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Japanese Ni*: A Cognitive Analysis of a Lexically Complex Particle*

by

Kaori Kabata 

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled *Japanese* Ni*: A Cognitive Analysis of a Lexically Complex Particle* submitted by Kaori Kabata in partial fulfillment of the requirements for the degree of Doctor of Philosophy in psycholinguistics.

Dr. Sally Rice

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Dr. Pamela Asquith

Dr. Kaoru Horie
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In memory of my father

Japanese Ni*: A Cognitive Analysis of a Lexically Complex Particle*

Kaori Kabata

ABSTRACT

This dissertation addresses issues in lexical categorization. The main research question is how the meanings of a complex lexical item can best be represented. More specifically, I ask how many meanings are to be postulated, and whether and how these different meanings are related to each other. The focus of the study is on the Japanese particle, *ni*, whose senses are wide-ranging and span many different grammatical categories. Traditional models of lexical meaning or linguistic categorization simply cannot handle such diversity of behavior within a single lexical category in any coherent way. This study comprises a unified and empirically grounded analysis of *ni*'s diverse behavior.

Based on a detailed semantic analysis of an extensive array of synchronic data, I propose a network model for the semantic structure of *ni*, taking into account the highly polysemous nature of *ni*. By polysemous, I mean that one linguistic form is associated with multiple meanings. In fact, *ni* seems to be highly heterosemous (i.e., one form is associated with multiple meanings *and* grammatical functions) as a lexical item. The proposed domain-based model accommodates the diverse senses of *ni* by integrating them in terms of image schemas and metaphorical extensions. I argue that although *ni* exhibits extensive semantic diversity in its equally extensive syntactic distribution, such variation is far from random or idiosyncratic. Even seemingly contradictory senses exhibit some similarities when examined closely.

The model is then subjected to assessment and evaluation by various empirical and experimental data. Data from a grammaticalization study of *ni* and similar particles in typologically diverse languages indicate how the semantic distribution that *ni* exhibits

synchronically may be associated with the grammaticalization pathways that it has undergone through its semantic development. Data from a text count study, a child acquisition study, and a series of off-line psycholinguistic experiments, also support the main characteristics of the proposed model. It is claimed that a network model for this lexeme can best handle its complex syntactic behavior and semantic functions, although the specific configuration of any representational model is very much task- and context-dependent.

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LIST OF ABBREVIATIONS

ABL	ablative
ACC	accusative
ADD	additive
ADR	addressee
ADV	adverbial form
AGT-EXP	agent in a passive sentence
ALL	allative
AND	andative
ANIM	animate
ANT	anterior
ASP	aspect
ATTR	attributive form
AUX	auxiliary
CAUS-EXP	experiential causee
CAUS	causative
CL	classifier
COM	commitative
CONC	concessive
CONCL	conclusive form
COND	conditional form
CONJ	conjunctive
COORD	coordinative
COP	copula
DAT	dative
DET	determinator
DIR	directional
EMPH	emphatic
ERG	ergative
EXC	exclamative
EXP	experiencer
FIN	final particle
FUT	future
GEN	genitive
GOAL	goal
HON	honorific
IMP	imperative
IMPRV	imperfect
INAM	inanimate
INST	instrumental
INTERJ	interjectional particle
LOC	locative
MAN	manner
NEG	negative

NML	nominalizer
NOM	nominative
OPT	optative
PARTV	partitive
PASS	passive
PAST	past tense
PERF	perfective
PL	plural
POS.PURP	positive purpose
PRAG	pragmatic marker
PROG	progressive
PRTCL	particle
PUR	purpose
Q	interrogative
QT	quotative
REAS	reason
REC	recipient
REFL	reflective
REL	relative clause marker
RES	resultative
SEQ	sequential
SG	singular
SRC	source
SUB	subjunctive
TAG	tag question
TEMP	temporal locative
TNS	tense
TOP	topicalizer
VN	verbal noun

CHAPTER ONE
INTRODUCTION

1.1 Overview

What does a word mean? By asking a question like this we are really asking something far more complicated: How are words related to their meaning(s)? How are meanings related to concepts in speakers' minds? How do speakers use words which seem to have many meanings or no meaning at all? This set of questions has been addressed by philosophers and lexicographers for centuries and cognitive psychologists and linguists for decades. These are questions for which there are still no answers so we do not know whether asking them takes us any closer to discovering the true nature of word meaning. And yet we ask anyway: What does a word mean? The answer that is probably closest to the truth is, *it depends*. It depends on the type of word (or morpheme) examined, on the purpose to which the meaning of the word (or morpheme) is put, and whether one is examining the word (or morpheme) in context or isolation.

Let us first consider the meaning of so-called *lexical* morphemes. Some words have unique, usually concrete referents, such as *Canada, Japan,* or *Elvis Presley*. Such words are considered **monosemous.** However, the majority of words have meanings that are harder to define. Some words have very general and vague meanings (for example, the meaning of *have* in sentences like *I have only 10 dollars on me, I have a scar in my forehead, I have a meeting to attend,* and *I have had the measles*. Some others, on the other hand, may exhibit abstract meanings, such as *knowledge, the,* and *of*. There are also many idiomatic expressions in which the individual words do not really make individual semantic contributions (for example, what is the meaning of *bucket* in the expression *kick the bucket*?).

Moreover, many words exhibit more than one meaning. One classic example is *plant*, which can mean either 'a botanical entity' or 'a factory.' The sentence *The plant was destroyed yesterday* taken out of context is lexically ambiguous because the word *plant* can be interpreted as meaning either of the two senses. In this example, the two meanings of *plant* are considered to be unrelated, a case of **homonymy**. There are also cases of **polysemy**, in which a word has multiple meanings which are seemingly related to each other. The meanings of *ring* in *a bathtub ring* or *a boxing ring* or even *a drug-trafficking*

ring are all apparently related to the meaning of *ring* as 'a circular piece of jewelry,' even though none of these usages involve a round figure. There are also cases in which a word has multiple syntactic functions or senses, a case of **heterosemy**. For example, the word *face* in *His face is familiar to me* acts as a noun while in *These windows face the parking lot* it acts as a verb. And yet, the two meanings do not seem unrelated to each other.

Grammatical morphemes, which have been traditionally treated as empty semantically, are especially prone to exhibiting non-isomorphism in the form-meaning relationship. One-form-to-many-meanings or many-forms-to-one-meaning relations are the norm in language, and even a *many forms-to-many meanings* relation is often observed. Let us consider the English suffix for marking AGENTIVITY, *-er*. In words like *driver*, *housekeeper*, and *murderer*, the suffix clearly conveys the meaning of 'the doer of the action invoked by the verb stem.' However, AGENTIVITY may also be marked by a small set of allomorphemes: *-or* in words like *actor* or *editor* and *-ar* in *liar* or *beggar*. Moreover, the suffix *-er* may mark something other than AGENTIVITY (e.g., INSTRUMENTALITY as in *planter* 'a container used for planting,' or ATTRIBUTION as in *foreigner* 'a person belonging to a foreign country').

Such non-isomorphism has caused untold problems for lexical categorization studies. What would the semantic structure be for the morpheme *-er*, for example? Would there be a single, core meaning (a monosemy approach), or would there be more than one? If so, would the multiple meanings be interrelated (a polysemy approach), or would they be considered separate morphemes (a homonymy approach)? If they are related, then *how* are they related to each other? When does a loose relationship between meanings come to be regarded as relatedness or unrelatedness?

Generative linguists have traditionally treated *grammatical* morphemes differently from *lexical* morphemes by assuming that the former lack semantic substance and therefore contribute little to the overall meaning of a clause. This is a somewhat ironic position since formal approaches assume that sentential meaning can be derived compositionally, i.e., by summing over the meanings of the parts of a sentence. Nevertheless, there have been very few, if any, formal syntactic or semantic analyses which investigated what and how grammatical morphemes may in fact contribute to sentential meaning. In fact, while many studies have proposed formal semantic analyses of sentential meaning, they have had little to say about the semantic role that grammatical morphemes play (cf. Chierchia & McConnell-Ginet 1990).

Cognitive linguistics (henceforth CL) breaks from this traditional view which maintains a distinction between lexical and grammatical meaning and assumes that all morphemes, grammatical or lexical, are potentially meaningful (e.g., Langacker 1991a/b; Taylor 1995). A sharp dichotomy between lexical and grammatical morphemes is rejected. Instead, the difference between them is claimed to be one of degree. Even within the lexical morpheme class, concreteness of meaning varies considerably. For example, the meaning of the word *kick* is more concrete than that of *think*, which is more concrete than the meaning of *thing*. Grammatical morphemes, such as *-ing*, *-er*, or *of*, do not necessarily have less semantic content, nor are they more abstract than lexical words, such as *entity*, *exist*, *proximity*, as Langacker argues (1987:18-9). On the contrary, most, if not all, grammatical morphemes are meaningful, and are as elaborate or complex semantically as many lexical morphemes, if not more so.

The Japanese particle, *ni*, which is an extremely frequent item in the language, represents one such lexically complex grammatical morpheme. It supports an extensive array of usages or senses, and marks a wide range of semantic and syntactic roles within the clause. Consider the sentences in (1) [I leave the morpheme *ni* unglossed for now]:

(1) a. *Heya* ***ni*** *piano* *ga* *aru.*
room piano NOM exist
'There is a piano *in* the room.'

b. *Taroo* *wa* *Masako* ***ni*** *hana* *o* *okut-ta.*
Taro TOP Masako flowers ACC send-PAST
'Taro sent flowers *to* Masako.'

c. *Masako* *wa* *Taroo* ***ni*** *hana* *o* *morat-ta.*
Masako TOP Taro flowers ACC receive-PAST
'Masako received flowers *from* Taro.'

d. *Taroo* ***ni*** *furansugo* *ga* *wakaru.*
Taro French NOM understand
'Taro understands French.'

e. *Taroo* *wa* *hahaoya* ***ni*** *shika-rare-ta.*
Taro TOP mother scold-PASS-PAST
'Taro was scolded *by* his mother.'

f. *Taroo* *to* *Masako* *wa* *shokuji* ***ni*** *dekake-ta.*
Taro COM Masako TOP dinner go out-PAST
'Taro and Masako went out *for* dinner.'

g. *Boku* *ga* *chuukokushi-ta* *no* ***ni*** *Masako* *wa* *deteit-ta.*
1sg NOM advise-PAST NML Masako TOP leave-PAST
'*Although* I advised (against it), Masako left.'

(1) represents a small set of usage contents involving *ni*. This diversity is partially illustrated in the English translations; each occurrence of *ni* above gets a different interpretation. *Ni* in (1a) serves as a simple locative marker, which can be translated as *in* in English. It also marks the recipient of a transfer event and is translated by the English preposition *to*, as shown in (1b); but in (1c), it is translated by *from* and marks the source of a transfer, which seems to be in conflict with the recipient sense in (1b). In (1d), on the other hand, *ni* marks the sentential subject. Moreover, *ni* marks the passive agent in (1e) and is translated as *by*, and it marks a purpose in (1f) and is translated as *for*. *Ni* is used as a concessive subordinator in (1g), something like the English *although*. The syntactic functions (or grammatical relations) indicated by *ni* also vary across these sentences. *Ni* marks an adjunct of a locative phrase in (1a), the indirect object in (1b), an oblique object in (1c), the subject in (1d), the passive agent in (1e), and another more abstract oblique object in (1f). Finally, in (1g) *ni* shows up as a subordinatingconjunction.

No previous analysis of *ni* has provided a satisfactory or comprehensive account of the diverse nature of *ni*'s meanings and its syntactic functions. Studies which have addressed its semantic behavior have simply itemized its separate senses (e.g., Matsumura 1971). Some scholars have attempted to account for the possible relations between particular senses of *ni* (e.g., Ikegami 1986), but none have actually covered its full range of usages. Similarly, previous syntactic analyses of *ni* which assumed a uniform semantic meaning across the board have failed to provide an adequate description of its distribution or the semantic contribution it makes to the clause (e.g., Kuno 1993). On the other hand, studies which have proposed the existence of multiple *ni* morphemes are also unsatisfactory, because such homonymous accounts do not allow for inter-relatedness among some senses of *ni* which are clearly related historically and which speakers regard as similar (e.g., Sadakane & Koizumi 1995). A particle like *ni*, because of its lexicosyntactic diversity, clearly poses a descriptive challenge. But since it does, it is a perfect morpheme to study for the purpose of better understanding the nature of word meaning, or more generally, the nature of linguistic categorization. *Ni*'s senses are wide-ranging, from a fairly concrete locative marker to a dative case marker to a concessive subordinate marker. Some senses even appear incompatible to each other at first glance. Traditional feature-based models of lexical meaning or linguistic categorization simply cannot handle such diversity of behavior within a single lexical category and, as of yet, a unified and empirically grounded analysis of *ni*'s diverse behavior has not been achieved.

In this dissertation, I present an analysis of the semantic structure of the Japanese particle *ni*. By *particle*, I mean the word class which subsumes both what have traditionally been called non-inflecting *postpositions* and *case markers*. I argue that *ni* is a highly polysemous (one form associated with multiple meanings), or rather, a highly heterosemous (one form associated with multiple meanings *and* functions) lexical category, to borrow Lichtenberk's (1991a) terminology. I demonstrate that although *ni* exhibits extensive semantic diversity in its equally extensive syntactic distribution, such variety is far from random or idiosyncratic. On the contrary, the multiple senses of *ni* are directly or indirectly related to each other through various well-ordered, historically documented, and typologically common semantic extensions affecting particles of this type.

By analyzing the lexical complexity of *ni*, however, my ultimate goal in this dissertation is to achieve a better understanding of the human conceptual system. In CL, the general approach I take in this study, linguistic forms are assumed to reflect a speaker's conceptualization of the world. Thus, Langacker (1991b:2) notes:

> *Meaning is equated with conceptualization. Linguistic semantics must therefore attempt the structural analyses and explicit description of abstract entities like thought and concepts...Because conceptualization resides in cognitive processing, our ultimate objective must be to characterize the types of cognitive events whose occurrence constitutes a given mental experience. The remoteness of this goal is not a valid argument for denying the conceptual basis of meaning.*

Therefore, by studying *ni*'s semantic structure, what I am actually interested in is not only the identification of the most cognitively salient senses of *ni* for actual speakers, but also how one ascertains which usages should be meaningfully associated with distinct senses and which should not.

Like English prepositions, Japanese particles are considered to be one of the most difficult classes of lexical items for learners to acquire . I believe that some of the difficulties are attributable, at least partially, to the assumption held by traditional linguists and pedagogists that the particles are essentially meaningless. Under such an assumption, the distribution of a word like *ni* appears to be anything but systematic. On the contrary, as I will demonstrate in the following chapters, particles are quite meaningful and some of them, including *ni*, seem to suffer from an overabundance of meaning! In this study, I undertake a comprehensive examination of *ni*'s assorted usage types and aim at providing a systematic explanation of the semantic relations among them. An analysis of this type should stand on its own as a detailed case study into the nature of lexical categorization as

well as a tool for helping learners better understand one part of the particle system in Japanese.

The organization of this dissertation is as follows. The remainder of this chapter presents an overview of categorization models put forward by psychologists and linguists and the relevance of these models for the present analysis of a complex lexical item. In Section 1.3, I present some of the assumptions about linguistic categorization made by cognitive linguistics, the general theoretical approach I take in this study of *ni*. Certain methodological issues concerning the present analysis will be also discussed.

In Chapter 2, I briefly explain the particle system in Japanese. The functions of particles in both canonical and non-canonical clause structures are compared and explained. I then describe the major usage or sense types associated with *ni* and discuss problems that this diversity poses for previous analyses of Japanese particles.

Chapter 3 provides a detailed examination of all of *ni*'s synchronic usages. I first discuss two important notions which serve as the conceptual underpinnings for my analysis: (i) Anderson's (1971) localist notion of spatial priority and metaphorical extension across semantic domains and (ii) Langacker's (1991a/b) Action Chain model by which certain archetypal semantic roles (like AGENT, PATIENT, and EXPERIENCER) can be understood. I then present my analysis of *ni* by associating the various senses to their use in a particular semantic domain. I demonstrate that similarities between the different senses of *ni* across semantic domains can be accounted for by metaphorical extensions as well as by an application of localist domain shifting and the Action Chain model. This chapter concludes with a provisional network model which I hope provides a better representation of the lexicogrammatical structure of *ni* than has hitherto been achieved.

The model proposed in Chapter 3 is subjected to empirical verification in Chapters 4 and 5. In Chapter 4, I compare the synchronic behavior of *ni* with data from several grammaticalization studies on similar items in various languages. The chains of semantic and functional extension posited for *ni* in Chapter 3 also seem to characterize the historical development (from their original lexical sources to their eventual grammatical applications) of like particles (i.e., ALLATIVE and DATIVE markers) cross-linguistically. In Chapter 5, I present the results of three separate studies: (i) the distributional frequency of distinct senses of *ni* based on text analysis; (ii) the case study of a Japanese child's acquisition of *ni*; and (iii) a set of psycholinguistic experiments involving judgments of semantic similarity. There is general discussion about conclusions we can draw from this research in Chapter 6.

1.2 Assumptions about Categorization in Psychology and Linguistics

This section provides an overview of the main approaches to categorization in the psychological and linguistic literature. Although assumptions about categorization are tacit in most of the previous treatments of *ni*, these assumptions nevertheless have a significant bearing on the nature and descriptive extent of the proposed models. The classical view of categorization is discussed first, followed by three different versions of prototype approaches.

1.2.1 The Classical View

The classical view of categorization, which dates from the time of Aristotle, maintains that conceptual categories are discrete and have definite boundaries. In addition, every entity satisfying the criteria for class membership within a category has the same status as all the other members. This view has been at the heart of *feature theory*, which developed mainly within the framework of generative linguistics (cf. Katz & Fodor 1963/64; Katz & Postal 1964; and, more recently, Bierwisch & Schreuder 1992).

Feature theory asserts that the meaning of a lexical item is definable in terms of bundles of semantic components (i.e., features). According to this view, categories are definable by a set of membership criteria, or defining attributes, which are both necessary and sufficient. For example, the meaning of *bachelor* in the sense 'man who has never married' can be represented in terms of the four features [HUMAN], [MALE], [ADULT], and [NEVER MARRIED] (Katz & Postal 1964:13). In their view, the features [HUMAN], [MALE], and [ADULT] are *semantic markers*, which are different from *distinguishers*, such as the feature [NEVER MARRIED]. The difference between the two types features, according to Katz and Fodor, coincides with "the distinction between that part of the meaning of a lexical item which is systematic for the language and that part of the meaning of the item which is not" (1963/1964:498).

Equipped with these two types of features, Katz and Fodor claimed that one is able to "exhibit the semantic structure *in* a dictionary entry and the semantic relations *between* dictionaries entries" (*ibid.*). For example, in the semantic structure of *bachelor* illustrated in Figure 1, the four different meanings of *bachelor* given in (a) are characterized and distinguished from all other senses based on the differential classifications of the features themselves.

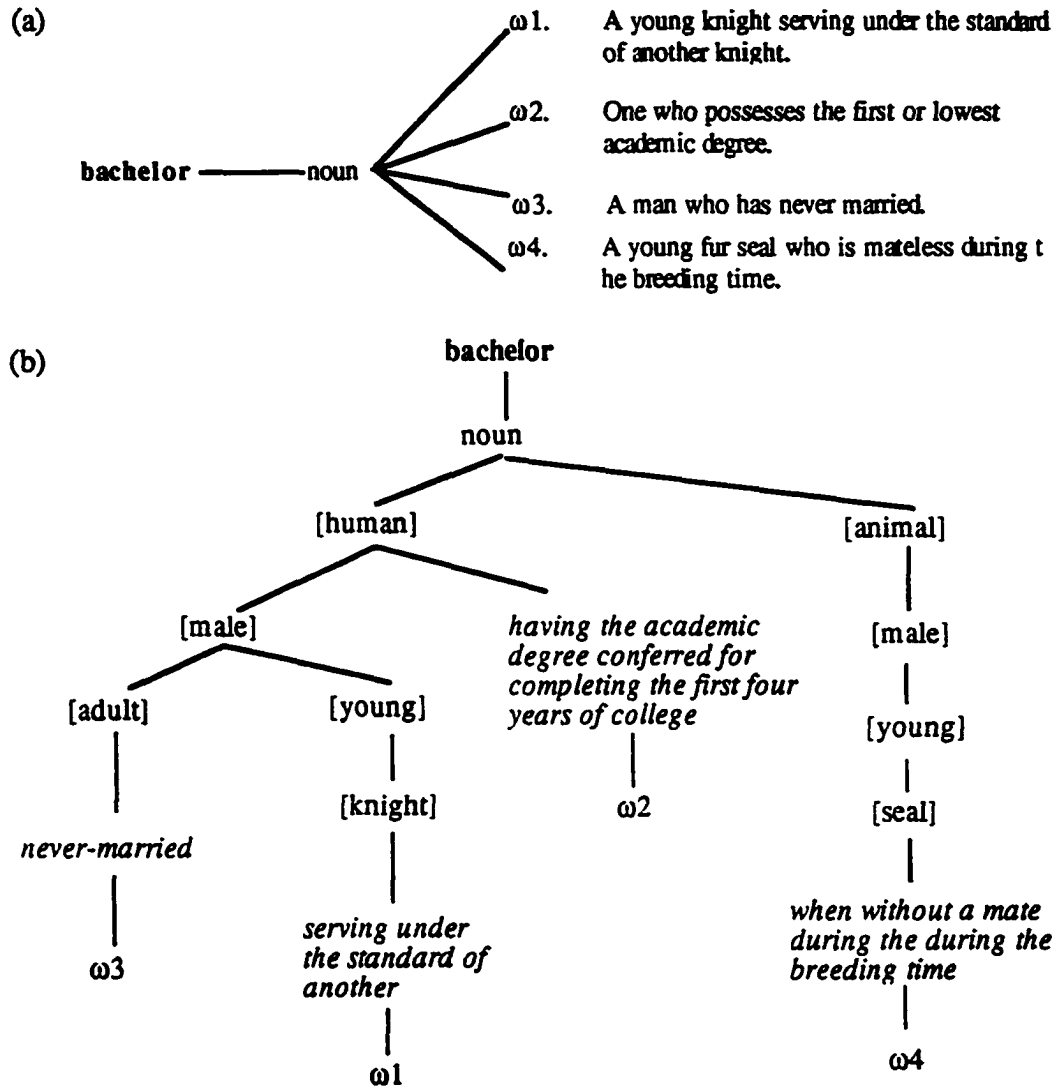


Figure 1. The Feature-Based Semantic Structure Proposed for *Bachelor* by Katz & Postal (1964:14)

Katz and Fodor claimed that semantic markers can further explain many semantic properties and relationships between words. Synonymous words, such as *settee* and *sofa*, are treated as sharing identical semantic markers, whereas so-called antonymous words, such as *bachelor* and *spinster*, *man* and *woman*, and *aunt* and *uncle*, are treated as sharing all but one semantic markers ([MALE] vs. [FEMALE] in these examples).

However, human categorization seems to be much more complex than what can be handled by the classical model. It is often impossible to come up with features which can define *all* the instances of natural categories, such as cultural, biological, or linguistic ones. There seem to be no necessary and sufficient conditions for BIRD, for instance, or DOG.

The feature [ADAPTED FOR FLIGHT] is a semantic trait of BIRD, but it is not criterial, and the same is true of the feature [POSSESSES FOUR LEGS] for DOG (Cruse 1986:18).

Miller and Johnson-Laird (1976) demonstrated that the classical view fails to account for how people actually label objects. Based on assumptions of the classical view, the meaning of the concept TABLE might be defined in terms of four components such as [THING], [CONNECTED AND RIGID], [FLAT AND HORIZONTAL TOP], and [VERTICAL LEGS]. However, the labeling process (or 'labeling routines' as Miller and Johnson-Laird call them) is not so simple and straightforward. For instance, a variety of unusual objects could pass as instances of the category TABLE according to a classical definition. There are also objects that fall so close to a category boundary that either of two labels (e.g., *table* or *bench*) could apply. Moreover, the classical view fails to assign any weight to the features so as to reflect their relative importance. In assigning a label *table* to an object, the four features given above may not be equally essential or applicable. Finally, feature-based categorization does not account for the fact that people are able to recognize tables on end or upside down, or other situations in which the applicability of a given feature is called into question. Thus, Miller and Johnson-Laird argued:

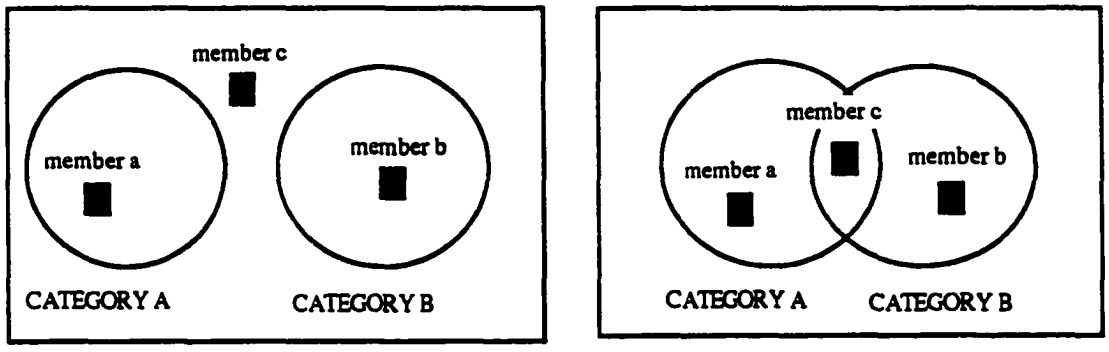
> *[A] psychological hypothesis about the concept someone has of a given word must include much information that is not essential for the perceptual recognition of instances labeled by that word. Labeling routines must be included in many concepts, but they cannot be the whole of any linguistically encoded concept* (1976:268).

A fundamental problem with the classical approach lies in its view of reason as disembodied symbol-manipulation, often associated with the MIND-AS-COMPUTER metaphor, as discussed by Lakoff (1987:xii). The classical view holds that categories exist in the world independent of people and are defined *logically* on the basis of objective characteristics of their members. This view does not account for how *human* cognition works and how categorization may depend on human perception and/or imagination. As Lakoff argued, human categorization "is essentially a matter of both human experience and imagination—of perception, motor activity, and culture, on the one hand, and of metaphor, metonymy, and mental imagery on the other" (*ibid.*:8).

1.2.2 *Prototype Theory*

The assumptions held by the classical view of categorization have been challenged and rejected by Eleanor Rosch (1973, 1975a/b, 1978), who proposed and applied the notion of *prototype* to categorization. According to the classical view, there are only two degrees of

membership, i.e., an item is either a member or a non-member of a category. In contrast, prototype theory asserts that category membership is a matter of gradience. Entities are not assigned membership by a set of necessary and sufficient conditions, as maintained by the classical view. Instead, they are judged by virtue of their similarity to a prototype. The closer an entity is to the prototype in some sort of conceptual space, the more central its status is within the category (Taylor 1995:60). Furthermore, according to prototype theory, category boundaries are not clear-cut, but rather, they are fuzzy. That is, the boundaries are not well-defined, and an entity can be in two categories at the same time. In short, there may be conceptual and membership overlap between two categories. The two Venn diagrams in Figure 2 crudely illustrate this most basic of opposing assumptions held by the classical and prototype views:



(a) The classical view (b) The prototype view

Figure 2. Two Views of Category Membership

According to the classical view, illustrated in Figure 2(a), no two categories overlap, and membership is an all-or-nothing matter. That is, an entity either belongs to Category A or Category B, or else it belongs to neither. The prototype view in Figure 2(b), on the other hand, allows for category overlap and, therefore, an entity may belong to more than one category at the same time (as is the case for member c).

In an experiment on color categories, Rosch (1973) demonstrated the effect that the salience of focal color areas has in the learning of color categories. Monolinguals of Dani, a language which has only two basic color terms, *mili* 'dark-cool' and *mola* 'light-warm,' were taught nonce color names for a set of eight color categories in which focal colors (presumed to represent natural prototypes) were either considered central or peripheral, or internominal colors were considered central. It was hypothesized that focal colors themselves and sets in which focal colors are central would be learned faster than nonfocal colors or unnaturally structured sets. The results indicated that the names for a set in which

focal colors were central were learned with significantly fewer errors. It was also found that focal colors were learned more easily than nonfocal ones even when the focal colors were considered peripheral members of color categories. Similar results were obtained from a form-learning experiment. Rosch concluded that the domains of color and form are structured into nonarbitrary, semantic categories which develop around perceptually salient *natural prototypes*.

This conclusion was later confirmed in additional studies, the results of which indicated that a similar "prototype effect" can be found for many other natural categories, like LINE and NUMBERS (Rosch 1975a) as well as categories of physical objects like FURNITURE, FRUIT and VEHICLE (Rosch 1975b). These findings, Rosch argued, indicate a general inadequacy of the classical approach. She stated that human categorization "should not be considered the arbitrary product of historical accident or of whimsy but rather the result of psychological principles of categorization" (1978:27).

According to Rosch (1978), categories in the perceived world can be defined in terms of two dimensions, a vertical dimension (e.g., *collie, dog, mammal*, and *animal*) and a horizontal dimension (e.g., *dog, cat, car, bus*, and *chair*). The vertical dimension of categories is organized in terms of three levels within a hierarchy: the superordinate, basic, and subordinate levels. Moreover, not all of the possible levels of categorizations are equally relevant or useful. Rather, the most important level of categorization will be the most inclusive level. This will be the level at which the category can mirror the structure of attributes perceived in the world (e.g., compare *dog* with *mammal* or *poodle*). For the horizontal dimension, on the other hand, most, if not all, categories do not have clear-cut boundaries, but are defined in terms of prototypes and prototypical instances. These are members which manifest the most representative attributes also manifested by the majority of the members inside the category, and few or none of the attributes manifested by members outside the category.

Prototypicality, the privileged status attributed to certain members of a category, manifests itself in quite robust ways, affecting "virtually all of the major dependent variables used as measures in psychological research" (Rosch 1978:38-39). For instance, in a category membership judgment task, the response time was much shorter for the items that had been rated more prototypical. It was also found that degree of prototypicality enhances the priming effect. Prototypicality is also reflected in the frequency of item output. In an experiment where subjects were asked to list instances of superordinate semantic categories, the most prototypical items were the first and most frequently

produced items. Moreover, evidence has been obtained that young children acquire good or prototypical examples of categories before poor or peripheral examples.

The prototype phenomenon has also been investigated vis-à-vis the lexical semantics of words referring to less concrete things. Coleman and Kay (1981) demonstrated in an experimental study that the concept LIE manifests prototype effects and whether or not an utterance is judged to be a lie is a matter of degree. According to them, while the prototypical LIE is characterized by three elements, (a) its actual falsehood, (b) its believed falsehood and (c) the speaker's intention to deceive, these three elements are not necessary and sufficient conditions. Instead, utterances which have all three of these elements would be considered full-fledged lies, while utterances which lack one or more characteristics might still be classed as lies, but less clearly so. For example, social expressions, such as *What a lovely party!*, uttered to the hostess by someone who was actually quite bored, may be considered to be partial lies, since one salient element, namely (a) actual falsehood, may be absent. There are also utterances which are literally true but irrelevant (e.g., A: *Where are you going*? B: *We're out of paprika* (uttered whenB is actually going out to buy a Christmas present for A). These utterances may be considered to be lies by some people, since they meet the element (c) (*ibid.*:29).

In order to evaluate the hypothesis that the meaning of the concept LIE or the lexical item *lie* is based on attributes [the elements (a)-(c) given above] displaying prototype effects, Coleman and Kay constructed a questionnaire containing eight stories, each of which had a different configuration, i.e., presence or absence of the three elements. A seven-point scale was used to measure subjects' ratings of the extent to which the utterance in each story was judged as a lie. The results indicated that stories containing more of the hypothesized prototype elements received higher LIE scores. Moreover, it was also shown that there was a uniform order of importance among the attributes: The element (b) (believed falsity) was the most important aspect of a prototypical LIE, followed by (c) (intention to deceive). Element (a) (actual falsity) was the least important. Coleman and Kay concluded that the meanings of many words (the word *lie*, in particular) are not describable in terms of "a list of necessary and sufficient conditions that a thing or event must satisfy to count as a member of the category denoted by the word, but rather [in terms of] a psychological object or process which we have called a PROTOTYPE" (1981:43) [brackets mine].

Lakoff (1987) claimed that the word *mother* also exhibits a wide range of meanings and can refer not only to 'a woman who has given birth to a child' but also to 'a stepmother,' 'an adoptive mother,' 'a foster mother,' 'a biological mother,' 'a donor

mother,' and so on. He argued that no definition can cover its full range of application. "*Mother*," he asserted, "is a concept that is based on a complex model in which a number of individual cognitive models combine, forming a cluster model" (1987:74). Moreover, according to Lakoff, the linguistic evidence indicates that there is more than one criterion for *real* motherhood, and yet, the very idea that there is such a thing as a *real mother* seems to require a choice among models. Thus, Lakoff argued:

> *The concept* mother *is not clearly defined, once and for all, in terms of common necessary and sufficient conditions. There need be no necessary and sufficient conditions for motherhood shared by normal biological mothers, donor mothers (who donate an egg), surrogate mothers (who bear the child, but may not have donated the egg), adoptive mothers, unwed mothers who give their children up for adoption, and stepmothers. They are all mothers by virtue of their relation to the ideal case, where the models converge. That ideal case is one of the many kinds of cases that give rise to prototype effects* (1987:76).

More recently, Taylor (1995) demonstrated that the notion of prototype concerns not only conceptual or lexical categories, but also functional or analytical categories as well. For example, we could distinguish whole words in English, morphologically and semantically independent items such as *elephant, tree, jump,* or *sequence*, from parts of words such as highly schematic and dependent grammatical affixes like the third-person singular marker *-s* or the participial-forming *-ing*. Conversely, we could treat both bound and unbound lexical items as members of the same category, i.e., MORPHEME, and state that it is populated with items displaying graded category membership. Either way, we would have to acknowledge that while there are pronounced differences between whole words and affixes or among the various members of the category, MORPHEME, the differences are not clear-cut. The article *the*, for instance, exhibits characteristics of both categories. Though it can bear stress and is fairly unselective with regard to adjacent elements, it cannot stand alone in an utterance nor can it be moved independently. The word vs. affix distinction becomes complicated by the existence of clitics which, like English *the*, are border-line cases.

Taylor also argued that the semantics of syntactic constructions, as well, can be characterized by the prototype concept. For example, the relations between the 'possessor' and the 'possessed' in a possessive genitive construction vary extensively and, yet, are characterizable in terms of prototypicality. Expressions like *John's car* and *the dog's bone* are considered to be prototypical cases because the possessor exerts exclusive rights over the possessed. The relation illustrated in *the secretary's typewriter* diverges from prototypical possession with respect to the fact that the secretary has only limited rights

over the typewriter. Less prototypical relations are expressions like *the company's director* and *the country's economic crisis*, where the relation is true only from the vantage point of the particular institution. Genitive constructions can be used with deverbal nouns which are understood as abstract entities located by the possessor NP, in expressions such as *the train's arrival, the prisoner's escape, Poland's invasion*, etc.

However, the exact definition of prototype or prototypicality is not without problem (cf. Geeraerts 1989; Wierzbicka 1990; Lakoff 1987; Vandeloise 1990). Geeraerts argued that 'prototypicality' is itself a prototype notion. According to him, there are four sets of attributes that are frequently mentioned as properties of prototypicality (1990:582-3):

(i) Prototypical categories are not definable by means of a single set of criterial attributes;
(ii) they exhibit a set of clustered and overlapping senses;
(iii) the members exhibit degrees of representativity; and
(iv) category boundaries are fuzzy.

Geeraerts claimed that there is not a single set of attributes that is common to the four different types of lexical concepts he examined, namely, *bird, red, odd number*, and *vers*, a Dutch adjective corresponding roughly with English *fresh*. For example, the concept BIRD meets the criteria in (i)-(iii), but not (iv) since membership in the category BIRD is fairly discrete. The concept RED exhibits a fuzzy boundary—thus (iv) is satisfied—but otherwise can be defined analytically (for example, as 'having a color that is more like that of blood than like that of an unclouded sky, that of grass, that of the sun, that of...etc.). Table 1 is a summary of the prototypicality values of these four concepts:

Table 1. *The Prototypicality of* PROTOTYPICALITY (Geeraerts 1989:600)

	Bird	*Vers*	*Red*	*Odd number*
(i) Analytic polysemy	+	−	−	−
(ii) Clustering of overlapping senses	+	+	−	−
(iii) Degrees of representativity	+	+	+	+
(iv) Fuzzy boundaries	−	+	+	−

Geeraerts argued that the concept of prototype itself exhibits a family-resemblance structure based on partial similarities. Some concepts are more typically prototypical than others. Of the four concepts above *bird* and *vers* 'fresh' are considered more prototypical

than *red* or *odd number* in that the former meet more criteria than the latter The category *fruit* would make a good candidate for prototypical prototypicality, in the sense that it seems to combine all the four characteristics given above (1989:599-600).

Wierzbicka also discussed limitations and misapplications of the concept of 'prototype.' She argued that while the notion is certainly a useful one in defining concepts of natural kinds (e.g., color) or cultural kinds (e.g., emotions) in natural language, in too many cases it has been treated as an excuse for intellectual laziness and sloppiness (which she referred to as a 'prototypes save' attitude—they save their promoters from undertaking a fine-grained semantic analysis necessary for a real description of some phenomenon). She stated, "[c]oncepts encoded in natural language are, in a sense, vague, but this does not mean that their semantic description should be vague, too. The challenge consists in portraying the vagueness inherent in natural language with precision" (1989:365).

Many of the problems associated with the 'prototype' concept may have resulted from misinterpretations of its applicability, as discussed by Lakoff (1987) and Vandeloise (1990). According to the *effect=representation* interpretation, "categories are represented in the mind in terms of prototypes, and degrees of category membership for other entities are determined by their degree of similarity to the prototype" (Vandeloise 1990:403). "The *effect=structure* interpretation, on the other hand, states that 'goodness of ratings is a direct reflection of degree of category membership'"(*ibid.*). However, prototype effects are not the direct reflection of the structures of the model, but are the surface result of the nature of cognitive models, as argued by Lakoff, who stated:

> *It is important to bear in mind that prototype effects are superficial. They may result from many factors. In the case of a graded category like* tall men, *which is fuzzy and does not have rigid boundaries, prototype effects may result from degree of category membership, while in the case of* bird, *which does have rigid boundaries, the prototype effects must result from some other aspect of internal category structure* (1987:45) [italics his].

In short, prototype effects can constrain but do not specify any particular model of processes or representation.

The problems associated with the *effect=representation* or *effect=structure* interpretations, however, seem to underlie studies of cognitive models in general. As I will discuss in Section 1.2.4, there is often confusion between the cognitive models developed for processing (i.e., effect) and those developed for representation among researchers interested in network models. Before I discuss these models, however, let me review a

couple of models of categorization developed in the field of cognitive psychology and computing science.

1.2.3 Exemplar Models

Exemplar models, as proposed by Nosofsky (1986, 1988), hold that classification decisions are based on the similarity of stimuli to stored *exemplars*. Thus, exemplar-based approaches to categorization deny that a single representational device (i.e., a prototype) serves as the central concept for the whole category. Instead, every token ever encountered of some category is stored for later comparison or categorization purposes.

In a study of identification-categorization relationships, Nosofsky (1986) hypothesized that subjects would distribute attention among some component dimensions so as to optimize performance in a given categorization paradigm. The stimuli were 16 examples of semicircles that varied in size (four sizes that are .478, .500, .522 and .544 cm in radius) and angle of orientation of a radial line drawn from the center of the semicircle to the rim (four levels that are 50°, 53°, 56°, and 59°). Figure 3 illustrates some of the examples of his stimuli:

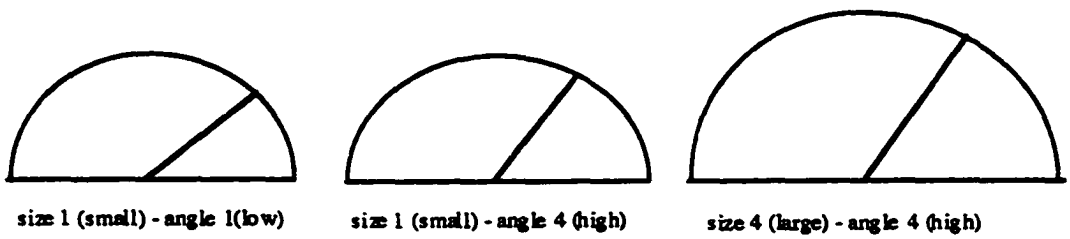


Figure 3. Some Examples of Nosofsky's (1986) Categorization Stimuli

Nosofsky's experiment consisted of two sessions: the identification session and several categorization sessions. In the first session, the subjects' task was to identify the value of the dimension(s)—both size and angle, only the angle, or only the size—of the stimulus as presented on the screen. In the following sessions, the subjects were asked to categorize the stimuli into one of two categories, Category 1 or Category 2, where the category structures differed in four conditions. For example, in the 'dimensional' categorization, small stimuli were assigned to Category 1 and large stimuli to Category 2, while in the 'criss-cross' categorization, small stimuli with low angles and large stimuli with high angles were assigned to Category 1 and large stimuli with low angles and small stimuli with high angles to Category 2, and so on. The results indicated that the identification-categorization relationships are best accounted for by assuming that subjects attended

selectively to relevant stimulus dimensions, supporting the hypothesis that memory for actual tokens rather than for generalized characteristics of some best exemplar (i.e., a prototype) accounted for decisions about category membership. Nosofsky concluded that "[perceived] similarity [or distance] is not an invariant relation [as the prototype theory asserts,] but a context-dependent one" (1986:53) [brackets mine]. Nosofsky further explained that, "[i]n any given choice context subjects will distribute attention among the psychological dimensions that compose the stimuli so as to optimize performance and...this leads to systematic changes in similarity relations" (1986:56).

The main difference between exemplar and prototype models lies in the fact that in the latter, it is assumed that the classification of a probe is based on its similarity to the central tendency of the category (i.e., prototype), while in the former, classification is based on the summed similarity of a probe to *all* stored items, where the summed similarity gives a measure of overall familiarity. However, Nosofsky argued that the summed-similarity exemplar model is not simply a disguised prototype model (1988:707). He demonstrated that data from a recognition test indicated that people had higher recognition confidence for high-frequency exemplars than for the non-presented prototype. If subjects had stored only a prototype, recognition should have been highest for the prototype, rather than for the non-prototype high-frequency exemplar. He concluded that computing the summed similarity of a probe to individual exemplars (according to the exemplar model) can lead to different predictions of classification and recognition than computing the similarity between a probe and the prototype.

Recent studies on conceptual structure, however, have argued that similarity alone is not adequate for explaining categorization (e.g., Medin 1989; Hirsh-Pasek et al. 1993). Medin stated that "in a number of contexts, categorization may be more like *problem-solving* than attribute matching. Inferences and causal attributions may drive the categorization process" (1989:1474) and that "[S]imilarity may be a byproduct of 'conceptual coherence' rather than a cause" (*ibid.*). His claim is based on the notion that real world knowledge is used to reason about or explain properties, not simply to match them. That is, the organization of concepts is *knowledge-based* and is driven by theories or mental models about the world.

The knowledge-based approach to categorization maintains that "classification is not simply based on a direct matching of properties of the concept with those in the example, but rather, it requires that the example have the right explanatory relationship to the theory organizing the concept" (*ibid.*). Medin conducted a study in order to examine the effect that types of knowledge structures have on rule induction. Two sets of children's drawings

were presented to subjects as stimulus materials and their task was to come up with a rule that could be used to correctly classify both the drawings and new examples that might be presented later. Some subjects were told that one set was done by farm children and the other by city children, while some others were told that one set was drawn by 'emotionally disturbed' children and the other by 'mentally healthy' children, etc. The results suggested that the rules that people gave had properties at two or three different levels of abstractness. Medin explained, "multiple levels [of description] arise when people try to find a link between abstract explanatory principles or ideas and specific details of drawings" (1989:1478) [brackets mine].

As Medin mentioned in the conclusion from his study, supporting the idea of knowledge-based categorization does not mean that the notion of similarity must be discarded. Rather, classification in terms of perceptual similarity should be reconciled with the deeper substance of knowledge-rich, theory-based categorization (*ibid.*:1479). Though most of the empirical data come from psychological studies based on perception tests, these models suggest that there might be significant implications for models about the mental representation of lexical items.

1.2.4 Network Models in Cognitive Linguistics

Network models incorporate aspects of prototype theory and have been a central part of CL analyses for the past ten years. Central to studies on network models has been the assumption that linguistic expressions (be they single lexical items or complex syntactic constructions) are routinely polysemous (e.g., Langacker 1991a/b; Goldberg 1995; Taylor 1995). **Polysemy** has traditionally meant that a word is associated with multiple related meanings. It is distinguished from **monosemy**, the case where a word has a single (often abstract) meaning, and **homonymy**, the case where unrelated meanings attach to the same phonological form.

In a network model, categories are assumed to be organized with respect to a prototype. The members, represented as *nodes* in the network, are connected directly or indirectly to the prototype through links brought about by processes of semantic extension, thus forming a highly interconnected structure with a center and periphery. Class membership is a matter of degree and there are not presumed to be any significant properties that are shared by all nodes/members. By postulating multiple nodes which are connected to each other through chains of extensions, network models allow one to account for finely-detailed characteristics of a speaker's knowledge about the conventional range of usages of an expression. Network models are claimed to exceed both reductionist models (the monosemy approach) and atomistic models (the homonymy approach) in descriptive and

explanatory power. In a monosemic analysis, a single sense (or node) would be proposed to represent all the meanings of a lexical category. In a homonymic analysis, on the other hand, all the individual senses would be treated as distinct and unrelated so that multiple items which just happen to share the same form would have to be posited and listed separately in the lexicon.

Despite the undoubtful agreement on the advantages of postulating a network structure for the lexical categorization model, there have been some controversies over the exact architectures, let alone the nature of the model (cf. Sandra & Rice 1995; Rice 1996). Rice has stated, "[t]here are a range of network models being proposed in the cognitive linguistics literature, just as there are differences of opinion about what constitutes a distinct sense of a preposition" (1996:138). In order to clarity the point, she compared two different approaches to network models in the CL literature: Lakoff's horizontally construed radial network model (1987) and Langacker's more vertical approach to a lexical network model (1991b).

Lakoff's (1987) network model of *over* represents a radial semantic structure, as illustrated in Figure 4.

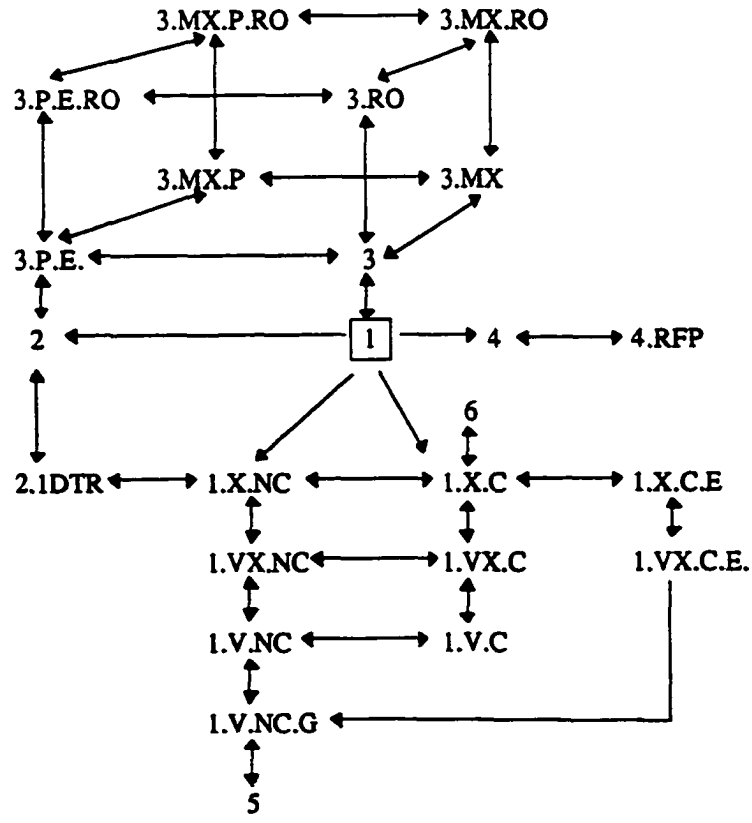


Figure 4. Lakoff's Lexical Network for *Over* (1987:436)

In this model, a single prototypical sense anchors the center and is linked to multiple secondary nodes. Each node in the model represents an actual sense which can be schematized on the basis of certain trajector and landmark characteristics (as identified by 1, 1.X.NC., etc). Listed in (2) are examples which illustrate the senses of *over* represented in the network presented in Figure 4.

(2)	SCHEMA	EXAMPLE
The Above-Across Sense		
a.	1	The plane flew *over*.
b.	1.X.NC.	The bird flew *over* the yard.
c.	1.VX.NC.	The plane flew *over* the hill.
d.	1.V.NC.	The bird flew *over* the wall.
e.	1.V.NC.G	The dog jumped *over* the fence.
f.	1.X.C.	Sam drove *over* the bridge.
g.	1.VX.C	Sam walked *over* the hill.
h.	1.V.C.	Sam climbed *over* the wall.
i.	1.VX.C.E.	Sam lives *over* the hill.
j.	1.X.C.E.	Sausalito is *over* the bridge.
The Above Sense		
k.	2	Hang the painting *over* the fireplace.
l.	2.1DTR	The power line stretches *over* the yard.
The Covering Sense		
m.	3	The board is *over* the hole.
n.	3.P.E.	The city clouded *over*.
o.	3.MX.	The guards were posted all *over* the hill.
p.	3.MX.P	I walked all *over* the hill.
q.	3.RO	There was a veil *over* her face.
r.	3.P.E.RO	As the rain came down, it froze and ice spread all *over* the windshield.
s.	3.MX.RO	There were flies all *over* the ceiling.
t.	3.MX.P.RO	The spider had crawled all *over* the ceiling.
The Reflexive Schema		
u.	4	Roll the log *over*.
v.	4.RFP	The fence fell *over*.
The Excess Schema		
w.	5	The river *over*flowed.
The Repetition Schema		
x.	6	Do it *over*.

Lakoff argued that the central sense of *over* is the 'above' and 'across' sense, with the landmark (or object of the preposition) left unspecified, as exemplified in (2a). The landmark or prepositional object may be specified, as shown in (2b), in which the landmark *yard* is extended (an "X" link in this analysis) and there is no contact (NC) presumed between the landmark and the trajector *plane*, or, where the landmark *hill* is vertical and extended (VX) and there is contact (C), as in (2g), or no contact, as in (2c). The focus may be on the endpoint of the path (E), as shown in (2i) and (2j). In the

proposed network, nine different uses of *over* are related directly or indirectly to Schema 1 in terms of two types of links: *instance links* (e.g., the link between 1 and 1.V.C. since 1.V.C. is an instance of 1) and *similarity links* (e.g., the link between 1.VX.NC. and 1.VX.C since they share the features 1.VX.).

Lakoff discussed five other senses of *over* which serve as basic schemas for one or more additional senses. The stative 'above' sense in (2k), indicated as Schema 2, is described as being connected to Schema 1 by a similarity link. The 'covering' sense in (2m), indicated as Schema 3, has several variants depending on whether the trajector (or object being located) is a mass entity (e.g., *cloud* in [2n]) or a multiplex entity (*guards* in [2o]), as well as on the orientation or perspective afforded by the viewer. *Over* also conveys what Lakoff calls a 'reflexive' sense in (2u), an 'excess' sense in (2w) and a 'repetition' sense in (2x). These senses are interpreted as being connected to Schema 1 directly or indirectly depending on the type and number of shared characteristics.

Lakoff's network is characterized as a *radial model* since it features a single core sense which serves as the prototype and is linked to the entire inventory of additional senses. Such a radial model takes sets of sentences containing (relational) items, sorts them on the basis of various trajector and landmark properties, and tries to establish similarity links between them. The model therefore represents heterogeneous and item-specific links.

In contrast, Langacker's (1987, 1991a/b) network is a concept-based model. It allows for the possibility of network growth and decay, variability among speakers, as well as for the continuous nature of the distinction between monosemy, polysemy, and homonymy. Moreover, there is no need to designate a single sense to be the prototype, because the model allows for multiple nodes to serve as local prototypes in cases of linguistic innovation. The Langackerian model features more hierarchical organization and is therefore more generalizable than Lakoff's radial model. Three types of categorizing relationships (as opposed to only two in Lakoff's model) are posited in the model, as illustrated in Figure 5.

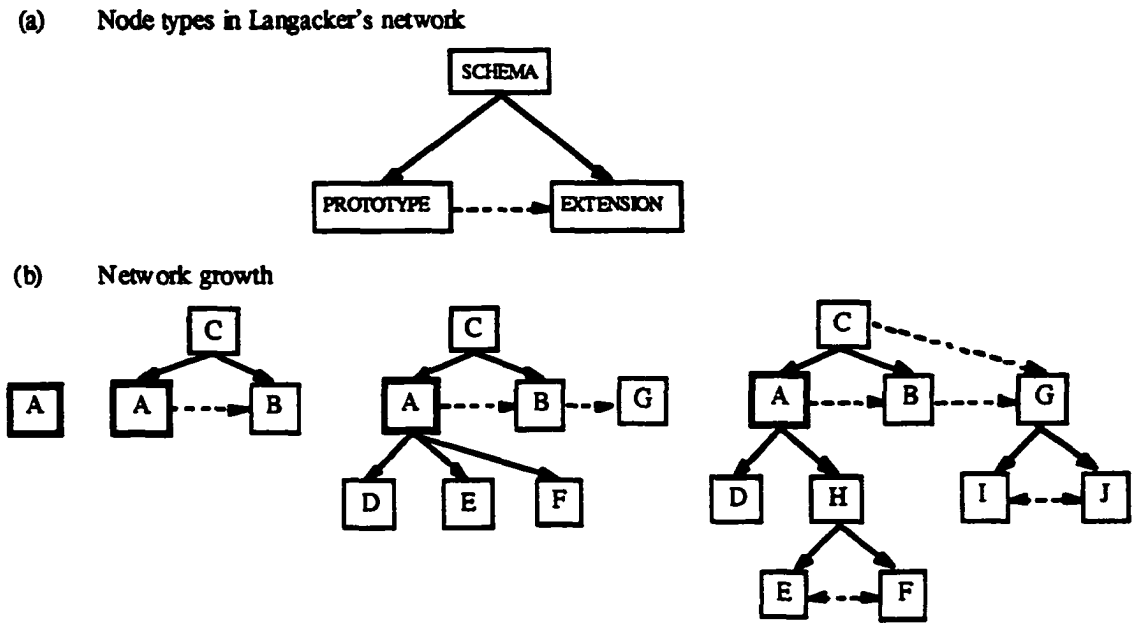


Figure 5. Langacker's Proposal for a Lexical Network (1991b:271)

These relationships account for the links between node types: *extension* from a PROTOTYPE to form an EXTENDED (or INNOVATIVE) sense, indicated by a dashed arrow ([A]- - ➔[B]); a perception of mutual *similarity* between two senses, indicated by a double-headed arrow ([A] ➔ - ➔ [B]); and *schematization* which results either when multiple senses give rise to a more abstract or generalized SCHEMA or when a SCHEMA is elaborated or instantiated by a prototype or extended node, symbolized by a solid arrow ([A] ⟶ [B]). In this model, the prototype is represented by a heavy line, indicating that it stands for the sense that was acquired first, and/or the one most likely to be activated in a neutral context.

Based on these notions concerning the network model, Langacker (1991b) illustrated a fragment of the semantic structure for the English verb *run* as shown in Figure 6:

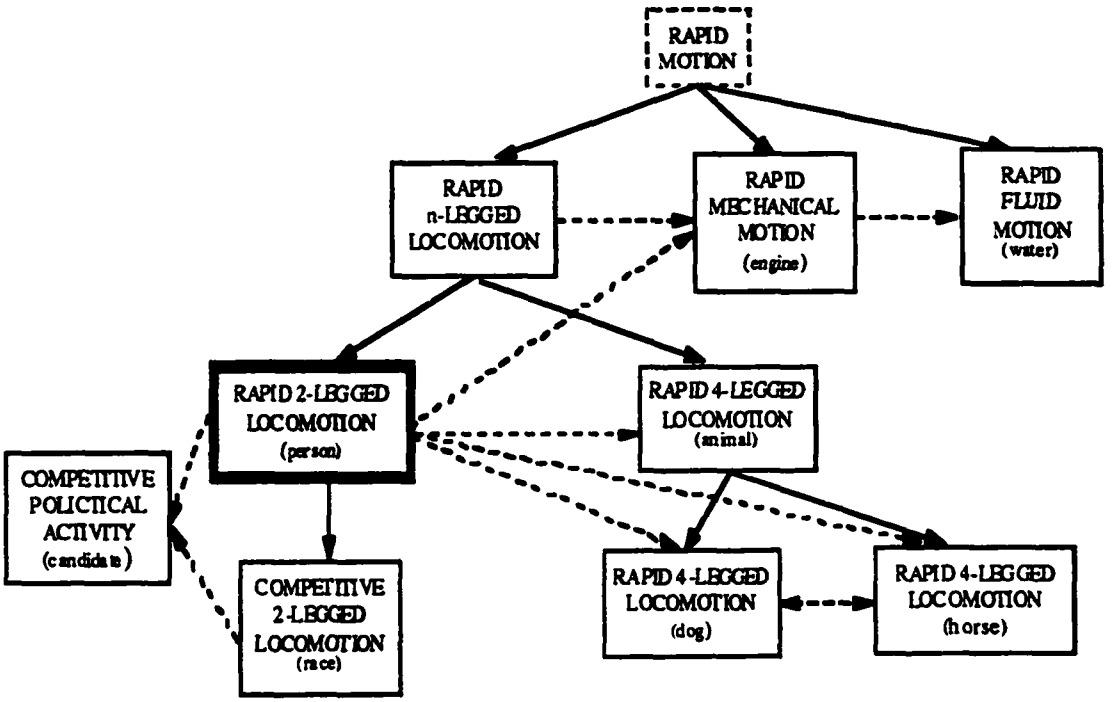


Figure 6. Langacker's Network Model for *Run* (1991b:267)

Langacker claims in his model that semantic relatedness is a matter of degree, and therefore the distinction between polysemy and homonymy does not reduce to simple dichotomies. Polysemy is conceived as a case where two senses are related either directly by a categorizing relationship or indirectly through a chain of such relationships. In this model, differences in the degree of relatedness can be indicated by the distance between two nodes. In Figure 6, for example, the 'rapid 4-legged locomotion' sense of *run* lies closer to the prototype 'rapid 2-legged locomotion' sense, than does 'rapid mechanical motion.' On the other hand, homonymy is characterized as the limiting case along the cline of relatedness, where the two senses are related only in terms of their common phonological realization.

The model also accommodates any individual differences between speakers since the types of links between nodes in a model (i.e., *extension*, *instantiation*, *schematicization*) are more relevant than the actual nodes themselves. Not all speakers may have integrated all possible extended senses into their lexical network for some item, nor might they have generalized across various senses to form abstract schemas within their lexical category. The specific configuration of the model is not at issue as is the case in Lakoff's network model for *over*. In Figure 6, for example, it is left unspecified how far a speaker extends the network through schematization, or whether a superschema (i.e., the

concept of 'rapid motion') having all other nodes as direct or indirect instantiations is extracted by the speaker. Since speakers may very well differ in the way they perceive the semantic relationships between two senses, any network model for Langacker is, at best, conceived to be a description of the *language* rather than an idealized representation of some speaker's *mental lexicon.*

Nevertheless, both Lakoff and Langacker suggest that network models can be taken as plausible *cognitive* models of lexical representation. However, as Sandra & Rice (1995) argued, cognitive linguists have been vague about what the correct cognitive interpretation of the network should be. One of the reasons for such vagueness is a lack of clear distinction between a model for psychological processes and that for a psychological structure (representation). Related to these problems is the fact that a number of aspects of the model have been left unspecified. Firstly, there have been no clear methodological principles established for the identification of distinct usage type. Whereas a monosemy-biased analysis (such as a categorization task) would tend to minimize the *differences* between the distinct usage types, a homonymy-biased analysis (such as a similarity rating task) would tend to minimize the *similarities.* Secondly, there is a lack of clarity concerning the formal aspects of the representational device. It is not clear, for example, in the case of Lakoff's radial model, how the single core sense is determined, or how very novel extensions or abstract usage types come to be represented by the network. Moreover, cognitive linguists are vague about whether the richness in usage types belong to the domain of sentence meaning or to the domain of lexical meaning. Does polysemy refer to clearly related *minor* variations on a single sense or to *major* variations which may only show some hint of relatedness? There seem to be more questions to be asked than answered at this stage.

1.2.5 Summary

Categorization has been central to studies in all of the social scientific disciplines, including philosophy and psychology, as well as linguistics, and I have surveyed the major positions here. The classical view of categorization maintains that categories have clear and characterizable boundaries, and every entity has equal membership. Based on such assumptions, *feature theory* claims that class membership is an all-or-nothing matter and there are neither degrees of membership nor in-between cases of class membership. By contrast, the reigning contemporary view of categorization holds that class membership is a matter of degree, reflecting the distance between some member of the category and the

category prototype on the basis of judged similarity. Moreover, category boundaries are deemed to be permeable and fuzzy.

Exemplar models and knowledge-based models of categorization, on the other hand, claim that perceived similarity to a prototype is not sufficient in order to account for all categorization processes. Exemplar models claim that classification decisions are based on the summed similarities of stimuli to stored exemplars, whereas knowledge-based models state that the organization of concepts is knowledge-rich and task-based, rather than directly a function of matching properties of some instance with the prototype. Although exemplar models are not routinely discussed in the linguistics literature (even in the CL literature), the kinds of issues they address are central to the present study into the nature of the complex lexical category headed by the Japanese particle, *ni*.

Two network models that have been proposed in the CL literature, Lakoff's radial model and Langacker's schema-prototype-instance model, vary with respect to the number and nature of actual nodes and links posited for some linguistic category. Both models assume that categorization is based on shared similarity to a prototype, but they differ on the conceptual constitution of the prototype, the number of prototypes allowed within a category, and the presence of abstract nodes (schemas) which do not directly reflect an actual usage type in the language. I feel that Langacker's model is superior because it is concept-based (as opposed to Lakoff's item-specific or token-based model) and therefore can accommodate network growth and decay, of individual differences between speakers. It also handles the non-discrete nature of the monosemy-polysemy-homonymy distinction. However, as Rice (1996) has pointed out, most aspects of network models have been left unspecified partly because there have been few comprehensive models proposed thus far for a given linguistic phenomenon. It is my aim in this dissertation to self-consciously and concretely address issues related to the implementation of a lexical network model which up to now have been left unspecified in the CL literature. In other words, I want to push the network model metaphor as far as I can in the present analysis of *ni* and see whether it (a) provides a better explanation of the synchronic semantic structure of *ni* than has thus far been proposed and (b) can withstand empirical examination.

1.3 The Present Study

My analysis of *ni* is undertaken from the general theoretical perspective of cognitive linguistics (CL). Its assumptions diverge in substantial ways from those underlying

traditional formal approaches. In this remaining section, I will first discuss the most important of these assumptions. I will then sketch out the methodology I will employ in my analysis of Japanese *ni*.

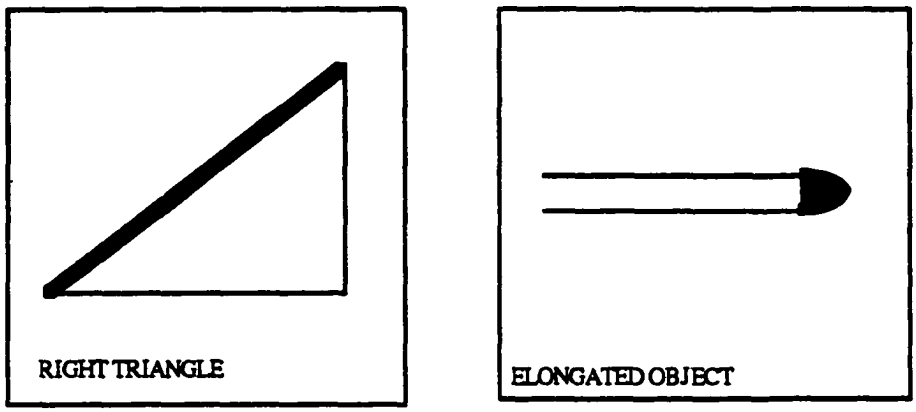
1.3.1 Assumptions

In contrast to more mainstream approaches in linguistics, which assume that language is a self-contained *formal* system, CL claims that language (i.e., grammatical and lexical form) is neither self-contained nor describable without essential reference to meaning (e.g., Langacker 1986, 1987, 1988, 1991a/b). In CL, meaning is equated with conceptualization, but conceptualization is open-ended, contextualized, and constrained by human experience. The idea that semantic structure is describable as a bundle of semantic features, as held by formal semantics, is rejected. It is claimed instead that semantic structure is subjective in nature and its value reflects not only the content of a conceived situation, but also how this content is structured and construed. Thus, as Langacker has stated:

> *The semantic value of an expression does not reside solely in the inherent properties of the entity or situation it describes, but crucially involves as well the way we choose to think about this entity or situation and mentally portray it. Expressions that are true under the same conditions, or which have the same reference or extension, often contrast in meaning nonetheless by virtue of representing alternate ways of mentally construing the same objective circumstances* (1988:6-7).

Inherent in the meaning of an expression is the way it is mentally 'imaged.' The term *imagery* is used here to refer to our ability to mentally construe a conceived situation in alternate ways. Moreover, the mental imagery underlying a semantic expression can be characterized in terms of a conceptual hierarchy, in the sense that certain conceptions presuppose others depending on the background or 'cognitive' domain against which they are conceived. For example, in one of Langacker's classic examples, the notion HYPOTENUSE presupposes the conception of RIGHT TRIANGLE as its conceptual base or background domain, as shown in Figure 7(a). Similarly, the notion TIP presupposes the conception of an elongated object as shown in 1.7(b). These notions are being foregrounded conceptually (or linguistically) only by virtue of how they contrast with some knowledge background. They are therefore *in profile* or highlighted (and represented with heavy lines). What is critical is that they cannot be conceptualized independently of their background domain, just as the card/concept the 'Queen of Spades' has a particular value in a game of Hearts, but a potentially different one in a game of Bridge or Poker, or the word

mouse has a different meaning depending on whether it refers to something biological or something electronic.



(a) HYPOTENUSE (b) TIP

Figure 7. The Imagery-Based Semantic Description in CL

Another important assumption in CL is that the lexicon and grammar form a continuum of symbolic elements. Grammatical structures do not constitute an autonomous formal system or level of representation, but rather, they are "inherently symbolic, providing for the structuring and conventional symbolization of conceptual content" (Langacker 1987:5). That is, in choosing a particular expression or construction, a speaker construes the conceived situation in a certain way. A pair of sentences, such as those in (3), therefore manifest a semantic contrast, despite the fact that they describe the same conceived situation and are propositonally identical:

(3) a. *Bill sent a walrus to Joyce.*
b. *Bill sent Joyce a walrus.*

(Langacker 1991b:13)

The difference in meaning between (3a) and (3b) coincides with a subtle difference in imagery employed to structure the situation, as illustrated in Figure 8. The small circles indicate the three event participants, namely, Bill (B), Joyce (J), and the walrus (W), and the large circles the regions which Bill and Joyce have control over. The heavy lines indicate a certain degree of conceptual salience. The sentences describe the identical situation in which a walrus that originates in the domain under Bill's control moves to the region under Joyce's control. They contrast, however, in the relative salience of certain aspects of the described scene, as Langacker (1991b:13) demonstrated. In (3a), with the

morpheme *to* marking the indirect object NP *Joyce*, the path followed by the walnus gets specifically designated and its conceptualization becomes more prominent than it would otherwise be, as indicated in Figure 8(a). In contrast, in (3b), in a double object construction, the possessive relationship between the possessed *walnus* and the possessor *Joyce* is emphasized. Therefore, prominence is added to the configuration of the result of the transfer, i.e., that the walrus is in Joyce's possession, as indicated in Figure 8(b).

Figure 8. Alternate Imagery for the Sentences in (3) (Langacker 1991b:14)

By assuming the symbolic nature of grammatical construction, grammatical morphemes, such as adpositions and case markers, are claimed to be meaningful and capable of making important semantic contributions within expressions. In traditional linguistics, lexical and grammatical morphemes represent a sharp dichotomy. Grammatical morphemes such as *of* and *be* are, in contrast to lexical units such as *ostrich* and *brick*, regarded as purely grammatical and, therefore for the most part meaningless elements. In CL, however, lexical and grammatical morphemes "vary along a continuum in regard to such parameters as the complexity and abstractness of their semantic specifications" (Langacker 1991b:111). Both lexical morphemes and grammatical morphemes exhibit gradations in semantic complexity (*ostrich—bird—animal—thing* vs. *above—may—have—of*). Moreover, the scales clearly overlap. *Thing* is hardly considered more complex or schematic than *above*. As will be shown in subsequent chapters, I will be claiming that Japanese *ni* is a highly polysemous lexical item manifesting a range of concrete and abstract as well as spatial and nonspatial usages. Nevertheless, based on CL assumptions like those discussed here, there is not nor should there be any a priori distinction made between the more lexical and the more grammatical usages of this relational particle. On the contrary, all the usage or sense types are considered to be interrelated and together comprise the conceptual content of this very complex lexical category.

1.3.2 Methodology

The purpose behind this dissertation is twofold. On the one hand, I construct a provisional model for the semantic structure of *ni* based on a detailed semantic analysis of an extensive array of synchronic data. I base my analysis on claims and assumptions made in the CL literature. On the other hand, I look beyond CL theory by marshaling empirical support for (or against) the proposed model. Independent evidence for the model comes from four sources: a grammaticalization (diachronic) study, a text study, L1 acquisition data, and a series of psycholinguistic experiments.

1.3.2.1 Synchronic Semantic Analysis of *Ni*

In Chapter 3, I present a semantic analysis of the complex nature of *ni*. Specifically, the questions addressed in this synchronic analysis are: How many senses are to be posited for *ni*? How can each sense of *ni* be characterized semantically? How are the various senses of *ni* related to each other (if at all)?

Most of the examples discussed in this dissertation are taken from a variety of sources: dictionaries, other linguistic analyses of *ni*, Japanese grammars, and various print media. Some are based on my own intuitions as a native speaker of Japanese. Each separately identified sense of *ni* are illustrated with many examples and discussed in depth. I claim that the vast majority of *ni*'s various senses are inter-related, either directly or indirectly, and that, as a whole, they exhibit a "family resemblance" to each other with different degrees of relatedness. I summarize the synchronic study by proposing a network model for the semantic structure of *ni*.

1.3.2.2 How *Ni* (and Similar Particles) Grammaticalized

A piece of supporting evidence for the proposed model of *ni*'s semantic structure comes from a grammaticalization study. Due to the absence of direct historical evidence for *ni*, the grammaticalization study is based both on circumstantial data and on attested cross-linguistic patterns. In the case of *ni*, most of the usages discussed in Chapter 3 are already found in the earliest historical records (e.g., Manyooshuu [circa 759 A.D.]; Taketori monogatari [900 A.D.]) and so it is impossible to trace its semantic development directly. However, it has been widely documented in numerous grammaticalization studies that metaphorical extensions across semantic domains are important mechanisms underlying grammaticalization processes and has affected many lexical items like *ni* in other languages (Bybee, Perkins, & Pagliuca 1994; Heine et al. 1991). As such, grammaticalization is

claimed to play a large role in synchronic polysemy patterns (Heine et al. 1991:225). In the absence of conclusive historical evidence for the development of *ni*, I cannot simply assert that grammaticalization trends are responsible for its (non-random) synchronic state. I must have independent evidence for the synchronic pattern observed. This comes from an examination of polysemy patterns for items like *ni* in other languages for which there is well-documented historical evidence (e.g., Rudzka-Ostyn's analysis of the Polish dative, 1996, and Genetti's analysis of postpositions in Newari, a Tibeto-Burman language spoken in Nepal, 1991).

1.3.2.3 Three Independent Case Studies of *Ni*

Chapter 5 brings in data from three empirical studies. Prototype theory claims that the privileged status attributed to certain members of a category (i.e., the most central members or prototypes) manifests itself in a variety of ways: (a) in rapid response times in similarity judgment tasks, (b) in an enhanced priming effect, (c) in the frequency of item output, and (d) in learnability (Rosch 1978). The prototype-based network model for *ni* proposed in Chapter 3 is compared against data from three separate case studies, summarized below:

Textual Frequency. A text count was conducted in order to ascertain the relative frequencies of the various senses of *ni*, as identified in Chapter 3. Sentences containing *ni* were collected from a wide range of genres including novels, essays, and newspaper articles and encompassed a variety of styles (i.e., formal vs. informal registers and narrative vs. conversational discourse). The collected data were then coded according to the major senses identified in Chapter 3, sorted, and tabulated. Assuming that frequency is one of the more robust measures of basicness (if not prototypicality), one would expect that the more frequently used senses are those which the model identifies as more basic and therefore, more (proto)typical of the category.

Acquisition Study. One property characterized by Rosch as being a prototype effect is early acquisition (1978:36). The assumption behind this claim was that the more basic or concrete a sense is, the easier it is to learn. Based on this assumption, one might expect that those senses of *ni* that are acquired earlier are those senses that the model asserts to be more basic conceptually (and earlier historically) as well as those that experimental subjects would perceive as being more central and concrete. The data in the acquisition study were obtained from the Aki corpus, available on-line from the CHILDES database.

It is expected that the order of acquisition would correlate with increasing conceptual complexity or abstractness. However, there are some compound factors to be considered in using acquisition studies which limit their usefulness. One such factor in any acquisition

study is determining whether input frequency might be playing a bigger role than conceptual simplicity or complexity.

Experimental Study. Finally, a series of three off-line psycholinguistic experiments were conducted: a sentence generation test, a sorting test, and a similarity judgment test. The underlying assumption was that the proposed model for the semantic structure of *ni* should be at least partly reflected in the minds of native speakers of Japanese. Subjects were native Japanese speakers who resided in Alberta, Canada. The sentence generation test was conducted in order to determine which sense type(s) might be more salient than others in speakers' minds. The sorting test and the similarity judgment test, on the other hand, would made reference to how speakers perceive relationships between the various senses of *ni*. Stimuli for both tests were comprised by a set of sentences which represent the major senses of *ni* as identified in Chapter 3. In the sorting test, subjects were asked to classify stimulus sentences into groups (of any number as they think is appropriate). In the similarity judgment test, subjects were asked to compare and rate the usage of *ni* in a set of paired stimulus sentences. The two types of tests were used because it has been found that similarity judgment tasks tend to maximize the perceived similarity between items, while categorization or sorting tasks tend to maximize the differences (cf. Sandra & Rice 1995). The results of the two experiments were compared with the differentiation of sense types posited in Chapter 3.

These three studies both support *and* call into question various aspects of the proposed network model from Chapter 3. As such, they suggest ways in which the model should be refined. They also allow us to support or reject certain claims made by cognitive linguists about the viability of lexical network models as representational models of the mental lexicon. Finally, they give us a better understanding about linguistic categorization at the lexical level for descriptive, pedagogical, and perhaps clinical purposes.

CHAPTER TWO
THE JAPANESE PARTICLE SYSTEM AND THE PARTICLE *NI*

2.1 Introduction

This chapter describes how diverse *ni* is semantically and syntactically in Japanese and discusses problems this diversity has posed for previous analyses of the particle. In order to best present the special characteristics of *ni*, I first provide a brief overview of the Japanese particle system in Section 2.2. In 2.3, I briefly catalogue each of the major usage types of *ni* that I have identified based on CL assumptions about categorization, about lexical and grammatical meaning, and about the role that meaning plays in syntactic organization. The usages itemized in 2.3 form the basis of my own analysis of the particle presented in Chapter 3. In Section 2.4, I survey and critique earlier studies of *ni*, showing how formal classical assumptions about categorization, assumptions about sharp divisions between lexical and grammatical meaning, and assumptions about the limited role that meaning plays in syntactic organization are most responsible for the number and kind of different senses that have been posited for *ni* in these analyses.

2.2 Japanese Clause Structure and the Particle System

Particles play a critical role in the interpretation of sentences in Modern Japanese (henceforth MJ).[1] For example, the sentence in (1) is unacceptable because it lacks any particles, containing as it does just the major components of a proposition. As shown in (2), however, the lexical items in (1) can give rise to different interpretations, depending on which particle marks which NP in the basic proposition. Note, however, that the difference is *not* due to word order, as can be seen by comparing (2a) and (2b):

(1) **Taroo Jiroo but-ta.*
Taro Jiro hit-PAST
'Taro hit Jiro.'

(2) a. *Taroo **ga** Jiroo **o** but-ta.*
Taro Jiro hit-PAST
'Taro hit Jiro.'

b. *Jiroo* *o* *Taroo* *ga* *but-ta.*
Jiro Taro hit-PAST
'Taro hit Jiro.'

c. *Taroo* *o* *Jiroo* *ga* *but-ta.*
Taro Jiro hit-PAST
'Jiro hit Taro.'

d. *Taroo* *to* *Jiroo* *ga* *but-ta.*
Taro Jiro hit-PAST
'Taro and Jiro hit (someone).'

e. *Taroo* *to* *Jiroo* *o* *but-ta.*
Taro Jiro hit-PAST
'(Someone) hit Taro and Jiro.'

In this section, I identify the roles that particles like *ga*, *o*, *to*, and of course *ni* play not only in coding grammatical relations within a proposition or clause, but also the role they play in describing semantic roles as well as in conveying discourse information.

2.2.1 The Particle System in Canonical Simplex Clauses

Despite the relatively flexible word order tolerated in Japanese, it is generally accepted among Japanese linguists that the basic or unmarked word order is SOV (cf. Martin 1975; Kuno 1973; Shibatani 1990). That is, a canonical transitive clause is usually expressed in a [NP_1 *ga* NP_2 *o* VP] construction whereas an intransitive clause is generally expressed in a [NP *ga* VP] construction. This transitive/intransitive distinction is exemplified in (3):

(3) a. *Taroo* *ga* *Hanako* *o* *but-ta.*
Taro NOM Hanako ACC hit-PAST
'Taro hit Hanako.'

b. *Taroo* *ga* *ki-ta.*
Taro NOM come-PAST
'Taro came.'

As shown in (3), the grammatical relations between clausal participants are indicated by the use of particles. Subjects are typically marked by what is generally called the NOMINATIVE marker, *ga*, and objects by the ACCUSATIVE marker, *o* (cf. Hinds 1986; Tsujimura 1996).

Since Japanese allows some freedom in word order (except for the rigid *verb-final constraint*, to use Kuno's [1973:4] terminology), particles play an important role in indicating grammatical relations. Compare (3a) (repeated as [4a]) with (4b-d):

(4) a. *Taroo ga Hanako o but-ta.* [S - O - V]
Taro NOM Hanako ACC hit-PAST
'Taro hit Hanako.'

b. *Hanako o Taroo ga but-ta.* [O - S - V]
Hanako ACC Taro NOM hit- PAST

c. **Hanako o but-ta Taroo ga.* [O - V - S]
Hanako ACC hit- PAST Taro NOM

d. **But-ta Hanako o Taroo ga.* [V - O - S]
hit-PAST Hanako ACC Taro NOM

While (4a) represents the basic word order, (4b) is also perfectly grammatical. (4c) and (4d) are, on the other hand, unacceptable because they violate the verb-final constraint.

Ditransitive verbs, such as *ageru* 'give,' take two NP complements: a direct object (DO) marked by *o*, the ACCUSATIVE marker, and an indirect object (IO) marked by *ni*. *Ni*, in these usages, is interpreted as marking the DATIVE, a case often associated with the recipient in sentences with verbs of giving (Tsujimura 1996:134). Thus, six possible sentence variations are possible in a ditransitive construction, though each variation may have a slightly different felicity in actual discourse. The six possible word orders for a ditransitive construction are shown in (5):

(5) a. *Taroo ga Hanako ni hon o age-ta.* [S-IO-DO-V]
Taro NOM Hanako DAT book ACC give-PAST
'Taro gave Hanako a book,'

b. *Taroo ga hon o Hanako ni age-ta.* [S-DO-IO-V]
Taro NOM book ACC Hanako DAT give-PAST

c. *Hanako ni Taroo ga hon o age-ta.* [IO-S-DO-V]
Hanako DAT Taro NOM book ACC give-PAST

d. *Hanako ni hon o Taroo ga age-ta.* [IO-DO-S-V]
Hanako DAT book ACC Taro NOM give-PAST

e. *Hon o Taroo ga Hanako ni age-ta.* [DO-S-IO-V]
book ACC Taro NOM Hanako DAT give-PAST

f. *Hon o Hanako ni Taroo ga age-ta.* [DO-IO-S-V]
book ACC Hanako DAT Taro NOM give-PAST

The term 'particle,' called *joshi* 'helping words' in Japanese, is generally used to refer to a heterogeneous group of grammatical morphemes, only some of which could be considered equivalent to the English prepositions, another type of non-inflecting particle by which some of the Japanese particles such as *ni* sometimes get translated. In traditional analyses, the Japanese particles are distinguished from lexical words and conjunctions because they do not form a constituent (*bunsetsu*) by themselves, but are always bound to

another lexical word (cf. Sakakura 1974; Hashimoto 1969). They are further distinguished from auxiliaries (*jodooshi*) in that they do not conjugate. In Japanese, conjugation typically involves verbs, adjectives, and auxiliaries. Table 1 shows the default type of conjugation for the so-called consonant verb *iku* 'go,' and the so-called 'vowel' verb *okiru* 'get up,' the adjective *ookii* 'big,' the adjectival nominative *shizukada* 'be quiet,' and the passive auxiliary *-rareru*.[2] There are six conjugation forms in Japanese: irrealis (*mizen*), adverbial (*renyoo*), conclusive (*shuushi*), attributive (*rentai*), realis (*katei*), and imperative (*meirei*), to follow Shibatani's labeling (1990:335):

Table 1. *The Japanese Conjugation System*

		iku 'go'	*okiru* 'get up'	*ookii* 'big'	*shizukada* 'be quiet'	*-reru* 'PASS'
	STEM	*ik-*	*ok-*	*ooki-*	*shizuka*	*rare-*
(a)	irrealis (*mizenkei*)	*ika*	*oki*	*ookiku*	*shizukadaro*	*rare*
(b)	adverbial (*renyookei*)	*iki*	*oki*	*ookiku*	*shizukade*	*rare*
(c)	conclusive (*shuusikei*)	*iku*	*okiru*	*ookii*	*shizukada*	*rareru*
(d)	attributive (*rentaikei*)	*iku*	*okiru*	*ookii*	*shizukana*	*rareru*
(e)	conditional (*kateikei*)	*ike*	*okire*	*ookikere*	*shizukanara*	*rarere*
(f)	imperative (*keireikei*)	*iko*	*okiro*	*	*	*rarero*

Besides case-marking functions to indicate grammatical relations (e.g, the NOMINATIVE marker *ga* indicates the subject, the ACCUSATIVE marker *o* the direct object, and so on), particles also describe semantic roles, such as LOCATION, DIRECTION, and INSTRUMENT. In (6) below, the particle *kara* marks a locative source in (6a) while *de* marks the instrument in (6b):

(6) a. *Taroo ga Tookyoo **kara** ki-ta.*
Taro NOM Tokyo SRC come-PAST
'Taro came from Tokyo.'

b. *Taroo ga fude **de** tegami o kai-ta.*
Taro NOM brush INST letter ACC write-PAST
'Taro wrote a letter with a brush.'

Providing linguistic glossing for the Japanese particles is not a simple process and this fact alone proved to be one of the primary motivations behind this study. Any given particle is simply associated with too many sense distinctions across different sentences (q.v. Chapter

3) and too many semantic dimensions within a sentence (i.e., grammatical, semantic, and pragmatic information combined in the use of a particle). As well, the previous literature reveals a lot of inconsistency in the glosses assigned to the particles (cf. Kuno 1973; Shibatani 1990). Kuno based his glossing solely on the English translation of the meaning of the sentence. For example, he glossed the particle *kara* as the preposition 'from,' *no* as the possessive inflection *-'s*, and so on. He left the majority of instances unglossed, however, unless they were the focus of discussion. Shibatani, on the other hand, treated the major particles (*ga*, *o*, and *ni*) as case-markers (and therefore glossed them as NOM, ACC, or DAT) in some cases, but simply provided English translations (and glossed them as *to, with, by*, etc.) in others.

Particles are associated with a mutidimensional range of functions in Japanese. They have syntactic, semantic, and pragmatic import. They can indicate grammatical relations (e.g., subject, object, oblique), they can mark major case relations (e.g., NOMINATIVE, ACCUSATIVE, DATIVE, GENITIVE, etc.) or semantic roles (e.g., AGENT, PATIENT, LOCATION, DIRECTION, POSSESSOR, EXPERIENCER, PURPOSE, etc.) depending on your point of view, as well as having some discourse functions (e.g. marking topic, politeness, gender, tags, etc.), as we will discuss in the next section. Moreover, they may be interpreted as serving more than one function at the same time, as shown in the linguistic gloss for (7a) with *no*, or as conveying different functions or meanings from one context to another, as shown in (7b) with *de*:

(7) a. *Kore wa boku no kai-ta e desu.*
this TOP 1SG GEN/SUBJ paint-PAST picture COP
'This is a picture that I painted.'

b. *Mariko wa byooki de gakkoo o yasumi, heya de hon o yon-de-i-ta.*
Mariko TOP illness REAS school ACC absent room LOC book ACC
read-CONJ-PROG-PAST
'Mariko was absent from school *because of* illness, and (she) was reading books *in* her room.'

The particle *no* in (7a) is ambiguous in that it marks both GENITIVE case and subject. Although *no* is commonly treated as the GENITIVE case marker (Tsujimura 1996), it also marks the subject in a relative clause. In (7a), both of these functions converge. By contrast, the two instances of *de* in (7b) appear to be separate particles if one simply goes by the English glossing alone. The first instance introduces a reason phrase and the second a location. Of course, one could simply code *de* as an all-purpose OBLIQUE marker, but

then one simply avoids or postpones the problem of differentiating between all the other OBLIQUE-marking particles (such as *ni*) in any given usage. For the purpose of the present dissertation, particles will be glossed on the basis of their *primary* syntactic, semantic, or pragmatic function(s) in a particular context (e.g., *de* might be glossed as an INSTRUMENT marker in one context and a REASON marker in the next).

The choice of particles is often related to semantic factors alone, such as animacy of the NP or the idiosyncracies and intricacies of predicate semantics. For example, while both *kara* and *ni* can mark SOURCE-like NPs, they are not totally interchangeable. Compare the sentences in (8):

(8) a. *Taroo ga Masako ni/kara hon o kari-ta.*
Taro NOM Masako SRC book ACC borrow-PAST
'Taro borrowed a book from Masako.'

b. *Taroo ga toshokan *ni/kara hon o kari-ta.*
Taro NOM library SRC book ACC borrow-PAST
'Taro borrowed a book from the library.'

The (un)acceptability of *ni* and *kara* in any given usage is related to animacy. In (8a), with an animate NP *Masako*, both *ni* and *kara* are acceptable, although there is a slight difference in meaning. With *ni*, which marks a 'secondary agent' (as will be discussed later in Chapter 3), the NP *Masako* is perceived as an agentive source who has agreed to lend the book. The reading with *kara*, the general SOURCE marker, is neutral with regard to *Masako*'s willingness to lend the book. The property of 'awareness' associated with most *ni*-marked NPs accounts for its unacceptability in contexts with inanimate NPs, such as *toshokan* 'library' in (8b).

Clearly, predicate semantics and selectional restrictions on complements play a major role in the choice of particles. Consider the sentences in (9):

(9) a. *Taroo ga Masako ni/*o at-ta.*
Taro NOM Masako DAT/ACC meet-PAST
'Taro met Masako.'

b. *Taroo ga Masako *ni/o mi-ta.*
Taro NOM Masako DAT/ACC see-PAST
'Taro saw Masako.'

c. **Taroo ga kabe ni/o at-ta.*
Taro NOM wall DAT/ACC meet-PAST
*'Taro met the wall.'

d. *Taroo ga kabe *ni/o mi-ta.*
Taro NOM wall DAT/ACC see-PAST
'Taro saw the wall.'

The difference in meaning between the verb *au* 'meet' in (9a) and *miru* 'see' (9b), is reflected in the differential use of the two particles, *ni* and *o*, as well as in the animacy of the object NPs. The former verb requires an animate NP who is sentient and aware (the archetypal DATIVE-marked NP, as we will see in Chapter 3); thus *ni* is acceptable in (9a). However, the verb subcategorizes for an oblique complement, not an accusative one, so *o* is unacceptable in (9a). This is probably analogous to the difference between *'tell NP'* and *'talk to NP'* in English. As shown in (9c), *au* 'meet' is not compatible with an innanimate NP and neither *ni* nor *o* are acceptable. On the other hand, the situation underlying the sentence in (9b) and (9d), seeing someone or something, does not require sentience or awareness on the part of the complement NP, and therefore this verb takes either an animate NP in (9b) or an inanimate NP (9d) marked by the accusative case marker *o*.

2.2.2 *The Particle System in Complex or Conjoined Clauses*

Particles play an equally important role in the structuring and interpretation of complex or conjoined clauses. A causative construction, for example, is formed by the causative auxiliary *-(sa)seru*. In a causative contruction, the causee is marked by either the ACCUSATIVE marker *o* or *ni*, a marker of DATIVE case, as shown in (10):

(10) a. *Taroo ga Masako o soko e ik-ase-ta.*
Taro NOM Masako ACC there DIR go-CAUS-PAST
'Taro made Masako go there.'

b. *Taroo ga Masako ni soko e ik-ase-ta.*
Taro NOM Masako DAT there DIR go-CAUS-PAST
'Taro let Masako go there.'

Needless to say, an *o*-marked causative and a *ni*-marked causative differ in meaning. In (10a), with an *o*-marked causee, it is implied that the instigator or causer (Taro) is indifferent to the intention of the causee (Masako), whereas (10b), with a *ni*-marked causee, implies that the causee is willing or has at least consented to go. This semantic difference between a *ni*-marked causee and an *o*-marked causee is more apparent in the paired sentences in (11), where *o*-marking is ruled out entirely. With the causative

auxiliary *-(te)morau*, which literally means 'receive the benefit of,' only a *ni*-marked causee is acceptable.

(11) a. **Taroo ga Masako o soko e it-te-morat-ta.*
Taro NOM Masako ACC there DIR go-CONJ-CAUS-PAST
'Taro got Masako to go there (for him).'

b. *Taroo ga Masako ni soko e it-te-morat-ta.*
Taro NOM Masako DAT there DIR go-CONJ-CAUS-PAST
'Taro got Masako to go there (for him).'

Since the auxiliary *-(te)morau* implies that Masako did a favor for Taro in going somewhere, the *ni*-marking, which indicates Masako's volitionality or intentionality, is obligatory. Here again, the distribution of the particles demonstrates their interaction with semantic factors, in this case, volitionality of the causee.

Particles may also be used to conjoin clauses, as shown in (12), as well as NPs (as shown in [2d] and [e]):

(12) a. *Taroo ga [sono hon ga ii to] it-ta.*
Taro NOM [the book NOM good CONJ] say-PAST
'Taro said that the book was/is good.'

b [*Taroo ga kaeru to] Masako ga ki-ta.*
[Taro NOM go home CONJ] Masako NOM come-PAST
'Taro went home and then Masako came.'

The particle *to* in (12a) is used to introduce the subordinate clause *sono hon ga ii* 'the book (was) good' as a complement of the main verb *itta* 'said,' while in (12b) it is used to describe a temporal relation (precedence) between two coordinated clauses.

There are often specific interactions between predicates and particles. For example, some conjunctive particles only attach to certain conjugation forms of verbs or adjectives. Particles, such as *toki* 'when,' *node* 'because,' and *made* 'until,' are attached to the attributive form, as illustrated in (13a), where *made* 'until' attached to the attributive form of the verb *okiru* 'get up.'[3] There are also particles, like the conjunctive particle *te* 'and' in (13b), which attach to the adverbial form (*oki*), and those which attach to the conditional form (*okire*), like the conditional particle *ba* 'if' in (13c):

(13) a. [*Taroo ga okiru made*] *machi-masyoo.*
[Taro NOM get up.CONCL CONJ] wait-let's
'Let's wait until Taro gets up.'

b. [*Taroo ga oki te*] *Masako mo oki-ta.*
[Taro NOM get up.ADV CONJ] Masako too get up-PAST
'Taro got up and Masako also gotup.'

c. [*Taroo ga okire ba*] *Masako mo okiru.*
[Taro NOM get up.COND CONJ] Masako too get up
'If Taro gets up, Masako gets up, too.'

So far, I have discussed the cases in which particles can primarily be defined in terms of their syntactic or grammatical functions. I have shown that particles play a significant role in organizing and/or regulating clausal structure in MJ. I have also illustrated how the usage of particles may be dependent on semantic criteria, such as animacy, volitionality, and general predicate semantics. In the next section, I will discuss the particle system in noncanonical clauses, where particles are used in some pragmatically-biased contexts, namely, topic constructions and negative sentences.

2.2.3 *The Particle System in Noncanonical Clauses*

One of the most striking pragmatic phenomena in MJ has to do with the topic construction. In MJ, topics are coded by the particle *wa*, which is generally called the topic marker. Compare the two sentences in (14):

(14) a. *Taroo ga Masao o but-ta.*
Taro NOM Masao ACC hit-PAST
'Taro hit Masao.'

b. *Taroo wa Masao o but-ta.*
Taro TOP Masao ACC hit-PAST
'As for Taro, (he) hit Masao.'

Although they have similar propositional content, these two sentences are different pragmatically. (14a), with the particle *ga* marking the subject NP, can be interpreted as a neutral description of the event in question, for example, as a response to a question like (15):

(15) *Kinoo nani ga at-ta no ?*
yesterday what NOM happen-PAST Q
'What happened yesterday?'

On the other hand, (14b) would likely be uttered in a situation where Taro has already been mentioned or at least brought into the consciousness of both the speaker and the hearer, for example, as a response to a question like (16):[4]

(16) *Taroo ga nani o shi-ta no ?*
Taro NOM what ACC do-PAST Q
'What did Taro do?'

Topicalized elements are not confined to the subject of the sentence, nor do they necessarily get moved to the left-most position. Virtually any element in a sentence can show up in any position as topic including the direct object as shown in (17), an oblique object as shown in (18), or an adverbial as in (19) and (20):

(17) a. *Taroo ga kono hon o kat-ta.* [neutral]
Taro NOM this book ACC buy-PAST
'Taro bought this book.'

b. *Kono hon wa Taroo ga kat-ta.* [topicalized]
This book TOP Taro NOM buy-PAST
'As for this book, Taro bought (it).'

(18) a. *Taroo ga Masako ni hon o kat-ta.* [neutral]
Taro NOM Masako DAT book ACC buy-PAST
'Taro bought a book for Masako.'

b. *Taroo ga Masako ni wa hon o kat-ta.* [topicalized]
Taro NOM Masako DAT TOP book ACC buy-PAST
'As for Masako, Taro bought a book (for her).'

(19) a. *Taroo ga sono mise de hon o kat-ta.* [neutral]
Taro NOM the shop LOC book ACC buy-PAST
'Taro bought a book at the shop.'

b. *Taroo ga sono mise de wa hon o kat-ta.* [topicalized]
Taro NOM the shop LOC TOP book ACC buy-PAST
'As for the shop, Taro bought a book (there).'

(20) a. *Taroo ga kinoo hon o kat-ta.* [neutral]
Taro NOM yesterday book ACC buy-PAST
'Taro bought a book yesterday.'

b. *Taroo ga kinoo wa hon o kat-ta.* [topicalized]
Taro NOM yesterday TOP book ACC buy-PAST
'As for yesterday, Taro bought a book (then).'

Note that the ACCUSATIVE marker *o* in (17) as well as the NOMINATIVE *ga* in (14) is deleted when the TOPIC-marking *wa* is attached. Other particles, such as the DATIVE marker *ni* and the LOCATIVE marker *de*, may be retained, as illustrated in (18), (19), and (20).

A topic construction may also involve a topicalized element which is syntactically unrelated to the clause. In (21), neither of the topicalized NPs, *sakana* 'fish,' or *boku* 'I' bear a syntactic relation to the clause:

(21) a. *Sakana* ***wa*** [*tai* *ga* *ii*].
fish TOP red snapper NOM good
'As for fish, red snappers are good.'

b. *Boku* ***wa*** [*kono* *hon* *ga* *ii*].
1SG TOP this book NOM good
lit. 'As for me, this book is good.'
'As for me, I like this book.'

The topic construction interacts significantly with various semantic phenomena, such as negation, tense, and different noun types. For example, a negative context correlates with a preference for *wa*-marking. In (22), while both *ga*-marking and *wa*-marking are acceptable in the affirmative sentence in (22a) and (22b), the *wa*-marking is preferable for introducing the subject NP in a negative sentence. The sentence in (22c), with *ga*-marking, is less acceptable than (22d), where the subject *Taroo* is marked by *wa*.

(22) a. *Taroo* ***ga*** *sono hon* *o* *yon-da.*
Taro NOM the book ACC read-PAST
'Taro read the book.'

b. *Taroo* ***wa*** *sono hon* *o* *yon-da.*
Taro TOP the book ACC read-PAST
'As for Taro, he read the book.'

c. ?*Taroo* ***ga*** *sono hon* *o* *yoma-nakat-ta.*
Taro NOM the book ACC read-NEG-PAST
'It was Taro who did not read the book.'

d. *Taroo* ***wa*** *sono hon* *o* *yoma-nakat-ta.*
Taro TOP the book ACC read-NEG-PAST
'(You may be assuming that Taro read the book, but) as for Taro, he did not read the book.'

According to Givón (1978:80), negative speech acts are presuppositionally more marked than their corresponding affirmatives in that the speaker uttering them assumes much more about what the hearer knows. In uttering a negative sentence, the speaker has reasons to assume that the corresponding affirmative has been already clued or discussed. Since *wa* as a topic marker introduces given information, it is more compatible with the overall pragmatic function of negatives. *Ga*, on the other hand, typically conveys new information and so in a negative context the sentence can only be interpretable as describing the speaker's subjective assessment of the situation, such as surprise, or complaint. The sentence in (22c), for example, implies that the speaker is surprised that Taro, who usually reads books, did not read one.

In this section, I have shown that Japanese particles play an important role not only in defining grammatical and/or semantic relations within a sentence, but also in conveying

discourse-level information. Moreover, they are quite vulnerable to a host of sentential or construction interactions (a point I will return to at length in Chapter 3). Next, I will provide an inventory of the major usages of *ni* both as a background to my discussion of insufficiencies associated with previous analyses in Section 2.4, and as a preview to my own analysis in Chapter 3.

2.3 A Preliminary Catalogue of the Major Usages of *Ni*

Although it has been acknowledged by many linguists and Japanese language pedagogists that *ni* is associated with a wide range of functions both semantically and syntactically, there has been no consensus as to how many distinct senses or usage types there are or even consensus about which usages are considered the most representative (cf. Matsumura 1971; Konoshima 1973; Martin 1975; Sugimoto 1986). For example, Matsumura (1971) provided 16 usage types: eleven different senses for *ni* as a case particle (*kaku-joshi*), two senses as a conjunctive particle (*setsuzoku-joshi*), two as a coordinative particle (*heiretsu-joshi*), and one as a sentence-final particle (*shuu-joshi*). His inventory is based on the traditional classification of particles, which focuses primarily on their syntactic functions. Martin (1975), on the other hand, listed 24 usage types and four groups of idioms (1975:40-41). His listing was based partially on the syntactic characteristics of the *ni*-marked NP (e.g., whether it functions as the indirect object or the subject) and partially on the semantic features (e.g., whether it describes reason, purpose, time, or location). Sadakane and Koizumi (1995), furthermore, posited 31 different usages for *ni* as a post-NP particle, claiming that their analysis is a modification of Martin's classification. Their categorization distinguishes between the different semantic functions underlying *ni*'s various usages (whether it marks a location or a benefactor) as well as between their different syntactic environments (whether the predicate verb is transitive, intransitive, or a copula verb). I discuss these other analyses at length in the next section. First, however, it is necessary to convey some sense of *ni*'s extreme lexicosyntactic diversity in MJ.

In the present study, I have identified 20 different usage categories, which I list in (23). My classification is based primarily on the semantic function exhibited by the complement of *ni*, although I also distinguish usages on the basis of the grammatical category of its complement:

(23) [i] SPATIAL LOCATION

*Kono heya **ni** wa piano ga ni-dai aru.*
This room TOP piano NOM two-CL exist
'There are two pianos in this room.'

[ii] DIRECTION/DESTINATION

*Taroo wa senshuu Tookyoo **ni** it-ta.*
Taro TOP last week Tokyo go-PAST
'Taro went to Tokyo last week.'

[iii] TEMPORAL LOCATION

*Taroo wa hachiji **ni** okiru.*
Taro TOP 8 o'clock get up
'Taro gets up at 8 o'clock.'

[iv] RECIPIENT

*Taroo wa Masako **ni** hon o age-ta.*
Taro TOP Masako book ACC give-PAST
'Taro gave a book to Masako.'

[v] ADDRESSEE

*Taroo wa Masako **ni** himitsu o uchiake-ta.*
Taro TOP Masako secret ACC reveal-PAST
'Taro revealed a secret to Masako.'

[vi] EXPERIENCER

*Taroo **ni** wa Masako no kimochi ga wakara-nai.*
Taro TOP Masako GEN feeling NOM understand-NEG
'Taro does not understand Masako's feelings.'

[vii] EXPERIENTIAL CAUSEE

*Taroo wa Masako **ni** sukina fuku o erab-ase-ta.*
Taro TOP Masako favorite dress ACC choose-CAUS-PAST
'Taro let Masako choose her favorite dress.'

[viii] AGENT IN A PASSIVE SENTENCE

*Taroo wa okaasan **ni** shikar-are-ta.*
Taro TOP mother scold-PASS-PAST
'Taro was scolded by his mother.'

[ix] HUMAN SOURCE OF TRANSFER

*Taroo wa Masako **ni** hon o morat-ta.*
Taro TOP Masako book ACC receive-PAST
'Taro received a book from Masako.'

[x] CONCEPTUAL GOAL

*Taroo wa musuko no shoorai **ni** kitaishi-te-iru.*
Taro TOP son gen future hope for-CONJ-be
'Taro is hoping for (the best of) his son's future.'

[xi] CONCEPTUAL SOURCE

*Taroo wa monooto **ni** bikkurishi-ta.*
Taro TOP noise get scared-PAST
'Taro got scared at the noise.'

[xii] RESULT

*Taroo wa isha **ni** nat-ta.*
Taro TOP doctor become-PAST
'Taro became a doctor.'

[xiii] MANNER

*Kodomotachi wa junban **ni** heya ni hait-ta.*
children TOP turns room DEST enter-PAST
'The children entered the room in turns.'

[xiv] COMPARATIVE REFERENCE POINT

*Taroo wa supootsude wa ani **ni** masaru.*
Taro TOP sport LOC TOP brother be superior
Lit: Taro is superior to his brother in sport.
'Taro is better at sport than his brother.'

[xv] CONCEPTUAL REFERENCE SPACE

*Taroo wa suugaku **ni** yowai.*
Taro TOP mathematics weak
'Taro is week in mathematics.'

[xvi] PURPOSE

*Taroo wa toori made kaimono **ni** dekake-ta.*
Taroo TOP street until shopping go out-PAST
'Taro went out to the street for shopping.'

[xvii] REASON

*Amarino kanashisa **ni** koe mo de-nai.*
excessive sadness voice even come out-NEG
'I cannot speak because of excessive sadness.'

[xviii] ADDITIVE

*Taroo no kyoodai wa ani futa-ri **ni** imooto desu.*
Taro GEN siblings TOP brother two-CL sister COP
'Taro's siblings consist of two brothers and a sister.'

[xix] CONCESSIVE CONJUNCTION

*Boku ga chuukokushi-ta (no) **ni** kare wa it-te-shimat-ta.*
1SG NOM advise-PAST NML 3.SG TOP go-CONJ-AUX- PAST
'Although I advised (against it), he went.'

[xx] PRAGMATIC MARKER

*Moo sukoshi ganbare-ba seiseki ga agaru-daroo **ni**.*
more a little try- CONJ marks NOM rise- AUX
'If you tired a little harder, the marks would go up; it is a pity that you don't.'

As evidenced above, *ni* demonstrates an extensive array of usages, both syntactically and semantically. However, as will be show in the next chapter, there are clear limits to its range of application. Of more immediate concern is how to regard these various usages: As evidence of *ni*'s inherent polysemy or as a robust case of homonymy?

Complicating the situation somewhat is the fact that *ni* also figures as a component in a number of complex postpositions which take a [*ni* V-*te*] form where *ni* is followed by a verb in the adverbial form (cf. Table 1) and the conjunctive particle *te*. Some examples are given in (24):

(24) a. ...*ni sot-te* 'along, along the line of' (cf. *sou* 'follow along, be along')

Taroo wa aoi sen ***ni sot-te*** *kami o kit-ta.*
Taro TOP blue line along paper ACC cut-PAST
'Taro cut the paper along the blue line.'

b. ...*ni kagit-te* 'in the exceptional case of, exceptionally' (cf. *kagiru* 'limit')

Kono mise ***ni kagit-te*** *kyoo wa sakana ga hangaku desu.*
this shop exceptionally today TOP fish NOM half price COP
'Today, as an exception in the case of this shop, fish are half-priced.'

c. ...*ni tsui-te* 'about, concerning' (cf. *tsuku* 'place oneself in the position of')

Taroo wa sono koto ***ni tsuite*** *setsumeeshi-ta.*
Taro TOP the matter about explain-PAST
'Taro explained about the matter.'

Other examples of the this type of complex postpositions include *ni kanshi-te* 'about, concerning' (cf. *kansuru* 'relate, concern'), *ni oi-te* 'in, at' (cf. *oku* 'put'), *ni tot-te* 'conceived from the viewpoint of, for (a person)' (cf. *toru* 'take') and *ni yot-te* 'by (in passives), by means of' or 'due to' (cf. *yoru* 'depend'). Matsumoto (1998, 1999) claimed these complex postpositions are the products of grammaticalization processes, whereby verbs have become deverbalized to acquire grammatical functions. While some of them have retained the literal meanings of the verbs (e.g., *ni kanshite* 'concerning'), others have become grammaticalized to the point where there is no similarity in meaning between the two forms (e.g., *ni totte* 'for' vs. *toru* 'take'). Matsumoto (1999) further claimed that the relationships between the source verbs and the resulting postpositions are semantically restricted. Semantic suitability constrains the verbal sources of adpositions.

One piece of evidence supporting the claim that complex postpositions have undergone grammaticalization processes is in their syntactic behavior, as Matsumoto argued. Complex postpositions, as in (25), behave differently from the participial construction, shown in (26), which contain the same verbs. For example, as shown in (25b), no emphasis or focusing particle such as *mo* 'too' can intervene between the components of a complex postposition, while particles can interrupt their participial counterparts, as shown in (26b). Nor can they inflect for morphological processes, such as negation, as demonstrated in (25c), whereas their participial counterparts can, as shown in (26c):

(25) the complex postposition *nitsuite*

a. *Taroo wa sono koto **ni tsuite** shetsumeesi-ta.* [3]
Taro TOP the matter about explain-PAST
'Taro explained about the matter.'

b. **Taroo wa sono koto ni mo tsuite shetsumeesi-ta.* [5b]
Taro TOP the matter too explain-PAST
'Taro explained even about the matter.'

c. **Taroo wa sono koto ni tsuka-nai-de shetsumeesi-ta.*
Taro TOP the matter NEG explain-PAST
Lit: Taro explained not about the matter.
'Taro did not explain about the matter.'

(26) the participial construction *ni tsuite*

a. *Taroo wa kare ni tsui-te doko made mo itta.*
Taro TOP he DAT follow-CONJ anywhere till even go-PAST
'Taro went everywhere, following him.' (Matsumoto 1998: [4])

b. *Taroo wa kare ni mo tsui-te doko made mo itta.* [5a]
Taro TOP he DAT too follow-CONJ anywhere till even go-PAST
'Taro went everywhere, following even him.'

c. *Taroo wa kare ni tsuka-nai-de kanozyo ni tui-te-it-ta.*
Taro TOP he DAT follow-NEG-CONJ she DAT follow-CONJ-go-PAST
'Taro went everywhere, following him.'

Another problem involved in the analysis of the particle *ni* arises from the fact that, like many other grammatical words, *ni* appears in many fixed expressions where (i) the meaning of the expression as a whole is not transparent from the literal meanings of each word, like *ki ni naru* 'bother' in (27a), or (ii) where its meaning is not productive outside that particular expression, like *konna ni* 'as much as this,' in (27b):

(27) a. ***ki ni naru*** 'bother' (cf. *ki* 'mind': *naru* 'become')
*Taroo wa shiken no kekka ga **ki ni nat-te** nemur-e-nakat-ta.*
Taro TOP exam GEN result NOM bother-CONJ sleep-can-NEG-PAST
'Taro could not sleep because the result of the exam was bothering him.'

b. ***konna ni*** 'such as this, as much as this'
***Konna ni** ookuno hito ga kuru to wa omowa-nakat-ta.*
as much as this many people NOM come QT TOP think-NEG-PAST
'I did not think as many as this people would come.'

The expression *ki ni naru* 'bother' in (27a) has been idiomatized to the point where the meaning of each word is not analyzable any more. Other examples of this kind include *mimi ni suru* 'hear' (cf. *mimi* 'ear'; *suru* 'do') and *atama ni kuru* 'upset' (cf.. *atama* 'head'; *kuru* 'come'). As you can see from these examples, this type of expressions

generally involve a body-part noun (such as *mimi* 'ear' and *atama* 'head') and a verb with a rather general meaning (such as *suru* 'do' and *kuru* 'come'), which together describe a psychological event. The expression *konna ni* 'as much as this' in (27b), is not totally opaque semantically, and *ni* may be interpretable as marking some kind of degree or extent. However, this use of *ni* is very low in productivity in that it can be used with only a few other related words, *konna, sonna, donna,* which vary only in the prefixs *ko-* , *so-*, *a-*, and *do-*, in the expressions like *sonna ni/anna ni* 'as much as that,' and *donna ni* 'no matter how much.'

Ni may also be used in expressions which are considered fixed, grammatical (rather than lexical) items. Consider (28):

(28) a. V-*zu ni* 'without Ving'
Taroo wa kutsu mo haka-zu ni tobidashi-ta.
Taro top shoes even put on-without dash out-past
'Taro dashed out without even putting on shoes.'

b. *o*-V *ni naru* (honorific)
Sensei wa moo o-kaeri-ni nari-mashi-ta.
teacher TOP already HON-leave-HON-AUX-PAST
'The teacher has already left.'

In (28a), the string *-zu ni* is attached to a verb in its irrealis form (*mizenkei*) and adds the meaning 'without ...ing' as a fixed form of expression. Similarly, in (28b), the verb *naru* does not convey its literal meaning 'become' any longer. Instead, the whole string *o-V ni naru* is used to express an honorific meaning of the action described by a verb in the adverbial form (*renyookei*). Although some verbs, including *naru* 'become' in (29) and *aru/iru* 'exist' in (30) are used almost always in combination with *ni*, they are not considered as fixed for two reasons: (i) because other particles than *ni* can be used, as shown in (29b) and (30b), and (ii) because other verbs can replace them without much change in meaning, in (29c) and (30c):

(29) a. *Shingoo ga kiiro ni nat-ta.*
traffic light NOM yellow RES become-PAST
Lit: The traffic light became yellow.
'The traffic light turned yellow.'

b. *Pikunikku wa chuushi to nat-ta.*
picnic TOP cancellation RES become-PAST
'Picnic got cancelled.'

c. *Shingoo ga kiiro ni kawat-ta.*
traffic light NOM yellow RES change-PAST
'The traffic light changed to yellow.'

(30) a. *Kono heya ni piano ga ni-dai aru.*
this room LOC piano NOM two-CL exist/INANIM
'There are two pianos in this room.'

b. *Asu kono heya de kaigi ga aru.*
tomorrow this room LOC meeting NOM exist/INANIM
'There will be a meeting in this room.'

c. *Kono heya ni piano ga ni-dai ok-are-te-iru.*
this room LOC piano NOM two-CL place-PASS-CONJ-be
Lit: Two pianos are placed in this room.
'There are two pianos in this room.'

Finally, the difficulty in analyzing the semantic behavior of *ni* may arise from the fact that it is responsible for the formation of other particles. *De* was originally formed through the merging of *ni* and the conjunctive particle *te*, but in MJ it has been treated as a separate particle which is typically used to describe reasons (one of *ni*'s functions, by the way). Similarly, *noni*, which is typically used as a concessive particle, is a form in which the nominalizer *no* has combined with *ni*, but it is generally considered as one word (cf. Matsumura 1971:661). However, as I will discuss in Chapter 3, the meanings of these derived particles exhibit some similarities to those of the lone *ni*.

Ni's wide-ranging syntactic and semantic behavior has posed a serious challenge for traditional classifications of Japanese particles, based as they were on classical models of categorization. I will discuss aims and shortcomings of these previous analyses in the next section.

2.4 Previous Analyses of *Ni*

The term 'particle' (*joshi*) is generally defined as 'a type of non-inflecting postposition' (cf. Kuno 1973; Shibatani 1990; Sadakane & Koizumi 1995). However, by this definition, the term 'particle' is extremely vague, and the task of providing sub-classifications within the class of particles has occupied many generations of scholars of Japanese.

Most traditional studies have based the classification of particles primarily on their syntactic functions. For example, Yamada (1908), referred to in Matsumura (1971) and Hashimoto (1969:22-27), classified particles into six groups on the basis of two criteria:

the types of words to which they are attached (i.e., nouns or verbs) and the grammatical relations they signal (i.e., how their complements are related to other parts of the sentence). Yamada's six groups are given in (31):[5]

(31) The Yamada (1908) Classification

a. CASE PARTICLES (*kaku-joshi*). These follow a noun and describe its grammatical relation to the other parts of the sentence (e.g., *no, ga, o, e, ni, de, to*).

e.g., *Taroo ga Masako no atama o but-ta.*
Taro NOM Masako GEN head ACC hit-PAST
'Taro hit Masako's head.'

b. ADVERBIAL PARTICLES (*fuku-joshi*). These follow various types of words and modify the meaning of the predicate (e.g., *dani, sae, sura, nomi, bakari, made*).

e.g., *Taroo wa Masako ni sae awa-nakat-ta.*
Taro TOP Masako DAT even meet-NEG-PAST
'Taro did not meet even Masako.'

c. CONJUNCTIVE PARTICLES (*setsuzoku-joshi*). These follow a verb or a verb-like word and relate it to the following constituent (e.g., *ga, ba, to, tomo, keredo*).

e.g., *Taroo ga it-ta ga Masako wa i-nakat-ta.*
Taro NOM go-PAST CONJ Masako TOP be-NEG-PAST
'Taro went (there), but Masako wasn't there.'

d. FINAL PARTICLES (*shuu-joshi*). These discourse-related items are used only in clause-final position (e.g., *ka, kana, na, ne*).

e.g., *Kyoo wa tenki ga ii ne.*
Today TOP weather NOM good TAG
'The weather is good today, isn't it?'

e. INTERJECTIONAL PARTICLES (*kantoo-joshi*). These occur in between constituents and describe something about the speaker's subjective state (e.g., *sa, ne*).

e.g., *Taroo ga sa Masako o but-ta.*
Taro NOM INTERJ Masako ACC hit-PAST
'Taro hit Masako, I am telling you.'

f. EMPHATIC PARTICLES (*kakari-joshi*). These attach to various types of words, restricting the form of the sentence final verb, and mainly have pragmatic force (e.g., *koso, sika*).

e.g., *Kondo koso seikoo shi-te-miseru.*
this time surely succeed do-CONJ-show
'I will surely succeed this time.'

Yamada's classification of particles has been very influential and is widely accepted by many grammarians, according to Matsumura (1971) and Konoshima (1973), and yet, a variety of other classifications have also been advanced over the intervening years, notably ones by Hashimoto (1969) and Sakakura (1974). However, while Yamada's analysis is based on classical Japanese, the latter two analyses are based on data from MJ. Hashimoto argued that Yamada's classification is complex and ambiguous because it is based on the

functions of the particles themselves (which, of course, can only be determined on the basis of its syntactic context). Instead, he proposed a nine-way classification based on the functions of the constituent within which the particle is contained. His classification is given in (32). The first six are identical to those in Yamada's taxonomy:

(32) The Hashimoto (1969) Classification

a. CASE PARTICLES (*kaku-joshi*)

b. ADVERBIAL PARTICLES (*fuku-joshi*)

c. CONJUNCTIVE PARTICLES (*setsuzoku-joshi*)

d. FINAL PARTICLES (*shuu-joshi*)

e. INTERJECTIONAL PARTICLES (*kantoo-joshi*)

f. EMPHATIC PARTICLES (*kakari-joshi*)

g. COORDINATIVE PARTICLES (*heiretsu-joshi*). These conjoin two (or more) like lexical categories (e.g., *to, ya, nari*).

e.g., *Are* *to* *kore* *to* *ga* *hoshii.*
that and this and NOM want
'I want this and that.'

h. NOUN MODIFYING PARTICLES (*juntai-joshi*). These follow nouns to form a modified NP. (e.g., *hodo, dake, bakari*).

e.g., *Boku* *wa* *sanzen-yen* *hodo* *mot-te-iru.*
1SG TOP 3,000-yen about have-CONJ-PROG
'I have about three thousand yen.'

i. ADVERB MODIFYING PARTICLE (*junfukutai-joshi*): These follow verbs to form adverbial phrases which modify the main verb. (e.g., *nagara, mama*).

e.g., *Taroo* *wa* *koohii* *o* *nomi* *nagara* *hanashi-ta.*
Taro TOP coffee ACC drink along with talk-PAST
'Taro talked, while drinking coffee.'

Sakakura (1974), on the other hand, based his classification on the speaker's attitude conveyed by the particle and classified them into four groups, each of which contains one or more subgroups. His four-way taxonomy is given in (33):

(33) The Sakakura (1974) Classification

a. CASE PARTICLES. These describe relationships within events (e.g., *ga, no, ni, o*).

b. CONJUNCTIVE PARTICLES. These describe causal or temporal relations between events from the speaker's viewpoint (e.g., *ba, ga, te, noni*).

c. EMPHATIC and ADVERBIAL PARTICLES. These describe the speaker's attitude towards the proposition (e.g., *wa, mo, koso, sae*).

e.g., *Taroo* *wa* *gosen-en* *mo* *mot-te-i-ta.*
Taro TOP 5,000 yen as much as have-CONJ-PROG-PAST
'Taro had as much as 5,000 yen.'

d. FINAL PARTICLES. These attach to the end of the clause and describe something about the speaker's subjective state such as wonder, surprise, and so on (e.g., *ka, na, zo, yo*).

e.g.,	*Boku*	*wa*	*kore*	*ga*	*hoshii*	*na.*
	1SG	TOP	this	NOM	want	FIN

'I want this; I am telling you my desire.'

There seem to be as many different classifications as there are Japanese grammarians and, at this point, there is no readily agreed upon, let alone unified, classification. However, all of these analyses share (at least implicitly) an underlying assumption based on the classical view of categorization, namely, that all the particle categories have clear-cut boundaries. Since the range of functions covered by particles is extremely varied, any rigid classification inevitably proves unsatisfactory in accounting for *all* the possible usage types. Even Sakakura (1974) has admitted as much:

> *So far, I have attempted to classify particles. I have not exhausted all the possible usages, nor do I think mine is the best classification, either, considering the variety of classifications proposed by other scholars. No classification has satisfactorily covered all the possible types of usages exhibited by the particles. However, I simply hope that this will provide a rough idea [about what type of usages particles have]* (1974:314) [brackets and translation mine].

Moreover, these traditional classifications become even more arbitrary and obscure when one tries to apply them to all of the various usages of *ni*. *Ni* exhibits such a wide array of functions (ranging, for example, from an NP-marking postposition to a VP-marking subordinator) that, at the very least, it would have to be multiply cross-classified. Since Japanese linguists have traditionally grouped particles according to their syntactic functions alone, *ni* has been treated as if it were one of several homonymous items. For example, in Matsumura (1971), the various usages of *ni* listed in (23) are categorized into four separate entries because of their different functional behaviors, regardless of the fact that there are clear relationships between the meanings: [i] to [xvii] (despite their semantic diversity) are all categorized as belonging to the same case particle (*kaku joshi*), while [xviii] is treated as a coordinative particle (*heiretsu joshi*), [xix] as a conjunctive particle (*setsuzoku joshi*), and [xx] as a final particle (*shuu joshi*).

Similarly, studies taking a purely diachronic point of view (that is, studies which attempt to describe the historical evolution of the particle) also hold fast to the traditional functional categories—case particle, conjunctive particle, sentence final particle, and so on—and only bother explaining change within each category and not whether the different

functions are related to each other. In Konoshima's (1973) study of various particles (including *ni*), different functions of the particle were investigated separately as if they were associated with different items. Hashimoto (1969) provided a description of historical changes associated with individual usages (i.e., when a certain usage came into use and when it may have disappeared), but no explanation as to *how* they developed and what might have motivated any developments. Pedagogical studies have, again, simply itemized the different senses of the particle, but few have looked into relationships among them or even assumed that there were relationships (cf. Matsumura 1971; Niimura 1976).

The traditional classification of particles based solely on their syntactic functions was criticized by Sadakane and Koizumi (1995), who took a Principles and Parameters approach to the analysis of *ni*. They argued that not all of the usages of *ni* which have been traditionally categorized as case particles (i.e., those exemplified in [i] to [xviii] in (23)) exhibit a syntactically unitary behavior. This admission obviously poses a serious challenge to syntactic analysis of grammatical categories. According to Sadakane and Koizumi, previous syntactic analyses of Japanese particles have been based on a rigid (but untenable) dichotomy between oblique case markers (postpositions) and formal case markers. Postpositions, such as *kara* 'from' and *de* 'with,' are those which have some clear lexical semantic content that is fully realized in combination with its object NP, while case markers, such as the NOMINATIVE marker, *ga*, and the ACCUSATIVE, *o*, are claimed to have little, if any, semantic contents and therefore need not take arguments to which particular thematic roles must be assigned (1995:6). In formal linguistic terms, the former necessarily project their own maximal projection, as illustrated in (34a), while the latter do not, as shown in (34b):

(34) a. [$_{PP}$ [$_{NP}$ John] *kara*]
John from
'from John'

b. [$_{NP}$ John-*ga*]
John-NOM
'John-Nom'

(Sadakane & Koizumi 1995:[1a-b])

Ni presents a problem for any such dichotomy, Sadakane and Koizumi argued, because it exhibits "characteristics of both case markers and postpositions, as well as characteristics of some other categories such as copulas" (*ibid.*:6). Their arguments were based on the results from three operational tests, namely, the floating numeral quantifier construction, clefting with a particle, and clefting without a particle. Case markers and postpositions are expected to behave differently in these syntactic environments, illustrated

below in (35)-(37) (Sadakane & Koizumi's examples [6]-[12]). In (35) with the nominative case marker *ga*, the numeral quantifier *sannin* 'three (people)' can be attached to the *NP-ga* constituent, whereas with the postposition *kara* 'from,' it can not attached to the *NP-kara* constituent. Similarly, in (36), only the postposition *kara* can be retained in the focus position of the clefted sentence, and the case marker *ga* cannot. Same explanation can be given to (37).

(35) FLOATING NUMERAL QUANTIFIER CONSTRUCTION

<u>case markers</u>

a. *[$_{NP}$ San-nin no gakusee-ga] piza-o tabe-ta.*
three-CL GEN student-NOM pizza-ACC eat-PAST
'Three of the students ate pizza.'

b. *[$_{NP}$ Gakusee-ga] san-nin piza-o tabe-ta.*
student-NOM three-CL pizza-ACC eat-PAST
'Three students ate pizza.'

<u>postpositions</u>

c. *John-ga [$_{PP}$ [$_{NP}$ san-nin no gakusee] kara] purezento-o morat-ta.*
John-NOM three-CL GEN students from presents-ACC receive-PAST
'John received presents from three of the students.'

d. **John-ga [$_{PP}$ [$_{NP}$ gakusee] kara] san-nin purezento-o morat-ta.*
John-NOM students from three-CL presents-ACC receive-PAST
*'John received presents three from students.'

(36) CLEFTING WITH A PARTICLE

<u>case markers</u>

a. *[Mary-ga] kinoo piza -o tabe-ta.*
Mary-NOM yesterday pizza-ACC eat-PAST
'Mary ate pizza yesterday.'

b. **[Kinoo piza-o tabe-ta] no wa [$_{NP}$ Mary-ga] da.*
yesterday pizza-ACC eat-PAST NML TOP Mary-NOM COP
'It's Mary who ate pizza yesterday.'

<u>postpositions</u>

c. *John-ga [Mary kara] tegami-o morat-ta.*
John-NOM Mary from letter-ACC receive-PAST
'John received a letter from Mary.'

d. *[John-ga tegami-o morat-ta] no wa [$_{PP}$ Mary kara] da.*
John-NOM letter-ACC receive-PAST NML TOP Mary from COP
'It's from Mary that John received a letter.'

(37) CLEFTING WITHOUT A PARTICLE

<u>case markers</u>

a. *[Mary-ga] kinoo piza-o tabe-ta.*
Mary-NOM yesterday pizza-ACC eat-PAST
'Mary ate pizza yesterday.'

b. *[Konoo piza-o tabe-ta] no wa [$_{NP}$Mary-ø] da.*
yesterday pizza-ACC eat-PAST NML TOP Mary COP
'It's Mary who ate pizza yesterday.'

postpositions

c. *John-ga [Mary kara] tegami-o morat-ta.*
John-NOM Mary from letter-ACC receive-PAST
'John received a letter from Mary.'

d. **[John-ga tegami-o morat-ta] no wa [$_{PP}$Mary-ø] da.*
John-NOM letter-ACC receive-PAST NML TOP Mary COP
'It's (from) Mary that John received a letter.'

The syntactic distinction between case markers and postpositions yielded by these tests is summarized in Table 2:

Table 2. *Summary of Tests for Case Marker vs. Postposition Distinction*
(Sadakane &Koizumi 1995:11)

	numeral quantifier	cleft with a particle	cleft without a particle
case marker	OK	* / ??	OK
postposition	*	OK	* / ? / OK

Sadakane and Koizumi demonstrated that among the 31 different usage categories for *ni* that they posited, only two behave as case markers. These include the RECIPIENT marking function in (23) [iv] and the function to mark 'contact,' which is subsumed in my analysis under the ALLATIVE marking functiion given in [ii]. Eighteen of their categories turned out to be postpositional usages, among which is the marker of the agent in a passive sentence, as in [viii], and the purpose marker in [xvi]. Moreover, some of their usages, including that of marking DIRECTION [ii], pass all the tests, and therefore are ambiguous between being a case marker and a postposition. Sadakane and Koizumi also discussed a few other usages, such as marking the RESULT [xii], which pass none of the tests, indicating that, by these criteria, *ni* in such an instance would be neither a case marker nor a postposition. Based on these results, they claimed that any problems posed by *ni* for traditional approaches can be solved by postulating "several homophonous particles *ni*, including the postposition *ni* and the dative case marker *ni*, as well as a couple of other types of *ni*" (1995:6). They further argued that their results are consonant with data from a child language acquisition study by Morii (as cited in Sadakane and Koizumi), who demonstrated that children learning Japanese acquire case marking usages of *ni* earlier than postpositional ones (Sadakane & Koizumi 1995:23-24).

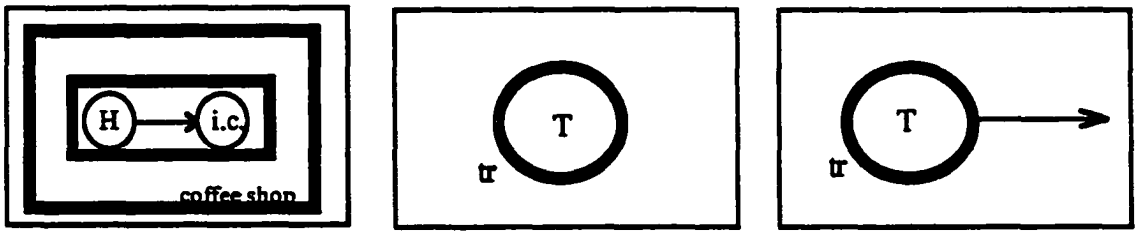
One of the problems of Sadakane and Koizumi's study lies in the fact that their arguments are exclusively grounded in a synchronic analysis of the particle. They do not provide any account as to whether or not, historically, there would have been relationships between the different usages. Moreover, they are solely interested in the *syntactic diversity* of *ni*, and totally dismiss the *semantic similarities* that the different senses encode. In supporting the results from their operational tests, they claimed, for example, the usage to mark what they call a goal indirect object (the RECIPIENT usage [iv] in [23]) and the one to mark dative of direction with a transitive verb (DIRECTION [ii]) are homonymous, when such usages have been demonstrated in multiple typological studies to be similar both semantically, syntactically, historically, and cross-linguistically (cf. Van Belle & Van Langendonck 1996). I will take up this point again in Chapter 4.

Another problem lies in their claim that there are several "homophonous particles *ni*." In making such a claim, they not only contradict themselves—they assume one single *ni* with so many *types* or *categories* of usages, on the one hand, and yet, they claim that they are *homonymous*, on the other—but they cannot help postulating innumerable *ni*'s unnecessarily. The distinction between case markers and postpositions can, instead, be treated as a matter of degree, as claimed by Kumashiro (1994), who takes as I do here a Cognitive Grammar approach to the analysis of Japanese particles.

Kumashiro argued that the senses of grammatical categories including both adpositions and case markers are, when described schematically, interpreted as being on the same continuum. The continuum is defined semantically in terms of a three-way distinction: (i) whether the grammatical morpheme profiles (i.e., designate as obligatorily structure) a relation or complement participant; (ii) whether the phrase marked by the grammatical morpheme acts as a modifier or complement; and (iii) whether the phrase is dependent or autonomous (i.e., presupposes another structure for its conceptual manifestation or not).

Kumashiro demonstrated that the prototypical adpositional phrase can be represented by the Japanese LOCATIVE postposition *de*. Figure 1(a) illustrates a schema for the phrase *coffee shop de* 'at the coffee shop,' as given in (38a). A *de*-marked phrase can be described as (i) profiling a spatial relation and (ii) forming a modifier. Furthermore, it is (iii) a dependent structure since it requires other information to complete it (e.g., the notion 'Taro eat ice cream' is presupposed). The prototypical case marker, represented by the English subject NP is considered to be completely the opposite. In Figure 1(b), which represents the subject nominal 'Taro' in (38b), it (i) not only profiles a participant (rather than a spatial relation), the subject NP in this case, but (ii) it forms a complement, and (iii) it is an autonomous structure. The *ga*-marked phrase in (38c) is much like an English

subject nominal because it (i) profiles a participant, and (ii) forms a complement, but (iii) it is a dependent structure since it requires the noun *Taro* to complete it.



(a) *coffee-shop-de* (b) *Taro* (c) *Taro-ga*

Figure 1. Contrasts in Profiling between an Adposition and a Case Marker (Kumashiro 1994:248)

(38) a. ***Kissaten de Hanako ga aisukuriim o tabeta.*** (1994:236 [1])
coffee shop LOC Hanako NOM ice cream ACC eat-PAST
'Hanako ate icecream at the coffee shop.'

b. ***Taro ate a banana.*** (1994:238 [3])

c. ***Taroo ga banana o tabe-ta.*** (1994:240 [5])
Taro NOM banana ACC eat-PAST
'Taro ate a banana.'

Kumashiro further argued that *ni*'s various senses, such as those which mark GOAL, RECIPIENT, and CAUSEE, can be characterized as occupying the middle ground between the prototypical adposition and the prototypical case marker on the same continuum. However, Kumashiro's adposition vs. case marker distinction is one-dimensional, and therefore does not account for the possible semantic connections between case-marking and adpositional usages, which otherwise may fall off this narrowly defined continuum. What I will be advancing in the next chapter is a more multi-dimensional approach to *ni*, one which paints a more complete picture of this complex and many-faceted lexical category by linking usages to conceptual domain rather than syntactic context.

In this chapter, I have shown that *ni* exhibits an extensive array of usages, both syntactically and semantically. Syntactically speaking, it functions as a case marker, a postposition, a conjunctive particle, and a coordinative particle, as well as a final particle. Semantically speaking, its senses vary from marking a simple SPATIAL LOCATION to RECIPIENT to a PASSIVE AGENT to PURPOSE to a CONCESSIVE clausal relation, as well as a large number of other relations. I have argued that traditional classifications of Japanese particles have been arbitrary and underspecific (or overspecific yet unmotivated sometimes), and they have failed to account for semantic similarities between different grammatical functions

of *ni*, on the one hand, or to explain why and how the syntactic and semantic differences associated with the particle came to be, on the other.

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[1] Konoshima (1973) claims that the division between Old Japanese (OJ) and Modern Japanese (MJ) can be drawn around the Muromachi Era (14c.-15c.), until around which time *kakari-musubi* — a linguistic phenomenon roughly characterizable as uses of an emphatic particule, such as *zo, namu, ya, ka,* determining the form of the predicative verb in the sentence — was remarkably common. I provide more discussion about the differences between MJ and OJ in Section 4.4.1.

[2] Vowel verbs are those which end in either *-iru* or *-eru* in their conclusive form, while consonant verbs end in one of the nine syllables: *-u, -tsu, -ru, -ku, -gu, -su, -nu, -mu,* and *-bu*. There are also several irregular verbs in Japanese, such as *kuru* 'come,' *aru* 'exist,' and *suru* 'do.'

[3] It is not totally clear to me whether the verbs or adjectives are in the attributive form or the conclusive form. Although it is generally considered that these conjunctive particles are attached to the attributive form (e.g., Matsumura 1971, Niimura 1976), the difference between the attributive form and the conclusive form is surfaced only with adjectival nominatives (*keiyoodooshi*), as shown in Table 2.1. Moreover, as noted by Nishio et al. (1986), adjectival nominatives may be attached in the conclusive form, too.

[4] I acknowledge that different interpretations may be possible depending on the context. Various factors, such as tense (present vs. past), noun type (specific vs. generic), and sentence type (simple vs. complex) should be considered in analyzing the usage of *ga* and *wa*. For more discussion, please refer to Kuno (1973), Hinds et al. (1987), and Cook (1993).

[5] The English translations are those given by Shibatani (1990:334).

CHAPTER THREE
A MULTIDIMENSIONAL ANALYSIS OF *NI*

3.1 Introduction

The previous chapter outlined the functional and semantic diversity of *ni* and mentioned some of the problems that any synchronic analysis of the particle must face. The claim under discussion is this: *Ni* is a lexically and grammatically complex item. What is at issue is how best to explain and represent this categorial complexity. This chapter describes the distributional behavior of *ni* in depth and attempts to integrate the various senses within a unified semantic analysis of the particle. Section 3.2 introduces two general concepts or mental models that are central to Cognitive Linguistics (henceforth CL) which will also be central to my analysis of the semantic structure of *ni*: The old localist notion of metaphorical extension across semantic domains on the one hand and that of Langacker's action chain based on image schemas on the other. In 3.3, I take each of *ni*'s various senses and situate it to its use in a particular semantic domain. Cross-domain metaphorical extension is wide-spread in language diachronically and it is clearly responsible for much of *ni*'s synchronic polysemy. That is, despite their application in different semantic domains, there is commonality underlying most of *ni*'s usages in Modern Japanese (henceforth MJ). I will invoke the action chain model to account for similarities among different usages of *ni*. In Section 3.4, I sketch out a provisional network model that can account for the semantic structure of *ni*.

3.2 The Construal and Coding of Events in Cognitive Domains

Taken together, the localist-based notion of semantic domain and Langacker's action chain model (1991a/b) provide a general framework for this discussion of the semantic structure of *ni*. The notion of semantic domain, originally introduced by Anderson (1971), allows us to characterize all semantic roles, no matter how concrete or abstract, in spatial terms. Hence, all relations between event participants at the propositional level can be understood in terms of five basic spatial relations: SOURCE, GOAL, THEME, PATH, and LOCATION. These five spatial roles are considered archetypal, so some part of their basic spatial sense is preserved when they are used to denote a non-spatial relation. That is, due to the power of

metaphor, most abstract relations have their linguistic origins in spatial concepts. The internal structure of a complex lexical item is therefore characterizable in terms of *conceptual domains* which are organized in a hierarchical relationship. Langacker's action chain model, on the other hand, provides a way of accounting for both case-marking hierarchies crosslinguistically as well as differences and similarities between basic and marked clause structure patterns within a language. In the following, I discuss each of these models in turn.

3.2.1 *Semantic Domains in a Network Model*

Words do not randomly acquire new senses. In the case of polysemous expressions, where a form is associated with multiple meanings, some of these meanings may be considered to be more concrete than others, and some may be more closely associated than others. And yet, when examined closely, the relationships between the various meanings are never arbitrary, but instead exhibit a large degree of systematicity. Of primary importance as a connecting mechanism between different senses is *metaphor.*

Metaphor, generally defined as the understanding of one concept in terms of another, has traditionally been viewed as characteristic of literary language alone. In CL, by contrast, metaphor is claimed to be "pervasive in everyday life, not just in language but in thought and action" (Lakoff & Johnson 1980:3). Johnson (1987:xxi) defines metaphor as "a pervasive, indispensable structure of human understanding by means of which we figuratively comprehend our world."

Central to the understanding of metaphor is the notion of *semantic domain.* Meanings are characterizable as literal or figurative depending on their inclusion in or relevance to the particular semantic domain necessary for their interpretation. Consider the use of *in* in the contrastive pair of sentences given in (1). In (1a), *in* describes the physical location of the subject with respect to a container-like setting, *the living room*, and the entire event transpires in the domain of *physical space.* By contrast, the use of *in* in (1b), dealing with *the good mood* or "emotional location" of the subject, is identified with a more abstract domain, which we could call *conceptual space.*

(1) a. She is *in* the living room.
b. She is *in* a good mood.

The relationship between these two uses of *in* involves metaphor, which allows us to conceptualize one notion, the target idea of emotional state, in terms of some source idea, that of physical location in space. A number of entailments follow or are preserved by the metaphor, such as moving into and out of locations/moods or not being able to be in more than one location/mood at the same time. Thus, metaphor is a major structuring force in semantic extension which operates *between* domains (Sweetser 1990:19). Lakoff & Johnson (1980) documented just how systematically spatial expressions have extended metaphorically to describe more abstract concepts, such as feelings in (2a), control in (2b) and quality in (2c):

(2) a. HAPPY IS UP; SAD IS DOWN

I am feeling *up*.
My spirits *rose*.
I am *depressed*.
I *fell* into a depression.

b. HAVING CONTROL IS UP; BEING SUBJECT TO CONTROL IS DOWN

I have control *over* her.
He's *at the height* of his power.
He is *under* my control.
He is *low man* on the totem pole.

c. GOOD IS UP; BAD IS DOWN

Things are looking *up*.
Things are at an all-time *low*.
He does *high*-quality work.

(Lakoff & Johnson 1980:15-16)

Numerous grammaticalization studies have demonstrated that metaphorical extensions tend to proceed *unidirectionally* (e.g., Sweetser 1990; Heine et al. 1991; Hopper & Traugott 1993). That is, language that describes physical or concrete phenomena can come to describe non-physical and abstract phenomena, but not the other way around. For instance, we use spatial language to talk about time or causality and not vice versa.

Despite a general agreement among grammaticalization theorists and cognitive linguists on the extensiveness and unidirectionality of metaphor, there has been no consensus at this point as to how many semantic domains are to be identified, much less as to what the nature or conceptual content of each domain might be. Nor has there been any univocal claim as to which domain is the most concrete or how or whether all those multiple domains are related to each other in a conceptual hierarchy (cf. Rice et al. 1999).

Nevertheless, Anderson's (1971) localist model first gave prominence to the idea of semantic domains. Central to localism is the claim that spatial expressions are more basic,

grammatically and semantically, than various kinds of non-spatial expressions and therefore they generally serve as structural templates for the latter. Anderson argued that syntactic (i.e., non-spatial) constructions, such as dative and possessive relations, as shown in (3b) and (3c), are reducible to spatial relations as illustrated in (3a), by introducing underlying structures such as (3b') and (3c'), respectively:

(3) a. John walked [$_{loc}$ *to* the door].
b. John told Mary the story.
b.' John told the story [$_{loc}$ *to* Mary].
c. John owns the house.
c.' The house belongs [$_{loc}$ *to* John] .

'Directional' or 'dynamic' locative relations, manifested in English by the ablative marker *from* as in (4a), contrast with purely stative locative relations. Verbs like *buy* in (4b) are characterized as being basically directional, as shown by the paraphrase in (4b'). Parallel relations are observed for a variety of verb pairs which seem to be semantic converses of each other, such as *borrow/lend, teach/learn*, and *give/obtain*. These so-called 'directional' verbs contrast with verbs like *possess, belong*, and *own*, which are inherently non-directional. Anderson further demonstrated that clauses with verbs like *help* in (4c) are similar to those containing *give* and other directional verbs in that they are considered to be variants of a common underlying structure, as shown in (4c'):

(4) a. The ball rolled from Jane to Mary. (Anderson 1971:119 [lxv])
b. John sold the book to Mary. (*ibid.*:129 [lxxx 1a])
b.' The book was sold by John to Mary. (*ibid.*:129 [lxxx 2a])
c. Mary helped anyone who asked.
c.' Mary gave help to anyone who asked. (*ibid.*:142 [cvii])

In short, Anderson claimed that an interconnection exists between spatial and non-spatial meanings. This idea has been the cornerstone of nearly two decades' worth of research in CL. It is an idea maintained and elaborated on by some grammaticalization theorists, such as Traugott (1982, 1989) and Sweetser (1990), who have long been interested in demonstrating how metaphorical shifts across domains (a diachronic process) can give rise to polysemy (a synchronic phenomenon).

Traugott (1982) originally proposed a 3-level system, which she claimed corresponds to the historical changes that a logical connective tends to undergo. According to her, many English expressions, not just connectives, exhibit shifts from *propositional* usages

through *textual* ones until they take on what she called *expressive* meanings. For example, *why* has developed from a simple question word in (5a) with propositional force into a complementizer in (5b) with textual force, to the hearer-engaging *why* particle in such expressions as (5c) which has expressive force:

(5) a. *Why* did you behave so badly?
b. That is *why* he returned.
c. If you have any trouble reaching her, *why*, just feel free to call me.

(Traugott 1982:255)

The three content levels she posited are illustrated in Figure 1. I have taken the liberty of equating her use of the term "levels" with the concept of "semantic domains" which I am advancing here.

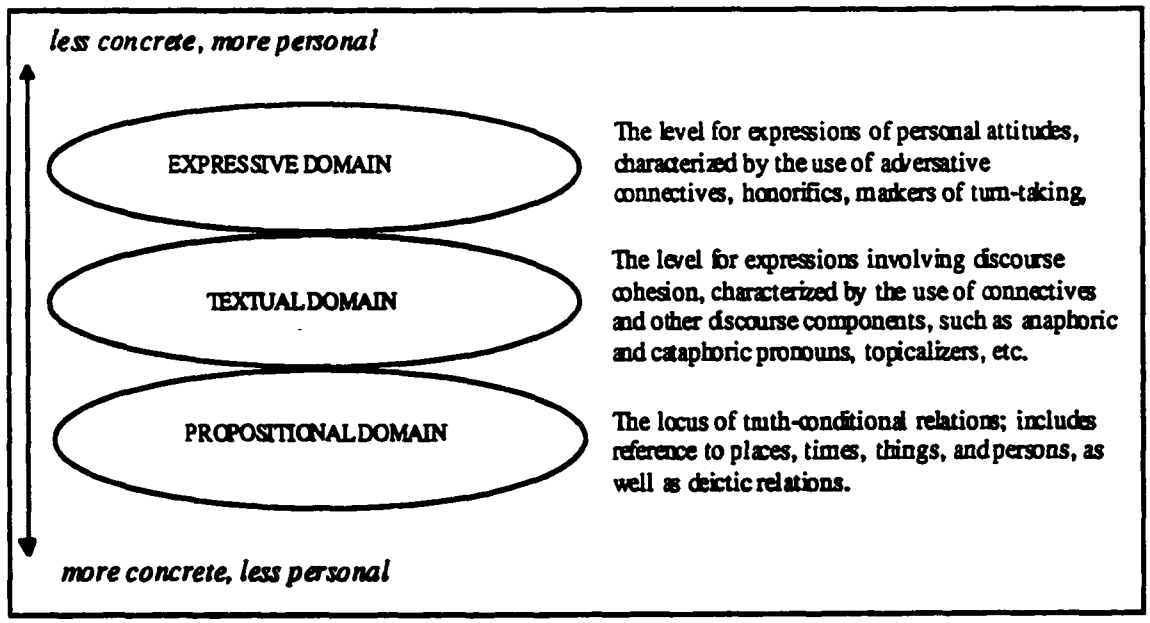

Figure 1. Traugott's (1982, 1989) Three-Level Model of Functional/Semantic Space

The most basic domain for Traugott is the PROPOSITIONAL DOMAIN, which is the "main locus of truth-conditional relations" (1982:248). This domain provides conceptual content for deictics to places (*here-there*), times (*now-then*), and persons (*I-you*), all of which, Traugott claimed, are subject to referential verification. The TEXTUAL DOMAIN, on the other hand, which has to do with the "resources available for creating a cohesive discourse" (*ibid.*), includes various connectives (e.g., *but*, *and*, and *therefore*) and some other

pragmatic discourse elements, such as anaphoric and cataphoric pronouns, topicalizers, relativizers, and so forth. The EXPRESSIVE DOMAIN is considered the most evolved and abstract and evolved since it concerns "the resources a language has for expressing personal attitudes to what is being talked about, to the text itself, and to others in the speech situation" (*ibid.*).

In accordance with Traugott's model, Sweetser (1990) argued that verbs of perception, modals, conjunctions, and conditionals in English have all undergone historical changes across a number of semantic domains. For example, the uses of *because* in (6) and those of *and* in (7) exhibit multiple meanings, each of which is identified with a particular semantic domain:

(6) a. John came back *because* he loved her. (1990:77 [1a-c])
b. John loved her, *because* he came back.
c. What are you doing tonight, *because* there is a good movie on.

(7) a. --What happened to Mary? (*ibid.*:87-88 [23])
--She got an M.A. in basketweaving *and* she joined a religious cult.
b. --Why don't you want me to take basketweaving again this quarter?
--Well, Mary got an M.A. in basketweaving, *and* she joined a religious cult.
(*ibid.*:87-88 [24])
c. Darling, you're wonderful, *and* how about dinner at Chez Panisse tonight?
(*ibid.*:89 [29])

The use of *because* in (6a) describes real-world causality; that is, John's love was the real-world cause of his coming back. This is a deontic use of *because*. The use of *because* in (6b), on the other hand, is understood as meaning that the speaker's knowledge of John's return causes the conclusion that John loves her. This is an epistemic use of *because*. In (6c), the *because* clause gives the reason behind the use of the *speech-act* embodied by the main clause, and the reading is something like "I ask what you are doing tonight because I want to suggest that we go see this good movie" (1990:77). Similarly, the connective *and* in (7a) is interpreted as indicating iconic narrative word-order. It is tacitly assumed that Mary's receipt of a Master's degree preceded her joining the religious cult. In (7b), the clauses do not simply reflect the temporal sequence of narrative events as in (7a). Instead, *and* conjoins the logical premises side-by-side. The sentence is interpreted as meaning that one concludes the likelihood of cult-joining from the knowledge that a person has a basketweaving M.A. In (7c), on the other hand, *and* conjoins speech-acts, rather than

content items or logical premises. The sentence would be interpreted as meaning something like "I *tell* you that you are beautiful, and I *propose* that we go out for dinner at Chez Panisse tonight."

Based on data like (6) and (7) above, Sweetser identified three major semantic domains; the SOCIO-PHYSICAL (or content) DOMAIN; the EPISTEMIC DOMAIN, and the SPEECH-ACT DOMAIN. Sweetser's multi-domain model, responsible for much of the polysemy associated with certain classes of lexical items such as verbs of perception and conception, modals, and connectives, is illustrated in Figure 2:

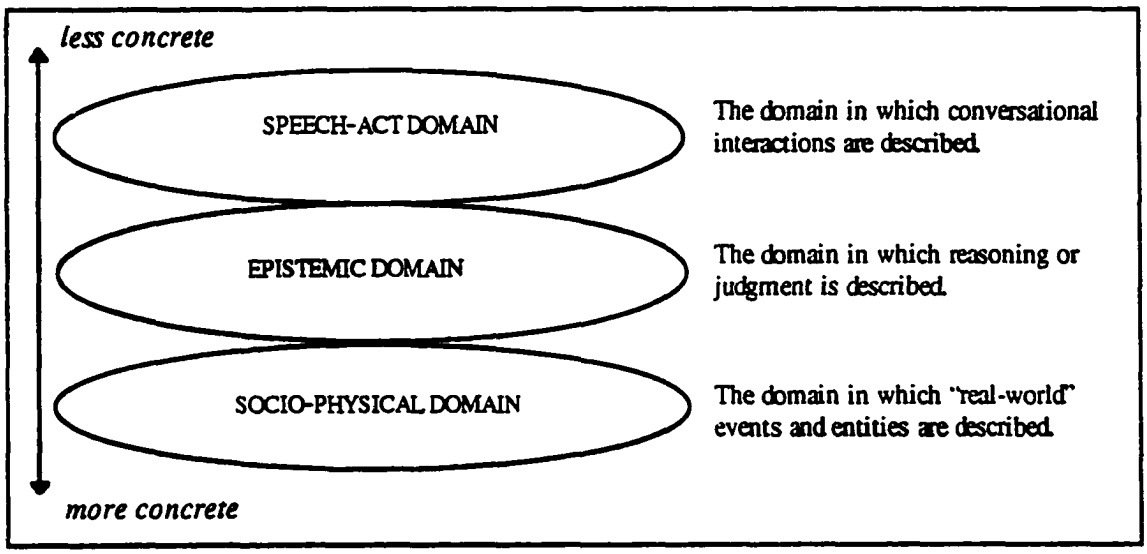

Figure 2. Sweetser's (1990) Three-Domain Model

The most concrete of Sweetser's domains is the SOCIO-PHYSICAL, which she further subdivided into the domain of physical action, motion, and location (the realm of the purely physical) and a less concrete domain of interpersonal interaction (the social realm). The sociophysical domain is where most real-world events transpire and is generally considered the most basic conceptually. Consequently, language first emerges (both historically and developmentally) to encode events and relations pertaining to the sociophysical arena. It is precisely the language of space and social interaction which so readily extends to encode events or relations transpiring in other domains

For Sweetser and most other cognitive linguists, a less concrete domain is the EPISTEMIC DOMAIN, where reasoning, causation, and subjective judgments are described. An epistemic expression may convey necessity, probability, or possibility in reasoning, as

illustrated in (8a), the cause of his or her conclusion in (8b), or the condition for concluding the truth of the proposition in (8c):

(8) a. John *must* be home already; I see his coat. (Sweetser 1990:49 [2])
(Compare: John *must* be home by ten; Mother won't let him stay out any later.)

b. *Since* John isn't here, he has (evidently) gone home. (*ibid.*:78 [3b])
(Compare: *Since* John wasn't there, we decided to leave a note for him.)

c. *If* she's divorced, (then) she's been married. (*ibid.*:166 [6])
(Compare: *If* Mary goes, John will go.)

Expressions concerning aspects of conversational interaction are relegated to the SPEECH-ACT DOMAIN, which is the locus of the most abstract kinds of relations in language. This is the domain where a speaker may express permission or obligation in the conversational world, as illustrated in (9a); causal explanation of the speech act being performed, as in (9b); or conditions on the fulfillment of the subsequent speech act, as in (9c):

(9) a. I *must* tell you that father wants you home, though I'd rather not. (*ibid.*:73 [44])

b. *Since* you're so smart, when was George Washington born? (*ibid.*:78 [3c])

c. *If* it's not rude to ask, what made you decide to leave IBM? (*ibid.*:118 [10])

Sweetser expressly demonstrated how epistemic usages of modal verbs in English grew out of root or deontic (socio-physical) senses. In (10) and (11), I contrast the root and epistemic meanings of the modal verbs *may* and *can't*:

(10) a. John *may* go to the party. [deontic meaning]
≈ 'He has my permission to attend the party.'

b. John *may* go to the party. [epistemic meaning]
≈ 'It may be the case that he attends the party.'

(11) a. You *can't* lift 500 kilos. [deontic meaning]
≈ 'You are unable to lift 500 kilos; it's not humanly possible.'

b. You *can't* be from my hometown. [epistemic meaning]
≈ 'It can't be the case that you are from there because otherwise I would already know you.'

Furthermore, the sense of *can* given in (12) is best characterized as being situated in the SPEECH-ACT or CONVERSATIONAL DOMAIN and not in the SOCIOPHYSICAL or EPISTEMIC ones (1990:71 [41]):

(12) Editor to journalist: "OK, Peking *can* be 'Beijing,' but you can't use 'Praha' for Prague."
≈ 'OK, *you can refer to* Peking as Beijing,....'

The two models, Traugott's (1982) functional-semantic model and Sweester's (1990) polysemy model are fairly comparable to each other although they each focus on different aspects of conceptual content. While Traugott was mainly interested in mapping the historical development of lexical items to texual and pragmatic markers, Sweester attempted to account for the metaphorical structure of the concrete-to-abstract semantic extensions as well as the deontic-to-epistemic meaning change of modality. Moreover, the boundaries between domains differ somewhat between the two models. What is important to us here, however, is the fact that both models recognize a similar kind of semantic development in language from meanings originally relegated to the more concrete physical and social world into the world of logical reasoning and conversational interaction. Semantic extension involves increasing abstraction and increasing subjectification in these models.

By contrast, Genetti (1991) proposed a metaphorical model involving projections between *four* semantic domains, domains which had originally been proposed by Diehl (1975) as cited in Genetti. Genetti felt that such a model gives the best account of the semantic relationships between postpositions and subordinators in Newari, a Tibeto-Burman language spoken in Nepal. As shown in Figure 3, Genetti's model captures the case distribution in Newari by postulating two dimensions. The first dimension contains the three "deep" semantic cases common to the localist model. The second dimension contains the four semantic domains which, she claimed, are ordered in terms of an "egodeictic hierarchy" which correlates with relative abstractness (Genetti 1991:231). The SOCIAL DOMAIN indicates location with respect to human interaction. Case relations such as DATIVE and INSTRUMENTAL are applicable in this domain. The SPATIAL DOMAIN involves the location and movement of physical objects in space. The TEMPORAL DOMAIN situates events in time. Finally, in the LOGICAL DOMAIN, propositional relations, such as conditionals, causality and purpose, are located.

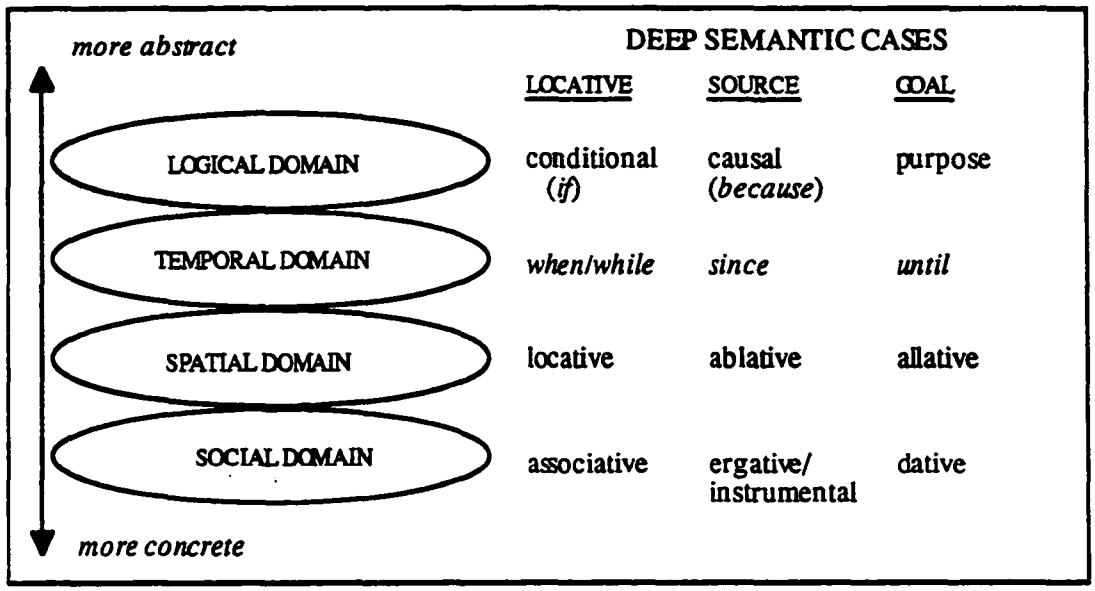

Figure 3. Genetti's (1991) Four-Domain Model Illustrating the Distribution of Cases and Conjunctions in Newari

Based on data collected from Classical Newari texts, Genetti demonstrated how case markers designating relations in a more concrete domain have come historically to code conceptually similar relations in more abstract domains. For example, the conditional subordinator meaning 'if' is etymologically related to the locative marker, whereas the purpose marker grew out of the dative marker (Genetti 1991:238-9). As I will discuss later in this chapter as well as in the next chapter on the grammaticalization study, the two spatial senses of the Japanese *ni* seems to have undergone separate semantic developmental paths to acquire different subordinative meanings. Genetti further argued that this process of semantic change is also accompanied by syntactic change, since the Newari postpositions which originally were used to code relations between arguments eventually evolved to code relations between propositions. Such cross-categorial change in spite of an underlying semantic unity has been termed **heterosemy** by Lichtenberk (1991a) and others.

While the four different domain models discussed above are intended to account for the semantic versatility and/or functional change of linguistic categories, they are nevertheless taken as being implicit models of semantic *representation*. Sweetser has gone so far as to claim:

> *A further positive result of this historical analysis is that it is equally applicable to synchronic polysemy-structure. A unified concept of semantic "relatedness," in which one frequent kind of relation is metaphor, can account for both synchronic lexical-meaning structure and diachronic directions in semantic change* (1990:145).

Following Sweetser and other cognitive linguists, I assume that synchronic polysemy patterns are the result of grammaticalization, and grammaticalization is the product of human cognitive activities. As has been widely documented in the grammaticalization literature on adpositions, semantic and functional extensions seem to be motivated by metaphorical conceptualization, which typically proceeds from more concrete to more abstract usages (e.g., Genetti 1991; Craig 1991; Bybee et al. 1994). Any synchronic model of semantic structure should then at least partially reflect diachronic change, as Sweetser has claimed.

My own analysis of the semantic structure of *ni* is based on assumptions shared by these localistic grammaticalization studies. That is, I believe that lexical and constructional meanings must be characterized relative to a particular background domain; that these domains are organized hierarchically, both conceptually and diachronically in terms of their concreteness and/or abstractness; and that linguistic expressions originally associated with one domain may extend to others.

My model for the semantic structure of *ni* is a hybrid of the four models discussed above. I posit six domains which afford the most comprehensive and detailed analysis of *ni*, as shown in Figure 4.

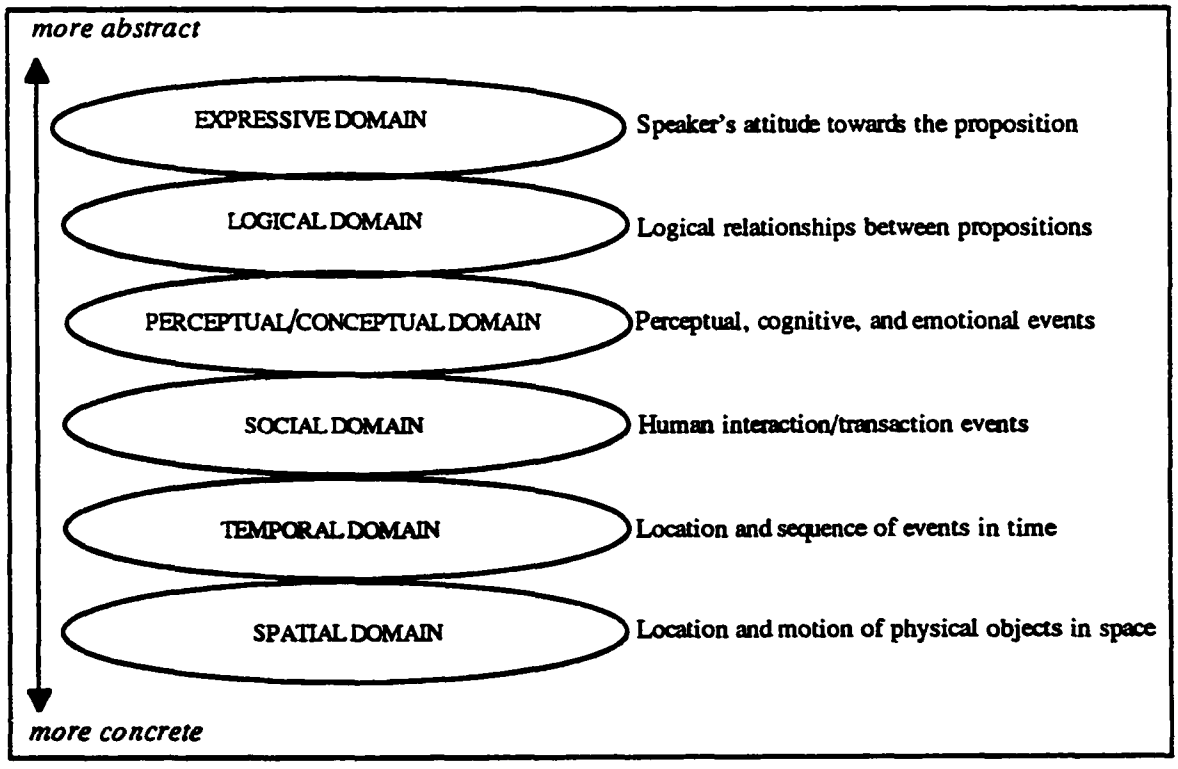

Figure 4. A Provisional Model for the Semantic Structure of *Ni*, Showing the Major Domains and their Semantic Content

The six domains are organized in order of their apparent concreteness or abstractness. I hypothesize that the most concrete is the SPATIAL DOMAIN, in that the relations described in this domain are externally (or physically) defined, based on our direct bodily experience. Almost as equally basic is the TEMPORAL DOMAIN, in which temporal relations are described spatially due to the pervasive TIME IS SPACE metaphor (Lakoff & Johnson 1980). In the SOCIAL DOMAIN, *ni* marks an extensive range of relations describing human interactions. Although I (provisionally) hypothesize that spatial relations are more concrete because they are based on the actual location and motion of objects in the physical world, it is quite possible that speakers consider the SOCIAL DOMAIN to be the most concrete since human interaction seems to be experientially privileged conceptually. The DOMAIN OF PERCEPTION/CONCEPTUALIZATION is considered to involve a greater degree of abstractness and so is located higher up in the domain hierarchy. Cognition, after all, deals with non-physical abstractions such as percepts, ideation, feelings, and emotions—entities or events which are located or transpire internally or subjectively. Still more abstract is the LOGICAL DOMAIN, where relationships between propositions are described. In this domain, *ni* marks PURPOSE, REASON, and CONCESSIVE relations. *Ni* further exhibits pragmatic usages pertaining to the EXPRESSIVE DOMAIN, which I argue is the most abstract in that it deals with the speaker's attitude towards the proposition itself.

It should be emphasized, however, that all of the domain models proposed earlier are based on assumptions and claims made by grammaticalization theorists and cognitive linguists. While they are useful for descriptive analysis, they have yet to be attested empirically or psychologically. In short, their representational utility is confined to linguistic description. In Section 3.3, I will build upon this macro-model and propose a more detailed model of *ni* at the "micro-semantic" level than those presented in Chapter 2. My model will distinguish individual sense types first and foremost on the basis of their association with a relevant semantic domain as shown in Figure 4. Within each domain, however, more particular sense distinctions will be identified and motivated. At the end of the chapter, a full-blown lexical network model of *ni* will be proposed. In Chapters 4 and 5, the semantic model will be subjected to empirical findings based on historical, typological, textual, developmental, and psycholinguistic evidence. Before we turn to the detailed analysis of *ni*, I must discuss two other notions critical for my analysis: image schemas and the action chain.

3.2.2 *Image Schemas and the Action Chain*

At the heart of CL is the belief that meaning is equated with conceptualization. Since conceptualization reflects cognitive processing, one of the goals of CL is to characterize the cognitive events that the speaker/hearer experiences mentally. *Image schemas* have been advanced by researchers in CL as a candidate notational device for such characterization. Johnson (1987) described the notion of image schemas as follows:

> *[I]n order for us to have meaningful, connected experiences that we can comprehend and reason about, there must be pattern and order to our actions, perceptions, and conceptions.* A schema is a recurrent pattern, shape, and regularity in, or of, these ongoing ordering activities. *These patterns emerge as meaningful structures for us chiefly at the level of our bodily movements through space, our manipulation of objects, and our perceptual interactions* [emphasis in original] (1987:29).

Image schemas, Johnson added, have a dynamic character. They are not fixed or static images as suggested by the visual diagrams which represent them. Instead, they are associated with a certain flexibility, grounded as they are in bodily experience. There are, however, a few basic elements or components that are related by definite structures, although they can take on any number of specific instantiations in varying contexts. Johnson provided examples of image schemas for the two basic senses of *out*, as shown in Figure 5 and as illustrated by sentences (13a) and (13b) respectively:

(13) a. John went *out* of the room.
b. Roll *out* the red carpet. (Johnson 1987:32-33)

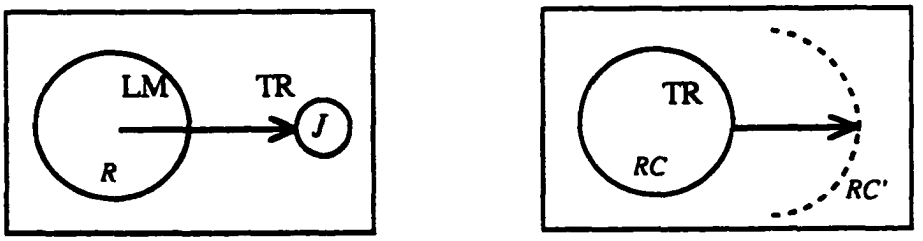

Figure 5. Two Basic Image Schemas for *Out* Proposed by Johnson (1987:32)

In these cognitive models, each schema illustrates how a trajector (TR)—the primary figure in a profiled relationship—moves in relation to a landmark (LM)—a salient substructure other than the trajector in the relation. In (a), for example, the larger circle indicates the container LM out of which the TR moves along some path indicated by the arrow. Take,

for instance, the *out* in "John went out of the room" in (13a). Here the LM circle, R, represents the room, and the smaller circle labeled J for John, as TR, moves into a position outside of it. Obviously, the schematic diagram in (a) gives us an idealized image of the elements in the event, since the room need not be circular, John need not move along a straight line in leaving the room, and no indication of where he moves to is given. Aspects of this basic schema underlie the meaning of *out* in (b), as well, where the TR and the LM are equated with the same entity so that the process predicated by the *out* relation really just indicates that the TR, the red carpet, RC, gets extended out from its original configuration to become RC'. Nevertheless, despite the particular realizations in each instance, there is some degree of semantic congruity holding between these two usages—which is what the image schematic diagrams are meant to capture.

The other theoretical notion central to my analysis of *ni* is that of the *action chain* (Langacker 1991a/b). As an image schematic structure in its own right, the action chain model characterizes various aspects of finite clause structure. A clause, after all, more or less represents a single event or a single set of relations between entities. Importantly, in the action chain model, some gestalt interaction described in an event is understood in terms of energy transmission, much as transpires between billiard balls in motion on a pool table. The elements of this model are space, time, participants, and energy, which are conceived as constituting a world in which discrete objects (i.e., participants) move around in space, make contact with one another, and participate in energetic interaction (i.e., the event). Figure 6 is a schematic illustration of the model.

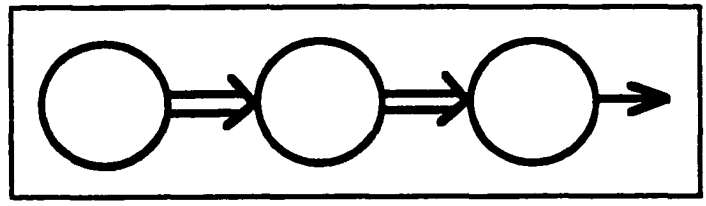

Figure 6. An Action Chain

The model in Figure 6 represents a kind of interaction involving three participants (indicated by the three circles) whereby one participant (the leftmost circle) makes forceful contact with another, resulting in the transfer of energy (indicated by a double arrow). The second participant is then driven into contact with a third, again resulting in a transmission of energy and causing it to move as well. However, since it only moves (indicated by the single arrow) and does not interact further with another participant, it can be thought of as the end result or state of the entire event chain. Put another way, the energy gets

exhausted by the final participant. Because the action chain depicts an event as an instance of energy transfer, the agent who instigates the action is represented as the *head* or start of the action chain. Likewise, the patient is typically the participant who gets affected by the transmission of energy or contact with the agent, so is generally represented as the *tail* or end of the action chain. There may be other participants depicted, as well, such as an instrument or a recipient. Of course, most predicated events are not as complicated as the action chain image schema diagrammed in Figure 6. Most action chain representations of events only involve subportions of this chain. Or rather, in any given configuration of an action chain, only certain portions of the chain will be highlighted (or 'profiled' to use Langacker's terminology), while the rest serves as background information. What gets highlighted is equivalent to what gets expressed in the clause. Consider the sentences in (14), all of which pertain to the same underlying event, although they each encode or construe it differently. The event involves three participants: an agent, an instrument, and a patient (which undergoes a profound change).

(14) a. Floyd broke the glass (with the hammer).
b. The hammer (easily) broke the glass.
c. The glass (easily) broke.

(Langacker 1991b:216 [5])

Sentence (14a) illustrates the most canonical clause type, a transitive clause. In a transitive clause, the agent is encoded as the subject and the patient as the direct object. Any additional participant in the event, such as an instrument or recipient or location, is encoded in a modifying phrase which is usually optional. Moreover, the full action chain is profiled, as shown in (a) in Figure 7. Since the subject is the agent, it is portrayed as the 'head' of the highlighted portion of the chain or the TR. In (14b), only the instrument and the patient are profiled, with the instrument coded as the subject (TR) this time, as illustrated in (b). However, still implicit in the construal is the notion of an agent who used the hammer to break the glass. Finally, in (14c), only the patient's change of state is profiled since the patient is chosen as subject (TR) and no other event participants are mentioned explicitly.

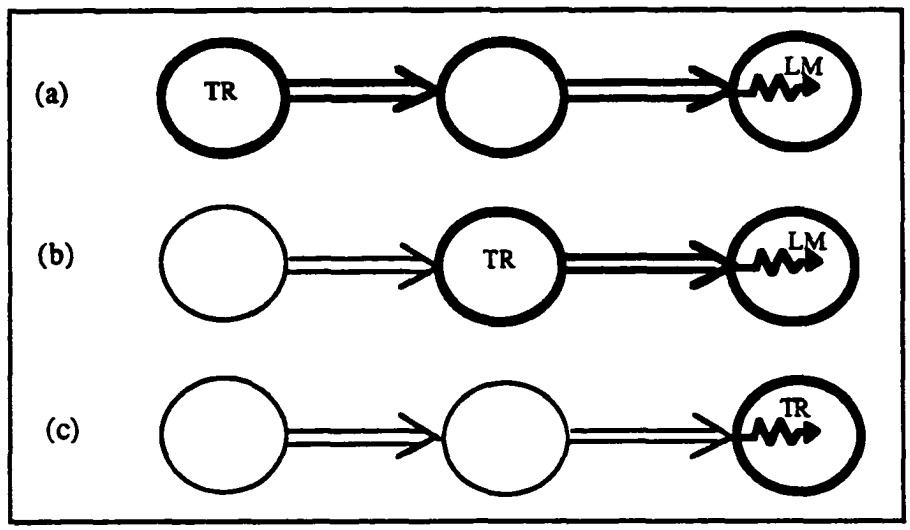

Figure 7. Three Related Action Chains Depicting the Three Related Clause Structures Given in (14)

The types of interactions that an action chain model can describe also vary. Figure 8 is a model for a prototypical transitive clause, as illustrated in (15), involving an AGENT participant, in its normal position as *head* of the action chain, and a PATIENT participant, which is canonically represented as the *tail* of the action chain. In these events, the result of the energy transmission between agent (TR) and patient (LM) is an internal change of state on the part of the latter, as indicated by the squiggly arrow:

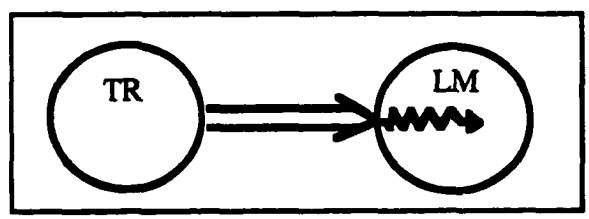

Figure 8. An Action Chain Schema for a Prototypical Transitive Clause

(15) a. John broke the window.
b. Yesterday, Bill kicked the dog.
c. The burglar killed Mike.

A participant in an action chain does not necessarily undergo an *internal* change of state, as is the case with the prototypical PATIENT. Many alternative events or resulting states can be represented in a transitive clause and, therefore, in an action chain. For example, the clause in (16a) involves a direct object participant, which *moves* with respect to its external

surroundings; the clause in (16b) involves an EXPERIENCER, who undergoes a particular type of sensory and emotional experience; and the clause in (16c) involves an EXPERIENCER as well as a MOVER, who experiences both external and internal change:

(16) a. Jones threw a rock.
b. Penelope tickled her little sister.
c. Holmes knocked his opponent against the ropes.

(Langacker 1991b:219 [8])

The notion of action chain characterizes the relations between the most salient, the most prevalent, and the most contrastive semantic roles: AGENT, INSTRUMENT, PATIENT, and EXPERIENCER. The archetypal AGENT is an entity which volitionally initiates an activity resulting, usually through physical contact, in the transfer of energy to an external object. Its polar opposite semantic role is the archetypal PATIENT, usually an inanimate object that absorbs the energy transmitted via the externally initiated physical contact and thereby has undergone (usually unvolitionally) an internal or external change of state. An archetypal INSTRUMENT is a physical object manipulated by an AGENT as a means to affect a PATIENT. It serves as an intermediary in the transmission of energy. Finally, an EXPERIENCER is a sentient being—typically a person—engaged in some mental activity, be it intellectual, perceptual, or emotive. It is also the event participant which is most affected by the event or the process or the condition as a whole. Langacker's (1991a:327) model illustrated in Figure 9 allows us to capture all the essential characteristics of the four role archetypes.

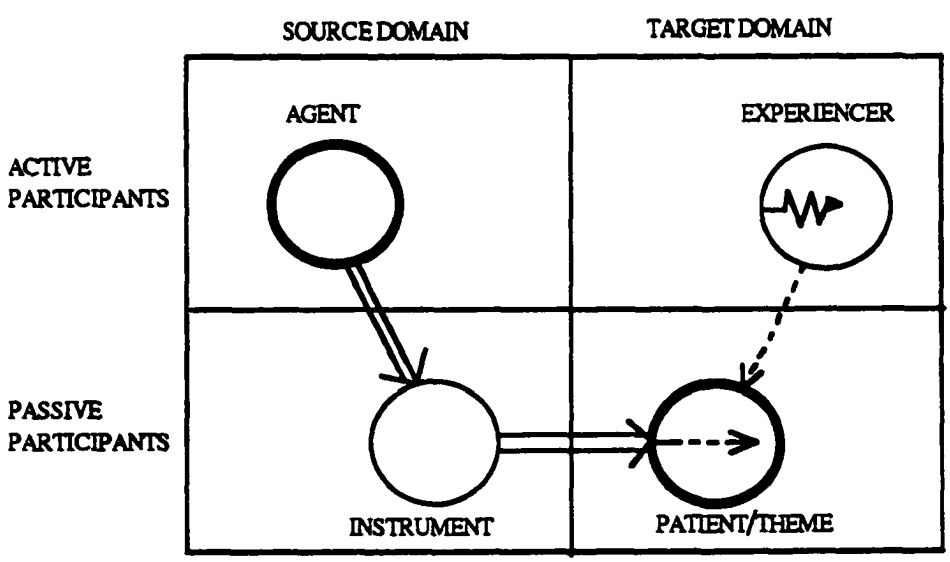

Figure 9. Langacker's Role Archetype Model

In this model, divisions are made in terms of two separate parameters which *could* be understood as binary features, although such categoriality is counter to the spirit of CL analyses. These differences are based on *sentience* and *energy transmission*. Event participants which are sentient are located in the top half of the matrix and are considered to be actively engaged or interested in the outcome of the event (construed as a kind of energy transmission). By this characterization, AGENTS and EXPERIENCERS are both active event participants, while INSTRUMENTS and PATIENTS are not since they are passively acted upon in any given event. Correspondingly, event participants which are energy sources are located in the left half of the matrix. These are the participants which instigate or carry out some interaction. Prototypically these are AGENTS and INSTRUMENTS. By contrast, PATIENTS and EXPERIENCERS can only react to, undergo, or absorb the energy transfer that is central to this schematic characterization of an event. Let me add to Langacker's model here the highly unspecified role of THEME. This is typically the semantic role assigned to the participant in an existential, attributional, locational, or pure motion predication. Such an entity is not acted upon per se, but is simply the only event participant of note. It is the only entity talked about or it is the entity which is displaced through motion.

The major virtue of the action chain and role archetype models is that they can help us understand the ways in which speakers construe an event and the ways in which languages code the roles played by participants in an interaction. Speakers have at their disposal various means for representing events. They can choose from a variety of clause structures each of which might suggest a slightly different construal of a scene or event, as illustrated above in (14). The most obvious example of this is whether some transitive event is encoded in an active clause or a passive clause (with or without explicit mention of the agent), so that the semantic role played by the subject of the three potential corresponding sentences is open to multiple interpretations.

A variety of different implicational hierarchies have been posited which attempt to account for acceptable and unacceptable clauses on the basis of the semantic role underlying the subject (e.g., Fillmore 1968; Givón 1984; Jackendoff 1972). Langacker's model allows certain predictions to be made about semantic case assignment. For example, since AGENT and PATIENT/THEME as well as INSTRUMENT and EXPERIENCER are diametrically opposed in the model, NPs bearing these roles should not receive the same morphological marking. That is, nominative marking, which is typically the case assigned to AGENTS in unmarked clause structures, should not also be used to code PATIENTS in more marked clause structures, although it might be used to code either of its neighbors in the matrix, INSTRUMENTS or EXPERIENCERS. Conversely, accusative marking, which is typically the case assigned to PATIENTS, should not also be used to code AGENTS, although it might be used in

special circumstances to code either of its neighbors in the matrix, INSTRUMENTS or EXPERIENCERS. And finally, of particular relevance to the present analysis of Japanese *ni*, dative marking, which is typically the case assigned to code EXPERIENCERS, should not also be used to code INSTRUMENTS, although it might also be used to code the participants with which it shares the active domain, namely AGENTS, as well as the participants with which it shares the energy sink domain, namely acted-upon PATIENTS or THEMES.

The action chain and role archetype model is applicable to the Japanese particles *ni*, *ga*, *o* and *de*, as illustrated in Figure 10.

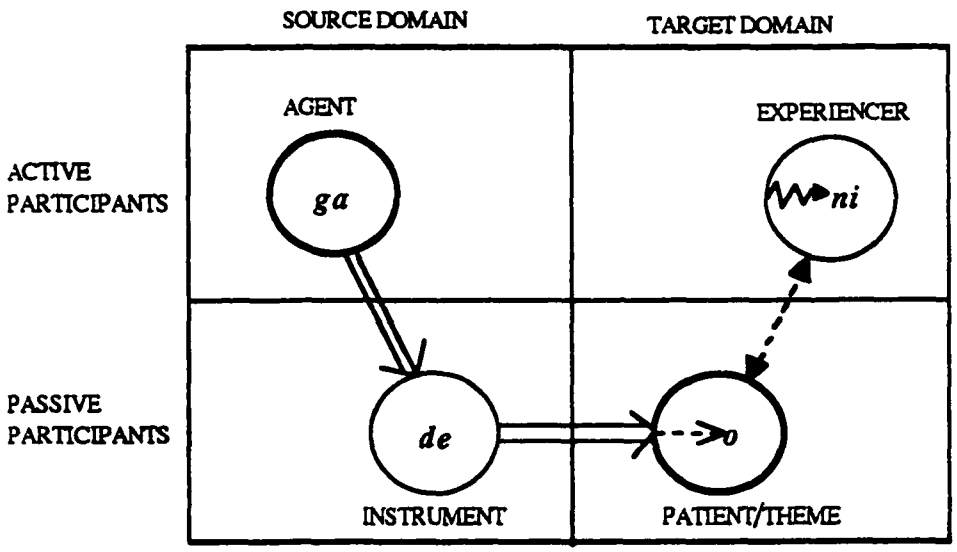

Figure 10. Role Archetypal Model for Japanese

Ni-marked participants are construed as residing in the active participant sector of the matrix (at the top), and therefore share with *ga*-marked participants the characteristic of having *sentience* (a property associated with canonical AGENTS—human beings). They are different from *ga*-marked participants, however, in that the latter represent the highest rank in the energy flow hierarchy and therefore are volitional and instigators of action. By contrast, *ni*-marked participants, which can be generally characterized as EXPERIENCERS, are located in the energy-sink target domain (or right-hand sector of the matrix), indicating that they lack the AGENT's volitionality, although they retain the AGENT-like property of conscious awareness. It should also be noted that *ni* marks an *internally affected* EXPERIENCER, indicated by the squiggly arrow, as I discuss below.

In the following section, I demonstrate that the various usages of *ni*, including those which may appear to be quite abstract, can be interrelated and characterized based on these

two semantically based models, namely a model of semantic "domain-shift" and Langacker's action chain and role archetype models.

3.3 Relations Coded by *Ni* Across Domains

In Section 2.3 above, I listed 20 broad usage categories for *ni*. In what follows, each usage type will be discussed in depth, first in terms of the semantic domain within which the fundamental relation it is characterizing is understood as transpiring. Secondly, each usage type within a particular semantic domain will be given a more specific semantic role characterization. These roles will be identified with labels such as LOCATIVE, ALLATIVE, TEMPORAL, EXPERIENCER, RECIPIENT, PURPOSE, and so on. These distinct role characterizations should be understood for the time being as representing separate polysemous senses of *ni*. Clearly, one might try to subsume all of these usages under a highly abstract monosemous label or, worse, try to identify and thereby proliferate even more distinct usage types under a radically polysemous or homonymous account. It remains to be seen what the most reasonable inventory of sense types for *ni* will be. In large measure, it depends on the purpose (e.g., pedagogy, lexicography, linguistic description, machine translation, hypotheses about the mental lexicon, etc.) to which the inventory is put. This issue comprises the focus of Chapters 4,5, and 6.

3.3.1 *Spatial Usages of* Ni

There are roughly two different types of spatial relations that the particle *ni* indicates: a stative LOCATIVE relation and a more dynamic ALLATIVE relation, marking the direction and/or final destination that a figure moves towards. In short, *ni*, when used spatially, marks both locations and goals.

Ni as a stative locative marker [LOC]

Ni, as a stative locative marker, asserts the existence of an entity by describing its current location. Morphosyntactic differences arise depending on whether the entity in question is animate or inanimate. This usage of *ni* often accompanies verbs describing existence, namely, *iru* in (17), and *aru* in (18). Though these two verbs are both translated as 'to exist,' they differ from each other in that the former is used with animate subjects and the latter with inanimate.[1]

(17) a. *Musume wa Tookyoo ni iru.*
daughter TOP Tokyo LOC exist.ANIM
Lit: Daughter exists in Tokyo.
'My daughter is in Tokyo.'

b. *Kono ie ni wa inu ga san-biki iru.*
this house LOC TOP dog NOM three-CL exist.ANIM
Lit: Three dogs exist in this house.
'There are three dogs in this house.'

(18) a. *Koko ni hon ga aru.* (M:623)
here LOC book NOM exist.INAM.
Lit: A book exists at this place.
'Here is a book.'

b. *Kono ie ni wa piano ga ni-dai aru.*
this house LOC TOP piano NOM two-CL exist.INAM
Lit: Two pianos exist in this house.
'There are two pianos in this house.'

The positional relation marked by *ni* seems rather vague. Depending on the shape or function of the *ni*-marked NP object, *ni* can be translated as *in* or *on*, as shown in (19a) and (20a). Otherwise, a [*no* N *ni*] form, such as *no mae ni* 'in front of,' *no ue ni* 'on top of,' and *no yoko ni* 'besides,' will be used to specify the positional relation, as illustrated in (19b) and (20b).

(19) a. *Reezooko ni suika ga at-ta.*
refrigerator LOC watermelon NOM exist.INAM-PAST
'There was a watermelon in the refrigerator.'

b. *Reezooko no naka ni suika ga at-ta.*
refrigerator GEN inside LOC watermelon NOM exist.INAM-PAST
'There was a watermelon inside the refrigerator.'

(20) a. *Taroo no tsukue ni memo ga at-ta.*
Taro gen desk LOC memorandum NOM exist.INAM-PAST
'There was a memorandum on Taro's desk.'

b. *Taroo no tsukue no ue ni memo ga at-ta.*
Taro gen desk GEN top LOC memorandum NOM exist.INAM-PAST
'There was a memorandum on top of Taro's desk.'

Moreover, as shown in (21a), only place nouns are allowed to be directly followed by *ni*. When the NP is a non-place, like *Taroo* 'Taro' or *doa* 'door,' *ni* has to co-occur with *...no tokoro* 'the place ...' in (21b) or one of the [*no* N *ni*] expressions to speficy the positional relation as in (21c).

(21) a. *Masako wa Tookyoo/*Taroo/*doa **ni** iru.*
Masako TOP Tokyo/Taro/door LOC exist.ANIM
'Masako is in Tokyo/at Taro's/at the door.'

b. *Masako wa *Tokyoo/Taroo/doa **no** **tokoro** **ni** iru.*
Masako TOP Tokyo/Taro/door GEN place LOC exist.ANIM
'Masako is in Tokyo/at Taro's/at the door.'

c. *Masako wa Taroo/doa **no** **mae/ushiro/yoko** **ni** iru.*
Masako TOP Taro/door GEN front/back/side LOC exist.ANIM
Lit: Masako exists at the front/back/side of Taro/door.
'Masako is *in front of/behind*/beside Taro/door.'

Ni-marked locative phrases may also accompany verbs like *sumu* 'live' as in (22), and *tomaru* 'stay' as in (23). These verbs obligatorily require *ni*-marked locative phrases. Without them, the sentences are anomalous:

(22) a. *Kare no kazoku wa nihon **ni** sun-de-iru.*
he GEN family TOP Japan LOC live-CONJ-PROG
'His family lives in Japan.'

b. **Kare no kazoku wa sun-de-iru.*
he GEN family TOP live-CONJ-PROG
*'His family lives.'

(23) a. *Masako wa Hiruton hoteru **ni** tomat-ta.*
Masako TOP Hilton Hotel LOC stay-PAST
'Masako stayed at the Hilton Hotel.'

b. **Masako wa tomat-ta.*
Masako TOP stay-PAST
?*Masako stayed.'

While *ni* marks stative locations of existence, as shown in (22) and (23), certain types of locations are marked by the particle *de* (which may be a reanalyzed form of *nite* in which the particle *ni* has combined with the conjunctive particle *te*). At first glance, the difference between the two locative particles may appear to lie in a simple stative vs. active distinction. Consider the pairs of sentences in (24) and (25):

(24) a. *Kono heya **ni/*de** piano ga aru.*
this room LOC piano NOM exist.INAM
'There is a piano in this room.'

b. *Masako wa kono heya ***ni/de** piano o hiku.*
Masako TOP this room LOC piano ACC play
'Masako plays the piano in this room.'

(25) a. *Kodomotachi wa kooen **ni/*de** iru.*

children TOP park LOC exist.ANIM
'Children are in the park.'

b. *Kodomotachi wa kooen *ni/de asobu.*
children TOP park LOC play
'Children play in the park.'

In the (a) sentences above, the existential verbs *aru* and *iru* 'exist' take *ni*-marked locative phrases, while the sentences in (b) contain verbs describing activities, namely *piano o hiku* 'play the piano' and *asobu* 'play,' and they both happen to take *de*-marked locative phrases. However, the stative/active distinction does not hold in cases like those in (26), where *ni* is not acceptable in sentences containing the stative verb *aru* 'exist':

(26) a. *Kinoo ie no mae *ni/de jiko ga at-ta.*
yesterday house GEN front LOC accident NOM exist-PAST
'There was an accident in front of (my) house.'

b. *Maishuu kono heya *ni/de kaigi ga aru.*
every week this room LOC meeting NOM exist
'There is a meeting in this room every week.'

c. *Ie no mae ni/*de ookina kashinoki ga aru.*
house GEN front LOC big oak NOM exist
'There is a big oak in front of (my) house.'

Although all three of the sentences in (26) include the existential verb *aru* 'exist,' only in (26c) is a *ni*-marked locative phrase acceptable (to the exclusion of *de*). Furthermore, when the subject denotes an event such as *jiko* 'accident' as in (26a) and *kaigi* 'meeting' as in (26b), only *de*-marking is acceptable with the location. The differential behavior of *ni* and *de* in these contexts is not random, however. It is perfectly motivated if background semantic domain and certain other semantic factors are taken into account, as I will demonstrate below.

Ueno (1995) argued, following Jackendoff (1983), that the distribution of *ni* and *de* depends on whether the context describes a situation in the spatial field or the temporal field of conceptual structure. According to Ueno, the situations described in (24a) and (25a) transpire in the spatial field, where locative phrases are treated as arguments. Therefore, *ni*-marking is acceptable. On the other hand, the situations described in (24b) and (25b) transpire primarily in the temporal field, where the locative phrases only have modifier status. In such cases, *de*-marking is therefore required. He went on to explain that in a sentence with the stative verb *aru* 'exist,' the situation pertains to the spatial field when the

nominative NP (i.e., the subject) describes a *thing*, as in (26c), whereas when the subject describes an *event*, as in (26a) and (26b), the sentence almost automatically designates a situation in the temporal field.

Ueno's analysis based on the distinction between spatial and temporal fields (or what I would call semantic domains), fails to account for the cases in (27), however. *Ni* and *de* seem to appear interchangeably in the same context in (27a), and yet, in (27b) only *ni* is acceptable:

(27) a. *Kare wa Shiatoru ni/de mikka taizaishi-ta.*
he TOP Seattle LOC three days stay-PAST
'He stayed in Seattle for three days.'

b. *Kare wa Shiatoru ni/*de taizaishi-ta.*
he TOP Seattle LOC stay-PAST
'He stayed in Seattle.'

c. *Kare wa mikka taizaishi-ta.*
he TOP three days stay-PAST
'He stayed for three days.'

d. **Kare wa taizaishi-ta.*
he TOP stay-PAST
'He stayed.'

I claim that the difference between a *ni*-marked locative and a *de*-marked locative is also one of *contingency*—*ni*-marked locative phrases are contingent on the verb (i.e., they serve as arguments) while *de*-marked locative phrases are not contingent (i.e., they serve as modifiers). The verb *taizaisuru* 'stay' requires an argument of some sort of complementation, either in the spatial or temporal field. Without one, the sentence is unacceptable as demonstrated in (27d). (27b) and (27c) are both acceptable because there is an argument, a *ni*-marked locative phrase *Shiatoru ni* 'in Seattle' in (27b), and a temporal expression *mikkakan* 'for three days' in (27c). When both a locative phrase and a temporal phrase occur in a simple sentence, the locative phrase can serve either as an argument—and therefore be marked by *ni*—or as a modifier—and be marked by *de*, as shown in (27a). The interchangeability of *ni* and *de* can then be interpretable as the result of a function of relative contingency or non-contingency on the meaning of the predicate and the relevance to the overall event of the content of the postpositional phrase.

Figure 11 is an image schema for the purely LOCATIVE sense of *ni*.[2] As we have discussed, *ni* may mark stative locations or existence, as illustrated in (a), or locations of

an event or complex relation, such as *living* or *working*, as illustrated in (b). In both ways, the *ni*-marked locations are contingent on the predicate verbs.

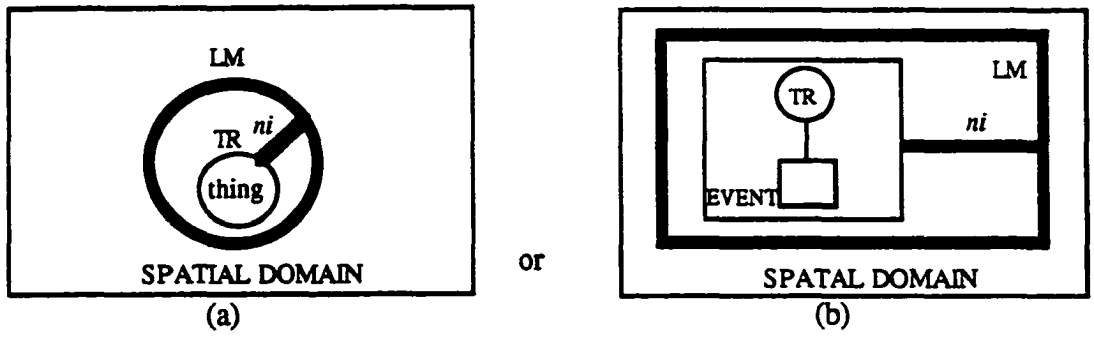

Figure 11. Image Schema for the LOCATIVE Sense of *Ni*

By assuming that the difference between *ni* and *de* is partially based on contingency/non-contingency, the distribution of the two particles with synonymous verbs *sumu/kurasu* 'live' or *tsutomeru/hataraku* 'work' can also be accounted for. Consider the sentences in (28) and (29):

(28) a. *Kare wa Tookyoo ni/*de sun-de-iru.*
he TOP Tokyo LOC live-CONJ-PROG
'He lives in Tokyo.'

b. *Kare wa Tookyoo *ni/de kurashi-teiru.*
he TOP Tokyo LOC live-CONJ-PROG
'He lives in Tokyo.'

c. **Kare wa shiawaseni sun-de-iru.*
he TOP happily live-CONJ-PROG
'He lives (is living) happily.'

d. *Kare wa shiawaseni kurasi-te-iru.*
he TOP happily live-CONJ-PROG
'He lives (is living) happily.'

(29) a. *Masako wa ginkoo ni/*de tsutome-te-iru.*
Masako TOP bank LOC work-CONJ-PROG
'Masako works at the bank.'

b. *Masako wa ginkoo *ni/de hatarai-te-iru.*
Masako TOP bank LOC work-CONJ-PROG
'Masako works at the bank.'

c. **Masako wa mainichi tsutome-te-iru.*
Masako TOP everyday work-CONJ-PROG
'Masako works every day.'

d. *Masako wa mainichi hatarai-te-iru.*
Masako TOP everyday work-CONJ-PROG
'Masako works every day.'

The 'live' verbs in (28), *sumu* and *kurasu*, and the 'work' verbs in (29), *tutomeru* and *hataraku*, differ in terms of the *contingency* of their locative phrases. That is, if the location is central to the event, and if the verb subcategorizes for a locative argument as is the case with *sumu* 'live,' then any locative phrase must be introduced with *ni*, as shown in (28a). Since *kurasu* does not subcategorize for a locative argument as shown in (28d), the modifying locative phrase is marked by *de*, instead of *ni*. Similarly, as shown in (29) while *tsutomeru* 'work' requires a locative argument (which is therefore marked by *ni*), its synonym *hataraku* 'work' does not (and therefore it takes a *de*-marked locative modifier). Even in its "simple" locative sense, *ni* is not a simple particle.

Ni as an allative marker [ALL]

The particle *ni* is also used in more dynamic motion predications where it functions as an ALLATIVE marker, describing motion 'to' or 'towards' a goal (Crystal 1991). This usage of *ni* subsumes both directional ('towards') and destinational ('to') relations. Admittedly, these relations are not terribly distinct from each other, so any meaning difference is generally implicit from the meaning of the verb. It should be noted that there is a particle in Japanese, *e*, which only marks direction, as we will see below. For the moment, the *ni*-marked NPs in (30) and (31) are interpretable as describing DIRECTION and DESTINATION, respectively. However, I am labeling them both as instances of an ALLATIVE sense of *ni*.

(30) a. *Kare wa kuukoo ni mukat-te-iru.*
he TOP airport ALL head-CONJ-PROG
'He is heading for the airport.'

b. *Sono otoko wa doa ni chikazui-te it-ta.*
the man TOP door ALL approach-CONJ go-PAST
'The man approached the door.'

c. *Taroo wa Tookyoo ni nimotsu o okut-ta.*
Taro TOP Tokyo ALL parcel ACC send-PAST
'Taro sent a parcel to Japan.'

(31) a. *Kare wa kyonen Tookyoo ni hikkoshi-ta.*
He TOP last year Tokyo ALL move-PAST
'He moved to Tokyo last year.'

b. *Masako wa Kyooto no daigaku ni kayot-te-iru.*
Masako TOP Kyoto GEN university ALL go-CONJ-PROG
'Masako goes to a university in Kyoto.'

c. *Chawan ga yuka ni ochi-ta.*
rice bowl NOM floor ALL fall-PAST
'The rice bowl fell to the floor.'

Allative case marking uses of *ni* may be substituted by what I will call the all-purpose DIRECTION marker *e*, without much difference in meaning. *Ni* and *e* are equally acceptable in (32):

(32) a. *Akira wa hajimete amerika ni/e ki-ta.*
Akira TOP for the first time America ALL/DIR come-PAST
'Akira came to America for the first time.'

b. *Haha wa isu ni/e koshikake-ta.*
mother TOP chair ALL/DIR sit-PAST
'(My) mother sat down on/onto the chair.'

However, the two particles are not totally interchangeable. In (33), the verb *tadoritsuku* '(finally) arrive' requires a goal, so *ni* naturally marks the destination, while *e* is less acceptable:

(33) *Yatto Tookyoo ni/?e tadoritsui-ta.*
finally Tokyo ALL/DIR arrive-PAST
'We finally arrived at/to Tokyo.'

This pair of sentences indicates that the difference between *ni* and *e* lies in the relative focus on either the goal or the path of motion. The sentence with *ni* focuses on the 'endpoint' of the path described by the motion verb, whereas in the reading with *e*, the focus is on the 'process' or movement itself (Konoshima 1973:33). The image schema for the allative sense of *ni* is illustrated in Figure 12:

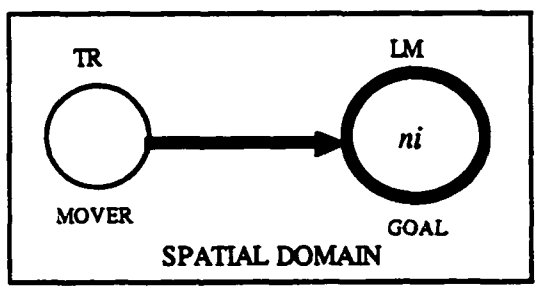

Figure 12. Image Schema for the ALLATIVE Sense of *Ni*

When *ni* marks contact or attachment, with its primary focus on the endpoint of the movement, the *ni*-marked NP appears to be ambiguous between a static LOCATIVE and a dynamic ALLATIVE reading. Examples are given in (34) and (35):

(34) a. *Taroo wa kabe **ni** postaa o hat-ta.*
Taro TOP wall ALL/LOC poster ACC put-PAST
'Taro put a poster on/onto the wall.'

b. *...Otaka ga eri **ni** shiroi tenugui o kake-te...* (Okuda:295)
Otaka NOM collar ALL/LOC white towel ACC hang-CONJ
'(and) Otaka was hanging a white towel on/upon her shoulder...'

c. *Fujiko wa kuchibeni o kuchibiru **ni** nut-ta.* (*ibid.*)
Fujiko TOP lipstick ACC lips ALL/LOC paint-PAST
'Fujiko put some lipstick on/onto her lips.'

(35) a. *Booru ga Taroo no kao **ni** ata-ta.*
ball NOM Taro GEN face ALL/LOC hit-PAST
'A ball hit (on) Taro's face.'

b. *Yoko no kata ga otoko no kata **ni** fure-ta.*
Yoko GEN shoulder NOM man GEN shoulder ALL/LOC touch-PAST
'Yoko's shoulder touched (on) the man's shoulder.'

c. *Kono ko wa hajimete kisha **ni** not-ta.* (*ibid.*)
this child TOP for the first time train ALL/LOC ride-PAST
'This child rode (on) a train for the first time.'

In these sentences, *ni* is interpreted as describing 'contact' or attachment between a moving TR and a LM, with the focus on the contact which results from motion or dislocated action. Generally, the path of movement is only implied. Figure 13 illustrates an image schema for *ni* when used to mark CONTACT.

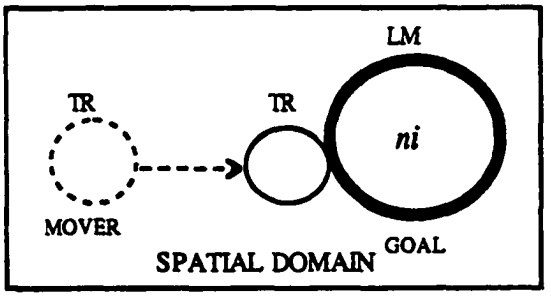

Figure 13. Image Schema for the 'Contact' Sense of *Ni*

As shown in Figure 13, the difference between the locative sense of *ni* and its sense of 'contact' is very subtle. The difference appears to be dependent on the property of the accompanying verb and the surrounding context. Consider the contrastive pairs of sentences in (36) and (37):

(36) a. *Shako* *ni* *kuruma* *o* *tome-ta.*
garage LOC/ALL car ACC stop-PAST
Lit: [I] stopped the car at the garage.
'I parked the car in the garage.'

b. *Shako* *ni* *kurum* *ga* *tomat-te-iru.*
garage LOC car NOM stop-CONJ-PROG
Lit: A car is parked in the garage.
'A car is in the garage.'

(37) a. *Kabe* *ni* *chizu* *o* *hat-ta.*
wall LOC/ALL map ACC put-PAST
'(I) put a map on(to) the wall.'

b. *Kabe* *ni* *chizu* *ga* *hat-te-aru.*
wall LOC map NOM put-CONJ-PROG
'A map is (put) on the wall.'

Depending on whether the predicate describes a dynamic motion like *tomeru* 'park,' in (36a), and *haru* 'put' (37a), or a stative situation like *tomatteiru* 'is parked' in (36b) and *hattearu* 'is put' in (37b), *ni*-marked NPs can be interpreted either as describing the endpoint of attachment or a simple stative location. The subtle difference between these two spatial meanings of *ni* is readily accounted for by the similarity of the image schemas (compare Figures 11 and 12 to 13).

The CONTACT sense of *ni* is used in idiomatic and fixed expressions for perceptual/conceptual situations. Verbs used in such expressions describe physical and perceptual contact or attachment, such as *noru* 'ride,' *tsuku/tsukeru* 'attach,' *kakaru/kakeru* 'hang,' and so on. In (38) to (40), the perceptual or psychological contact predicated in the (b) sentences is understood metaphorically in terms of the concrete, physical contact in the (a) sentences :

(38) a. *Taroo* *wa* *Kamakura-yuki* *no* *densha* *ni* *not-ta.*
Taro TOP Kamakura-bound for GEN train LOC/ALL get on-PAST
'Taro got on the train bound for Kamakura.'

b. *Taroo* *wa* *tomodachi* *no* *soodan* *ni* *not-ta.*
Taro TOP friend GEN consultation LOC.ALL get on-PAST.
Lit: Taro got on his friend's consultation.
'Taro gave advice to his friend.'

(39) a. *Mariko* *wa* *kooto* *o* *hangaa* *ni* *kake-ta.*
Mariko TOP coat ACC hanger LOC/ALL hang-PAST
'Mariko hung her coat on/onto the hanger.'

b. *Shiken no koto ga ki ni kakat-te nemur-e-nakat-ta.*
exam GEN thing NOM mind LOC/ALL hang-CONJ sleep-can-be.NEG-PAST
Lit: The thing of exam was hanging on/upon the mind and (I) could not sleep.
'I was so worried about the exam that I could not sleep.'

(40) a. *Kono jodooshi wa dooshi no renyookei ni tsuku.*
this auxiliary TOP verb GEN conjunctive form LOC/ALL attach
'This auxiliary attaches to/onto a verb of the conjunctive form.'

b. *Hitome ni tsuku koodoo wa sakeru-beki-da.*
publiceye LOC/ALL attach behavior TOP avoid-should-COP
Lit: (You) should avoid behavior which attaches to/onto the public eye.
'You should avoid any conspicuous behavior.'

Other somewhat idiomtic examples containing the contact sense of *ni* are given in (41):

(41) (i) [--- *ni noru* 'ride']

a. *kuchi-guruma ni noru*
mouth-car LOC/ALL ride
Lit: ride on a mouth car ('glib talk')
'be taken in by glib talk'

b. *chooshi ni noru*
a tune LOC/ALL ride
Lit: ride on a tune
'be elated (with success)'

c. *kidoo ni noru*
an orbit LOC/ALL ride
Lit: ride on an orbit
'be well under way'

(ii) [--- *ni tsuku/tsukeru* 'attach']

a. *me ni tsuku*
eye LOC/ALL attach(intr.)
Lit: be attached to the eye
'attract one's notice, be salient'

b. *mi ni tsukeru*
body LOC/ALL attach(tr.)
Lit: attach ...to the body
'learn, acquire'

c. *hana ni tsuku*
nose LOC/ALL attach(intr.)
Lit: be attached to the nose
'be disgusted with'

(iii) [--- *ni kakaru* 'hang']

a. *ki ni kakaru*
mind LOC/ALL hang
Lit: hang from/on the mind
'worry'

b. *o-me* *ni* *kakaru*
HON-eye LOC/ALL hang
Lit: hang from/on your eyes
'meet'

c. *wana* *ni* *kakaru*
trap LOC/ALL hang
Lit: hang from/on the trap
'be ensnared'

(iv) [miscellaneous examples]

a. *te* *ni* *ireru*
hand LOC/ALL put in
Lit: put X in the hands
'gain, acquire'

b. *kokoro* *ni* *shimiru*
heart LOC/ALL soak
Lit: be soaked to the heart
'be moved by'

c. *mi* *ni* *shimiru*
body LOC/ALL soak
Lit: be soaked to the body
'feel keenly'

These usages of *ni* which express perceptual or conceptual contact (and, by extension, conceptual or emotional reaction) can all be explained as semantic extensions from its physical contact sense based on a spatial metaphor.

3.3.2 Ni *in the Temporal Domain* [TEMP]

Besides being a marker of spatial relations, *ni* is also used as the general temporal marker in Japanese. (It should be noted that there are a limited set of expressions which do not take any temporal markers, e.g., *kyoo* 'today,' *kinoo* 'yesterday,' *kotosi* 'this year.') The extension from spatial to temporal usages depends on a metaphoric process, involving the linguistically widespread TIME IS SPACE metaphor (cf. Lakoff & Johnson 1980; Rice et al. 1999).

In the sentences in (42), *ni* introduces temporal expressions, which could be thought of as a type of temporal location:

(42) a. *Gakkoo* *wa* *kuji* *ni* *hajimari-masu.* (M:624)
school TOP 9 o'clock TEMP start-AUX
'School starts at 9 o'clock.'

b. *Kare* *wa* *konna* *yofuke* *ni* *yattteko-nai-daroo.*
he TOP such midnight TEMP come-NEG-AUX
'He will not come (this late) at midnight.'

c. *Kore wa kantoochihoo de haru no hajime ni yoku okoru.*
this TOP eastern district LOC spring GEN beginning TEMP often happen
'This happens often at the beginning of spring in eastern Japan.' (KKK:137)

An event or occasion may also be marked by *ni* as a less explicit type of temporal location. Consider (43):

(43) *Sotsugyoshiki ni yuki ga fut-ta no o oboe-te-iru.*
ceremony TEMP snow NOM fall-PASS NML ACC remember-CONJ-PROG
Lit: I remember that snow fell at (the time of) the graduation ceremony.
'I remember that it was snowing at the graduation ceremony.'

In certain cases, the temporal use of *ni* may be replaceable by the particle *de* without altering the 'objective situation' too much. As illustrated in the contrastive sentences in (44) and (45), *de* is used only when the context describes the termination of an activity or event, while *ni*, which can mark an endpoint in the Spatial Domain, is a more general temporal marker marking as it does either a temporal starting point or an ending point.

(44) a. *Gakkoo wa sanzi ni/de owaru.*
school TOP 3 o'clock TEMP end
'School ends at 3 o'clock.'

b. *Gakko wa kuzi ni/*de hazimaru.*
school TOP 9 o'clock TEMP start
'School starts at 3 o'clock.'

(45) a. *Kono mise wa gozi ni/de shimaru.*
this store TOP 5 o'clock TEMP close
'This store closes at 5 o'clock.'

b. *Kono mise wa kuzi ni/*de kaitensuru.*
this store TOP 9 o'clock TEMP open
'This store opens at 9 o'clock.'

The image schema for the TEMPORAL LOCATIVE sense of *ni* is given in Figure 14:

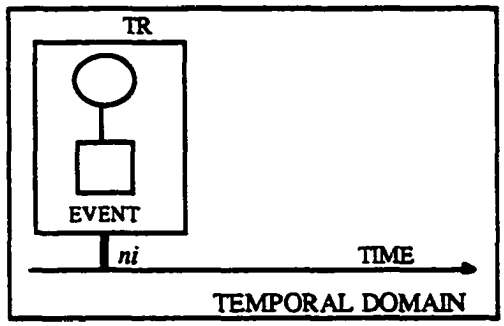

Figure 14. Image Schema for the TEMPORAL LOCATIVE Sense of *Ni*

In the preceding, I have tried to show that the TEMPORAL LOCATIVE sense of *ni* seems to be a semantic extension from its stative LOCATIVE sense, rather than its ALLATIVE sense.

3.3.3 *Usages of* Ni *in the Social Domain*

Ni also exhibits an extensive array of senses pertaining to events that transpire in the Social Domain, the domain where human interactions are effected. In the Social Domain, there are roughly two different types of EXPERIENCER roles described by *ni*: those which can be subsumed under the 'dative' case marker rubric and those which are characterized as 'secondary agents.' The former type of usage, such as marking the recipient of transfer or the addressee in a communicative event, have GOAL-oriented meanings and as such can be considered to be rather straightforward extensions from the spatial ALLATIVE sense. By contrast, the secondary agent type of usages of *ni* in this domain, such as marking the passive agent or the communicative source, describe the opposite type of relations, i.e., the SOURCE of motion. Below, I discuss each of these in turn. As discussed in Kabata and Rice (1997), despite this apparent contradiction in meaning, the senses that *ni* manifests in events transpiring relative to the Social Domain can be readily captured by Langacker's role archetype model, modified for Japanese, as illustrated above in Figure 10.

3.3.3.1 *Ni* marking the Dative Case

One of the most prominent usages of *ni* is as a dative case marker. However, any NP identified as a dative participant or marked with dative case could potentially play a variety of roles (cf. Van Belle & Van Langendonck 1996; Rice 1998). Participant types associated with the dative case include the RECIPIENT of a physical transfer as in (46a), the ADDRESSEE in a communicative transfer as in (46b), and the EXPERIENCER of a conceptual event as in (46c):

(46) a. *Kare wa zen-zaisan o tsuma ni yuzuru-tsumori-da.*
he TOP all property ACC wife REC give away-plan-COP
'He is planning to give away all the property to his wife.'

b. *Kanojo wa sono kodomo ni yasashiku hanashikake-ta.*
she TOP the child ADR kindly talk-PAST
'She talked to the child kindly.'

c. *Wasashi wa kinoo gakkoo de Masako ni at-ta.*
1.SG TOP yesterday school LOC Masako EXP meet-PAST
'I met Masako at school yesterday.'

In these sentences, the *ni*-marked NPs represent participants in events involving human interaction. These usages of *ni* introduce what Langacker calls "verbal complements that are object-like in some respects yet grammatically distinct from direct objects" (1991a:324). Below, I examine each of these indirect participant usages in more detail.

Ni as a recipient marker [REC]

Ni marks the RECIPIENT in sentences with verbs of physical transfer, such as *ageru* 'give something to somebody else other than the speaker' as in (47a), *kureru* '(somebody) gives something to the speaker or the speaker's dependents' as in (47b), and *watasu* or 'pass' as in (47c):

(47) a. *Makoto wa sono omocha o Taroo ni age-ta.*
Makoto TOP that toy ACC Taro REC give-PAST
'Makoto gave the toy to Taro.'

b. *Taroo wa sono omocha o watashi ni kure-ta.*
Taro TOP that toy ACC 1SG REC give-PAST
'Taro gave the toy to me.'

c. *Sono hon o Tanaka-san ni watashi-te-kudasai.*
that book ACC Tanaka-Mr. REC pass-CONJ-please
'Please pass that book to Mr. Tanaka.'

d. **Sono hon o Tanaka-san no ie ni watashi-te-kudasai.*
that book ACC Tanaka-Mr. GEN house REC pass-CONJ-please
'*Please pass that book to Mr. Tanaka's house.'

Recipients of transfer are typically human or at least animate and, therefore, are characterized as being sentient or having conscious awareness or being internally affected by the transfer. *Taroo* 'Taro' in (47a) and *watashi* 'I' in (47b) are both human, and so is *Tanaka-san* 'Mr. Tanaka' in (47c). When the NP object of *ni* is clearly intended to

indicate a physical structure as the recipient, the resulting sentence is anomalous, as shown in (47d).

A *ni*-marked NP may be interpreted as playing a BENEFACTIVE role or as being the RECIPIENT of a favor, typically in sentences with V-*te ageru* 'do a favor (for somebody other than the speaker)' or V-*te kureru* '(somebody else) do a favor (for the speaker)' expressions. Consider (48) and (49):

(48) a. *Mariko wa Taroo ni piano o hii-te-age-ta.*
Mariko TOP Taro REC piano ACC play-CONJ-AUX-PAST
'Mariko played the piano for Taro.'

b. *Mariko wa piano o hii-ta.*
Mariko TOP piano ACC play-PAST
'Mariko played the piano.'

(49) a. *Taroo wa watashi ni uta o tsukut-te-kure-ta*
Taro TOP 1SG REC song ACC make-CONJ-AUX-PAST
'Taro made/wrote a song for me.'

b. *Taroo wa uta o tsukut-ta*
Taro TOP song ACC make-PAST
'Taro made/wrote a song.'

The verbs *ageru* and *kureru*, which has literal meanings 'give (something to somebody other than the speaker)' and 'give (something to the speaker),' convey functions to form a ditransitive construction as shown in (a) sentences out of otherwise mono-transitive verbs such as *hiku* 'play (the piano)' and *tsukuru* 'make,' as shown in (b) sentences. *Ni* is interpreted as marking RECIPIENTS of a favor, for instance Masako's playing the piano in (48a), in these ditransitive sentences.

The usage of *ni* to mark RECIPIENTS is clearly related to its spatial directional usage. The semantic as well as structural similarities between the two applications are illustrated in (50):

(50) a. *Kare wa nihon ni tegami o okut-ta.* [SPATIAL DOMAIN]
he TOP Japan ALL letter ACC send-PAST
'He sent a letter to Japan.'

b. *Kare wa tomodachi ni tegami o okut-ta.* [SOCIAL DOMAIN]
he TOP friend REC letter ACC send-PAST
'He sent a letter to his friend.'

While the *ni*-marked NP *nihon* 'Japan' simply indicates the destination of the transfer in (50a), in (50b) the noun phrase *tomodachi* 'a friend' could be construed as both the recipient of the letter as well as the destination of the physical transfer.

The image schema for the RECIPIENT sense of *ni* is provided in Figure 15 below:

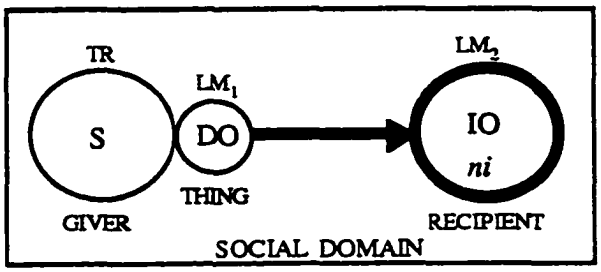

Figure 15. Image Schema for the RECIPIENT Sense of *Ni*

Ni marks the human indirect participant (LM_2) as the RECIPIENT or GOAL of a physical transfer. The similarity between the ALLATIVE sense of *ni* and its RECIPIENT sense as illustrated in (50) is meant to be reflected in the similarity of the image schemas for the two senses: The image schema for the ALLATIVE sense (in Figure 12) located in the Spatial Domain has been partially retained in the image schema for the RECIPIENT sense in the Social Domain.

Ni as an addressee marker [ADR]

In sentences with verbs of communicative transfer as in (51), *ni* marks the ADDRESSEE:

(51) a. *Shira-nai* *hito* *ga* *boku* *ni* *hanashikake-te-ki-ta.*
know-NEG person NOM 1SG ADR talk-CONJ-come-PAST
'Somebody I don't know talked to me.'

b. *Sakuya* *ryooshin* *ni* *denwa* *o* *kake-ta.*
last night parents ADR telephone ACC ring-PAST
'I called up my parents last night.'

This sense of *ni* to mark an interlocutor in a communicative event exhibits quite a bit of conceptual similarity with *ni*'s direction-marking and transfer senses. Both senses share the notion of unilaterality of object motion or trans-action between two sentient participants. Consider the paired sentences in (52). In (52a), *ni* indicates that the consultation was unilateral or one-sided, while in (52b), featuring *to*, the comitative particle, there is a strong sense that the consultation was more mutual and reciprocal:

(52) a. *Hanako wa Mariko ni soodan-shi-ta.*
Hanako TOP Mariko ADR consult-do-PAST
'Hanako consulted Mariko.' (Hanako talked to Mariko [over a matter])

b. *Hanako wa Mariko to soodan-shi-ta.*
Hanako TOP Mariko COM consult-do- PAST
'Hanako talked with Mariko (over a matter).'

Sentence (52a) implies that Hanako had a problem which she discussed with Mariko, who presumably gave her some advice, while in (52b), both Hanako and Mariko are construed as being mutually involved in resolving some problem, about which they talked with each other. As Kuno (1973:104) argued, *ni* marks a "noun phrase whose referent is psychologically not considered to be moving." The ADDRESSEE sense of *ni* is thus interpretable as a rather straightforward semantic extension of *ni*'s ALLATIVE and RECIPIENT marking sense by virtue of indicating the ultimate target of motion, as characterized by the image schema in Figure 16.

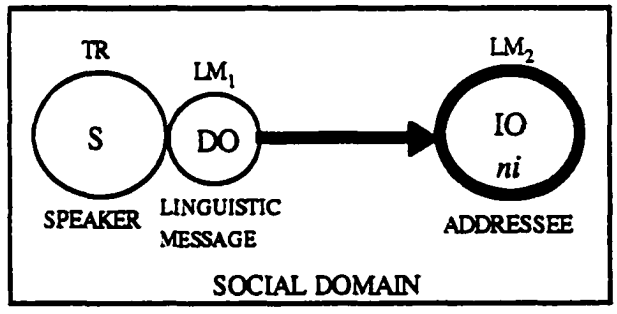

Figure 16. Image Schema for the ADDRESSEE Sense of *Ni*

The similarity of the ADDRESSEE sense of *ni* to its ALLATIVE sense is clear: The major difference between these two senses lies in the shift of background domain, namely from the Spatial to the Social Domain. However, with that shift comes a number of other entailments, chiefly, that the *ni*-marked NP is not a static location in space towards which something moves, but is the target or endpoint of some transfer, either of a physical object or of a communicative act.

Ni as an experiencer marker [EXP]

EXPERIENCER is another type of semantic relation that is typically encoded cross-linguistically in the dative case (Langacker 1991a:327). An EXPERIENCER is 'sentient' and 'aware' of the mental experience. Since *ni* is called upon in Japanese to mark EXPERIENCER

roles, we could say that it inherits properties of prototypical EXPERIENCERS and that these properties partially flesh out its meaning. In (53a), the verb *au* 'meet' requires a *ni*-participant who is 'sentient,' while in (53b) the verb *miru* 'see' takes an *o*-marked participant, coded in the non-sentient or 'unaware' accusative case.

(53) a. *Kinoo machi de Mariko **ni/*o** at-ta.*
yesterday town LOC Mariko EXP/*ACC meet-PAST
'Yesterday I met Mariko in town.'

b. *Kinoo machi de Mariko ***ni/o** mi-ta.*
yesterday town LOC Mariko *EXP/ACC see-PAST
'Yesterday I saw Mariko in town.'

While it is certain that Mariko was aware of the meeting with the speaker in (50a), as the dative case marking *ni* implies, Mariko may or may not have been aware of being seen in (50b), since the accusative case marker *o* expresses a wholly passive participant (recall *o*'s placement in the role archetype model given in Figure 10).

The property of sentience or awareness of a *ni*-marked NP seems persistent in metaphorical expressions with the verb *au* 'meet.' Although *ni* may mark non-animate expressions with the verb *au* (which are written with a different Chinese character from *au* 'to meet [somebody],' by the way), as pointed out by Hiroko Terakura (personal communication), such cases are limited to expressions of hardships or troublesome which affect the subject adversely. Consider (54):

(54) a. *Michiko wa futsuka-mae ziko **ni** at-ta.*
Michiko TOP two days-before accident EXP meet-PAST
'Michiko had an accident two days ago.'

b. *Taroo wa gakkoo de hidoi me **ni** at-ta.*
Taro TOP school LOC bitter experience EXP meet-PAST
'Taro had a bitter experience at school.'

c. ***Taroo** wa gakkoo de ii me **ni** at-ta.*
Taro TOP school LOC good experience EXP meet-PAST
'Taro had a good experience at school.'

Whereas NPs like *ziko* 'accident' in (54a) and *hidoime* 'bitter experience' in (54b) are compatible with the verb *au* 'to meet,' its use with *iime* 'good experience,' which lacks any adversative meaning, is not acceptable, as shown in (54c). *Ni* seems to require the context to contain a surprising, unexpected, or negative outcome when used figuratively.

Ni also marks EXPERIENCER NPs in sentences with certain types of verbs: verbs describing ability, such as *dekiru* 'be good at' in (55) or *wakaru* 'understand' as shown in (56); verbs ending with the ability auxiliary *reru/rareru*, such as *mieru* 'can see' or *hanaseru* 'can speak' as shown in (57); and verbs of possession such as *aru* or *iru* 'have' as shown in (58). In these sentences, *ni* is alternatively replaced with the nominative marker *ga*. The *ni*-marked NPs are typically human, who are naturally characterizable as 'sentient' participants.

(55) *dekiru* 'be able to'

a. *Taroo* ***ni*** *furansugo* *ga* *dekiru.*
Taro EXP French NOM be able to
'Taro can speak French.'

b. *Taroo* *ga* *furansugo* *ga* *dekiru.*
Taro NOM French NOM be able to
'Taro can speak French.'

(56) *wakaru* 'understand'

a. *Taroo* ***ni*** *furansugo* *ga* *wakaru.*
Taro EXP French NOM understand
'Taro understands French.'

b. *Taroo* *ga* *furansugo* *ga* *wakaru.*
Taro NOM French NOM understand
'Taro understands French.'

(57) *V-reru/rareru* 'can'

a. *Taroo* ***ni*** *furansugo* *ga* *hanas-eru.*
Taro EXP French NOM speak-can
'Taro can speak French.'

b. *Taroo* *ga* *furansugo* *ga* *hanas-eru.*
Taro NOM French NOM speak-can
'Taro can speak French.'

(58) *aru/iru* 'have'

a. *Taroo* ***ni*** *kodomo* *ga* *aru/iru.*
Taro EXP child NOM have
'Taro has a child.'

b. *Taroo* *ga* *kodomo* *ga* *aru/iru.*
Taro NOM child NOM have
'Taro has a child.'

Note that prototypical possessive relationships involving a *ni*-marked possessor subject, as shown in (55a) above, repeated below in (59a), are identical to the most typical locative sentence structures, shown in (59b):

(59) a. *Taroo* ***ni*** *kodomo* *ga* *aru/iru.* [SOCIAL DOMAIN]
Taro EXP child NOM have
'Taro has a child.'

b. *Heya* ***ni*** *teeburu* *ga* *aru.* [SPATIAL DOMAIN]
room LOC table NOM exist.INAM
'There is a table in the room.'

The extension of locative expressions to indicate possessive relationships is widely attested in the world's languages (cf. Heine et al. 1993). The traditional analysis holds that the predicate *aru* functions as an intransitive verb meaning 'to exist' in both sentences in (59). However, as Kuno (1973) argued, this explanation fails to explain (i) what the grammatical interpretation of *Taro* should be if *kodomo* is the subject of *aru/iru* in sentence (59a), and (ii) why the verb of possession *aru* has different selectional restrictions than the verb of existence *aru*, which typically takes an inanimate subject and not an animate one. In a similar vein, consider the sentences below:

(60) a. *Kanojo* ***ni*** *wa* *kodomo* *ga* *aru.* [*kodomo* = animate noun]
she EXP TOP child NOM exist.INAM
'She has a child.'

b. *Kanojo* ***ni*** *wa* *ie* *ga* *aru.* [*ie* = inanimate noun]
she EXP TOP house NOM exist.INAM
'She has a house.'

(61) a. *Heya* ***ni*** *kodomo* *ga* **aru/iru.* [*kodomo* = animate noun]
room LOC child NOM *exist.INAM/exist.ANIM
'There is a child in the room.'

b. *Heya* ***ni*** *tsukue* *ga* *aru/*iru.* [*tsukue* = inanimate noun]
room LOC desk NOM exist.INAM/*exist.ANIM
'There is a desk in the room.'

In (60a), *aru* is used with the animate complement *kodomo*, while in (61a) the use of *aru* with the same animate noun results in an ungrammatical sentence. This indicates that (60a) is a different kind of construction from (61a) and that *aru*, when used in sentences like (60a) and (60b), functions as a transitive verb meaning 'have,' or 'possess.' That is, the *ni*-marked NP *heya* 'room' in (61) describes a location and the *ga*-marked NPs, *kodomo* 'child' and *tsukue* 'desk' are the subjects. In (60), the *ni*-marked NP *kanojo* 'she' is the subject and *kodomo* 'child' in (60a) and *ie* 'house' in (60b) are the respective objects of *aru*.

A possessed entity, unlike a located object, can be abstract. For example, it may be an experience as shown in (62a) or an ability as in (62b):

(62) a. *Kare ni wa amerika taizai no keiken ga aru.*
he EXP TOP America stay GEN experience NOM have
'He has an experience of staying in America.' [possession of experience]

b. *Kanojo ni wa hitoride ikiteiku nooryoku ga aru.*
she EXP TOP alone live ability NOM have
'She has the ability to live alone.' [possession of ability]

It is argued by Langacker that the roles RECIPIENT or GOAL, which are typically marked in the dative case, are 'possessors' in a broader, more basic sense, since "possession can be the reason for an action giving rise to a mental experience" (1991a:328). In this sense, the subjects in sentences (55a) to (58a) can also be regarded as possessors of some experiential or associative relationship, which may include a familial relationship, an ownership relationship, or an outright ability.

As I mentioned above, *ni*-marking in the (a) sentences may be alternatively replaced by *ga*-marking as shown in the (b) sentences of the pairs given in (55) to (58). I believe that this *ga/ni* alternation can be interpreted as a semantic phenomenon reflecting the ambiguity of the AGENTIVE and EXPERIENCER roles, rather thanas a syntactic or stylistic phenomenon, as argued previously by Kuno (1973) and Shibatani (1978). As discussed in an experimental study by Kabata (1999a), the continuous nature of the semantic content of the AGENTIVE and EXPERIENCER roles is illustrated in (63), where the verb of comprehension, *wakaru* 'understand' may take either a *ga*-marked subject or a *ni*-marked subject, or both, depending on the intended meaning:

(63) a. *Taroo ga/ni Masako no kimochi o/ga wakaru.*
Taro NOM/EXP Masako GEN feeling ACC/NOM understand
'Taro understands Masako's feeling.'

b. *Taroo ga/*ni Masako no kimochi o/ga wakaroo-toshi-ta.*
Taro NOM/*EXP Masako GEN feeling ACC/NOM understand-try-PAST
'Taro tried to understand Masako's feeling.'

c. *Taroo ?ga/ni Masako no kimochi ga/*o wakat-teki-ta.*
Taro ?NOM/EXP Masako GEN feeling ACC/*NOM understand-com to-PAST
'Taro came to understand Masako's feeling.'

d. *Taroo *ga/ni(wa) Masako no kimochi ga/*o mattaku wakara-nai.*
Taro NOM/EXP(TOP) Masako GEN feeling ACC/*NOM at all understand-NEG
'Taro does not understand Masako's feeling at all.'

Both *ni* and *ga* are acceptable in (63a), which describes a neutral context in the sense that there are no prior expectations with respect to what the sentence is about. In (63b),

however, the auxiliary *-toshita* 'tried to' requires a volitional subject and so only *ga* is acceptable, whereas in (63c), in which the context is biased away from willful effort because of the inchoative expression V- *te kita* 'came to,' *ni* is the more acceptable subject particle. The same is true for (63d); the inability expression *wakaranai* 'do not understand' suggests an irrealis event, thereby removing the subject NP from active control. In Kabata (1999a) I showed that native speakers' choices of particles were actually affected by such semantic factors like negativity, volitionality, and types of verbs or nouns contained in the sentence.

The role archetype model in Figure 10 captures the essential characteristics of the prototypical values of the range of two semantic roles signaled by *ga* and *ni*, respectively. The archetypal AGENT, which is typically marked by *ga* in Japanese, is a person who volitionally initiates some activity resulting, usually through contact, in the transfer of energy to an independent object. On the other hand, the archetypal EXPERIENCER, which is typically marked by *ni*, can be characterized as a sentient entity engaged in mental activity, be it intellectual, perceptual, or emotive. However, the relation between these two roles is more continuous than dichotomous. The subject NP may exhibit characteristics of a canonical AGENT, and in such cases it is more likely to be marked by *ga*. However, when it exhibits stronger characteristics of the prototypical EXPERIENCER, such as an attenuated agentivity, a passive experiencer, or heightened sentence,, then it is more likely to be marked by *ni*.

Thus, the EXPERIENCER sense of *ni* has characteristics of being a sentient entity who is either a goal or possessor of percept or abilities, as shown by the image schema in Figure 17:

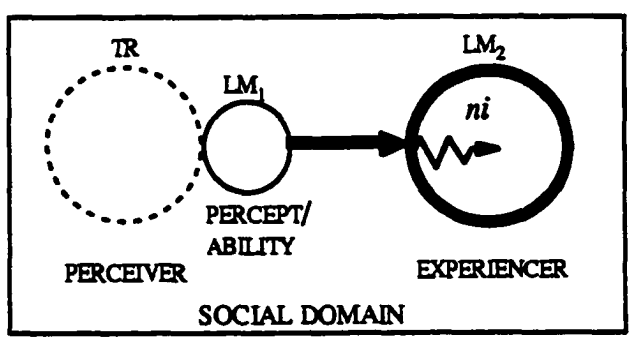

Figure 17. Image Schema for the EXPERIENCER Sense of *Ni*

The usage of *ni* as a dative case-marker seems readily motivated by applying a combination of Anderson's localist model and Langacker's action chain model. First of all,

we have a basic understanding of *ni* as a marker of goals, that is, as having a general ALLATIVE meaning. Then we must posit a domain change, from physical space to the sphere of social interaction. That being the case, Figure 18 illustrates the schematized relation holding between the agentive participant (which is generally encoded with *ga* or *wa* when topicalized) and the *ni*-marked indirect participant, either as the RECIPIENT, the ADDRESSEE, or the EXPERIENCER—the participant that some action (transfer, communication, possessive/attributional relation) is directed towards and that undergoes some internal change of state (or is affected) because of the action.

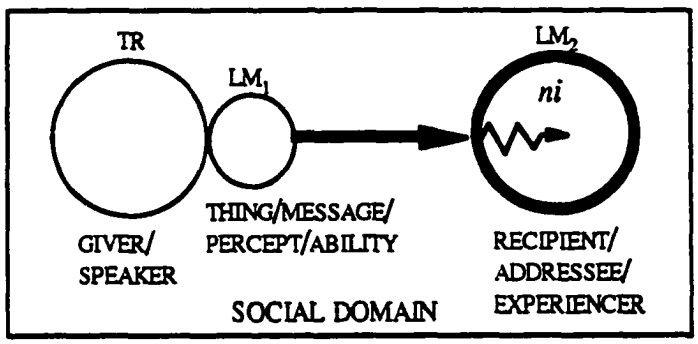

Figure 18. Image Schema for *Ni* as a Dative Marker

3.3.3.2 *Ni* as a Secondary Agent

There are three additional constructions in the Social Domain involving *ni*. I take these usages of *ni* to be specifically related to its central dative function. Surprisingly, these three usages all involve SOURCE-oriented participants. I will argue that these functions are modest extensions from the general dative functions discussed above. These three functions are: (i) to mark the *causee* in a causative construction involving a partially sentient, acted-upon participant, (ii) to mark an *agent* in (certain types of) passive sentences, and (iii) to mark the *speech-act participant* in a communication predication who is the source of information.

What is shared by these three extended functions of *ni* is the 'intentionality' or 'awareness' of the NP participant marked by *ni*. Such 'intentionality' or 'awareness' can be explained by applying the notion of 'secondary agent' implicit in the 'energy flow hierarchy' schema of Langacker's (1991a/b) action chain model. The application of this schema to the Japanese particles *ni*, *de*, *ga*, and *o*, was illustrated in Figure 10. In all three of the functions described in the preceding paragraph, the *ni*-marked participant can be described as a secondary agent, secondary in the sense of being downstream from the

original energy source. This is a characteristic it shares with the THEME or PATIENT, which is typically encoded by *o* in Japanese. And yet, it is agentive at the same time in the sense of having some reduced initiative role, or of being a sentient *active* participant, a property it has in common with any *ga*-marked (primary) agent.

The secondary agent, Langacker (1991a) explains, is an intermediary in the flow of energy from the (primary) AGENT to the THEME. And yet, as often illustrated by dative case across languages, it centers on the notion of *mental experience*, one facet of which is volitionality (cf. Van Belle & Van Langendonck 1996). As Languager argues, "while the experiencer role may be purely thematic, an *initiative* construal is likely. It might even be observed that our characterization of a dative or indirect object as *an active experiencer in the target domain* applies quite well to a secondary agent" (1991a:413) [emphasis in original]. The three extended usages of *ni* discussed below can all be accommodated by applying the notion of a secondary agent.

Ni as an experiential causee marker [CAUS-EXP]

In a causative construction, as shown in (64), the dative case-marking function of *ni* has extended to mark the experiential causee:

(64) a. *Sensei wa Masao ni soko e ik-ase-ta.*
teacher TOP Masao CAUS-EXP there DIR go-CAUS-PAST
'The teacher made Masao go there.'

b. *Takashi wa byooki dat-ta node Masao ni it-te-morat-ta.*
Takashi TOP sick COP-PAST because Masao CAUS-EXP go-CONJ-CAUS-PAST
'Because Takashi was sick, he had Masao go.'

The property of sentient awareness (shared with agent) is clearly a hallmark of *ni*-marked NPs in causative constructions. When comparing *ni*-causative sentences with *o*-causative sentences, the distinctive experiencer meaning of *ni* is evident. Consider the sentences below:

(65) a. *Sensei wa Masao o ik-ase-ta.*
teacher TOP Masao ACC go-CAUS-PAST
'The teacher made Masao go.'

b. *Sensei wa Masao ni ik-ase-ta.*
teacher TOP Masao CAUS-EXP go-CAUS-PAST
'The teacher let/had Masao go.'

The difference between sentences (65a) and (65b) is that in the former, with the accusative marker *o* marking the causee, it is implied that the subject *sensei* 'the teacher' is indifferent to whether Masao consents to go or not. By contrast, in the latter sentence, with *ni*, which involves the property of sentient awareness also associated with agents, it is implied that Masao is willing to go or even partially responsible for the caused event.

Cole (1983:125) made the distinction between the two different cases more precisely in stating that "dative case is used with agentive complement subjects and accusative case with non-agentive complement subjects." A similar explanation is given by Shibatani (1978), who claimed that the basic difference between *o*-causatives and *ni*-causatives is that the latter implies that the action is willingly conducted with the causee's consent, while the former indicates that the causee has no control over the situation. Thus the anomalousness of a *ni*-causative in sentence (66) is perfectly understandable, since people are not usually willing to die, nor are they aware of being dead, which is what a *ni*-marked causative would imply.

(66) *Watashi no fuchuui de kare o/*ni shin-ase-te-shimat-ta.*
1SG GEN carelessness REAS he ACC/* CAUS-EXP die-CAUS-CONJ-AUX-PAST
*'I had him die because of my carelessness.'

On the other hand, the 'awareness' or 'willingness' of the causee is required in *-te morau* 'to let someone do a favor and *-te hoshii* 'want someone to do a constructions. Compare the sentences in (67). With the *-(te) morau* and *-te hoshii* expressions, only a *ni*-marked causee is acceptable as shown in (67a) and (67b), whereas in (67c), with the simple causative auxiliary *-saseru*, either a *ni*-marked NP or an *o*-marked NP is acceptable, depending on the contextual meaning, as was discussed in (65) above:

(67) a. *Watashi wa Keiko ni /*o uchi ni ki-te-morat-ta.*
1SG TOP Keiko CAUS-EXP /*ACC house ALL come-CONJ-CAUS-PAST
'I had Keiko come to my house.'

b. *Watashi wa Keiko ni/*o uchi ni ki-te-hoshii.*
1SG TOP Keiko CAUS-EXP /ACC house ALL come-CONJ-want
'I want Keiko come to my house.'

c. *Watashi wa Keiko ni/o uchi ni ko-sase-ta.*
1SG TOP Keiko CAUS-EXP /ACC house ALL come-CAUS-PAST
'I let/made Keiko come to my house.'

In (67a), with the auxiliary *-(te) morau*, whose literal (or lexical) meaning is 'be given' or 'receive,' it is implied that the subject or speaker feels grateful that the causee is eagerly or, at least, willingly conducting the action in the embedded clause. Similarly in (67b), the auxiliary *-(te) hoshii* expresses the speaker's desire for the causee to conduct the action, which the causee, and not the speaker, has control over. Only *ni* is compatible with the 'willingness' or the 'awareness' of the causee. Such sentience is claimed to be a property associated with an EXPERIENCER CAUSEE.

Figure 19 is a cognitive model for the EXPERIENCER CAUSEE sense of *ni*.

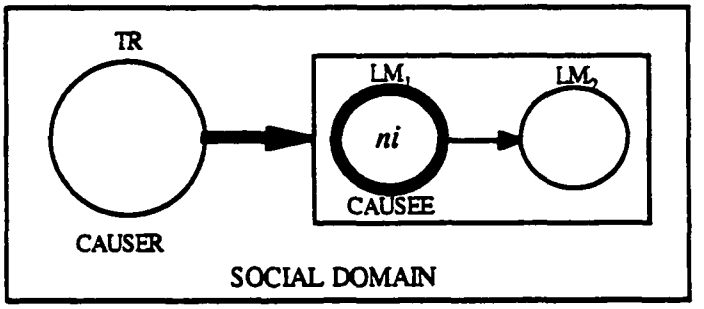

Figure 19. Image Schema for the CAUSEE Sense of *Ni*

The CAUSEE-marking sense of *ni* conveys characteristics of both a GOAL-oriented and a SOURCE-oriented participant, as suggested by Hiroko Terakura (personal communication). It can be conceptualized as a goal in that the *ni*-marked participant is a direct object of the matrix causative clause. It can also be conceptualized as a source, however, because it serves as an agent of the embedded (i.e., caused) event.

Ni as a passive agent marker [AGT-PASS]

In Japanese, passive sentences are morphologically marked by the passive auxiliary *-(ra)reru*. In such constructions, *ni* marks passivized agents as shown in the (a) sentences in (68) to (71), while the (b) sentences represent their active counterparts:

(68) a. *Boku wa okaasan ni hidoku shikar-are-ta.*
1SG TOP mother AGT-PASS severely scold-PASS-PAST
'I was scolded by my mother severely.'

b. *Okaasan wa boku o hidoku shikat-ta.*
mother TOP I ACC severely scold-PAST
'My mother scolded me severely.'

(69) a. *Hanako wa sensei ni home-rare-ta.*
Hanako TOP teacher AGT-PASS praise-PASS-PAST
'Hanako was praised by her teacher.'

b. *Sensei wa Hanako o home-ta.*
teacher TOP Hanako ACC praise-PAST
'Hanako's teacher praised her.'

(70) a. *Taroo wa tomodachi ni atama o tatak-are-ta.*
Taro TOP friend AGT-PASS head ACC hit- PASS-PAST
Lit: As for Taro, his head was hit.
'Taro was hit on the head by my friend'

b. *Tomodachi ga Taroo no atama o tatai-ta.*
friend NOM Taro GEN head ACC hit-PAST
'(Taro's) friend hit Taro's head.'

(71) a. *Masao wa dareka ni saifu o nusum-are-ta.*
Masao TOP somebody AGT-PASS wallet ACC steal-PASS-PAST
Lit: As for Masao, his wallet was stolen.
'Masao had his wallet stole.'

b. *Dareka ga Masao no saifu o nusun-da.*
somebody NOM Masao GEN wallet ACC steal-PAST
'Somebody stole Masao's wallet.'

It is *okaasan* 'my mother' who carries out the scolding in sentence (68a) and it is *sensei* 'the teacher' who praises Hanako in (69a). Similarly, in (70a) it is *tomodachi* 'his friend' who hit Taro's head, and in (71a) *dareka* 'somebody' stole his wallet, which belongs to Masao. As discussed above, the role of the grammatical marker *ni* in a passive sentence is to mark a volitional, sentient yet downstream AGENT. Such volitionality is a property that the agent and the experiencer have in common as active participants in Langacker's action chain/role archetype model, as illustrated in Figure 10.

However, Japanese also allows another type of passive construction, which has traditionally been called the 'adversative passive' (cf. Kuno 1973:22-24). Consider the sentences in (72)-(74):

(72) a. *John wa tsuma ni shin-are-ta.* (Kuno 1973:23 [51])
John TOP wife AGT-PASS die-PASS-PAST
Lit:John was died by his wife.
'John's wife died on him.'

b. *Tsuma ga shin-da.*
wife NOM die-PAST
'The wife died.'

(73) a. *John wa ame ni fur-are-ta.* (*ibid*:23 [50])
John NOM rain AGT-PASS fall-PASS-PAST
Lit: John was fallen on by the rain.
'John was rained on.'

b. *Ame ga fut-ta.*
rain NOM fall-PAST
'It rained.'

(74) a. *John wa Mary ni piano o hik-are-ta.* (*ibid*:24 [24])
John TOP Mary AGT-PASS piano ACC play-PASS-PAST
'John was played the piano to by Mary.'

b. *Mary ga piano o hii-ta.*
Mary NOM piano ACC play-PAST
'Mary played the piano.'

Adversative passive constructions, containing either intransitive verbs, as shown in (72a) and (73a), or transitive verbs, as shown in (74a), can be syntactically characterized as "having one extra noun phrase compared to the corresponding active sentences [as shown in the (b) sentences]" (Kuno 1973:24). Semantically, however, there is a lot more differentiating the (a) and (b) pairs than the presence of an additional NP. What is common in all the (a) sentences is that the sentential subject is adversely affected by the action or event denoted by the verb. In sentence (72a), it is implied that John's wife's death had a profound influence on his life afterwards (for example, he had to raise their three children by himself). Sentence (73a) expresses the speaker's disappointment or annoyance at the fact that it rained. Similarly, in (74a) it is implied that John was annoyed by the sound of the piano. The (b) sentences describe the neutral situation and have no adversative interpretations. These usages all seem to involve what has been called the "ethical" dative in a number of Indo-European languages. The ethical dative referent is syntactically unconnected to the rest of the clause, but it has a strong pragmatic link. With this use of *ni*, the participant is described as being most affected by the event in question, although that participant may not be directly involved in the event per se.

The distinction between so-called adversative passive constructions and the other type (i.e., canonical) of passive in MJ is not always clear-cut, as Wierzbicka (1988) argued. Consider the sentences in (75):

(75) a. *Kanzya wa kangofu ni kanbu o fuk-are-ta.*
patient TOP nurse AGT-PASS affected part ACC wipe-PASS-PAST
Lit: The affected part of the patient body was wiped by a nurse.
'The patient had the affected part of his body wiped by a nurse.'
(Wierzbicka 1988:273)

b. [*Kanzya wa kangofun ni kanbu o fuk-are*] *-te ita-soodat-ta.*
and hurt-seem-PAST
'[The patient had the affected part of his body wiped by a nurse]
and he seemed hurt.'

c. [*Kanzya wa kangofu ni kanbu o fuk-are*] *-te* *kimochiyosa-soodat-ta.*
and feel good-seem-PAST
'[The patient had the affected part of his body wiped by a nurse]
and he seemed comfortable.'

The sentence in (75a), where the sentential subject stands in a whole-part relation to the *o*-marked NP, is ambiguous. Both a neutral reading (i.e., non-adversative) as shown in (75b) and an adversative reading in (75c) are possible.

Moreover, as Wierzbicka claimed, the so-called "adversative" passive constructions (i.e., passive sentences with an extra NP), do not necessarily convey a negative implication. Thus, the pair of sentences in (76), which appear to be the same construction, have different implications:

(76) a. *Haha wa kodomo ni nak-are-ta.*
mother TOP child AGT-PASS cry-PASS-PAST
'The child cried (and the mother was negatively affected by it).'

b. *John wa kireina ko ni nak-are-ta.*
John TOP pretty girl AGT-PASS cry-PASS-PAST
'A pretty girl cried (and John was affected by it).'
(Wierzbicka 1988:270)

While (76a) can be understood only as implying that the mother was negatively affected by her child's crying, (76b) is most likely to be understood as implying that John was positively affected by the pretty girl (e.g., John felt flattered). The difference in interpretation between these two sentences, Wierzbicka argued, is correlated with the difference in personal involvement of the sentential subject. That is, the sentence (76b) implies that the pretty girl cried *over John*, and therefore John is directly involved; the sentence (76a), on the other hand, does not imply that the child cried over the mother, and the mother is understood as negatively affected by an action which does not directly involve her. Thus, the Japanese passive constructions cannot be defined simply in morphological terms, as have been maintained by traditional Japanese linguists (e.g., Kuno 1973). Rather, there are a number of different passive constructions, with the same passive morphology and argument structure, which are distinguishable from one another in semantic terms, as claimed by Wierzbicka (1988:261).

An image schema for the PASSIVE AGENT sense of *ni* is provided in Figure 20:

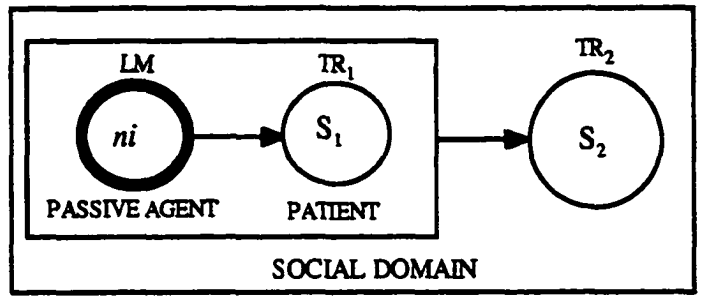

Figure 20. Image Schema for the PASSIVE AGENT Sense of *Ni*

Ni is now marking the passive agent, which is characterized as being the SOURCE of an action. In a canonical passive sentence, a *ni*-marked NP directly affects the patient (TR_1), who is coded as the sentential subject (S_1), whereas in an adversative passive, a *ni*-marked NP is the source of an action which indirectly affects the person (TR_2) coded as the sentential subject (S_2). The GOAL-type property, which is central to the dative sense of *ni*, is void in this sense, as illustrated above.

Ni as a human source marker [SRC]

Ni is also used to mark the HUMAN SOURCE in sentences with verbs of physical transfer, such as *morau* 'receive' in (77a) or *kariru* 'borrow' in (77b), and in sentences with verbs of communicative transfer such as *kiku* 'hear' in (78a) and *narau* 'learn' in (78b):

(77) Physical transfer

a. *Masako wa tonari no obasan ni okashi o morat-ta.*
Masako TOP nextdoor GEN lady SRC sweets ACC receive-PAST
'Masako received some sweets from a lady in the neighborhood.'

b. *Taro wa Masao ni hon o kari-ta*
Taro TOP Masao SRC book ACC borrow-PAST
'Taro borrowed a book from Masao.'

(78) Communicative transfer

a. *Yumiko wa Masako ni sono nyuusu o kii-ta.*
Yumiko TOP Masako SRC the news ACC hear-PAST
'Yumiko heard the news from Masako.'

b. *Taroo wa Yamada sensei ni eigo o narat-ta*
Taro TOP Yamada teacher SRC English ACC learn-PAST
'Taro learned English from Mr. Yamada.'

Interestingly enough, *ni* marks two contradictory types of (human) participants in transfer predications: both SOURCES and GOALS/RECIPIENTS. One might wonder whether *ni*

encodes directionality at all (that is, the starting point vs. the endpoint of transfer). Perhaps directionality is wholly implicit in the verb and *ni* simply marks some relevant and human oblique object. I will not pursue this matter further here. There are a number of verb pairs in Japanese which encode slightly different perspectives of the same overall event. Some examples of these converse pairs are: *osowaru* 'learn' vs. *oshieru* 'teach,' as in (79), *kariru* 'borrow' vs. *kasu* 'lend,' as in (80), and *morau* 'receive' vs. *ageru* 'give,' as in (81). In all cases, the human source or goal of the metaphorical or literal transfer is an NP marked by *ni*. However, by encoding a different perspective on the same overall transfer event, these verbs target different event participants to serve as the sentence subject, as can be seen in the sentence pairs below:

(79) a. *Taro wa Yamada sensei ni eigo o osowat-ta.*
Taro TOP Yamada teacher SRC English ACC learn-PAST
'Taro learned English from Mr. Yamada.'

b. *Yamada sensei wa Taro ni eigo o oshie-ta.*
Yamada teacher TOP Taro REC English ACC teach-PAST
'Mr. Yamada taught English to Taro.'

(80) a. *Taro wa Masao ni hon o kari-ta.*
Taro TOP Masao SRC book ACC borrow-PAST
'Taro borrowed a book from Masao.'

b. *Masao wa Taro ni hon o kashi-ta.*
Masao TOP Taro REC book ACC lend-PAST
'Masao lent a book to Taro.'

(81) a. *Yumiko wa Taroo ni orugooru o morat-ta.*
Yumiko TOP Taro SRC music box ACC receive-PAST
'Yumiko received a music box from Taro.'

b. *Taroo wa Yumiko ni orugooru o age-ta.*
Taro TOP Yumiko REC music box ACC give-PAST
'Taro gave a music box to Yumiko.'

The image schema for the SOURCE sense of *ni* in Figure 21 illustrates the contrast to its GOAL sense.

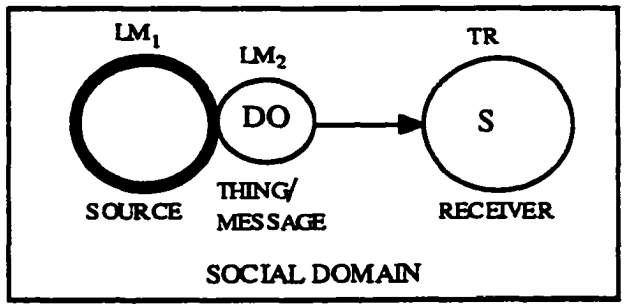

Figure 21. Image Schema for the HUMAN SOURCE Sense of *Ni*

It should be noted, however, that just as a *ni*-marked RECIPIENT is necessarily human (see Section 3.3.3.1), the SOURCE coded by *ni* must also be a human and sentient though oblique participant. In (82b), for example, *ni* cannot mark the non-animate SOURCE NP *toshokan* 'the library.' Only the general source marker *kara* is acceptable in such a context. By contrast, in (80a), repeated here as (82a), the source is animate and *ni* is therefore acceptable:

(82) a. *Taroo wa Masao ni/kara hon o kari-ta.*
Taro TOP Masao SRC book ACC borrow-PAST
'Taro borrowed a book from Masao.'

b. *Taroo wa toshokan *ni /kara hon o kari-ta.*
Taro TOP library SRC book ACC borrow-PAST
'Taro borrowed a book from the library.'

Moreover, as Ikegami (1986) demonstrated, *ni* only marks a SOURCE NP which is sentient and consents to the activity of transfer, as illustrated in (83). In (83b), with the verb *ubat-ta* 'robbed,' although the transfer is still from Mary to John, as in (80a), the source NP cannot be marked by *ni*, because "in the act of taking a book away from Mary, John rather than Mary is the participant who has the upperhand" (Ikegami 1986:12-13):

(83) a. *John wa Mary ni/kara hon o morat-ta.*
John TOP Mary SRC book ACC receive-PAST
'John received a book from Mary.'

b. *John wa Mary *ni/kara hon o ubat-ta.*
John TOP Mary SRC book ACC rob-PAST
'John stole (or forcefully and illegally took) a book from Mary.'

The requirement that the *ni*-marked NP be animate, consciously aware and consenting in transfer predications is just what is expected if we assume that this usage of *ni* is an

extension from its function as the dative case marker, encoding a sentient and partially instigating experiencer as a 'secondary agent.'

I have argued here that the basic spatial allative usage of *ni* has extended to mark a variety of functions—RECIPIENT, ADDRESSEE, and EXPERIENCER—which are traditionally associated with the dative case cross-linguistically. These functions have further developed into other more grammaticalized applications, to mark EXPERIENCER CAUSEE, PASSIVE AGENT, and even COMMUNICATIVE SOURCE, which at first glance appear to be in direct contradiction to GOAL-oriented usages. Langacker's action chain model based on role archetypes provides a reasonable account of such semantic and functional extension. The shared properties of agentivity and awareness, which are associated with the role of EXPERIENCER, may have motivated some of these extended usages.

3.3.4 Ni *in the Perceptual/Conceptual Domain*

In the previous section, I have shown that *ni*, with its dative case-marking functions and other grammaticalized functions, codes a variety of human participants involved in interactions transpiring in the Social Domain. *Ni* is also used to describe various aspects of perceptual and conceptual experience such as indicating (i) the conceptual goal and (ii) the conceptual source. It also indicates (iii) the event endpoint or resulting state of change, (iv) the manner in which an event takes place, (v) the standard or reference point in a comparison or rating predication, as well as (vi) the conceptual space within which a state or abstract attribution is predicated of a thing or event. In these usages, *ni* introduces rather abstract and event-like objects, such as an idea, activity, or ability.

Ni as a conceptual goal marker [CGOAL]

Ni is understood as marking the goal of conceptual or abstract motion in sentences like those in (84):

(84) a. *Minna ga kare no Toodai gookaku ni kitaishi-te-iru.*
everybody NOM 3SG GEN Tokyo Univ. pass CGOAL anticipate-CONJ-PROG
'Everybody is anticipating his passing (the entrance exam to) Tokyo University.'

b. *Ichiban ga tok-e-tara niban no mondai ni choosenshi-te-mi-yoo.*
No. 1 NOM solve-can-if No. 2 GEN question CGOAL attempt-CONJ-try-let's
'If you can solve question No. 1, let's attempt question No. 2.'

Verbs which are compatible with *ni* as the conceptual goal marker are those which describe the speaker's anticipation or attention toward something, such as *kitaisutu*

'anticipate, expect' in (84a), *choosensuru* 'challenge,' in (84b). To anticipate or be challenged by something can be conceptualized as turning your mind 'towards' something, and *ni* indicates both the directionality and destination, which it inherits from its spatial ALLATIVE sense.

The image schema in Figure 22 suggests the directionality of the sense of *ni* marking the CONCEPTUAL GOAL :

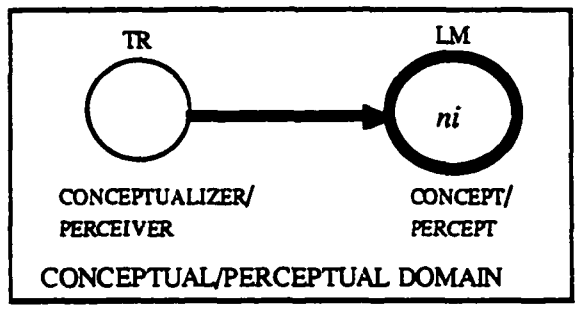

Figure 22. Image Schema for the CONCEPTUAL GOAL Sense of *Ni*

There is a lot of similarity between the CONCEPTUAL GOAL sense of *ni* and its ALLATIVE sense. The conceptual or perceptual goal can be metaphorically understood as the destination the conceptualizer or perceiver is moving towards in his or her ideation.

Ni as a conceptual source marker [CSRC]

Ni can mark a CONCEPTUAL SOURCE, or an 'object of stimuli' to use Yamanashi's (1994) terminology, in expressions like *...ni odoroku* 'be surprised at' as in (85a), *...ni gakkarisuru* 'be disappointed at' as in (85b), and *...ni kangekisuru* 'be moved at' as in (85c). Other expressions which take *ni* as a conceptual source marker include *...ni kanshasuru* 'be thankful for,' *...ni yorokubu* 'be glad at,' etc.

(85) a. *Totsuzen no ihoo ni minna odoroi-ta.*
sudden GEN death news CSRS everyone surprised-PAST
'Everyone was surprised at the sudden news about the death.'

b. *Ryooshin wa ane no seeseki ni totemo gakkarishi-ta.*
parents TOP sister GEN mark CSRS very disappointed-PAST
'(My) parents were very disappointed at my sister's mark.'

c. *Masako wa tomodachi no yasashisa ni kangekishi-ta.*
Masako TOP friends GEN kindness CSRS moved-PAST
'Masako was moved at her friends' kindness.'

Rather ambiguously, the *ni*-marked NPs in (85) can be construed either as the REASON behind the emotional or psychological state or as the perceptual or emotional TARGET. *Ihoo* 'death news' in (85a), for example, is interpretable not only as the reason why everyone was surprised, but as the target event at which everyone is surprised. Similarly, in (85b) and (85c), *ane no seeseki* 'my sister's (bad) mark' and *tomodachi no yasashisa* 'a friend' kindness' are the reasons for disappointment or appreciation and, at the same time, the targets that such feelings are extended towards.

The image schema for the conceptual source of *ni* is given in Figure 23. A *ni*-marked entity can be interpreted either as a source traveling towards and making contact with the conceptualizer (indicated by the solid arrow) or as the goal that the conceptualizer is traveling towards as shown by the dotted arrow).

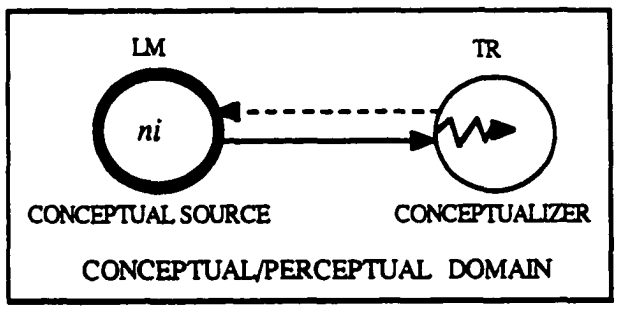

Figure 23. Image Schema for the PERCEPTUAL/EMOTIONAL SOURCE Sense of *Ni*

Percepts and emotions are routinely introduced by *ni*, suggesting that the overall perceptual event or emotional state is being structured conceptually in spatial terms.

Ni as a resultative marker [RES]

One of the most frequently occurring usages of *ni* is to mark a resultative phrase. In (86) below, *ni*-marked NPs express the new state resulting from the action denoted by verbs of change such as *naru* 'become,' as shown in (86a), *hiku* 'grind,' as shown in (86b), and *kawaru* (V*i*)/*kaeru* (V*t*) 'change,' as shown in (86c) and (86d):

(86) a. *Kare no musuko wa isha ni nat-ta.*
he GEN son TOP doctor RES become-PAST
'His son became a doctor.'

b. *Kore wa mame o kona ni hiku kikai desu.*
this TOP beans ACC powder RES grind machine COP
'This is a machine to grind the beans into powder'

c. *Shingoo* *ga* *aka* *kara* *ao* *ni* *kawat-ta.*
signal NOM red SRC blue RES change-PAST
'The signal changed from red to blue.'

d. *Boku* *wa* *shuppatu* *o* *nichiyoo* *ni* *kae-ta.*
1SG TOP departure ACC Sunday RES change-PAST
'I changed the departure (date) to Sunday.'

Ni can mark more abstract result NPs as well. Consider the use of terms such as *rakutenteki* 'optimism' in (87a) and *jootai* 'state' (87b) as *ni*-marked results:

(87) a. *Kanojo* *wa* *saikin* *totemo* *rakutenteki* *ni* *nat-ta.*
she TOP recently very optimism RES become-PAST
'She has become very optimistic these days.'

b. *..Yukiroo-san* *o* *hutsuu* *no* *jootai* *ni* *kaesu* *tameni*...(Okuda:311)
Yukiroo ACC ordinary GEN state RES return inorderto
'..in order to return Yukiroo to his ordinary state....'

The use of *ni* to mark RESULT seems to be related to its ALLATIVE (directional) sense by a semantic shift from the Spatial to Conceptual/Perceptual Domain. An event or situation is construed as the TR which travels along some (temporal) path towards some eventual conclusion (the *ni*-marked end state). A possible image schematic representation underlying *ni*'s RESULTATIVE sense is illustrated in Figure 24:

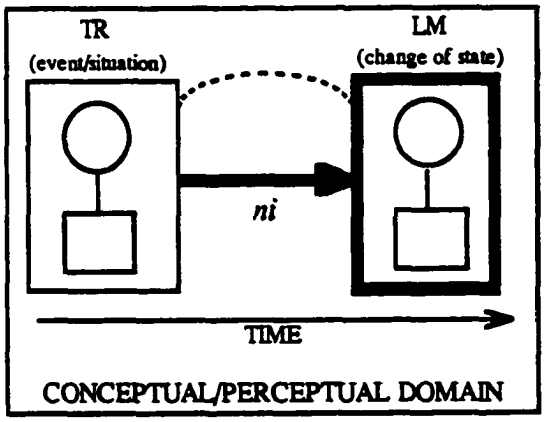

Figure 24. Image Schema for the RESULT Sense of *Ni*

The property of 'directionality' or the construal of a 'path' becomes salient when compared to the *to*-marked RESULTATIVE. Whereas the focus of the *ni*-marked RESULTATIVE is both on a processual path (as indicated by the heavy arrow) and the endpoint of the path, with *to*, the focus is on the endpoint of the change only. (88) illustrate this semantic contrast between a *ni*-marked resultative and a *to*-marked resultative:

(88) a. *Midori wa kotoshi roku-sai ni/*to nar-i-masu.*
Midori TOP this year 6-years RES become-CONJ-AUX
'Midori becomes 6 years old this year.'

b. *Wazawai tenji-te fuku *ni/to naru.*
badluck change-CONJ goodluck RES become
Lit: Bad luck becomes good luck.
'Bad luck often changes into good luck..' (proverb)

c. *Kare wa nochini seijika ni/to nat-ta.*
he TOP later statesman RES become-PAST
'He became a statesman later.'

In (88a), *ni* is more acceptable as the RESULTATIVE marker because a child's growing up is a natural process of change, while (88b) means that what a person has thought to be bad luck has turned out to be good and, in this sense, the change is a sudden or unexpected one. In a sentence with a more neutral meaning, as in (88c), both *ni* and *to* are equally acceptable, but there is a subtle difference in meaning due to associations of either expectedness of the *ni*-RESULTATIVE or unexpectedness of the *to*-RESULTATIVE. Here, again, we observe a certain persistence of the characteristics of the spatial meaning of *ni*, which may have motivated the semantic extension from a pure ALLATIVE-marker in the Spatial Domain to a RESULTATIVE sense in a more abstract domain. In Section 3.3.1, I have already pointed out that the focus of sentences with *ni* as an ALLATIVE marker is on the endpoint of a path of the movement. Such a semantic shift from an ALLATIVE marker to a RESULTATIVE marker involves a metaphorical shift from a concrete Spatial Domain to a more abstract Conceptual/Perceptual Domain. In both cases, however, *ni* codes the final goal or eventual state of the relation or events predicated by the verb.

Ni as as manner marker [MAN]

The particle *ni* also marks a stative relation indicating the MANNER in which an event takes place. Consider the sentences in (89):

(89) a. *Gakusei ga ichiretu ni naran-de-iru.*
students NOM one line MAN queue-CONJ-EXIST
'The students are queueing in one line.'

b. *Kare wa tsune ni reeseeda.*
he TOP usual state MAN calm
Lit: He is calm in his usual state.
'He is always calm.'

MANNER is defined by Talmy as "a subsidiary action or state that a PATIENT manifests concurrently with its main action or state" (1985:128). Thus, while RESULT can be conceptualized as the ENDPOINT of an event or situation, as discussed above, MANNER can be the PATH that an event or situation construed as the TR travels along. The image schema for the MANNER sense of *ni* is illustrated in Figure 25.

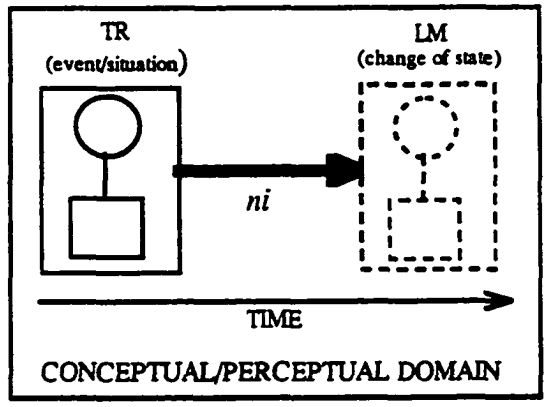

Figure 25. Image Schema for the MANNER Sense of *Ni*

Unlike the RESULT-marking *ni*, which has its focus on the *endpoint* of change, as shown in (90a), the focus of the MANNER-marking *ni* in (90b) is on the *process*, which is, when conceptualized as a metaphorical extension from the Spatial Domain, analogous to the PATH of movement.

(90) a. *Kyooshitu no naka ga totuzen shizuka ni nat-ta.* [resultative]
classroom GEN inside NOM suddenly quiet RES become-PAST
'Inside of the classroom suddenly became quiet.'

b. *Kanojo wa heya de shizuka ni hon o yon-de-i-ta.* [manner]
she TOP heya LOC quiet MAN book ACC read-CONJ-PROG-PAST
Lit: She was reading a book in a quiet manner in the room.
'She was quietly reading a book in the room.'

Such conflation of PATH to describe MANNER is also found in English, where *way* can be used to describe manner, as in *He spoke in a quiet way(=quietly).* In the case of *ni*, however, the MANNER sense of *ni* seems to be a rather small semantic extension from its RESULTATIVE sense.

Ni is used extensively in combination with other morphemes to form adverbs of manner in MJ. Such manner adverbs might be *deontic*, such as *shizuka-ni* 'quietly,' or more *epistemic*, such as *akiraka-ni* 'apparently,' *honto-ni* 'really,' to name a few. Some

of these adverbs, such as *shizuka-ni* and *akiraka-ni*, are usually understood as single words, on the grounds that there are no such unbounded noun stem as *shizuka* or *akiraka*, while other adverbials such as *tune-ni* 'always' or *koi-ni* 'intentionally' are more likely to be recognized as constructed from the affixation of [NP + *ni*] (Matsumura 1971:624).

Ni as a comparative reference point marker [CRP]

Ni also marks the standard of comparison or the point of reference in sentences in which two events, rates, or qualities are being compared or contrasted. Some examples of this usage are shown in (91):

(91) a. *Kare wa gakuryoku de wa ani ni masat-te-iru.*
he TOP intelligence LOC TOP elder brother CRP superior-ONJ-PROG
'He is superior to his elder brother in intelligence.'

b. *Saikin shuunyu ni hireishi te shuppi mo ooku nat-ta.*
recently income CRP be proportionate CONJ expense too more become-PAST
'Recently, expenses have increased in proportion to income'

c. *Kono ko wa otoosan ni sokkuri-da.*
this child TOP father CRP identical-COP
'This child looks identical to his father.'

The *ni*-marked NP denotes the standard of comparison in (91a), the point of reference used in a rating in (91b), and the point of reference for a judgment about similarity in (91c).

I claim that the usage of *ni* to mark a comparative reference point in a comparison or a rating is semantically related to the directional or destinational marker. The image schema for this sense of *ni*, to mark a reference point, is illustrated in Figure 26:

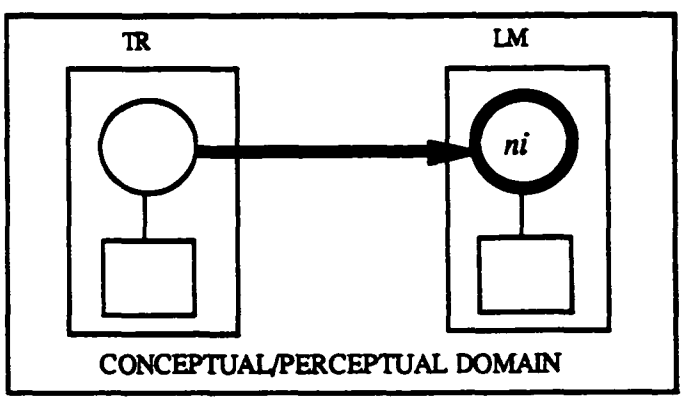

Figure 26. Image Schema for the REFERENCE POINT Sense of *Ni*

The sense of *ni* to mark a REFERENCE POINT is accounted for in the model as a semantic extension from the by now familiar ALLATIVE marking function in the Spatial Domain to a more abstract—in this case, conceptual—usage in the Perceptual/Conceptual Domain. Referring to a standard point in comparison or a rating can be interpreted as a kind of mental assessment or abstract movement in a conceptual domain, and the reference point can serve as a metaphorical "goal" of the abstract movement or comparison.

Ni as a conceptual reference space marker [CRS]

Ni may also mark a REFERENCE SPACE or a setting for a conceptual state. The REFERENCE POINT-marking sense refers to the target of a comparison or assessment, as discussed above. When used to mark a REFERENCE SPACE, *ni* specifies the domain where the conceptual state described is relevant. Consider the sentences in (92):

(92) a. *Taroo wa keizaijijoo ni kuwashii.*
Taro TOP economic situation CRS familiar
'Taro is familiar with economic situation.'

b. *Mariko wa keesan ni take-te-iru.*
Mariko TOP calculation CRS excel-CONJ.be
'Mariko excels in calculation.'

The *ni*-marked NPs *keizaijijoo* 'economic situations' in (92a) and *keesan* 'calculation' in (92b) provide the setting or relevant domain required by the predicates in these sentences, *kuwashii* 'be familiar' and *taketeiru* 'excel' respectively. These *ni*-marked NPs seem to be contingent on these predicates; that is, the sentences would be unacceptable without their *ni*-marked references, as shown in (93):

(93) a. **Taroo wa kuwashii.*
Taro TOP familiar
*'Taro is familiar.'

b. **Mariko wa take-te-iru.*
Mariko TOP excel-CONJ-be
'Mariko excels.'

The CONCEPTUAL REFERENCE SPACE can be understood as a semantic extension from the spatial LOCATIVE sense through a domain shift, as illustrated by the image schema provided below:

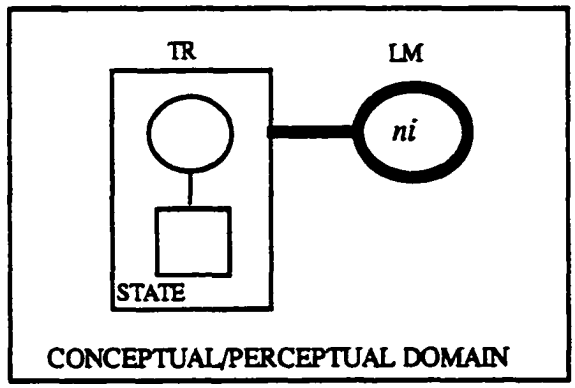

Figure 27. Image Schema for the CONCEPTUAL REFERENCE SPACE Sense of *Ni*

Referring to a relevant domain for a state or quality is like describing a location for an event. In both cases, *ni* introduces a space which complements and is therefore contingent upon the predicate.

3.3.5 Ni *in the Logical Domain*

In the Logical Domain, *ni* marks a variety of relations between events and propositions (rather than relations between entities per se). Most of these relations have to do with *causality* or with the factors which motivate some event (such as *purposes* and *reasons*). As well, there are even more abstract logical relations predicated by *ni* such as *concession*, that is, counter-to-expectation relations holding between two clauses. In all of these cases, however, *ni* seems to predicate a relation between the speaker's background knowledge or attitude about a proposition and some aspect of the proposition itself. At first glance, it may seem that PURPOSE- and REASON-marking functions of *ni* should be at odds with each other (in the sense that one suggests a GOAL or logical outcome of action while the other suggests a SOURCE or logical motivation behind it). However, these two usages are highly related, even ambiguously so, both in Japanese and in most other languages as well. I will address this apparent contradiction below. I will also suggest how the use of *ni* to mark a CONCESSIVE relation between two clauses is highly related to its use as a pragmatic marker in the Expressive Domain, to be examined in Section 3.3.6 below.

Ni as a purpose marker [PUR]

In the sentences below, *ni* introduces PURPOSE phrases or clauses. In (94), the purpose phrase is an abstract activity NP (similar to English gerunds), while in (95) the purpose

phrase is coded by a VP in the adverbial form. In (96) PURPOSE is expressed by a clause headed by *ni*:

(94) a. *Toori made kaimono ni dekake-mashi-ta.* (M:624)
street as far as shopping PUR go out-AUX-PAST
'(I) went out to the street for shopping.'

b. *Kanojo wa jugyo no junbi ni hannichi tsuiyasu.*
she TOP classes GEN preparation PUR half day spend
'She spends half the day for the preparation of classes.'

(95) a. *Sake o nomi ni ikoo.* (*ibid.*)
sake ACC drink.ADV PUR Let's go
'Let's go to drink sake.'

b. *Taroo wa Masako ni ai ni ki-ta.*
Taro TOP Masako EXP meet.ADV PUR come-PAST
'Taro came in order to meet Masako.'

(96) a. *Kono hako wa komono o ire-te oku no ni benri da.*
this box TOP small things ACC put-CONJ keep.CONCL NML PUR convenient COP
'This box is convenient to put and keep accessories (in).' (*ibid.*)

b. *Tabako o kau ni mo ekimae made ika-nebanaranai.*
tobacco ACC buy.CONCL PUR even downtown as far as go-must
'(I) go as far as downtown just to buy tobacco.' (*ibid.*)

Sentences like these suggest that *ni* is clearly in the throes of grammaticalization. It can take nominal, nominalized, and verbal complements in PURPOSE-marking contexts so long as these complement phrases mark some activity. In CL terms, activities can be construed either atemporally or temporally, that is, as potentially contrasting types of activities or as actual processes of a certain type. To take an example from English, the same *-ing* form of a verb can be interpreted as a gerund, that is, as a nominalization or atemporal process in a sentence like *Skiing is a lot of fun* or it can be interpreted as a progressive participle, that is, as a verb or temporal process in a sentence like *I was skiing when I broke my leg.* Many Japanese verbal forms are equally ambiguous between having a temporal or an atemporal interpretation. What is interesting is that, either way, they can be marked by *ni*. In the former case, *ni* has been labelled a conjunctive particle, while in the latter, a postposition, even though it seems to be signalling the same kind of semantic relation in both cases. This is further demonstrated below. As shown by the contrastive pairs of sentences in (97) and (98), *ni* takes complements which are concrete locations (usually NPs) when they describe DESTINATIONS of physical movement as in (97a) and (98a). However, when they describe PURPOSES as in (97b) and (98b), the complements of *ni* may

be more abstract, often expressing an action or an event, and so may be either nominal or verbal.

(97) a. *Masaru* *wa* *maitoshi* *fujisan* *ni* *nobori-masu.* [ALLATIVE]
Masaru TOP every year Mt. Fuji ALL climb-AUX
'Masaru climbs Mt. Fuji every year.'

b. *Masaru* *wa* *maishuu* *gorufu* *ni* *iki-masu.* [PURPOSE]
Masaru TOP every week golfing PUR go-AUX
'Masaru goes golfing every week.'

(98) a. *Yumiko* *wa* *sono* *honya* *ni* *tachiyot-ta.* [ALLATIVE]
Yumiko TOP the bookstore ALL stop by-PAST
'Yumiko stopped by the bookstore.'

b. *Yumiko* *wa* *hon* *o* *kai* *ni* *tachiyot-ta.* [PURPOSE]
Yumiko TOP book ACC buy.ADV PUR stop by-PAST
'Yumiko stopped to buy a book.'

The semantic similarity of the PURPOSE sense of *ni* to its ALLATIVE sense is illustrated in Figure 28. Logical relations can be construed as events taking place in a subjective world (in contrast with an objective world), a world as viewed by the speaker.

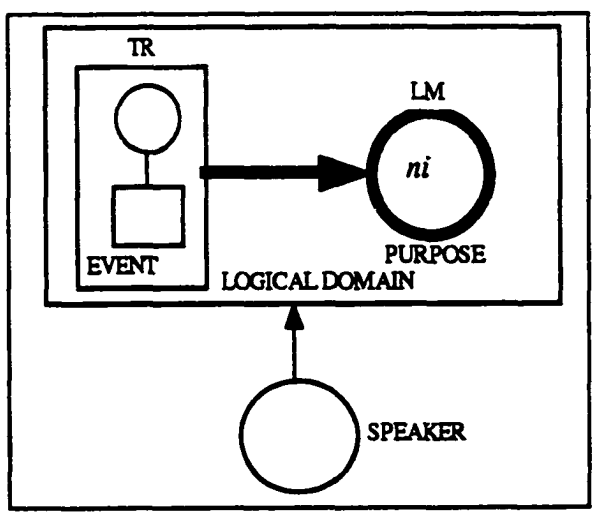

Figure 28. Image Schema for the PURPOSE Sense of *Ni*

The PURPOSE sense of *ni* is a metaphorical extension from its spatial ALLATIVE-marking sense, involving a Spatial-to-Logical Domain shift. While DESTINATIONS are goals in the physical world, PURPOSES can be construed as goals in the mental world that an event, coded as TR, travels towards.

Ni as a reason marker [REAS]

Interestingly enough, the particle *ni* which, as we have established, functions as a PURPOSE marker, also marks REASONS as shown in (99):

(99) a. *Amarino atsusa ni jitto suwat-te-ir-are-nakat-ta.*
excessive heat REAS still sit-CONJ-PROG-can-NEG-PAST
Lit: I couldn't sit still for the excessive heat.
'It was so hot that I could not sit still.'

b. *Sasuga no otoko mo futa-ri no kimochi ni sukkari*
such GEN man even two-CL GEN feeling REAS altogether
kokoro o aratamer-are-te...
mind ACC change-PASS-CONJ
'Even such a (tough) man had his mind changed his mind altogether because of the two people's feeling...' (KKK 148)

PURPOSES and REASONS are closely connected conceptually in that both can be seen as providing explanations for the occurrence of an action, as has been argued by Thompson and Longacre (1985:185). They differ, however, in that purpose clauses express a motivating event which *must* be unrealized at the time of the main event, while reason clauses express a motivating event which *may* be realized at the time of the main clause event. Therefore, as Frawley (1992:227) has claimed, it is understandable that one morpheme serves these two functions in many languages, considering the fact that a *goal* of action is hard to distinguish from its *anticipated outcome*. To clarify the argument, consider the sentence in (100). The lone *ni*-phrase can be interpreted as either a PURPOSE or a REASON:

(100) *Jiro wa ani no kekkonshiki ni suutsu o kat-ta.*
Jiro TOP brother GEN wedding PUR/REAS suit ACC buy-PAST
'Jiro bought a suit for his brother's wedding.'

The phrase *anino kekkonshiki ni* is ambiguous: Is it a purpose or a reason? It is possible to argue for either interpretation: 'Jiro bought a suit in order to wear at his brother's wedding' [PURPOSE] or 'Jiro bought a suit because his brother had/was having a wedding' [REASON]. As the purpose behind the purchase, his brother's wedding was an unrealized event at the time Jiro bought the suit. As the reason behind it, his brother's wedding motivated Jiro to buy the suit, though the wedding was to "follow" the action of buying the suit. That is, the motivation for the purchase is not the actual wedding, but the "anticipation" of the wedding, in keeping with Frawley's explanation.

The applicability of the use of *ni*'s REASON sense seems to be limited. Typically, *ni* codes subjective reasons behind emotions and feelings rather than actions or facts. There is in Japanese a more general REASON marker, *de*, which is sometimes in free variation with *ni* as a REASON marker and sometimes in complementary distribution with it.[3] Consider the contrasting sentences in (101):

(101) a. *Kanojo wa atari no kurasa ni/?de kokorobosoku nat-ta.*
she TOP around GEN darkness REAS frightened become-PAST
'She felt frightened because it was so dark around.'

b. *Kanojo wa byooki de/*ni gakkoo o yasun-da.*
she TOP sickness REAS school ACC absent-COP
'She was absent from school because of sickness.'

In (101a), *ni* is acceptable for marking the NP *atari no kurasa* 'the darkness of the surrounding' as the reason for her feeling of fright. *De* is less acceptable. In (101b), however, the NP *byooki* 'sickness' is not a reason for emotion or feeling, but the fact that she was absent from school. Thus, *ni* is not acceptable, since only *de* can mark an objective reason. Moreover, *ni* is acceptable only in cases where the *ni*-marked NP is ambiguous between a REASON interpretation and a PASSIVE AGENT interpretation—not that the difference between these two senses is clear-cut; it is anything but! Consider the pairs of sentences in (102) and (103):

(102) a. *Sengetu no ooame ni/de hashi ga nagas-are-ta.*
last month GEN downpour REAS bridge NOM wash-PASS-PAST
'The bridge was washed away by the downpour last month.'

b. *Kyonen no ooame *ni/de hashi ga nagare-ta.*
last year GEN downpour REAS bridge NOM wash-PAST
'The bridge washed away because of the flood last month.'

(103) a. *Amarino ureshisa ni/de namida ga de-ta.*
excessive joy REAS tears NOM come out-PAST
Lit: Because of excessive joy, tears came out.
'I was so happy that I started crying.'

b. *Ureshisa *ni/de namida ga de-ta.*
joy REAS tears NOM come out-PAST
Lit: Because of joy, tears came out.
'I started crying because I was happy.'

The *ni*-marked NP *ooame* 'downpour' in (102a) can be construed either as a REASON or as a personified AGENT in the passive sentence. Without the passive morphology *-reru*, however, as in (102b), only *de* is acceptable to mark REASON. In (103a), on the other

hand, *ni* is acceptable as a REASON marker because of the extreme nature of the *ni*-marked NP. The expression *amarino* 'excessive amount of' indicates excessiveness, which can be perceived as analogous to the endpoint of a quality or quantity path or scale, and the sentence can be interpreted as meaning something like 'she cried to the point that she was excessively happy.' Without an overt expression of excessiveness, however, only *de* is acceptable and is interpreted as marking a REASON, as shown in (103b).

Horikawa (1988) characterized *ni*-marked REASONS as being essential elements for the realization of the event denoted by the clausal predicates. According to him, *ni*-marking is acceptable in the sentence describing the subject's emotion in (101b), because the *ni*-marked NP, *kurasa* 'the darkness,' is an essential component for the described emotional state *kokorobosuku naru* 'become frightened.' Similarly, in a passive sentence in (102b), *ni* is acceptable because the context *essentially* requires REASONS. However, Horikawa does not provide any account as to why both *ni* and *de* can be acceptable in some cases. I would suggest that the difference between *ni* and *de* as a REASON marker may lie in the contingency/non-contingency distinction. That is, while a *ni*-marked REASON is required by the clausal predicate, a *de*-marked REASON is an optional element. W have observed similar distinction before between their usages as LOCATIVE markers in the Spatial Domain. However, this issue needs further study.

Ni as an additive marker [ADD]

Ni can also mark ADDITION in the context of describing a list of items to which another entity is added. In such cases, *ni* seems to mean something like 'in addition to.' Thus, when we find *ni* in a [NP *ni* NP] construction, it usually functions to conjoin asymmetrical NPs, as shown in (104):

(104) a. *Kono hon ni kono kaban ni kono hudebako o kudasai.*
this book ADD this bag ADD this pencil case ACC please
Lit: This book, this bag, and this pencil case, please.
'I will take this book, this bag, and this pencil case, please.' (M:625)

b. *Kyoodai wa ani futa-ri ni ane hito-ri desu.* (*ibid.*)
sibling TOP older brother 2-CL ADD older sister 1-CL COP
'As for siblings, I have one older sister in addition to two older brothers.'

These additive uses of *ni* as given in (104) can be related to its more basic allative sense, as illustrated in the pair of sentences in (105):

(105) a. *San* *ni* *go* *o* *tasu* *to* *hachi* *ni* *naru.*
three ALL five ACC add CONJ eight RES become
'(If you) add five to three, then (the total) becomes eight.'

b. *Masako* *wa* *sarada* *ni* *reezun* *o* *kuwae-ta.*
Masako TOP salad ALL aisin ACC add-PAST
'Masako added some raisins to the salad.'

In (105a), where the event described transpires in the Logical Domain, the sense of *ni* is rather ambiguous between an ALLATIVE marker and an ADDITIVE marker. (105b) is also ambiguous, although *ni* may be interpreted more as marking ALLATIVE than as ADDITIVE in this sentence because it pertains to a more concrete Spatial Domain where a physical motion is described.

The ADDITIVE sense of *ni* can be understood as a metaphorical extension from its ALLATIVE-marking sense across the Conceptual Domain. The conception of the action 'adding something to something else' could be construed as an instance of actual or abstract movement, and the conceptualizer as adding items to a set. The added items can be likened to entities moving towards inclusion in the *ni*-marked set, as may be illustrated in Figure 29.

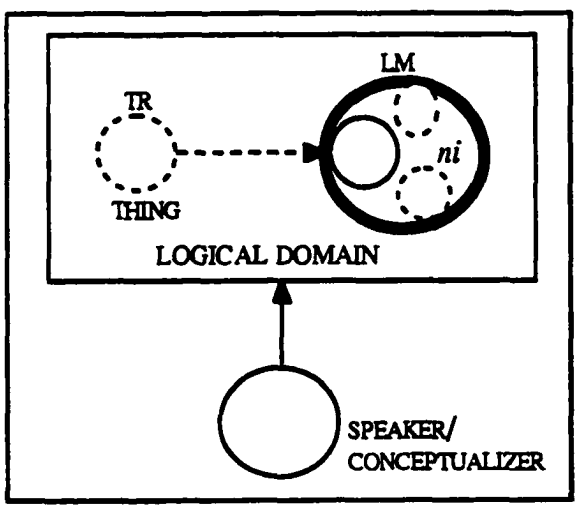

Figure 29. The Image Schema for the ADDITIVE Sense of *Ni*

As Kuno (1973) demonstrated, the use of *ni* as an additive marker exhibits slight differences from the other so-called coordinating particles, namely, *to* and *ya*. Consider the sentences in (106):

(106) a. *John* ***ni*** *Mary* ***ni*** *Tom* *ga* *ki-ta.* (Kuno 1973:112)
John ADD Mary ADD Tom NOM come-PAST
'Tom, in addition to John, and in addition to Mary, came.'

b. *John* ***to*** *Mary* ***to*** *Tom* ***(to)*** *ga* *ki-ta.*
John COORD Mary COORD Tom (COORD) NOM come-PAST
'John and Mary and Tom (and only they) came.'

c. *John* ***ya*** *Mary* ***ya*** *Tom* *ga* *ki-ta.*
John COORD Mary COORD Tom NOM come-PAST
'John and Mary and Tom (among others) came.'

As indicated in the English translation, *to* implies an exhaustive and symmetrical listing wherein all the listed items are perceived to be equivalent. *Ya* is also used for listing equivalent set memebrs. *Ni*, on the other hand, describes a simple (nonexhaustive) enumeration, and therefore, it is more acceptable when the list contains more than two items, especially when they are asymmetrically construed. The sentences in (107) show a contrast between *ni* and *to* functioning as coordinative conjunctions:

(107) a. ?*Makoto* ***ni*** *Akira* *ga* *kekkonshi-ta.*
Makoto ADD Akira NOM marry-PAST
'Akira in addition to Makoto got married.'

b. *Makoto* ***ni*** *Akira* ***ni*** *Jiroo* *ga* *kekkonshi-ta.*
Makoto ADD Akira ADD Jiro NOM marry-PAST
'Jiro, in addition to Akira, and in addition to Makoto, got married.'

c. *Makoto* ***to*** *Akira* *ga* *kekkonshi-ta.*
Makoto COORD Akira NOM marry-PAST
'Makoto and Akira (and nobody else) got married.'

d. *Makoto* ***to*** *Akira* ***to*** *Jiroo* *ga* *kekkonshi-ta.*
Makoto COORD Akira COORD Jiro NOM marry-PAST
'Makoto and Akira and Jiro (all) got married.'

Sentence (107a) is less acceptable than (107b) because *ni* is most felicitous when more than two items are being listed, while (107c) and (107d) are equally acceptable because *to*, which implies an exhaustive listing, does not have such a requirement.

However, not all instances of *ni* in [NP *ni* NP] constructions can be handled simply as a semantic extensions from the ALLATIVE sense. *Ni*, when used to conjoin NPs, may also link a contrasting pair of items in some set, rather than simply listing potentially equivalent entities. For example, man and woman contrast in (108a), as do Tokyo and Kyoto, and green and white are contrastive as well in (108b):

(108) a. *Azuma-otoko ni kyoo-onna.* (M:625)
Tokyo-man ADD Kyoto-woman
'A man from Tokyo and a woman from Kyoto'

b. *Shiroi sunahama ni midori no matsubayashi ga nantomo*
white sandbeach ADD green GEN pine trees NOM anyway
i-e-nai utukushisa-da. (*ibid.*)
say-able-NEG beauty-COP
'The beauty of the white beach and the green pine trees (in contrast to each other) is beyond words.'

The ADDITIVE sense of *ni* conjoins NPs as discussed so far, but also verbs in the adverbial form, as shown in (109). As Okamoto (1994) argued, a [V_i *ni* V_i] construction, which can best be translated into English as 'V to the utmost extent' or 'V as much as (one) can,' is not synonymous with 'V_i in addition to V_i.'

(109) a. *Teki o chi ni uchii-makut-ta.* (M:625)
enemy ACC shoot ADD shoot-exhaust-PAST
'(He) shot and shot exhaustively.'

b. *Mati ni mat-ta sono hi ga ki-ta.* (*ibid.*)
wait ADD wait-PAST the day NOM come-PAST
'The day that (I) waited for to the utmost extent came.'

Okamoto pointed out two reasons why these [V_i *ni* V_i] constructions cannot be properly analyzed as verbal parallels of the [NP *ni* NP] cases in (104). Firstly, they are used only when the verb is repeated, as in (109a) and (109b). Secondly, [V_i *ni* V_i] constructions tend to be accompanied by expressions of extremity, such as *ageku* 'after all' and *sue ni* 'at the end of' which refer to the endpoint of an action or a process, as shown in (110):

(110) *Jiro wa kangae ni kangae-ta sue soko e it-ta.*
Jiro TOP think ADD think-PAST end there DIR go-PAST
'Jiro thought as much as he could, and only after that did he finally go there.'

Okamoto claimed, from these observations, that these cases of [V_i *ni* V_i] may be better analyzed as a whole rather than compositionally. However, doing so does not mean that these two instances of *ni* [NP_i *ni* NP_j] and [V_i *ni* V_i] are unrelated. These [V_i *ni* V_i] constructions are really intriguing because they seem to foreshadow the conjunctive uses. However, for now, I will leave unexplored this issue of whether and how so-called ADDITIVE *ni* with NPs and CONJUNCTIVE *ni* with VPs might be related.

Ni as a concessive conjunctive marker [CONC]

In Japanese, a particle is traditionally considered to be a subordinator (or to use the traditional term, conjunctive particle) when it is attached to a verb or other type of predicate (e.g., an adjective). However, as argued above, predicates in the final (or attributive) form are very much like nominalizations, in which case the status of *ni* as either an NP-marking postposition or as a VP-marking conjunction is not at all clear-cut. Nevertheless, when *ni* functions as a conjunction, it can invoke two types of semantic relations between events: CONCESSIVE and CONDITIONAL relations. I will discuss these in turn.

When *ni* describes CONCESSIVE relations, it has a value akin to *although* in English. Consider the sentences in (111):

(111) a. *Ikkagetsu mae ni tegami o dashi-ta no ni mada*
one month before TEMP letter ACC mail-PAST NML CONC yet
henji ga nai
response NOM exist-NEG
'Although I mailed the letter one month ago, there has not been any response yet.'

b. *Shiken ga chikai no ni ason-de bakari i-te daijoobuna-no.*
exam NOM close NMLCONC play-CONJ always be-CONJ all right- Q
'Although the exam is close, you are always playing; are you all right?'

c. *Kanzui-te-iru-rashii no ni nanimo shira-nai furi o shi-te-iru.*
notice-CONJ-PROG-AUX NMLCONC at all know-NEG pretense ACC do-CONJ-PROG
'Although (he) seems to have noticed it, (he) pretends not to know anything at all.'

The CONCESSIVE usage of *ni* as shown above may appear in the [*no* + *ni*] form in which *ni* is preceded by the nominalizer *no*. In MJ, the *noni* form is used far more commonly than a bare use of *ni*, so that the two may be considered as a single conjunction. In fact, many dictionaries have a separate entry for *noni* although they acknowldge that it is a combined form of the two particles, *no*, the nominalizer, and *ni* (cf. Matsumura 1973; Niimura 1976). As a matter of fact, in some dialects of Japanese (e.g., the Shizuoka dialect), *ni* can stand alone as a concessive subordinator among elderly speakers while the *noni* form is more common among younger speakers.

The semantic characteristics of the CONCESSIVE *(no)ni* becomes evident when contrasted with the use of another concessive subordinator *keredomo* (or *kedo* in a conversational style). Consider the sentences in (112) and (113):

(112) a. *Purezento o age-ta no ni oree mo iwa-nakat-ta.*
present ACC give-PAST NML CONC gratitude even express-NEG-PAST
'He did not even express his gratitude although I gave him a gift.'

b. *Purezento o age-ta kedo oree mo iwa-nakat-ta.*
present ACC give-PAST CONC gratitude even express-NEG-PAST
'He did not even express his gratitude although I gave him a gift.'

(113) a. *Sekkaku purezento o age-ta no ni oree mo iwa-nakat-ta.*
With trouble present ACC give-PAST NML CONC gratitude even express-NEG-PAST
'He did not even express his gratitude although I took trouble to give him a gift.'

b. **Sekkaku purezento o age-ta kedo oree mo iwa-nai.*
With trouble present ACC give-PAST CONC gratitude even express-NEG- PAST
'He did not even express his gratitude although I took trouble to give him a gift.'

Syntactically, the use of *ni* as a concessive subordinator may be interchangeable with *kedo*, as shown in the pair of sentences in (112). However, while the sentences with *(no)ni* implies that the speaker is sorry for or is upset about the situation, *keredomo* or *kedo* describes the situation objectively. In (113), with the expression *sekkaku* 'with much trouble,' which conveys the speaker's subjective (negative) feeling about the situation, only *(no)ni* is acceptable. This semantic characteristic of *ni* as a concessive marker seems to be consistent with its pragmatic use, as will be discussed in the following section.

In the CONDITIONAL sense, on the other hand, *ni* does not take a nominalizer and is used only in certain fixed expressions. Among them are [V *ni*] expressions, such as *sassuru-ni* 'as I guess,' and *yoosuru-ni* 'in summary,' as shown in (114a), and the [*...mo aroo ni*] expressions, such as *koto-mo-aroo-ni* 'for all the (possible) things,' *hito-mo-aroo-ni* 'for all the people (available),' and *basho-mo-aroo-ni* 'for all the places (available),' as shown in (114b).

(114) a. *Omou ni, kore wa karera no hankoo de aru.*
think CONC this TOP they GEN crime COP be
Lit: To (my) thinking, this is their crime.
'I think they are the criminals.'

b. *Basho mo aroo ni, koko de iwa-naku-te mo ii-ja-nai ka.*
place also exist CONC here LOC say-NEG-CONJ even good-COP-NEG Q
Lit: Though other places are possible, you would not have to say (it) here.
'Why would you have to say it here (and not in other places)?'

Both the [V *ni*] expressions and the [*...mo aroo ni*] expressions describe the condition for the following statement or opinion of the speaker. In the latter case, *ni* seems to convey a concessive meaning attached to the expressions.

Synchronically, the CONCESSIVE CONJUNCTIVE sense of *ni* behaves rather differently both semantically and syntactically from the senses of *ni* we have discussed so far. However, both cross-linguistic grammaticalization literature and historical data of *ni* suggest that the CONCESSIVE CONJUNCTIVE *ni* may be a semantic extension from its SPATIAL LOCATIVE sense. The functional extension of an adposition to a connective particle has been documented by many grammaticalization researchers (cf. Heine et al. 1991, Genetti 1991, Craig 1991). Moreover, it is generally (though not always explicitly) maintained by Japanese linguists that the subordinating functions of *ni* have developed out of its postpositional functions (cf. Hashimoto 1969; Matsumura 1971). I will return to this point in Chapter 4. In the following section, I discuss the PRAGMATIC sense of *ni*, which seems to be closely related to the CONCESSIVE CONJUNCTIVE sense discussed here.

3.2.6 Ni *in the Expressive Domain* [PRAG]

When used in sentence-final position, *ni* conveys surprise, regret, or some negative attitude on the part of the speaker. In (115), for example, the main clause describes a hypothetical situation and *ni* expresses the speaker's regret about the state of affairs. In (116), on the other hand, the main clause describes an event which actually took or is taking place either in the past as shown in (116a-c) or in the present in (116d), and *ni* expresses the speaker's worry or concern about the present situation, which otherwise is left very implicit. This usage may be akin to the pragmatic force a word like *alas* or *sigh* has in English when used in front of an assertion.

(115) a. *Chotto chuuishi-tara jiko ni wa nara-nakat-ta-roo **ni** naa.*
a little attend to-COND accident RES TOP become-NEG-PAST-AUX PRAG EXC
'Alas. If you had paid a little attention, the accident wouldn't have happened;
(it is a pity that you did not pay enough attention and the accident happened)'.

b. *Moosukoshi benkyoosure-ba seiseki ga agaru-daroo **ni**.*
a little more study-COND mark NOM raise-AUX PRAG
'Sigh. If you studied a little more, your mark would go up;
(it is a pity that you don't).'

(116) a. *Mukashi wa tetsuyashi-te-mo heikidat-ta no **ni**.*
old days TOP stay up all night-CONJ-COND fine-PAST NML PRAG
'Sigh. I was fine in the old days even if I stayed up all night
(I am sorry for the present situation where I am not very strong any more).'

b. *Are hodo shinsetsu ni shi-te-yat-ta no **ni**.*
that much kind MAN do-CONJ-give-PAST NML PRAG
'Alas. I was so kind (to them) (I complain about the present situation
where they do not appreciate it).'

c. *Kono mae are hodo chuuishi-ta no ni*
this before that much warn-PAST NML PRAG
'I warned you that much before (I am sorry about the present situation where something happened against my warning).'

d. *Sukoshi wa benkyooshi-nasai. Ashita wa shiken na no ni*
a little TOP study-IMP tomorrow TOP exam COP NML PRAG
'Study at least a little bit, the exam is tomorrow (I am concerned about the present situation where you are not studying).'

In these sentences, *ni* expresses the speaker's feeling or attitude about the rest of the utterance. These usages can all be described as pertaining to the Expressive Domain. As Sweetser (1990) and Traugott (1982, 1989) have long argued, a logical or textual connective used to mark propositional relations may often undergo subjectivization to acquire a more personal and/or epistemic meaning. The sense of *ni* observed in (115) and (116) above can then be interpretable as a kind of subjective semantic extension from its more objective CONCESSIVE sense as a subordinating conjunction.

3.3 A Provisional Model for the Semantic Structure of *Ni*

In this chapter, by itemizing and integrating the various usages associated with *ni* in MJ, I hope to have demonstrated that it is a complex and heterosemous lexical category. It exhibits an extensive array of senses and functions, ranging from locative marking to dative case marking to concessive clause conjoining all the way to marking pragmatically something about the speaker's attitude underlying the uttered proposition. And yet, its distribution amongst all of these usage types is not all that random. When examined closely, all of *ni*'s senses, including those which appear to be contradictory to each other at the first glance (e.g., to mark a human GOAL vs. human SOURCE, or to mark a PURPOSE vs. REASON), exhibit some degree of similarity to each other, either directly or indirectly. I have argued that the relationships between *ni*'s various senses can be motivated as the byproduct of metaphoric extension across multiple semantic domains. These domains contrast with one another conceptually in terms of the content of an expression, the concreteness or abstractness of the event underlying the expression, as well as the basicness or derivativeness of the notion being predicated. They can be thought of as forming different levels in a conceptual (and perhaps historical and developmental) hierarchy. Similarities between different usages of *ni* have also been accounted for by invoking Langacker's action chain model and his role archetype model, whereby certain canonical values

associated with archetypal event participants can be shared or contrasted with their cohorts (e.g., *ga* vs. *ni*, or *ni* vs. *o*).

A unified (though still provisional) model for the overall semantic structure of *ni* is illustrated in Figure 30. I have indicated the two most distinct senses of *ni* in the model by placing them in heavy-lined squares ( ). The senses presented in the dotted squares ( ) should be considered schematic senses which may or may not emerge for a given speaker. These are the senses which sanction metaphorical extensions which hold between semantic domains, as described by dotted arrows ( ). The actual tokens or productive usage types are indicated by solid squares ( ). They are connected to schematic senses through relationships of instantiation which are denoted by solid arrows ( ). The various usage types are further connected to each other, directly or indirectly, by similarity links ( ). Thus, a single extension may be multiply motivated.

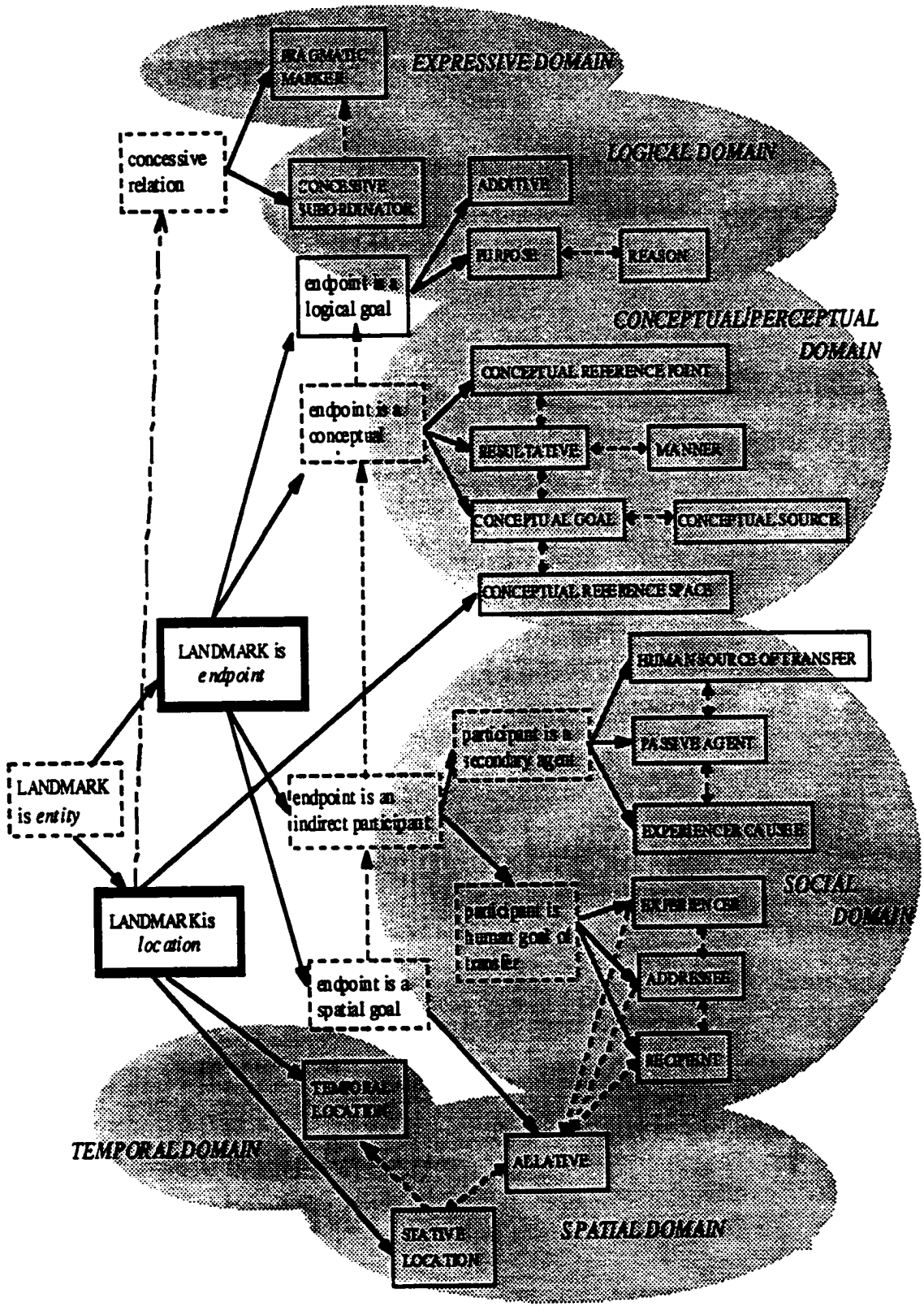

Figure 30. A Proposed Model of the Semantic Structure of *Ni*

In sum, I have hypothesized that the most basic semantic domain for *ni* is the Spatial Domain, in which it exhibits two related, but distinctive senses: the stative LOCATIVE sense and the more dynamic ALLATIVE sense. These two basic senses of *ni* have extended in a variety of ways across various semantic domains and have derived new meanings from these new domains (cf. Croft 1993).

In the Temporal Domain, where *ni* serves as the all-purpose temporal marker in MJ. I have argued that the relation between the SPATIAL LOCATIVE sense of *ni* and its TEMPORAL LOCATIVE sense can be accounted for by a Spatial to Temporal domain shift due to the pervasive TIME IS SPACE metaphor in language. In the Social Domain, *ni* marks a variety of senses which can be subsumed under the 'dative' case: RECIPIENT, ADDRESSEE, and EXPERIENCER. I have demonstrated that despite subtle semantic differences, they can all be characterized as GOAL-oriented participants, much like its ALLATIVE sense in the Spatial Domain. In the same domain, however, *ni* also marks three distinctive senses which are SOURCE-oriented: the EXPERIENTIAL CAUSEE in a causative construction, the PASSIVE AGENT in either a transitive or intransitive passive construction, and the HUMAN SOURCE in a communicative act (transfer). I have suggested how Langacker's role archetype model, modified for Japanese, provides a framework to account for the relationship between these two seemingly contradictory senses. *Ni*-marked participants in the Social Domain share the property of 'sentience' or 'awareness,' in common with *ga*-marked initiative roles (i.e., prototypical AGENTS), but at the same time, being downstream from the original energy source, they share characteristics with *o*-marked participants (i.e., prototypical PATIENTS). As such, the three GOAL-oriented senses of *ni* can be characterized as 'indirect' human participants, as semantic extensions from the ALLATIVE sense, while the three SOURCE-oriented senses of *ni* can be characterized as 'secondary agents,' based on properties they share with archetypal AGENTS by virtue of being human.

In the more abstract domain of Conceptual/Perceptual relations, *ni* exhibits various senses including two opposing senses: the CONCEPTUAL GOAL sense and the CONCEPTUAL SOURCE sense. I have suggested that the semantic similarity between them is associated with the ambiguity behind our conceptualizations of GOALS and SOURCES. In the Conceptual/Perceptual Domain, *ni* also conveys the RESULTATIVE sense, the MANNER, and a marker of a CONCEPTUAL REFERENCE POINT, which are semantic extensions from the ALLATIVE sense of *ni*, as well as marking the CONCEPTUAL REFERENCE SPACE, which I claimed is an extension from the spatial LOCATIVE sense. They preserve basic characteristics of the spatial

image schemas despite their use in a more abstract domain. In the Logical Domain, furthermore, where propositional relations are described, *ni* marks two apparently opposite semantic relations: PURPOSE and REASON. I have argued that *ni*'s PURPOSE sense is a semantic extension from the ALLATIVE sense through a Spatial-to-Logical Domain shift. I have also argued that the REASON sense of *ni* may be semantically related to the PURPOSE sense due to the similarity in the conceptualized causal relation.

There was a cases where I had left the semantic characterization an open question. Based on claims made in a number of grammaticalization studies which have documented functional extensions of locative adpositions to subordinative conjunctions, I have suggested that the CONCESSIVE sense of *ni* in the Logical Domain may be a semantic extension from its LOCATIVE sense. I have indicated this relation by a broken arrow (- - ►). However, this concessive sense seems related to its pragmatic sense in the Expressive Domain.

Let me emphasize that the network model, as proposed in Figure 30, is based on general tenets and tendencies of cognitive linguistic analyses of adpositions only (cf. Croft 1998). Therefore, it is only a working hypothesis of the abstract semantic structure of this particle. Whether speakers actually perceive such fine-grained distinctions between the meanings of *ni* is an open, empirical question. A representational model can serve as a model of something in particular or it can have a particular purpose, as a lexicographic model, for instance, or as a pedagogical model, a developmental model, a model of historical change, or as a model of a typical speaker's mental lexicon. Returning to the questions about lexical meaning that I asked at the outset in Chapter 1, the status of this lexical model equally depends on its functional purpose. In the following two chapters, I present several empirical studies, each of which is meant to evaluate the model. I will demonstrate that the network-based model proposed here, while it may not mirror them precisely, is at least consistent with a range of cross-linguistic and psycholinguistic evidence.

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[1] The full list of sources is as follows:

KKK: Kokuritsu Kokugogaku Kenkyuusho (National Insttitute of Japanaese Linguistics) (1951). *Gendaigo no Joshi·Jodooshi: Yoohoo to Jitsurei (Particles and Auxiliaries in Modan Language: Their Usages and Examples).*

M: Matsumura, Akira (1971). *Nion Bumpoo Daijiten (Dictionary of Japanese Grammar).* Tokyo: Meiji Shoten.

Okuda: Okuda, Yasuo (1983). Ni-kaku no meishi to dooshi tono kumiawase (The combination of *ni*-marked nouns and verbs). In *Nihongo Bumpoo Rengoron Shiryoo-hen (Japanese Grammar of Idioms, The Supplement)*, Gengogaku Kenkyuu Kai (eds.). Tokyo: Mugi Shoboo.

[2] I followed Newman (1996) in the representation of image schemas.

[3] Or, rather, the particle *de* is also polysemous and can mark a variety of relations such as LOCATIVE, INSTRUMENTS, REASONS, etc.

CHAPTER FOUR
EVIDENCE FROM GRAMMATICALIZATION

4.1 Introduction

In the last chapter I proposed a representational model for *ni* based on a semantic analysis of some synchronic data. The proposed model will now be evaluated by subjecting it to data from several empirical studies presented in this and the following chapter. Here, I examine the grammaticalization literature for clues into the nature of semantic extension (i.e., directional trends, evolutionary developments, underlying mechanics, etc.) for functional items like adpositions. The diachronic developmentsof polysemous particles in Japanese, such as *wake, kara,* and *no*, has been studied by some Japanese linguists (cf., Horie 1998; Iguchi 1998). I will demonstrate that the semantic and functional extensions posited for *ni* in Chapter 3 also reflect some common grammaticalization patterns cross-linguistically (cf. Heine et al. 1993).

I first discuss some basic notions and claims made by proponents of grammaticalization theory (henceforth GT) in Section 4.2. In 4.3, I review several grammaticalization studies which looked at similar lexical items in languages which are geographically and genetically unrelated to Japanese. Then in 4.4, I present a reconstruction of *ni*'s grammaticalization. Due to the absence of a direct written record, my analysis is largely based on circumstantial evidence and on other grammaticalization studies of items similar to *ni* in various languages. Finally, in 4.5, I summarize the grammaticalization study and evaluate the synchronic model proposed in the previous chapter.

4.2 Aspects of Grammaticalization

The term 'grammaticalization' is most generally defined as "the process whereby lexical items and constructions come in certain linguistic contexts to serve grammatical functions, and, once grammaticalized, continue to develop new grammatical functions" (Hopper & Traugott 1993:xv). It is a process in which "grammatical morphemes develop gradually out of lexical morphemes or combinations of lexical morphemes with lexical or grammatical morphemes" (Bybee et al. 1994:4). As the target lexical items take on grammatical functions, they become *generalized* in their meaning and distribution and, consequently,

become more polysemous. Thus, GT challenges tacit assumptions made by traditional linguistic approaches that lexical items are fairly stable and that linguistic categories have discrete boundaries. Instead, GT maintains that morpheme classes or linguistic structures form a continuum, which Heine et al. (1991) call a 'grammaticalization chain.' They stated:

> *One major problem, one that requires further investigation, concerns the categorical status of these grammaticalization chains...[They] cut across cognitive domains, conceptual boundaries, constituent types, parts of speech, morpheme types, etc. Common strategies adopted by grammarians are either to force them into the straitjacket of existing categories, to allocate one part of the chain to one of the existing categories, declaring the remainder of the chain to be deviant uses, or else simply to ignore their existence altogether* (*ibid.*:225).

There are two important mechanisms involved in the process of grammaticalization: *metaphorical re-conceptualization* and *reanalysis*. The former enables people to understand and experience one thing in terms of another and to express a more abstract concept in terms of a less abstract one. It involves making *conceptual mappings* or *associative leaps* from one semantic domain to another—specifically from a more concrete domain to a more abstract domain. Sweetser (1990) claimed that certain aspects of semantic structure, which she terms "image-schematic structure," must be preserved in metaphorical mappings across domains. What allows such a semantic and, usually, a concomitant functional extension is the speaker/hearer's experience of the domains which are construed as sharing a certain amount of conceptual structure.

Reanalysis, which is the other type of mechanism, can be defined as "change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation" (Langacker 1977:58). It concerns various levels of linguistic units, including phonology, morphology, and syntax, as well as semantics. Changes to a more superficial structure, such as the occurrence and placement of morpheme boundaries, involve *resegmentation*, as exemplified in (1). English has many highly productive derivational affixes, such as *-hood, -dom, -ly,* which originated in full nouns meaning 'condition,' 'state,' and 'body, likeliness,' respectively, and which compounded with other nouns:

(1) *cild-had* 'condition of a child' > *childhood*
freo-dom 'realm of freedom' > *freedom*
man-lic 'body of a man, likeness of a man' > *manly*
(Hopper & Traugott 1993:41)

On the other hand, changes affecting the more abstract syntactic/semantic aspects of structure are called *reformulations* These involve changes in syntactic or semantic categories and/or configurations. In (2) below, the construction in (a) consisting of a head noun and a modifying prepositional phrase gets reinterpreted by speakers as a (complex) preposition and a complement NP, as bracketed in (b):

(2) a. *[[back] of the barn]*
b. *[back of [the barn]]*

(*ibid.*)

What underlies reanalysis is a certain type of reasoning. Andersen (1973) argued that inherent ambiguities in language motivate an ABDUCTIVE innovation, not only in the phonological system, which he focused on in his discussion, but also in the wider linguistic system (1973:780-781). According to him, a model of *abductive reasoning* "proceeds from an observed result, invokes a law, and infers that something may be the case" (*ibid.*:775). In a syllogism with three propositions, abductive reasoning proceeds as shown below:

(3)
RESULT	*Socrates is mortal.*
LAW	*All men are mortal.*
CASE	*Socrates is a man.*

Abductive reasoning thus contrasts with *inductive reasoning*, which proceeds from observed cases and results to establish a law, or *deductive reasoning* which applies a law to a case and predicts a result. Conclusions reached by abductive inference are not necessarily true (i.e., *Socrates may not be a man*), even though their premises might be (*Socrates is motal, all men are motal*). The process of reanalysis shown in (2) is explainable as an abductive process, as Hopper and Traugott (1993) argued: A hearer has heard the *output* (2a) (the RESULT), but assigns to it a different structure (2b) after matching it with possible analogous nominal structures consisting of a complex preposition and a head noun (e.g., *in front of the house*), which are specified by the LAWS. The conclusion (2b)—the resulting structural interpretation—is not identical to the original structure (2a), but it is nonetheless compatible with it in that the surface string is the same.

What is most frequently mentioned as an intrinsic property of the grammaticalization process is the *unidirectionality* hypothesis. Although the process is not entirely free from

counterexamples nor is there anything deterministic about grammaticalization and unidirectionality, it has been widely argued that there are strong constraints on how a change may occur and on the directionality of the change (e.g., Hopper & Traugott 1993; Bybee et al. 1994). On the one hand, there is a unidirectionality of *generalization*, a process whereby the meanings of a form become broader or more generalized. Generalization may also be characterized as a process whereby a form comes to serve a larger range of grammatical functions. The notion of directionality, on the other hand, may be perceived as a process of *decategorization*. As Hopper and Traugott (1993:103-104) argued, there is a tendency for a major grammatical category item such as a noun or a verb to take on a minor category function such as a preposition, conjunction, auxiliary verb, or pronoun. A clear case is seen in the conjunction *while* as in *while we were sleeping*, which originated as a noun (*hwil* in Old English) meaning 'a length of time.' The meaning is still preserved in Modern English, as in *We stayed there for a <u>while</u>*.

Any grammaticalization process, motivated by mechanisms like those discussed above, is necessarily gradual, as claimed by Lichtenberk (1991b). He posited that for any two changes, A to B and A to C, if the change of A to B is smaller than that of A to C, then B must have preceded C in the course of evolution. He proposed a "Principle of Gradual Change," which is schematized in (4) (*ibid.*:39):

(4) A → B → C not A → C → B

As a consequence of gradual grammaticalization processes, any new or extended meanings or functions of a lexical item are expected to exhibit some degree of relatedness. Some of the meanings shall be more closely related to the basic meaning while others may appear to be related only partially or indirectly. Furthermore, the basic property of the original lexical meaning may well persist in any new grammaticalized function. The persistence of older meanings alongside newer meanings leads to *layering*, a synchronic effect to which polysemous relationships among various, often diverse, meanings of a lexical item are attributable.

Croft (1991) argued that synchronic *syncretism*, or the subsumption of different meanings and functions under a single surface form, is an outproduct of diachronic processes. The English prepositions *with*, for example, subsumes INSTRUMENT (as in the sentence *John tickled her <u>with</u> a feather*), MANNER (*He broke the lock <u>with</u> ease*), and COMITATIVE (*Mary went there <u>with</u> her mother*). The relationships between these thematic

roles are not obvious at first glance, and yet, are eventually interpretable as representing a case of *spread*, the extension of a form from one element in a semantic domain to a semantically contiguous or nearby element in the same domain—in this case, the domain of causal structure (1991:184).

In the last decade, grammaticalization theorists and cognitive linguists have emphasized the relevance of GT to the understanding of synchronic linguistic behavior and, more importantly, human cognitive structure (e.g., Langacker 1991a/b; Sweetser 1990, Heine et al. 1991). In particular, a quote from Traugott and Heine (1991:1) bears repeating here:

> *Grammaticalization is the linguistic process, both through time and synchronically, of organization of categories and of coding. The study of grammaticalization therefore highlights the tension between relatively unconstrained lexical expression and more constrained morphosyntactic coding, and points to relative indeterminacy in language and to the basic non-discreteness of categories.*

Similarly, Heine et al. (1991) rejected any dichotomy between synchrony and diachrony, and, instead, they employed the notion of *panchrony* to refer to "the phenomena exhibiting simultaneously a synchronic-psychological and diachronic relation" (1991:258). They argued that "grammaticalization has to be conceived of as a panchronic process that presents both a diachronic perspective and a synchronic perspective" (*ibid.*:261). It is based on these claims that I believe a study of the historical evolution of *ni*, by taking into account common grammaticalization patterns cross-linguistically, can provide an important piece of evidence for the semantic analysis of its synchronic behavior modeled in Chapter 3.

4.3 Evidence from Cross-Linguistics Studies

In this section, I review several studies which analyzed lexical items in other languages similar to *ni* both synchronically and diachronically. Heine's (1990) study on dative markers in Ik and Kanuri in the Nilo-Saharan language family presents a strong case of *unidirectionality* of grammaticalization as two linguistically unrelated languages reveal extremely similar developmental processes. Interestingly enough, *ni* also exhibits a similar pattern of development, as demonstrated in 4.4. Genetti's (1991) study of the grammaticalization of postpositions of Newari, a Tibeto-Burman language of Nepal, also provides supporting evidence for the synchronic model I have proposed for *ni*. Newari postpositions exhibit another cross-linguistic tendency in which subordinative functions

develops out of locative-marking functions of these items. Finally, a cross-linguistic study of dative markers demonstrates that many of the various senses and functions of *ni* can be interpreted in terms what are generally considered to be "dative" functions. In other words, the constellation of sense types of *ni* identified in the previous chapter are not that unusual, from a historical, typological, and above all, conceptual perspective.

4.3.1 The Unidirectionality of Grammaticalization in Ik and Kanuri

The dative case markers in the Ik and Kanuri languages documented by Heine (1990) exhibit surprisingly similar semantic distributions to that of *ni*. Like *ni*, the dative marker *-kᵉ* in Ik and *-ro* in Kanuri are associated with various so-called *indirect objects*, such as RECIPIENT, ADDRESSEE, and BENEFACTIVE, and they both entertain an array of usage types across domains, ranging from the Spatial and Social Domains to Logical Domain.

Based on the notion of unidirectionality of grammaticalization, namely that grammaticalization proceeds from more concrete case functions to the expression of more abstract functions, Heine assumed that the most basic function of both the dative suffix *-kᵉ* and *-ro* is that of a directional locative (i.e., ALLATIVE), as shown in (5a) and (6a). These dative suffixes also denote a kind of purpose or GOAL when introducing a non-concrete complement, such as *-nk'ak'-* 'eating' in (5b) or kəlo 'learning' in (6b):

(5) Ik

a. ...k'e-esá ntsa awá-**kᵉ**. (Heine 1990:[4])
go-FUT he home-DAT
'...and he will go home.'

b. kotere k'aa noo ro'ba 'jiiki hɔm-uk'ota noo nyɛk'a ro'b-a
because go PAST people all drive-AND PAST hunger people-ACC
nk'ak'-e kabas-e kasilee-i. (*ibid.*:[6])
eat-DAT maizemeal-GEN Kasile-ABL
'Because all went, the hunger drove them to eat maizemeal at Kasile.'

(6) Kanuri

a. suro fato-be-**ro** kargawo. (*ibid.*:[30])
inside house-GEN-DAT enter.3SG.PAST
'He went into/inside the house.'

b. ...Kanuri-woso Arabi kəlo-**ro** mangərzəna. (*ibid.*:[33])
Kanuri-each Arabic learn-VN-DAT he.try.PERF
'...every Kanuri tries to learn Arabic.'

A variety of more abstract senses are derived from GOAL. With human complements, both suffixes convey a BENEFACTIVE sense, as in (7), and an ADDRESSEE sense (which Heine called a dative function), as in (8). These examples are from Ik:

(7) tɔbɔŋɔ́-k° ceki-k° itiŋ-és wicé-k°. (*ibid.*:[7])
food-COP woman-ACC cook-FUT children-DAT
'It is food that the woman will cook for the children.'

(8) ...nkáyó- ó 'jáká-áma ná kut-ɔ ro'ba-ke. (*ibid.*:[9])
stand-COP elder-SIN REL big say-COP people-DAT
'...and a senior elder stands up and tells the people.'

The ALLATIVE or GOAL senses have also extended to PURPOSE senses in both languages and, just like *ni* in Japanese, a purpose event may coded by either nominal or verbal complements. Consider Heine's examples from Ik in (9):

(9) a. 'je'j-ia terega ŋaropi-e nci-e nye sukulu-e missionu-o kaa-boŋ-u. (*ibid.*:[11])
remain-I work money-DAT I-GEN REL school-DAT mission Kaabong
'I kept working for my school fees at the mission school of Kaabong.'

b. ...bɛr-és-ó lo'dúrú-iké-e ni ot-és-í-e e'dí. (*ibid.*:[13])
build-FUT-COP granary-PL-GEN REL pour-FUT-OPT-DAT grains
'...and they will build granaries to store crops in.'

Heine argued that a semantic ambiguity between PURPOSE and REASON complements as observed across languages has brought about the REASON function in both languages. In English, as well, a sentence like *Mary is studying hard for medical school* may receive both a PURPOSE and a REASON reading. It is, therefore, not surprising at all that in Ik and Kanuri (and in Japanese, as well) the same morpheme may be used for both PURPOSE and REASON. In (10), the Ik dative morpheme *k°*, which marks PURPOSE complements in (9) above, is also used to mark REASON:

(10) útá k'ó-í-í ma--í-í-k° (*ibid.*:[14])
NEG go-I-NEG be.sick-I-OPT-DAT
'I cannot go because I am sick.'

Similarly, a MANNER sense may have been derived out of the REASON sense because of its semantic ambiguity. A complement marked by the dative suffix -ɛ may be interpreted either as a REASON or a MANNER in a context like (11a), while it exclusively expresses MANNER in another, like (11b):

(11) a. zɛk'wo-o wáána-ama na arágwanno kɔn itátám-ɪ-ɛ ró'ba ni. (*ibid.*:[15])
sit-COP visitor-SG this month one teach-OPT-DAT people these
'And the visitor stayed for a month, teaching these people.'

b. zɛk'w-ia koto nda nts-i kedi-e maraŋ. (*ibid.*:[16a])
sit-I then with he-GEN way-DAT good
'I just now stay with him in a good way.'

Figure 1 illustrates the common grammaticalization paths that Heine proposed the two dative case markers may have undergone. The functions which are confined to Ik are indicated by parentheses:

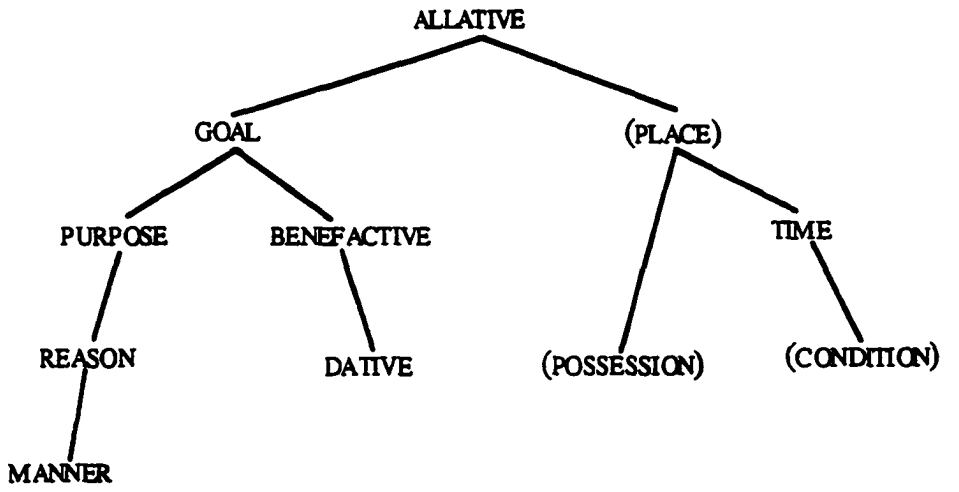

Figure 1. The Grammaticalization of ALLATIVES in Ik and Kanuri (Heine 1990:131)

Heine argued that the similarities exhibited by these two dative case markers are neither coincidental nor accidental. Rather, he contended, considering the geographic distance and syntactic divergence between them, they are best accounted for as being the result of a robust grammaticalization process (1990:130-131). The similarity of *ni*'s diverse synchronic functions to those exhibited by these two dative markers, can also be attributable to similar grammaticalization pressures.

4.3.2 Newari Subordinators

One of the common functional developments observed across languages is that of subordinative clausal markers evolving out of adpositional nominal markers (e.g., Genetti 1991; Ohori 1995). In the same study mentioned above, Heine also demonstrated that the Ik suffix *-kᵉ* and the Kanuri suffix *-ro* both serve as clause subordinators as well as a variety of case markers. As a marker of REASON or CAUSE in Kanuri, *-ro* may either mark a nominal phrase as shown in (12a) or a clause in (12b):

(12) a. ade nanka-ro' (Heine 1990:[37])
that cause-DAT
'because of this'

b. cidə danzeŋyi-də-ro Kano-lan namngin. (Heine 1990:[39])
work-DET end.3SG.NEG.PERF -DET-DAT Kano-in sit down.1SG-IMPFV
'Because the work isn't finished I'll stay in Kano.'

Similar patterns of development have been documented by Genetti (1991), who examined the syncretism between postpositions and subordinators in Newari, a Tibeto-Burman language of Nepal. Genetti demonstrated that the majority of the subordinators are etymologically related to postpositions in that the former havedeveloped out of the latter. Among her examples are the temporal subordinator *syaM*, which is believed to be morphologically related to the ergative case marker *sëM*, and the conditional marker *śa*, which developed out of the locative postposition *sa*. Similarly, purpose clauses are marked by the dative marker *ta* or *yata*, which is formed by the genitive marker *ya* and the dative marker *ta*.

Furthermore, Genetti argued that the nominalization of clauses in Nuwari, together with the following reanalysis of nominal morphology to verbal, is the mechanism responsible for the development from postposition to subordinator observed in this language. Postpositions are believed to have originally been suffixed to nominal constituents, but once they suffix to fully inflected finite nominal verbs, their status becomes ambiguous. Both *naM* in (13a) and *n* in (13b) are INSTRUMENT markers in Classical Newari. However, while the postposition *naM* in (13a) is clearly nominal, as it is suffixed to a noun, the morphological status of *n* in (13b) is unclear, since it is suffixed to a finite verb:

(13) a. thva deśa-s utpatā-naM khavayāva conaM (Genetti 1991:[44])
this country-LOC disaster-INST cry stay
'(Somebody) was weeping on account of a public disaster.'

b. āva chan daya-n jin rājy li kāya dhuna (*ibid.*:[45])
now you have-INST I kingdom back take finish
'Because you are here I have now won back my kingdom.'

Genetti argued this ambiguity of the morphological status motivates the semantic extension of postpositional meaning into a more abstract domain (1991:246). The development of postpositions into subordinators was then followed by the reanalysis in ambiguous cases of verb-plus-verbal morphology, according to Genetti.

Such syncretism between subordinators and postpositions is not restricted to Newari. Genetti showed that the same phenomenon is exhibited by the twenty-six languages in the

Bodic branch of Tibeto-Burman. Data from Classic Tibetan shows that the LOCATIVE marker *na* in (14a) gets used to introduce a CONDITIONAL clause in (14b), and in Thakali, the ERGATIVE case marker/INSTRUMENT marker also marks a TEMPORAL clause, as shown in (15):

(14) Classic Tibetan

a. gyas **na** bsgyur (Genetti 1991:[4])
right LOC turn
'Turn to the right.'

b. me yod **na** du-ba 'yung (*ibid.*:[5])
fire be if smoke become
'If there is a fire, there is smoke.'

(15) Thakali

a. 'nakyu-**ce** 'pohr-si yah-ei mu ro (*ibid.*:[19])
dog-ERG/INST take-ANT go-PAST is PRTCL
'So the dog took her and went.'

b. taalwri pih-si pih-wa-ce... (*ibid.*:[20])
why say-ANT say-non-past-WHEN
'When she asked why...'

The development of subordinators out of postpositions has been widely documented in other linguistically unrelated languages, as well. For example, Craig (1991) demonstrated that all the subordinators in Rama, a Chibchan language in Nicaragua, are related to postpositions.

(16) a. Naas sii **ba** aa taak-iikar (Craig 1991:[22])
I water PUR NEG go-want
'I don't want to go for water.'

b. Tiiskama ni-sung-**bang** taak-i.
baby I-see-PUR go-TNS
'I am going to see/look at the baby.'

(17) a. Ipang **su** an-siik-u (*ibid.*:[24])
island LOC 3PL-come-TNS
'They came to the island.'

b. Nais tum-ting-atkut-**su** y-aakir-i
right so dark-happen-ASP-SUB 3SG-stay-TNS
'Upon getting dark, he stays.'

Ba(ng) marks both an NP as GOAL, as in (16a), and a PURPOSE clause, as shown in (16b). Similarly, *su* marks either a LOCATIVE NP in (17a), or a TEMPORAL clause in (17b). Lichtenberk (1991b) also argued in his study of prepositions in To'aba'ita, an Austronesian language, that three of the six prepositions which, he claimed, derived from verbs, have further grammaticalized into complementizers. In (18a), *fasa*, which is a variant form of

the ablative preposition *fasi*, marks an NP, while *fasi* is used as a purpose clause marker in (18b):

(18) a. Wela 'e thaka **fasa** luma [34]
child he.PERF run from house
'The child ran away from the house.'

b. Fale-a ta si fanga 'a-na wela na'i **fasi** ka bona [61]
give-it some PARTV food to-his child this POS.PURP he.SEQ be quiet
'Give some food to the child so that he is quiet.'

The widespread development of adpositions into subordinators illustrates both the frequency of their process and the unidirectional nature of grammaticalization processes in general. As Genetti (1991) maintained, a number of studies report on postpositional sources for subordinators, but none of them reported any cases where the reverse is true. It is not surprising at all, therefore, that some Japanese particles, including *ni*, exhibit a similar grammaticalization pattern, i.e., whereby a subordinator has developed out of a postpositional grammatical marker.

4.3.3 Extended Senses Exhibited by Dative Markers in Other Languages

One of the reasons why *ni* is often referred to as a general dative marker by Japanese grammarians (e.g., Shibatani 1990, Tsujimura 1996) may lie in the fact that it exhibits the same range of senses which are cross-linguistically common among so-called dative markers. Among such senses are RECIPIENT and ADDRESSEE, which both mark indirect objects in ditransitive constructions, as well as EXPERIENCER, which may be coded as the subject or oblique object of a clause.

Both the Polish dative and the Czech dative, discussed by Rudzka-Ostyn (1996) and Janda (1993) respectively, convey a variety of syntactic and semantic functions and their distributions bear rea sharp semblance to that of *ni* to a large extent. The most central meanings of these datives are claimed to be those which denote a human experiencer, specifically a recipient of some object, as represented in (19) and (20):

(19) Polish dative

a. Jan **dał** **jej** **książkę.** (Rudzka-Ostyn 1996:[2])
John-NOM gave her-DAT book-ACC
'John gave her a book.'

b. Ania **kupiła** Evie tę książkę. (*ibid.*:([5])
Ann-NOM bought Eve-DAT this book-ACC
'Ann bought Eve this book.'

c. Pokazał dzieciom zabawki. (*ibid.*:([12])
showed-he children-DAT toys-ACC
'He showed the children the toys.'

(20) Czech dative

a. Ludmila mu dala kytku. (Janda 1993:[6])
Ludmila-NOM him-DAT gave flower-ACC
'Ludmila gave him a flower.'

b. Ludmila mu uvařila kaši. (*ibid.*:([8])
Ludmila-NOM him-DAT bought hat-ACC
'Ludmila bought him a hat.'

c. Ludmila mu řekla svoje jméno. (*ibid.*:([12])
Ludmila-NOM him-DAT told her name-ACC
'Ludmila told him her name.'

The most prototypical instantiation of these datives are the ones in a ditransitive construction as shown in the (a) sentences, where the verb expresses a physical transfer and the dative marked NP is a human recipient of a concrete object. On the other hand, the sentences in (b) and (c) in (19) and (20) are only considered to be minor extensions, since they retain the basic nominative-dative-accusative case structure. As Rudzka-Ostyn argued, what is important in the acceptability of dative marking in this type of construction is that the object acquired or transferred is 'intended' for the recipient, that they become transferable or just available for use, and as such fall under the recipient's *control*. Thus, the object acquired need not be displaced, as shown in (b), and dative referents may be associated with a less concrete, mental sphere of control, as in (c).

Both datives exhibit further extensions from the prototypical dative usage whereby the dative referent are construed as end-point experiencers bearing effects produced by the described action, as shown in (21) and (22). The dative referent may obtain some benefit from the action, as shown in (a), as well as adverse effects, as shown in (b).

(21) Polish

a. Osoba ta sprzata nam mieszkanie. (Ruzka-Ostyn 1996:[13])
person this-NOM cleans us-DAT apartment-ACC
'This person cleans our apartment (for us).'

b. Lokotorzy poniszczyli nam meble. (*ibid.*:[16])
tenants-NOM damaged us-DAT furniture-ACC
'Tenants damaged our furniture.'

(22) Czech

a. Ludmila mu uvařila kaši. (Janda 1993:[25a])
Ludmila-NOM him-DAT cooked kasha-ACC
'Ludmila cooked kasha for him.'

b. Aleš nám naboural auto. (*ibid.*:[26])
Aleš-NOM us-DAT wrecked car-ACC
'Aleš wrecked our car.'

This property of *affectedness* is even retained by dative-marked NPs in intransitive constructions. The given processes and states involve entities related to the dative referent one way or another. The relation may be, for instance, one of possession, as shown in (23a) and (24a), or kinship, as in (23b) and (24b). What is important here is the fact that the dative referent is construed as being affected by the event in question.

(23) Polish

a. Sasiadowi zepsuło sie auto. (Rudzka-Ostyn 1996:[28])
neighbor-DAT broke down REFL car
'Our neighbor's car broke down (on him).'

b. Ani umarła babcia. (*ibid.*:[30])
Ann-DAT died granny-NOM
'Ann's granny died./Ann lost her granny.'

(24) Czech

a. Když se vrátil, viděl, že mu schořel jeho dům. (Janda [69])
when REFL-ACC returned saw that him-DAT burned up his house
'When he returned, he saw that his house had burned down (and he was affected).'

b. Zemřela mu matka. (*ibid.*:[69b])
died him-DAT mother-NOM
'His mother died (on him).'

Polish further allows the dative to be used with copulas. Rudzka-Ostyn argued that such manifestations indicate the strong tendency in Polish to construe an objectively stative scene as dynamic (1996:360). In (25a), the verb *byc* 'to be' designates no physical transfer, and yet, the speaker can create an impression of transfer and attribute its effect to the dative referent. Similarly, in sentences where adjectives or participles are used predicatively, the dative referent can be construed as an experiencer, as shown in (25b), or simply as a target-reference point, as in (25c):

(25) Polish

a. Pani Czapska była im prawdziwa matka. (Rudzka-Ostyn 1996:[33])
Mrs. Czapska-NOM was them-DAT true mother-INST
'Mrs. Czapska was a true mother to them.'

b. Zaściankowośc miasteczka była mi nieznośna. (*ibid.*:[34])
parochialism-NOM little town-GEN was me-DAT unbearable
'The parochial character of the little town was unbearable to me.'

c. Pojecie to bliskie jest fenomenologii. (*ibid.*:[35])
concept-NOM this lose is (to) phenomenology-DAT
'This concept comes close to phonomenological thinking.'

The dative uses discussed so far are interpreted as rather straightforward extensions of the prototypical RECIPIENT sense, in that the referents can be construed as being affected by the activities or events described (1993:64). this use of datives is further extended to the marking of an experiencer subject, who as a consequence of the event experiences some internal state or reaction, as illustrated in (26) and (27). The syntactic frame for this dative use is called an "impersonal construction," because in this construction there is no marking for person, gender, and other properties normally associated with inflected forms (Rudzka-Ostyn 1996:365).

(26) Polish

a. Słabo mi sie robi. (Rudzka-Ostyn 1996:[48])
faint (on) me-DAT REFL gets-it
'I feel faint.'

b. Itak sie biedakowi zmarło. (*ibid.*:[49])
and so REFL(on) poor man-DAT died-it
'And so the poor man died.'

(27) Czech

a. Je mu zima. (Janda 1993:[53])
is him-DAT cold
'He is cold.'

b. Mně je hodně přes dvacet let. (*ibid.*:[56])
me-DAT is much across twenty years-GEN
'I am well over twenty years old.'

Both Polish and Czech datives have acquired pragmatic uses which allow the speaker to capture the hearer's attention. Below, the use of the ETHICAL DATIVE, shown in (28a) and (29a), establishes an explicit link between the speaker's utterance and the hearer, while the EMOTIONAL DATIVE, shown in (28b) and (29b), is employed by the speaker who claims that s/he has a relationship to an event, even though s/he is not really involved in it.

(28) Polish

a. Ale ci sie dziś Janek wygłupił! (Rudzka-Ostyn 1996:[53])
how you-DAT REFL today John-NOM played the fool
'If you knew what a fool John made of himself today!'

b. Tylko mi nie choldź do Kowalskich! (*ibid.*:[55])
only me-DAT not go-you to the Kowalskis
'Don't you dare go to the Kowalskis!'

(29) Czech

a. Včera jsem ti měl silnou horečku. (Janda 1993:[79])
Yesterday am-AUX you-DAT had strong fever-ACC
'(Hey, you know what?) I had a high fever yesterday.'

b. Co jste nám tu ukradli? (*ibid.*:[81])
What-ACC are-AUX us-DAT here stole
'What have you stolen here (on us)?'

Many of *ni*'s various usages as a dative marker exhibits a parallelism to those of the Polish and Czech dative markers. Like the Polish and Czech datives, *ni* marks a RECIPIENT of both physical and non-physical transfer, an ADDRESSEE, and a BENEFACTIVE. It also serves to mark an EXPERIENCER subject, as well as to convey some discourse or pragmatic force.

However, I am not claiming that all the functions of *ni* can be subsumed as 'dative.' Firstly, the semantic distribution of *ni* is so diverse that the cross-linguistically common dative functions fails to capture it entirely. Secondly, the very understanding of the "essence of the dative" has yet to be achieved, as argued by Rice (1998). The notion of dativity is quite vague and at the same time, extremely complex. Notionally, dativity can be associated with a wide range of semantic roles and syntactic functions. Moreover, the expression of dativity can be coded by a variety of morphological and/or syntactic devices cross-linguistically. We will have to leave this matter for further research.

4.3.4 Summary

Each of the studies discussed in this section provides a motivation for the reconstruction of the grammaticalization of *ni*. The dative markers in Ik and Kanuri suggest the commonality of the development of an allative marker which extends to a dative marker and further to a purpose marker. The Newari data present evidence for cross-linguistically prevalent functional extensions of subordinators out of postpositional markers. Finally, the cross-linguistic study of dative markers in Polish and Czech provides some support for the semantic relationships among the various senses of *ni*. In the next section, I propose a historical reconstruction of *ni*. As will be discussed, the synchronic semantic diversity of *ni* can be interpreted as a result of extensive though stepwise grammaticalization. When examined closely, each proposed extension matches grammaticalization patterns which are fairly common cross-linguistically.

4.4 A Reconstruction of *Ni*'s Grammaticalization

Following claims made by gramaticalization theorists about adpositions and similar particles, such as Heine (1990) and Hopper and Traugott (1993), it is assumed that the earliest senses of *ni* are the ones describing spatial relations, and that the grammaticalization processes that *ni* has undergone are not particularly idiosyncratic or language specific. In the discussion that follows, those sentences given as examples are from three Japanese dictionaries and books on classic Japanese grammar: Matsumura (1971), Morizui et al. (1975), and Niimura (1976). The original sources of examples indicated in parentheses beside each of them are given in Table 1.

Table 1. *The Abbreviations for Literature Sources*

ABBREVIATIONS	FULL TITLE	DATES WRITTEN
KJ	Kojiki	circa 712 A.D.
MY	Manyooshu	later than 759 A.D.
TK	Taketori monogatari	900 A.D.
IM	Ise monogatari	905 A.D.
KW	Kokin wakashu	905 A.D.
MS	Makuranosooshi	992 A.D.
GM	Genji monogatari	1008 A.D.
TC	Tsutsumichuunagon monogatari	1055 A.D.
SN	Sarasina nikki	1060 A.D.
TU	Turezuregusa	1331 A.D.
SH	Shikisyoo	14c - 15c A.D.
KG	Kooyoogunkan	16c. A.D.
KH	Koshokutenju	17c. A.D.
SM	Sekenmunazanyoo	1692 A.D.

4.4.1 The Origin of Ni

The earliest texts in Japanese date back to the Nara Era in the eighth century.[1] Among them are the *Kojiki* 'Record of Ancient Matters' (circa A.D. 712), *Manyooshuu* 'Collection of a Myriad Leaves' (A.D. 759), which is an anthology of Japanese verse written in Chinese characters, and *Taketori Monogatari* 'A Tale of a Man Named Taketori' (A.D. 900), which is the first to be written in Hirakana. It has been generally maintained by Japanese linguists that the history of the Japanese language can roughly be divided into Old Japanese (henceforth OJ) and Modern Japanese (henceforth MJ), with the boundary around the middle of the Muromachi Era (e.g., Konoshima 1973; Shibatani 1990:119). Konoshima

further states that some of the linguistic phenomena characterizing MJ started to appear around the Kamakura Era and that MJ seems to have established itself during the Edo Era (1973:29).

According to Konoshima (*ibid.*:28), one of the major differences between the two periods lies in the use of *kakari-musubi*, so-called 'emphatic binding' expressions, which can be roughly defined as a linguistic phenomenon in which the use of a particle restricts the form of the sentence final predicate (cf. Matsumura 1971:95). Such particles are generally categorized as emphatic particles (*kakari joshi*), such as *zo, namu, ya*, and *ka*, which require the predicate to be in its attributive form, and *koso*, which takes a conditional form. In (30) below, while a neutral sentence in (30a) contains the predicate verb *nagaru* in its conclusive form, sentences with emphatic particles like *zo* in (30b) and *koso* (30c) take specific sentence-final forms: *nagaruru*–the attributive form– in the sentence with *zo* and *nagarure*–the conditional form-in the sentence with *koso*:

(30) a. *Mizu* *nagaru.*
water run.CONCL
'Water runs.'

b. *Mizu* *zo* *nagaruru.*
water EMPH run.ATTR

c. *Mizu* ***koso*** *nagarure.*
water EMPH run.COND

(Matsumura 1971:95)

While such *kakari-musubi* phenomena were rigid and abundant in OJ, they have become more relaxed in MJ. In an example in MJ shown in (31), although the sentence contains the emphatic particle *koso*, it no longer requires the sentence final copula verb *da* to be in its conditional form:

(31) *Buji* *dat-tare-ba**koso*** *sonna* *nonnkina koto* *o* *it-te-i-rareru* *no da*
safe COP-PAST-as EMPH such easy-going thing ACC say-CONJ-be-can.CONL. GEN COP
'As [he] was safe, you can sound so easy-going.'

(*ibid.*:96)

As pointed out by Horie (personal communication), such a loss or relaxing of the *kakari-musubi* phenomenon may be related to the merger of conclusive and attributive (or adonominal, in Horie's term) predicative forms in MJ, which, according to Matsumura (1971:110-111), began around the end of the Heian Era. Horie (1993) argued that the merging of the two predicative forms is also related to the replacement of bare attributive

forms by a use of overt nominalizers, such as *no* and *koto* another syntactic phenomenon distinguishing OJ and MJ. The examples below are Horie's (1993:306-7):

(32) a. *[Kaguyahime no yamome naru] o nageka-si-kere-ba,.....* [TK]
Kaguyahime GEN single person be.ATTR ACC lament-HON-PAST-because
Because [she] was lamenting that Kaguyahime was unmarried,... '

b. *Taroo ga shiken ni shippaishi-ta no] o shit-te odoroi-ta.*
Taro NOM exam in fail-PAST ACC know-CONJ be surprised-PAST
'I was surprised to know that Taro had failed in the exam.'

(33) a. *[...to chigira-se-tamahi-shi] ni, kanawa-zari-keru inochi.* [GM]
QT pledge-HON-HON-PAST.ATTR CONJ come true-NEG-PAST fate
'A fate which, although he made a pledge, has not gone according to his wishes'

b. *[Taroo ga yamero to it-ta no] ni...*
Taro NOM stop QT say-PAST CONJ.
'Although Taro said "Stop [it]!"... '

The use of *no* as a nominalizer is considered as having developed out of its genitive function around the beginning of the Edo Era, according to Matsumura (1971:650), and has affected the syntactic environments of both complement clauses, as shown in (32) above, and subordinate clauses, as shown in (33). In MJ the nominalizer *no* is obligatory in both types of clauses, as shown in (32a) and (33a), while bare attributive predicate forms were used in OJ, as shown in (32b) and (33b). The development of the nominalizer *no* has affected the syntactic environment of the occurrence of *ni* as a concessive conjunction. I will come back to this point in Section 4.4.7.

Finally, the difference in the subject marking system also distinguishes between OJ and MJ. In the latter, *ga* is well established as a subject-case marker both in matrix and embedded clauses, and *no*, which is used interchangeably with *ga* as a subject case marker in nominalized embedded clauses in OJ, functions mainly as a genitive marker. In OJ, matrix clause subjects were normally not marked overtly (Shibatani 1990:348). Moreover, the use of the particle *o* as an object marker does not seem established in OJ (Kyoogoku1987:218).

In the case of *ni*, most of the usages associated with it are already found in the earliest historical records. Moreover, Chinese characters were used to simply represent its sound (e.g., at least four different Chinese characters , 二、爾、邇 and 丹 , which can all be pronounced as /ni/, are found in *Manyooshuu*). In cases of nouns or verbs, each Chinese character represents a concept (e.g., *yama,* 'mountain,' *oyo-gu* 'swim,' and *ten-ki* 'sky-air' or 'weather').

Several opposing analyses have been proposed as to which usage of *ni* is the most basic. Konoshima (1973) argued that the basic meaning of *ni* is to introduce a static (as opposed to dynamic) object that the action expressed by the verb or adjective is aimed at, as in *kokumin ni hooshisuru* 'serve the people.' According to Matsumura (1971), however, a different proposal was advanced by Sakakura (1951) in his study *Kokugo no Rekishi* (The History of Japanese). He argued that the usage of *ni* as a suffix in an adverbial modifier such as *sizuka ni* 'quietly' is the basic one.

Hashimoto (1969:127), in contrast, maintained that it is very likely that the locative-marking function is the basic usage of *ni*, though he did not provide any further discussion in this respect. Along the same line of argument, Akiba-Reynolds (1984) claimed that a locative BE or BE-AT verb *nu* has probably been reanalyzed as the locative preposition *ni*, which has generalized extensively into various usages. By "locative BE" she means a verb which takes a locative nominal as its complement and she refers to a Twi sentence, shown in (34), which describes a locative usage of such a BE-verb 'wɔ':

(34) *sukuu* *wɔ* *Kumase*
school be+at Kumase
'The school is at Kumase'.

Akiba-Reynolds further claimed that *ni*, which was the adverbial form of the locative verb *nu*, underwent a reanalysis as shown in (35), and then kept developing into various oblique markers. In (35a), the locative verb *nu*, conjugated in the adverbial form *ni*, is followed by the main verb *wori* 'be.' In its reanalyzed form (35b), on the other hand, *ni* is not behaving as a verb anymore, but rather as a postposition which forms a locative phrase with the noun phrase that precedes it. This is the same kind of reanalysis involved in (2) above:

(35) a. *Okina* *toguti* *n-i* *wor-i*
Okina door be at-CONJ be-FIN
reanalyzed as:
b. *Okina* *toguti* *ni* *wor-i*
Okina door LOC be-FIN
'Okina is at the door.'

Because of the absence of direct historical evidence, her analysis cannot be considered air-tight. Besides, she does not give any account of the further extension of the locative usage. However, from the point of view of GT, which claims that the development of verbs into case markers and beyond is not uncommon cross-linguistically (cf. Traugott &

Heine 1991, Lichtenberk 1991a), it seems reasonable to postulate a locative verb as the lexical source of the postposition.

4.4.2 Spatial Senses of Ni

In the preceding sections, I discussed a general cross-linguistic tendency for semantic and functional extension of a lexical item from a more concrete meaning to a more abstract one. I propose that *ni* demonstrates a similar pattern of development and assume that the most basic function of the particle *ni* is to code a spatial relation. As discussed in Chapter 3, there are roughly two different types of spatial relations that the grammatical marker *ni* indicates: a pure or stative locative relation [LOC] and an allative relation [ALL] marking the direction and/or destination that a figure moves towards. The use of *ni* to express located existence is found in the oldest written records as illustrated in the sentences in (36):

(36) a. *Kaminamigawa* ***ni*** *kage* *mie-te....* (Morizui et al. 1995:[MY])
Kaminami River LOC shadow can be seen-CONJ
Lit: the shadow can be seen in the Kaminami River, and..
'The cherry blossoms are reflected in the Kaminami River, and..'

b. *haru goro* *Kurama* ***ni*** *komor-i-tari.* (*ibid.*:[SN])
spring around Kurama LOC hide-CONJ-PAST
'(He) hid (himself) in Kurama around the spring.'

Uses of *ni* to describe destinations or directions (i.e., ALLATIVE relations) are also found in these records :

(37) a. *Yamato he* ***ni*** *iku ha* *dare* *ga* *tsuma.* (Niimura 1976:[KJ])
Yamato direction ALL go TOP who NOM wife
'Whose wife goes to Yamato?'

b. *Aniototo* *tomotati* *hikii-te* *Naniha no* *kata* ***ni***
brothers friends lead-CONJ Naniha GEN towards ALL
iki-keri. (Matsumura 1971:[IM])
go-PAST
'(my) brothers went towards Naniha by leading their friends.'

The relation between the stative locative marker and the allative marker is not uncommon cross-linguistically, although some languages do distinguish them (e.g., English *into/onto*) The English preposition *on*, for example, is used to code both stative locations and destinations, as shown in (38):

(38) a. *The book is on/*onto the desk.* [STATIVE]
b. *I put the book on/onto the desk.* [ALLATIVE]

Lacking any direct historical evidence, it is not possible to determine which one of the two spatial usages of *ni* is more basic than the other, although Akiba-Raynolds proposed the static use is more basic. Developmentally, Choi and Bowerman (1992) suggested that children initially attend to lexical items coding endpoints of motion rather than static location, but clearly the two are conceptually very similar. Despite the conflicting proposals, it is important for our purposes to maintain this fundamental distinction because extended usages of *ni* exhibit *persistence* of meaning of both of the particular spatial usages—LOCATIVE and ALLATIVE—demonstrating that distinct usages of *ni* have undergone different paths of development.

Histrical records indicate that *ni* as a stative locative marker was also used to mark a respected person, especially the emperor or the empress, as a subject of the clause. Consider (39):

(39) a. *Onmae ni mo ochiwaraha-se-tamahu.* (Matsumura 1971:[MS])
empress LOC also laugh-HON-HON
Lit: At the place of the empress, (she) laughed, too.
'The empress laughed, too.'

b. *In ni kiko-shi-mesa-mu-koto o habakari-tamahi-te.* (*ibid.*:[GM])
emperor LOC hear-HON-HON-will-NOML ACC refrain-HON-CONJ
Lit: (she) refrained the fact that at the emperor, (he) would hear (that).
'(She) avoided having the emperor hear of (that).'

In MJ, this use of *ni* is more commonly found in the form of *ni wa*, or *ni okaserarete wa*, which literally means 'at the (honorific) place of,' as shown in (40):

(40) *Tennoo ni okaserarete wa gozenn juuji sanjuppun, kookyo o goshuppatsu.*
emperor at the place of A.M.10 o'clock 30 minutes palace ACC leave.HON
Lit: At the palce of the emperor, (he) left the palace at 10:30 A.M.
'The emperor left the palace at 10:30 A.M.'

This suggests that the historical honorific usages of *ni* were metonymic abbreviations for the full purely locative usage preferred in MJ. According to Hashimoto (1969:123), this usage of *ni*, as shown in (39) did not exist until the Heian Era, and was the most commonly used in the late Heian Era and the Kamakura Era, until it faded out at a later time. Matsumura (1971:621) stated that by marking the subject with the locative marking

ni, one can avoid explicitly marking the subject and in so doing express respect for that person.

4.4.3 Temporal Senses of Ni

The semantic extension of a spatial marker to code a temporal relation is a widely documented grammaticalization phenomenon cross-linguistically (e.g., Claudi & Heine 1986; Traugott 1988;Heine et al. 1991). According to Traugott, one of the examples of this type of grammaticalization is the nearly wholesale conversion of the originally spatial preposition *æfter* as in (41a) to the temporal preposition *æfter* (41b) in Old English (1988:409).

(41) a. *The dog was running **after** the man on the bike.*
b. *Please come to see me **after** the class.*

*Before*is like *after*, though the former may still, though only weakly, have a spatial sense. Other English prepositions, such as *at*, *on*, and *in*, are also believed to have undergone similar semantic extensions. In these cases, however, both spatial and temporal senses have been retained.

The Japanese particle *ni* is also used to express a temporal location. *Ni* is also used to express a temporal location, as well as a spatial location, as discussed in the previous chapter. Data can be found in old written records, as shown in the examples in (42).

(42) a. *Inisie* ***ni*** *ari-kemu* *hito* *mo...* (Matsumura 1971:[MY])
past TEMP exist-PAST person also
'people in the past also...'

b. *Hitori* *ite* *mono* *omohu* *yuu* ***ni*** (*ibid.*:[MY])
alone exist things think evening TEMP
'In the evening when I am alone and think about things...'

The extension from spatial to temporal usages depends on a metaphoric process, involving the TIME IS SPACE metaphor (cf. Lakoff & Johnson 1980). Traugott (1988) refers to such processes as involving semantic-pragmatic inference of the sort which allows relations situated in an internal (i.e., temporal) situation to be conceptualized like relations situated in an external, described (i.e., spatial) situation. The extension of the particle *ni* from a spatial usage to a temporal usage can be understood as having undergone a similar path of development.

4.4.4 Ni *as a Dative Case Marker*

The semantic extension of *ni* from a directional marker to the dative case marker can be interpreted as involving a domain shift from the Spatial to the Social Domain. This pattern of grammaticalization has been demonstrated by a number of diachronic and synchronic studies dealing with the semantic and functional development of grammatical forms (e.g., English *to* in Davidse 1996, the Dutch preposition *aan* in Columbo & Flores D'Arcais, 1984; the Senufo postposition *mà* in Carlson, 1991). For example, Carlson demonstrated that a dative/benefactive and locative goal postposition have the same form in most of the Senufo languages, which belong to the Niger-Congo language family. (43) is an example from Cebaara, where *má/mà* marks both ALLATIVE and DATIVE participants:

(43) a. *à* *wi* *lúrú* *ã* *kàtyóoli* *má*
and she return PERF courtyard ALL
'...and she returned home.'

b. *Wi* *n* *gi* *kãa* *wi* *mà*
he PERF it give him DAT
'He gave it to him.'

In Cebaara, *má/mà*, which has grammaticalized from the imperfective form of a verb meaning 'come,' functions both as a locative goal marker and a dative case marker. The Japanese particle *ni* can also be understood as having undergone a similar extension from an allative to a dative sense. The examples in (44), from early written records, illustrate *ni*'s function to mark a RECIPIENT in (44a) and an ADDRESSEE in (44b):

(44) a. *Tori* ***ni*** *wa* *sakura* *no* *hosonaga,* *Choo* ***ni*** *wa*
Tori REC TOP cherry GEN dress Choo REC TOP
* *yamabukigasane* *tamaharu.* (Matsumura 1971:[GM])
yellow dress give.HON
'(The emperor) gave a pink dress to Tori, and a yellow dress to Tyoo.'

b. *Tairakeku* *hunade* *wa* *shi-nu* *to* *oya* ***ni*** *moosane.*
safely departure (of a ship) TOP do-PERF QT parents ADR please tell
'Please tell my parents that the ship departed safely.' (*ibid.*:[MS])

SOURCE-oriented usages of *ni*, such as those which mark CAUSEE or PASSIVE AGENT, have been found in the early records. They might also be interpreted as deriving from its GOAL-oriented usages.

(45) a. *Hito ni imatoshimo sira-se-tamawa-zu* (Morizui et al. 1975:[GM])
people CAUS-EXP even now know-CAUS-HON-NEG
'(The emperor) has not yet let people know (about it).'

b. *Kuni no kami ni karam-erare-ni-keri* (*ibid.*:[IM])
county GEN officer AGT-PASS tie-PASS-PERF-PAST
'(He) was tied by the officer of the county.'

c. *Kuruma nado mo dare ni ka kar-amu.* (Matsumura 1971:[TC])
car such as also who SRC Q borrow-shall
'Who shall I borrow something like a car?'

The conceptual relationship between these apparently contradictory usages has been discussed in 3.3.3. Moreover, it is not cross-linguistically uncommon that the dative marker is used in two opposing senses (e.g., Janda 1993, Van Hoecke 1996). For example, Van Hoecke maintained that the Latin dative marks both the case of attribution, as shown in (46a) and the case of removal or separation, as shown in (46b):

(46) a. *Caesar regnum Cleopatrae dedit.* (Van Hoecke 1996:[9])
Ceasar-NOM kingdom-ACC Cleopatra-DAT give-3SG.PERF
'Ceasar gave the kingdom to Cleopatra.'

b. *Caesar scutum militi detraxit.* (*ibid.*:[10])
Ceasar-NOM shild-ACC soldier-DAT take away-3SG.PERF
'Ceasar took the shield away from the soldier.'

Ni's diverse semantic distribution in the Social Domain can be interpreted as an byproduct of relatively common semantic or functional extensions cross-linguistically. I argue that the prototypical sense of *ni* in this domain is that of RECIPIENT, which has extended to other GOAL-oriented semantic roles, such as ADDRESSEE and EXPERIENCER. On the other hand, the RECIPIENT sense has undergone what is interpreted as some conceptual reversal to mark various types of SOURCE-oriented roles, such as the HUMAN SOURCE OF TRANSFER, EXPERIENCER CAUSEE, and PASSIVE AGENT.

4.4.5 Ni *in the Conceptual/Perceptual Domain*

Ni has further developed to introduce perceptual and conceptual experiences, such as (i) indicating a resultant state of change, (ii) the manner in which an event is taking place, (iii) the standard or point reference in a comparison or rating. These perceptual or conceptual senses of *ni* date back to the earliest written records:

(47) RESULTATIVE

a. *Yama no shizuku ni nara-masi mono o.* (Niimura 1976:[MY])
mountain GEN raindrop RES become-want FIN EXCL
'I wish I could become a rain-drop in the mountain'

b. *Hai ni nari-tamaha-mu o mi-tatematsuri-te...* (Matsumura 1971:[GM])
ash RES become-HON-AUX ACC see-HON-CONJ
'(as I) see (him) become ash'

(48) MANNER

a. *Shirayuhuhana ni nami tatiwataru.* (*ibid.*:[MY])
white-cotton-flower MAN wave standing over
'(the) wave was standing over like white cotton flowers.'

b. *Hana zo mukashi no ka ni nihohi-keru.* (*ibid.*:[KW]
flower EMPH old time GEN fragrance MAN smell-AUX
'the flowers smell like the fragrance from old time.'

(49) REFERENCE POINT

a. *Hiru no akasa ni mo sugi-te hikariwatari* (Morizui et al. 1975 [TK])
daytime GEN light CRP too exceed-CONJ shine
'(It) was shining with more light than the daytime light'/(It) was brighter than the daylight.'

b. *Noosho, gakushoo, bensetsu, hito ni sugure-te* (*ibid.*:[TU])
penmanship intelligence discussion people CRP superior-CONJ
(He) is superior in penmanship, intelligence, and discussion

The use of an allative or dative marker to describe conceptual or perceptual relations is common typologically. I have shown in Section 4.2 that the Polish dative has acquired a function to mark a target reference point. The English *to*, which serves both as an allative marker and as a dative marker, is also used to code RESULT. Consider (50):

(50) a. *He went to the museum.* [ALLATIVE]
b. *He gave a ring to his wife.* [DATIVE]
c. *He tore the letter to pieces.* [RESULTATIVE]

Similarly, the Latin dative is not only used to mark the direction of movement as shown in (51a), but can also be used to mark the conceptual reference point in sentences with verbs and adjectives indicating similarity or comparison, as in (51b) (Van Hoecke 1996:10-11):

(51) a. *It clamor caelo.* [DIRECTION]
go up-3SG cry-NOM heaven-DAT
'The cry went up to heaven.'

b. *Canis none est similis lupo?* [CONCEPTUAL REFERENCE POINT]
dog-NOM not be-3SG similar-NOM wolf-DAT
'Isn't the dog similar to the wolf?'

Even the apparent contradiction between the two senses, the CONCEPTUAL GOAL and the CONCEPTUAL SOURCE as in (52), can be related through a fairly simple semantic link. The ambiguity in construal between GOAL and SOURCE is considered to lie behind such a GOAL-SOURCE extension, which is also demonstrated by the English preposition *at*, as shown in (53):

(52) a. *hajime no ya ni nahozari no kokoro ari.* (Matsumura 1971:[TU])
first GEN arrow CGOAL neglegence GEN feeling exist
'(By counting on the next arrow,) one has a feeling of negligence to the first arrow.'

b. *....kaze no oto ni zo odorokare-nuru.* (*ibid.*:[KW])
wind GEN noise CSRC EMPH surprise-PAST
'(I) was surprised at the noise of the wind.'

(53) a. *The boys threw stones at the poor dog.* [SPATIAL GOAL]

b. *John is aiming at finishing the project by May.* [CONCEPTUAL GOAL]

c. *John was surprised at the fact that Ben finished the project.* [CONCEPTUAL SOURCE]

At, which marks the LOCATIVE GOAL in the Spatial Domain, as shown in (53a) is used to mark both THE CONCEPTUAL GOAL, in (53b), and THE CONCEPTUAL SOURCE, in (53c).

I propose that the conceptual or perceptual senses of *ni* have developed out of its basic spatial directional senses through a metaphorical shift from the Spatial Domain to a more abstract one. The CONCEPTUAL GOAL can be construed as the endpoint of a conceptual path. The EMOTIONAL SOURCE sense can, in turn, be interpreted as a fairly simple semantic extension from its CONCEPTUAL GOAL sense. In the case of its RESULTATIVE sense, *ni* can be construed as describing the final goal or eventual state of the process or event, while the focus is on the path instead of the goal when it describes MANNER. Furthermore, the usage of *ni* to mark a conceptual reference point can be understood as an metaphorical application of the very spatial directional marker to the domain of conceptual assessment.

4.4.6 Purpose and Reason Uses of Ni

In Japanese, the particle *ni*, which, as we have established, functions as an allative marker, also marks PURPOSE and REASON. Historical records indicate that *ni* has acquired PURPOSE and REASON senses sometime predating the Heian Era. Such early usages are illustrated in (54) and (55):

(54) PURPOSE

a. *tokidokino onnenbutsu ni komori-tamahi-shi.* (Matsumura 1971:[GM])
sometimes pray PUR stay - HON-PAST
'(He) sometimes stayed (in the temple) for praying.'

b. *nanigoto ni ki-ta.* (Niimura 1976:[SH])
what affair PUR come-PAST
'For what did you come?'

(55) REASON

a. *yo no hito no koi ni shina-mu o...* (Matsumura 1971:[MY])
would GEN people GEN love REAS die - will ACC
'(That) people in the world will die of love...'

b. chikaki hi nado ni niguru hito wa. (*ibid.*:[TU])
near fire such as REAS escape person TOP
'those who run away because of a fire in the neighborhood'

According to Thompson and Longacre (1985), many languages use the same morphology for marking PURPOSE and REASON. In 4.2, I showed that the Kanuri suffix *-ro*, which is used to express the ALLATIVE, is also used to encode PURPOSE and REASON. Thompson and Longacre also cited examples from Kanuri, as well as Ngizim, a Chadic language, in which the subordinating morpheme for both purpose clauses and reason clauses is *gàadà*. Consider the sentences in(56) and (57) from Kanuri and Ngizim, respectively:

(56) Kanuri

a. *Biska Monguno-ro lete-ro tawange ciwoko.*
yesterday Monguno-ALL go(VN)-PUR early.1SG get up.1SG.PAST
'Yesterday I got up early to go to Monguno.'

b. *Biska Monguno-ro lengin-de-ro tawange ciwok.*
yesterday Monguno-ALL go.1SG.IMPERF-DEF-REAS early.1SG get up.1SG.PAST
'Yesterday I got up early because I was going to Monguno.'

(57) Ngizim

a. *Vɛru gáadà dà si sɛma..*
go out.PERF PUR SJNCT drink beer
'He went out to drink beer.'

b. *Ata aban gáadà aci ngaa.*
eat.PERF food REAS he well
'He ate food because he was well.'

(Thompson & Longacre 1985:185-186)

Notice that in the Kanuri examples in (56a-b) an ALLATIVE marker has extended to mark bothPURPOSE and the REASON. The use of the allative/dative case marker for purpose or reason phrases is quite common cross-linguistically (cf. Heine et al. 1993). English *for*,

which still has vestiges of its original allative function, as shown in (58a), also codes purposes (58b) and reasons (58c):

(58) a. *He headed for the back door.* [ALLATIVE]
b. *He runs everyday for exercise.* [PURPOSE]
c. *My hometown is famous for its beauty.* [REASON]

The extension from allative or dative case marker to purposive or reason marker can be seen as a series of simple semantic shifts from the basic Spatial Domain to the Socio-physical Domain to the Domain of Logical Relations (Genetti 1991), not just in Japanese, but in a wide variety of unrelated languages.

4.4.7 Ni *as a Subordinating Conjunction*

In Japanese, a particle is traditionally considered to be a subordinator (or to use the traditional term, a conjunctive particle) when it is attached to a verb in the final form. As discussed in 4.3.2, the cross-linguistic grammaticalization of an adposition from marking a nominal phrase to marking a clause is widespread (cf. Genetti 1991; Lichtenberk 1991b; Craig 1991). Lichtenberk, for example, describes a case in To'aba'ita, an Oceanic language, where the preposition *uri* which has a basic allative/purpose meaning as in (59a) is historically related to *uri*, a purpose and reason complementizer as in (59b) and (c) respectively. His examples are given in (59):

(59) To'aba'ita

a. *Nau ku rake'iri uri-a wane.*
I 1SG.PERF be angry toward-him man
'I am angry at the man.'

b. *Wela na'i 'e angi uri-a 'e thaofa.*
child this 3SG.PERF cry REAS-it 3SG.PERF be hungry
'The child cried because he was hungry.'

c. *Nia ka sifo uri ta i'a 'i Fafolifua uri-a-a 'a-na.*
he 3SG.SEQ descend GOAL some finish to Fafolifua PUR-it-them MID.VCE-his
'He went down to F. for some fish to take back and roast.'

(Lichtenberk 1991b:49)

Similarly, Genetti (1991:229) claimed that "the extension of case postpositions to clausal subordinators follows regular patterns, such that postpositions with a given semantic value develop into a consistent set of subordinators." In her typological study of Newari dialects, she demonstrated that there is frequent syncretism between the dative case

postposition and purpose clausal subordinators (e.g., *ta* in Newari). The same grammaticalization pathway seems to be evident in Japanese as well. The earliest written records indicate that the purpose sense of *ni* was used to mark an abstract NP as a postposition, as shown in (54a), repeated here as (60a), as well as to serve as a subordinator to mark a clause, as shown in (60b-c):

(60) [NP + *ni*]

a. *tokidokino onnenbutsu ni komori-tamahi-shi.* (Matsumura 1971:[GM])
sometimes pray PUR stay-HON-PAST
'(He) sometimes stayed (in the temple) for praying'

[Verb in conjunctive form + *ni*]

b. *Asuka no kawa ni misogishi ni iku.* (*ibid.*:[MY])
Asuka GEN river ALL do washing PUR go
'(I) go to the river of Asuka to do the washing.'

c. *matsuri mi ni ide-tamahu.* (*ibid.*:[GM])
festival see PUR go out-HON
'(He) went out to see the festival.'

Diachronic studies of *ni* (Hashimoto 1969; Konoshima 1973) have proposed several stages of development whereby *ni* goes from having a postpositional function (with abstract nominals or nominalizations) to including a conjunctive function. These stages are illustrated in Table 2:

Table 2. *The Development of* CONCESSIVE SUBORDINATOR *Sense of Ni*

STAGE	FORM	DESCRIPTION OF DEVELOPMENT
(i)	[[S] + abstract noun] + *ni* (*time/case*)	*Ni* was originally attached to abstract nouns such as *toki*, 'time,' or *baai* 'case,' indicating the time or place in which an event or action takes place.
(ii)	[[S] + ø] + *ni*	The temporal/locative meaning became generalized through the process of pragmatic inference in which the abstract nouns (*toki* and *baai*) were dropped.
(iii)	[[S] + *no*] + *ni*	The subordinating function of *ni* was taken over by the complex particle *noni*, in which the nominalizer *no* precedes *ni*, by the Edo Era. *Noni* specifically means 'although/though' at this stage.
(iv)	[S] + *noni*	In MJ, the complex particle *noni* (nominalizer *no* + subordinator *ni*) has undergone reanalysis to the extent that it is considered to be a single particle (Niimura 1976).

Examples for each stage of development are given below:

(61) (i) [*monoomou* *to* *wabi iru* *toki*] ***ni*** *nakitsutsu motona* [MY]
be worried CONJ sorrow stay time CONJ crying continuously
'(The birds) continuously keep crying at the time (when) I am worried and stay sorrowful.'

(ii) [*Ayashigari-te yori-te* *miru*] ***ni*** *tsutsu no naka hikari-tari* [TK]
wonder-CONJ approach-CONJ see CONJ bamboo GEN inside shine- AUX
'When he wondered and approached to see, inside of the bamboo was shining'

(iii) [*Ore* *ga korehodo iu*] *no*] ***ni*** *kokoro ni shitago-te-tamoran* [KH]
1.SG NOM this much say NOML CONJ mind DAT obey-CONJ-wish
'Although I tell (him) this much, I wish he would obey his mind.'

(Konoshima 1971:200-201)

(iv) [*Shikenga* *chikai*] ***noni*** *kare* *wa* *ason-de* *bakari iru*
exam NOM close CONJ he TOP play-CONJ always be
'Though the exam is coming near, he is always playing.'

The morphosyntactic change of the concessive conjunctive use of *ni* from Stage (ii) to Stage (iii) is associated with the development of *no* as a nominalizer, as discussed in 4.4.1 above. According to Konoshima (1973:201), *noni* is used commonly in the language from the late Edo Era, but not during the early Edo Era.

It is generally, though implicitly, maintained by Japanese linguists as well that the postpositional locative function of *ni* has developed to serve subordinating functions (cf. Hashimoto 1969; Matsumura 1971). On the other hand, cross-linguistic evidence suggests that temporal connectives expressing simultaneity or temporal overlap have often developed into concessive conjunctions (cf. Traugott & König 1991:199; Heine et al. 1993) One such example is the English *while*, which originated in OE in the temporal adverbial phrase *hweile re* 'at the time that' (*ibid.*). It seems that the source of the development of the concessive conjunctive sense of *ni* is its locative sense, which has acquired rather general conjunctive functions, one of which is to mark the temporal relation between a pair of clauses (or events). In the sentences below, *ni* is interpreted as a coordinating subordinator meaning 'and' in (62a) and as a concessive subordinator roughly meaning 'though' in (62b). *Ni* can also be interpreted as marking the reason clause like the English subordinator 'because,' as shown in (62c), or 'when,' in (61ii), repeated here as (62d): :

(62) a. *Namida* *no koboruru* ***ni*** *me* *mo* *mi-e-zu*... (Matsumura 1971:[IM]
tears GEN fall CONJ eye also see-can-NEG
Lit: Tears fell and eye(s) cannot see..
'Tears fell down and I cannot see...'

b. *Kataharaitashi to omohu ni, on-seusoku mo tae-te nashi.*
sorry QT feel CONJ HON-letter also stop-CONJ exist.NEG
Lit: (I) feel sorry, but the letter has also stopped and does not exist.
'Though I feel sorry (for her), the letter has stopped coming in.'
(Morizui et al. 1975:[GM])

c. *kono koto o nageku ni, hige mo shiroku, (ibid.:[TK])*
this thing ACC grieve CONJ mustache also white
Lit: Because (he) grieved over this thing, (his) mustache also was white,...
'Because he grieved over this incident so much that his mustache turned white,'

d. *Ayashigari-te yori-te miru ni tsutsu no naka hikari-tari (ibid.:[TK])*
wonder-CONJ approach-CONJ see CONJ bamboo GEN inside shine- AUX
'When he wondered and approached to see, inside of the bamboo was shining.'

It is quite common cross-linguistically for a single subordinator to serve more than one function. For example, *hweile*, whose semantic development we discussed above, came to allow for other inferences and, finally acquired the concessive meaning, although the demonstrative *re* was eventually dropped (Traugott & König 1991). In the case of *ni*, its concessive meaning 'although' gradually became predominant for the conjunctive function, and by the middle of the Edo Era, when *noni* became commonly used, it was the only meaning which remained (Konoshima 1973:200-201). The development of the complex particle *noni* is understood as a process of reanalysis which was motivated by the regularization of explicit marking of nominalization, as argued by Genetti (1991:246). In some dialects of Japanese (e.g., the Sizuoka dialect), however, the old form of concessive *ni* (that of stage [ii]) is retained mainly by older people.

4.4.9 Further Grammaticalization of Ni

The ADDITIVE sense of *ni* can also be thought of as developing out of ALLATIVE sense through metaphoric or cross-domain extension. According to Hashimoto (1969), uses of *ni* as an additive marker can be found only from the post-Heian Era onward. In (63a), an example from *Makuranosooshi*, written in the Heian Era, *ni* is ambiguous between an ALLATIVE sense and a more abstract ADDITIVE sense. In (63b), from *Tsurezuregusa*, written in the Kamakura Era, however, there is not really a spatial sense any more and *ni* is interpreted as describing ADDITION only:

(63) a. *Kezuri koori ni amazura ire-te...* (Morizui et al. 1975:[MS])
crushed ice ALL/ADD sweetening add-CONJ
'To add sweetening to crushed ice, and...'

b. *Yo o hi ni tsugi-te* (*ibid.*:[TU])
night ACC day ADD connect-CONJ
'(I) connect night to day.= (I) work both days and nights.'

Matsumura (1971) argued that the additive use of *ni* was motivated by an omission of the predicate verb in a sentence with *ni* as an ALLATIVE or GOAL marker. Matsumura provides the following two sentences as evidence for his arguement:

(64) a. *Sore wa nusubito ni oi to yuu mono nari*
it TOP theif ADD extra payment QT say thing be
Lit. 'It is what is called shooting an extra payment at a thief.'
'It is as if you pay an extra cost after you are broken in.'

b. *nusubito ni oi o utsu to...*
theif ALL/ADD extra payment ACC cast QT
'To cast an extra payment to/at a thief...'

(Matsumura 1971:622)

Although the two sentences share the same *ni*-marked referent and the NP following it, the interpretation of the function of the *ni*-marked NP differs between them. *Ni in* (64a) can be characterized as an additive marker which links two NPs. In (64b), on the other hand, although the the same two NPs as the ones in (64a) are contained, the *ni*-marked NP is taken as the object of the verb *utsu* 'shoot' rather than forming an [NP *ni* NP] constituent. Therefore *ni* in (64b) is more likely to be interpreted as describing direction. A simple extension from the ALLATIVE sense of *ni* to its ADDITIVE sense is evident here.

Finally, the PRAGMATIC use of *ni* to describes the speakers' feeling is found only in records later than the Edo Era. One such use is exemplified in (65):

(65) *Yoku atatamara-nu to atode samui ni yo.* (Morizui et al. 1975:[UB])
well warm up-NEG CONJ later cold PRAG FIN
'If you don't warm up well, you will feel cold later, I tell you (I am concerned that you are not listening to me).'

As I discussed in 3.3.6, the semantic extension that a subordinative conjunctive marker may undergo to acquire a more personal and/or epistemic meaning is not uncommon cross-linguistically (Sweetser 1990; Traugott 1982, 1989). In Japanese, there are at least a couple of particles, namely, *kara* and *tte*, which are considered to have undergone similar grammaticalization paths (e.g., Suzuki 1997; Iguchi 1998). For example, *kara*, which introduces a REASON clause as a subordinative conjunction, conveys the speaker's complaint toward an addressee when used as a sentence-final particle (Iguchi 1998). As Konoshima (1973:202) argued, the PRAGMATIC use of *ni* at the sentence final position seems to have emerged out of its CONCESSIVE use by omitting the main clause.

Many studies in GT have argued that many lexical and grammatical items eventually acquire epistemic uses, whereby the speaker expresses his or her personal attitude toward the context (cf. Traugott 1982, 1989; Sweetser 1990). It is exactly the cross-linguistically commonextensions that I have hypothesized that *ni* has undergone. In this process, *ni* has ultimately acquired sentence-final discourse-marking functions of a most subjectuive nature.

4.5 Discussion

In this chapter, I have suggested that the diversity of *ni*'s synchronic behavior is the result of multiple grammaticalization pathways which the particle has undergone through its semantic development. Due to the lack of a direct historical record, my arguments have been based on circumstantial evidence, cross-linguistic data, and claims made by grammaticalization theorists. However, when each of the extended usages is closely looked at, each individual extension confirms to an attested grammaticalization process cross-linguistically. The extension from the spatial usages to the temporal usages is a widely documented extension exploiting/capitalizing on the widespread TIME IS SPACE metaphor (cf. Heine et al. 1991; Claudi & Heine 1986). The redeployment of an ALLATIVE marker to mark DATIVE or dative case marker and further to a PURPOSE is also reported in a number of grammaticalization studies. Even those usages which may look somewhat contradictory at a glance can be hypothesized as involving fairly straightforward pragmatic inferences—the main engine of grammaticalization. Figure 2. summarizes the grammaticalization paths that I argue *ni* has undergone.

The data obtained from this grammaticalization study provides a supporting piece of evidence for the network model proposed in Chapter 3. Based on claims made by a number of GT studies, I have argued that the earliest sense of *ni* was to describe spatial relations, which can be roughly characterized by two distinct sense types: the STATIVE LOCATIVE sense and the ALLATIVE sense. The STATIVE LOCATIVE marker has extended to mark TEMPORAL LOCATION. This extension illustrates one of the main properties of grammatical extension—that more concrete concepts come to serve as models for more abstract ones (Traugott 1988). The STATIVE LOCATIVE marker has also extended into a CONJUNCTIVE function, which first had a variety of meanings, but which later lost most of them and came to express a specific relation between two propositions, namely, a CONCESSIVE relation. Based on historical data analyzed by Hashimoto (1969), I have argued that *ni* has

developed this concessive subordinative sense through what is considered a common extension in many languages, as claimed by Genetti (1991) and Heine et al. (1993).

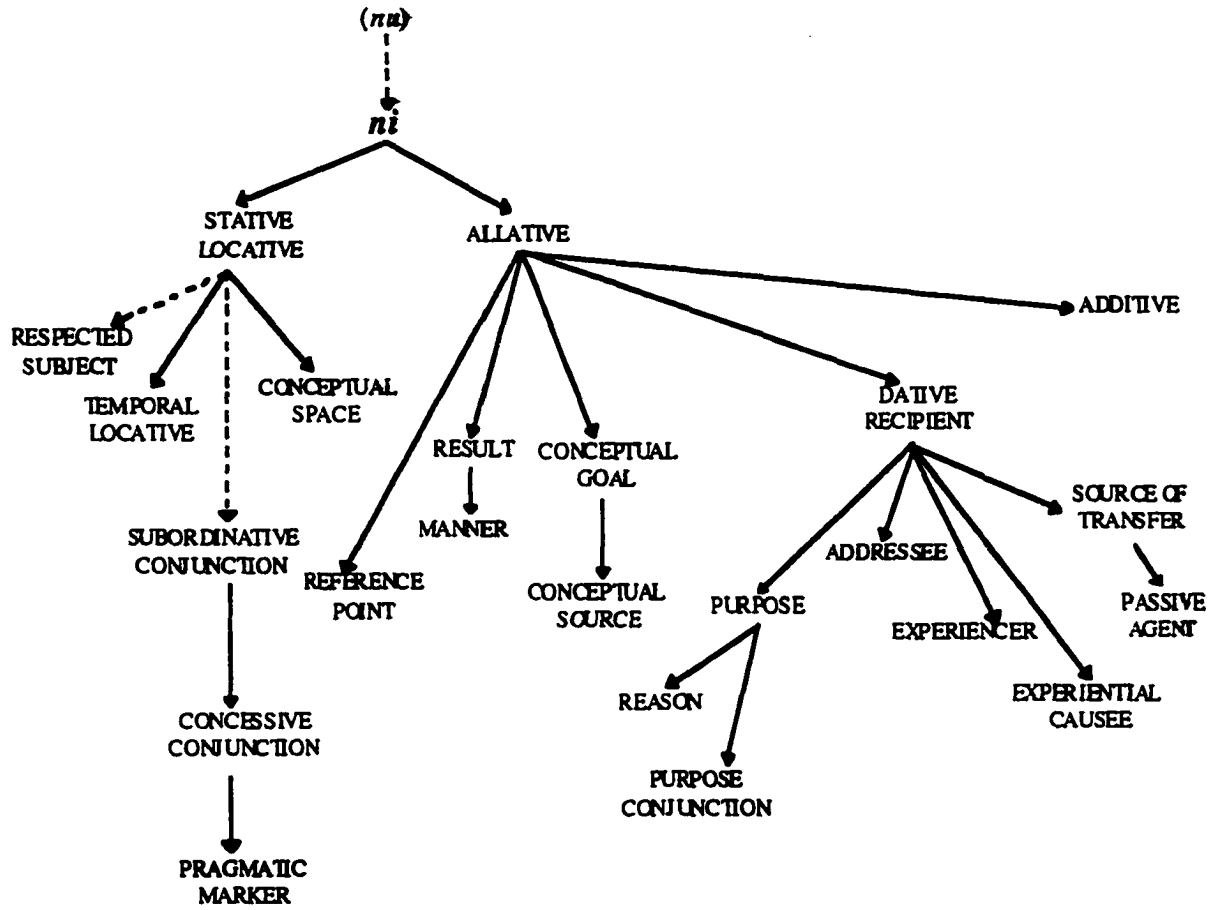

Figure 2. The Grammaticalization of Japanese *Ni*

The ALLATIVE sense of *ni* is claimed here to have given rise to its complement of senses, ranging from marking a human goal as a DATIVE object to marking a human source as a secondary agent, and to coding a number of conceptual and/or perceptual relations. In Chapter 3, I argued that some of these GOAL-oriented usages are construed as being straightforward semantic extensions from the spatial ALLATIVE sense (e.g., the RECIPIENT, PURPOSIVE, or the EXPERIENTIAL CAUSEE), while others which mark SOURCE-oriented relations may only be indirectly related through chains of association (e.g., PASSIVE AGENT, HUMAN SOURCE OF TRANSFER, or REASON).

One of the reasons why *ni* has been considered such a complex particle by many Japanese linguists (e.g., Matsumura 1971) is that most of its varied senses date back to the pre-literature stages of Japanese. Since there are no written records available as evidence to

determine exact dates of origin for derived senses, all relations between the different senses must remain as conjecture rather than as conclusive. During its grammaticalization process, *ni* has acquired an extensive range of senses, but there have been a few senses which have either disappeared or have been overtaken by other particles (e.g., the RESPECTED SUBJECT sense and most of the conjunctive meanings). *Ni* has also combined to form a number of complex particles which, through the process of reanalysis, have later come to acquire various abstract senses. However, most of *ni*'s senses are still commonly used in MJ. *Ni*'s complex synchronic semantics demonstrates a very complex picture of *layering* as well as *persistence* as *ni* has undergone extensive grammaticalization to acquire newer functions while some of its older usages remain.

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[1] The major historical periods in the Japanese history are as follows:

Nara Era	(8th Century)
Heian Era	(late 8c. - late 12c.)
Kamakura Era	(late 12c. - early 14c.)
Muromachi Era	(14c. - 15c.)
Edo Era	(17c. - late 19c.)

CHAPTER FIVE
EVIDENCE FROM EMPIRICAL STUDIES

5.1 Introduction

Data from the diachronic study presented in the previous chapter provided at least partial supporting evidence for the lexical network model I proposed for *ni* in Chapter 3. In the present chapter, I examine whether the model accords with data from three independent empirical studies: a text count study, a child language acquisition study, and several psycholinguistic experiments. With their focus on different kinds of linguistic activities, these three types of studies should have implications about the configuration of the semantic structure of *ni*. I first discuss the text count study, in which the relative frequencies of the various senses of *ni* are ascertained across a variety of genres. In Section 5.3, I present an analysis of a young child's acquisition of *ni*. I show that the acquisition pattern of individual senses of *ni* at least partially reflects the semantic model. Finally, in 5.4, I report results from three experimental tasks: a sentence generation test, a similarity judgment test, and a sorting test. A general discussion in 5.5 concludes this chapter.

5.2 Text Count Study

A text count study was conducted with a view to determining the relative frequencies of the various senses of *ni* in various genres of Japanese discourse. The rationale behind this study was that the senses which are more basic and, therefore, more prototypical of the category would be used more frequently, as maintained by Rosch (1978) and Bybee (1985).

Based on the model, it was expected that the frequency distribution would not be homogeneous across sense types. Rather, senses which are semantically more basic and more central to the category *ni*, such as the LOCATIVE and ALLATIVE senses in the Spatial Domain, would appear with higher frequency than others.

5.2.1 Method

Sentences containing *ni* were collected from six different sources. The six contexts consisted of four 50-page-long sections I randomly extracted from four different written

texts, and two oral texts, a transcribed speech given by the Japanese Empress at a conference, and a transcribed TV interview. The four written tests varied in both the degree of formality and style, and so did the two oral texts. Table 1 provides a description of each of the texts used in the study.[1]

Table 1. *Description of Texts Used in the Text Count Study*

	TITLE	GENRE & STYLE	CONTEXT
A	*Kokoro* by Natsume Soseki, pp. 300-349	written (novel) formal, mostly narrative	A university student decides to move out of his hometown and finds a room in a house in Tokyo.
B	*Hatachi no Genten* by Takano Etsuko, pp. 193-242	written (essay) informal, mostly narrative	The author keeps a diary on her life as a university student.
C	*Onnashachoo ni Kanpai* by Akagawa Jiro, pp. 1-50	written (novel) informal, largely conversational	A story about workers at a company which is about to go bankrupt.
D	*Sekai no Owari to Haadoboirudo Wandaarando* by Murakami Haruki, pp. 690-739	written (novel) rather formal, largely conversational	The main character tries to find a researcher who is hiding in an underground maze.
E	*Memory of reading in my childhood*, a speech made by the Empress Michiko on 9.24.98	spoken (speech) formal	The Japanese Empress's speech on her own experiences with books.
F	*Tetsuko no Heya*, a TV interview program, July 1985	spoken (conversation) informal	Two female TV personalities talk about their personal lives and families.

Each instance of *ni* in the texts was labeled according to its domain and usage type. Six domain types and 22 usage types were identified; 20 sense types which were based on the analyses in Chapter 3, the use of *ni* in a complex particle (e.g., *ni-tsuite* 'about,' *ni-yotte* 'by,' and *ni-kagitte* 'in the exceptional case of'), and the use of *ni* in a fixed expression (e.g., *ki-ni-naru* 'bother,' and *...zu-ni* 'without V-ing'), as defined in Chapter 2.

5.2.2 Results and Discussion

Table 2 is a summary of the frequency distribution of the sense types of *ni* in the six texts. In total, 1734 instances of *ni* were detected. Among the various senses of *ni*, the most frequently used sense type was that of marking MANNER at 19% (337 times), followed by the two spatial senses, the ALLATIVE sense and the STATIVE LOCATIVE sense both at 13% (234 times and 226 times respectively). The RESULTATIVE sense and the TEMPORAL LOCATIVE sense were also frequent, at 10% (174 times) and 9% (148 times) respectively. Coincidentally, the senses marking EMOTIONAL SOURCE, REASON, and CONCESSIVE CONJUNCTION were less

frequent across the texts. A chi square test revealed a significant difference in frequency between the sense types (X^2=341.9, $p < .0001$).

Table 2. *Raw Data from the Text Count Study*

DOMAIN/ SENSE TYPE \ TEXT	A		B		C		D		E		F		TOTAL	
SPATIAL														
SPATIAL LOCATIVE	54	(13%)	14	(6%)	46	(17%)	51	(15%)	44	(14%)	17	(8%)	226	(13%)
ALLATIVE	27	(7%)	24	(11%)	39	(15%)	95	(29%)	32	(10%)	17	(8%)	234	(13%)
TEMPORAL														
TEMPORAL LOCATIVE	35	(9%)	22	(10%)	12	(5%)	16	(5%)	38	(12%)	25	(12%)	148	(9%)
SOCIAL														
RECIPIENT	6	(1%)	3	(1%)	0	(0%)	0	(0%)	17	(5%)	2	(1%)	28	(2%)
ADDRESSEE	8	(2%)	2	(1%)	1	(0%)	6	(2%)	2	(1%)	9	(4%)	28	(2%)
EXPERIENCER	21	(5%)	5	(2%)	10	(4%)	11	(3%)	13	(4%)	7	(3%)	67	(4%)
CAUSEE	3	(1%)	2	(1%)	0	(0%)	0	(0%)	3	(1%)	4	(2%)	12	(1%)
PASSIVE AGENT	5	(1%)	3	(1%)	5	(2%)	6	(2%)	3	(1%)	5	(2%)	27	(2%)
HUMAN SOURCE	1	(0%)	3	(1%)	1	(0%)	0	(0%)	0	(0%)	0	(0%)	5	(0%)
CONCEPTUAL/PERCEPTUAL														
CONCEPTUAL GOAL	17	(4%)	15	(7%)	12	(5%)	13	(4%)	15	(5%)	1	(0%)	73	(4%)
EMOTIONAL SOURCE	2	(0%)	4	(2%)	0	(0%)	0	(0%)	17	(5%)	0	(0%)	23	(1%)
RESULT	47	(12%)	29	(13%)	21	(8%)	37	(11%)	16	(5%)	24	(11%)	174	(10%)
MANNER	92	(23%)	35	(16%)	43	(16%)	57	(17%)	49	(16%)	61	(29%)	337	(19%)
REFERENCE POINT	10	(2%)	6	(3%)	2	(1%)	9	(3%)	2	(1%)	4	(2%)	33	(2%)
CONCEPTUAL SPACE	3	(1%)	3	(1%)	1	(0%)	3	(1%)	2	(1%)	0	(0%)	12	(1%)
LOGICAL														
PURPOSE	13	(3%)	10	(5%)	12	(5%)	8	(2%)	17	(5%)	13	(6%)	73	(4%)
REASON	4	(1%)	1	(0%)	4	(2%)	0	(0%)	3	(1%)	0	(0%)	12	(1%)
CONCESSIVE	3	(1%)	5	2%)	5	(2%)	1	(0%)	0	(0%)	2	(1%)	16	(1%)
ADDITIVE	3	(1%)	0	0%)	0	(0%)	1	(0%)	3	(1%)	0	(0%)	7	(0%)
EXPRESSIVE														
PRAGMATIC	0	(0%)	3	(1%)	0	(0%)	0	(0%)	0	(0%)	2	(1%)	5	(0%)
OTHERS														
COMPLEX PARTICLE	34	(8%)	13	(6%)	32	(12%)	7	(2%)	23	(7%)	2	(1%)	111	(6%)
FIXED EXPRESSION	13	(3%)	15	(7%)	18	(7%)	11	(3%)	11	(4%)	15	(7%)	83	(5%)
TOTAL	401	(100%)	217	(100%)	264	(100%)	332	(100%)	310	(100%)	210	(100%)	1734	(100%)

Figure 1 illustrates the frequency distribution of the sense types of *ni* for the four written texts. They all showed relatively high frequencies for the two spatial senses and the MANNER and RESULTATIVE senses. The EXPERIENCER sense, the CONCEPTUAL GOAL sense, and the PURPOSE sense were also frequent, through to a lesser degree. A chi square test showed that the difference in frequency distribution between the four texts is not significant (X^2 = 68.74, p = .137), suggesting that patterns of frequency distribution were similar regardless of genre or register.

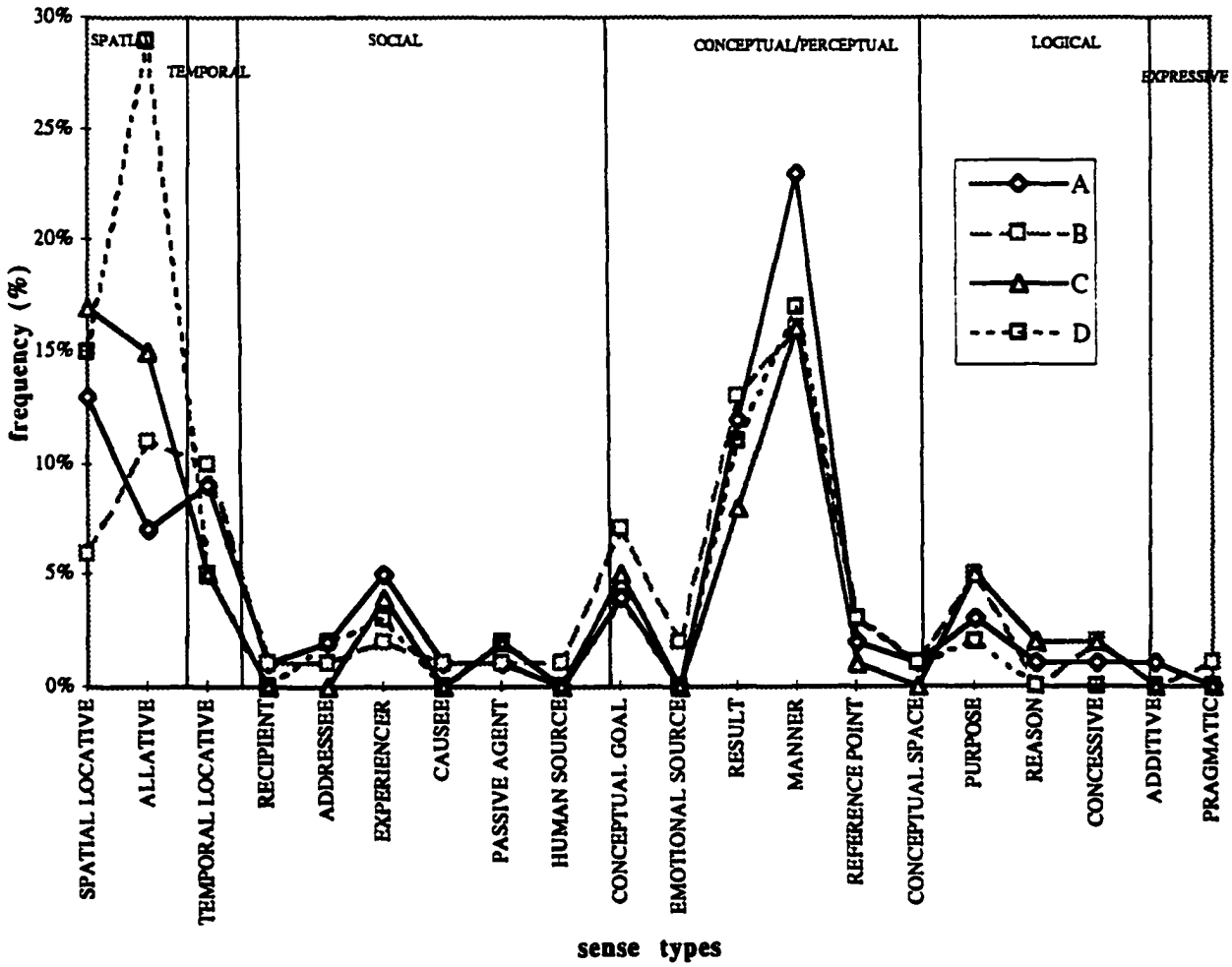

Figure 1. Frequency Distribution of Senses of *Ni* in the Four Written Texts

The higher frequency of the ALLATIVE sense in Text D may be an artifact of the randomly selected passage. The context is such that the main character moves about in a maze in search of a researcher who is hiding somewhere within it, therefore his forward spatial movement was described repeatedly in many sentences.

The two spoken texts also showed similar distribution patterns, as illustrated in Figure 2. The two spatial senses and the TEMPORAL LOCATIVE sense, as well as the MANNER sense, were among the most frequent sense types for both texts.

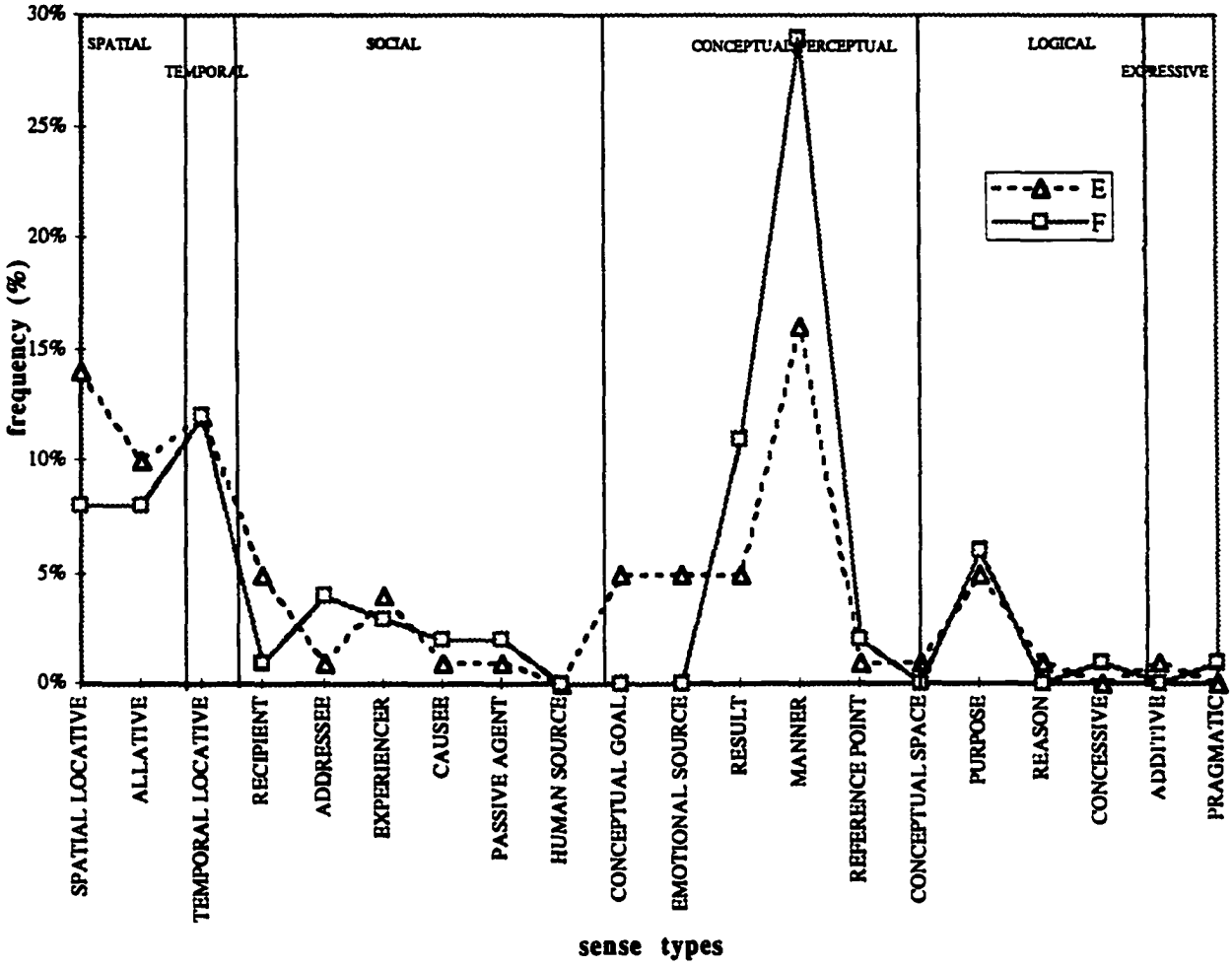

Figure 2. Frequency Distribution of Senses of *Ni* in the Two Spoken Texts

A chi square test revealed that, despite the difference in register, the difference in the frequency distribution between the two texts is not significant ($X^2 = 30.1$, $p = .0504$). The higher frequency of the MANNER sense in Text E was due to the higher frequency of the expression *honto ni* 'really' or 'truly,' which showed up 31% (19 times) of the total 61 instances.

Furthermore, the average frequency distributions were similar between the written texts and the speech texts. The correlation between the average frequency for the written and spoken texts was found to be significant ($r = .90, p < .01$). As shown in Figure 3, the two

spatial senses, the TEMPORAL sense, and the RESULT and MANNER senses in the Conceptual Domain were among the most frequent sense types in all types of texts. The EXPERIENCER sense, the CONCEPTUAL GOAL sense, and the PURPOSE sense were also very frequent. The fact that the TEMPORAL sense was more frequent than the spatial senses in the oral texts, unlike the written texts, might be because in the speech data speakers used temporal phrases to mark sequences of events in telling their stories.

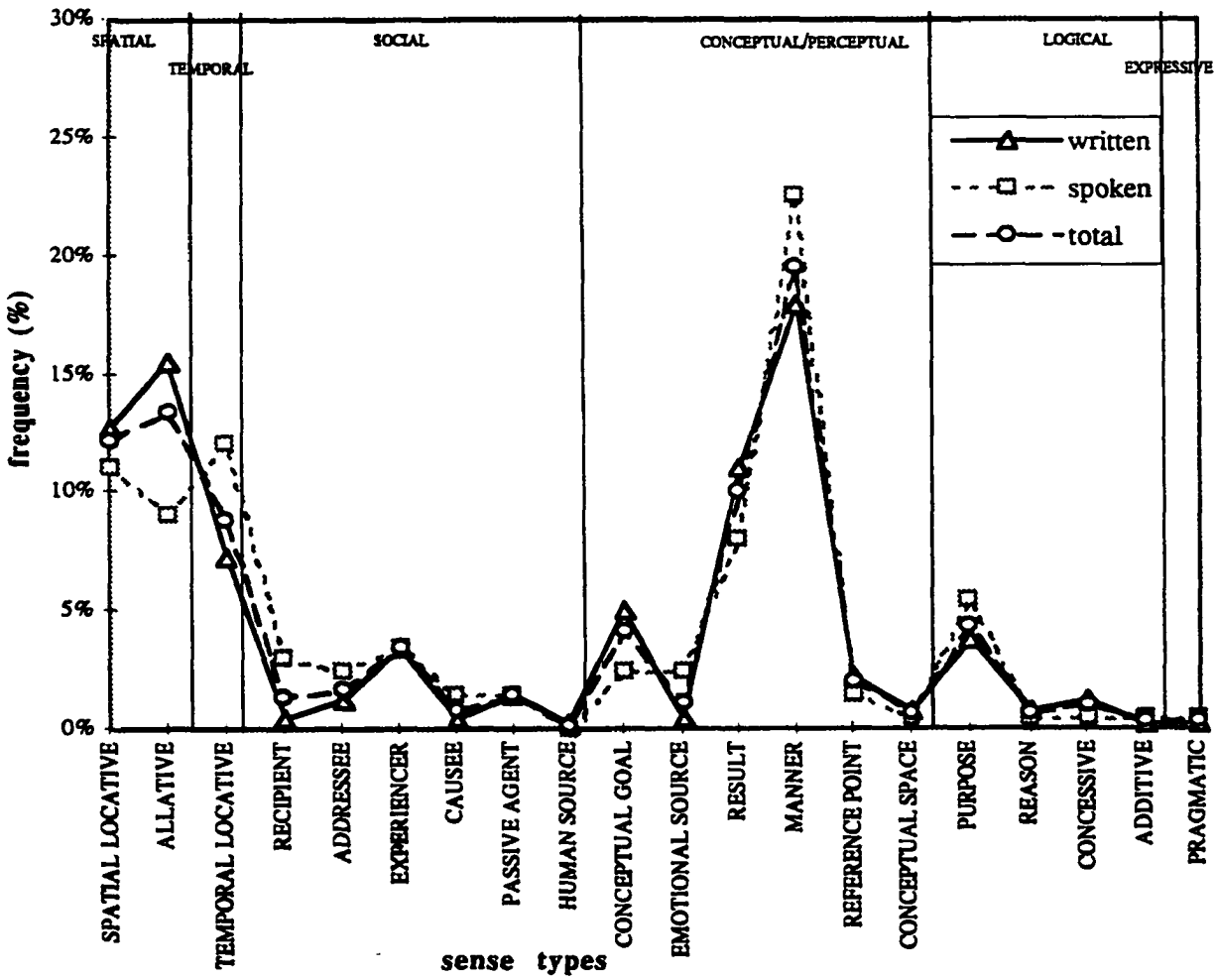

Figure 3. Frequency Distribution of Senses of *Ni* in the Spoken and Written Texts by Domain

Overall, the results from the text count study suggested that the frequency distribution of the senses of *ni* is not significantly dependent on differences in genre, style, or formality. The results also showed that some senses, such as the two spatial senses, were significantly used more frequently than others, suggesting they are more prototypical, if not

basic, for the category of *ni*. Moreover, when the frequency distribution pattern was examined by each domain, GOAL-oriented senses, such as ALLATIVE, RESULTATIVE, and PURPOSE senses, were generally more frequent than SOURCE-oriented ones, suggesting that the property of marking a GOAL is more central to the overall semantic profile of *ni*. These findings from the text count study seem to be consistent with the main characteristics of the proposed semantic model for *ni*, which predicts the non-homogeneity of the category of *ni*.

The data from the text count study, however, also indicated that uses of certain sense types are lexically dependent, in the sense that *ni* may be strongly associated with a small number of words in certain contexts. Many instances of the MANNER sense involved sentential adverbial expressions, such as, *sara ni* 'moreover,' *jitsu ni* 'truly,' or the expression *honto ni* 'in deed,' which showed up in 30% of the uses of *ni* to mark the MANNER in one of the spoken texts. It is possible that some of these adverbial expressions have become lexicalized as one word and conventionalized to the point of idiomaticity.

5.3 Child Language Acquisition Study

The primary purpose of this study was to examine whether the different senses of *ni* in the proposed semantic model are reflected in the pattern of acquisition by a child learning Japanese. Based on an assumption made by prototype theory that children acquire concepts that are prototypical members of a category (Rosch 1978:36), it was expected that those senses of *ni* that are acquired earlier would be the ones which are more basic conceptually. It was also expected that senses that are conceptually more abstract or complex should be acquired at later stages of the acquisition process. In the case of *ni*, the proposed model predicts that the locative-marking senses are the most basic and therefore acquired earlier than the others, while more abstract senses such as the ones marking PURPOSE or the CONCESSIVE conjunctive relations should be acquired later.

5.3.1 Method

Data. The analysis was based on data from the Aki Corpus (cf. Miyata 1995 and MacWhinney 1995) obtained from the CHILDES database.[2] The corpus consists of transcripted speech of a Japanese boy named Aki (a pseudonym). There are 56 files sampling Aki's speech and the adult language directed towards him from when he was 1;5.7 to 3;0.0 years old.[3] The data were collected by videotaping the child once a week while he played with his mother at home. The major participants in the files were the child

Aki [AKI], the mother [AMO], and the investigator Susanne [SUZ], but sometimes the father [AFA], Aki's younger brother Ree [REE], the baby-sitter [OBA], and both paternal and maternal grandmothers ([BAA] and [OOB], respectively) also appeared in the transcripts. The length of each observational session was roughly an hour, but they sometimes differed for reasons such as the child's condition or technical problems which hindered the recording.[4]

Procedure. Nine different particles including *ni* were tabulated to determine the overall emergence pattern. Then, each instance of *ni* in the corpus spoken by Aki (labeled as [AKI]) or an adult caregiver (labeled as [ADU]) was identified with its domain and sense types. Six domain types and 20 sense types were identified based on the characterizations given in Chapter 3. Fixed strings containing *ni* such as *konna/annna/sonnna ni* 'as much as this/that/it,' *...no yoo ni* 'like...' and *...no kawari ni* 'instead of...' were marked as [FIX], and non-spontaneous speech was further distinguished as a self-repetition [REP] or as an immediate [IMI] or near-immediate [NMI] (roughly within 20 lines) imitation of others. Indeterminate or erroneous uses of *ni* were treated as such and marked as [IND] and [ERR], respectively. In total, 26 instance types of *ni* were coded for.

It should be noted that an emergence pattern for *ni* was determined on the basis of the third correct spontaneous use by Aki. That is, I eliminated from consideration the following uses of *ni*: self-repetitions, immediate or near-immediate imitations of adults, indeterminate uses, and all erroneous uses.

5.3.2 Results

Overall emergence pattern of ni. *Ni* was one of the most frequently used among the nine particles that are traditionally considered to be canonical case particles (cf. Konoshima 1973; Sakakura 1974). The frequency of usage and age of first emergence of these nine particles by Aki are shown in Table 3.

Table 3. *Frequency of Use and Order of Emergence of Nine Particles by Aki* (raw numbers in parentheses)

PARTICLE	MAIN USAGE TYPE(S)	FREQUENCY		AGE AT ONSET
no	genitive, question marker	46%	(1256)	2;1
ga	subject marker	12%	(333)	2;4
de	locative, instrumental, reason	13%	(348)	2;4
to	comitative, coordinative	10%	(267)	2;4
ni	locative, allative, recipient, manner, result, purpose	13%	(351)	2;5
kara	source, reason	5%	(145)	2;6
e	destination	1%	(15)	2;8
o	object marker	1%	(36)	2;9
yori	comparative reference point	-	0	-
TOTAL		100%	(2751)	

Except for the genitive case particle *no*, which appeared by far the most frequently for a total of 46% (1256 times), *ni* was the most frequently used particle, followed by *ga*, *de*, and *to*. *E* and *o* only appeared with a much lower frequency at 1% each, and *yori* never appeared in Aki's speech at all. As for the order of emergence of the nine particles, *ni* was one of the earliest-to-emerge items along with *ga*, *de*, *to*, and *kara*.

In total, there were 351 instances of *ni* in Aki's speech, compared with 1630 in the adults' speech, which were mostly found in his mother's utterances. The first instance of *ni* used by Aki appeared when he was 2;1.17 (Aki File AKI.14:*l*.203). However, in this case, Aki only seems to repeat the last part of his mother's utterance, as shown in (1):[5]

(1) [Aki and his mother are drawing a picture of a train]

*AMO:	*Aki-chan*	*notteru*	*no,*	*koko*	*ni.*	'Aki, are you riding here?'
		ride-PROG	Q	here	LOC	
*AKI:	*ni.*					

A truly spontaneous use did not occur until he was 2;4.4 (AKI.25:*l*.271), where Aki uses *ni* as an ALLATIVE marker, as shown in (2):

(2) [Aki playing with a toy truck]

*AKI:	*hashiri [: hashiru]*	*ne.*			'I am going to run.'
	run	TAG			
*AKI:	*honto(o)*	*yo.*			'Really.'
	really	FIN			
*AMO:	*un.*				'OK.'
	yes				
*AKI:	*atchi*	*ni.*			'That way'
	there	ALL			
*AKI:	*atchi*	*ni*	*iku*	*yo.*	'I am going that way.'
	there	ALL	go	FIN	

Increased variation and sophistication in Aki's uses of *ni* correlates with an increase in his mean of length of utterance (MLU), as shown in Figure 4.

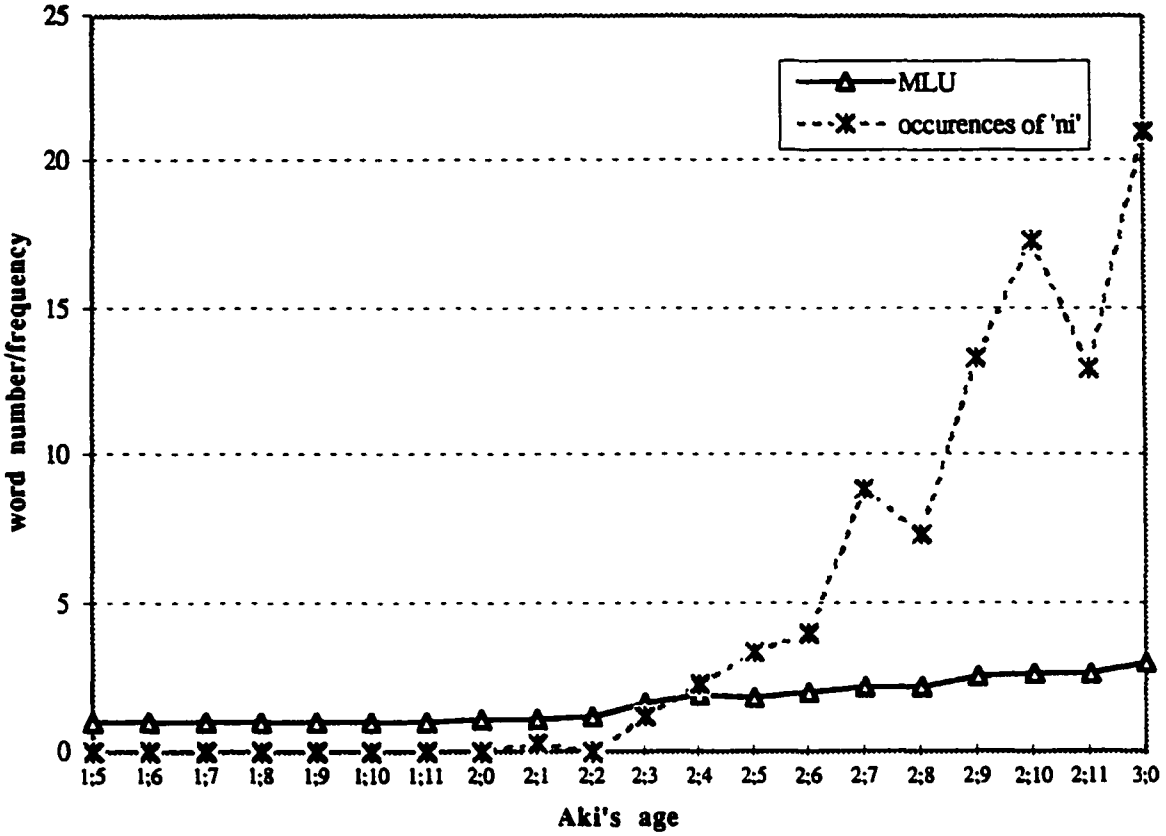

Figure 4. Aki's MLU and the Frequency of Uses of *Ni* by Age

As the MLU increases, sentences with *ni* get more complex. In the pair of examples in (3), both instances of *ni* are identified as an ALLATIVE marker.

(3) a.	*AKI: *wasabi choodai.*	'Give me wasabi.'
	wasabi give me	
	*AMO: *wasabi ne.*	'Wasabi is...'
	wasano TAG	
	*AMO: *dok(o)ka ni ne* +...	'It should be somewhere.'
	somewhere LOC INTERJ	
	*AKI: *doko ni itta [: iku-ta], wasabi?*	'Where has wasabi gone?'
	where ALL go-PAST wasabi	
		[AKI.37:*l*.1692]

b. [Aki takes up little penguin, which can be fixed on the water tap, little propeller on its head which turns when water flows through.]

*AKI:	*kore ne pyoon@o to osu*	'This one, when I push it, it
	this INTERJ hop MAN push	hops into the bath tub.'
	to ne o#fu:ro-ba ni ne hairu no.	
	when INTERJ bathroom ALL INTERJ enter FIN	
*AMO:	*pyon@o tte iku no?*	'It hops into it?'
	hop MAN go Q	
*AKI:	*soo.*	'That's right.'
	right	

[AKI.56:*l*.395]

While most of Aki's earlier utterances consist of truncated or simple sentences, as shown in (3a), an utterance at age 2;7.19, his later utterances often contain more than one clause, as shown in (3b), spoken when he was 3;0.0.

Frequency distribution of senses of ni. The overall frequency of each sense type is shown in Table 4:

Table 4. *Frequencies of Each Sense Type of* Ni (raw number in parentheses)

	DOMAIN	SENSE TYPE	AKI		ADULT	
SPONTANEOUS USES	SPATIAL	STATIVE LOCATIVE	18.8%	(66)	21.7%	
		ALLATIVE	22.2%	(78)	28.5%	
	TEMPORAL	TEMPORAL LOCATIVE		-	1.1%	(18)
	SOCIAL	RECIPIENT	4.3%	(15)	7.5%	
		ADDRESSEE		-	1.3%	(21)
		EXPERIENCER	0.6%	(2)	0.4%	(7)
		CAUSEE	0.3%	(1)	1.3%	(21)
		PASSIVE AGENT	0.9%	(3)	0.2%	(3)
		HUMAN SOURCE		-	0.3%	(5)
	CONCEPTUAL	CONCEPTUAL GOAL	3.4%	(12)	3.7%	(61)
		EMOTIONAL SOURCE		-		-
		RESULTATIVE	4.0%	(14)	9.9%	
		MANNER	5.4%	(19)	8.1%	
		REFERENCE POINT		-	0.3%	(5)
		CONCEPTUAL SPACE		-		-
	LOGICAL	PURPOSE	2.3%	(8)	6.3%	
		REASON		-		-
		ADDITIVE		-		-
		CONCESSIVE		-		-
	EXPRESSIVE	PRAGMATIC	0.6%	(2)	0.1%	(2)
NON-SPONTANEOUS OR INDETERMINATE USES	fixed expressions		1.4%	(5)	1.5%	(26)
	errors		11.1%	(40)	0.3%	(5)
	repetition		8.3%	(29)	5.2%	(84)
	immediate imitation		4.0%	(14)	1.3%	(21)
	near imitation		0.9%	(3)		-
	indefinite		11.7%	(41)	0.9%	(14)
	TOTAL		100%		100%	

The two senses of *ni* in the Spatial Domain were by far the most frequent of all the sense types. The ALLATIVE sense was used the most frequently in Aki's speech at 22.2% of the time (78 instances) and the STATIVE LOCATIVE sense comprised 18.8% of all uses (66 times). Less frequent were MANNER, RESULTATIVE and RECIPIENT senses, which occurred at frequencies of 5.4% (19 times), 4.0% (14 times), and 4.3% (15 times) respectively, followed by the CONCEPTUAL GOAL sense at 3.4% (10 times). The PURPOSE sense appeared for 2.3% of the time (8 instances), and the rest of the senses of *ni* either occurred only a few times or not at all.

A strong correlation was found between the adults' input frequencies and the child's output frequencies ($r = .973, p < .01$), as shown in Figure 5:

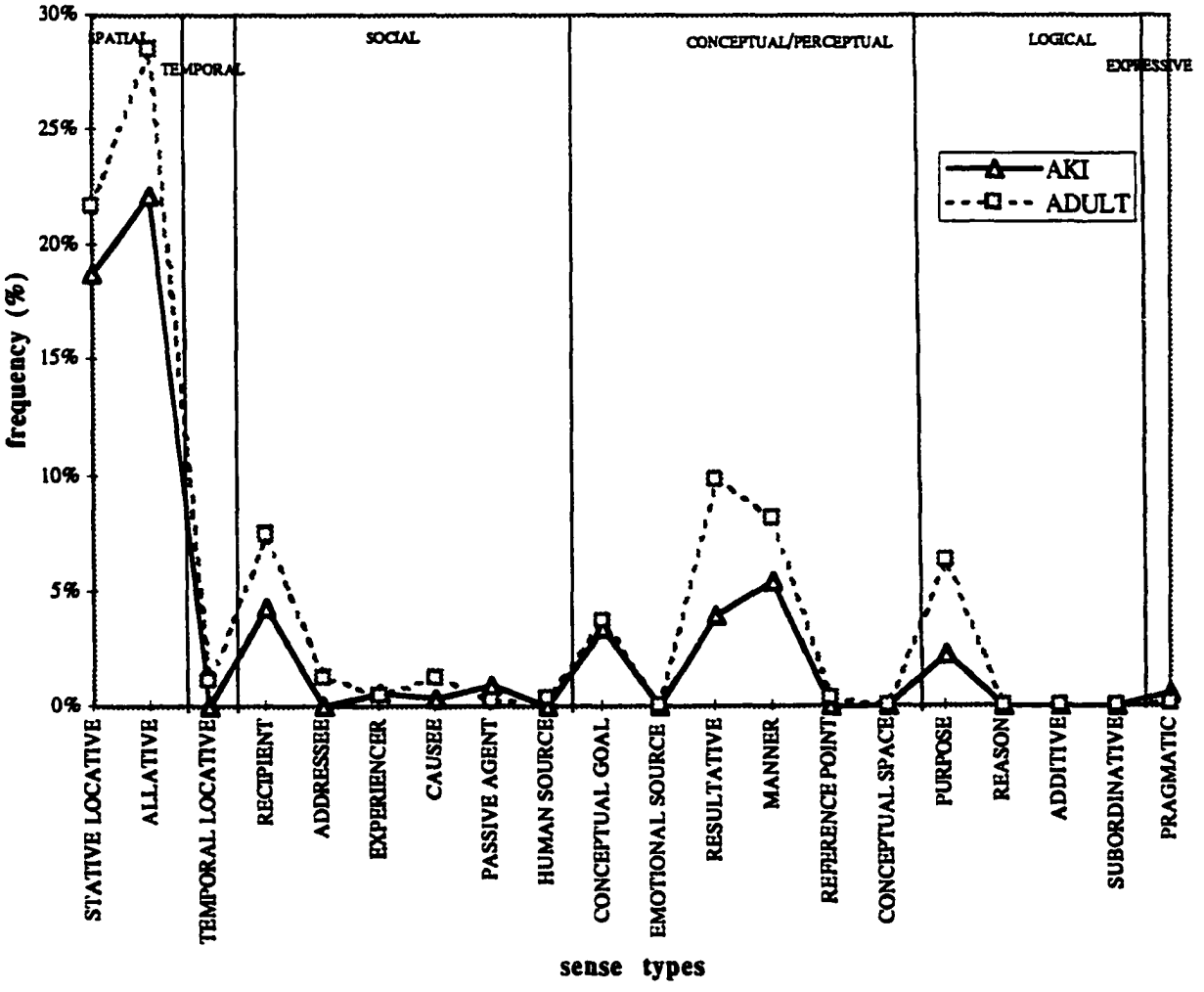

Figure 5. Frequency of Each Sense Type Produced by Aki and Adults

Those uses of *ni* that were the most frequent in Aki's speech, such as the LOCATIVE, ALLATIVE, and RECIPIENT senses, were also the most frequent in the adults' speech. Similarly, those which were not frequent in Aki's speech, such as the TEMPORAL, CAUSEE, and PASSIVE AGENT senses, were not frequent in the mother's speech, either.

Emergence order of senses of ni. Table 5 shows the list of the first seven sense types and Aki's age at which they first emerged. Senses not shown on the list either did not occur more than a few times in Aki's speech or they never occurred at all.

Table 5. *The Emergence Order of the First Seven Senses of* Ni *by Aki*

DOMAIN	SENSE TYPE	AKI'S AGE
Spatial	ALLATIVE	2;5.20
Spatial	LOCATIVE	2;5.20
Conceptual	RESULTATIVE	2;7.5
Social	RECIPIENT	2;7.19
Conceptual	MANNER	2;8.3
Logical	PURPOSE	2;9.0
Conceptual	CONCEPTUAL GOAL	2;9.14

The two spatial senses appeared earliest in the acquisition process. The ALLATIVE use first appeared when Aki was 2;4.4, as was already shown in (2), followed by the stative LOCATIVE use, shown in (4), which first appeared when he was 2;4.9.

(4) [Aki is playing with blocks.]

*AKI: *&kimiki [: tsumiki].*	'Blocks.'
blocks	
*AMO: *sono shita ni tsumiki aru?*	'Are there blocks under there?'
that under LOC blocks exist	
*AKI: *koko &nan:ai [: ni nai].*	'There are none here.'
here LOC not exist	
	[AKI.26:*l*.577]

Apart from these two spatial senses, no other senses of *ni* emerged until more than a month later. The RESULTATIVE sense and the RECIPIENT sense were not used until Aki was 2;7.5 (AKI.35) and 2;7.19 (AKI.37) respectively. Three other senses, the MANNER sense, the CONCEPTUAL GOAL sense, and the PURPOSE sense emerged even later when he was roughly 32 months, 33 months, and 34 months of age, respectively.

Figure 6 illustrates the negative correlation which exists between the overall frequency and the order of emergence of sense types of *ni*. This correlation was found to be significant (r=-.87, p< .05). Earlier, I suggested that those sense types of *ni* which Aki

produced more often emerged earlier in his speech. The ALLATIVE sense and the STATIVE LOCATIVE senses were both the most frequent and the earliest-to-emerge sense types of *ni* in Aki's speech. Considering that both higher frequency and earlier emergence reflect prototypicality effects as proposed by Rosch (1978), this finding is interpreted as indicating the cognitive basicness of these sense types or their centrality to the category of *ni*.

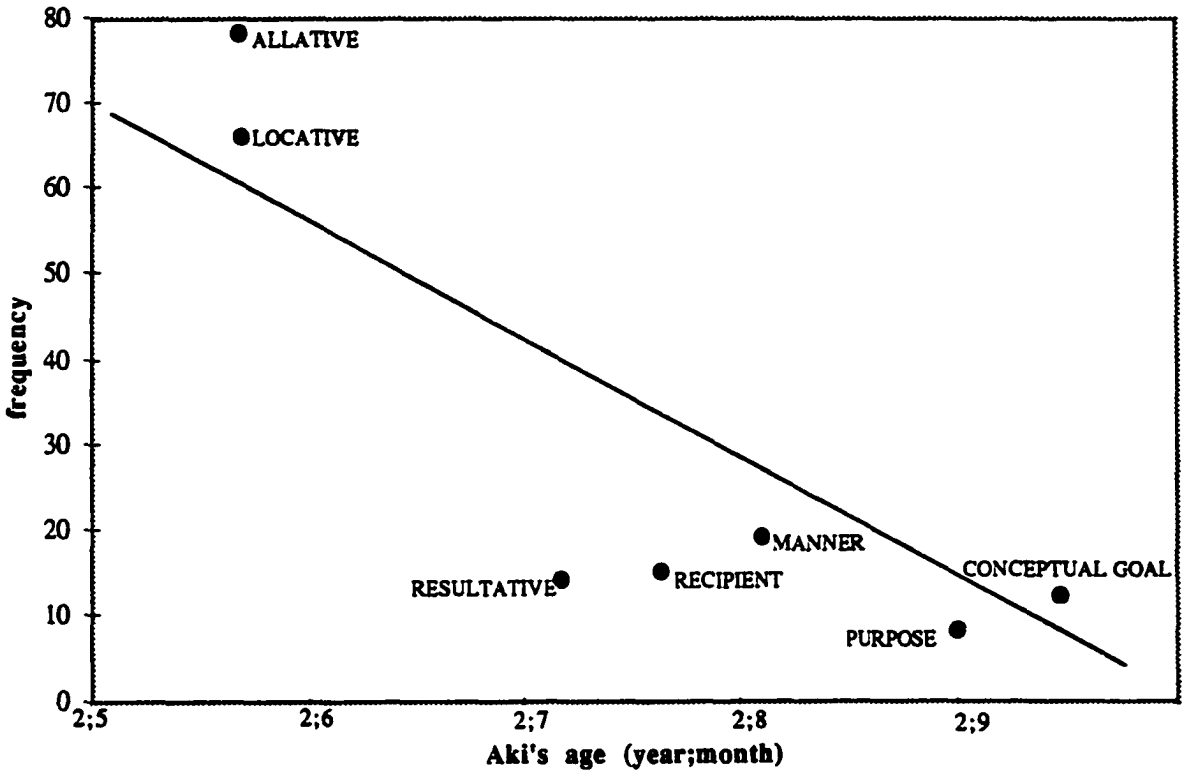

Figure 6. Correlation between Aki's Frequency of Production and Order of Emergence

Lexical boundedness. Although the frequency distribution of Aki's usages of *ni* as well as their emergence order suggests that the acquisition of the various sense types proceeds in a non-random manner, a closer look reveals that his uses of *ni* are lexically restricted to a large degree. For the most part, certain sense types were actually used in combination with only one or two selected words, as illustrated in Table 6.

46% of the instances of the SPATIAL LOCATIVE sense by Aki occurred with verbs *aru/nai* or *'iru* 'exist/not exist.' Similarly, 53% of the instances of the RECIPIENT sense appeared with the verb *ageru* 'give,' and 43% of the RESULTATIVE senses with the verb *naru* 'become.' The PURPOSE sense was always used either with the verb *kuru* 'come' or *iku* 'go,' and a similar tendency was found with the ALLATIVE sense, which was used 14% of

the time with the verb *iku* 'go.' While many sense types were associated with certain verbs, the MANNER sense seemed to be associated with nouns. Based on all MANNER usages, *ni* occurred in the expression ... *fuu ni* 'in a ... way' in 42% of the time and in the expression *issho ni* 'together' 26% of the time.

Table 6. *Lexical Restrictedness of Uses of* Ni *by Aki and Adults*

DOMAIN	LEXICAL CONTEXT	AKI		ADULT	
SPATIAL LOCATIVE	aru/nai 'exist [animate]'	31%	(21)	39%	(138)
	iru 'exist [inanimate]'	15%	(10)	30%	(105)
	ø	36%	(24)	5%	(17)
	others	18%	(12)	26%	(93)
	TOTAL	100%	(67)	100%	(353)
ALLATIVE	iku 'go'	14%	(11)	17%	(80)
	kuru 'come'	1%	(1)	3%	(15)
	hairu 'enter'	8%	(6)	8%	(39)
	noru/noseru 'put (...) on..'	8%	(6)	16%	(75)
	haru 'stick'	9%	(7)	2%	(10)
	ø	28%	(22)	5%	(22)
	others	33%	(26)	48%	(224)
	TOTAL	100%	(79)	100%	(465)
RECIPIENT	ageru 'give'	53%	(8)	27%	(33)
	miseru 'show'	13%	(2)	17%	(21)
	kasu 'lend'	13%	(2)	5%	(6)
	ø	7%	(1)	1%	(1)
	others	13%	(2)	50%	(61)
	TOTAL	100%	(15)	100%	(122)
MANNER	issho-ni 'together'	26%	(5)	29%	(38)
	joozu-ni 'well'	5%	(1)	27%	(35)
	... fuu ni 'in the way..'	42%	(8)	13%	(17)
	others	26%	(5)	32%	(42)
	TOTAL	100%	(19)	100%	(132)
RESULTATIVE	naru 'become'	43%	(6)	72%	(116)
	suru 'make'	29%	(4)	19%	(30)
	others	7%	(1)	10%	(16)
	TOTAL	100%	(14	100%	(162)
PURPOSE	kuru 'come'	50%	(4)	45%	(46)
	iku 'go'	50%	(4)	47%	(48)
	others	0%	(0)	9%	(9)
	TOTAL	100%	(8)	100%	(103)

The lexical fixedness exhibited by Aki's uses of various sense types of *ni* appears to be compatible with Tomasello's (1992) Verb Island Hypothesis. According to Tomasello, children learn the possible lexical and constructional combinations for each lexical item before they generalize or analogize patterns across the entire class of eligible words. Along the same line of argument, Rice (1999) also argued that English-speaking children tend to use favorite expressions or useful fixed phrases containing prepositions early and often regardless of the items' inherent lexicosyntactic complexity. The fact is that the adults' input also exhibited similar tendencies in lexical restrictedness. Therefore, Aki's preference for certain types of combinations may be a function of his familiarity with them.

Error Analysis. 39 substitution errors involving the use of *ni* were detected in Aki's speech. (Errors involving omissions of *ni* when required were not coded for in this study.) 18 of the substitution errors involved cases in which *ni* was erroneously used for some other particle, while 21 were cases where some other particles were used when *ni* should have been used.

Most of Aki's errors involved a confusion between *ni* and *de*. 13 errors (33%) involved erroneous uses of *ni* when *de* should have been used. For example, in (5a), Aki uses *ni* instead of *de* although *baaba no oniwa* 'the grandma's garden' is a location of an event and therefore *de* should have been used. Another 6 instances (15%) involved erroneous use of *de* when *ni* should have been used. In (5b), the verb *sumu* 'live' in *sunderu* 'be living' requires *ni* to mark a contingent location, but Aki uses *de* instead.

(5) a. [Aki is looking at his legs, full of mosquito stings]

*AKI: *ka ni sasat-ta [: sasu-ta].*		'I got stung by mosquitoes.'
mosquitoes pass.agt sting-past		
*AMO: *sas-are-ta?*		'You got stung?'
sting-pass-past		
*AKI: *Baaba no o#niwa ni (:de).*		'In the grandma's garden.'
grandma gen garden loc		
		[AKI.49:*l*.484]

b. [Aki holds abacus like a 10 floor building]

*AKI: *Ree-chan wa?*		'How about Ree?'
TOP		
*AMO: *Ree-chan doko kanaa?*		'Where is Ree?'
where I wonder		
*AKI: *Ree-chan doko de (:ni) sun-de-ru?*		'Where does Ree live?'
where LOC live-CONJ-be		
*AMO: *Ree-chan san-gai.*		'Ree is on the third floor.'
third floor		
		[AKI.50:*l*.1648]

As discussed in Chapter 3, *de* and *ni* are in complementar distribution as locative markers: while *ni* marks contingent locations and the vague location of something's existence, *de* marks the location of some activity. However, the distinction between the two particles is not clear-cut, and many second language learners are reported to have difficulty in mastering their respective distribution and meaning (Masuda 1996:60). Aki may know that both *ni* and *de* can mark locations, but he may still be largely dependent on lexical information as to what verbs or nouns are combined with them, and may not have yet learned the subtle differences in meaning between them.

Aki made a variety of other errors. (6a) is an error Aki made at 2;5.13,which involved a confusion of two particles co-occurring within a sentence. Specifically, he confused the ALLATIVE *ni* and *to*, the COMITATIVE marker. In (6b), on the other hand, Aki, at age 2;7.19, substituted *ni* for *ga* to mark the agentive subject:

(6) a. *AMO: *kore doko iku no?* 'Where does this go?'
this where go Q
*AKI: *kore ne # kangaruu ni(:to) basu to(:ni).* 'This one, [it] goes to the kangaroo with the bas.'
this INTERJ kangaroo ALL bus COM
*AMO: *kangaruu?* '[Did it go to] the kangaroo?'
kangaroo
[AKI.30:*l*.2136]

b. [Mother find a piece of plastic]
*AMO: *pengin-chan no?* '[Is this] the penguin's?'
penguin GEN
*AKI: *soo.* 'That's right.'
that's right
*AMO: *tore-ta no?* '[Did it] come off?'
come off-PAST Q
*AKI: soo. 'That's right.'
that's right
*AMO: *dare ga tot-ta no?* 'Who took [it] off?'
who NOM take off-PAST Q
*AKI: *Aki-chan ni (:ga).* 'Aki-chan (=I) did.'
NOM
*AMO: *Aki-chan tot-ta no?* 'Did you take it off?'
take off-PAST Q
*AKI: *un.*
yes
[AKI.37:*l*.903]

One plausible account for these errors is provided by Clancy (1985), who argued that at an early stage of acquisition of particles, Japanese children may recognize that nouns are typically followed by particles and they may attempt to produce a 'Noun + Particle' unit

even before they have learned the functions of those particles (1985:388). However, if her account is correct, Aki would be making a lot more errors by randomly assigning particles whenever a noun appears. Rather, an error like the one Aki made in (6b) might be better explained as the result of the adult's inconsistent input, as argued in Kabata (1999). The subject marker *ga* and the object marker *o* are optional in Japanese and are often omitted by adult speakers. In fact, in this example, the mother uses *ga* in asking *dare ga totta no?* 'Who took it off?,' but omits it in saying *Aki-chan ø totta no?* 'Did you take it off?' Aki may not know which particle to use to mark *Aki-chan* and ended up using *ni* erroneously since he has often heard *ni* used to mark it, for example, as a RECIPIENT. If so, Aki's uses of *ni* may be largely dependent on associations with a small sets of words.

5.3.3 Discussion

The correlation found between the overall frequency of production and order of emergence suggests that the pattern of Aki's acquisition of *ni* can be associated with semantic or cognitive basicness. The two spatial senses, which were by far the most frequently produced in Aki's speech, were the first ones to emerge, as was predicted from the semantic model proposed in Chapter 3. Three GOAL-type senses, namely, the RESULTATIVE sense, the RECIPIENT sense, and the MANNER sense emerged later and were used less frequently. More abstract senses in the Logical Domain as well as certain SOURCE-oriented senses, such as PASSIVE AGENT or the COMMUNICATIVE HUMAN SOURCE sense did not emerge until later stages in Aki's acquisition.

However, the semantic basicness or concreteness of senses may play only a small part in particle acquisition by children. The data indicated that other factors, such as input frequency, lexical fixedness, and the consistency of particle use in the input, may all interact with each other in determining the acquisition pattern. In the present study, a strong correlation was found between the frequency distribution of *ni* in Aki's speech and that of the adults'. Moreover, a closer look at each instance of *ni* revealed that *ni* was used with only a small number of verbs or nouns, which were also frequently used in the adults' input. It seems that Aki learned senses of *ni* in combination with a small number of verbs or nouns which he was familiar with in the input speech.

These findings are consistent with what Choi (1993) found in her study of children's acquisition of locative markers in Korean, a language which has a similar case-marking system to that in Japanese. Choi argues that "children are sensitive to language-specific input from early on, and they develop much of their grammar on the basis of the language they hear in their environment" (1993:220). In the present study, it was not only the spatial

senses but also senses in other domains, such as the RECIPIENT and RESULTATIVE senses, that appeared to be learned in a lexically bound fashion.

However, Choi's account of children's acquisition does not capture the whole picture of Aki's acquisition of *ni*. For example, if lexical acquisition is completely lexically bound, then there should be no errors. However, Aki makes errors and they often involve a confusion between *ni* and *de*. Aki may initially have learned the uses of these particles in association with certain verbs or nouns. Moreover, although he may have mastered the basic locative senses in a fairly straightforward and trouble-free fashion, finer semantic distinctions took a lot longer to develop and caused numerous errors.

Despite the fact that these results were confined to a single case study and therefore no strong conclusions about the L1 emergence of *ni* can be drawn, they suggest that semantic basicness of senses may indeed play a role in lexical acquisition. However, semantic factors may not be as relevant as predicted solely on the basis of the proposed network model. Rather, other phenomena such as input frequency, lexical co-occurrence, and input consistency may be key factors in particle acquisition.

The two studies discussed so far were intended to address the question about the semantic structure of *ni* only indirectly. Therefore I conducted a set of experiments in order to tap into the question more directly, i.e., by asking native speakers to make judgments about the semantic relationships among the various senses of *ni*.

5.4. Psycholinguistic Study

A series of psycholinguistic experiments were conducted in order to examine whether speakers' judgments about the various senses of *ni* actually support the proposed model. Similar experimental approaches to lexical polysemy have been taken by a few previous studies, such as Caramazza and Grober (1976), Colombo and Flores d'Arcais (1984), Sandra and Rice (1995), and Rice (1996).

In the present study, three off-line tests were employed: a sentence generation test, a sorting test, and a similarity judgment test. A sentence generation test was expected to provide some insight as to which sense types of *ni* are more salient than others in speakers' minds. A similarity judgment test and a sorting test were conducted in order to examine how speakers perceive the relationships between individual senses of *ni*. However, as argued by Sandra and Rice (1995), these two tests involve different tasks which tend to lead to different response strategies on the part of subjects. For example, since the sorting

task requires subjects to keep the most obviously different senses apart even if the relationships between them are appreciated, distinctions may be more pronounced in the sorting test than in the similarity test. Therefore, the results of the two tests were expected to counter-balance each other.

5.4.1 Sentence Generation Test

The purpose of the sentence generation test was to determine which sense types of *ni* native speakers would judge to be central members of the category and which sense types would they consider more peripheral. Following Rosch (1978), it was hypothesized that prototypical senses would be more easily recalled and therefore generated first and with the greatest frequency. Other sense types were also expected to be mentioned, but only later and at a lower frequency. However, since *ni* is a homonymous morpheme, also meaning *luggage*, *two*, and *resemble*, it was also of interest to see which *ni* would be recalled more easily, a fully 'lexical' *ni* or the grammatical particle *ni*.

Subjects. 18 native speakers of Japanese, 11 females and 7 males, participated in this experiment on a voluntary basis. Their ages ranged from 22 to 52, with the average age being 28 years old. They were all residing in Edmonton, Alberta, at the time of the experiment. All of them had completed their formal education in Japan, except for one female subject who received a large part of her elementary education in a Japanese school in Germany, but who spoke Japanese both at school and at home. Although the subjects' length of stay outside of Japan ranged from 1 month to 16 years, with the average time away set at 4.1 years, they all still used Japanese on a daily basis.

Materials. The only materials used in this study were three envelopes, each containing 10 blank cards and a piece of paper on which a word was written in Roman characters. The three words included *ni* as well as *kara* and *ga*, which served as distractors. Like *ni*, both *kara* and *ga* are homonymous. *Kara* has lexical uses meaning *empty* (空) or *shell* (殻) and *ga* can also mean *moss* (蛾). In their particle use, *kara* conveys a fairly concrete SOURCE meaning such as 'from' or 'out of' as in *Hon o hako kara dashita* '(He) took a book out of the box,' as well as a causal conjunctive meaning 'because' in *Ame ga futta kara shiai wa enkisareta* '**Because** it rained, the game was postponed,' while *ga* exhibits fairly grammaticalized, abstract meanings (*ga* marks the AGENT as in *Taroo ga Masao o butta* 'Taro hit Masao' and it can signal certain types of THEME roles as in *Boku wa ringo ga tabetai* 'I want to eat an apple'). Each of the stimulus words was presented in Roman characters in order to prevent any character-induced semantic interference.

Procedure. Subjects were presented with the three envelopes in a random order and were asked to generate 10 sentences (one on each card) for the particular word given in each envelope. They were told to work at their own speed and to take short breaks if necessary. Since there were 18 subjects generating 10 sentences, 180 sentences containing *ni* were obtained. The generated uses of *ni* were classified into one of the 20 sense types described in Chapter 3. Uses of *ni* in complex particles or in fixed expressions were classified as such.

Results. Table 7 shows the frequency of each usage type and the average order of their first mention together with examples of the actual generated sentences. The entire list of sentences is given in Appendix A. There were three sentences which contained two instances of *ni*, which explains why the total frequency of mention amounts to 183, instead of 180.

Despite the fact that *ni* has more than one homonym, the first sentence produced by 15 of the 18 subjects contained the particle *ni*. Among the various usages produced, by far the most frequent was the spatial ALLATIVE sense, followed by the other spatial sense signaling a stative LOCATIVE.

Table 7. *Frequency of Response Type and Average Order of Mention in Sentence Generation Task*

DOMAIN / SENSE TYPE	FREQUENCY OF MENTION	AVERAGE ORDER OF MENTION	SELECTED EXAMPLES
SPATIAL			
LOCATIVE	23	3.25	*Inu ga niwa ni i-masu.* dog NOM garden exist-AUX 'There is a dog in the garden.'
ALLATIVE	47	3.44	*Watashi wa tottemo nihon ni kaeri-tai desu.* 1.SG TOP very much Japan return-want to COP 'I really want to go back to Japan.'
TEMPORAL			
TEMPORAL LOCATIVE	12	5.89	*Haru ni wa sakura o mi ni ikoo.* spring TOP cherry blossoms ACC see PUR let's go 'Lets go to see cherry blossoms in spring.'
SOCIAL			
RECIPIENT	11	6.67	*Ryooshin ni tegami o okut-ta.* parents letter ACC send-PAST 'I sent a letter to my parents.'
ADDRESSEE	9	4.17	*Nanika are ba watashi ni tsutaete kudasai.* something exist if 1.SG inform please 'If [there is] anything, please let me know.'
EXPERIENCER	4	5.75	*Watashi kara toosan ni ai ni iki-mashi-ta.* 1.SG from father meet PUR go-AUX-PAST 'I myself went to see my father.'
CAUSATIVE	1	1.00	*Watashi ni sa-sete kudasai.* 1.SG do-caus please 'Please let me do (it).'

Table 7. *(continued)*

HUMAN SOURCE	2	2.50	*Kore wa haha ni moratta yubiwa desu.* this TOP mother receive-PAST ring COP 'This is a ring I got from my mother.'
PASSIVE AGENT	0	-	—
CONCEPTUAL			
CONCEPTUAL GOAL	3	7.33	*Kore o suru koto ni shi-masu.* this ACC do NOML decide-AUX 'I will decide to do this.'
EMOTIONAL SOURCE	1	9.00	*Eega ni kandoosuru.* movie get moved '[I] get moved by a movie.'
RESULTATIVE	18	3.56	*Atama ga masshiro ni nari-mashi-ta.* head/hair NOM all white become-AUX-PAST 'My hair turned all white.'
MANNER	13	5.00	*Sei no jun ni narande kudasai.* height GEN order line up please 'Please line up in order of height
REFERENCE POINT	4	9.00	*Kare wa hahaoya ni nite-iru.* 3.SG TOP mother resemble-be 'He looks like his mother.'
CONCEPTUAL SPACE	1	5.00	*Watashi wa shihooshiken ni ukat-ta.* 1.SG TOP law exam pass-PAST 'I passed the law exam.'
LOGICAL			
PURPOSE	4	7.33	*Haru ni wa sakura o mi ni iko.* spring TEMP TOP cherry blossoms ACC see let's go 'Let's go to see cherry blossoms in spring.'
REASON	0	-	—
CONCESSIVE	0	-	—
ADDITIVE	1	9.00	*Doraemon ni nezumi.* Doraemon rat ' Doraemon (a cartoon character) and a rat.'
EXPRESSIVE			
PRAGMATIC	0	-	—
OTHERS			
COMPLEX PARTICLES	3	5.33	*Nihon ni-tuite kaite kudasai.* Japan about write please 'Please write about Japan.'
FIXED EXPRESSIONS	3	9.67	*Sekaijuu ga heiwa de ari-masu yoo-ni.* people in the world NOM peaceful COP be-AUX I wish 'May all the people in the world have peace.'
HOMONYMS	23	2.73	*Kaado no suuji wa ni dat-ta.* card GEN number TOP two COP-PAST 'The number on the card was "two".'
TOTAL	183		
AVERAGE	7.96	5.43	

The ALLATIVE sense of *ni* was provided by all of the subjects and it was the most frequent sense type for 16 of them. In terms of order of mention, the ALLATIVE was produced within the first three sentences by 12 subjects. As indicated in the scatterplot in Figure 7, the more frequently produced sense types were generally the ones which were also generated first. Nevertheless, the (expected) negative correlation between frequency and order of mention failed to reach a significant level (r = -.36, p > .1675). However, when one outlier was removed (a lone instance of CAUSEE *ni* mentioned first by one subject), the negative correlation between order of mention and frequency of mention proved to be statistically significant (r =-.54, p <.05).

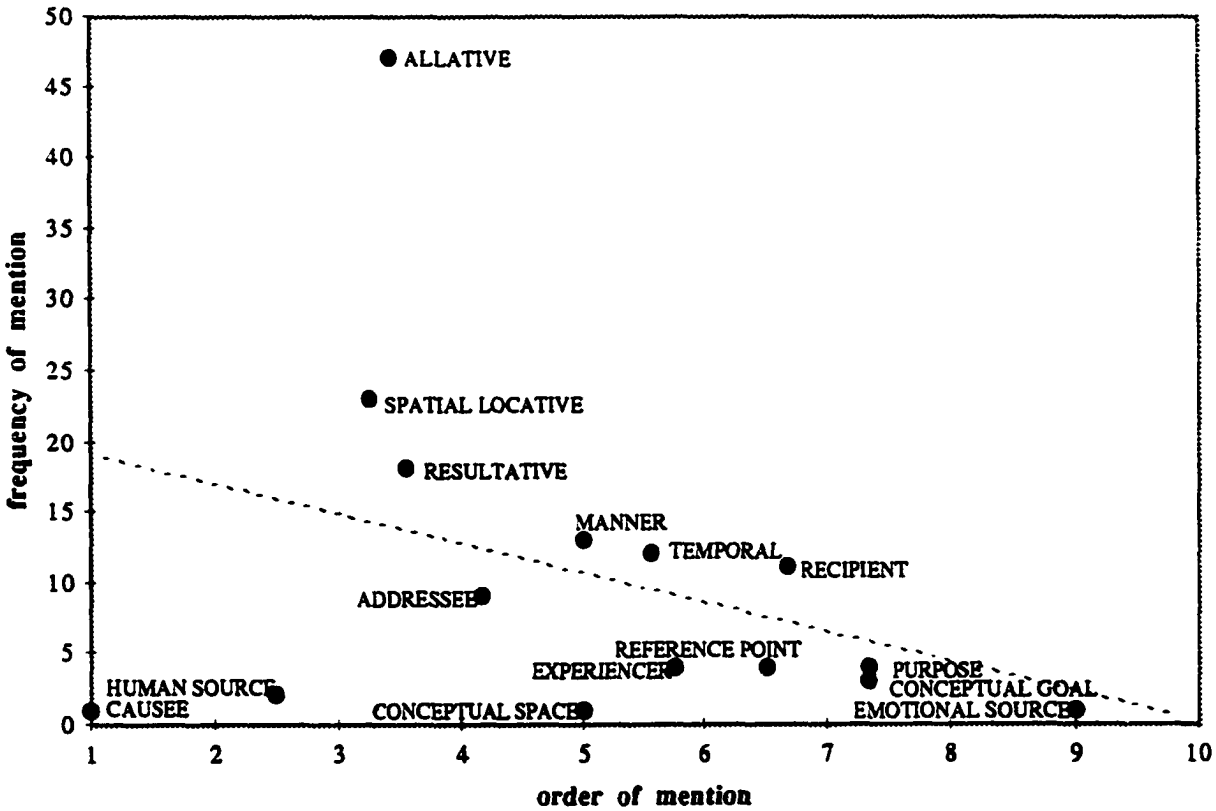

Figure 7. Negative Correlation between Frequency and Average Order of Mention from the Sentence Generation Task

When each generated sentence was examined more closely, it was found that some of the uses of *ni* were greatly associated with particular verbs. The RESULTATIVE sense of *ni* was used with the verb *naru* 'to become' in 72% of the cases (in 13 out of 18 sentences), and the SPATIAL LOCATIVE sense of *ni* was used with the verbs *aru* or *iru* 'exist' 61% of the time (in 14 out of 23 sentences). Similarly, the verbs *iku* 'to go' or *kuru* 'to come' were

used in 47% of the cases (in 22 of the 47 sentences) where *ni* was used to mark the DESTINATION.

Based on the assumption that a frequency of occurrence is one of the characteristics of prototypes, the results suggest that the two spatial senses are perceived as basic to the meaning of *ni*. The results also indicate that, in general, the GOAL-oriented senses are more prevalent and presumably more basic than SOURCE-oriented senses since they are also more frequent and mentioned earlier on average. This finding is compatible with the proposed model. However, it is also apparent that some of the senses of *ni* have a strong association with a rather small number of verbs. It is suggested that the prototypicality of a sense type may be, at least partially, related to the frequency of those verbs. Some of the uses of *ni* may have become conventionalized to the extent that the expressions they are used in are perceived as idioms or fixed verb phrases by some speakers.

5.4.2 Sorting Test

The purpose of the sorting test was to examine whether speakers perceive differing degrees of similarity among the various senses of *ni*. The logic behind this technique was that any distinctions subjects make in the task should reflect the distinctions they perceive and, by the same token, the frequency with which a pair of sense types are grouped together should indicate the relative semantic similarity between them.

Based on the proposed model, it was hypothesized that senses which are similar semantically (e.g., the ALLATIVE sense and the RECIPIENT sense) would be grouped together more often than those which do not share semantic characteristics (e.g., the ALLATIVE sense and the CONCESSIVE CONJUNCTION sense). Since senses are characterized in the model in terms of both image schemas and semantic domains, the degree of similarity exhibited by any single pair of senses should pertain to the similarity of the image schemas and/or the distance between the domains they are associated with. For example, RECIPIENT and ADDRESSEE are alike in their image schemas and they share the same domain, so they should be perceived as more similar to each other than RECIPIENT and PASSIVE AGENT senses, which share the same domain but are not alike in their image schemas (i.e., the former is a kind of GOAL while the latter is a kind of SOURCE).

Subjects. Subjects were 18 native speakers of Japanese, 12 females and 6 males, who were all parents of students at a Japanese school in Calgary, Alberta.[6] Their ages ranged from 25 to 50 years old, with the average age being 41.2. Although most of the subjects had resided outside of Japan for a rather long period of time—the average length of stay

overseas was 8 years and 7 months, they all used Japanese as their primary language at home.

Materials. Stimuli for this study consisted of 44 sentences (listed in Appendix B) containing the particle *ni*. A pair of sentences for each of the 20 sense types as well as for complex particles and fixed expressions were obtained mostly from the *Asahi* or *Mainichi*, which is available on-line.[7] The sentences were modified so that each was balanced in length and for the position that *ni* occupied in the sentence. The stimulus sentences were proof-read for their grammaticality and acceptability by two Japanese native speakers before the tests. The sentences were then printed individually on 3x5-inch index cards, with *ni* in each sentence in a larger type and bold face. The cards were arranged in a randomized order for each subject and placed in an envelope.

Procedure. Subjects underwent a practice session in which they were instructed to sort five cards, each of which had a sentence with the particle *kara* printed on it. They were instructed to sort the cards (sentences) into groups on the basis of "how *kara* was being used in each sentence." After they made sure they understood the task, they were asked to sort the 44 cards contained in the envelope. The task was to sort the cards in the same manner as they did for the practice set with *kara*; i.e., to sort the sentences into groups on the basis of how *ni* was being used. They were also told that they could make as many or as few groups as they wished. Subjects were encouraged to proceed at their own pace and to take a short break as needed. It took most of the subjects about 30 minutes to complete the task.

Results. The average number of groups formed by these subjects for the 44 sentences containing *ni* was 15.6, with the range falling between 9 and 24. The average number of sentences grouped together was 2.8, with the maximum at 19 and the minimum at 1.

A 44x44 similarity matrix, with scores ranging between 0 (very different) and 18 (very similar), was constructed based on the frequencies with which every possible pairwise combination of sentences occurred. The frequency data from the matrix were then subject to a hierarchical cluster analysis, a method whereby similarities between cases, reflected in the hierarchical structure of clusters, are computed based on the "distances" between every pair of cases. A tree diagram, shown in Figure 8, represents the output of the analysis. The points on the top of the tree diagram (i.e., .1.00, 0.75, ...0.00) indicate the relative distances between clusters.

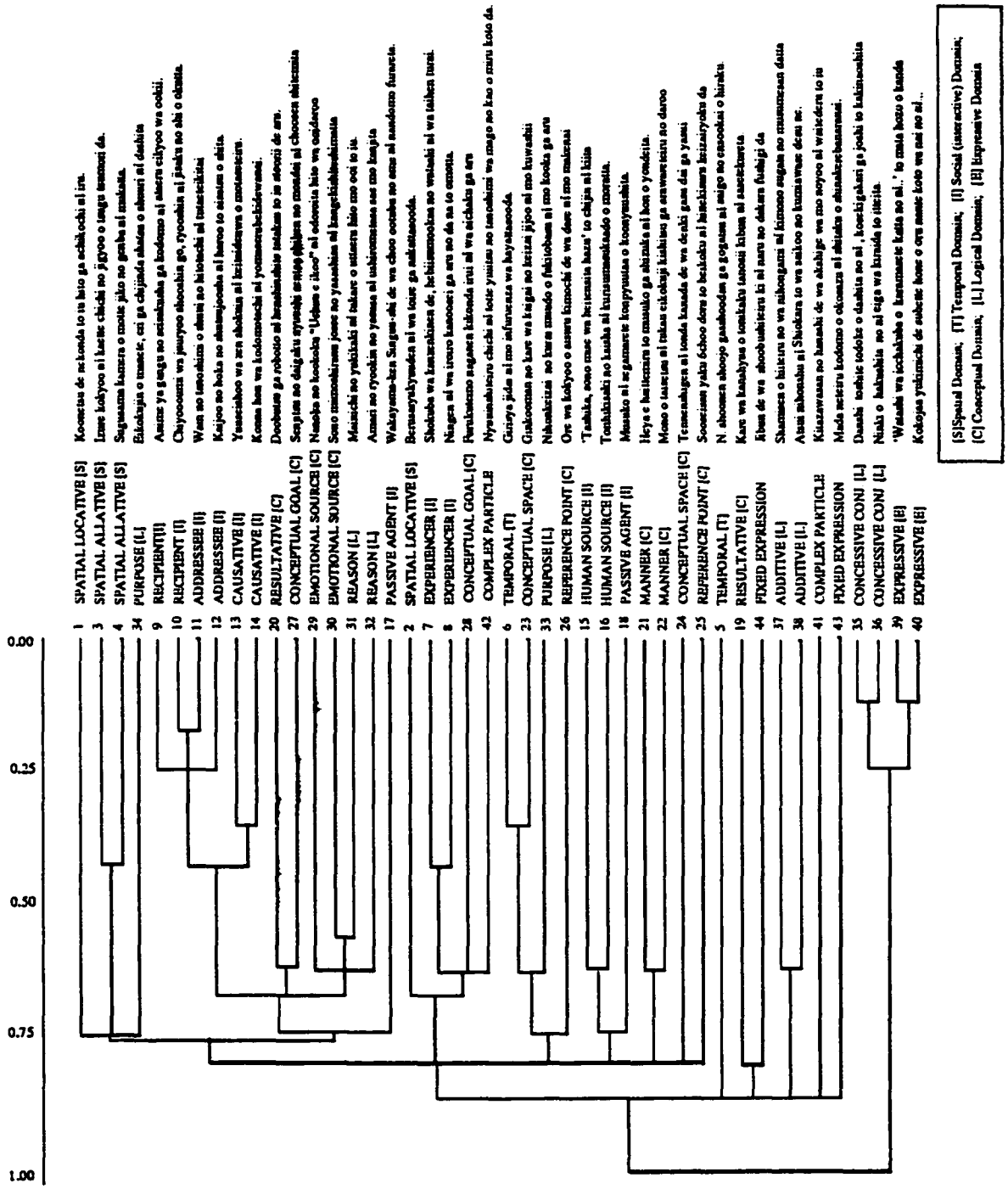

Figure 8. Hierarchical Clustering for 44 Sentences Containing *Ni* from the Sorting Task

From this sorting task two separate clusters emerged for the senses of *ni*. One of them was comprised of two tight clusters, representing sentences 35 and 36, both of which were CONCESSIVE CONJUNCTIVE senses, and 39 and 40, representing PRAGMATIC senses, respectively. It seems that these two CONCESSIVE senses were judged as very similar to each other, but distinguished from the rest of the senses of *ni*. These are very abstract usages of *ni* and both serve a clause-combining function in Japanese.

The other main cluster contained several smaller clusters nested within it. While some of these groupings were compatible with the semantic model proposed in Chapter 3, some others were somewhat unexpected. As predicted by the model, the GOAL-type senses in the Social Domain represented a rather tight cluster. The pair of RECIPIENT sentences, 9 and 10, and the pair of ADDRESSEE sentences, 11 and 12, formed a tight cluster, which was joined by the pair of CAUSATIVE sentences, 13 and 14, at a higher level in the hierarchy. Similarly, two types of SOURCE-oriented senses, the EMOTIONAL SOURCE sense, 29 and 30, and the REASON sense, 31 and 32, form a cluster. Other senses join the cluster only at a rather high (leftward) level, indicating that not a lot of similarity was noted between them by subjects.

Still, the results were generally consistent with the model in that it predicts that different senses would be judged as being similar to different degrees. The GOAL-oriented senses of *ni* in the Social Domain (i.e., the RECIPIENT, ADDRESSEE, and CAUSEE senses) were found to form a cluster at a low level in the hierarchy, suggesting strong similarities were perceived among them. Senses that share similar schematic characteristics but belong to different content domains (i.e., the ALLATIVE, PURPOSE, RESULTATIVE, and CONCEPTUAL GOAL senses) were judged to be much less similar to each other. SOURCE-oriented senses of *ni*, such as HUMAN SOURCE, 15 and 16, and PASSIVE AGENT, 17 and 18, combined into a larger cluster with other abstract sense types like MANNER, 21 and 22, and TEMPORAL, 5, rather than forming a cluster on their own. Since centrality is one of the main characteristics of prototypes of a category, it was thought that certain types of GOAL-oriented senses, i.e., the RECIPIENT and the ADDRESSEE senses of *ni*, may be perceived by subjects as being more typical of the category. However, surprisingly, the two spatial usages did not form a tight cluster, despite the semantic overlap they exhibit, as discussed in Chapter 3. Speakers may perceive these two senses to be equally basic, yet semantically distinct.

There were some unexpected clusters which looked as if subject based their judgments on something other than the semantic characteristics of *ni*. Sentences 6 (TEMPORAL LOCATION), 23 (CONCEPTUAL SPACE), 33 (PURPOSE), and 26 (REFERENCE POINT) were judged as being similar, regardless of the semantic diversity in the uses of *ni*. Upon closer examination, it was found that these four sentences all contained the adverbial particle *mo*

'also,' right after *ni*. Lexico-syntactic context is hard to factor out, especially when one tries to use naturalistic sentences as stimuli, but it would have to be controlled for in a future study (c.f. Clark 1973).

Finally, a similarity judgment test was run in the hopes of obtaining additional evidence for the goodness or weakness of the semantic network model proposed for *ni*.

5.4.3 Similarity Judgment Test

A similarity judgment test was conducted to examine whether and how speakers of Japanese perceive similarities or differences between individual senses of *ni*. The rationale behind this test was that senses which are proposed to be semantically more related should be judged as being more similar. Since this technique requires subjects to compare only two sense types at a time and to make judgments based on a rather consistent decision criterion, it was expected to yield a result which, when assessed with the results from the other studies, would allow us to refine or reject the proposed model.

Subjects. The same group of 18 subjects from the sentence generation study participated in this experiment.

Material s. Test materials consisted of 231 pairs of sentences, formed by pairing 22 sentences with each other. The 22 sentences were chosen out of the 44 stimulus sentences used in the sorting task so that each sentence represented a different sense type of *ni*, but each subject was provided with a different set of sentences. The paired sentences were presented in print in a random order.

Procedure. The subjects' task was to compare the two senses of *ni* in the paired sentences and to make a similarity rating based on *ni*'s usage on a ranked scale between 1 (totally different) and 7 (identical). After reading written instructions, subjects underwent a practice session in which five pairs of sentences, including a pair of homonyms of *ni* and one pair with purportedly synonymous usages of *ni*, were provided to help them determine the high and low anchors of their individual scales. They were instructed to proceed at their own pace and to take short breaks if necessary. The entire session took, on average, a little over an hour for each subject.

Results. The similarity scores for the total set of 231 pairs ranged between 1.1 and 6.3, with an average of 2.53, which was rather low (i.e., indicating dissimilarity). The pairs which got high similarity ratings included the CONCESSIVE CONJUNCTIVE-PRAGMATIC pair at 6.3, the RECIPIENT-ADDRESSEE pair at 6.2, and the RECIPIENT-CAUSEE pair at 5.7, followed by the ADDRESSEE-CAUSEE pair at 5.2. In contrast, pairs of CAUSATIVE and PRAGMATIC

senses, HUMAN SOURCE and PRAGMATIC senses, and PASSIVE AGENT and PRAGMATIC senses all got the lowest similarity ratings at 1.1.

The tree diagram in Figure 9 was constructed based on the results of a cluster analysis of the data. The scores for sentences containing *ni* in a complex particle or fixed expression were excluded from the analysis because of the diversity in meanings between the paired sentences.

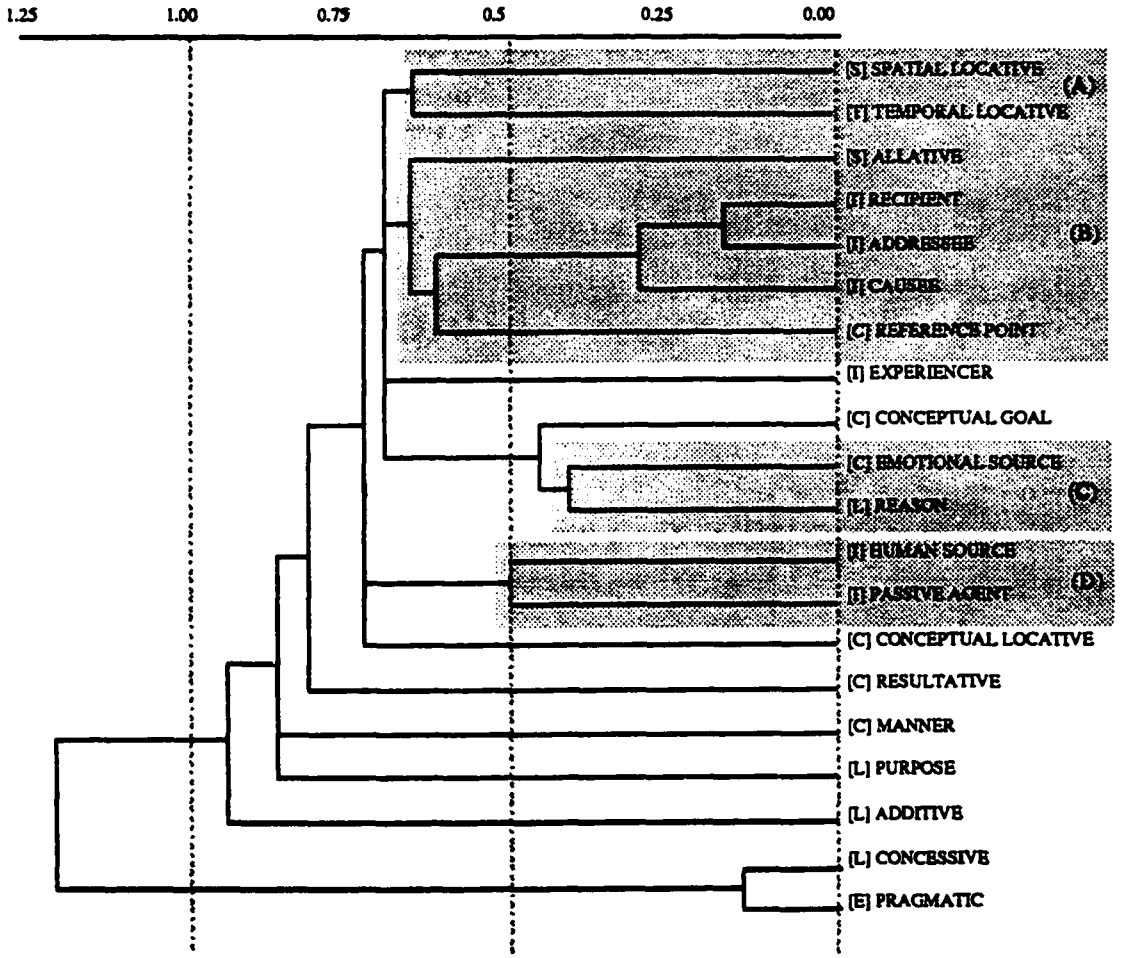

Figure 9. Hierarchical Cluster Analysis for Senses of *Ni* Based on the Results from the Similarity Judgment Task

In accordance with the results from the sorting task, the CONCESSIVE sense and the PRAGMATIC sense formed a small but tight cluster. These two senses were judged as being very different from the rest of the senses of *ni*, with the similarity scores ranging between 1.1 and 1.6. Nonetheless, they were judged as being more related to the other senses of *ni*

than a homonym of *ni*, which was given in the practice session. The similarity score for the pair of locative senses and a homonym of *ni* (*ni* meaning 'luggage') in the practice session was 1.0, indicating all the subjects rated this pair as totally different.

The rest of the senses of *ni* formed a large diffuse cluster, within which individual sense types were connected to one another at different levels of the hierarchy, indicating graded perceived similarities (as predicted by the semantic model). The two GOAL-oriented senses in the Social Domain, the RECIPIENT and the ADDRESSEE senses, formed a small and tight cluster. The CAUSEE sense, which I have argued is both GOAL-like and SOURCE-like in its meaning, joined the cluster next, indicating that these three senses in the same domain were judged to be fairly similar to one another. Finally, the REFERENCE POINT sense in the Conceptual Domain and the ALLATIVE sense in the Spatial Domain joined and formed a 'GOAL-like sense' cluster (Cluster [B]) in Figure 9). However, not all the GOAL-like senses belonged to this cluster. Despite the similarities in the image schemas as discussed in Chapter 3, the RESULTATIVE sense in the Conceptual Domain and the PURPOSE sense in the Logical Domain were judged as being similar to them to a much lesser degree.

There were three other clusters within this cluster. Two LOGICAL SOURCE senses, the EMOTIONAL source and the REASON senses, group together (Cluster [C]), suggesting a relatively strong perceived similarity between them. A 'HUMAN SOURCE sense' cluster (Cluster [D]) was formed by the two SOURCE-oriented senses in the Social Domain, the HUMAN SOURCE sense, and the PASSIVE AGENT sense. Finally, the SPATIAL LOCATIVE and the TEMPORAL LOCATIVE senses formed a 'LOCATIVE sense' cluster (Cluster [A]), though only at a much higher level in the hierarchy (which, again, indicated a low level of perceived similarity).

5.4.4 Summary

Overall, the results from these three experiments are consistent with the most important characteristics of the polysemy model proposed in Chapter 3. Certain sense types seemed to be perceived as being more central or prototypical to the category of *ni* than others. The fact that the ALLATIVE sense was by far the most frequently mentioned in the sentence generation test suggests that it may be more salient than any other sense type of *ni* in speakers' minds. The centrality exhibited by HUMAN GOAL-like senses, such as RECIPIENT and ADDRESSEE, in the sorting task and the similarity judgment task suggests that *ni* may have more than one prototype.

The results also indicate that speakers may make distinctions between major sense groupings, despite any task effects. The CONCESSIVE sense and the PRAGMATIC sense of *ni*

were judged as being only remotely related to the rest of the senses, both in the sorting test and the similarity judgment test. Differentiation between GOAL-type senses of *ni* and SOURCE-type senses of *ni* was also pretty consistent. These two opposing sense types were not only different from each other in frequency of mention in the sentence generation test, but they were also judged as dissimilar in the sorting test and the similarity judgment test. In short, they were never grouped together in the cluster analyses conducted on the respective test results.

Finally, speakers seemed to perceive degrees of similarity or difference between the senses. Moreover, the semantic characterizations and the background content domains may have played a role in speakers' perception of similarities between sense types. Senses which share a image schematic characteristics and which are situated semantically in the same content domain were regularly perceived as being similar to each other: The RECIPIENT, ADDRESSEE, and CAUSEE senses were judged as being very alike, and so were the HUMAN SOURCE and PASSIVE AGENT senses. Conversely, the ALLATIVE sense, the REFERENCE POINT sense, and the PURPOSE sense, which share the semantic characteristics of being GOAL-oriented although they do not share the same domain, were perceived to be similar to the RECIPIENT and ADDRESSEE senses only weakly. However, the CONCESSIVE CONJUNCTIVE sense and the PRAGMATIC senses were judged as being very similar despite the fact they do not share the same domain. After all, they both serve as abstract clause-level conjunctive markers. The perceived similarities are no doubt determined by an interaction between intrinsic semantic characteristics and the background domain of each sense type.

5.5 General Discussion

The purpose of this chapter was to evaluate empirically the network model for the semantic structure of *ni* proposed in Chapter 3. The main implications made by the model were as follows: (i) the particle *ni* is not a monosemous lexical item, but rather a polysemous or heterosemous lexeme whose various senses are interrelated directly or indirectly; (ii) its semantic structure is organized in terms of domains, which can be thought of as partially forming a conceptual hierarchy in terms of concreteness or abstractness; and (iii) not all the senses of *ni* are equally salient. Only certain senses can be considered to be prototypical members of the category, while others represent extended senses semantically and grammatically.

The results from the empirical studies presented in this chapter suggested that the strong monosemy view should indeed be rejected. The non-homogeneous nature of the category of *ni* was supported by both the differential frequency distribution obtained in the text count and the non-random child acquisition pattern by Aki. The data from the sentence generation task also indicated that speakers perceive certain sense types as being more central or prototypical to the category than others, in accordance with the polysemy view.

This finding was further supported by the similarity in the frequency distribution of the senses of *ni* from three of the studies, illustrated in Figure 10. Despite differences in the sources of data, there was a general tendency among the frequency data: The two spatial senses of *ni*, STATIVE LOCATIVE and ALLATIVE, and the two logical senses, RESULTATIVE and MANNER, were more frequent than any other senses in all of the empirical studies. It was suggested that these senses are the most central to the category of *ni*.

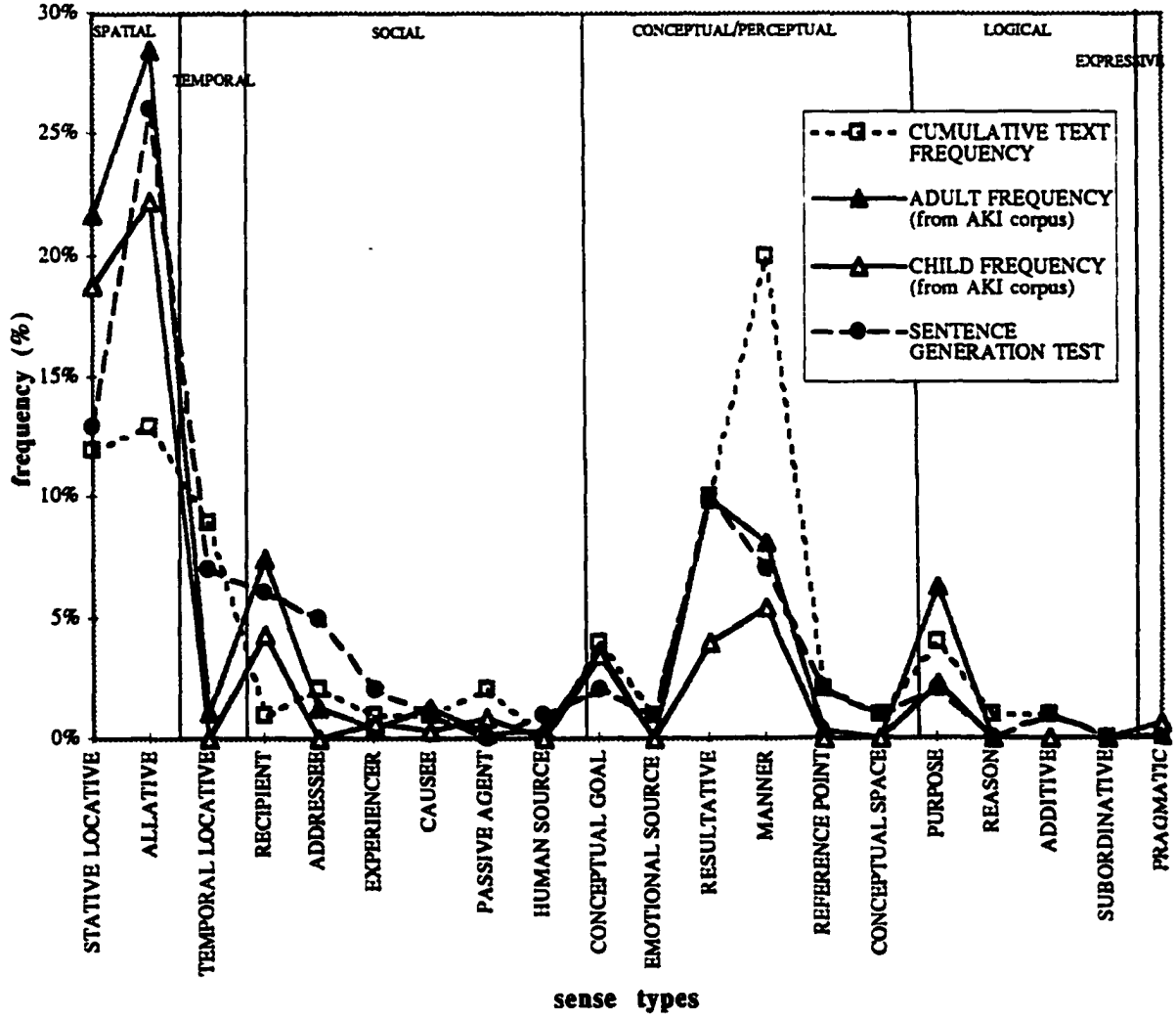

Figure 10. Comparison of Frequency Distribution among the Various Empirical Studies

The perceived degrees of similarity among various senses, as observed in the similarity judgment test and the sorting test, also supported *ni*'s polysemous status. The results from these two tests suggested that speakers were able to differentiate between senses which were semantically dissimilar. The CONCESSIVE senses of *ni* seemed the least similar to the other senses, and yet, not totally unrelated to the rest of the senses of *ni*. General differentiations were also made between the GOAL-oriented senses of *ni* and its SOURCE-oriented senses, although they were apparently perceived as more similar to each other than to the CONCESSIVE senses. Moreover, the two spatial senses were distinguished from each other. This finding is in keeping with the proposed model, which assumes that the two spatial senses of *ni* serve as bases for two distinctive semantic developmental paths.

Any perceived similarities among senses seemed sensitive to shared semantic characteristics and shared domains. Both in the sorting test and the similarity judgment test, it was found that two senses sharing similar semantic properties and the same domain were perceived as being more similar than those which do not. However, senses which share the semantic characteristics but not the semantic domain were also judged as similar, though to lesser degrees. Among the major semantic properties affecting the perceived similarities or dissimilarities seemed to be the GOAL-orientedness or SOURCE-orientedness of senses. These findings lend strong support to the proposed model, in which the various senses of *ni* are claimed to be related to each other through semantic extensions and inter-domain metaphorical mappings.

As for the actual configuration of the semantic model for *ni*, however, the results did not speak with one voice. Although they all suggested in one way or another that some of the sense types of *ni* may be perceived as being more salient than others by speakers, there were some inconsistencies among them as to which sense types were the most basic or central to the category. The prototypicality of the ALLATIVE sense was indicated by its high frequency in the text count study, its early emergence in the acquisition study, and its high frequency of mention in the sentence generation test. This is what can be predicted from the model which assumes ALLATIVE to be semantically basic—it is situated in the Spatial Domain, the most concrete level in the conceptual hierarchy, and it serves as the basis for various GOAL-like senses. On the other hand, the centrality of the RECIPIENT and the ADDRESSEE senses observed in the results from the two similarity measurement tests suggested that they may be central to the category as well, at least synchronically. Aki's use of *ni* also indicated that the RECIPIENT sense was one of the earlier sense types to be

acquired. Furthermore, the MANNER sense of *ni*, which is a rather abstract sense only indirectly related to the other senses semantically, was among the more frequent sense types in the text count study as well as in the Aki study. The category of *ni* seems to be associated with multiple prototypes. It may also be the case, however, that the salience or centrality of members of a category has much to do with what the model attempts to represent; for example, whether the model stands for a child acquisition pattern or speakers' perception about the similarities of senses. I discuss this point further in the following chapter.

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[1] The sources of these texts are as follows:

The four written texts: Shinchoobunko no hyaku-satsu (Shinchoo library's selection of 100 books), available on CD-Rom.

The speech by Empress: The Japanese empress's speech at a symposium on September 24, 1998. Obtained from an on-line newspaper at <asahi.com>.

Tetsuko no heya: Taped and transcribed by Dr. Hiroko Terakura at the East Asian Department, Univeristy of Alberta.

[2] The Aki corpus was collected and published by Susanne Miyata (1995) and is available from <poppy.psy.com.edu> in <japan.tar>.

[3] The child's age is reported in years; month, and days.

[4] Below is the list of the description of each file.

FILE #	AKI age	session length
AKI01	1;5.7	0:11:20
AKI02	1;6.10	0:25:15
AKI03	1;7.4	0:13:35
AKI04	1;8.23	0:37.20
AKI05	1;9.20	0:25:30
AKI06	1;10.0	0:34:30
AKI07	1;11.29	0:21:30
AKI08	2;0.5	0:38:50
AKI09	2;0.12	0:35:30
AKI10	2;0.19	0:36:30
AKI11	2;0.26	0:38:00
AKI12	2;1.3	0:47:15
AKI13	2;1;10	0:47:35
AKI14	2;1.17	0:36:10
AKI15	2;1;24	0:50:50
AKI16	2;2.0	0:48:00
AKI17	2;2.11	0:49:30
AKI18	2;2.14	0:46:40
AKI19	2;2.22	0:48:40
AKI20	2;3.0	0:48:25
AKI21	2;3.4	1:02:00
AKI22	2;3.12	1:00:00
AKI23	2;3.18	1:00:00
AKI24	2;3.26	1:00:00
AKI25	2;4.4	1:00:00
AKI26	2;4.9	1:00:00
AKI27	2;4.18	1:00:00
AKI28	2;4.29	1:00:00
AKI29	2;5.6	1:00:00
AKI30	2;5.13	1:00:00

FILE #	AKI age	session length
AKI31	2;5.20	0:55:30
AKI32	2;6.15	1:00:00
AKI33	2;6.22	1:00:00
AKI34	2;6.30	1:00:00
AKI35	2;7.5	1:00:00
AKI36	2;7.12	1:00:00
AKI37	2;7.19	1:00:00
AKI38	2;7.26	1:00:00
AKI39	2;8.3	1:00:00
AKI40	2;8.11	1:00:00
AKI41	2;8.17	1:00:00
AKI42	2;8.24	1:00:00
AKI43	2;9.0	1:00:00
AKI44	2;9;7	1:00:00
AKI45	2;9.14	1:00:00
AKI46	2;9.24	1:00:00
AKI47	2;9.29	1:00:00
AKI48	2;10.7	1:00:00
AKI49	2;10.12	1:00:00
AKI50	2;10.20	1:00:00
AKI51	2;10.28	1:00:00
AKI52	2;11.0	1:00:00
AKI53	2;11.9	1:00:00
AKI54	2;11.16	0:57:40
AKI55	2;11.25	0:35:00
AKI56	3;0.0	1:00:00

[5] Special CHAT symbols used in the data are as follows (cf. MacWhinney 1995):

[?]	best guess at a word
[: text]	replacement
( )	non completion of a word
@o	onomatopoeia
#	prefix marker

[6] I am grateful to Ms. Sakiko Nakagane for arranging the experiment for me. My thanks also go to all the Japanese people at the Japanese school, who kindly took time to participate in my experiment.

[7] The URL addresses for the two on-line newspapers are as follows:

Asahi Newspaper: <www.asahi.com

Mainichi Newspaper: <www.mainichi.co.jp>

CHAPTER SIX
CONCLUSION

6.1 The Model vs. the Empirical Findings

This dissertation has been concerned with giving a cognitive account of the semantic behavior of the Japanese particle *ni*. *Ni* is a semantically and functionally diverse lexical item and it has posed challenges for traditional, theoretical, and pedagogical accounts of its linguistic distribution. The difficulty lies mainly in the narrow view of grammatical categorization that these accounts have been based on. I presented an overview of issues in categorization from both psychological and linguistic perspectives in Chapter 1. I argued that Langacker's prototype-based network model best accounts for network growth and decay, individual differences between speakers, and the non-discrete nature of the monosemy-polysemy-homonymy distinction. In Chapter 2, I described the functional and semantic diversity of *ni* and discussed problems with those previous studies which assumed a rigid, function-based categorization.

Chapter 3 presented a cognitive analysis of the semantic structure of *ni*. I claimed that, despite its heterosemous behavior, the various senses of *ni*, when examined in light of cognitive linguistic accounts, exhibit similarities to each other to varying degrees. The semantic relationships among its senses were accounted for in terms of metaphorical extensions, a conceptual hierarchy of semantic domains, and Langacker's action chain model. Based on this semantic analysis, a provisional network model was proposed to represent *ni* lexically. This model was then subjected to assessment and evaluation by various empirical and experimental data presented in Chapters 4 and 5. In Chapter 4, I discussed how the semantic distribution that *ni* exhibits synchronically may simply be a remnant of the extensive associated with the grammaticalization that it has undergone through its semantic development. In Chapter 5, I presented data from various empirical studies, including a text count study, a child acquisition study, and a series of off-line psycholinguistic experiments.

In this concluding chapter, I will evaluate the network model I proposed in Chapter 3 and present a revised lexical model for *ni*, showing how the original model has been modified based on the empirical findings discussed in the two preceding chapters. I will discuss implications that this study has for issues in semantic conceptualization. Some suggestions for future research will conclude this dissertation.

6.2 Revised Model for the Lexical Representation of *Ni*

Taken together, the basic structure of the proposed model was supported by the results from the empirical studies, although fine details of the model were not. The diachronic evidence presented in Chapter 4 described certain grammaticalization processes which *ni* might have undergone historically to yield such an extensive array of synchronic usage types. I argued that the earliest senses of *ni* probably marked two distinct types of spatial relations, STATIVE LOCATION and ALLATIVE, each of which has separately undergone various semantic extensions. The ALLATIVE sense of *ni* has given rise to a number of GOAL-oriented senses, among which is the cross-linguistically common ALLATIVE-RECIPIENT-PURPOSE extension, which operates across cognitive domains (Heine et al. 1993). The CONCEPTUAL GOAL sense and RESULTATIVE sense have also developed out of the ALLATIVE sense and they, in turn, have extended to mark SOURCE-oriented clausal participants, such as EMOTIONAL SOURCES and REASONS. The STATIVE LOCATIVE sense, on the other hand, has extended into a TEMPORAL LOCATIVE marker in the Temporal Domain and a CONCEPTUAL SPACE sense in the Conceptual/Perceptual Domain. The study also showed that the CONCESSIVE CONJUNCTIVE sense and the PRAGMATIC sense might well have developed out of the STATIVE LOCATIVE sense through some typologicaly common grammaticalization processes.

Although the results from the empirical studies discussed in Chapter 5 revealed a more complex picture of the semantic structure of *ni*, they were consistent with the main characteristics of the proposed model. The basicness of the two spatial senses suggested in the diachronic study was supported by their high frequency in the text count data and the sentence generation study data. They were also among the most frequently used sense types as well as being the first to emerge in the child language acquisition data (although that was only a single case study). The frequency data also indicated that the GOAL-oriented senses are generally more common than SOURCE-oriented senses, thus supporting the data from the diachronic study which suggested that the SOURCE-type senses have developed out of the GOAL-type senses, and therefore, are less central members of the category *ni*.

The data from two psycholinguistic tests which measured perceived similarities suggested that speakers do actually recognize relationships between senses of *ni*, further supporting my claim about the grammaticalization processes I argued *ni* has probably undergone. Subjects could differentiate between the two spatial senses, which I hypothesized have undergone separate developmental pathways to give rise to different kinds of senses in more abstract semantic domains. The strong similarity perceived by subjects between the various GOAL-type senses of *ni* can also be interpreted as reflecting the

metaphorical relationships and the conceptual similarities underlying semantic extensions. Moreover, the perceived similarities and dissimilarities between any two senses seem to be sensitive to the content domains they are associated with. That is, two senses which belong to the same domain may be perceived to be more similar to each other than those which do not, regardless of other semantic overlap they might share.

Nevertheless, historical relations may not necessarily be reflected by the perceived similarities by speakers of MJ. The CONCESSIVE CONJUNCTIVE sense in the Logical Domain and the PRAGMATIC sense in the Expressive Domain, which I argued are related to the STATIVE locative sense of *ni* through cross-linguistically common functional extensions, were perceived to form a small cluster, which is only remotely related to the rest of the sense types of *ni*. Similarly, the perceived similarity between the two senses was minimum in the synchronic data, although the ADDITIVE sense is historically related to the ALLATIVE sense through a remote but fairly straightforward functional extension.

Figure 1 presents a revised model for the semantic representation of *ni* based on the empirical data fom Chapters 4 and 5. It should be emphasized that this model is best understood as a representational model for language use, rather than as a model for diachronic or developmental change. Although the diachronic data suggest how the synchronic semantic distribution of *ni* may have developed, speakers may not necessarily perceive past semantic relations. Similarly, data from the language acquisition study can only make indirect reference to which sense types may be more basic conceptually, since the conceptual basicness might be only one factor which determines the acquisition process.

The notation in Figure 1 is the same as that I employed in the model proposed in Chapter 3. The dotted squares () represent schematic senses at a more abstract level of conceptualization, which may or may not be perceived by speakers. These schematic senses are represented in the model, however, since they support the metaphorical semantic extensions, described by dotted arrows (- - - - ►). The senses indicated by solid squares () are actual usage types. They are connected to image schemas through the relationship of instantiation, denoted by solid arrows (——►). The various usage types are further connected to each other, directly or indirectly, by similarity links (◄- - ►). Finally, the most prototypical senses in the category of *ni* are indicated by heavy-lined squares () in the model.

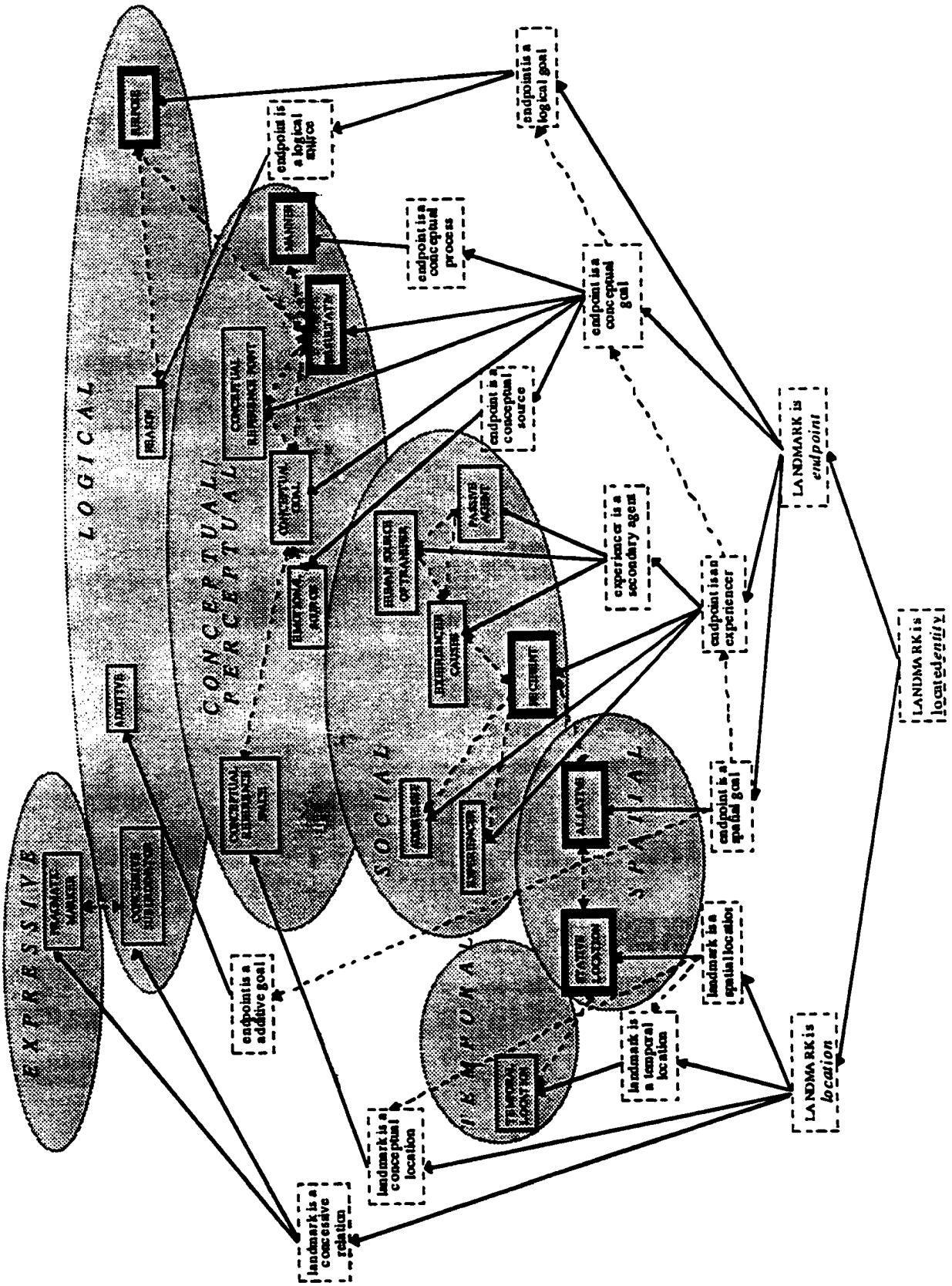

Figure 1. The Revised Model for Lexical Representation of *Ni*

In this revised model as in the original sketched out in Chapter 3, the various senses of *ni* are structured in terms of semantic domains, mirroring the conceptual hierarchy based on the concreteness or abstractness of the senses. The metaphorical extensions operate between schematic senses across the semantic domains (compare the ALLATIVE sense, the RECIPIENT sense, the RESULTATIVE sense, and the PURPOSE sense). Within each domain, senses are related to each other by similarities in their schematic representations (compare the RECIPIENT sense, the ADDRESSEE sense, and the EXPERIENCER sense). Senses may exhibit similarities across semantic domains either due to similarities in the surface structure (e.g., the STATIVE LOCATIVE sense and the EXPERIENCER sense), or the overall contextual similarity (e.g., the EMOTIONAL source sense and the REASON sense).

As indicated by the distance and number of nodes between senses, the degree of relatedness between senses of *ni* varies. Senses which share the same schematic representation and transpire in the same domain (e.g., the RECIPIENT sense and the ADDRESSEE sense, or the PASSIVE AGENT sense and HUMAN SOURCE sense) are considered more similar to each other than senses which share the higher-level scheme but are in different domains (e.g., the RECIPIENT sense and the RESULTATIVE sense, or the HUMAN SOURCE sense and the REASON sense). Senses which share neither a schematic representation nor a semantic domain (e.g., the RECIPIENT sense and the EMOTIONAL SOURCE sense) are related only indirectly. The CONCESSIVE CONJUNCTIVE sense and the PRAGMATIC sense are similar only to each other, and are related to the rest of the members of the category only remotely. The ADDITIVE sense of *ni* is also separate from the other senses of *ni*, although it is considered to be a semantic extension from the ALLATIVE sense.

Multiple prototypes are represented in the model. Some of these prototypical senses, namely, the SPATIAL LOCATIVE sense and the ALLATIVE sense, are associated with cognitive or semantic basicness, while other GOAL-type senses like RECIPIENT, RESULTATIVE, and PURPOSE manifest a different kind of centrality to the category. They were not only more frequently produced than other sense types in the text count data, but were also earlier to emerge in the acquisition data. The MANNER sense, which is associated neither with semantic basicness nor with centrality, is also represented as being prototypical to the category, due to its high frequency of use.

The primary characteristic of this network model, however, lies in the fact that it allows for individual differences between speakers and possible differences between different aspects of language use. Different speakers may very well perceive senses at different levels of abstractness, and even a single speaker may perceive relationships among senses differently in different contexts. As I discussed above, the specific configurations of the model are somewhat different depending on whether it is a model of diachronic changes, or

of developmental chage. Langacker's (1987, 1991a/b) network model has provided a basis for this model for *ni*, as it accommodates all the properties of a category mentioned above.

As discussed at the beginning of this dissertation, cognitive linguistics maintains that linguistic expression is assumed to reflect our conceptualization of the world. Therefore, although no strong conclusions can be drawn from a study of a single lexical category, the complex nature of *ni* should have implications for our understanding of the human conceptual system. Based on these findings for *ni*, there are a few aspects of conceptual categorization we can point out. First of all, when it comes to the internal semantics of a lexical item, an extreme monosemy or a strong homonymy account should be treated as special cases, especially for grammatical words such as the Japanese particles. Thus, most lexical items should probably be treated as inherently polysemous from the start. Category boundaries are non-discrete and therefore a distinction between a monosemy/polysemy account or a polysemy/homonymy account is more relative than absolute. Categorization, especially semantic categorization, is less rigidly dichotomous than gradual or continuous. As in the case of *ni*, senses that have been shown to be historically related may or may not be conceptually related synchronically. Conversely, senses which are not related semantically or historically may be perceived as similar conceptually due to a similarity in other aspects, such as functional similarity or similarities of surface form. Moreover, category membership varies. While some members of a category are more basic or central to the category, others will necessarily be more peripheral and therefore considered less prototypical. A category may be associated with multiple prototypes. Finally, the findings from the present study suggest that that a lexical category is not a fixed conceptual *or* linguistic entity. Rather, it is non-static and quite dynamic in nature. The specific configuration of the internal categorial structure of a lexical item may vary between individual speakers and may depend heavily on the context of use. At the same time, a lexical category may exhibit semantic or functional extension or loss over time by adding or losing its sense type members.

6.3 Prospects

Clearly, we are still a long way from fully understanding what a linguistic category is like, let alone what the human conceptual system that supports language is like. In order to better understand the nature of linguistic categorization, we must admit that there are a number of questions that are far from answered. These questions have to do with the

relationship between representational models as proposed by linguists and actual psychological representations in the minds of speakers. Possibly, there is no real connection between the two. At the very least, the nature of the relationship between linguistic and psychological models of semantic representation will remain indeterminate for a long time.

However, I do not mean that we should give up our attempts to understand linguistic categorization. I believe there are already a few areas of study where we cognitive linguists can look for more evidence to increase our understanding of linguistic categories. First of all, there is a need to establish methodological principles for constraining the range of lexical representation models. Although there have been a number of studies exploring lexical network models as models of mental representation, such models have left most of their aspects unspecified—as Sandra and Rice (1995) and Rice (1996) have argued. Croft (1998) also maintains that introspective linguistic data alone cannot determine the proper model of mental representation, but they can only restrict the range of possible mental representations (1998:168). He argues the need for evidence from various empirical sources including corpus evidence, and on- and off-line psycholinguistic experiments. Sandra (1998) questions whether linguists can address the *mental* issues at all. While he agrees that empirical evidence can restrict the range of available options, he is concerned that cognitive linguists tend to fall into what he calls a polysemy fallacy (1998:368-375). He states, "[without any] decision rules for identifying relevant distinctions at the level of representational content, cognitive linguists will be naturally inclined to find distinctions all over the place" (1998:371). In this dissertation, I have shown that evidence from various empirical studies can allow us to make educated guesses about how the various senses of *ni* may possibly be perceived by speakers, although no single source of evidence is conclusive enough to pinpoint what the internal semantics of *ni* should or could look like for fluent speakers of MJ, collectively or individually. At this moment, we are simply not equipped with a reliable enough methodology whereby we can determine the nature of subjective mental representation objectively. We can only gather various sorts of evidence from different linguistic sources and draw some partial insights as best we can.

Secondly, the findings from this study on the particle *ni* should be compared with the lexicosyntactic behaviour of other particles in Japanese. The best candidates would be: *de* and *to*, which are quite diverse in their semantic and functional behavior like *ni*; *kara*, a particle conveying rather concrete meanings; and *ga* or *o*, which have fairly schematic grammatical functions. By studying the semantic structure of these particles, we should be able to deepen our understanding of the nature of complex linguistic categories in general.

Cross-linguistic studies of similar lexical items, ALLATIVE markers for example, would also help us understand which aspects of mental representation are language-independent or language-specific.

I am also interested in studying those aspects of meaning of the particles which are first to be lost or always retained. In the present study, I demonstrated that the semantic structure of a linguistic item can predict certain aspects of the language acquisition process. I would be interested in whether a pattern of language loss can, at least partially, be reflected in or predicted by this semantic model. Does an aphasic patient lose certain types of senses before others? If so, does prototypicality or semantic basicness have anything to do with the order of or resistance to meaning loss? I would like to investigate whether the semantic model developed here provides any explanation.

Finally, I hope to explore the way in which the findings from studies of semantic structure may assist second language acquisition. In traditional (i.e., formal) classroom teaching, the different usages of a particle have either been treated as if they belonged to different words or the different senses have simply been itemized. If we, as teachers of Japanese to second language learners, can gain a better understanding of grammaticalization and how languages change, then we stand a better chance of being able to communicate the full range of *ni*'s lexicosyntactic behavior in a more coherent and easy-to-master way. The semantic model for *ni* proposed here may help us find a better way of teaching particle uses than simply itemizing different senses in a random manner. If may be easier for students to learn if they are taught prototypical usage types of a particle. It may also be the case that their learning is enhanced if they learn semantically more basic senses before more abstract ones. I would also be interested in studying whether second language learners may benefit from a knowledge of the semantic relations between various senses as well as between different particles. In any event, I strongly believe that a study of lexical semantics such as this would be of significant pedagogical value.

At the beginning of this dissertation, I asked the question, *What does a word mean?* I return to my initial answer: *It depends.* A word's meaning depends on what kind of word it is, what kind of context it is being used in, and how it is being used in this or that particular context. In this dissertation, I have investigated what the internal semantic structure of the Japanese particle *ni* could possibly be like. The representational model I proposed on the basis of my semantic analysis alone had to be modified when confronted with findings from various empirical studies. It seems that a representational model for a word's meaning or meanings also depends on what kind of data the model is supposed to account for, what point in its semantic development the word (or the language) is currently

at, or what particular stage in the acquisition process the speaker using the word has reached. A word's meaning (and hence its lexical representation) also depends on the linguistic activity the speaker is currently engaged in—a conversation, a written narrative, an out-of-context similarity task, not to mention the specific purpose the representational analysis is being put to. However, by saying that a word's meaning *depends*, I do not suggest that we should give up asking this question, what does a word mean?. On the contrary, we should keep asking so that we will eventually gain a better understanding of the complex conceptual system which supports a seemingly more complex linguistic system.

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APPENDIX A. Sentences Produced in the Sentence Generation Task

SPATIAL LOCATION

*Inu ga niwa **ni** imasu.*
'There is a dog in the garden.'
*Ha **ni** nori ga tuiteimasu.*
'There is some seaweed on your tooth.'
*Osara **ni** ippai doonattu ga okareteimasu.*
'There are a lot of donuts on the plate.'
*Ashi **ni** mame ga dekiteimasu.*
'I have a blister on my foot.'
*Sono hanashi wa kyoo **no** shinbun **ni** notteita.*
'That stoy was on today's newspaper.'
*Boku no naka **ni** nani ka iru.*
"There is something in myself.'
*Sora **ni** yuuhoo ga!*
'[There is] a UFO in the sky.'
*Doko **ni** arimasu ka?*
'Where is [it]?'
*Shokudoo **ni** ringo ga oitearimasu.*
'There are some apples in the cafeteria.'
*Tsukue no ue **ni** famikon ga arimasu.*
'There is a family computer on the desk.'
*Densha no naka **ni** kasa o wasuretekita.*
'I left my unbrella inside the train.'
*Kare wa nihon **ni** sunda koto ga arimasu.*
'He has once lived in Japan.'
*Kanojo wa kanada **ni** sumitai to omotteimasu.*
'She wants to stay in Canada.'
*Soko **ni** aru.*
'[It] is there.'
*Ima soko **ni** aru kiki.*
'The crisis which is just in front of you.'
*Niwa **ni** saita hana.*
The flower which bloomed in the garden.'
*Doko **ni** aru?*
'Where is [it]?'
*Sugu soko **ni** aru.*
'[It] is right there.'
*Koko **ni** koocha ga arimasu.*
'There is some tea here.'
*Tsukue no ue **ni** pen ga arimasu.*
'There is a pen on the table.'
*Tokyoo **ni** sundeiru.*
'[I] live in Tokyo.'
*Soko **ni** wa mizu to orenji ga atta.*
'There were some water and an orange there.'
*Chikaku **ni** kooen ga aru.*
'There is a park near here.'

DIRECTION/DISTINATION

*Watashi wa tottemo nihon **ni** kaeritai desu.*
'I really want to go back to Japan.'
*Yasumi wa yappari hawai **ni** ikitai desu ne.*
'For a holiday, I want to go to Hawaii after all.'
*Koohii **ni** miruku o irete kudasai.*
'Please put some milk in my coffee.;'
*Tsugi no kado o migi **ni** magatte kudasai.*
'Please turn to the right at the next corner.'
*Kinoo byooin **ni** ittekimashita.*
'I went to the hospital yesterday.'
*Toronto **ni** ikitai.*
'I want to go to Toronto.'
*Watashi no heya **ni** kitekudasai.*
'Please come to my room.'
*Watashi wa daigaku **ni** nyuugakushimasu.*
'I am going to enter a university.'
*Kuruma **ni** noru.*
'[He] gets into a car.'
*Hune **ni** noru.*
'[He] takes/gets on a boat.'
*Uchuu **ni** ittemitai.*
'I would like to go to the space.'
*Saipan **ni** ikitai naa.*
'I would like to go to Saipan.'
*Tabako **ni** hi o tukeru.*
'[He] lits a cigarret.'
*Supein **ni** ikitai desu.*
'I want to go to Spain.'
*Kono kami **ni** kaitekudasai.*
'Please write on this paper.'
*Koohii **ni** kuriimu o irete kudasai.*
"Please put some cream in my coffee..'
*Konsaato **ni** iku to yakusoku shimashita ka?*
'Did I make an appointment to go to the concert?'
*Acchi **ni** iku to ikidokari desu yo.*
'You will meet a deadend if you to that way.'
*Kanada **ni** kimashita.*
'[I] came to Canada.'
*Kami **ni** kaite kudasai.*
'Please write on the paper.'
*Nihon **ni** zehi kite kudasai.*
'Please come to Japan by all means.'
*Kanada **ni** kimashita.*
'[I] came to Canada.'
*Tsukue no ue **ni** oite kudasai.*
'Please put [it] on the table.'
*Koko **ni** sain shite kudasai.*
'Please sign here.'

*Doko **ni** ikimasu ka?*
'Where shall we go?'
*Kutsu **ni** gamu ga kuttsuita.*
'Gum got stuck to my shoes.'
*Ibaragiken **ni** ryokoo shimashita.*
'I travelled to Ibaraki Prefecture.'
*Dentoo **ni** akari ga tomoru.*
'A light gets lighted.'
*Nichiyoobi wa kyookai **ni** iku.*
'[I] go to church on Sunday.'
*Me **ni** gomi ga hairu.*
'Dust came into my eye.'
*Kikyuu **ni** noru.*
'[He] gets on a baloon.'
*Koohii **ni** miruku o ireru.*
'[He] puts some milk in the coffe.'
*Koko **ni** kite.*
'Please come here.'
*Fuutoo **ni** irete ne.*
'Please put [it] into the envelope.'
*Kanojo wa kanada **ni** kita moo juunen ga tatta.*
'She has lived in Japan for ten years.'
*Machi **ni** ikimashoo*
'Let's go to downtown.'
*Kinoo bankuubaa **ni** ikimashita.*
'I went to Vancouver yesterday.'
*Ashita kare wa rooya **ni** hairu.*
'He goes into jail tomorrow.'
*Ashita kare wa amerika **ni** tabidatsu.*
'He leaves for America tomorrow.'
*Nabe **ni** yasai o ireru.*
'[I] put some vegetable into the pot.'
*Nihon **ni** made iku.*
'[He] goes all the way to Japan.'
*Nihoon **ni** tadori tsuku.*
'[He] finally arrives in Japan.'
*Doko **ni** iku?*
'Where are [you] going?'
*Kono isu **ni** suwatte kudasai.*
'Please sit in this chair.'
*Kita **ni** iku.*
'[He] goes to the north.'
*Fukuro **ni** tsumeru.*
'[I] pack [them] in the bag.'
*Daigaku **ni** itteimasu.*
'I go to university.'

TEMPORAL LOCATION

*Kaeri **ni** yasai o katte kite kurenai?*
'Will you by some vegitable on the way home?'
*Boku ga ichiban **ni** dekita.*
'I did it in the first.place.'
*Isshoo **ni** ichido no tsyansu da.*
'Such a chance comes only once in a life time.'
*Watashi no zensei **ni** wa inu ga ita no kamo shirenai.*
'There may have been a dog in my previous life.'
*Saigo **ni** sensei kara hitokoto okotoba o itadakimasu.*
':At last, we receive a message from our teacher.'
*Haru **ni** wa sakura o mi ni ikoo.*
'Lets go to see cherry blossoms in spring,'
*Kyoo **ni** mo ame ga hurisoo da.*
'It is likely to rain even today.'
*Hachiji **ni** machiawase ga aru.*
'I have an appointment at eight o'clock.'
*Kako **ni** mondai a arimashita.*
'[He] had some trouble in his past.'
*Kare wa raigetsu **ni** yattekimasu.*
'He comes next month.'
*Dooji **ni** kotaeru.*
'[We] answer at the same time.'
*Ashita made **ni** modorimasu.*
'[I] will return by tomorrow.'

RECEIPIENT

*Ane **ni** okurimono o shimashita.*
'I gave a present to my sister.'
*Ryooshin **ni** tegami o okutta.*
'I sent a letter to my parents.'
*Chichi **ni** wa nekutai o kanada kara okuruoo.*
'To my fahter, I will send a necktie from Canada.'
*Buku **ni** ai o kudasai.*
'Please give love to me.'
*Minna **ni** agemasu.*
'I will give (this) to everyone.'
*Anata to watashi **ni** itadakimashita.*
'[He] gave [this] to you and me.'
*Watashi **ni** kudasai.*
'Pease give [it] to me.'
*Chichi **ni** tegami o kaku.*
'[I] write letters to my father.'
*Neko **ni** gohan o ageru jikan desuyo.*
'It is time to give food to the cat.'
*Kore o kare **ni** watashite kudasai.*
'Please pass this to him.'
*Kore o anata **ni** agemasu.*
'[I] will give this to you.'

ADDRESSEE

*Okaasan **ni** yoroshiku otsutae kudasai.*
'Please say hello to your mother.'
*Sensei **ni** kiitemitai.*
'I would like to ask the teacher.'
*Nani ka areba watashi **ni** tsutaete kudasai.*
'If anything, please let me know.'

*Ryokoogaisha **ni** chiketto no tehai o irai shimashita.*
'I requested the travel agency for the ticket.'
*Anata **ni** onegai shimasu.*
'I will ask you (a favor).'
*Watashi **ni** oshiete kudasai.*
'Please teach me.'
*Sensei **ni** shitsumon o suru.*
'[A student] asks a question to the teacher.'.
*Minna **ni** itte ne.*
Tell [it] to everybody.'
*Kakari no hito **ni** kiite kudasai.*
'Please ask the person in charge.'

EXPERIENCER

*Sono shigoto wa watashi **ni** wa ni ga omoi.*
'That job is a burden to me.
*Watashi kara toosan **ni** ai ni ikimashita.*
'I myself went to see my father.'
*Chijin **ni** au.*
'[He] meets an acquaintance.'
*Hito **ni** au.*
'[I] meet somebody.'

EXPERIENTIAL CAUSEE

*Watashi **ni** sasete kusasai.*
'Please let me do (it).

HUMAN SOURCE OF TRANSFER

*Kore wa haha **ni** moratta yubiwa desu.*
'This is a ring I got from my mother.'
*Oba **ni** puresento o moratta.*
'I got a present from my aunt.'

CONCEPTUAL GOAL

*Anoko **ni** kubittake.*
'I am in love with that girl.'
*Watashi **ni** makasete kudasai!*
'Please count on me.'
*Kore o suru koto **ni** shimasu.*
'I will decide to do this.'

CONCEPTUAL/PERCEPTUAL SOURCE

*Eega **ni** kandoo suru.*
'[I] gets moved by a movie.'

RESULT

*Benkyoo o suru ki **ni** naranai.*
'I don't feel like studying.'
*Ii shiai **ni** narimashita.*
'[This] turned out to be a good game.'
*Atama ga masshiro **ni** narimashita.*
'The hair turned all grey'
*Kirei **ni** narimashita.*
'[This place] became clean.'
*Himitsu **ni** shite kudasai.*
'Please keep it secret.'
*Isha **ni** naru.*
'[He] becomes a doctor.'
*Ashita **ni** naru deshoo.*
'It will be tomorrow.'
*Sore wa kotae **ni** natteimasen.*
'It is not an answer.'
*Wa **ni** natte suwatte kudasai.*
'Please sit in a circle.'
*Kangofu **ni** naru.*
'[She] becomes a nurse.'
*Keeki o sanko **ni** wakeru.*
'[She] cuts the cake into three.'
*Hitsuyoo **ni** naru.*
'[That] becomes necessary.'
*Hon **ni** suru.*
'[He] turns [it] into a book.'
*Ashita wa ame **ni** naru deshoo.*
'It will become rainy tomorrow.'
*Genki **ni** natte kudasai.*
'Please get well.'
*Kara **ni** natta.*
'[It] became empty.'
*Kodomo **ni** kaeru.*
'[I] return to my childhood.'
*Haru **ni** nattekita.*
'It is getting spring-like.'

MANNER

*Sei no jun **ni** narande kudasai.*
'Please line up in the order of hight'
*Sono yoo **ni** shite kudasai.*
'Please do in that way.'
*Hushigi **ni** omoimashita.*
'I thought [it] strange.'
*Gen **ni** tsutsushinde kudasai.*
'Please be careful solemnly.'
Sara ni yoku kangaetemimasu.
'I will try to think more.'
*Toku **ni** muzukashii desu.*
'[This] is especially difficult.'
*Majime **ni** torikumu.*
'[I] work in earnest.'
*Kyoo no kanojo wa suteki **ni** mieru.*
'She looks pretty today.'
*Jun **ni** narabu.*
'[We] line up in order.'
*Mina onaji **ni** happyoo suru.*
'Everyone presents in the same way.'
*Korede hontoo **ni** iino ka.*
'I wonder if this is really fine.'
*Akiraka **ni** sore wa chigau.*
'Cobviously it is wrong.'

*Tashika **ni** uketorimashita.*
'[I] received it for sure.'

COMPARATIVE REFERENT POINT

*Aitsu **ni** dake wa zettai maketakunai.*
'I do never want to lose to him.'
*Tengoku **ni** ichiban chikai kuni.*
'The country which is the closest to the heaven.'
*Kare wa hahaoya **ni** niteiru.*
'He looks like his mother.'
*Kafun **ni** wa yowai.*
'I am alergic to pollen.'

CONCEPTUAL SPACE

*Watashi wa shihooshiken **ni** ukatta.*
'I passed in the law exam.'

PURPOSE

*Kari **ni** iku.*
'[He] goes hunting.'
*Haru ni wa sakura o mi **ni** ikoo.*
'Lets go to see cherry blossoms in spring,'
*Watashi kara toosan ni ai **ni** ikimashita.*
'I myself went to see my father.'
*Kuruma o kau tame **ni** kare no mise e itta.*
'I went to his store to buy a car.'

ADDITIVE

*Doraemon **ni** nezumi.*
'A rat to Doraemon (a cartoon character)'

***ni* in a complex particle**

*Sore **ni** kanshite wa wakarimasen.*
'I do not know about that matter.'
*Anata **ni** totte ichiban taisetsuna mono ha nan desu ka.*
'What is the most precious to you?'
*Nihon **ni** tuite kaite kudasai.*
'Please write about Japan.'

***ni* in a fixed expression**

*Yakeishi **ni** mizu.*
'It is nothing like a drop in the ocean.'
*Sekaijinrui ga heiwa de arimasu yoo **ni**.*
'May all the people in the world have peace.'
*Omou **ni** okashii no de wa nai ka.*
'In my idea, this seems strange.'

homonyms of ***ni***

[two]
Ni shi ga hachi.
'Two by four equals eight.'
*Watashi wa **ni** ban me no kodomo desu.*
'I am the second child (of the family.'
*Kaado no suuji wa **ni** datta.*
'The number on the card was "two".'
Ni to oumono Itto mo ezu. (old saying)
'If you ran after two hares, you will catch neither.'
Ni san ga roku.
'Two by three is six.'
Reesu de ni-i .
'[I[was in the second place in the race.'
*Ichi tasu **ni** wa san desu.*
'One plus two equals three.'
*Hon ga **ni** satsu arimasu.*
'There are two books.'
Ni banme ni hashiru.
'[He] ran in the second place.'
*Sore wa **ni** no tsugi de ii.*
'It is only next to second.'

[luggage]
*Sono shigoto wa watashi ni wa **ni** ga omoi.*
'That job is a burden to me.
*Kata no **ni** ga orita.*
The burden (on my shoulder) has gone.'
Ni ga omoi.
'It is a burden.'
Ni o hodoku.
'[She] unpack the luggage.'

[resemble]
*Watashi wa chichioya **ni** da.*
'I resemble my father.'
*Kanojo wa otoosan **ni** desu.*
'She resembles her father.'
*Okaasan **ni** desu ne.*
'[You] resemble your mother.'
*Chichioya **ni** no musume.*
'The girl looks like her father.'

[ni" (a smile)]
Ni tto waratta.
'[She] smiled, saying "ni".'
*Shashin o toru kara **ni** (t)to waratte!*
'Say "ni" as I take a picture.'

[others]
Kinnikuman, tatakae!
'Go fight, Kinnikuman.'
Nihon wa atatakakute iinaa.
'Japan will be nice, because it is warm there.'

APPENDIX B. Stimulus Sentences for the Sorting Test (Two per sense type)

SPATIAL LOCATIVE

1 *Koonetsu de nekonda to iu hito ga achikochi ni iru.*
high fever REAS bed-ridden QT say people NOM here and there exist
'There are people here and there who they say were bed-ridden because of high fever.'

2 *Berusaiyukyuuden ni wa toire ga nakat-ta-soo-da.*
the Versailles Palace TOP toilet NOM not exist-I hear-COP
'I heard that there was no toilet in the Versailles Palace.'

ALLATIVE

3 *Izure kokyoo ni kaet-te chichi no igyoo o tsugu tsumori da.*
someday hometown return-CONJ father GEN business ACC succeed to plan COP
'I plan to return to my home town and succeed to my father's business someday.'

4 *Sugusama kamera o mot-te jiko no genba ni mukat-ta.*
right way camera ACC take-CONJ accident GEN site head-PAST
'I took my camera right way and headed to the accident site.'

TEMPORAL LOCATIVE

5 *Nishirokugoo shoonen shoojo gasshoodan ga gogatsu ni saigo no ensookai o hiraku.*
Nishirokugoo boys and girls chorus NOM May last GEN recital ACC hold
'The Nishirokugo boys' and girls' chorus is going to hold its last recital in May.'

6 *Girisya jidai ni mo infuruenza wa hayat-ta-soo-da.*
Greek Era also influenza TOP prevail-PAST-I hear-COP
'I heard influenza also prevailed in the Greek Era.'

EXPERIENCER

7 *Shokuba wa kanzen kin'en de, hebiisumookaa no watashi ni wa taihen tsurai.*
office TOP complete non-smoking COP, heavy smoker GEN I TOP very hard
'The office is completely non-smoking, which is very hard on me, a heavy smoker.'

8 *Ningen ni wa iroiro kanoosei ga aru no da na to omot-ta.*
Human beings TOP various possibilities NOM exist NOM COP FIN QT think-PAST
'I thought that human beings have various possibilities.'

RECIPIENT

9 *Anime ya gangu no seisakusha ga kodomo ni ataeru eekyoo wa ookii.*
animation or toys GEN producer NOM children give influence TOP big
'The influence that producers of animation or toys give to children is significant.'

10 *Chiyonoumi wa juuryoo shooshin go, ryooshin ni jisaku no shi o okut-ta.*
Chiyonoumi TOP Juuryoo promotion after, parents self making GEN poem ACC present-PAST
'Chiyonoumi presented his parents with a poem of his own making after the promotion to Juuryoo.'

ADDRESSEE

11 *Wain no tanoshimi o shuui no hitotachi ni tsutae-te-iki-tai.*
wine GEN pleasure ACC around GEN people teach-CONJ-go-want to
'[I]want to keep teaching the pleasure of wine to the people around me.'

12 *Kaijoo no hoka no shutsujoosha ni haroo to aisatsu o shi-ta.*
hall GEN other GEN participants hello QT greeting ACC do-PAST
'[He] greeted the other participants at the hall, (saying) "Hello".'

EXPERIENCER CAUSEE

13 *Yuuseishoo* *wa* *zen* *shokuin* *ni* *keetaidenwa* *o* *mot-ase-te-iru.*
Ministry of posts and telecommunication TOP all worker cellular phone ACC carry-CAUS-CONJ-be
'I heard that the Ministry of P & T had all its workers carry a cellular phone.'

14 *Konna* *hon* *wa* *kodomotachi* *ni* *yom-aseru-beki* *de* *wa* *nai.*
such book TOP children read-CAUS-should COP TOP NEG
'Such a book should not be allowed for children to read.'

HUMAN SOURCE

15 *'Tashika,* *sono* *mise* *wa* *heitenshi-ta* *hazu'* *to* *chijin* *ni* *kii-ta.*
surely, the shop TOP close-PAST certain QT friend hear-PAST
'I heard from a friend that the shop has surely closed down.'

16 *Torihikisaki* *no* *kaisha* *ni* *kurisumasu-kaado* *o* *morat-ta.*
business partner GEN company Christmas-card ACC receive-PAST
'I received a Christmas card from a partner business company.'

PASSIVE AGENT

17 *Wakayama-ken* *Singuu-shi* *de* *wa* *choo* *ootsubu* *no* *ame* *ni* *nandomo* *fur-are-ta.*
Wakayama-Pref.Shingu-city LOC TOP super big-drop GEN rain many times fall-PASS-PAST
'In Singu -city , Wakayama-Prefecture it rained in big drops on us many times.'

18 *Musuko* *ni* *segam-are-te* *konpyuutaa* *o* *koonyuushi-ta.*
son beg-PASS-CONJ computer ACC buy-PAST
'Being begged by my son, I bought a computer.'

RESULTATIVE

19 *Kare* *wa* *kanshyuu* *o* *tonikaku* *tanoshii* *kibun* *ni* *sase-te-kure-ta.*
He TOP audience ACC anyhow pleasant mood make-CONJ-give-PAST
'He gave us the favor of making the audience feel pleasant anyhow.'

20 *Doobutsu* *ga* *robotto* *ni* *henshinshi-te* *tatakau* *to* *iu* *stoorii* *de-aru.*
animal NOM robot change-CONJ fight QT say tory COP-be
'The story is that animals change into robots and fight.'

MANNER

21 *Heya* *e* *hait-te-miru* *to* *musuko* *ga* *shizuka* *ni* *hon* *o* *yonde-ita.*
room DIR enter-CONJ-try when son NOM quiet book ACC read-PROG
'When I entered the room, my son was reading a book in a quiet manner.'

22 *Mono* *o* *taisetsu* *ni* *tsukau* *eekokuji* *kishitsu* *ga* *arawarete-iru* *no* *daroo.*
things ACC important use English people nature NOM appear-PROG NOM I guess
Lit. 'I guess the nature of English people who use things in an important manner appear [here].'
'I guess this shows the nature of English people who appreciate things.'

CONCEPTUAL SPACE

23 *Ginkooman* *no* *kare* *wa* *kaigai* *no* *keezai* *jijoo* *ni* *mo* *kuwashii.*
Banker GEN he TOP foreign GEN economic situation also familiar
'He, as a banker, is also familiar with the foreign economic situation.'

24 *Tennenshigen* *ni* *ton-da* *kanada* *de* *wa* *denki* *gasu-dai* *ga* *yasui.*
natural resources abundant-COP Canada LOC TOP electricity gas-fee NOM cheap
'In Canada, which is abundant in natural resources, the electricity and gas fee is low.'

CONCEPTUAL REFERENCE POINT

25 *Sooseesan* *yaku* *roku-choo-doru* *to* *beekoku* *ni* *hittekisuru* *keezairyoku* *da.*
total product about 6 trillion-dollars QT America be equal to economic power COP
'With its total product at about 6.3 trillion dollars, its economic power is equal to (that of) America.'

26 *Ore* *wa* *kokyoo* *o* *aisuru* *kimochi* *de* *wa* *dare* *ni* *mo* *make-nai.*
I TOP hometown ACC love feeling LOC TOP anyone even lose- NEG
Lit.'I don't lose to anyone with my love to my hometown.'
'Nobody loves their hometown more than I do.'

CONCEPTUAL GOAL

27 *Senjitsu no daigaku-nyuushi-sentaa -shiken no mondai ni choosenshite-mi-ta.*
the other day GEN univ. entrance exam centre exam GEN questions challenge-try-PAST
'I tried to challenge the questions of the exam by Univ. Entrance Exam Center the other day.'

28 *Furuku-temo naganen kikon-da irui ni wa aichaku ga aru.*
old-even if long years wear-PAST clothes TOP attachment NOM exist
'Even if they are old, I have attachment to the clothes I have worn a long time.'

EMOTIONAL SOURCE

29 *Nanoka no kookoku "Uchuu e ikoo" ni odoroi-ta hito wa ooi-daroo.*
7th GEN ad Space DIR let's go surprise-PAST people TOP many-probably
'Probably many people were surprised at the ad on the 7th ' Let's go to Space.'

30 *Sono mimoshiranu josee no yasashisa ni kangekishite-shimat-ta.*
that total stranger lady GEN kindness moved-AUX-PAST
'I was moved by the kindness of the lady, who was a total stranger.'

REASON

31 *Mainichi no yukikaki ni tsukare o uttaeru hito mo ooi to iu.*
everyday GEN snow shovelling exhaust ACC complain people also many QT I hear
' I heard many people complain about exhaustion because of the everyday snow-shoveling.'

32 *Amari no ryookin no yasusa ni ushirometasa sae mo kanji-ta.*
excessive GEN fee GEN cheapness guilty felling even also feel-PAST
'[I] felt even guilty because of such a low fee.'

PURPOSE

33 *Nihonkeezai no kurai muudo o hukitobasu ni mo kooka ga aru.*
Japanese economy GEN dark mood ACC blow away also effect NOM exist
'It has the effect of blowing away the dark mood of the Japanese economy.'

34 *Eekokujin o mane-te, eri ga chijin-da shatsu o shuuri ni dashi-ta.*
English ACC imitate-CONJ collar NOM shrink-PAST shirt ACC repair send-PAST
'Following the English, I sent out for repair some shirts whose collars had shrunk.'

CONCESSIVE

35 *Danshi toshite todoke o dashi-ta no ni, kosekigakari ga joshi to kakinaoshi-ta.*
boy as a registration ACC submit-PAST NOML registration officer NOM girl as correct-PAST
'Although I submitted the (birth) registration as a boy, a registration officer corrected it as a girl.'

36 *Ninki o hakushi-ta no ni eega wa kiraida to it-te-ita.*
popularity ACC establish-PAST NOML movie TOP hate QT say-CONJ -PROG
'Although [he] established popularity [as a movie director], [he] was saying that he hated movies.'

ADDITIVE

37 *Shamisen o hiite-iru no wa nihongami ni kimono sugata no musumesan dat-ta.*
shamisen ACC play -PROG NOM TOP Japanese hair-do kimono figure GEN young lady COP -PAST
'It was a young lady with a Japanese hair-do in kimono who was playing shamisen.'

38 *Atsui nihonshu ni shiokara to wa saikoo no kumiawase desu ne.*
hot Japanese sake salty squid QT TOP best GEN combination COP FIN
'Men were also dancing in a tuxedo and white tie.'

PRAGMATIC

39 *'Watashi wa icchaku-ba o karamase-te kat-ta no ni. to mata hozookan-da.*
I TOP firstranked-horse ACC mix-CONJ buy-PAST NOML QT again get disappointed-PAST
'I got disappointed again, in [thinking] that I had bought [the ticket] by mixing the first-ranked horse.'

40 *Koko jaa yukimichi de subet-te hone o oru nante koto wa nai no ni...*
here LOC snowy road LOC slip-CONJ bone ACC break EMP thing TOP not-exist NOML
'Here, there is not such a thing as slipping on a snowy road and breaking bones....(but people are exaggerating the situation).'

COMPLEX PARTICLE

41 *Kitazawasan no hanashi de wa akahige wa mo no-yoo-ni waitederu to iu.*
Mr. Kitazawa GEN story by TOP akahige TOP seaweed gush out QT say
'According to the story by Mr. Kitazawa, Akahige gushes out like seaweed.'

42 *Nyuuinshiteiru chichi ni- totte yuiitsu no tanoshimi wa mago no kao o miru koto da.*
Be hospitalized father only GEN pleasure TOP grandkid GEN face ACC see NOM COP
'The only pleasure for my father, who is hospitalized, is to see his grandkids' faces.'

FIXED EXPRESSION

43 *Mada nete-iru kodomo o okosa-zu-ni shitaku o shi-nakerebanaranai.*
still sleep-PROG children ACC wake up -NEG preparation ACC do-have to
'I have preparation to do without waking up the children who are still sleeping.'

44 *Jibun de wa shoobushite-iru ki- ni- naru no dakara fushigi-da.*
self by TOP compete-PROG mood become GEN because strange-COP
'It is strange because I start feeling as if I were competing.'