Implicature and Presupposition in Navajo

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It is necessary to understand at least a little about pragmatics if one is to study semantics.[*] Pragmatics helps us identify what part of the apparent meaning of an utterance arises from the grammar of a language and distinguish it from inferences that arise as part of a broader intelligence and curiosity that people have about the world along with what are taken to be norms of behavior within a culture. This book is a study of aspects of Navajo grammar. Consequently, we are most interested in seeing how the grammar works, and so we are mainly interested in pragmatics to show what the grammar does not need to do. However, we found ourselves investigating the boundary between semantics and pragmatics far more than we had anticipated, returning repeatedly to issues of conversational implicature and presupposition in our efforts to isolate the meanings of particular words and phrases. Indeed, an understanding of pragmatics at a fairly intricate level was indispensable to the semantic side of our investigation.

Logicians and semanticists are inclined to believe that their principles are universal, and so will find it unsurprising and probably uninteresting that Navajo meanings and inferences are just like those of English speakers. However, court translators and educators who work in the world of contact between the Navajo and English speech communities have been confronted with striking differences between the Navajo and Anglo ways of ordering information. People familiar with this might find it very surprising to learn that there are principles of inference and information presentation that operate identically in both speech communities.

This chapter shows that Gricean implicature arises in Navajo in the same way as it does in English and that presupposition works the same way also. As suggested above, these results will not be striking to linguists. However, since pragmatics is so important in identifying the boundaries of lexical and sentential meaning it is necessary to establish clearly how these pragmatic

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effects operate in Navajo and how they can be identified. To our knowledge, no such study has been undertaken before.

1. Entailments and Implicatures.

Much fruitful work in natural language semantics and its interface with syntax has focussed on predicting the truth conditions for sentences. Work with models allows us to test the truth conditions we predict for sentences. We take it that uttering a declarative sentence expresses a proposition. To help us see which proposition it is for a particular utterance, we try to identify what is entailed by different propositions. Entailment is defined as follows:

> Entailment: For propositions X and Y, X entails Y if and only if in any model in which X is true, Y is also true.

Thus, for example, (1) entails (2), but (2) does not entail (1):

(1) Masdᶜᶜl t'¡¡ si'™™nit'§§' y¶y££'.
  'I ate all the pie.'

(2) Masdᶜᶜl ‑a' y¶y££'.
  'I ate some pie.'[1]

By diligently applying tools like these, substantial progress has been made over the years in identifying peculiarities of meaning for individual words and syntactic constructions in the languages studied in this way.

A challenge for this line of research is that utterances are often taken to mean different things in different contexts. Let us consider an easy example:

(3) Shichid¶ hᵒl≠.
  my-car   exists
  'I have a car.'

In a context in which the speaker is expected to tell whether she is a car owner or not, (3) will be taken to indicate that she is. On the other hand, if another person in the conversation has just said that he needs to get to the store somehow, (3) could be understood as an offer to give him a ride. What sense is the linguist to make of these facts? We surely do not want to say that (3) is ambiguous, assigning *hᵒl≠* an ownership interpretation and an 'I'll take you to the store' interpretation! However, without careful consideration, we might well take (2) to entail that the speaker ate some pie but did not eat the whole pie. For careful work on truth conditional semantics to be carried out, a technique is needed for distinguishing grammatical meaning from meaning in context.

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[1] Example (2) can alternatively be glossed as 'I ate a pie'. (2) clearly does not entail (1) when *masdᶜᶜl ‑a'* is interpreted as 'some pie', but this is not the case for the other interpretation of (2). The ambiguity between the two interpretations of (2) is due to the interaction between *‑a'* and *masdᶜᶜl.*

Implicature and Presupposition

Before H. P. Grice's classic paper "Logic and Conversation" (Grice 1975), philosophers were known to bemoan what appear to be divergences in meaning between the connectives of formal logic and their English counterparts. The apparent meanings of English sentences containing *not, if...then, and, or, all*, and *some* do not always match to the interpretation expected by the two-valued logical connectives $\neg, \rightarrow, \wedge, \vee, \forall$, and $\exists$. Some logicians concluded that natural languages were not logical.

Grice (1975) provides a way of explaining the differences by identifying principles of inference in context. The idea is that the natural language sentences have exactly the interpretations predicted by the logical analysis, but that in context, people will draw additional conclusions that go beyond what the sentences logically entail. The overarching assumption, which Grice called the Cooperative Principle, is that participants in a conversation work together to give each other good clues about what each participant means. The assumption of cooperation makes communication easier by allowing inferences to be drawn by the conversants. Grice identifies four categories of principles that lead to specific inferences. The categories are identified as Quantity, Quality, Relation, and Manner.

The category of Quantity concerns the quantity of information that is contributed by an utterance in a conversation. Grice identified two maxims of Quantity:

> Quantity
> > 1. Make your contribution as informative as is required (for the current purposes of the exchange).
> > 2. Do not make your contribution more informative than is required.

The category of Quality is identified with the supermaxim, "Try to make your contribution one that is true," and the following more specific maxims:

> Quality
> > 1. Do not say what you believe to be false.
> > 2. Do not say that for which you lack adequate evidence.

The category of Relation contains a single maxim:

> Relation
> > Be relevant.

The category of Manner relates to how the propositional content of an utterance is conveyed, rather than to the content itself. "Be perspicuous" is the supermaxim and is associated with the following maxims:

> Manner
> > 1. Avoid obscurity of expression.
> > 2. Avoid ambiguity.
> > 3. Be brief (avoid unnecessary prolixity).
> > 4. Be orderly.

Conversants will generally assume the other conversants are following all these maxims and will draw inferences (conversational implicatures) based on these maxims. This means that speakers do not have to spell everything out: they do not have to use utterances that entail everything they are intended to convey, an effort that would take more time; instead, they use short cuts and rely on the hearer to draw the correct inferences.

We will see below the sorts of inferences that arise by assuming each of the maxims introduced above. First, we must acknowledge, as Grice did, that it is not obligatory for these maxims to be followed. Sometimes a speaker warns the hearers not to draw the customary inference. For example, one might say, "I'm not completely sure about this, but..." thereby serving notice that the quality of information may not be up to the usual standards. Or a speaker might interject "Hey! By the way,...." to introduce a new topic and prevent the hearers from trying to see how what follows is relevant to what came before. Also, it is possible for two of the maxims to conflict with one another. And it is possible for a speaker to deliberately violate a maxim, either intending to mislead the hearer, or intending the hearer to recognize the violation and draw a conclusion from it.

It is generally accepted by linguists that all cultures make use of some form of these maxims (mainly because it is hard to imagine human communication without using them), although we are a long way from verifying this. It seems that at least some version of each must be universal, but certain aspects of the maxims of Manner, as Grice stated them, are likely to be culture specific. First, what counts as being orderly is likely to differ. Second, even within many cultures different circumstances call for differing degrees of perspicuity. A universal form of the supermaxim of Manner might be "Make your contribution in a manner that is appropriate to the circumstances," although this is admittedly vague.

The conversational implicatures that arise from utterances in context are not entailments of the utterances. Rather, they are inferences that arise by assuming that the participants in the conversation are cooperating with each other. As Grice noted, since implicatures are not entailments they can be canceled by the speaker. In other words, a speaker can utter an overt denial of an implicature without being self-contradictory. We can use this characteristic of implicatures as a tool to distinguish the (contextual) effects of pragmatics from the (truth-conditional) meaning that arises from the grammar and the lexicon of the language in question. We illustrate this with the following examples:

(4)   Masdç̓l a-n¶d°° y¶y££'.
        'I ate half the pie.'

(5)   Masdç̓l -a' y¶y££'.
        'I ate some pie.'

We note that, in English, (4) entails (5). To make sure our glosses are correct, we can test to see whether (4) entails (5) in Navajo by conjoining (4) with the contradiction of (5). If the result is self-contradictory, we will verify that (4) entails (5), following the definition of entailment:

(6)   →←   Masdǫǫ́l a̱n̄d°° y¶y££' ¡konidi masdǫǫ́l doo -a' y¶y£™da.
            'I ate half the pie but I didn't eat any pie.'

The sentence above is, in fact, a contradiction, so we find that our glosses capture the correct entailment pattern in Navajo. Below, we find that conjoining (4) and (5) is consistent (not contradictory), although redundant:

(7)   Masdǫǫ́l a̱n̄d°° y¶y££' d°° masdǫǫ́l -a' y¶y££'.
        'I ate half the pie and I ate some pie.'

We noted that in applying this test, we had a tendency to think of the two conjuncts as reporting separate events with one following the other. For the test to work, we had to try to think of the conjuncts as reporting the same event twice. We must also acknowledge that these sentences are not very natural sounding, but for that matter, the English counterparts are not either. Of course, in applying the cancellation test, it is not actually necessary to conjoin the sentences in question; all that is needed is for us to see whether it is possible to construct a model in which both sentences are true. If this is possible, the sentences are not contradictory.

    Since Grice (1975), a large body of work on pragmatics and its interaction with semantics has developed. Our purpose in this chapter is not to survey this literature but to test the techniques of investigation and apply them to Navajo. However, see Horn (1996) for a recent survey of relevant work, and Davis (1991) for a collection of classical literature in pragmatics.

    We will now look at example utterances in Navajo discourse and see how the maxims of conversation explain the inferences that are drawn from them.

    The maxims of Quality pertain to the speaker intending to be truthful, including having adequate evidence that the asserted proposition is true. Quality is such a fundamental assumption that just about any utterance in any conversation can serve as an example of a quality inference. Except under unusual circumstances conversants will assume this maxim is being respected. The effect of this is that, all other things being equal, participants in a conversation will believe what the speaker says. We noticed earlier that a speaker can warn the other conversants that the quality of information is not as high as might be desired. Later, we will see a way to do this in Navajo.

    The maxim of Relation is appealed to in understanding the meaning intended by Speaker B in the following exchange:

(8)   Speaker A: Ei¶sh dinǫ́ at'ᵃ?
                    'Is this man very rich?'
        Speaker B: Mm, bichid¶t'°° ahay°¶.
                    'Well, he has a lot of cars.'

The question posed by Speaker A is not answered directly, but A has little difficulty in drawing the inference B intends. Speaker A has only to figure out how what B said is relevant to the question A posed. The added cultural assumption that most people do not have a lot of cars leads to the inference that B wishes to be understood as answering affirmatively.

Below is another example that reveals the importance of additional assumptions about the environment in identifying how an utterance is relevant:

(9)   Speaker A: D¶sh Ch'¶n¶ªªgºº atiin?
                          'Does this road lead to Chinle?'
       Speaker B: Mm, jº o'oodl¢¢zh.
                          'Well, it's paved.'

Someone who is not familiar with Navajo country may not be able to see how B's answer is relevant, and so will not know how to interpret it. To see that it is relevant, one must know that roads are not paved unless they lead to some place that is relatively big. Thus, B conversationally implicates that the road in question does go to Chinle.

The maxims of Manner deal with how a proposition is expressed rather than with what the proposition actually is. Imagine a situation in which a woman who is not a very skilled weaver has been working on a rug. A second person wants to tell someone else that the woman has been weaving. But rather than simply saying she had been weaving, as in (10a), the speaker says (10b):

(10)   a.Asdz¡¡n at¬'º.
           'The woman is weaving.'

        b.Asdz¡¡n dah hiist¬'≠ y¶znoo¬ha¬
           'The woman is batting away at the rug.'

This utterance flouts the submaxim "Be brief." The speaker seems to intend the hearer to recognize that the maxim is being violated, and she expects the hearer to infer something from this. The hearer is likely to ask himself why the speaker expressed the proposition in the way she did rather in the more obvious, briefer way, and this leads him to take the utterance to mean more than simply what was said. There is more than one possible explanation for the speaker saying it this way. One, of course, is that the speaker wants to convey that the weaver is not very skilled. Another possibility, however, is that the speaker thinks the hearer doesn't know what 'weave' means. Another is that the speaker forgot the word for 'weave'. No doubt there are other possible explanations as well. Grice's account is intentionally vague here since contextual factors and the hearer's cleverness are involved in discerning what the speaker could have intended.

A second example of flouting "Be brief" is shown below:

(11)   Naaltsoos ¶¬'¶n¶b¢¢sh nits¢kees¶n¢ini¬t™$h.
        'The secretary pecked at the computer.'

Finally, we turn to the maxim of Quantity. This maxim is a very powerful and useful assumption in discourse. Recall that it means the hearer will assume that the speaker is providing enough information with each utterance to allow the hearer to draw accurate inferences about the speaker's intended meaning. Consider the following dialogue in a context in which conversants A and B see an acquaintance named John who is with someone A does not know:

(12) Speaker A: H¡¶sh™ J¡an yi¬naa'aash?
                'Who's with John?'
      Speaker B: Bich'ah bik¡¡' "Jenny" n¶.
                'Her hat has "Jenny" written on it.'

A Navajo conversant will draw the same inferences from what B says as an English conversant would from the English counterpart. In the absence of any clues that B is opting out of any of Grice's maxims, A will assume that B is replying in a truthfully and with strong, relevant information. From this, A will conclude that B has no better evidence for the identity of John's companion than the name inscribed on her hat. Of course, this discourse would also be consistent with a context in which B thinks that A should have noticed what was written on the hat. In such a case, B's contribution to the conversation might be sarcastic. In the absence of additional information about B's thoughts, A might not know which way to take B's utterance.

The English gloss for the sentence below is frequently used in introductory courses to illustrate quantity inferences:

(13) Masd¢¢l a¬n¶'d°° y¶y££'.
      'I ate half the pie.'

In many contexts, uttering (13) will strongly suggest the negation of (14):

(14) Masd¢¢l t'¡¡ si'££n¶t'§§' y¶y££'.
      'I ate all the pie.'

The question that arises is whether this strong suggestion is an entailment of (13) or a conversational implicature. It turns out, of course, that any model in which (14) is true, (13) is also true, since one cannot eat a whole pie without eating its halves. This is the case for Navajo as well as English. But since models can be constructed in which both sentences are true, it cannot be the case that (13) entails the negation of (14). Since this is the case, we must appeal to conversational implicature to explain why the negation of (14) is often strongly suggested when (13) is uttered. Here the maxims of Quantity play a crucial role. Given any context in which someone ate the whole pie and in which it is relevant to know just how much pie the person ate, uttering (13) would not be adequately informative. Hence it would be misleading to utter (13).

In our investigation of the indefinite particle -a', which is usually glossed as 'some', we made the conjecture that -a' might mean any non-null proper subset of whatever material is being discussed. That is, we thought it might entail 'some but not all'. However, we found that not only are (14) and (15) consistent as shown in (16), but, in fact (14) entails (15):

(15) Masd¢¢l -a' y¶y££'.
      'I ate some pie.'

(16) Masd¢¢l -a' y¶y££'. Masd¢¢l t'¡¡ si'™™hit'§§' y¶y££'.
      'I ate some pie. I ate all the pie.'

These results reveal that our conjecture is not quite correct. If *-a'* entailed 'not all' then the two sentences in (16) could not be true at the same time, but they can be. We conclude from this that *-a'* means about what *some* means in English: more than 'none' and possibly 'all'. So *-a'* will be most commonly used when a proper subset of the material is affected in the manner described, but it would not be a falsehood if all the material is affected.

Now we need to explain why (15) so strongly suggests that the utterer did not eat all the pie. Here we appeal to a very standard pragmatic explanation. Since (14) entails (15), (14) is stronger and more informative than (15). This means that if (15) is uttered in a context in which the truth of (14) would have been relevant, the maxims of Quantity require an inference that (14) is false. This is because the maxim requires the hearer to assume that the strongest truthful statement that is relevant has been made. Since (14) is stronger than (15) and is relevant, if the speaker utters (15) instead, the speaker must not have evidence to believe that (14) is true.

We have now seen how conversational implicatures are drawn in Navajo discourse based on Grice's maxims. We noted earlier that there are situations in which a speaker needs to be able to warn a hearer not to draw an inference that would customarily be drawn. There are conventional ways of doing this. Imagine a context in which a dining hall manager needs to know exactly how many of a group of boys have eaten lunch already. Imagine further that you know that at least three of the boys ate, but that you do not know exactly how many boys ate. You want to cooperate with the manager. Saying (17) will provide information of good quality, but doing so would be insufficiently informative.

(17)   Ashiik¢ -a' da'¶y££'.
        'Some of the boys ate.'

Saying (17) would result in a quantity implicature that not everyone ate, but you do not want to convey this since you do not know whether it is true. Grice called this kind of case a "clash." The first maxim of Quantity requires one to be sufficiently informative, but this cannot be complied with without violating the second maxim of Quality, which requires one to have adequate evidence for what one says. The question then is, how can you warn the manager not to draw the usual inference? Following (17) with the utterance of the following will do the job:

(18)   D¶kw¶¶   shᵃᵃ   t'¡adoo da'¶y£™   da.
        how-many   probably   not   they-ate   neg
        'Maybe not many ate.'

We close this section with a case in which a pragmatic explanation led us to change our minds about what had been a fairly clear intuition of the interpretation of a sentence. In the end, we concluded that a strong quantity implicature was affecting our intuitions:

(19) a. Dib¢ y¡zh¶ danizhᵒn¶.   'The lambs are beautiful.'
      b. Òa'   daalgai   dᵒᵒ ‑a'   daalzhin.
          some   pl-white   and   some   pl-black.
          'Some are white and some are black.'

The sentence in (b) strongly suggests that the speaker has provided an exhaustive list of the colors of the lambs. One speaker gave the interpretation of this at first as 'Some are white and the rest are black.' Indeed, it seems contradictory to continue the discourse with the following:

(20)   c. Dib¢‑ch¶¶g¶ hᵒl≠.   'There is a brown one.'

However, we would be hard pressed to get the grammar to predict that (19b) should entail that all of them are black or white. We take it that (b) merely implicates that there are no other colors. Furthermore, (b) conversationally implicates this by the maxims of Quantity. Given a context in which it is relevant for the hearer to know all the colors of the sheep, (19b) will be insufficiently informative if a brown lamb happens to be present. This explanation is supported by the fact that the discourse in (19) can be continued with the following sentence:

(21)   c. Dib¢‑ch¶¶g¶ a‑dᵒ hᵒl≠.   'There is also a brown one.'

If (19b) truly entailed that there were no sheep of any color other than black or white, (21) would result in a contradiction, but it does not.

This concludes our investigation of conversational implicature in Navajo discourse. We have seen that these implicatures arise in the same way in Navajo and in English discourse. What is novel about our study is that for the first time Gricean implicature is being used to explain inferences made in Navajo discourse. We conclude that despite profound differences between the Anglo and Navajo cultures, on a deeper level members of the two communities reason about the world in exactly the same way.

2. Presupposition.

Strawson (1950, 1952) argued that a portion of the informational content of an utterance is what we might call "at issue" (a term used by William Ladusaw) and that part of it may be presupposed. Strawson confined his attention to existential presuppositions for definite descriptions, but work by many scholars since has shown the phenomenon to be more general. Consider the contrasting examples below:

(22) a. I still pour chocolate syrup on my pickles.
      b. I pour chocolate syrup on my pickles.

Both sentences entail that the speaker has a habit of pouring chocolate syrup on his or her pickles, but (22a) presents additional information. It is also an admission to having had such a habit in the past. Naively, we might expect that

when a yes-no question is formed, it asks whether the proposition conveyed by the corresponding declarative sentence is true or not. This would seem to mean that a yes-no question amounts to asking this for all the truth conditions of the declarative sentence. Similarly, we might expect that forming the negative counterpart to an affirmative sentence would amount to denying all the truth conditions of the affirmative sentence. However, consider the following contrast:

(23)   a. Do you still pour chocolate syrup on your pickles?
        b. Do you pour chocolate syrup on your pickles?

(23a) and (23b) ask the same question, whether the addressee has the habit at the time of the question. But something else is happening with (a). Someone who asks (a) is very clearly assuming that the addressee at least used to have the habit in the past. Someone who asks (b) does not say anything about having such an assumption (although simply asking the question means that the speaker thinks it is possibly true, but this is an independent effect based, in part, on the maxim of Relation). Providing a negative answer to these two questions has different effects also. In the case of (23a), a simple negative answer indicates that the answerer affirms having poured chocolate syrup on his or her pickles in the past, but denies having the habit at present. Answering 'No' to (23b), however, simply denies having the habit at present and says nothing about whether she or he had the habit in the past. The same effect is seen with negative sentences:

(24)   a. I do not pour chocolate syrup on my pickles any more.
        b. I do not pour chocolate syrup on my pickles.

Utterances of either sentence deny having the habit at present, but (24a) affirms having once had the habit.

In the (23a) and (24a), a part of the informational content was at issue, (or in the foreground, so to speak), and part of it was presupposed, (or covert and in the background). The presupposed information was conveyed even by a question or a negative sentence. The at issue information was denied by the negative sentence and it is what was being asked about in the yes-no question. There are cases where negation does not preserve a presupposition, but the conditions in which it is does be clearly identified (Seuren 1985: 228 ff.).

Like English, Navajo utterances also present foregrounded and backgrounded information with entailments that can be either at issue or presupposed. As is to be expected, definite descriptions presuppose the existence of a referent. And content questions presuppose all the information they express.[2] Thus, the examples below strongly suggest that the addressee has been stealing something:

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[2] This does not preclude us from answering "What did you eat for supper?" with "Nothing. I didn't have supper." If we take the line that the question presupposes that the addressee had supper, we would be committed to the view that the answer contradicts the presupposition. This is not the only possible take on the issue.

(25)   Ha'¡t'¶l¡ ayºo n¶'••h?
        'What is it that you're stealing?'

(26)   Ha'¡t'¶l¡ n¶n¶'••h?
        'What did you steal?'

Also, certain temporal modifiers like *k'ad* (often glossed 'now'), at least when they are focussed in a question, work like *still* in English, causing the accompanying eventuality description to be presupposed. The following presuppose that the addressee has stolen turquoise in the past:

(27)   Da'   t'ahdi¶sh   doot¬'izhii   n¶'••h?
        Question still-focus   turquoise   2-stealing
        'Are you still stealing turquoise?'

(28)   Da'   k'ad¶sh   doot¬'izhii   doo   n¶'••hda?
        Question now-focus   turquoise   neg   2-stealing-neg
        'Are you not now stealing turquoise?'

It may well be that focussing on the time of utterance, as these questions do, leads to an inference that the speaker thinks it is likely the addressee stole turquoise in the past. This inference may have its basis in the maxims of Manner: the addressee would wonder why the speaker chose to include the temporal modifier rather than leaving it out or using an indefinite one as in the following example:

(29)   Da'   h¡d££' da'¶sh   doot¬'izhii   n¶n¶'aa'?
        Question ever-focus   turquoise   2-steal
        'Did you ever steal turquoise?'

This sentence does not carry the presupposition that the addressee has ever stolen turquoise.

As in English, there are certain Navajo verbs with similar meanings that show a contrast with respect to what they presuppose. The verbs in the following sentences are similar to *prevent* and *deprive* in English.

(30)   Mary J¡an ¬≠' yidooyªª ¬g¶ yich'££h naay¡.
        'Mary prevented John from eating fish.'

(31)   Mary J¡an ¬≠' yidooyªª ¬g¶ yᵀᴹh yiz'••d.
        'Mary deprived John of eating fish.'

Both sentences entail that Mary did something to interrupt John's eating fish, something which would have happened under ordinary circumstances. The second example presupposes that John's eating fish would have been a good thing in some way, but the first is neutral in this respect. Both examples differ from their English counterparts in presupposing that John did not eat fish, rather than having this information at issue. This is evident when a question is formed for the above sentences:

(32)   Da' Mary Jįan ⌐≠' yidooyᵃᵃ ⌐◖g¶ yich'££h naayį?
       'Did Mary prevent John from eating fish?'

(33)   Da' Mary Jįan ⌐≠' yidooyᵃᵃ ⌐◖g¶ y™™h yiz'••d?
       'Did Mary deprive John of eating fish?'

Only Mary's preventing the event is at issue. That John doesn't get to eat fish is presupposed.

This brief survey has shown that the truth conditions of Navajo sentences may be presupposed or at issue. We have identified certain lexical items that carry idiosyncratic presuppositions.

3. Conclusion.

This chapter has shown in detail that Grice's maxims serve as the basis for conversational implicatures in Navajo. We have also demonstrated the use of presupposition in Navajo. These findings are significant for three reasons. First, they show support for the universality of the fundamental principles of pragmatics. Second, the techniques applied in this study are powerful tools that can be used in future research on Navajo semantics, allowing greater attention to detail than has been possible in the past. Finally, it has frequently been noted by teachers and lawyers who go back and forth between the Navajo and Anglo cultures that there are profound differences between these cultures in the accepted conventions of human interaction (see, e.g. Field 1998), including the ways in which information is presented in discourse. Our results, however, show that there are even deeper commonalities. Navajos and Anglos use exactly the same reasoning techniques in drawing inferences, and, from what we have seen thus far, the Gricean principles which serve as a basis for these inferences appear to be identical.

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