame.

Excerpt 3

1 A: ‖Qâots'ii-m |qx'ōan ne e ‖gama-ma ǂkǐi
The name of ‖*Qâots'ii*', did God give?
(3.2)
2 G: ‖nâã-m (.) [ae khôe-be ǂkǐi]
That , (.) [well, a person gave]
3 T: [khôe-be kx'o ci ne tsé] khôe ʔèsi ts'ii ‖qâo khôe-‖ko
[ǂgŏaʔo-xa-‖ko e mee ‖Qâots'ii]=
[A person, long ago, you know], the person could not help being without the buttock, people, [cousins said ‖*Qâots'ii*]=
4 G: [khôe-be ǂkǐi cua ‖gama-be ǂkǐi]=
[A person gave. God did not give]=
5 A: =khôe-be ǂkǐi
=Did a person give?
6 G: ae: kx'ai che khôe-be
Yeah, a man who lived long ago
7 A: kx'ai ‖gôo-ko-be
A big man who lived long ago?
8 G: ae: ʔe-‖kóe ka tsháa kôo-si
Yeah, in their water basin

In this fragment, three informants (G, K, and T) participated as the speakers, while the author (A) acted as an addressee. G began to narrate the story about the lazy, lusty character while K and T took part in the narration later. The farcical

episode is derived from the literal meaning of ǁ*Qâots'ii*, which is decomposed into "ǁ*qâo*" (cannot help being without ~) and "*ts'ii*" (buttock). The characters are considered to be people who lived in the old days (lines 2–4), implying that the episode is thought to be an actual event that occurred at this location when a group of San lived around the basin (line 8).

This excerpt is particularly interesting in illustrating how members of a certain culture open up a story and share their common knowledge with a stranger in their culture. By examining the speech and interaction during this excerpt closely, we can see how the |Gui/ǁGana express such episodes in several different ways.

Lines 1–4

The interplay in lines 1–4 is seen as a question and answer sequence (Schegloff, 1984) between the author and informants (G and T), but the modes of answering were rather different between these informants. Before the start of the conversation, K sat on the ground and set up a rod for springhare hunting. Without preamble, the author asked if the name ǁ*Qâots'ii* had been given by god (line 1). Then a long pause (3.2 sec) occurred. This indicated that although ǁ*Qâots'ii* was well-known to them, the relevance of the question to the situation was uncertain. It was not clearly directed to one individual and may have caused some embarrassment among the informants.

My principal informant G took the initiative (line 2), beginning with "ǁ*nãã-m*" ("that" + a suffix that indicates male, single, and genitive). It is to be noted that the grammatical structure of the question (= is the name of ǁ*Qâots'ii*' given by god?) requires a yes or no answer. However, G answered A by calling for a particular membership categorization in the |Gui/ǁGana culture. That is, folktales of the |Gui/ǁGana are usually attributed in origin to deeds by god or by actual persons. Accordingly, following an interjection "*ae,"* he replied with "*khôe* " (a person), which is the alternative to "ǁ*gama*" (the god).

The deictic phrase "ǁ*nãã-m*" implied that G had something to answer. However, the central part of the answer appeared only after a slight pause and hedged by the interjection "*ae."* That allowed T to interrupt (line 3), which subsequently overlapped with G's answer (line 2).

T also activated the categorization between god and persons, and started the answer with the same word ("*khôe*") as G. While G's reply replicated the grammatical format of the question (O-S-V, line 2), T offered a more detailed description on the way in which ǁ*Qâots'ii* was named: long ago, there was a person who could not help being without a buttock, and people told him ǁ*Qâots'ii* (line 3). The age in which the episode occurred was indicated by the tense marker "*kx'o*" (distant past). He then provided an upshot of the long story told later in this conversation. The use of the tense marker as well as the upshot worked as an introduction to the story. This indicates that he recognized the sequential action of A's question (line 1) as enhancing the storytelling and correspondingly responded to the action in line 3.

The clause "*khôe ʔèsi ts'ii ǁqâo*" (the person could not help being without a buttock) was derived from the words meaning of "*ǁqâots'ii* "and constituted a turn constructional unit (Schegloff 1982: 74–75). Just as T mentioned the name giver, "people" (*khôe-ǁko*), which was part of the next turn constructional unit, G juxtaposed a rephrased answer to A's question (line 4). G's statement consequently overlapped with the latter part of T's sentence (line 3). Again, G replied to the specific form of the question by strengthening the categorization between god and person in his reply. He might not have recognized the descriptive answer by T as the appropriate level of response required of the question. This also sounded like a claim to be the main respondent to A's question. In contrast, T's reply became gradually weaker.

Lines 5–8

A then repeated G's phrase, "*khôe-be ǂkíi* " (person named, line 5). He thereby marked it as news for him and requested G to expand the story. As with most utterances of the author in this excerpt, this served to draw out the narrative.

In response, G gave an affirmative "*ae:* " (yeah) and began by following up on the previous answer by saying "*kx'ai che khôe-be*" (a man who lived long ago) (line 6). He used an adjective "*kx'ai*" to indicate the distant past and thereby introduced a time frame in the story. A followed by paraphrasing the statement, replacing the word "*khoe*" (person) with" *ǁgôo-ko*" (big person) (line 7). The phrase "*kx'ai ǁgôo -ko-be*" (a big man who lived long ago) is often used by the |Gui/ǁGana, when they narrate folktales. This enhanced the narration by paraphrasing line 5, and using an idiomatic expression that is reminiscent of folktales.

In line 8 G offers an affirmative "*ae:*, " which was the response to A's *question form* (line 7), and continued the narration, which is the response to the *sequential action* of the previous utterance. He mentioned the place in which this episode took place (line 8). As with time formulation in line 6, the place formulation seen here is often used at the beginning of a story (cf. Sacks 1992: 255–257, 767–771).

Excerpt 4 (Cont. from Excerpt 3)

9 A: n: n:
mmhm mhm
10 K: ʔe-ǁkóe kôo-si wa ǁʔāna-ha
They lived around the basin.
11 A: e he:i
Oh
12 K: aa-m kôo-m wa ʔe-ǁkóe ǁʔāna-ha ka
When they lived around that basin
13 A: e he:i
Oh
14 K: |ʔôkka |ʔó-ǁkóe e ci (0.9) ʔóõ
Perhaps other people used to (0.9) go foraging

Picture 3 The dry basin located at the center of ǁ*Qâots'ii*

15 A: n:
mhm
16 G: |ʔôkka [cua ʔóõ]
((The guy)) probably [did not go foraging]
17 K: [! qǎe]
[((used to)) go hunting]
18 A: n:
mhm
19 K: ǁnáã-m ka ʔàbe ci [khô̂e-sa xa ci ǁqâo khoaʔĩ]
At that time, he [could not live without a woman, maybe]
20 G: [ǁʔae-si ʔue |kam ka ci zee ǁgǎe-ko-zi |xòa]
[In his home, every day, ((he)) used to take a rest with women]
21 A: e:i
Yeah
22 K: |ʔôkka cua ʔàbe ci qǎe kx'ara kôõ
Perhaps he did not go out every time.
23 A: n:
mhm
24 K: kx'o |kui xa e ci xo-zi ʔóõ
Only ((other people)) used to forage things
25 A: n:
mhm

26 K: xo-zi ci |qx'óõ
((They)) used to kill things
27 A: n:
mhm
28 K: ʔàbe aa‖ko ci zi ǂʔoõ
He used to eat them.
29 A: n:
mhm

In this sequence, informants deployed the rich content of the farcical episode. When a group of San lived around the basin (line 10), the main character in the story did not forage as much as other people in the group (lines 12, 14, 16, and 17); instead, he stayed at the camp with the women (lines 19, 20, and 22). He depended on the camp residents for his subsistence (lines 24, 26, and 28). As seen below, K negotiated the position of narrator with G, and K eventually took over the position from G.

Lines 9–17

A gave a continuer to G's narration (line 9). However, it was K who produced the next sentence (line 10). The verb "‖*ʔāna-ha*" (lived), which was omitted earlier, was pronounced in louder volume, and by adding it, K provided the full sentence. Hence the previous sentences were paraphrased into one plain line. In response, A gave an interjection "*e he:i,*" which marked his change of state (line 11). The particle thereby functioned as a receipt of information delivered in the previous turn, and at the same time, as an acknowledgement of a shift in narrator. K was thus entitled the position of the narrator and continued with the story. After expressing the clause that meant "they lived around that basin," he used a postposition "*ka*" (when) that transforms the preceding clause to the subclause of larger sentence (line 12). This projected that his narration was not complete. In response, A offered a continuer that facilitated further expansion of the story (line 13). K began a detailed description of the story (line 14). Here, a gap of 0.9 sec occurred before he expressed the word "*ʔóõ*" (forage), indicating that he was searching for the appropriate word.

Following the continuer by A (line 15), G resumed his turn (line 16). He mentioned the main character, as opposed to other people that K described in line 14: unlike the other people who used to go foraging (line 14), the main character probably did not forage (line 16). Providing interaction, G followed up on K's narration and tried to establish a co-storytelling relationship with K in line 16.

The latter part of G's utterance was overlapped by K's "*!qǎe*" (line 17). While the concept "*ʔóõ* " included both hunting and gathering, "*!qǎe*" denotes "go hunting." This suggests that K corrected the word "*ʔóõ* " (line 14) with "*!qǎe*" in line 17.

Lines 18–29

A offered a continuer (line 18) after which K began speaking about the main character (line 19). He noted that the character could not live without a woman[10]. It is relevant that in line 19, he did not negate the overlap by G (line 16). Instead, K rephrased the summary of the story based on the word meaning of "‖*qâots'ii.*" These suggest that K accepted the previous move by G and recognized the story as arriving at the climax.

After the personal pronoun "*ʔàbe"* (he) was expressed, G interrupted mid-sentence (line 20) and subsequently overlapped with K's comment (line 19). The pronoun "*ʔàbe*" projected that K would speak about the main character in turn. This made G's narration similar to the latter part of K's. G provided the details (= in his home, he used to take rest with women), which implied a lusty personality. These indicate that both K and G were reaching the climax of the story that they were collaboratively pursuing.

After line 22, K started to detail the story toward the punch line. A repeated a continuer type response "*n:*" (lines 23, 25, 27, and 29), after which K's utterance followed. K's utterances are in repetitive rhythm with a falling pitch contour at the end of each. Additionally, the utterances rhyme well, each ending with the sound *oõ* (lines 22, 24, 26, and 28). ǀGui/ǁGana languages have extremely complex consonant and tonal systems, the sounds of which are enormously meaningful (Nakagawa 1996). Using the sounds effectively, the ǀGui/ǁGana people often use verse-like expressions in many spheres of their daily activities (Takada 2005). The expressions observed here enabled the audience to recognize the progression in the story. This prompted A to provide continuer at the end of every phrase, almost as if to keep the tempo with his "*n:*".

Excerpt 5 (Cont. from Excerpt 4)

30 K: ǁnáã kx'ai ǂgŏaʔo-xa-ǁko-ma mee[11], "ae tsâm ci khôe-si ts'ii xa ǁqâo"
Then cousins said, "Ah, you cannot live without the buttocks of woman?"
31 A: n:
mhm
32 K: "tsâm ʔóõ tèma ka"
"Why don't you go gathering?"
33 A: n:
mhm
34 K: "kx'am khôe-sa xóu, ʔèsi kēu ǂnôe ne tsé ʔóõ"
"Leave the woman, leave her sitting, and go foraging!"
35 A: n:
mhm
36 K: "cua khôe ts'ii ǁqâo"
"Don't be following the buttocks!"
37 A: n:

Picture 4 K held out his left hand to take the strings used to bind the rod.

mhm
38 K: ta-mee aa kx'o ‖Qâots'ii-sa ʔàma ǂkîi[12)]
Therefore, those ((people)) gave ((the name of)) ‖*Qâots'ii* to him.

K reached the most interesting part of the story. The main character was accused of staying at the camp with women and neglecting his work (lines 30, 32, 34, and 36). The word "*ts'ii* " has an additional sexual connotation (line 36). In subsequent conversation (not included in the excerpt), G inferred that other males were afraid that in their absence, the stay-at-home would indulge in sexual relations with their own partners. The oration in this section merits attention.

Lines 30–38

In line 30, K gives the punch line, which is based on the word meanings of "‖*qâots'ii*." While the punch line had been projected earlier, this time it was given using another voice. After the verb "*mee*" (say), K began to report the words of the "ǂ*gŏaʔo-xa-*‖*ko*" (cousins).[13)] K began with an interjection "*ae*" and the second person pronoun "*tsam*" (interrogatory). He also spoke louder and emphasized an accent as well as his accusative voice qualities[14)]. These expressions marked that K shifted his perspective to one of the old cousins, or an actor in the story. Additionally, by correlating with the onset of reported speech in line 30, K turned his face up and held out his left hand to receive the strings with which to bind the rod (picture 3). This gesture provided the audience with a visual signal for a change in the frame of the conversation (Goffman 1974).

In general, reported speech can be marked by grammatical, prosodic, and gestural devices (Bolden 2004). K effectively combined these devices to express the punch line in this excerpt. Despite the dramatic presentation of the punch line, A only managed a continuer in line 31. This probably provoked K to upgrade the punch line. The speech in lines 32, 34, and 36 have a moral implication, akin to the closure of a sermonette, a short story genre. However, A did not express an expected reaction to the punch line, such as laughing or giving his opinion, and instead limited his response to "*n:*" in lines 33, 35, and 37.

The verb "*mee*" came up again in line 38, a case serving as an unquote or a sign that reported speech had ended, after which K's own words continued. The utterance (therefore, people named it as ǁ*Qâots'ii*) gave an upshot of the story and worked as a marker of sequence closure. Immediately after saying it, K licked the strings to wet them. This gestural shift served as a visual signal for sequence closure.

Discussion

The analyses of excerpts 3–5 elucidate some of important issues with respect to storytelling practices in anthropological research situations.

First, shifts in narrators merit attention. When an anthropologist engages in the research, the researcher usually initiates the story collection. Our example was not an exception. When the author asked the name giver of ǁ*Qâots'ii* (line 1), the addressee was not clear. Subsequently, others made claims to be the narrator. At first, the principal informant G began to reply (line 2). When he hedged at the central part of the answer, T took the opportunity to answer further (line 3). Where G answered according to the grammatical format of the question, T took the liberty of offering a more descriptive answer, which served as the pre-telling of the story. G then juxtaposed his rephrased answer (line 4) to T's (line 3). Subsequently, A provided a news marker to the phrase expressed by G. In response, G began narrating the story (lines 5–8).

Following a continuer to G's sentence (line 9), K produced the next (line 10). He paraphrased G's previous utterances into a single complete sentence. A then gave an interjection that functioned as a receipt of information delivered in the previous turn as well as an acknowledgement of a shift in narrator. Therefore, K was entitled to the position of narrator and set the task (lines 12–14). At A's next continuer (line 15), G followed up where K had left off and tried to establish a co-storytelling partnership with K (line 16). K accepted it and went on to the climax of the story (line 19). G interrupted mid-sentence in line 20. This interplay indicates that both K and G tried to finalize the story that they were collaboratively pursuing.

However, after line 22, K started to detail the story toward the punch line using verse-like expressions and a change in the manner of his speech (lines 22–38). Both the verse-like expressions and the reported speech prompted further continuers from A and no further shifts in narrating occurred.

To summarize, shifts in narrators took place when a speaker provided a response that he recognized as required by the previous turn (lines 3 and 4), or when one speaker tried to establish a co-storytelling relationship according to the larger structure of storytelling (lines 10, 16 and 20). Meanwhile, the continuous storytelling by a single speaker was often enhanced by A's responses, such as an acknowledgment or a continuer. In this manner, the author was actively involved in the participation framework of interactions. In essence, the local rules that assigned the position of the narrator were not fundamentally different from those of ordinary conversation.

Next, we can recognize features that are particularly applicable to the story

narration. For example, the upshot of the story was given in the initial part of the narration (line 3), and subsequently, the detailing of the story occurred. The establishment of time (lines 3 and 6) and place (line 8) were made early on in the narration. A few idiomatic expressions associated with folktales were used to pace the story (lines 6 and 7). When the story neared its climax, rhetorical expressions, such as verses and reported speech, were used to attract the attention of the audience (lines 22–38). When the addressee did not express a predicted response to the punch line, the speaker upgraded it by adding a moral implication to the story (lines 32, 34, and 36) or by giving an upshot of the story (line 38).

The above features are frequently observed in the storytelling form of the ǀGui/ǁGana people (cf. Sugawara 1998). In our examples, each informant did not violate the propriety of the structure of story when engaged in the narration. Rather, they collaboratively pursued the established structure in carrying the story forward. Sugawara (1998: 254–256) stated that ǀGui/ǁGana quickly read the flow of talk and often made up a conversation collaboratively, which was confirmed by our observations.

CONCLUDING REMARKS

Our main concern in this paper is to study language, social organization, and culture from an integrated perspective, as well as to adequately represent viewpoints from across cultural boundaries, through explicating the use of the folk knowledge necessary for navigation. We close this paper by refocusing on the themes that underlie the preceding analyses.

Narratives of personal experience concomitantly reflect impersonal experiences (Ochs and Capps 2001: 55). When the ǀGui/ǁGana people talk about their personal experiences, they are inevitably involved in generating social meanings. For example, the use of particular grammatical particles, proper nouns, and idiomatic phrases reminds the hearer of relevant background facts. In addition, the expression of these items is not solely revealed by personal cognition, but is inevitably constrained by social roles.

Participants in the interactions construct actions through the use of appropriate semiotic resources within an unfolding temporal horizon (Goodwin 2000: 1492). The remarkable navigation skills of the ǀGui/ǁGana could not be achieved without various semiotic resources, including above-mentioned linguistic items and social roles. In addition, our informants demonstrated good command in using the environment as a resource in their interactions. For example, when G mentioned the route from *Kx'ôẽsakéne* to */Gāma*, he indicated the movement with ostensive pointing toward a referent in the surroundings (excerpt 2). When the speaker held out his hand toward the strings, the gestural shift provided the audience with a visual signal that a change would occur in the frame of the conversation (excerpt 5). This was accomplished even though the use of the external instrument did not indicate or depict any particular referent.

Moreover, their action is contingent upon the sequential organization of the interactions. Even when a single speaker produced a multiunit turn in the storytelling, the recipients signaled attention or interest by saying "*n*:" or "*e:i*," which functioned as continuers and thus enabled the speaker to expand the turn (e.g., excerpt 1, and excerpts 4 and 5: lines 22–38). Therefore, these feats of navigation require an audience that appreciates the personal experiences of the speaker, who communicates through references to their vast folk knowledge. Indeed, the feats of navigation comprise only the tip of the iceberg when it comes to the knowledge that the ǀGui/ǁGana employ in their everyday practices. Note that they have (re)generated the knowledge not by means of a formal education system but through the routines of their life, which include (but are not limited to) relaxed storytelling. In these ways, as we have demonstrated, the folk knowledge necessary for navigation becomes accessible. Furthermore, social reality, which we recognize as an essential aspect of culture, is constructed by routines, in other words, a continuous exertion of actions. In brief, culture is incrementally attained through the accumulation of actions, which is "the interactively organized process of public recognition of meaningful events (Goodwin 2000: 1492)."

It is particularly interesting to recognize "social roles" as a type of semiotic resource, when offering a basis for "adequate representation of other voices across cultural boundaries." Anthropologists are motivated to perceive local people as significant others, while at the same time, local people must deal with the outsider who has just entered their life. A form of asymmetry is inherently built into the participation framework of their interactions.

However, interactions occur not only among the exclusive members of a certain speech community but also between the members and the outsider. It is of note that in the practice of social interactions, interrelated social roles, such as that of researcher–informant, are transformed into (or filtered by) positions that are contingent upon the progress of interactions. Hearer–storyteller and "one who knows–one who does not know" are examples of these positions. Hence, interactions can be seen as the sequence of actions reflecting these contingent positions. This perspective facilitates the analysis of the intersubjective foundation of fieldwork, which has largely been excluded from serious ethnographic texts (Clifford 1986: 109).

From this standpoint, we have analyzed a variety of actions that were executed to accomplish a mutual understanding in the course of interactions. In excerpt 1, for example, A's responses were too ambiguous for O to determine the extent of A's understanding; thus, O reacted to A's responses initially by continuing the story, then by enacting the moving situations, and finally by repeating the concluding phrase. In excerpt 2, G, T, and O provided details of the moving route with each other and the interactants consequently arriving at a mutual understanding. In excerpt 5, A kept giving continuers to K's storytelling. Accordingly, K upgraded the punch line several times and produced turns that involved more than one turn constructional unit, to preclude other participants from taking over the storytelling.

As seen in these examples, various facets of |Gui/‖Gana cultural practices emerged through the execution of actions performed to accomplish mutual understanding. It is noteworthy that in these practices, the researcher was not excluded from the "inside view," but was a participant capable of achieving mutual understanding. In this sense, |Gui/‖Gana cultural practices are not concealed as an ethnic mystique, but are collaboratively constructed among those who are involved with their life.

In the aftermath, when a researcher analyzes the actions, the interactions must be regarded as particular achievements from among many possibilities (Schegloff 1982: 89); the researcher must then examine why a given action was executed at a particular point, in a particular way, and by a particular participant in the course of interactions. The analyses distill the forms of actions and thereby elucidate the events. In essence, our approach does not seek to "fuse objective and subjective practices (Clifford 1986: 109)," but attempts to achieve two interrelated classes of empirical understanding, namely, mutual understanding in the natural course of interactions and theoretical understanding of sequential organization.

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NOTES

1) Because of space constraints, uses of "understanding of places where there are few obstacles" and "conceptualization of sequences of woodland" will be discussed elsewhere.
2) Literature and field data were collected on trips to southern Africa over a total period of two-and-half years. Field research for this paper was carried out mainly in *Kx'ôẽsakéne* from 1999–2001. A population of 1,002 |Gui and ‖Gana lived in *Kx'ôẽsakéne* during the study period (census in April 2000). I took part in activities requiring movement over long distances. I also interviewed people in camp about their navigation practices. I made field notes on the spot and, in addition, activities and conversations were recorded on a video tape recorder equipped with an electret condenser microphone. Parts of the recordings were transcribed with the assistance of the informants, who provided much additional information, particularly with regard to idiomatic phrases and the context of utterances. All communications, including those with the informants, were conducted in |Gui or ‖Gana languages.
3) In the excerpt, free glosses are placed immediately beneath the |Gui / ‖Gana utterances. Utterances are transcribed according to a modified version of the conventions developed by

conversation analysis research (see Sacks *et al.* (1974) for details). Information important for the utterance is indicated in double parentheses: (( )). Equal signs (=) indicate run-on utterances or an utterance that has been interrupted by someone else. Pause length is marked in parentheses, in tenths of a second, e.g., (0.6). Overlap of utterances is marked by square brackets: [ ]. Audible laughter is indicated by the letter "h", where more h's indicate more laughter. Underlining indicates stressed words. Single parentheses indicate that something was said that was unintelligible or unidentified.

4) Gestural information has been omitted from Excerpt 1
5) ǂ*káno* means "straight". The duplication of ǂ*káno* means "go straight" and implies "to find the way"(Sugawara, personal communication).
6) Gestural information is omitted in Excerpt 2
7) ǁ*nhám kâma* means "go that way, over there".
8) The latitude and longitude of places were surveyed by the author with using the GPS camera.
9) For the details of the method of springhare hunting, see Tanaka (1980: 35, 46).
10) The word "*khôe*" (person) was expressed with a suffix "*sa*" that indicates female, single, and accusative. Thus the gender of person was manifested in this phrase.
11) K turned his face up and held out his left hand to take strings.
12) K licked the strings to make them wet.
13) By definition, "ǂ*gǒaʔo* " means "cross-cousin." The word roughly indicates "other group members" here.
14) As shown in this example, the ǀGui/ǁGana often imitate the speech of others in conversation by exaggerating their prosodic features, thereby attracting the attention of the audience (cf. Sugawara 1998: 244–256).

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