

Conditionals and the Logic of Desirability: An Interview with Noriko Akatsuka

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PROFILE

Noriko Akatsuka is Professor of Japanese Linguistics and Japanese language in the Department of East Asian Languages and Cultures at the University of California, Los Angeles. After receiving her Ph.D. in linguistics from the University of Illinois at Urbana in 1972, she taught at the Department of Linguistics at the University of Chicago, until she came to UCLA in 1981. At UCLA, Professor Akatsuka has played the primary role in establishing a unique graduate program in Japanese Linguistics using a functional/discourse orientation. She teaches Japanese linguistics and contrastive Japanese/Korean linguistics (with Dr. Sung-Ock Sohn) at the undergraduate and graduate levels, combining the aspects of both language and culture into her discussions and analyses. In addition, she teaches and supervises the elementary Japanese language program, which is the largest such program among the major research universities in the United States.

INTRODUCTION

Over the past 15 years, Professor Noriko Akatsuka has been exploring the connection between the speaker's state of mind (e.g., prior knowledge and attitude) and modality. In particular, she has focused on conditionals using data from several languages, primarily Japanese, Korean, and English. When asked, "Why conditionals?," Professor Akatsuka explains that, unlike researchers in the fields of philosophy and formal linguistics, her goal has been to employ the conditional construction as a tool to investigate other, more profound questions concerning the relationship between language and the human mind.

Mayes: I understand that you've been working on conditionals for over 15 years. Could you discuss how you became interested in this topic and why it's important for linguistics.

Akatsuka: Yes. At the abstract level I could say I chose conditionals because I was interested in the following four questions:

1. What is linguistic pragmatics?
2. Is semantics independent of pragmatics?
3. Do human languages have the same sort of formal system as artificial languages?
4. Why and how is language a reflection of the human mind?

Though conditionals themselves are extremely fascinating, I chose to study them not for their own sake, but instead as a tool to be used in the investigation of these issues.

On a more personal level, in about 1974 or 1975, when I was starting out as an Assistant Professor at the Department of Linguistics at the University of Chicago, I sat in on a course in mathematical linguistics. At that time, many linguists were using symbolic logic to formally represent linguistic semantics—I mean "formally" in the sense of clearly and concisely. By sitting in on that class, I learned that the analysis of conditionals was traditionally regarded as the territory of mathematical logicians and philosophers rather than linguists. That amazed me. I also learned that many brilliant people had been trying to come up with some analysis of the logical meaning of conditionals for a long time, and yet there is still very little agreement about the semantics of conditionals.

I started to think that in Japanese, two- and three- year olds can understand conditional forms such as *sawaccha dame* 'don't touch it,' literally, 'if you touch it, it's not good.' Japanese children understand these types of utterances right away, so how could conditionals be so complicated? Then I realized that maybe the first premise of the philosophers is wrong—the premise that people try to represent the meaning of natural language conditionals using mathematical logic. In the domain of mathematics, there is no 'speaker,' no 'listener,' and no evolution of time. The notion of true and false in mathematical logic does not need the existence of people. If $2 + 2$ is 4, $2 + 2$ will always equal 4 even after every human being disappears from earth. It's an impersonal, eternal truth. I began to think that maybe conditionals belong to an entirely different domain—the domain where what counts is the speaker, the listener, and the progression of time.

Mayes: *I see.*

Akatsuka: Of course, initially this was only my gut feeling and for a long, long time I didn't really know how to go about substantiating those feelings. I also realized that the examples in logic textbooks are all in English, and that I should look at my own language. For example, in modern Japanese, the antecedent clause in *konya shujin ga kaette kitara tazunemashoo* 'If/When my husband comes back tonight, I'll ask him' can express either 'if' or 'when.' And in order

to understand whether the meaning is a conditional or a temporal one, you have to consider what the speaker is thinking about with respect to her husband coming home, that is, whether it involves a certainty or an uncertainty. If it's just a regular business day, he would be expected to come back at the end of the day. But if he's out of town on business and the wife does not know whether he's coming tonight or tomorrow, the reading would be 'if.'

Mayes: *You're saying that philosophers and logicians never took context into account.*

Akatsuka: Yes, it basically comes down to that. In addition, the reason why conditionals were considered to be within the territory of philosophers and logicians is that since the ancient Greeks, the inquiry into 'truth' and how to find 'truth' through correct logical reasoning and correct argumentation had been a primary issue in Western academia. This focus on correct inference based on truth value was the reason why conditionals enjoyed such a prestigious position in philosophical inquiry.

Mayes: *So, since the philosophers focused more on truth value, each conditional utterance had to have a truth value as well.*

Akatsuka: Their main interest was to examine how similar 'if p , then q ' of natural language was to the mathematical conditional, ' $p \supset q$,' or how and where it differed. The crucial notions here are True (T) and False (F), and the evaluation of (T) or (F) in the 'if p , then q ' structure. So, for example, look at the following classical truth table. If the value of both p and q are (T), then the evaluation of the whole proposition is also (T) as you can see in the first line. Likewise if the value of both p and q are (F), the evaluation of the whole proposition is (T) as you see in the last line:

Table 1: CLASSICAL TRUTH TABLE

p	q	$p \supset q$
True	True	True
True	False	False
False	True	True
False	False	True

This is one of the puzzles I faced at the very early stages of my work on conditionals in the late '70s and early '80s.¹ The puzzle involves a contrast of two conditionals. One example was a situation of a mother who was crying at her only daughter's funeral, saying: 'If only I hadn't given her the car keys, this accident wouldn't have happened.' According to the truth table analysis, 'if I

hadn't given her the car keys' is F(false), since she *did* give her the keys, and 'this accident wouldn't have happened' is also F(false), since it actually did happen; thus the whole utterance is analyzed as T(true). This corresponds to the fourth line of the classical truth table (i.e., $F \ F = T$). Now compare this sentence with the following conditional: "If you are a policeman, I'm the Queen of China." What the speaker is saying is that you are clearly *not* a policeman. The truth value of the first clause is F, and of course I'm not the Queen of China, so that's F, but with the value of both p and q being F, the value of the whole proposition is T (i.e., $F \ F = T$).

So now compare the first conditional with this one. Both are $F \ F = T$, but the first one really expresses the speaker's deep sorrow and regret, while the second one shows the speaker's cynical attitude towards the previous speaker and implies, "I don't believe you. That's nonsense." The mental state of the speaker is totally different. What does the logical analysis of $F \ F = T$ express about the semantic analysis of these two conditionals? It doesn't say anything about the semantics in that sense. Also, the truth-value approach cannot tell us anything about why the first conditional can start a conversation, but the second one cannot. The "if" clause of the second type of conditional is always a repetition of what the previous speaker has just asserted. It cannot originate in the speaker's own mind.

Mayes: Are you saying that if you only focus on truth value then you miss this huge difference between these two types of sentences?

Akatsuka: Yes. You can see that what is not accounted for is why the speaker has chosen to use this conditional sentence showing her deep sorrow in the first instance and in the second one, the speaker chose to use this conditional statement to indicate her cynical attitude with respect to the absurdity of the situation. The formula $F \ F = T$ doesn't say anything at all about these differences. This is what made me really decide to choose conditionals as my focus of study.

Mayes: So your perspective is that rather than just this truth value of the proposition, there is more meaning conveyed in the speaker's attitude.

*Akatsuka: Yes, that's right. As I said earlier my study of conditionals has continued for the past 15 years, and I can divide this time into two, with the first half being an inquiry into epistemic modality and the second half, deontic modality, all in relation to conditionality. In epistemic modality, the best example would be perhaps my 1985 paper entitled, "Conditionals and the epistemic scale." There, the question which fascinated me is how language differentiates knowledge in the sense of internalized knowledge on the one hand, and information on the other. I was particularly fascinated by the fact that *surprise*, that is, the speaker's attitude towards newly learned information (i.e., "I*

didn't know that until now!") is often expressed by exactly the same grammatical form which normally expresses the speaker's doubt or uncertain attitude. This is especially clear in *nara* conditionals in Japanese and in the evidential system in Turkish. Also in every language that I know of there seems to be a strong resemblance between question and exclamation forms. If you compare the two utterances "Is she beautiful?" and "(Boy!) Is she beautiful!" you'll see that *surprise* expresses the speaker's strong endorsement of the truth of his message rather than uncertainty, and you might wonder why questions and exclamations can be expressed by nearly identical grammatical forms

Mayes: *If we subscribe to a static, truth-value oriented approach to semantics, it will be impossible to answer this question on a principled basis.*

Akatsuka: That's right. I began this particular paper with a quotation from Benveniste's (1971, p. 223) famous article, "Subjectivity in Language," which says "If LANGUAGE is, as they say, the instrument of communication, to what does it owe this property?" In my mind, my paper was a silent dedication to Benveniste. If you were to ask me to choose one linguist who inspired me the most and who continues to do so, the answer would definitely be Benveniste. I first read his book, *Problems in General Linguistics* (1971) around the same time I got seriously interested in conditionals. I was quite moved when he questioned the fact that people have equated language to a 'communicative tool,' and then asked the question that if it's simply a 'tool' how do we explain where all of these properties come from? If it's a tool or an instrument, you could throw it away and replace it with a new one. But in the case of language, there is no way to separate it from human beings. In Benveniste's words, "Language is in the nature of man, and he did not fabricate it" (pp. 223-224). He also said that the real nature of language only shows up in discourse—"Many notions in linguistics, perhaps even in psychology, will appear in a different light if one reestablishes them within the framework of discourse" (p. 230). Most importantly, he characterized the speaker as being the "subject" of consciousness. Reading this was really so good for me because just the definition—his way of looking at language and the speaker—made me really understand how modern Japanese conditionals work, for example. You have to look into the consciousness of the speaker to see whether the utterance is a conditional or a temporal. You have to know whether the speaker considers the issue at hand as being within the realm of certainty or uncertainty at the very moment of utterance.

Mayes: *That's really true.*

Akatsuka: There's another point I'd like to make along these lines. The notion of True and False is just one aspect of semantics. Granted, human beings are thinking and reasoning entities, but linguistic researchers must not forget that

we are also feeling entities. When you look at it this way, I think it becomes clear that in the case of the first sentence (the mother's sorrow), in order to understand the semantics of that conditional sentence, you really need to look at the notions of DESIRABLE / UNDESIRABLE instead of TRUE / FALSE. So, "if I hadn't given her the car keys" is not a matter of true vs. false, but rather giving her the car keys is either a 'desirable' action or an 'undesirable' action. *Giving* her the car keys turned out to be a clearly undesirable thing; the desirable situation would have been *not giving* them to her.

Mayes: Is this where deontic modality comes in? And rather than truth value, in your work would you say that we should look at conditionals in terms of DESIRABLE and UNDESIRABLE?

Akatsuka: Yes, that's right. Let's look at my desirability table and compare it with the truth table.

Table 2: Akatsuka Desirability Table vs. Classical Truth Table

DESIRABILITY TABLE (Akatsuka)			TRUTH TABLE (classical logic)		
p	q	if p then q	p	q	$p \supset q$
Desirable	Desirable	Desirable	True	True	True
_____	_____	_____	True	False	False
_____	_____	_____	False	True	True
Undesirable	Undesirable	Undesirable	False	False	True

You see, this desirability table is quite simple and it is a reflection of my belief that the natural logic working in our everyday reasoning is extremely simple. In many uses of conditionals, the logic is actually "Desirable leads to Desirable" and "Undesirable leads to Undesirable." The first type of conditional expresses the speaker's attitude, "THAT'S DESIRABLE, SO I WANT IT TO HAPPEN." Conversely, "undesirable leads to undesirable" conditionals express the speaker's attitude "THAT'S UNDESIRABLE, SO I DON'T WANT IT TO HAPPEN."

I first arrived at the desirability table hypothesis using made-up examples such as "if you eat my cookies, I'll whip you." For most of us who don't want to be whipped, a natural interpretation of this statement would be a threat, or it could be a genuine promise if the speaker knows that the listener enjoys being whipped. I have been testing my desirability hypothesis using spontaneous discourse data and a quantification method since the early '90s. The most dramatic findings from my recent joint research with Pat Clancy, of UCSB, and Susan Strauss, of UCLA, involve the types of conditionals used by parents to their children.² In this study we wanted to look at how Japanese, Korean, and

American parents use conditionals when talking to very young children and to analyze what kinds of conditionals they use. In other words, we asked ourselves questions like: what kind of input using conditionals are Japanese, Korean, and American children of one-, two-, and three- years of age exposed to? And could it really be the case that the conditional sentences children are hearing relate to issues of true vs. false, or is it more an issue of DESIRABLE (i.e., desirable-leads-to-desirable) or UNDESIRABLE (i.e., undesirable-leads-to-undesirable)? The data for our study consisted of a total of 84 hours of conversational discourse in Japanese, Korean, and American English, and for this particular paper, we analyzed only the speech of the adults. Since the children were very young (i.e., less than three years old) these conversations were particularly rich in deontic modality, including many speech acts such as permission, commands, and prohibitions.

It turned out that the two most common types of conditionals were what we called "predictive conditionals" and "future temporal conditionals" in all three languages, and we were amazed by the striking contrast between the speakers' attitudes expressed by these two types of conditionals. For all three languages, the majority of "predictive conditionals" were warnings or threats involving an undesirable antecedent leading to an undesirable consequent. One example from the mother's speech in the English data went something like this: "I'll give the baby to Donna if you're not nice." In this situation, the American child had dropped her doll on the floor. The mother then threatened to give the doll away if the child wasn't nice to it. As you can see, this is undesirable in both cases. The mother is unhappy about the child's 'not being nice,' which is undesirable to the mother, and giving the doll away to someone else is an undesirable situation to the child—so, undesirable leads to undesirable. One of the Japanese examples involved the child serving tea to guests and the mother says: *Yosomi siteruto koboshichau yo* 'If you are looking away, it'll spill.' Here again, 'If you are looking away' UNDESIRABLE-leads-to-UNDESIRABLE, 'it will spill.' We called these predictive conditionals since they involve some causally contingent relationship between the two states of affairs (i.e., the antecedent and consequent clauses). The mechanism seems very natural: Parents want to bring their children up in a safe environment and they also want to educate them to behave well. UNDESIRABLE-leads-to-UNDESIRABLE shows the parents' attitude toward the avoidance of bad things. I'm certain that the following conditional statement or some variation of it can be heard in many American homes with small children: "If you touch it, you'll get burnt," and the very same logic applies.

Mayes: *So it's highly motivated in this context.*

Akatsuka: Yes, that's right. Recall that we discovered the most striking attitudinal contrast between what we called the "predictive" type of conditionals that we just discussed and the "future temporal" conditionals. Future temporals are defined as involving a temporal rather than a causal contingency between a

future antecedent and its consequent. We discovered that the majority of the future temporal conditionals in the three languages are promises, plans, and teaching, and these types of conditionals overwhelmingly reflect the logic of DESIRABLE-leads-to-DESIRABLE. For example, in the Japanese data, the Japanese child's older sister is at kindergarten and his mother says, *Yotchan mo oniichan ni nareba iku no ne* 'When you grow up, Yotchan, you will go [to kindergarten] too.' We also have a nice parallel example from the Korean data in which the Korean child expresses her desire to speak English. Here, the child's mother replies, *Khu-myen call halswuisse* 'When you grow up, you'll be able to speak well.' We all remember what an exciting thing it was to think about growing up when we were little.

In both Japanese and Korean, there is no morphological distinction between predictives and future temporals, although English differentiates the two with "if" and "when." In our data, then, future temporal conditionals present the future as something to look forward to. The logic of DESIRABLE-leads-to-DESIRABLE in future temporals directly reflects the parents' attitude—they are raising their children with a lot of love and hope and expectations for a happy future.

Don't you think that what we have discovered is not just limited to speakers of Japanese, Korean, and English and that there must be some universal elements as well? It is so natural to assume that under normal circumstances we human beings bring up our children with hope, and we expect them to grow up in safe and happy environments as good members of our society. This must mean that by the time they turn three, children of basically any society and language background will learn the logic of desirability, that is, DESIRABLE-leads-to-DESIRABLE and UNDESIRABLE-leads-to-UNDESIRABLE.

Mayes: *So you do think this is universal?*

Akatsuka: Yes. And to analyze the conditionals used by parents in terms of desirability really is cross-linguistic evidence in support of the idea that in order to understand the semantics of conditionals, you have to look into this desirability stance of the speaker and should not just consider the notions of true and false.

Mayes: *In your recent work, you've been examining the diachronic development of the Japanese conditional -tewa. What can you say about the value of adding this kind of diachronic analysis to any type of linguistic analysis?*

Akatsuka: This most recent study of *-tewa* really is so fascinating to me because when I started to look at the Japanese *-tewa* conditional, I didn't expect to go back to 11th century data, namely, the *Tale of Genji*. The most exciting thing is that this study provides a dynamic piece of evidence to support my desirability hypothesis and at the same time it highlights the relevance of the

current theory of language change, such as Traugott's (1989) subjectification hypothesis, in understanding the synchronic phenomenon. Incidentally, this study started out as a by-product of my joint course with Sung-Ock Sohn, here at UCLA, "A Contrastive Study of Japanese and Korean" in 1993. Sung-Ock and I wanted to compare and contrast Japanese *-tewa* and Korean *-taka* conditionals, both of which are unique in that they are only used to express the speaker's prediction, UNDESIRABLE-leads-to-UNDESIRABLE, and the whole thing expresses the speaker's attitude, I DON'T WANT IT TO HAPPEN. Both *-tewa* and *-taka* conditionals are typically used to convey the speaker's warnings or prohibitions. So, the Japanese example, *Sonna kurai tokoro de hon o yon-dewa, me o waruku shimasu yo* 'If you read in such a dark place, you will ruin your eyes' will communicate the message, "don't read in such a dark place." To the best of my knowledge, we are the first to discuss the theoretical implication of the existence and development of such a conditional in literature. We named these structures negative conditionals because they only express the negative evaluative attitude of the speaker. It was clear to us from the very beginning that Japanese and Korean developed their respective negative conditionals quite independently from each other. At first I didn't know how to analyze the negative conditionality of *-tewa* and began to wonder where the meaning of UNDESIRABLE comes from. The form itself is the gerundive *-te* form plus the topic marker *wa*, and some people would even argue that *-tewa* is not a conditional marker. Then I thought that perhaps if I were to look at the historical development of this *-tewa* form, it might shed some light as to why this marker only expresses a negative attitude.

And then, I was incredibly lucky. I found an article written about 14 years ago as a Master's essay by Madoka Takamura, a Japanese graduate student of classical Japanese literature, which appeared in a very obscure journal in Japan. This article discussed the use of the *-te* conditional in the *Tale of Genji*. During the time of *Genji*, there was a regular conditional structure, the *-ba* conditional. However, instead of using the *-ba* conditional, Lady Murasaki (the author of the *Tale of Genji*) used the *-te* conditional for several special types of cases. Takamura realized that whenever the *-te* conditional was used, somehow the speaker was in a very sad mental state. Without Takamura's Master's essay, I really couldn't have done this analysis. But at the same time, there is a current hypothesis about language change, especially Elizabeth Traugott's (1989) subjectification hypothesis, which proposes that meanings start from an objective, propositional statement and then take on a textual cohesive function, like the word "while" in English. "While" started out as a noun meaning 'period' or 'duration,' as in "a short while." Then, the next stage, where the textual cohesive function is developed would be exemplified by "While Charles was sleeping I studied," in which "while" becomes like a conjunction, conjoining two states of affairs. The third meaning would be something like "While you have many good points, I still can't agree with you." It is this newest development of "while," indicating the speaker's stance right now in the

discourse site, that Traugott characterizes as subjectification. The nominal meaning of 'period' or 'in a short while' has nothing to do with the speaker's personal stance. The meaning of 'while' changed from a noun to a cohesion marker, and finally shifted its relevance to the discourse site—right here, and expresses the subjective—the speaker's stance, what Traugott calls subjectification.

The *-tewa* or *-te* conditional could be looked at within this subjectification hypothesis from the point of view that *-te wa* (*te* + *Ha*) carries the negative or undesirable evaluation. Very simply stated, *-te* developed from the continuous form or the *renyookei* of the perfective auxiliary verb, *tsu*. It became the *-te* form like the current *-te* form in the fifth or sixth century, functioning to connect two states of affairs. At that time, there was no negative meaning associated with it; it was used in many ways just like the current functions of *-te* indicating cause, sequence, or simultaneity: *o me ni kakarete ureshii desu* 'I'm glad to meet you,' which is causal, or *uchi ni haitte, kutsu o nugimashita* 'When I entered the house, I took off my shoes,' which is sequential. All these meanings were already being carried by *-te* in the sixth or seventh centuries, but in the 11th century, we can see that in the cases where it was used to refer to future time, it is only used in a negative sense; the speaker doesn't want something to happen. So for example from the *Genji* data, a dying woman looking at her motherless grandchild weeps, knowing that she may die today or tomorrow, and says "What's going to happen after I die?" Other examples went something like this: "If I die at any moment, what kind of destitution awaits her?" And, in another scene, people are discussing the potential consequences of a beautiful girl who had a horrible suitor, someone like a *yakuza* (Japanese gang) member. These people, fearful of denying the girl to the suitor because of the severity of the reaction utter something like: "If we say no to that person, what kind of retaliation will he take upon us?" This *-te* conditional is used in these types of situations. And so my claim is that the *-tewa* conditional comes from this *-te* form.

What I'd like to say is that not only is this analysis of the *-tewa* conditional a clear example of Traugott's subjectification hypothesis, but also it supports my claim that this has developed into only this specific use as a conditional expressing something which is undesirable—conditionals are important devices for showing the speaker's stance. And notice that this negative conditional is very much like the "predictive" conditional we found in the adult speech to children in Japanese, Korean, and English. It's really very similar. The speaker does not want this horrible thing to happen. It becomes all the more clear that if you just stick to True and False, those fascinating facts about language and people will never come to our attention.

Mayes: *Good evidence for what you're saying also can be seen in all those lexicalized constructions that occur now, like -tewa (cha) ikemasen 'don't do it,' for warnings and prohibitions.*

Akatsuka: Yes. Yes. Great. Great. That's something that I wanted to say also. This is really like the last stage in the grammaticization process, corresponding to the example I mentioned earlier, "While you have many good points, I still can't agree with you." At first sight, *-tewa* doesn't look like a conditional marker but it actually was and still is a conditional marker in Modern Japanese.

Mayes: *So -tewa is a classic example of grammaticization all the way through.*

Akatsuka: Yes, and specifically, it is a grammaticization of the speaker's particular attitude, UNDESIRABLE. I'm very happy about this research because thanks to this idea, I started to read the *Tale of Genji*. The *Tale of Genji* is the classic of classics in Japanese literature, and yet for a long time for me it was just a story of the prince's love history. But recently it has become something amazingly new. It's really psychological, and what is fascinating is that when you look at the *-te* conditional in the *Tale of Genji*, there is not a single example of a *-te* conditional used in an interactive way, as in the speech acts of warning and prohibition like 'If you read in such a dark place you'll ruin your eyes,' which actually typifies the usage of *-tewa* conditionals in Modern Japanese. In the *Tale of Genji*, *-te* conditionals were typically used in mental speech, predominantly when women were weeping internally or lamenting something. It was not at all discourse-interactive.

So I have learned that this dichotomy of diachrony and synchrony is really an artifact. In order to understand certain linguistic forms and think about why they work in one particular way and not in other ways, often you have to investigate the past history and see how that form came about.

Mayes: *For so long we had that dichotomy between synchrony and diachrony, but nowadays, well, slowly but surely, more and more researchers are taking into account historical issues, at least where they can. Maybe they can't always do the entire analysis themselves, but at least looking at some of the historical backgrounds will certainly shed a lot of light on the current usages. I think that grammaticization is a way of explaining how the two things fit together.*

Akatsuka: Yes, that's right. Especially in the case of polysemy; it's really fascinating that Traugott's theory is based on her observations on the history of English, because here we have a parallel situation in Japanese. In order to really understand *-tewa*, we need Traugott's dynamic theory of language change, namely, her "subjectification" hypothesis. Language is really dynamic.

Mayes: *I think that's the thing that comes through too. If you look at language from a diachronic point of view then you can't help but see it as dynamic.*

Akatsuka: Yes, it is. It is really fascinating.

CONCLUSION

In the past, linguists have tended to view language as an autonomous object to be studied and analyzed quite apart from the human beings who use it. The traditional analysis of conditionals as containing propositions that carry static truth values regardless of context is merely one example.

In the late '70s and early '80s with the advent of discourse analysis and functional approaches to linguistics, we have begun to take a more holistic and integrated view of language, attempting to explain it as a reflection of interactive and cognitive aspects of the human mind. Professor Akatsuka's work on conditionals is just one example of how far this approach can take us. She has shown that conditionals do not convey static, objective generalizations about the world; rather, they express the speaker's dynamic, subjective evaluation of what s/he knows about the world and how s/he feels about it, given the situation and context at the time of speaking.

In addition to research like Professor Akatsuka's that takes into account both the speaker and the context, recent developments in linguistics such as theories of grammaticization and language change promise to add even more evidence in support of a theory that views language as dynamic. In the future, we may expect to see an increasing number of analyses of diachronic and crosslinguistic discourse data (e.g., Akatsuka & Sohn, 1994; Akatsuka, forthcoming) which will ultimately provide a comprehensive theory of language as it reflects the human mind.

NOTES

- ¹ See Akatsuka (1983).
- ² See Clancy, Akatsuka, and Strauss (forthcoming).

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