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A Rationale and Suggestions for Including

Sound Symbolic Vocabulary

in University-Level Japanese Language Classroom Instruction

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A Rationale and Suggestions for Including

Sound Symbolic Expressive Vocabulary

in University-Level Japanese Language Classroom Instruction

by

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The Japanese language is unusually rich in a variety of sound symbolic words. Sound imitation is used to reflect physical, audible noises relating to the actions or movements of people, animals, and things. Such words are also used to express imitation of manner to portray feelings and figurative meanings. These expressions are found in a wide variety of contexts, ranging from classical literature to daily conversation, to *manga* (the trendy comic books read extensively by virtually every age group in Japan). Sound symbolic vocabulary adds a vividness and flair to the Japanese language, making it colorful, creative, and psychologically expressive. These words have common structural features and syntactic functions that make them readily identifiable (though, perhaps, not at a conscious level for the native speaker) as a lexical group. And yet, despite their undeniable presence in all areas of language use, sound symbolic words have been virtually ignored in Japanese language

textbooks and classroom instruction. They continue to represent, to outsiders, at least, one of the most elusive and least understood aspects of the Japanese language.

In this dissertation, I frame my discussion of characteristics of sound symbolic vocabulary by first reviewing the literature on Japanese sound symbolic vocabulary and on vocabulary acquisition in L1 and L2. I then discuss the results of interviews with textbook authors and language educators concerning the teaching of sound symbolic words. Although they expressed some divergent views, for the most part they agreed that these words do play an important role and should be introduced to students in manageable increments, at a point when students have acquired enough knowledge to make learning meaningful. Imagery-based pictorial, verbal, and contextual responses to 100 sound symbolic words given by 50 Japanese native speakers are presented. I then provide suggestions for classroom instruction of sound symbolic vocabulary based on a constructivist model using metalinguistic previews and imagery-based elaboration strategies, offering a sample "snapshot" lesson. Ramifications of this dissertation should help students increase their knowledge of and ability to communicate using real-life Japanese, greatly expand their word power, and make significant progress to greater language proficiency.

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CHAPTER ONE

INTRODUCTION

The acquisition of vocabulary knowledge is fundamental to the development of proficiency in a foreign language and is an important factor in the building of communicative competence. The fact that the ACTFL (American Council for the Teaching of Foreign Languages) Guidelines for each level of proficiency from Novice-Low to Superior in listening, speaking, reading, and writing in a foreign language mention vocabulary skills clearly lends support to this idea. Communicative competence is a recent approach to language acquisition and language pedagogy that aims to teach students to use the target language in real-life situations for a variety of communicative purposes by integrating skills in listening, speaking, reading, and writing. In this approach, vocabulary is viewed as an essential element in the listening skills needed to understand basic everyday conversation, the oral skills needed to express oneself in a variety of everyday situations, and the basic reading and writing skills necessary to carry out functional tasks.

The focus of this dissertation is a special kind of vocabulary in Japanese, namely, sound symbolic expressive vocabulary. What makes sound symbolic words so special? The fact that the thousands of such words that exist in modern Japanese comprise one of the four main types of vocabulary in the language, the fact that these words conform to rigid linguistic norms, and the fact they are encountered in a wide variety of linguistic contexts and are used frequently by speakers in very systematic ways make them important to language learners and teachers alike. And, yet these words are elusive, seemingly difficult to approach, and very rarely represented in beginning and intermediate Japanese language textbooks.

Eleanor Jorden, distinguished scholar of Japanese, noted in a conversation with me during my dissertation research, that sound symbolic expressions are not easily rendered into English and are very culture-specific, having uniquely Japanese

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connotations associated with them. She related the following story to illustrate that point. A Japanese visitor to California was struck by a car and slightly injured while crossing a street. Because he could not speak English, an interpreter was called in to relate the details to the police who had been called to the scene of the accident. The man's description of the incident contained so many sound symbolic expressions that the interpreter was unable accurately to translate the description of the accident's details, such as how the car was moving, how the man was struck by the car, etc. into English. This story emphatically illustrates a crucial point: it is not that the situations, feelings, emotions, or thoughts, such as those in the story, do not exist for speakers of English (and other languages) but rather that our language does not deal with them in the same way as Japanese does. Teaching sound symbolic vocabulary presents a challenge, therefore, to both the learner and teacher of Japanese because such instruction involves teaching a language feature that does not exist in a comparable form in the learners' first language. The dilemma is how to facilitate the acquisition of such elusive vocabulary that on one hand, plays such an integral role in everyday Japanese and consequently is essential in developing true proficiency in the language, and yet on the other hand, remains enigmatic and seemingly out of reach.

A Brief Look at Sound Symbolic Vocabulary

Like many languages, the Japanese language is rich in a variety of sound symbolic words. In Japanese, sound imitation (*giseigo*) is used to reflect physical, audible noises relating to the actions or movements of people, animals, and things. In addition, manner imitation (*gitaigo*) is composed of sound words that represent the manner of an action, a situation, or an image, as if the sound expressed these state. These two categories can be further broken down into four subcategories: *giseigo* that imitate the voices of animate objects, including human voices; *giongo* that are the sounds of nature; *gitaigo*, also called phenomimes, that express in descriptive and symbolic terms the states and conditions of both inanimate and animate objects and the change, phenomena, movements, growth, etc. in nature; and *gijoogo*, also called

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psychomimes, that describe human emotions and psychological states. Examples of
each category follow:

> *Giseigo*: Tanaka san wa terebi o mite, *gera-gera* waratte iru.
>
>> ("Mr. Tanaka is watching TV and is laughing loudly and
>>
>> unrestrainedly.")
>
> *Giongo*:   Ame ga *para-para* futte kita.
>
>> ("It started to sprinkle." This is the sound of small rain droplets.)
>
> *Gitaigo*: Neko ga *satto* nigeta.
>
>> ("The cat escaped swiftly.")
>
> *Gijoogo*: Ashita kara haruyasumi no de, minna *uki-uki* shite iru.
>
>> ("Because spring break starts tomorrow, everyone is in a
>>
>> happy and bouncy mood.")

These onomatopoetic (*giseigo* and *giongo*) and mimetic (*gitaigo* and *gijoogo*)
expressions are found in a wide variety of contexts, ranging from classical poetry and
drama to daily speech to films, advertisements, and *manga* (the trendy comic books
read extensively by virtually every age group in Japan). Unlike English, Japanese
lacks an abundance of explicit, descriptive verbs (Chang, 1990; Hamano, 1986;
Hirose, 1981; Sakamoto, 1991; and Yang, 1984, among others). However, a Japanese
speaker can create an effect similar to the use of such verbs in English (such as "to
bawl," "to sob," "to sniffle," "to whimper," "to cry one's heart out," etc.) by
combining various expressive words (such as *on-on*, *shiku-shiku*, *sussuri*, *waa-waa*,
waan-to, etc) with the verb *naku* ("to cry"). In addition, using mimetic and
onomatopoetic words allows the speaker to express subtle semantic nuances not
otherwise available so economically in the Japanese lexicon. *Giseigo* and *gitaigo* add
a vividness and flair to the Japanese language, making it colorful, creative and
psychologically expressive. In fact, a Japanese speaker's personal speech style has
much to do with the amount of *giseigo* and *gitaigo* used; the more sound expressions
used, the more vivid and lively the speech. These words have common structural

features and syntactic functions that make them readily identifiable (though, perhaps, not at a conscious level) as a lexical group. And yet, despite their undeniable presence in all areas of language use, these sound symbolic words represent (to foreigners trying to learn Japanese, at least) one of the most elusive and least understood aspects of the Japanese language.

Paucity of Sound Symbolic Words in L2 Instruction

To date, Japanese language textbooks have virtually ignored this important area. Textbooks typically include only a handful of the thousands of existing sound symbolic words and offer little or no explanation of their common characteristics, the extensiveness of their use in the linguistic lives of the Japanese people, and their unique ability to express precise meanings and subtle semantic nuances.

For example, in the *Learn Japanese* series, (Volumes 1-4) which has had a long history of use in university-level Japanese language classrooms at many US institutions, sound symbolic words are not even introduced until Lesson 3 in Volume 4 and even then, fewer than twenty words are mentioned and are intended for passive learning only. The English meanings given are very simple (for example, *shito-shito*-"quietly"; *chira-chira*--"lightly") and the emotional connotations that are connected with the words in the minds of native speakers are never brought up at all. These are no example sentences showing how the words are actually used in real-life contexts. Seven more onomatopoetic/mimetic expressions are introduced in Lesson 12, Volume 4, again with minimal explanations and no sample sentences. This situation was improved on only slightly by the addition of two supplementary workbooks, *Japanese Step by Step* (Volumes One and Two) that were developed by the Japanese Department at the University of Texas for use in conjunction with the *Learn Japanese* series. In Lesson 2, Volume One, 22 frames from several popular *manga* series that illustrate some common sound symbolic words were presented for *katakana* (one of the two Japanese phonetic alphabets) reading practice, but there were no accompanying explanations of usage or meanings in English. In Volume Two,

Lesson 9, five *manga* frames introduced four new onomatopoetic words to students, again with only brief explanations and no meanings. Even in several of the newest Japanese language textbooks, very little attention is paid to sound symbolic vocabulary.

In the two-volume *Yookoso!* Series (1999), which is excellent in many respects, mention of sound symbolism is made in only four places throughout the series and only in one Culture Note ("Types of Rain") and in one Linguistic Note ("Sound Words") is any explanation offered. Though an improvement over the first edition of *Yookoso!* (1994) in which only seven examples of sound symbolic vocabulary were introduced, the second edition series, which includes two volumes to be used typically over a two-year period in university-level classrooms, introduces a total of only eleven expressions and offers but a few examples of contextual usage.

A careful examination of another recently available Japanese language textbook series designed for university-level students, *Nakama 1* (1998) and *Nakama 2* (2000), revealed only four examples of sound symbolic vocabulary. All four words are not introduced until the final chapter ("Health") of the first volume and are used to describe various types of pain. No examples at all were found in *Nakama 2*. Sound symbolism is not mentioned at all in yet another recently published textbook, *Living Language: Japanese All the Way (Basic to Intermediate)* (1996). Even in Eleanor Jorden's three-volume classic *Japanese: The Spoken Language*, onomatopoetic/mimetic vocabulary is discussed in only one brief note (in Part 2) on Structural Patterns. Though Jorden cites only three examples, her short discussion does include helpful references to the unusually large inventory of sound symbolic vocabulary in Japanese and its subcategories, the shapes of words of this type, and the difficulty of learning such words for non-native speakers.

An examination of two college-level textbooks for students at an intermediate level of Japanese study revealed that fewer than 25 sound symbolic words are mentioned. In *A Course in Modern Japanese, Volume 3* (1994), there was a total of

12 words mentioned throughout the entire volume. The definitions given were very simple, with no explanation of the affective dimension of sound symbolic vocabulary or even that these words belong to a special lexical group at all. There was a very brief one-paragraph grammar note on Adverbs in Lesson 7 about sound symbolic words. Four example words were given but without sentences to show contextual usage. In another college-level text for intermediate students, *An Integrated Approach to Intermediate Japanese* (1994), there was a one-page section in Lesson 12 about *giongo* (phonomimes, onomatopoeia) and *gitaigo* (phenomimes, psychomimes) that discussed the catgories of sound symbolic words and compared these words to words like them in English, noting three major differences. In this section, 16 words of various types were mentioned with more accurate and precise definitions but without any example sentences. Throughout the rest of the textbook only 7 additional sound symbolic words were introduced as new vocabulary from a variety of reading selections. Therefore, even textbooks for intermediate-level students seem to exhibit less-than-ideal coverage of sound symbolic vocabulary and provide insufficient examples of words as they are used in real-life contexts.

In addition to the paucity of sound symbolic words in currently available Japanese language textbooks, factors such as the abstractness and multiplicity of meanings, the highly idiomatic nature of their usage, and the lack of equivalent forms in other languages may help to explain the difficulties students encounter when attempting to master the sound symbolic aspect of Japanese (Yang, 1984). A multitude of sound symbolic words have been generated by native speakers throughout the developmental history of Japanese as a direct means of expressing inner intuitions, emotions, and physical reactions to the world around them. *Giseigo* and *gitaigo* may be thought of as a kind of "raw language"—words for which there are no viable alternatives and with which a speaker's innermost feelings and thoughts can be very precisely communicated.

Image-Based Nature of Meaning Construction for Sound Symbolic Vocabulary

Several authors have reported that Japanese native speakers tend to associate various types of sensory imagery with sound symbolic words (Backhouse, 1983; Bruch, 1986; Chang, 1990; Hamano, 1986; Inoue, 1991; Kita, 1997; McVeigh, 1996; Occhi, 1996; Sakamoto, 1991; Yamasaki, 1992; Yang, 1984). Kita (1997) argued that the semantics of sound symbolic words do not belong to the analytic dimension of quantification and predication that is amodal with respect to various cognitive modalities (for example, vision, olfaction, hearing, etc.), that is decontextualized because it is removed from subjective experience, and that is "about" a certain experience but not a rendition of the experience itself. He proposed that the semantics of sound symbolic vocabulary belong rather to what he called the affecto-imagistic dimension in which different facets (affective, emotive, and perceptual activation) are represented. In the affecto-imagistic dimension, various kinds of information from different cognitive modalities create the subjective effect of evoking a vivid image or "re-experiencing" of the event. Yamasaki (1992), in describing Japanese sound expressions, stated that when such expressions are used, native speakers grasp the situation directly by sense and translate the sound expression into a visual mental image that they "see" in their minds. She claimed that such words give subjective impressions as they are used to describe the condition, action, or movement of things as well as to convey feelings and states of mind. When a native speaker hears these words, he/she understands the situation instantly. In a study in which 75 native Japanese speakers were asked to list five sound symbolic words, to give grammaticality judgments of sentence usage, and to provide sentence modifications as necessary, Occhi (1996) found that sound symbolic words showed strong association to scenarios of shared meaning that evoke them, giving support to the idea of a sound-sense connection to one's surrounding world. Therefore, using imagery-based strategies could very well be the key in developing instructional materials to teach non-native students about Japanese sound symbolism. Making

students aware of the importance of the link between sound and sense in Japanese could do much in enhancing the effectiveness of both the teaching and learning of Japanese according to language education experts.

It has also been well established in the literature on learning that the interaction of verbal and pictorial components positively affects an individual's construction of meaning and recall of information. Many studies have demonstrated that print and picture combinations have an overall facilitative effect on learning (Bransford & Johnson, 1972; Canning-Wilson, 1999; Chun & Plass, 1996; Gray, 1997; Haan, Appels & Aleman, 2000; Hodes, 1994; Lai, 1997; Lesgold, DeGood & Levin, 1977; Lesgold, Levin, Shimron & Guttman, 1975; Levin, Bender & Lesgold, 1976; Li, 1997; Lu, Webb, & Krus, 1999; Machalias, 1991; Mastropieri & Scruggs, 1998; Ott, Butler, & Blake, 1973; Oxford & Crookall, 1990; Paivio, 1980; Peeck, 1974; Rigney & Lutz, 1976; Rohwer & Harris, 1975; Royer & Cable, 1976; Sadoski & Paivio, 2001; Schallert, 1980; Sidelnick & Svoboda, 2000; Stephens & Dwyer, 1997; Wang & Thomas, 1992; Zhang & Schumm, 2000, among others). It has been suggested by many that pictorial stimuli encourage the formation of mental images of the information presented. Research studies have further shown that instructions to interact with the text (i.e., to form mental images while hearing or reading new information) increase the amount of attention learners bring to the task which results in increased overall learning performance (Anderson & Hidde, 1971; Anderson & Kulhavy, 1972; Avila & Sadoski, 1996; Kulhavy & Swenson, 1975; Paivio, 1971; Sadoski & Paivio, 2001; Zhang & Schumm, 2000, among others).

Research also indicates that there seem to be certain situations in which pictures are vastly more efficient than words in conveying a message and may, in some cases, better represent information that is actually very difficult to verbalize (Chun & Plass, 1996; Kolers, 1973; Kulhavy & Caterino, 1990; Levin and Lesgold, 1978; Lu, Webb, & Krus, 1999; Machalias, 1991; Ortony, 1975; Paivio, 1980; Schallert, 1980). Japanese sound symbolic words may represent just such a case.

Because there are no exact English equivalents (barring long, complicated verbal explanations) for many Japanese *giseigo/gitaigo*, it is likely that pictures illustrating how Japanese native speakers "mentally visualize" such words in appropriate contexts would facilitate learners' imaginal processing. Such illustrations, elicited from a variety of Japanese native speakers, may have the potential of conveying richer semantic meaning and cultural information than could any literal verbal description alone by inviting learners to construct mental representations of each expression presented in an appropriate linguistic and cultural context.

Statement of the Problem

This dissertation is intended to make a contribution to the field of Japanese language teaching by exploring the world of sound symbolism. First, this important lexical group has been underrepresented in Japanese textbooks and in classroom instruction, as confirmed by textbook authors and language teachers who participated in a questionnaire survey. Second, capturing native speakers' mental images by means of verbal and pictorial representations could provide a key to unlocking the meaning that real-life language users construct for this elusive group of words. Long-range ramifications of this dissertation on the future design of more effective instruction will help students increase their knowledge of and ability to communicate using real-life Japanese, greatly expand their word power, and make significant progress along the path to higher levels of language proficiency.

Organization of the Dissertation

This dissertation will focus on various aspects of Japanese sound symbolism as explained in the following outline. Chapter Two is a review of literature pertaining to two relevant areas: (1) characteristics of Japanese sound symbolic vocabulary, and (2) L1 and L2 vocabulary acquisition. Chapter Three provides support for the claim that sound symbolic vocabulary has been underrepresented in textbooks and classroom instruction, explores the reasons for why this is so, and situates the role of sound symbolic vocabulary in the broader context of Japanese language acquisition

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and teaching. Chapter Four, the heart of the dissertation, presents data elicited from native speakers in the form of responses (imagery-based verbal, pictorial, and contextual) to a number of sound symbolic expressions. Chapter Five focuses on how sound symbolic words could be taught in university-level classrooms using a constructivist/dual-coding model of learning as an overall framework in which both metalinguistic previews and imagery-based elaboration strategies are suggested as a means of facilitating meaningful learning and recall and increased communicative competence. Ideas for incorporating the teaching of sound symbolic vocabulary into thematically based language instruction are offered. Chapter Six presents a summary, implications for future research regarding Japanese sound symbolism, and a conclusion.

CHAPTER TWO
REVIEW OF LITERATURE

The ultimate goal of this dissertation is to contribute to the field of Japanese language teaching by exploring the world of sound symbolism. The image-based nature of meaning construction for sound symbolic vocabulary by native speakers will be investigated. Long-range ramifications of the results of such an exploration on the design of more effective language instruction in the future should help students enhance their communicative skills as a means of reaching higher levels of language proficiency. In this chapter I will present a review of literature related to two areas: 1) characteristics of Japanese sound symbolic vocabulary and 2) L1 and L2 vocabulary acquisition.

CHARACTERISTICS OF SOUND SYMBOLIC VOCABULARY

The information about sound symbolic vocabulary in this section of comes from a number of sources that I consulted during the course of my dissertation research and serves as the basis for my description of the characteristic features of these words (Akutsu, 1994; Backhouse, 1983; Bruch, 1986; Chang, 1990; Crystal, 1987; Fukuda, 1993; Garrigues, 1995; Gomi, 1989; Hamano, 1986; Hirose, 1981; Jugaku, 1970; Kimizuka, 1967; Kita, 1997; Makino & Tsutsui, 1989; McVeigh, 1996; Millington, 1993; Occhi, 1996; Ono, 1978; Sakamoto, 1991; Yamasaki, 1992; Yang, 1984).

Japanese is a language rich in sound symbolism. Sound symbolic words comprise a very large and important portion of the lexicon and are encountered everywhere in the Japanese linguistic and cultural landscape. These words can be found in a wide variety of contexts, from traditional poetry to trendy comics where they create certain moods without the need for detailed verbal description, from

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newspaper headlines where they pack a punch in just one or two words to product names and advertising where they are catchy and appealing, and from use by celebrities in the entertainment world to use by all speakers in informal spoken Japanese where they bring spice and flavor into everyday life encounters (Chang, 1990; Fukuda, 1993; Hamano, 1986; Hirose, 1981; Jugaku, 1970; Millington, 1993; Sakamoto, 1991; Yamasaki, 1992; and Yang, 1984).

Japanese sound symbolic vocabulary represents an unusual use of sound that extends well beyond the realm of onomatopoeia. According to Yamasaki (1992) Japanese speakers grasp situations directly by sense, "translating" these special sounds into visual images that they "see" in their minds. In Japanese, sound expressions are used not only to imitate actual environmental sounds (as in English and other European languages) but also to describe very precisely the conditions of things, perceptual events in different sensory modalities, the manner of action or movement of animate and inanimate things, and to express inner feelings, sensations and emotions as well as physical reactions.

Japanese native speakers report that hearing and reading sound symbolic words evoke vivid "at the scene" feelings that are in some sense equivalent to actual sensory input and affect and create for them an intuitive impression of a direct, immediate, and non-arbitrary sound-meaning relationship (Kita, 1997). Sound symbolic words tend to conjure up strong associations with the scenarios that evoke them (Occhi, 1996). They have the unique capability of creating a subjective psychological effect of generating vivid multisensory images of experiences and physiological states, full of affect (Kita, 1997). When native speakers encounter such words, they have direct, real impressions of being at the scene, of somehow "re-experiencing" the event or feeling (Kita, 1997).

Sound Symbolism

Before examining the syntactic nature of sound symbolic words, I will briefly take a look at an area that bridges both sound and meaning, that of sound symbolism

itself as it relates to the Japanese language. It is beyond the scope of this dissertation to discuss the multitude of studies that have been conducted over many years that have focused on finding universal themes in sound symbolism. The results of some of those studies have supported the notion of natural, universal sound symbolism across languages while the results of others produced no supporting evidence. What is important to note is that in Japanese there does seem to exist a systematic and consistent association between sound and meaning as has been demonstrated in numerous studies using Japanese language data including Kobayashi (1933, 1965), Ihara and Iwahara (1938), Matsuoka (1958), Suzuki (1962), Uemura (1965), Frei (1970), and Kindaichi (1978), among others reported in Hirose (1981). I found the work done by Hirose (1981), Hamano (1986), Bruch (1986), Sakamoto (1991), and Kita (1997) to be particularly informative regarding meaning attributes of Japanese phonemes. A summary of the phono-semantic associations for sounds in Japanese follows:

Consonants.

p	light, small, fine, without resistance; clearness, lucidity, discontinuous, associated with water; explosion, breaking decisiveness
b	heavy, dirty, coarse, big, continuous, powerful; explosion, breaking, decisiveness
t	hard, stiff, discontinuous; light, small, fine, lack of surface tension
d	heavy, large, coarse, dirty, discontinuous, long
k	hard, stiff, surface angularity, discontinuous; light, small, fine; opening, breaking up, swelling, expanding, puffing out, emission from inside, surfacing, inward/outward movement
g	hard surface, heavy, dirty, big, discontinuous

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h	weakness, softness, unreliability, indeterminateness, unstable condition; no resistance, airy, movement in air or liquid of thin object, breath sounds
s	non-viscous body, quietness; light, small, fine; smooth but with friction; dry, continuous, soft contact
sh	friction, quiet
z	heavy, dirty, big, rough, friction, quietness
ch	discontinuous
dz	restless, rough, discontinuous
m	murkiness, big, many, soft, roundness, slow, undesirable
n	viscosity, stickiness, sliminess, sluggishness, slowness, wet, flexible, soft
w	human noise, emotional upheaval; flexible, soft, slow,faintness, haziness
y	leisurely motion, swinging motion, unreliable motion; non-firm, slow, sound from many sources; haziness, childishness
r	smoothness, slipperiness, liquidity; discontinuous movement; soft, rolling, fluid movement
Vowels.	
a	flat plane, bright, non-trivial, no-bound, big, unpleasant, strong; shape of first object or movement
i	line; small, fast, hard, sharp, light, intense; pleasant, weak
u	protrusion, round, smooth, dark, big, continuous
e	inappropriateness, undesirable, non-sharp, vulgarity, unpleasantness

| *o* | round, bouncy, big, discontinuous; unpleasant, strong |

Types of sounds.

Stops	abruptness, discontinuity, hardness; hitting sounds/movements
Fricatives	friction, quietness, distribution of movement through air; cutting sounds, stirring, water flowing
Affricates	loud, uncomfortable sounds/movements, negative connotation
Semi-vowels	non-firmness, slowness
Flap *r*	discontinuous movement (especially when occurs in second syllable)

Sound devices.

Consonant voicing	qualities of heaviness, slowness, loudness, bulkiness, viscosity, large movement
Suffix *–ri*	slows action; quiet ending, adds interval separation and size
Consonant doubling	adds emphasis or intensity and distribution in time
Suffix *–n*	adds slowness, semi-completion, largeness and loudness, reverberation
Final glottal stop	unidirectionally forceful, makes action discontinuous and Separated, occurring at irregular intervals
Palatalization	adds quality of childishness, excessive energy, sometimes negative affect, instability, unreliability, lack of elegance
Repetition	single: one momentary occurrence multiple: continuous or multiple occurrences

Vowel length   short: spatially or temporally short
                      long: spatially or temporally long

Syntax

An examination of the linguistic characteristics of sound symbolic words can facilitate a better understanding of their highly systematic nature and their significant, integral connection with other aspects of the Japanese language. I will now discuss syntactic features of sound symbolic words. These words can be divided into four basic types, depending on the grammatical function they perform in a sentence:

Adverbial type. Words that are used mainly as modifiers of verbs or adjectives. They may be further broken down into the following three sub-types:

(1) Expressions that are classified as adverbs and used as adverbs as they are, without any grammatical particle.

Examples: *jiri-jiri atsui*   "scorching hot"
              shiku-shiku naku   "to sob"
              choko-choko aruku   "to waddle"

(2) Expressions used as adverbs either as they are or with the grammatical particle *to*.

Examples: *hoka-hoka (to) atatakai*   "glowing with warmth"
              puri-puri (to) okoru   "to fume"
              iji-iji (to) miru   "to cast a timid look"

(3) Expressions used as adverbs with the grammatical particle *to*. There are specific cases that require the use of *to* as follow:

(a) Expressions ending with the syllabic obstruent

Examples: *pikatto*   "a momentary flash of light"
              gyotto   "a feeling of sudden surprise"
              zotto   "a feeling of cold or fear as if
                              one has had a momentary
                              shower of cold water"

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(b) Expressions of non-reduplicated syllable(s) ending in *–n* or *-ri*

Examples: *kichin to* "to be thorough and orderly"
funwari to "floating or drifting action of something light and soft"
ninmari to "to chuckle or smile in a self-satisfied manner"

(c) One-syllable expressions with long vowels

Examples: *guu to* "sound of snoring"
bii to "sound of a buzzer"
gyaa to "momentary shriek or shout upon receiving an extreme shock"

(d) Expressions with double consonant in the middle of a two-syllable root

Examples: *sassato* "quickly"
sesseto "earnest and hurried action"

(e) Expressions with double consonant or syllabic nasal in the middle of two-syllable root and ending in *–ri*

Examples: *hissori to* "utterly quiet"
shittori to "moist; calm and tasteful"
kukkiri to "clearly; distinctly"

Compound verb type. Words that are used as verbs with *suru* ("to do") or with the particle *to* and *suru.*

Examples: *ira-ira suru* "to fret"
hara-hara suru "to be anxious about"
uki-uki to shite "buoyantly"

Na adjective type. Words that are used with the same inflection of the *na-*type adjective that has noun-like morphology and adjective-like semantics. When the expression is followed by a noun, *no* is often used instead of the inflection *na*. They are often used to indicate abstract qualities.

Examples:

iken ga bara-bara da	"opinions were divided"
kan-kan ni naru	"to get angry"
gucha-gucha no hikidashi	"a messy drawer"
giri-giri no jikan	"close timing"
chobo-chobo no seiseki	"mediocre grades"
pera-pera no eigo	"fluent English"

Noun type. Some expressions can be used as nouns, many of which are derived from sound words and are found in baby talk, slang, colloquial speech, and casual writing.

Examples:

wan-wan	"dog"
pon-pon	"tummy"
kuku	"shoes"
buubuu	"car"
nuru-nuru	"sticky substance"

Derivations. The powerful influence that sound symbolic words have on other areas of the Japanese language can be demonstrated by the fact that in modern Japanese, there are many examples of other parts of speech, such as nouns, verbs, and *na* adjectives, that are actually derivatives of sound symbolic words. For example, the origin of the following three kinds of compound nouns can be traced to sound symbolic expressions (Hamano, 1986):

(1) Expressions that combine a two-syllable sound symbolic word and a noun.

Examples:

soyo-kaze	"soft breeze"
beta-home	"excessive praise"
dosha-buri	"torrential rain"

(2) Expressions that combine a reduplicative or semi-reduplicative form and a noun.

Examples:

niko-niko gao	"smiling face:
zaa-zaa buri	"torrential rain"

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(3) Expressions that combine a sound symbolic word ending in –*ri* and a
   noun.

   Examples: *funwari-omuretsu*   "soft omelet"
                 bikkuri-bako   "jack-in-the-box

To further illustrate the significant impact of sound symbolic vocabulary, it is
worth mentioning that there are five basic types of Japanese verbs that have been
created from mimetic expressions, as illustrated below (Akutsu, 1994):

(1) Intransitive –*u* verbs: -*mu* and –*ru*

   From the XYXY pattern come the verb forms XY-*mu* and XY-*ru* [Note:
   the first consonant of these verbs is neither voiced nor given a "p" sound]

   Examples: *pika-pika* "shiny" >> *hikaru* "to shine"
                 neba-neba "sticky">>*nebaru* "to stick"
                 peko-peko "dented">>*hekomu* "to become dented"
                 gishi-gishi"creaky">>*kishimu* "to creak"

(2) Intransitive –*u* verbs: -*gu* and –*ku*

   From the XYXY pattern come the verb forms XY-*gu* and XY-*ku*

   Examples: *zawa-zawa* "noisy">>*sawagu* "to make noise"
                 iso-iso "cheerfully">>*isogu* "to hurry"
                 soyo-soyo "swaying">>*soyogu* "to sway"
                 pata-pata "flapping">>*hataku* "to swat"

   *Variation: XYXY form >>XY-*geru* and XY-*keru*

   Examples: *koro-koro* "rolling">>*korogeru*>>*korogaru* "to roll"
                 doro-doro "muddy">>*torokeru* "to melt"
                 niya-niya "smirking">>*niyakeru* "to be effeminate"

(3) Intransitive –*ru* verbs: -*eru* (the vowel in Y changes to an *e*)
   Transitive –*u* verbs: -*su*

   From the XYXY pattern come the verb forms XY-*eru* and XY-*su*

   Examples: *yura-yura* "shaking">>*yureru*>>*yurasu* "to shake"
            kara-kara "dry">>*kareru*>>*karasu* "to let wither"
            tara-tara "dripping">>*tareru*>>*tarasu* "to drip"
            hiya-hiya "chilly">>*hieru*>>*hiyasu* "to chill"

(4) Intransitive –*u* verbs: -*meku*

From the XYXY pattern comes the verb form XY-*meku*

Examples: *kira-kira* "glittering">>*kirameku* "to glitter"
yoro-yoro "staggering">>*yoromeku* "to stagger"
doki-doki "heart beating">>*tokimeku* "heart flutters"
zawa-zawa "a crowd's noise">>*zawameku* "to be in a
commotion"

(5) Intransitive –*u* verbs: -*tsuku*

From the XYXY pattern comes the verb form XY-*tsuku*. These verbs have negative connotations and are used to express troubling situations or feelings of sickness. The first consonant of this verb type is sometimes voiced or has a *p* sound.

Examples: *mago-mago* "flurried">>*magotsuku* "to be flustered"
fura-fura "unsteady">>*furatsuku* "to feel giddy"
uro-uro "loitering">>*urotsuku* "to loiter"
muka-muka "nauseous">>*mukatsuku* "to feel sick"
ira-ira "irritated">>*iratsuku* "to be irritated"
dabu-dabu "baggy">>*dabutsuku* "to be overabundant"
beta-beta "sticky">>*betatsuku* "to be sticky"
neba-neba "sticky">>*nebatsuku* "to be sticky"
para-para "scattered">>*paratsuku* "to scatter"

In addition, there are some *na* adjectives that were created from sound symbolic expressions, further showing the significant and powerful effect these words have had and continue to have on other lexical categories of Japanese.

From the XYXY/X*n*Y*ri*/Xdouble consonantY*ri* patterns come>>
XY*ka*/XY*yaka*/XY*raka* *Na* Adjectives

Examples: *oro-oro* "bewildered">>*oroka* "foolish"
hiso-hiso "secretly">>*hisoka* "secret"
honnori "faintly">>*honoka* "faint"
yuttari "unconfined">>*yutaka* "abundant"
yuru-yuru "slowly">>*yuruyaka* "gentle"
niko-niko "smile">>*nikoyaka* "smiling"
suku-suku "healthily">>*sukoyaka* "healthy"
hiya-hiya "chilly">>*hiyayaka* "cold"

> *shinnari* "pliable">>*shinayaka* "pliable"
> *sappari* "refreshed">>*sawayaka* "refreshing"
> *yanwari* "softly">>*yawaraka* "soft"

Phonology

From a phonological perspective, it is interesting to note that all of the phonemes and combinations found in sound symbolic vocabulary are found elsewhere in the Japanese lexicon and that these words adhere rigidly to the same phonological processes, such as vowel devoicing, that affect words in the other three major lexical areas of Japanese, namely native words, Sino-Japanese words, and modern loan words (Kita, 1997). However, there are some phonological features that distinguish sound symbolic words from these other three types. These are the absence of the *rendaku* process, the occurrence of word-initial *p*, and the presence of medial voiced obstruent geminates. The *rendaku* process is where the initial consonant of the reduplicated morpheme becomes voiced unless that morpheme contains a medial voiced consonant in which case voicing does not take place. This process is an extremely common phenomenon in lexical areas other than sound symbolic vocabulary as shown in the following examples of words from the native Japanese lexicon:

> Voicing occurs:
>
> *san* "three" + *kai* "floor" >> *san-gai* "third floor"
> *toki* "time" + *toki* "time" >> *toki-doki* "sometimes"
> *kuni* "country" + *kuni* "country" >> *kuni-guni* "countries"
> *hito* "person" + *hito* "person" >> *hito-bito* "people"
>
> Voicing does NOT occur:
>
> *tabi* "every time" + *tabi* "every time" >> *tabi-tabi* "often; many times"
> *tsugi* "next" + *tsugi* "next" >> *tsugi-tsugi* "one after another"

However, this *rendaku* voicing is not found at all in modern sound symbolic words. While the occurrence of word-initial *p* was a common feature of old Japanese, in

modern standard Japanese, the use of initial *p* is confined to sound symbolic expressions, where it is very common, and to foreign loanwords. In fact, in the sound symbolic class, initial *p* words far outnumber words with any other initial sounds. Hamano (1986) noted that approximately one-sixth of Japanese sound symbolic words are *p*-initial which is an exceedingly large number compared to other forms. In the evolution of the Japanese phonological system, native word-initial *p* changed to *h* so that in modern Japanese the only *p*-initial words are sound symbolic words or loan words. The third distinguishing phonological feature, although not common, is the occurrence of medial voiced obstruent geminates that is limited to loan words and to sound symbolic expressions, as in the examples *bobbo* ("flames, smoke, steam rising or billowing out intermittently with great force") and *daddatt* ("something of considerable weight surging forward") (Garrigues, 1995).

Morphology

Sound symbolic words are constructed using one-or-two-syllable base forms with the application of several types of expansion devices. In Japanese, a syllable can consist of a vowel, the syllabic consonant *n*, or a consonant + a vowel. The expansion devices are: vowel lengthening, final glottalization, doubling of medial consonants, insertion of syllabic *n* as either an infix or suffix, addition of *–ri* as a suffix, and reduplication. Vowel lengthening, glottalization, the addition of syllabic *n*, and reduplication are devices used with one-syllable base forms. All of the devices may be used with two-syllable bases. It is generally accepted that vowel lengthening is used in sound symbolic constructions to express a greater duration of the sound or situation, or a broader expanse or volume of the condition being described. Examples of the application of vowel lengthening are shown below:

patt	"to scatter or spread suddenly, widely"
paatt	"to disperse in all directions"
gachan	"with a reverberating crash; with a clang"
gachaan	"with a resounding clang"

The use of glottalization in sound symbolic expressions has two main functions. When it follows a non-lengthened vowel, it creates for the majority of native speakers the effect of abrupt, sharp, momentary motion or movement and when attached to a word with a lengthened vowel, it enhances the expansive quality of the long vowel sound. Examples of glottalization follow:

korott	"a round object rolls once and stops suddenly"
karatt	"a can hits the ground quickly"
pyutt	"whizzingly"
kyutt	"the sound and/or action of squeezing or pressing strongly"

Doubling of medial consonants functions to intensify the word or to convey the impression of sudden change or great speed and is often used in conjunction with final -*ri*. Native speakers also tend to agree that the suffix –*ri* itself seems to express a feeling of softer, slower motions or rolling movements and a sense of completion, and when used together with double consonants, it expresses the completeness of a single act or an accomplished state (Hirose, 1981; Hamano, 1986). Examples of the effects these devices have in changing a word's nuance ever so slightly are found below:

pata-pata	"stickily"
petari	"stick tightly"
pettari	"stick right on, all over"
saba-saba	"to become refreshed"
sappari	"a fresh, tidy appearance"
poki-poki	"the sound or action of dry, hard, thin objects breaking continuously"
pokiri	"a dry, hard, thin object breaking once"
pokkiri	"a dry, hard, thin object breaking once" (more abrupt, sharper sound)

Most native speakers would report that when syllabic *n* is added as an infix or a suffix, it conveys a reverberating or echoing quality to phonomimes (onomatopoeia) or a lingering quality to phenomimes (mimesis). It is often used with words imitative of the sound of bells or of waves crashing against a huge rock. The insertion of *n* sometimes can add a nuance of serenity in addition to the lingering feeling. Examples of words with the syllabic *n* are shown in the following:

kaan	"the loud and clear ringing sound of a large metal bell"
goon	"the long, dull ring from the gong at a Buddhist temple"
basshaan	
zabuun	"the sound of waves crashing against a rock or cliff"
dodoon	
fuwari	"single flying, floating state"
funwari	"slowly, lightly, lazily floating with a serene feeling"

Reduplication is one of the principal distinguishing features of sound symbolic words in Japanese. Although reduplication is a fairly common process in Japanese in general, as it applies to native Japanese nouns and adjectives it is easily distinguished from that used with sound symbolic words. In the case of the native Japanese words, the initial consonant of the reduplicated morpheme becomes voiced unless that morpheme contains a medial voiced consonant, where voicing does not occur. With sound symbolic words, however, such voicing does not take place at all. Reduplication is a device for semantic extension in sound symbolic word construction. Single forms (with or without other extenders) convey the connotation of a single or limited sound/action or a temporary state, while reduplicated forms suggest a repetitious sound/action or continuing state. Reduplicated forms may occur with words of one, two, or three syllable, with two-syllable reduplication being the most prevalent, accounting for nearly 40% of all sound symbolic words (Yang, 1984). In the case of one-syllable bases, reduplication always co-occurs with glottalization or gemination, syllabic *n*, or vowel lengthening, as shown in the following examples:

shutt-shutt	"spurting repeatedly"
shan-shan	"actively, jinglingly"
shaa-shaa	"flowing smoothly"
kyatt-kyatt	"screeching, giggling"
aan-aan	"bawling"
kii-kii	"squeaks, screeches"

Reduplicated three-syllable bases are one-or-two-syllable bases plus the suffixes –*n* and –*ri* which are reduplicated as illustrated below:

gurun-gurun	"round and round"
kirari-kirari	"an intermittent or dispersed shining or glittering; glistening"

Reduplicated forms are primarily of a symmetrical XX or XYXY type but there are words that consist of two different, yet semantically related, bases or that have vowel and/or consonant alternation in the reduplicated part. Examples of the three types follow:

(1) In this construction, the second syllable in the two bases is the same

Examples:	*atafuta*	"hurried, flustered activity or feelings"
	chirahora	"to exist or appear in small numbers; light snowfall"
	pecha-kucha	"chitter -chatter"
	dogi-magi	"be flustered"
	horari-kurari	"here and there; evading the issue"
	dotan-batan	"stamping noisily"

(2) In this type, only the vowels change from the first base to the second base

Examples:	*kara-koro*	"the sound of wooden clogs"
	kasa-koso	"the sound of dry leaves"

(3) In this type, all of the syllables are different

Examples:	*gatapishi*	"rattling sound; falling apart"
	pachi-kuri	"blinking eyes"
	choko-maka	"moving around in small steps"
	soso-kuse	"busily"
	sutenkororin	"rolling right over"

Vowel alternation in Japanese bisyllablic reduplicated forms occurs in three possible patterns: parallel alternation of both vowels, alternation of the first vowel only, or alternation of the second vowel only. Examples of each type follow:

(1) Parallel alternation of both vowels

Examples:	*nyoro-nyoro*	"a long, thin object with a slippery surface squirming or wriggling about; centers on the wiggling action"
	nyuru-nyuru	"a long, thin object sliding continuously; centers on the slippery quality of the surface
	bara-bara	"peltingly, scatteringly (rain, stones, etc.)
	boro-boro	"falling one after another (small objects)
	charan-charan	"jangling"
	chirin-chirin	"jingling"

(2) Alternation of the first vowel only

Examples:	*oji-oji*	"nervously, timidly"
	uji-uji	"hesitatingly, indecisively"
	gari-gari	"scraping, crunching"
	giri-giri	"creaking, gnashing"
	becha-becha	"soggy, mushy, soft and moist"
	bicha-bicha	"completely soaked, sopping wet"

(3) Alternation of the second vowel only

Examples:	*buri-buri*	"quivering, jiggling, swaying"
	buru-buru	"shivering, trembling, shaking"
	gota-gota	"in confusion; complainingly"
	gote-gote	"in a jumble; grumbling continually"
	tsuka-tsuka	"(speak) bluntly, directly"
	tsuke-tsuke	"(speak) bluntly, harshly, meanly"

In Japanese sound symbolic vocabulary, consonant alternation is seen in two kinds of devices, namely voicing and palatalization. The primary function of voicing

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seems to be to convey connotations of bulkiness, heaviness, coarseness, roughness, ponderousness, viscosity, slowness, loudness, or large movement in contrast to those qualities expressed by voiceless consonants (Hamano, 1986; Hirose, 1981). The following word pairs illustrate these contrasts:

kira-kira "attractive, repeated glimmerings or blinkings from a small, fine object; twinkle, glitter, sparkle"
gira-gira "to glare strongly or shine on and off; has an intense, overdone feeling"

toku-toku "flowing (from a small opening), gurgling out"
doku-doku "gushing out copiously, in a steady stream"

chara-chara "jinglingly (lighter); coquettishly"
jara-jara "jinglingly (heavier); flirtingly, lewdly"

sara-sara "with a dry, rustling sound"
zara-zara "rustling (of sand, dried beans, coins); rattling"

There is a unique case of voiceless-voiced contrast in Japanese called *handakuon*. The letters *h*, *p*, and *b* (an aspirate and two plosives) are considered to be a unit in which *h* is lighter, with no resistance in movement through air or water, having more of a literary flavor than *p* and where *b* is heavier, bigger, dirtier, more discontinuous than *p* (Hamano, 1986). Examples of this three-part contrast follow:

hata-hata "fluttering lightly, waving in the wind"
pata-pata "fluttering, flapping"
bata-bata "fluttering loudly, flapping; floundering"

hera-hera "talk meaninglessly, babblingly"
pera-pera "fluently, gibly, chatteringly"
bera-bera "volubly, garrulously, on and on"

hoku-hoku "(rice) nicely cooked, not soggy or mushy"
poku-poku "(rice, cake, potato, etc.) dry and crumbly"
boku-boku "dry and crumbly (a heavier, drier feeling)"

The second type of consonant alternation found in Japanese sound symbolism is palatalization. This feature has been characterized by Hamano (1986) as extending the meaning of the base word by adding connotations of "childishness, immaturity, instability, unreliability, uncoordinated movement, diversity, excessive energy, noisiness, lack of elegance, and cheapness." Mester and Ito (1989) asserted that palatalization adds an impression of "uncontrolledness" to a word's meaning. This claim has been challenged by Schourup and Tamori (1992). Garrigues (1995) proposed that while in many instances there does seem to be a notion of "uncontrolledness" or "childishness" associated with palatalization, there are broader implications of the device that do not necessarily convey negative connotations. Unlike voicing, palatalization may regularly occur in medial positions as well as initially, but its application follows several rules as pointed out by Hamano (1986) and Mester and Ito (1989). Palatalization can be applied to only one consonant within a base form. While labial sounds (*p,b,m*), velar sounds (*k,g,h*) and alveolar sounds (*t,d,s,z,n*) can all be palatalized initially, only alveolars can be palatalized medially. Alveolar sounds will be palatalized before non-alveolar sounds, accounting for the fact that palatalization is applied most often to the alveolar sounds. Examples of sound symbolic word pairs demonstrating initial and medial consonant alternation by palatalization are presented below:

Examples: *poko-poko*   "bobbing up, popping up unexpectedly"
             pyoko-pyoko   "bobbing one's head; hopping about"

             koro-koro   "a small, round object rolling continuously"
             kyoro-kyoro   "glancing anxiously/restlessly about"

             toko-toko   "with short, quick steps; scurrying along"
             choko-choko   "with short, mincing steps; toddlingly"

             sara-sara   "with a dry, smooth feeling"
             shara-shara   "with a light, rustling sound"

nuru-nuru	"move in a slippery fashion; feel slimy, clammy, greasy"
nyuru-nyuru	"sliding, moving smoothly; feel slimy, slippery"
kuta-kuta	"(boil) to a pulp; crumpled, wilted, worn out"
kucha-kucha	"(chew) noisily; in a crumpled manner, wrinkled"
uza-uza	"swarming in large numbers"
uja-uja	"swarming (somewhat more actively or widely)"
gunnari	"limply, feeling tired and dejected"
gunnyari	"limply; squashily; exhaustedly"

The great diversity, productivity, and systematicity of Japanese sound symbolic word forms resulting from the application of extending devices and sound alternation have been pointed out by many (Bruch, 1986; Garrigues, 1995; Hamano, 1986; Hirose, 1981; Kita, 1997; Sakamoto, 1991; and Yang,1984). Such characteristics serve to more clearly define the set of sound symbolic vocabulary items that play such a vital and unique role in Japanese.

Semantics

Lastly, from a semantic perspective, sound symbolic words may be categorized according to their functions into three major groups: phonomimes (*giseigo* and *giongo*) that imitate the sounds of animate objects and the sounds of nature and the world around us, capturing auditory aspects of actions and situations; phenomimes (*gitaigo* and *giyoogo*) that express in descriptive and symbolic terms the states and conditions of inanimate and animate objects as well as the various changes, phenomena, growth, and movement in the surrounding environment, capturing visual, tactile, gustatory, and olfactory aspects; and psychomimes *(gijoogo)* that express inner feelings, sensations and emotions, as well as physical reactions to events and experiences, capturing their affective aspects. In Japanese, sound symbolic words represent complex impressions that combine vivid description, sensory input, and

affect. These words are quite powerful, evoking striking multisensory images of experiences and states, giving the direct and real feeling of being at the scene to those who hear or read them. Sound symbolic words pack much rich information into a small space, evoking surprisingly realistic mental representations of events or states. When native speakers encounter sound symbolic words, they "translate" these special sounds, seeing pictures in their minds, giving them an immediate grasp of the situation being described. Occhi (1996) claimed that this was due to the fact that sound symbolic words embody strong associations with the scenarios that evoke them. Kita (1997) suggested that these words belong to an affecto-imagistic dimension of meaning where language has direct contact with sensory, motor, and affective information.

However, the semantic nature of sound symbolic words, in particular, proves to be elusive from the point of view of outsiders. Accurate translation of these words is extremely difficult to achieve, defying either concise approximation or full explanation, by native speakers who know exactly how to use and interpret their myriad forms. It is challenging for non-native learners to grasp the semantics of Japanese sound symbolic words because in English, there are no single-word equivalent forms. Instead their meanings are incorporated into a wide variety of verb stems, are captured by metaphors or idiomatic expressions, require lengthy verbal explanations, or are completely absent. Sound symbolic words give the Japanese language its spice and flavor, making it more natural and expressive. It is important for Japanese language educators to realize that for students to attain mastery of the language, they need more than grammar and typical vocabulary. Serious students of Japanese will delight in incorporating sound symbolic words into their lexical repertoires, thus paving the way toward greater language proficiency and a deeper understanding of the Japanese mentality.

VOCABULARY ACQUISITION

One aspect of foreign language learning that in the past received little attention but that recently has become the focus of a virtual explosion of research studies is the learning and teaching of vocabulary. Vocabulary knowledge is fundamental to the development of proficiency in a foreign language and is an important factor in the building of communicative competence, as is evidenced by the fact that every level of language proficiency from Novice to Superior in the ACTFL Proficiency Guidelines mention vocabulary skills. The ACTFL Guidelines are descriptions of different levels of language proficiency identified by the American Council for the Teaching of Foreign Languages, based on the five levels originally defined by the US Foreign Service Institute. The guidelines provide a detailed description of the kinds of communication functions, range of vocabulary, degree of accuracy and flexibility that learners of a language are able to control at different levels in each of the four major language skills (listening, speaking, reading, and writing). The ACTFL Guidelines are not based on any particular linguistic theory or pedagogical method and are intended for global assessment (American Council for the Teaching of Foreign Languages [ACTFL], 1983). Increasingly it has become accepted that such effective communication relies less on the mastery of grammatical structures than on the possession of an adequate, appropriate, and functional vocabulary base. There are a myriad of key questions that are focusing more and more research attention on the acquisition of foreign language vocabulary, including, among many others: the assessment of progress in acquiring vocabulary knowledge; the relevance of context for vocabulary learning; the role of background knowledge; the role of learner factors such as age, proficiency, and first language background; an examination of the basic principles of various instructional techniques to facilitate vocabulary acquisition; the appropriateness and benefits of direct vocabulary instruction over learning vocabulary by incidental exposure through extensive

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reading; the size and growth of an individual learner's mental lexicon; how words are stored in the mental lexicon; automaticity of word retrieval; the number of words non-native speakers need to know; the importance of mental elaboration in vocabulary learning; and the advantages of teaching learners to use a wide variety of strategies to increase classroom success (Hell & Mahn, 1997; Schmitt, 1998; Wesche & Paribakht, 2000). In this section, I will limit my review of previous research to two major areas: what does it mean to know a word and teaching and learning strategies for vocabulary acquisition. The teaching and learning strategies section is further divided into three sub-sections: vocabulary development as viewed by various philosophical approaches to language instruction, vocabulary learning in L1 and L2, and imagery-based strategies for L2 vocabulary acquisition. In this last sub-section, I discuss research literature related to Dual Coding Theory, the Keyword Method, using visual materials to facilitate learning, and using visual stimuli and imagery.

What Does It Mean to Know a Word

A common theme in much of the research that has been done in the area of vocabulary acquisition is that of the importance of "deeper" processing, the exertion of greater mental effort by the learner, to ensure the development of easily accessible, ever-expanding lexical networks (Avila & Sadoski, 1996; Ellis, 1995; Harley, Howard & Roberge, 1996; Kang & Golden, 1994; Kojic-Sabo & Lightbrown, 1999; Rodrguez & Sadoski, 2000; and Wesche & Paribakht, 2000). Every listening or speaking, reading or writing language experience modifies, expands, or strengthens a learner's vast network of interrelated conceptual associations as new words are constantly integrated into existing knowledge (Kang & Golden, 1994). The complex nature of the kind of lexical knowledge base that native speakers of a language possess and that is the ultimate goal of foreign language vocabulary instruction in the classroom has been the focus of many studies in recent years (Beheydt, 1987; Kang & Golden, 1994; Laufer, 1990; and Wesche & Paribakht, 2000, among many others). There seems to be a general consensus among researchers that what constitutes

"knowing" a word includes such essential features as: the semantic concepts the word represents, the associations the word evokes, the word's connotations, its collocations (the words it typically appears with), social and stylistic limitations, its derivative possibilities, its syntactic and morphological behavior, and the possibility of multiple meanings (Kang & Golden, 1994). Learning new vocabulary in a foreign language, therefore, entails much more than learning the simple meanings of individual words. It is a gradual incremental process in which learners ideally are guided through regularly repeated, meaningful exposures to target words via a variety of contexts and tasks that require them actively to elaborate the different aspects of word knowledge and to put this knowledge into practice by actually using it. An impressive body of research has shown that classroom instruction using a variety of tasks provides learners with multiple encounters with the target words and focuses learner attention on different lexical features, a combination that leads to further mental elaboration, thus strengthening lexical knowledge and word use ability (see Wesche & Paribakht, 2000, for a review). Learners must be trained explicitly to be more aware of and skillful in the use of effective strategies that enable them to maximize potential gains from multiple exposures to target vocabulary in varied contexts and to go beyond simple recognition of word forms and meanings to a demonstrated level of ability to use the target words successfully in real-life language situations.

Teaching and Learning Strategies for Vocabulary Acquisition

Before discussing vocabulary teaching and learning strategies, I will first review briefly the history of vocabulary development as viewed from the perspective of several different philosophical approaches to language instruction (from Kang & Golden, 1994; Tohsaku, 1999). Then I will look at how vocabulary is learned and taught in both L1 and L2. Finally, I will examine research on the use of imagery-based strategies for vocabulary acquisition, focusing on the keyword method, using

visual materials to facilitate learning, and using visual stimuli and imagery instructional techniques.

Vocabulary development as viewed by various philosophical approaches to language instruction. The Classical Method (also called the Traditional Method or Grammar-Translation Method) did direct some learner attention to vocabulary because the main purpose of the method was to understand classical texts and translate them into the learner's native language. Target words were selected based on the texts being read and were taught primarily through bilingual word lists, dictionary study, and rote memorization (from Richards & Rodgers, 1986, as cited in Kang & Golden, 1994). Students were expected to learn the meaning of words by memorizing them and were tested on translating excerpts from reading texts and on vocabulary items out of context. Next on the scene appeared the Direct Method that introduced constructed dialogues. Students learned vocabulary through communicating in the target language. Common everyday vocabulary was introduced to students in context through direct association of words and phrases with objects and actions, without the use of translation (from Omaggio, 1986, as cited in Kang & Golden, 1994). After this came the Audio-lingual Method that focused attention primarily on language structure and developing correct language habits. Vocabulary was not a priority in instruction, at least not until the basic structures were learned. When vocabulary was introduced, it was used to demonstrate particular grammatical structures (from Carter & McCarthy, 1988, as cited in Kang & Golden, 1994). The emphasis in the next method, Cognitive e-Code Learning, was first on developing competence in a foreign language through a solid grounding in grammatical rules then introducing vocabulary (from Rivers, 1981, as cited in Kang & Golden, 1994).

Most recently, the Communicative Approach (from Tohsaku, 1999) has emphasized vocabulary practice in conjunction with opportunities for learners to interact with one another and the teacher in realistic situations. In this interactive,

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communication-based approach, vocabulary acquisition plays a vital role in the development of language proficiency especially at the beginning stages of learning. For this reason, a relatively large number of vocabulary items is presented in a systematic manner, moving from comprehension activities to simple production activities to creative, personalized production activities. Vocabulary is also introduced using Total Physical Response techniques and is reintroduced and reviewed at regular intervals, first in contextualized mechanical drills, then through meaningful communicative exercises, and finally in creative, free-answer sequences. Students begin with the basics and move gradually into higher-level communication as they develop both skill and confidence with the vocabulary and grammar being learned. The goal of the communicative approach is to teach students how to use the target language in real-life situations for different communicative purposes through a variety of activities that serve as the basis for communicative interaction in the classroom. This approach to language learning invites learners to become active participants in the learning process, sharing the responsibility for successful language acquisition. Topically based organization presents meaningful contexts for language learning and increases learner motivation and enjoyment.

Vocabulary learning in L1 and L2. As well as looking at the different historical approaches to vocabulary development in language learning, it is also important to consider how vocabulary is acquired naturally in L1 as well as how words are learned in L2. It is widely recognized that vocabulary in a learner's first language is primarily acquired in four ways (Manzo & Manzo, 1993): incidentally through massive exposure to rich language in oral and written contexts; through direct vocabulary instruction in which learners are taught word meanings and strategies utilizing contextual, morphological, syntactical, and definitional information; through self-instruction where learners use their own prior knowledge and experiences to build word knowledge in combination with dictionary use and consciously seeking meanings from other native speakers; and through mental manipulation while

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thinking, speaking, and writing leading to higher levels of metalinguistic awareness. Each of these is set in motion by an appropriate social climate and conducive community of language (Vygotsky, 1962). Effective vocabulary instruction should be correlated with these natural processes of word learning. Based on the literature on vocabulary acquisition, such instruction is comprised of the following components (Manzo & Manzo, 1993):

- Disposition—opening the student's mind and will to engage new words
- Integration—establishing ties between the meaning of a new word and the student's existing knowledge
- Repetition—provisions for practice distributed over time, as well as opportunities for frequent encounters with the word in similar and differing contexts
- Interaction and meaningful use—social situations conducive to using new words in interactions with others and, thus, mentally referencing new words in listening, reading, writing, and speaking
- Self-instruction—maintaining an awareness of new words outside the classroom

Current research findings indicate that successful vocabulary instruction includes the following (McCormick, 1999; Nagy, 1998; Stahl, 1986): use of materials that provide definitional information plus several examples of the word used correctly in context; methods that encourage "deep" processing (making multiple connections between new and known information, exerting more mental effort or creativity) where learners make associations, apply information to demonstrate understanding and create a novel synthesis of the new word and known information, taking "ownership" of the word; and tasks/activities that expose the learner to multiple repetitions of the same information about each word's meaning and provide multiple exposures to the word in different contexts or settings.

Just as it applies to first-language vocabulary learning, a systematic, research-based vocabulary instructional program that combines both direct and indirect teaching methods can better facilitate foreign language vocabulary acquisition. In first-language vocabulary development, the learning of words generally takes place in the context of learning new concepts that the words represent. Using this perspective, many researchers have advocated a knowledge-based approach to vocabulary teaching for first-language learners in which the goal of instruction is to establish rich connections between new words and prior knowledge, presenting new words and their associated concepts in the context of larger domains of knowledge (Kang & Golden, 1994). Although learners in university-level foreign language classrooms have more than likely already developed complex mental networks of background knowledge through their personal interactions with the society and culture of their native countries, for them, vocabulary acquisition is not only a matter of associating the new words in the foreign language with these existing lexical networks but also of acquiring new knowledge about the world that often results in the modification, or even the creation, of completely new networks. A thorough development of all the aspects of vocabulary knowledge occurs gradually over time, step-by-step, as learners are actively involved in language experiences that modify, expand, strengthen, and create such complex conceptual mental connections.

Research findings overwhelmingly support the fact that learners need a great many exposures to the target language in diverse contexts, both verbal and written, both receptive and productive, to be able to develop word knowledge as well as depth and breadth of vocabulary (see Wesche & Paribahkt, 2000, for a review). One such kind of exposure is that which learners encounter in direct classroom instruction. According to research evidence I reviewed, successful learning and recall of foreign language vocabulary items can be facilitated by classroom instruction that includes: supplying L1 translations of words; teaching definitions; using mnemonic devices and techniques (such as the Keyword Method); teaching word families, situational sets

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and semantic sets; pointing out and manipulating word relationships; and using rich oral and written contexts (Oxford & Crookall, 1990). Studies have shown that classroom activities that require learners to interact with and manipulate words in various ways as well as promote and reinforce "deep" processing of the words are a must for meaningful learning and effective recall (Ellis, 1995; Ellis & Beaton, 1993; Harley, 1996; Hodes, 1994; Kang & Golden, 1994; Kojic-Sabo & Lightbrown, 1999; Lai, 1997; Li, 1997; Mastropieri & Scruggs, 1998; Rodriguez & Sadoski, 2000; Wesche & Paribakht, 2000).

Research indicates that much like incidental learning of vocabulary outside the classroom in one's first language is a major source of vocabulary development, so it is in foreign language learning as well. Numerous studies report that it is important, therefore, to focus on teaching learners not only vocabulary words themselves but also how to learn vocabulary (Cohen, 1987; Kelly, 1991; Kojic-Sabo & Lightbrown, 1999; Prince, 1996). Teachers can introduce a variety of strategies to learners and help them to discover which ones work best for them. Teachers can also help students to increase their word knowledge by encouraging them to seek out various opportunities actively to use the target language in natural contexts outside the classroom setting. It is essential that learners have repeated encounters with language in authentic contexts to develop their metalinguistic knowledge of word concepts, semantic relations and associations, connotations, collocations, social and stylistic limitations, derivations and syntactic and morphological behavior (Kang & Golden, 1994; Laufer, 1990; Schmitt, 1998; Sanaoui, 1996). Students should be guided in their search for chances to participate in interactions that can provide the oral context that is so crucial to vocabulary development. Research-based evidence suggests that sufficient exposure to target language vocabulary in meaningful, communicative oral and written contexts is necessary for effective learning (Oxford & Crookall, 1990). Simulations/games, small group discussions, project work, and other communicative techniques can provide naturalistic, motivating practice in the

areas of speaking and writing. Students should also be encouraged to read widely in the foreign language because written contexts have been shown in research to be important sources of vocabulary learning (Krashen, 1982, 1988). Teachers can guide students in the development of reading skills and strategies in order to motivate them to read independently for pleasure outside of class and to enable them to more successfully infer word meanings and learn new words from written text. L2 reading practice can involve a vast variety of materials, such as comic books, advertisements, letters, articles, stories, newspapers, magazines, and books, among others.

Imagery-based Strategies for L2 Vocabulary Acquisition

Out of the many research articles and studies that focused on direct teaching methods and strategies for foreign language vocabulary acquisition, I found those dealing with mnemonic, imagery-based strategies to be particularly relevant to this dissertation (see Levin, Johnson, Pittelman, Levin, Shriberg, Toms-Bronowski, & Hayes, 1984; Oxford & Crookall, 1990). In these articles and studies, strategies facilitating vocabulary acquisition were grounded in a combination of findings from linguistics as well as from learning theories, giving them a solid, theoretically based foundation. There is an impressive body of research literature that supports the use of imagery-based elaboration strategies to facilitate more meaningful learning as well as better retention and recall (Carney & Levin, 1998; Cohen, 1987; Edwards, 1997; Ellis, 1995; Grier & Ratner, 1996; Haan, Appels, & Aleman, 2000; Hodes, 1994; Kelly, 1991; Kojic-Sabo & Lightbrown, 1999; Laufer, 1990; Lawson & Hogben, 1996; Li, 1997; Manalo, 1999; Mastropieri & Scruggs, 1998; Ott, Blake, & Butler, 1976; Paivio, 1980; Pressley, Levin & Delaney, 1982; Sadoski & Paivio, 2001; Stephens & Dwyer, 1997; Wang & Thomas, 1992; Zhang & Schumm, 2000, among others). Sensory imagery, and particularly visual imagery, has proven to be an effective instructional tool to help learners make necessary cognitive associations between what they know and what they need to learn. Such mnemonic strategies can

promote deeper processing of the material to be learned as well as enhancing student motivation and enjoyment in learning.

Dual-coding theory. According to Dual Coding Theory (Sadoski & Paivio, 1994, 2001; Sadoski, Paivio, & Goetz, 1991) cognition consists of the activity of two separate mental subsystems, one specialized for the representation and processing of information concerning nonverbal objects and events and the other specialized for dealing with language. The nonverbal system is referred to as the imagery system because its functions include the analysis of scenes and the generation of mental images (visual as well as in other modalities such as auditory, haptic, and affective). The language-specialized subsystem is referred to as the verbal system. These systems are separate but interconnected, so that they can function independently, in parallel, or in an integrated manner.

The two systems have different organizational and processing characteristics. Information in the verbal system is organized in a way that favors sequential, syntactic processing, whereas nonverbal information (especially in the visual modality) is organized more in the form of holistic nested sets with information available in a synchronous or parallel manner. Interconnection between the systems allows for great variety in cognitive activity.

Sensory systems detect verbal and nonverbal stimuli and continually activate mental representations, logogens in the verbal system and imagens in the nonverbal system. These are theoretical constructs corresponding to the elementary units within each system and are thought to have some neurological basis. The modality and size of these units can vary.

Organization can work within a system or between systems. Intra-system organization is called associative and it is based on learning and experience and is probabilistic. Inter-system relationships are referential. Language can evoke imagery, and imagery can evoke language (also probabilistically). Language could referentially evoke numerous images or no images at all, and mental images could

referentially evoke much language or no language at all. Such referential interconnections allow for the great flexibility in human cognition.

Dual Coding principles can be useful in understanding the acquisition and teaching of vocabulary. The theory maintains that building referential links between accurate mental representations of word meanings expressed verbally (logogens) and mental images of relevant pictures (imagens) can significantly facilitate the learning and retention of these meanings. Dual Coding Theory asserts that imagery and verbal processes are independent and additive in their effects on learning and memory.

Focus on the keyword method. The Keyword Method, a mnemonic technique based on imagery developed for learning foreign language vocabulary (Atkinson, 1975), has been one of the most extensively researched mnemonic strategies (see Avila & Sadoski, 1996; Hell & Mahn, 1997; Zhang & Schumm, 2000, for thorough reviews). In the Keyword Method, a keyword, that is an L1 word that has a phonological and/or orthographic resemblance to the foreign word to be learned, plays a central role. This method divides word learning into two stages. In the first stage, the learner identifies a concrete, easily imaged word from L1, a keyword that is then associated with the new word in L2. In the second stage, the learner must either create a mental image in which the keyword and the L1 translation of the new foreign language word interact or respond to a teacher-provided interactive picture. So the keyword mnemonic establishes both a form and a semantic connection (by means of the created image or provided picture) between the new word and its L1 translation. After learning, presentation of the newly learned word elicits the keyword, which in turn evokes the interactive image or picture of the keyword and the new word, after which the learner can retrieve and produce the L1 translation.

Several researchers have offered theoretically based support for use of the Keyword Method. From a dual coding perspective (see Paivio, 1980, 1986), Paivio and Desrochers (1979) suggested that in the Keyword Method mental imagery provides a meaningful link between each mnemonic pegword and recall. Levin

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(1989) argued that the Keyword Method is mnemonic-based because it relies on the recoding, relating, and retrieving principles of effective associative mnemonic devices. Pressley, Levin, Kuiper, Bryant, and Michener (1982) and Pressley et al. (1987) claimed that the Keyword Method provides linkages from the new vocabulary word to a meaningful definition and therefore produces enhanced associative recall of definitions. When cued with the vocabulary words, the learner has a direct mnemonic route, via the keyword interaction, to the corresponding meanings. Cohen (1987) further claimed that mnemonic aids are most beneficial in successfully guiding students in L2 vocabulary acquisition. He advocated using mnemonic links as one of the best ways of improving performance in learning new words.

Though the Keyword Method may appear to be a tedious procedure for learning vocabulary, there have been numerous research studies (see Avila & Sadoski, 1996; Hell & Mahn, 1997; and Zhang & Schumm, 2000, for reviews) documenting the effectiveness of the method for foreign/second language vocabulary acquisition in a wide variety of languages, for recall and comprehension of word definitions in various content areas, and for students across various age ranges and ability levels. However, despite significant research findings reporting the benefits of the Keyword Method, it is not entirely without controversy. Some of the issues that have sparked debate among researchers are: the retention of words learned; the effect on delayed recall; the effective application of the method in actual classroom settings; the effect on comprehension; the applicability of the method to minority students, especially those with limited English proficiency; the benefits of the method with experienced FL learners; its applicability in learning abstract words; and the effectiveness of using semantically related keywords as retrieval cues.

While the issues central to these academic debates are still not completely resolved, research evidence lends support to the idea that imagery-based mnemonic techniques, like the Keyword Method, can facilitate effective vocabulary learning and recall, can help students become more strategic and independent learners, can guide

them in making crucial cognitive associations between existing knowledge and what they need to learn, can promote enriched discussion and classroom interaction, can enhance learner motivation and enjoyment in learning, and can serve as promising instructional tools in vocabulary teaching. With vocabulary learning, as with foreign language learning in general, learners need to be given good tools and shown how to use them.

   Using visual materials to facilitate learning. Out of the ever-increasing body of research studies focusing on the use of mnemonic elaboration strategies, those studies that examined instruction combining verbal and visual components are particularly relevant to the subject of this dissertation (Canning-Wilson, 1999; Chun & Plass, 1996; Gray, 1997; Haan, Appels & Aleman, 2000; Hodes, 1994; Lai, 1997; Li, 1997; Lu, Webb, & Krus, 1999; Machalias, 1991; Mastropieri & Scruggs, 1998; Ott, Butler, & Blake, 1973; Oxford & Crookall, 1990; Paivio, 1980; Sadoski & Paivio, 2001; Schallert, 1980; Sidelnick & Svoboda, 2000; Stephens & Dwyer, 1997; Wang & Thomas, 1992; Zhang & Schumm, 2000). Researchers who conducted the studies I examined generally concluded that mnemonic instruction including an interaction between verbal and pictorial elements results in information being conveyed to learners in ways that more effectively encode it visually as well as verbally, leading to deeper processing, better organized storage in long-term memory, and more efficient retrieval and recall. Pictorial stimuli that correctly and specifically represent input can be valuable tools in vocabulary instruction, economically representing difficult-to-define concepts that would otherwise require lengthy and time-consuming explanations (Schallert, 1980). Growing research evidence suggests that the use of supporting visual materials serves as an associative aid in the learner's active construction of conceptual mental networks by providing an alternate access route to text content and as an additional retrieval cue to access targeted information in long-term memory (Beheydt, 1987). Research also supports the idea that instructional techniques and materials that use a dual verbal-visual associative mode

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of presentation facilitate more efficient encoding, deeper processing, more meaningful learning, and superior memory performance with hard-to-learn material (Avila & Sadoski, 1996; Fleming, 1979; Haan, Appels, & Aleman, 2000; Hode, 1994; Lai, 1997; Lawson & Hogben, 1996; Li, 1997; Lu, Webb, & Krus, 1999; Ott, Butler, Blake, & Ball, 1973; Paivio, 1980; Pressley, Levin, & Delaney, 1982; Pullen, 1997; Rodriguez & Sadoski, 2000; Sadoski & Paivio, 2001; Sadoski, Paivio, & Goetz, 1991; Stephens & Dwyer, 1997; Zhang & Schumm, 2000, among others).

While it is beyond the scope of this literature review to cover thoroughly all of the research findings related to the combined use of verbal and visual elements in instruction, I will now discuss three studies that clearly demonstrate the powerful effect of visual-verbal instruction on learning and recall. In the first study, Kulhavy, Lee, and Caterino (1985) showed fifth graders a map of a small town with railroad, streets, buildings, a pond, and other features. One group was asked to write a geographical description of the map, while another group wrote a short story about life in the town. Both groups were later given an incomplete map and asked to fill in as many features as they could recall. The story group remembered more features and located them more accurately on the map. The researchers concluded that the verbal elaboration provided by writing the story was superior to writing a simple description of the map. In a second experiment, fifth graders either saw the map or read a verbal description of it and listened to a story about the history of the town. Then they were asked to recall both the story and the map. The learners who saw the map recalled more events from the story, and their recall was dependent on whether they remembered the geographic features associated with the events. These findings indicated that the dual availability of the information in visual and elaborated verbal form resulted in better recall (see Sadoski & Paivio, 2001, for a review).

In another study relevant to this dissertation, Purnell and Solman (1991) conducted five experiments to examine the effect of illustrations on the comprehension of technical material by high school students. One group of students

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received text only, another group received only an illustration of the content, and a third group received both the text and the illustration. For example, one set of materials dealing with the water cycle explained it either via extended text or in a labeled illustration, showing clouds, rain, a body of land, and a body of water. Comprehension of content was measured by 20 multiple-choice questions. Results showed that comprehension performance was superior when the content was presented in both text and illustration over the alternate conditions. When text and illustration of the same content were compared to each other, comprehension was superior for the illustration (see Sadoski & Paivio, 2001, for a more complete review of similar studies).

Yet another study reported by Lai (1997) used a stratified posttest-only control group design involving five groups to explore the impact of visual/graphic aids on students' learning of Chinese radicals when used in conjunction with written prose in a computer learning environment. Based on the Dual Coding Theory, Lai's study compared graphic aids with concrete verbal information that was used as a cue to help learners form mental images, intending to find out the most effective strategy to enhance learning. Five groups of learners received different treatments: 1) written prose with no cues, 2) written prose with cue, 3) written prose with single static graphic aids, 4) written prose with gradient static graphic aids, and 5) written prose with animated graphic aids. Results of the study showed that all types of visual/graphic aids and concrete verbal information contributed to the interconnection of the verbal and non-verbal systems (from Dual Coding Theory). Consistent with the majority of studies that I examined, it is clear that the use of concrete verbal information and visual aids facilitates overall learner performance.

Using visual stimuli and imagery. I reviewed a number of research studies that focused more specifically on learning by visualization, that is, using a combination of guided or imposed mental imagery and external visual representations, such as pictures or illustrations (Canning-Wilson, 1999; Foth, 1973;

Lawson & Hogben, 1996; Paivio, 1980; Paivio & Csapo, 1973; Pressley, Levin & Delaney, 1982; Pullen, 1997; Sadoski & Paivio, 2001; Schallert, 1980; Schmitt, 1998; Short, Kauffman & Kahn, 2000; Smagorinsky, 2001). While only indirectly relevant to this dissertation, the findings from these studies are valuable nonetheless. I have incorporated many of their conclusions about imagery and pictorially based instruction strategies into the underlying framework for my rationale and suggestions for including sound symbolic expressive vocabulary in university-level Japanese language classroom instructional design in the future.

Mounting research evidence indicates that when learners are provided with visual prompts to stimulate the generation of personalized mental images and are encouraged to think of the ways the target vocabulary might relate to their own life experiences, they are more likely to engage in active elaboration of the material to be learned (Ott, Butler, Blake, & Ball, 1973). Visuals help learners isolate and identify important material, recall prior knowledge, provide interaction with content, make abstract input more concrete, stimulate the imaginal process, facilitate selective encoding and deeper elaborative processing, thereby enhancing learning and memory (Hodes, 1994). Using imagery evoked by visual stimuli in conjunction with verbal information has been shown to create a more meaningful context that is conducive to more effective encoding, storage, and retrieval of information to be learned. There is an impressive amount of research that supports the use of such imagery-based elaboration strategies in learning verbal material such as vocabulary (see Anderson & Hidde, 1971; Anderson & Kulhavy, 1972; Avila & Sadoski, 1996; Kulhavy & Swenson, 1975; Paivio, 1971; Sadoski & Paivio, 2001; Zhang & Schumm, 2000, among others). Such strategies better focus learner attention, foster better organization of input, enhance meaningfulness, promote deeper processing and more complex elaborations, allow for more active construction of meaning, and more successful recall (Grier & Ratner, 1996; Lawson & Hogben, 1996; Mastropieri &

Scruggs, 1998; Short, Kauffman & Kahn, 2000; Stephens & Dwyer, 1997; Wesche & Paribakht, 2000).

Of the studies I reviewed, none dealt with exactly the same instructional model or the same content area as I present in this dissertation. However, one of the studies reviewed by Sadoski and Paivio (2001) may serve to represent the advantages of using a combination of visual stimuli and guided imagery to facilitate learning. In a study with 120 fourth graders reading a 925-word basal reader story with five text-relevant illustrations, Gambrell and Jawitz (1993) investigated the relative effectiveness of induced mental imagery, attention to story illustrations, and both together. The group instructed to form mental images read an unillustrated version of the story. The group instructed to attend to illustrations read the standard illustrated version of the story. The group instructed to do both also read the illustrated version. Finally, a control group was instructed to read and remember the unillustrated version. The group instructed to form their own mental images as well as attend to illustrations significantly outperformed all the other groups on several measures of comprehension and recall including inferential comprehension. The group that only imaged outperformed the illustrations-only group on recall of story structure elements and complete recall of the story. The control group had the lowest performance on all recall tasks although it was the only group explicitly instructed to read to remember. The researchers concluded that mental images and illustrations independently enhanced reading performance, and that, in combination, these two strategies produced impressive increases in children's comprehension and recall of stories. These results were consistent with the principles of Dual Coding Theory.

In a later chapter, I will present verbal, pictorial, and contextual representations of the mental images evoked by sound symbolic vocabulary words in the minds of Japanese native speakers. Such representations might provide the key to a better understanding of the meaning that real-life language users construct for an important, yet elusive set of words in the Japanese lexicon. Strategies incorporating

external visual prompts, such as these representations, to evoke internal mental imagery have been shown to be particularly successful when used with "image-hospitable" language material (Gray, 1997; Manalo, 1999; Paivio, 1980; Sadoski & Paivio, 2001; Wang & Thomas, 1992) of which Japanese sound symbolic words are excellent examples (Kita, 1997; Millington, 1993; Occhi, 1996; Sakamoto, 1991; Yamasaki, 1992; Yang, 1984). The instructional design I propose for future consideration that utilizes representations such as those presented in this dissertation includes the following component steps: students are given verbal descriptions of and drawings of the images evoked by sound symbolic words in the minds of Japanese native speakers in addition to illustrations found in authentic materials such as comic books; students are then asked to construct their own individual mental images for the words, calling on their personal life experiences and prior knowledge; they are then asked to draw pictorial representations of their mental images; students then share their images and pictures with classmates, comparing and contrasting them, looking for commonalities and differences, discussing the connections between their own original drawings, the native speakers' "verbal sketches" and drawings, and the target vocabulary.

Instructional approaches to teaching vocabulary, as exemplified in this design, that involve the concept of prior knowledge, the use of imagery and illustrations, the use of image-hospitable language material, and the transfer of linguistic and non-linguistic information, as suggested later in this dissertation for future consideration by those designing instruction, should be effective in promoting deeper levels of meaningful learning and better retention and recall that, in turn, should lead to increased communicative skills and higher levels of language proficiency. Using such teaching practices that are grounded in established theory and supported by research evidence has promising potential in the future of Japanese language classroom instructional design.

CHAPTER THREE

VIEWS OF TEXTBOOK AUTHORS AND LANGUAGE TEACHERS
REGARDING SOUND SYMBOLIC VOCABULARY

According to the American Council for the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines, vocabulary plays an important role in each level of proficiency from Novice through Superior/Distinguished for listening, speaking, reading, and writing in learning a foreign language. The following guidelines, however, are particularly applicable when discussing sound symbolic vocabulary in Japanese language learning. For the Listening—Advanced level, the learner is expected to "understand main ideas and most details of connected discourse on a variety of topics beyond the immediacy of the situation . . .the texts frequently involved description and narration in different time frames or aspects. . ." Sound symbolic words are commonly encountered in just such situations that involve narration and description. The guidelines for Speaking—Intermediate—High mention "emerging evidence of connected discourse, particularly for simple narration and/or description." For the Advanced Level of Speaking, the guidelines state that the learner "can narrate and describe with some details, linking sentences together smoothly." The Advanced Plus speaker exhibits the ability to "support opinions, explain in detail, and hypothesize." The ACTFL Guidelines for Reading at the Intermediate—High and Advanced Levels emphasize that the learner is able to understand texts that include descriptions and narrations. The guidelines for writing from the Intermediate—High level through the Superior level include "the mastery of adequate target language vocabulary to describe and narrate with increasing proficiency." The ACTFL Proficiency Guidelines provide a contextual frame of reference for the information in this chapter regarding sound symbolic vocabulary in Japanese language instruction. It is important to note that while the Intermediate and Advanced levels are where proficiency with vocabulary is expected, a learner cannot reach such levels of proficiency without having been introduced to the target vocabulary much earlier in learning process and without extensive practice using the words over an extended period of time in a wide variety of appropriate language contexts.

The purpose of this chapter is to provide support for my claim that sound symbolic vocabulary has been under-represented in language teaching materials and in classroom instruction. As stated in Chapter One, a close examination of several of the currently available Japanese language textbooks used in university-level classrooms for beginning and intermediate students revealed that in actuality they pay very little attention to sound symbolic vocabulary relative to other types of vocabulary in Japanese. Only a very limited number of example words and even fewer explanations about this lexical group were found. It is apparent that this area of the Japanese language, one that undeniably plays an important linguistic role, if for no other reason than simply the existence of thousands of such words in the lexicon, has been virtually ignored in Japanese language classrooms. In order to uncover possible reasons for this situation, I constructed two questionnaires, one designed for textbook authors and one for Japanese language educators, which were sent to the respective recipients by electronic mail. In this chapter I report on the results of both questionnaires. The chapter is divided into three major sections, "Views of Textbook Authors," "Views of Language Teachers," and "Conclusion."

Views of Textbook Authors

I contacted the following five authors of some of the most-widely used college-level Japanese language textbooks by electronic mail, requesting their participation in my survey: Yasuhiko Tohsaku, author of *Yookoso! An Invitation to Contemporary Japanese* (1999) and *Yookoso! Continuing with Contemporary Japanese* (1999); Seiichi Makino and Yukiko Hatasa, co-authors of *Nakama 1* (1998) and *Nakama 2* (2000); Eleanor Jorden , author of *Japanese: The Spoken Language, Volume 1* (1987), *Volume 2* (1988), *Volume3* (1990); and Hiroko Storm, author of *Living Language: Japanese All the Way (Basic to Intermediate)*(1996).

Three of these four textbooks or textbook series are listed on the website of The Japan Foundation Los Angeles Language Center, established in 1983 as a special legal entity under the auspices of the Ministry of Foreign Affairs for the purpose of

contributing to the mutual understanding and friendship between the United States and Japan through the development of the Japanese language and culture education in the United States. The Center actively supports Japanese language programs and associations of Japanese language teachers throughout the US by carrying out project alliances with a variety of language experts and special institutions and provides online services by developing websites and other sources of information technology. These textbooks were also mentioned on the Japanese Textbook Discussion Board that was developed by the Alliance of Associations of Teachers of Japanese to provide teachers with up-to-date information on Japanese language textbooks that are currently available for K-16 classrooms. The Alliance includes the Association of Teachers of Japanese, which is an international non-profit, non-political organization for scholars, teachers and students of Japanese language, literature, and linguistics and works to promote academic work in the field and to broaden and deepen knowledge and appreciation of Japan and its culture.

I will now briefly describe each of the textbooks/textbook series in order to establish a more meaningful context for the authors' responses to my questionnaire. *Yookoso: An Invitation to Contemporary Japanese* and *Yookoso: Continuing with Contemporary Japanese* are proficiency-based textbooks designed for beginning and intermediate level college students respectively. There are many exercises, grammar explanations in English with many examples for students to study on their own, a flexibility allowing the teacher to incorporate grammar and oral proficiency using preferred method, numerous pictures, culture and linguistic notes, and large amounts of vocabulary. *Nakama 1* and *Nakama 2* is a textbook series that is proficiency-based, emphasizing practical communication, development of all four language skills, student interaction, and cultural awareness. Both textbooks in this series feature thematically organized chapters that focus on high-frequency communicative situations and introduce students to the Japanese language and its three writing systems. Hiragana and katakana are introduced through unique mnemonic devices and a series of specially created *manga* precede each chapter dialogue and serve as visual advance organizers. Chapter dialogues

present a lively, continuous story line that illustrates typical daily events in Japanese life. Exercises progress from directed practice to a wide range of open-ended communicative activities that emphasize pair and group work. *Japanese: The Spoken Language* is a 3-volume series that stresses Japanese as it is spoken today in Japan. The books include brief and natural core conversations, drills in a response format, and explanations offering not only linguistic analysis but also descriptions of how the language is used within Japanese society. These three textbook series are found on both The Japan Foundation Los Angeles Language Center's list of Teaching Materials for College-level learners and the Japanese Textbook Discussion Board maintained by the Alliance of Associations of Teachers of Japanese, as are *Learn Japanese: Vols. 1-4* and *A Course in Modern Japanese: Vol. 3* that I discussed in Chapter One. In addition, I contacted the author of *Living Language: Japanese All the Way (Basic to Intermediate,)* a one-volume text that includes the following: 40 lessons that begin with lively dialogues including the most common useful expressions for everyday conversation; English translations and explanations of Japanese grammar and usage, pronunciation, vocabulary, and cultural notes; quizzes and review for self-checking of progress; a summary of Japanese grammar and verb charts; and a section on business and social letter-writing. This textbook, unlike the previous three series, is designed for independent study rather than for use in a classroom setting.

Four of the five authors responded by electronic mail, providing answers to the questions I had developed in the Textbook Author Questionnaire (See Appendix A). Eleanor Jorden responded via a telephone conversation with me. I constructed the questionnaire in such a way as to begin with broader-based curriculum questions that would serve to establish a meaningful context for subsequent questions dealing more specifically with the issue of sound symbolism. I will now present an analysis of the responses given by the five textbook authors to the questionnaire, grouping them into the following four major areas: Factors That Influence the Selection of General Textbook Topics; Views on Japanese Sound Symbolic Vocabulary; Representation of Sound Symbolic Vocabulary in Japanese Language Teaching; and Views on Teaching Sound

Symbolic Vocabulary. I will refer to the authors as Author A, Author B, Author C, Author D, and Author E throughout the first section of the chapter in order to facilitate a clearer continuity in following the responses from one major area to the next.

Factors that influence the selection of general textbook topics. The five textbook authors provided similar responses concerning factors that influence the selection of topics to include in textbooks. An important factor that emerged from the response data was the relevance of topics ranging from vocabulary to grammatical structures to the kinds of basic survival tasks that learners would most likely encounter in everyday situations. Topics that are directly related to the learners, such as self, school, town, everyday life, are introduced first followed by related topics. Author C explained that "some sound symbolic expressions, such as ones used to describe medical conditions, may be fairly essential for learners at the elementary level while others whose function is to enhance vividness and expressive power may not be necessary to perform basic communicative tasks." A second factor was based on a more>>>less theme, as illustrated by Author E's response, "I include simple topics before complicated ones, commonly used structures before less commonly used ones, and more important areas before less important ones." Author E continued this idea, stating that she "chooses vocabulary and grammar structures that are needed for basic communication, moving from normal, unmarked language gradually toward less unmarked language, such as slang, baby Japanese, and casual speech." Author C added that "as learners become more proficient, the need for effectiveness and precision becomes more important, which should influence the selection of vocabulary items."   A third factor was an examination of relevant language teaching sources, such as the ACTFL Proficiency Guidelines, the European Union English Benchmarks, and other foreign language textbooks, to guide the selection of topics.

Views on Japanese sound symbolic vocabulary. Responses concerning the role of sound symbolic vocabulary in Japanese were fairly consistent among the five authors, indicating support for the idea that it plays an important role. The authors mentioned the fact that compared to English, Japanese lacks verbs that express the manner in which

certain events and actions take place and that using sound symbolic expressions helps speakers communicate meaning and nuances in such events and actions more directly, visually, and effectively. Author E stated that "sound symbolic words play an important role in language change and linguistic vitality."   Author D pointed out that "this important body of very specialized vocabulary is so large in Japanese that entire dictionaries are devoted to it and such words are found literally everywhere—in literature, in *manga* and *anime* (Japanese animation), and in everyday speech."

The issue of whether non-native learners can ever really attain a grasp of sound symbolic expressions generated optimistic responses from three of the textbook authors. Author C, however, expressed the opinion that "we can teach students about the linguistic characteristics of these expressions but it is primarily for the learners' knowledge." All of the authors said that sound symbolic words and expressions are learned very early and naturally by native speakers, as a result of being immersed in a Japanese-speaking environment and being exposed to children's books and songs that use them. The fact that these words are part of Japanese baby talk was also mentioned in the authors' responses.

Representation of sound symbolic vocabulary in Japanese language teaching.. Concerning possible reasons for the under-representation of sound symbolism in beginning and intermediate-level Japanese language textbooks, there were several given by the textbook authors. Three of the authors noted that sound symbolic vocabulary words might be more difficult than other kinds of vocabulary because they are not easily rendered into English and are very culture-specific, having uniquely Japanese connotations associated with them.

When asked why she had included only a few examples of sound symbolic words in her textbooks, Author D stated that:

> sound symbolic words do not appear in the kinds of situations typically
> found in beginning textbooks. They are found in more advanced Japanese
> and are really only for those students who will likely encounter them. While
> they are an interesting aspect of the Japanese language, sound symbolic

vocabulary should be reserved for those learners who will most likely

meet them in their study of Japanese. I held off introducing these words

in my textbook series, waiting until they could be placed in appropriate

contexts—descriptions and oral narratives. This is where such words are

encountered in real-life Japanese and such contexts are not elementary.

These words belong to the area of advanced Japanese, where students

will have mastered appropriate and necessary contextual references.

Textbooks should be structured so that students can gradually build up

to the point where these words can be properly introduced.

Three of the authors seemed to agree, even though they did not introduce many sound symbolic words in their textbooks, that if the goal in teaching Japanese is to facilitate communicative competence and higher levels of proficiency (as mentioned in the ACTFL Proficiency Guidelines) in the use of authentic Japanese, then it makes sense to introduce students to and familiarize them with these words relatively early in the language learning process. Providing students with a basic metalinguistic framework for sound symbolic vocabulary would be very helpful, even for beginning-level learners. "Such metalinguistic knowledge will help them acquire sound symbolic vocabulary more efficiently when they go to Japan," according to Author A. Author D stated that "students do need linguistic explanations—in detail and in depth—and a linguistic analysis of how sound symbolic words are actually used in Japanese society by native speakers."

Views on teaching sound symbolic vocabulary. Despite their differing stances regarding many aspects of sound symbolic vocabulary, all five authors offered useful suggestions for classroom instruction. These included using: Japanese animation, comics, and other authentic materials; literary material such as short stories and essays; realistic role-playing scenarios; word games; and actual sensory experiences with the words.

All of the authors stressed the importance of having appropriate contexts to make learning more meaningful to students rather than introducing the words in isolation.

"Students must be comfortable with the contextual vocabulary framing sound symbolic words so that the new words are introduced amid familiar surroundings," according to Author D. Author E pointed out that students "should know some basic vocabulary and grammar structures before learning sound symbolic words so that they have some material with which to connect the new information." This idea is consistent with the influential role played by prior knowledge in the learning process as seen from a constructivist perspective that I will discuss in a later chapter.

To conclude this section on the Views of Textbook Authors, I offer the following summary statement made by Author D: "With the introduction of these words in manageable increments, using systematic instruction in natural contexts, the study of this interesting and distinctive feature of the Japanese language can be all the more challenging and intriguing."

Views of Language Teachers

I sent the Sound Symbolism Questionnaire (see Appendix B) via electronic mail to several dozen university-level Japanese language-teaching professionals who have been acknowledged as contributing consultants in the preparation of several of the textbooks that I had examined. I had originally hoped for at least twenty responses to my questionnaire but despite several attempts, I received only thirteen replies regarding the questionnaire. Seven of those responding expressed an interest in my study but for various reasons said that they could not complete the questionnaire. There are several possible reasons including the fact that I sent the questionnaire during the summer when many professors are away from their home campuses, that the questionnaire was lengthy and would have taken a considerable amount of time to complete, that many of the educators were too busy at the time they received the questionnaire to work on it, that many of the educators felt that sound symbolism was not in their particular fields of expertise, and perhaps that none of them knew me personally. The six language teachers who actually completed the questionnaire included two female native speakers from very large universities in Ohio and Washington, DC, and four non-native speakers, three women and one man, from Wittenberg University (Ohio), Portland State University

(Oregon), Southern Illinois University and Illinois State University (both in Illinois). The responses given by these six educators were quite informative and insightful. I constructed the Sound Symbolism Questionnaire in a way that was similar to the questionnaire designed for the textbook authors, asking broader-based questions initially and then moving toward more specific, sound symbolism-oriented questions. Next, I will present an analysis of the responses to these questions, grouping them under the following three thematic headings: Views on Japanese Sound Symbolic Vocabulary; Representation of Sound Symbolic Vocabulary in Japanese Language Teaching; and Views on Teaching Sound Symbolic Vocabulary. I will refer to the educators who responded to my questionnaire as Teacher A, Teacher B, Teacher C, Teacher D, Teacher E, and Teacher F. Teachers A and B are native speakers of Japanese; the remaining four teachers are non-native speakers.

Views on Japanese sound symbolic vocabulary. When asked about the role of sound symbolic expressive words in Japanese, the educators gave a variety of responses. The native speakers said that these words are used to express different conditions (eg. how it rains or snows), to be descriptive or poetic, or to make a speaker's speech more animated, dynamic, and exciting. The non-native speakers stated that these words add immediacy to language, making descriptions vivid; are a reflection of the richness of affective expressions in Japanese; and express the qualities of objects, actions, and intangibles as well as emotional states.

Regarding the use of sound symbolic words by native speakers, Teacher A responded with the comment:

most native speakers are not always conscious of their use, except by people who are very sensitive to words, but that when they want to interest their audience, they attempt to use sound words more often than usual. And, because Japanese verbs lack specific information about the manner in which a certain action takes place, sound symbolic words are used to provide such precise information.

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Teacher D pointed out that native speakers use sound symbolic words because "they allow for the expression of attitudes and feelings toward what they are talking about, more than making purely referential statements." Native speakers are aware of the sound symbolic system because it is taught in school but few realize just how extensive it really is. The non-native teachers observed that there does seem to be a connection between the use of sound symbolism and a speaker's identity, both as an individual and as a member of various social groups (eg. women, children). While much of the sound symbolic system is standardized, there seems to be a good deal of regional and individual idiosyncrasy.

Concerning how native speakers learn so many sound symbolic words, the respondents' answers revealed similar perspectives. Teachers A and B recall learning some words in *kokugo* (Japanese language) class. However, they noted that such formal classroom instruction would not be able to account for the large number of words that native speakers typically acquire. Native speakers learn these words, like other types of words, by being exposed to them repeatedly in natural conversations in appropriate contexts. Linguistic explanations, when offered at all, were done so as "to make the systematicity of language transparent rather than to teach new terms or to increase the students' command of the terms," according to Teacher D. She continued, "It is the systematicity and regularity of the sound symbolic lexical group that enables those with even basic knowledge to predict meaning at better than random rates." Native speakers have an innate awareness of sound-sense correlations but generally cannot explain them.

Representation of sound symbolic vocabulary in Japanese language teaching. All six language teachers stated that sound symbolic words are not integrated into classroom instruction more often for several reasons, including: limited classroom time for vocabulary instruction; not a functional priority for basic communication; takes more time for students to get a "feel" for sound symbolic expressions than for other vocabulary; expository texts used more often than narrative texts (where these words are most often found); an emphasis on formal grammar instruction; and semantic content of words is difficult to grasp.

Expanding on this issue of representation of sound symbolic vocabulary in classroom instruction, Teacher E speculated that "many learners might have a subconscious psychological aversion to using sound symbolic vocabulary, much of which uses reduplicated sounds and which in English occurs in baby talk." He continued,

> Every time my first-year students are introduced to reduplicated words
> (eg. *tokidoki*), they invariably burst out laughing. "*Tokidoki*? Is that for
> real?" Somehow it doesn't sound like adult language to them. And I
> confess, when I first started learning Japanese, I hated those words.
> They sounded like baby talk to me, too. I remember being surprised
> when I first heard grown Japanese say "*bai bai*" to each other. In
> English "bye-bye" sounds rather juvenile, as do most reduplicated
> expressions. But in Japanese it sounds perfectly natural. I suspect
> that it takes many *gaijin* (foreigners) a long time to get over that subtle
> and probably subconscious psychological aversion.

Teacher D gave still different reasons for the under-representation of the sound symbolic lexicon in textbooks and classroom instruction. She stated that in her experience there has been far more emphasis on referential aspects of language than on pragmatic ones in language teaching materials, possibly due to the fact that the referential aspect of language is somehow thought to be more "primary" or "important." Language learners want to be able to "say things" (make understandable propositions) and the sound symbolic aspect of language, which is expressive and emotive, is of secondary importance to them. She went on to state that another reason may be that in the past Japanese educators and linguists who had accepted most aspects of the "Nihonjinron" approach to the Japanese language may have felt that "sound symbolism was one of those native aspects of *kokugo* that foreigners should not or could not learn." Sound symbolic words are considered to be part of the "native vocabulary" that many Japanese held, and perhaps still hold, as a sacred area of "Japaneseness." Teacher D recounted personal experiences in which older Japanese did not like her mentioning the similarities between Japanese and Korean sound symbolism or that English even has its own form of sound

symbolism. She stated, however, that this "sacred enclave" attitude toward Japanese has diminished greatly since the late 1980s and early 1990s. In addition, Teacher D pointed out the fact that textbooks, which are already crammed full of so many other things, are slow to respond to changes in attitude. Textbook authors may be slow to include sound symbolic words because it is not always easy to give simple, one- or two-word glosses of these forms. She also stated that because much of the material covered in the classroom is more suitable for formal settings, less of the sound symbolic system is going to be included.

 Views on teaching Japanese sound symbolic vocabulary. All six of the teachers indicated by their responses that Japanese language educators should teach students about sound symbolism.   Based on personal experiences, they found that most students love it and find the words easy to remember. Several of the educators stated they thought it would be fun to teach sound symbolic words more extensively than they have in the past and that they would make conscious efforts to introduce more of them in their classrooms in the future. They confirmed the idea that sound symbolism is undoubtedly a major part of Japanese and one that a person who is truly fluent has to use. Teacher D went on to state:

> Even if classroom instructors do not spend a lot of time on it, sound
> symbolism can be introduced with a few common expressions as examples
> and students can be informed of reference materials that they can use on
> their own. Such an introduction would help make students more aware of
> this aspect of Japanese that they will likely hear from their native-speaker friends.

 All of the teachers felt that it is the responsibility of classroom instructors to create realistic contexts in which authentic language can be introduced to students. These learning contexts should focus on areas that are of interest and are familiar to students. Within such real-life contexts, students would participate in language tasks requiring them to describe given scenes, events, and sounds. It was suggested that teachers could introduce sound symbolism, using authentic examples from *anime*, *manga*, films, music, and children's books as well as Japanese food and craft items. Teacher D recommended

that if native Japanese speakers are available, they can attend classes to help learners with pair work and can serve as conversation partners on a weekly basis. Teacher D also stated that many students will have the opportunity to go to Japan, but even if they do not, it is a good strategy for instructors to talk to them as if they were going to go.

All of the teachers who responded to the questionnaire noted that repeated exposures to sound words in natural environments are very important for students. Students should be equipped with strategies to deal effectively with unknown words they may encounter. According to Teacher D, raising metalinguistic awareness by giving students a concise summary of the high points of the sound symbolic system, providing lots of examples of situations in which they can use the target words/expressions, and having them complete exercises/tasks that require application of the newly learned material should be central in classroom instruction. She suggested that such spiral curriculum-inspired instruction could begin sometime in the first year of language study and would continue at every level with increasing levels of complexity.

Like Teacher D, two other language educators felt that introducing students not only to examples of sound symbolic expressions in appropriate contexts but also to a structured overview of the common characteristics, phonological and syntactic aspects, and cultural connotations would be beneficial, better equipping them to process unfamiliar words when encountered in a variety of language situations. The two native speakers, however, felt that while such exposure would be beneficial, it should be done as part of a linguistics or literature class that all language learners should be encouraged to take. Such a course would do much to raise students' metalinguistic awareness. In language class, students could be taught some words so that they are aware of their existence as examples of this specialized lexical group. While instructors can certainly lay a firm foundation for an understanding of Japanese sound symbolism in the first two years of language study, the limited classroom time available would be better spent, according to Teachers A and B, devoted to enabling students more effectively to use Japanese as a communicative tool to further enhance their functional skills and expanding their future career opportunities involving language use.

Conclusion

   The five textbook authors and six Japanese language educators who responded to my questionnaires, though few in number, nevertheless provided many valuable insights concerning sound symbolism and Japanese language teaching. Though looking at this situation from diverse perspectives, all of the respondents seemed to express a common interest in providing students in the Japanese language classroom with quality instruction, designed to promote the acquisition of effective communicative skills and higher levels of language proficiency.

CHAPTER FOUR

ELICITING NATIVE SPEAKERS' IMAGERY-BASED
REPRESENTATIONS OF SOUND SYMBOLIC VOCABULARY ITEMS

The goal of the present study was to shed some light on the nature of the
sound-sense connections native speakers make with sound symbolic expressions. My
primary purpose was to get at the sensory imagery evoked in the "mind's eye" of
native speakers as they encounter these words and to elicit from them verbal,
pictorial, and contextual representations. My interest in their responses to these
words came from a need to explore the vivid and yet elusive meanings invited by
sound symbolic vocabulary. In addition, I hoped eventually that native speaker
representations—their actual "verbal sketches" and pictures-- could possibly be used
in future classroom instructional design.

During the formative stages of my dissertation study, I conducted a small pilot
study in which several native Japanese speakers who were graduate teaching
assistants responded to six sound symbolic words using verbal descriptions of the
mental images evoked by the words. The purpose of the pilot study was to determine
if sound symbolic words did indeed, as I suspected, evoke vivid mental images in the
minds of Japanese native speakers that could be described verbally. It turned out that
their descriptions were incredibly vivid, so much so that not only the meanings of the
words but also their affective implications were expressed. Two outstanding
examples are: *yura-yura*, a word that in the dictionary is defined as "to sway gently,
to curl upwards, to swing softly in the air, flickeringly," which generated a mental
image depicted verbally by the following: "swinging and slow image; very relaxing
and poetic image; the breeze blowing; a shimmering image, like mirages on the road
in hot weather"; and *iso-iso,* defined as "eagerly, cheerfully, lightheartedly (said of
anticipating a happy event)" and depicted by the following verbal descriptions: "my
grandmother and my aunts are leaving for someplace special without men," a very

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revealing response which could make way for a very interesting discussion about Japanese culture and society. For the complete set of responses given in the pilot study, see Appendix C. The dissertation study that I will describe in this chapter was an extension of the pilot study, eliciting from 50 native speakers their imagery-based verbal, pictorial, and contextual representations of 100 sound symbolic words.

The chapter is composed of three major sections: methods, results, and conclusion, together describing how I went about gathering data, what I found, and what I concluded.

<div align="center">Methods</div>

Participants

Fifty native speakers of Japanese participated in this study. There were 25 participants in each of two groups, one from Kuji, a small town in the extreme northern part of the largest island of Honshu, and the other from Ebino, a small town in the southeastern part of the southernmost major island, Kyushu. The participants were asked to complete a Participant Information Sheet that asked for the following information: name, age, gender, address, level of education, number of years studied English, and occupation. Out of a total of 50 participants, there were 31 women and 19 men (16 women, 9 men from Kuji; 15 women, 10 men from Ebino). The ages of the participants ranged from 18 to 68. The range of number of years that English had been studied was from one to fifteen years. The occupations of the participants included students (the largest single group), teachers, office workers, public service workers, city workers, housewives, a dental technician, a doctor's receptionist, and a dorm manager. Note that I did not in any way seek out individuals with special artistic training or in professions that involved illustration and drawing.

Materials

One hundred sound symbolic words were used in this study. They were selected based on several criteria, including mid- to high-frequency use by native

speakers, lack of one-to-one English equivalents, and variety of word shape. Frequency of use information was obtained from *A Thesaurus of Japanese Mimesis and Onomatopoeia: Usage by Categories* (Chang, 1990) and was based on an investigation by Chang of newspapers, magazines, comic books, literary works, elementary school textbooks, children's stories, as well as radio and TV broadcasts. The table below shows the frequency of use figures for each of the five broad semantic categories used in the presentation of the data.

Frequency of Use	Category I Emotional Aspects (26 words)	Category II Physical Aspects (37 words)	Category III Actions and Movement (21 words)	Category IV State (12 words)	Category V Climatic/ Environmental Conditions (4 words)	Total (100 words)
High	26	34	19	11	3	93
Medium	0	3	2	1	1	7
Low	0	0	0	0	0	0

Table 4.1. Frequency of Use

Words for which English has close single-expression equivalents, such as *wan-wan* ("bow-wow") or *niao-niao* ("meow-meow") and other animal sounds that are present not only in English but in most languages, were not included in the 100 words used in this study. More challenging for the language learner, and consequently for the language teacher as well, are words that have no one-to-one equivalents in English and therefore require special instructional strategies to facilitate learning. It was this kind of sound symbolic word that comprised the body of 100 words to which the participants in this study responded. As for variety of word shape, of the 100 words,

84 were reduplicated words; 16 words had other shapes, such as words ending in –*ri* or –*n* or with a glottal stop + *to* (such as *zotto, sukatto, and gyotto*). This distribution pattern roughly mirrors the actual distribution of the various types of words in the sound-symbolic inventory (see Yang, 1984).

 I divided the 100 words into 10 groups of 10 words each, with each group (but one) having at least seven reduplicated forms with various other alternate forms completing the group of ten. [See "Sound Symbolic Vocabulary Groups" in Appendix D.] As per my written instructions, each group of 10 words was assigned by my research assistants to a different group of five participants. Word Groups 1 through 5 were examined by the 25 participants from Kuji; Groups 6 through 10 by the 25 participants from Ebino. In the first round of data collection sessions, my research assistant in Kuji met with Groups 1 through 5 separately, giving each group's members a typed list of the 10 words assigned to their group. In the second round of group sessions, done in Ebino at a later time, my research assistant there had each of the group's members write each of the 10 words for that group on a separate sheet of paper.

Procedure

I discussed this dissertation project at length with my research assistants in person, making sure that they clearly understood my purpose and data collection plans. After returning to Japan, the research assistants kept in frequent contact with me by means of e-mail. I sent them guidelines as described below to follow regarding the collection of data from the participants who would take part in the project.

In the group sessions, the participants were asked to read and sign the study consent form and to complete the Participant Information Sheet, giving personal data such as name, gender, age, address, level of education, number of years of English study, and occupation. The research assistants, according to my instructions, explained to the participants that the purpose of this study was to obtain the responses

of Japanese native speakers to a set of sound symbolic words. The five participants in each group were first instructed to look at each of the ten words assigned to their group and then to describe as best they could the "pictures in their minds." The research assistants explained to the participants that their descriptions could be verbal (using words, in English), visual (drawing a picture), and/or contextual (in what kind of situations is this word used). The participants were told that they were not limited to only one type of response. Because the participants' level of English proficiency was generally not high, in order to encourage responses, they were told that their verbal descriptions did not have to be written in the form of complete sentences. The research assistants assured them that what was important in the study were the descriptions of the mind pictures, not their proficiency in English. In order to facilitate the data collection process, the research assistants had been instructed to ask the participants the following questions: "What do you 'see' in your mind? What kind of image is it—visual, auditory, touch, smell, taste? Does the image have a positive, a negative, or a neutral feeling? How would you use the word in a simple sentence? Please write an example sentence." The participants were then asked to complete the task in one sitting. The five groups from Kuji were given typed lists with all ten of the words on one sheet of paper. As a result, both the verbal descriptions and pictorial responses were minimal due to lack of space. The research assistant in Ebino dictated the ten words to each group, having the respondents write one word per sheet of paper. This difference between groups resulted in more numerous pictorial responses that were larger in size and more detailed given by Groups 6 through 10. The fact that there was an entire sheet of paper devoted to each word seemed to encourage more verbal and pictorial responses by the Ebino groups.

The research assistants enlisted participation for this study from various groups of people in their respective communities, including students, colleagues, and friends. The participants were told that their participation in the study would provide them with a unique opportunity to think about an interesting aspect of Japanese in

ways that should be both enlightening and enjoyable. They were also ensured of the confidentiality regarding any personal information and responses they might provide.

Data Preparation

The first step I took in preparing the data that I received by mail from my research assistants was to make photocopies of each participant's responses. Then I cut apart those pages that had all 10 words on one page. The next step was to sort all of the responses, grouping them by word. In other words, for each of the 100 words, I gathered together the five responses given to that word. For each word, I then referred to several dictionaries and reference books or articles for English definitions and frequency of use information. Based on this information, I grouped the 100 words into several semantic categories, looking for commonalities as well as unique aspects in how they were represented, as described further in the next section.

Results

Once the preparation of the data was completed, my next task was to sort the 100 words used in the study into a small number of manageable groupings for convenience of reporting. The grouping task was complicated by the fact that many of the words have multiple meanings, some that are related and others that are not. The Words with Multiple Meanings table that follows shows how many words in each of the five categories I used had meanings that were listed in one or more different semantic categories in the dictionaries I consulted. As the data in Table 4.2 indicate, nearly two-thirds of the words had multiple meanings.

I decided to base my categories on broad domains of meaning and to place words into those categories using the participants' most common responses to the words as guidelines. Grouping the words in this way was not an attempt to come up with precisely defined semantic categories but rather as an efficient way of thinking about them that might be useful in designing classroom language instruction.

Number of Words with Multiple Meanings	Category I Emotional Aspects (26 words)	Category II Physical Aspects (37 words)	Category III Actions and Movement (21 words)	Category IV State (12 words)	Category V Climatic/ Environmental Conditions (4 words)	Total (100 words)
Number of Words in One Category	16	11	4	4	3	38
Number of Words in Two Categories	5	15	7	2	1	30
Number of Words in Three Categories	5	4	6	2	0	17
Number of Words in Four Categories	0	2	3	3	0	8
Number of Words in More Than Four Categories	0	5	1	1	0	7

Table 4.2. Words with Multiple Meanings

Looking at the native speakers' responses to the 100 words, I decided to use five broad-based domains based on similar categories used by Akutsu (1994), Chang (1990), and Millington (1993): (1) Emotional Aspects, (2) Physical Aspects, (3) Actions and Movement, (4) State, and (5) Climatic/Environmental Conditions. This study involved only 100 words selected out of thousands of sound symbolic words

that are used in modern Japanese. Therefore, the categories into which a larger number of sound symbolic words could be categorized would naturally number many more than these five. But again, for the sake of convenience of reporting the findings of this study, I decided to use these five broad categories.

I will now report on the results of the study, discussing each of the five meaning-based domains separately. The point of this study is to go beyond the typical lexicographer's depiction of the meanings of words. Here native speakers are providing insight into their meaning construction as they encounter sound symbolic words. Why did I include so many examples of the participants' responses? It turned out that the rich variety and striking vividness represented in their responses that were so extremely detailed, quite humorous, remarkably visually appealing, and culturally revealing could not be adequately portrayed with merely a few selected examples. So that a fuller appreciation of the many insights into meaning-making provided by these native-speaker representations might be developed, I have presented numerous actual verbal descriptions and pictures given by the participants in this study. In each category, there were many vivid verbal descriptions and expressive drawings given but I will only discuss some examples at length. In all cases, I will present the actual responses given by participants, including misspellings and grammatical errors, in order to maintain accuracy of reporting the data.

Category I—Emotional Aspects

The first broad category of words I will discuss is the Emotional Aspects category into which 26 words were placed. For this first category, I will comment on each of the 26 words but in the remaining categories, I will only discuss certain words that were particularly interesting. I found it helpful to further divide this category into five sub-categories, again based on similar categories from Akutsu (1994), Chang (1990), and Millington (1993) as are all remaining categories throughout this chapter: (1) Laugh/Smile and Cry, (2) Fear/Anxiety/Nervousness/Worry, (3) Excitement/Happiness, (4) Anger/Irritation, and (5) Relaxed/Relief.

Laugh/smile and cry.

Sub-Category	Number of Words	List of Word Items (Group #)
Laugh/Smile and Cry	8	*kera-kera(#9), niko-niko(#1), niya-niya(#3), hera-hera(#4), nita-nita(#2), ninmari(#1), kusu-kusu(#10); shiku-shiku(#7)*

In the table above, I have listed the sub-category name, the number of words placed in it, and the actual word items along with the number of the group that was asked to respond to the word. I will follow a similar format throughout the remaining sections of the chapter.

The Laugh/Smile sub-category is an important one in Japanese because the generic verb *warau* encompasses both broad meanings of laughing and smiling. It is generally only with the addition of adverbial modifiers including sound symbolic expressions to generic verbs that more precise meanings and nuances can be expressed. Two of the seven laugh/smile words in this sub-category evoked positive mental images, four evoked negative images, and one evoked both positive and negative images.

For the word *kera-kera* (defined in dictionary entries as "a shrill, frivolous laughter; to burst out giggling, squealing; to cackle"), three out of five people drew happy, smiling faces (and very interestingly, two of the faces had exactly the same teeth) as shown in Figure 4.1:
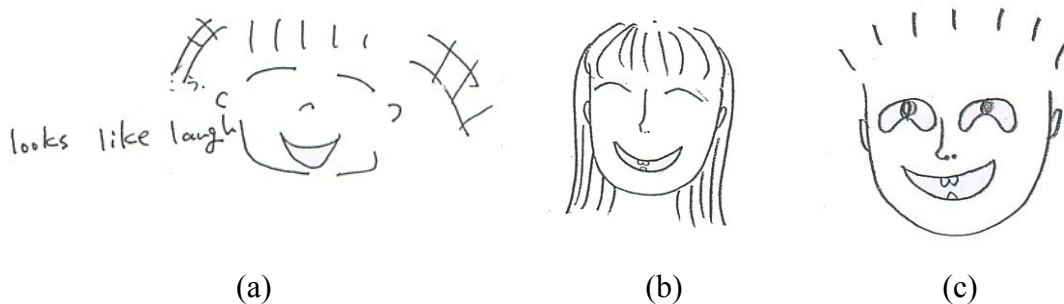

(a) (b) (c)

Figure 4.1. Three illustrations of *kera-kera*

Three participants described *niko-niko* ("to be beaming; to be all smiles; to smile warmly; to grin, laugh") with the phrase "happy smiling," one person said "keep smiling…like salespersons," and another gave two examples: "When I see a kitty or puppy" and "When I eat my favorite food." *Niya-niya* ("to grin showing the teeth; to smile blissfully to oneself") generated some interesting responses: two people felt that the word evoked a positive image such as the smile one has when thinking about a good memory; two people used the word "scheme" when describing this kind of smile; and one person said that it evoked both a positive image, "a bashful smile, a smile that someone wants to hide happy; for example, He was smiling when he was thinking of his girlfriend," and a negative image, "an ironic smile."

Four words in this sub-category generated negative images in native speakers' minds. *Hera-hera* ("a dubious laugh; said of a laugh when one is embarrassed or when one wants to deceive others") elicited these responses: "do something not honest"; "untrue, dishonest, incorrect"; "when I say 'I am your friend' but I am not"; and "flatter, play up to." One person pointed out that *hera-hera* could also mean "the chatter of a talkative person." *Nita-nita* ("to laugh maliciously with a nuance of dubious joy or pleasure; to snicker with mischief; to snigger impishly") evoked the following responses: "smile because have secret"; "silent smile"; "mischievous smile"; and "remember something and laugh, without uttering a voice alone." *Ninmari* ("to chuckle to oneself or smile in a self-satisfied manner") generated some great verbal responses: "smile when you found a favorite food in your dinner by chance…and then you smile to yourself"; "I smile because lucky"; "bad feeling at the back of smile"; and "smile triumphantly; unexpected luck; I remember something in the past; I feel disagreeable if a stranger man look at me *ninmari*." One participant in the group drew an especially expressive pictorial representation of his mental image along with comments as shown in Figure 4.2:

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Figure 4.2. Illustration of *ninmari*

The last word in this sub-category was *kusu-kusu* ("to titter; to snicker; said of furtive laughter; to laugh quietly in a low, stifled voice") that evoked some very descriptive verbal responses: "laughing with whisper voice"; "giggling, snickering"; "laugh quietly in a disrespectful way at someone/something rude or embarrassing"; and "laugh in a childlike way, because you are amused, nervous, or embarrassed." In addition, there were three very vivid pictorial representations generated by this group, as shown in Figure 4.3:

(a)
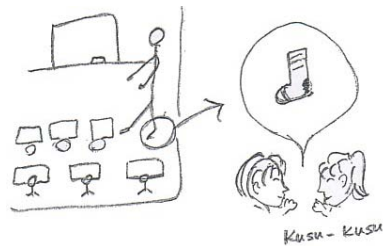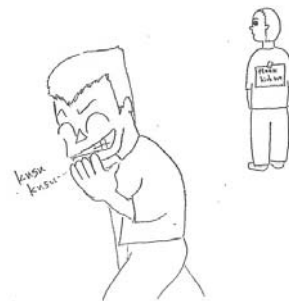
(b)   (c)

Figure 4.3. Three illustrations of *kusu-kusu*

Interestingly, only one word in the entire group of 100 words turned out to deal with crying. *Shiku-shiku* ("to sob softly; to snivel; to whimper") elicited similar responses from all five people in the group: "sob, weep"; "He wept to himself"; "It's crying"; "crying"; and "crying, very sad, disappointment, hurt, death of I loved people." Four of them drew illustrations of their mental images that were strikingly similar, as shown in Figure 4.4:
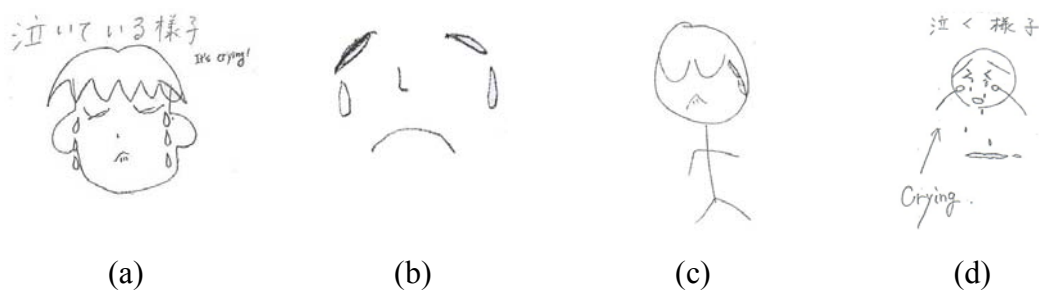

| (a) | (b) | (c) | (d) |

Figure 4.4. Four illustrations of *shiku-shiku*

Excitement/happiness.

Sub-Category	Number of Words	List of Word Items (Group#)
Excitement/ Happiness	5	*uki-uki(#4), waku-waku(#5), iso-iso(#1), hoku-hoku(#5), zoku-zoku(#1)*

As with the Laugh/Smile and Cry sub-category, the Excitement/Happiness sub-category included some interesting participant verbal responses but unlike it, there were no particularly outstanding drawings. Four out of the five words had positive connotations while one word had both positive and negative nuances. *Uki-uki* ("to wait cheerfully and expectantly; to be happy and in a bouncy mood") elicited similar responses from all five group members that focused on a happy, excited feeling. Three good example situational contexts were given: "I will go to Morioka

tomorrow," "go out on a spree," and "I will go to school picnic tomorrow but tonight I can't sleep very well because I am too excited." *Waku-waku* ("bursting with excitement in anticipation of something pleasant") also generated positive images from the participants who used words such as "nervous," "exciting," "expecting," "waiting," "much hope," "pleasure," "cheerful," "heartbeat" and "waiting excited before travel" to describe their images. One person gave the example situation, "I am excited because something good is going to happen. I'm looking forward to waiting what's happen good in the near future." Two people gave the example of children waiting for Christmas presents and one person drew a picture of a Christmas stocking full of goodies. This is very interesting considering the fact that Christmas is not typically celebrated in Japan.

The images evoked by the word *iso-iso* ("cheerfully, eagerly, lightheartedly, anticipating a happy event") were described by all five group members as positive images of "feeling happy such as when getting ready for a date with one's boyfriend," "when you are in a hurry," or "when you feel happy when you didn't have to be in the office because you finished your job, so you hurried and prepared for going back to your house while nobody noticed." Two people also mentioned a feeling of restlessness associated with *iso-iso*. There was one great drawing for this word, as shown in Figure 4.5:

Figure 4.5. Illustration of *iso-iso*

Hoku-hoku ("to be delighted and satisfied that things go as planned or better than expected") is another positive expression that generated a consensus of responses from its group members, including "be much pleased" and "smile complacently." In addition three participants mentioned having "enough and many money in the wallet," "a lot of money," and "have money." This word can also refer to the soft, fluffy, hot, steaming, delicious-looking appearance of food, such as freshly baked bread or a baked potato, something that three people mentioned. The last word in this sub-category *zoku-zoku* ("feeling of joy, expectation, fear, or repulsion") is a word with both positive and negative connotations. Four participants described images of shivering with the chills when catching a cold, when one has a fever, or when watching a horror film. One person said the image generated was one of "people coming non-stop somewhere such as shops, amusement parks, etc." It seems that most of the participants felt the negative connotations were stronger than the positive ones. Only one person used the word "exciting" when talking about this word.

Fear/anxiety/nervousness/worry.

Sub-Category	Number of Words	List of Word Items (Group#)
Fear/Anxiety/ Nervousness/ Worry	7	*biku-biku(#4), odo-odo(#5), gyotto(#2), sowa-sowa(#3), hara-hara(#7), hiya-hiya(#8), kowa-gowa(#6)*

This sub-category included seven words, all producing negative images. These words generated not only very vivid verbal descriptions but several really great drawings as well. I will first discuss words that generated very descriptive verbal responses. *Biku-biku* ("discomposure due to worrying that something undesirable will happen") produced the following descriptions: "shaking with fear, being nervous by a sudden surprise, feeling unrest and unsettled" and "when we felt the first jolt of

the earthquake, we lost our presence of mind." Here is a good example of vocabulary allowing culture to come through. Earthquakes are an everyday reality in the lives of the Japanese people. *Odo-odo* ("to be afraid, scared, upset, lacking confidence, to be restless with uncertainty") is a similarly negative word. Once again there was consensus among the group with common underlying themes of "nervously frightened, timid," "nervous, passive, frighten, threaten, intimidate," "be afraid, lose our composure, chickenheart," and "afraid with eyes moving quickly." Three of the participants mentioned compelling images of "abused children" and "poor, small kids without protection." *Gyotto* ("the mental shock, fear, or uneasiness when something sudden occurs") generated complete consensus among its group members with all five respondents indicating a feeling of surprise at a disagreeable thing and a "not happy" feeling. *Sowa-sowa* ("restlessness resulting from anxiety or nervous excitement about something") evoked feelings of "nervousness, impatience, instability, fidgeting, not calm" from group members. One person gave a vivid verbal description of this word: "someone stand up, sit down, walk around, shake his leg…again and again…and again." *Hara-hara* ("to be nervous or fearful due to seeing others in some dangerous situation; on the edge of one's seat; with one's heart in one's mouth") elicited interesting verbal responses: "I felt my heart beating fast while I was waiting for the result of the test," "I have worry. I can't sit still," "heart is pounding, very surprised," and three great drawings, two of which are strikingly similar, as shown in Figure 4.6:

(a)

a thrilling scene
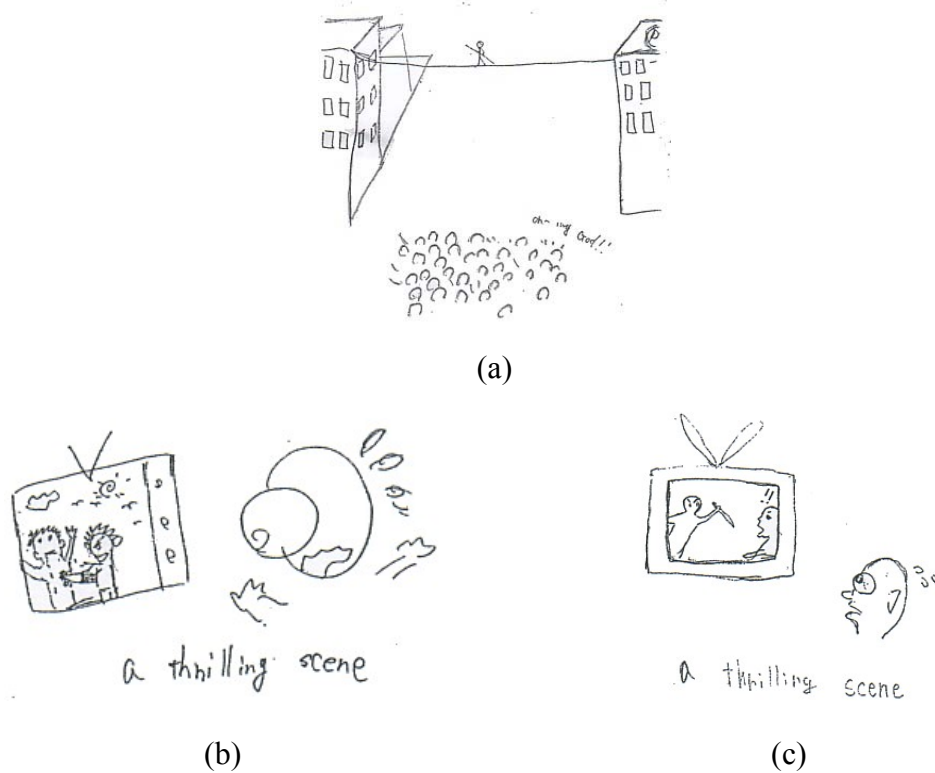
(b)

a thrilling scene

(c)

Figure 4.6. Three illustrations of *hara-hara*

Hiya-hiya ("an uneasiness, fear, or timidity about a dangerous situation") generated similar responses with the idea of being afraid of what was going to happen after some terrible occurrence. For this word, there were some additional responses, indicating feeling cold after drinking or eating something cold, being confused, and the feeling you have when you tell lies. There were also two great drawings for *hiya-hiya*, as shown in Figure 4.7:

(a)

(b)

Figure 4.7. Two illustrations of *hiya-hiya*

Kowa-gowa ("nervous, frightened behavior; with trepidation") is the final word I will examine in this sub-category. For this word, there were several very detailed drawings, as shown in Figure 4.8:
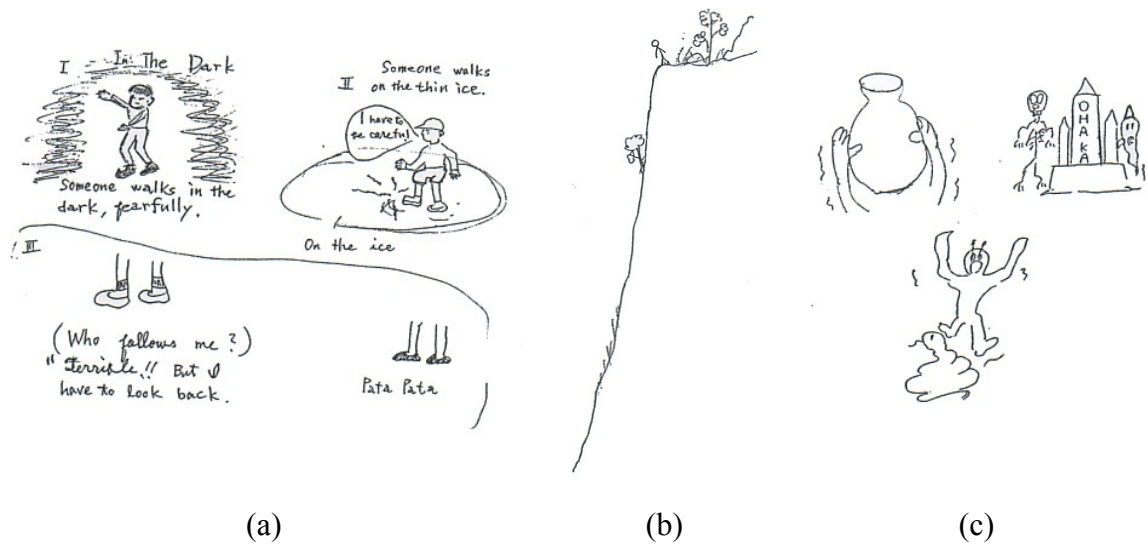

(a) (b) (c)

Figure 4.8. Three illustrations of *kowa-gowa*

Anger/irritation.

Sub-Category	Number of Words	List of Word Items (Group #)
Anger/ Irritation	4	*puri-puri(#7), kan-kan(#9), pun-pun(#10), ira-ira(#8)*

There were four words that I placed in this sub-category. Three of the words express anger or rage: *puri-puri* ("to fume"), *kan-kan* ("to boil with rage with fire in one's eyes"), and *pun-pun* ("to bubble with rage"). It is very interesting to compare the drawings done by the participants in the three different groups responding to the words, noting the striking similarities in them, as shown in Figure 4.9:
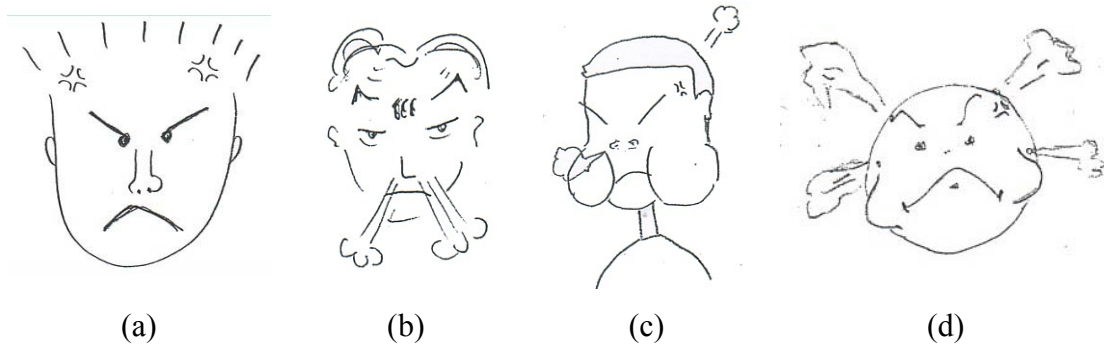
Figure 4.9. Four illustrations of *puri-puri, kan-kan,* and *pun-pun*

Each of the words in this sub-category has multiple meanings that would be listed as different or cross-listed entries in the dictionary. All of them share the common meaning of anger but each one has additional meanings that were mentioned by the participants, both verbally and pictorially:

> *puri-puri* ("firm, resilient flesh or texture which quivers upon moving") in
> Figure 4.10:
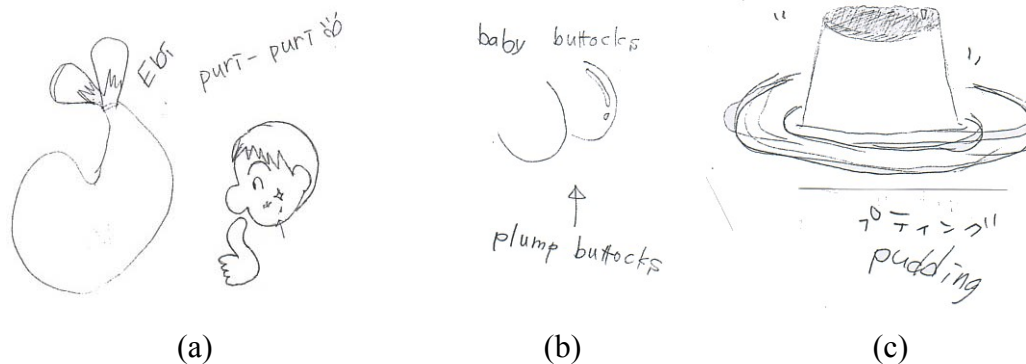
Figure 4.10. Three illustrations of *puri-puri*

kan-kan ("the high, clear sound when something metal is struck intermittently; strong sunlight") in Figure 4.11:

(a)   (b)   (c)

Figure 4.11. Three illustrations of *kan-kan*

pun-pun ("a strong enveloping and overpowering fragrance or odor") in Figure 4.12:

Figure 4.12. Illustration of *pun-pun*

In response to the last word in this sub-category, *ira-ira* ("to fret, to be irritable, to be edgy, to be nervous, to be annoyed"), two people drew very similar illustrations to those for the above-mentioned three words. This is interesting to note

because all four words were assigned to different groups of participants. Once again, it is interesting to note the similarities, as shown in Figure 4.13:
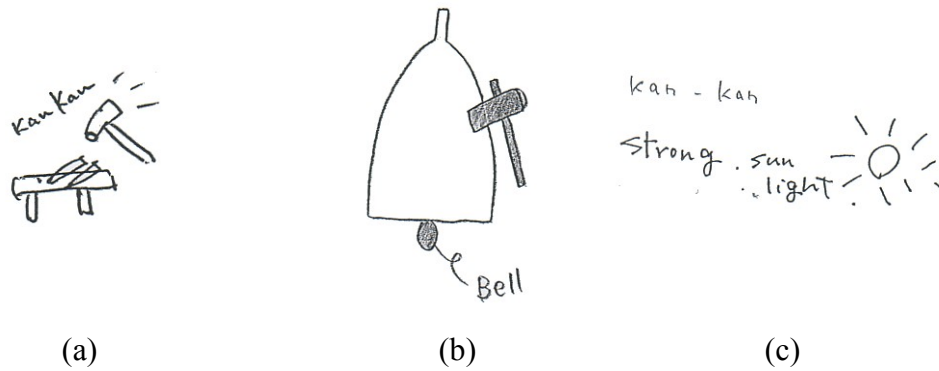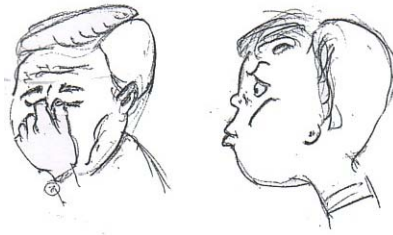

(a)   (b)
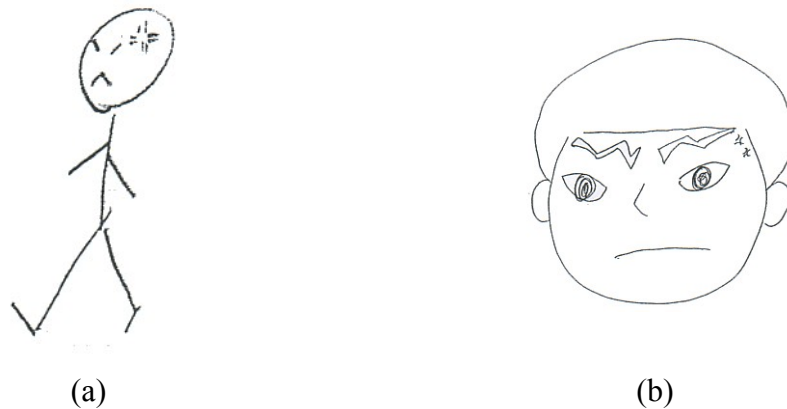
Figure 4.13. Two illustrations of *ira-ira*

There was another meaning for *ira-ira* ("stress and nervousness") that was illustrated nicely by the following drawings in Figure 4.14:

(a)   (b)
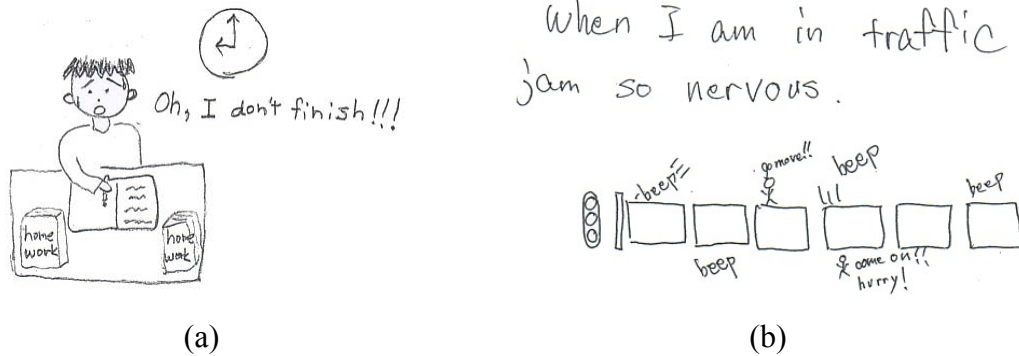
Figure 4.14. Two illustrations of *ira-ira*

The two words in the last sub-category of Relaxed/Relief, *nonbiri (#5)* and *hotto(#9)*, did not generate any particularly interesting verbal or pictorial descriptions from the responding groups.

Category II—Physical Aspects

I will now discuss the Physical Aspects category that turned out to have the greatest number of words in it. I divided this category into eight sub-categories: (1) Pain, (2) Trembling/Shivering, (3) Eye Expressions/Movements, (4) Pleasant/ Soft/Fresh, (5) Visual/Movement of Light, (6) Sound/Noise, (7) Limited Space/Time/Amount, and (8) Contour.

Pain.

Sub-Category	Number of Words	List of Word Items (Group#)
Pain	5	*kiri-kiri(#8), gan-gan(#8), hiri-hiri(#6), chiku-chiku(#10), zuki-zuki(#9)*

There were five words in Pain, the first sub-category, each describing a different kind of pain. This is an important group of words to include in classroom instruction because knowledge of these words would enable students to distinguish more accurately among various types of pain. Three people said that the word *kiri-kiri* ("a sharp, continuous pain with a feeling of being drilled into or struck with something sharp") is used when one has a stomachache. One person would use this word to describe the pain caused by a toothache. The fifth person in the group gave responses that were quite different: "when you are nervous" or "when you feel angry."

For the word *gan-gan* ("head throbbing or feeling as if it is being continuously struck; a splitting or pounding headache") all five members of the group said it is used when one has a bad headache. Four of them also drew great pictures, vividly illustrating the images evoked in their minds by this word, as shown in Figure 4.15:

(a)	(b)	(c)	(d)
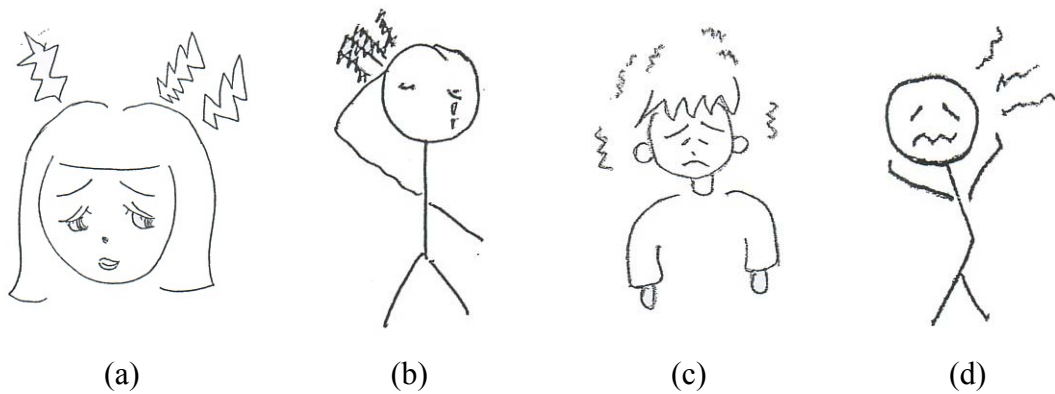
Figure 4.15. Four illustrations of *gan-gan*

Additional meanings were given by three participants: "to knock at the door hard," "to do many things," and "to do something with strong force."

Hiri-hiri ("a lingering feeling of pain/irritation on the skin; to sting/smart") elicited some very expressive drawings as shown in Figure 4.16:

(a)

(b)   (c)
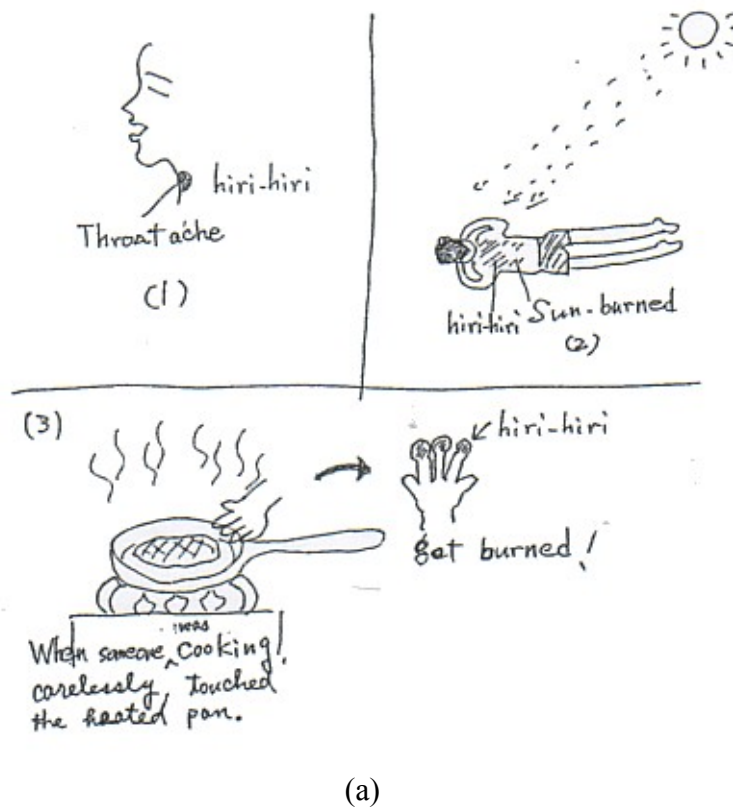
Figure 4.16. Three illustrations of *hiri-hiri*

All five group members verbally described the word *chiku-chiku* ("a prickling or tingling sensation; intermittent pain like being stuck with thorns or needles") as the kind of pain one feels when pricked with a sharp object. In addition, four of them drew great illustrations of their mental images, as shown in Figure 4.17:

(a)   (b)   (c)   (d)
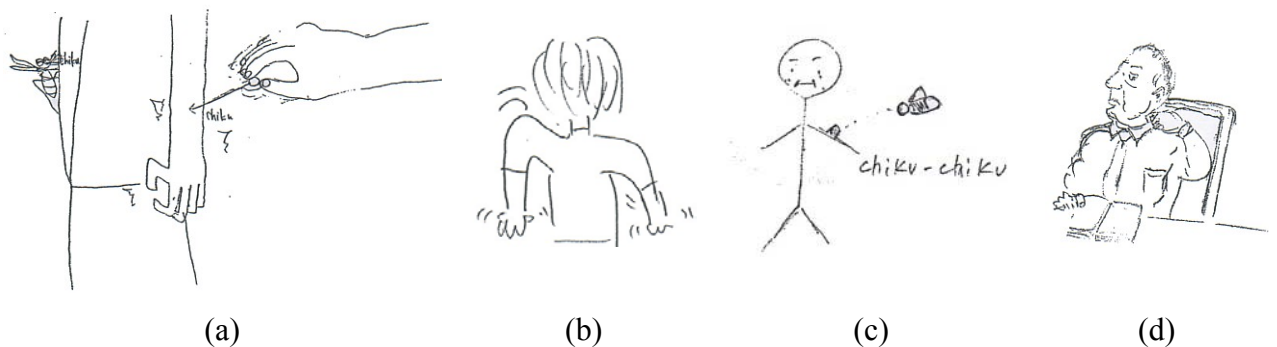
Figure 4.17. Four illustrations of *chiku-chiku*

Four out of five people said that their images for the word *zuki-zuki* ("a throbbing pain with a pulsing sensation") were of a slight ache or throbbing pain. Two of these participants added drawings to their verbal descriptions, as shown in Figure 4.18:

(a)   (b)

Figure 4.18. Two illustrations of *zuki-zuki*

One group member mentioned the additional meaning of "the heartache one feels when remembering a past love."

Trembling/shivering.

Sub-Category	Number of Words	List of Word Items (Group#)
Trembling/ Shivering	4	*gaku-gaku(#4), wana-wana(#3), buru-buru(#5), zotto(#7)*

In the next sub-category, I placed four words having to do with the physical aspects of trembling and/or shivering. For the first word, *gaku-gaku* ("to shiver, shake, tremble because of cold, fear, or shock"), there was a common element of fear/horror in the images described by the group: "Image is afraid. When I watch scary movies I feel like this"; horror image…when I watched horror movies, I was struck with horror"; "terrify, fear, negative image"; "fright, frighten, terrify. She has a terror of snakes"; and "shiver with fear." The next word *wana-wana* ("to tremble from anger, cold, or fear; centering more on the psychological aspect than the physical") elicited responses from only two out of five group members: "maybe agitate feeling, not a good feeling, negative image" and "I don't know; maybe angry a

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little." Three group members indicated that they were not familiar with this word at all, an interesting outcome given that it is a commonly used word. *Buru-buru* ("to shiver or tremble due to cold or fear; to quiver; to shake") evoked similar images in the minds of all five participants, indicated by their verbal descriptions: "It is cold, the body is shaking"; "when we are cold, shaking, quiver, terrible time"; "we say shaking *buru-buru* when we feel cold"; "my body when cold, nervous." Three people also mentioned that this word is used to describe a dog shaking its body. In this group, there were only two drawings done to illustrate the mental image of *buru-buru*, as shown in Figure 4.19:

      (a)   (b)

Figure 4.19. Two illustrations of *buru-buru*

The last word in this sub-category, *zotto* ("to shudder, to feel a chill creep over one; a sharp, momentary feeling of chills running up and down the spine"), generated not only vivid verbal descriptions, including "a ghost story"; "shudder at the very thought of it"; "I feel a chill on the back when I see a ghost or hear a ghost story"; "afraid of danger, feel very cold," but also some wonderfully expressive drawings as shown in Figure 4.20a and Figure 4.20b:
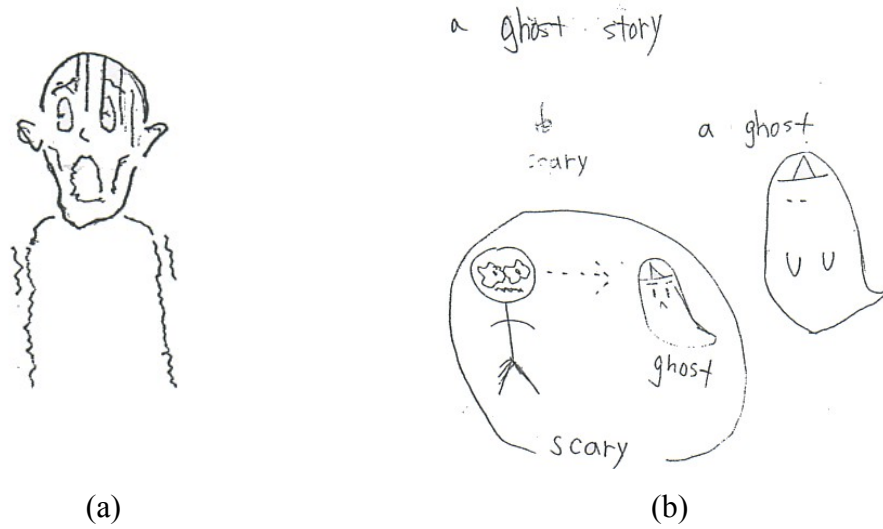
(a)   (b)

Figure 4.20a. Two illustrations of *zotto*

(a)   (b)
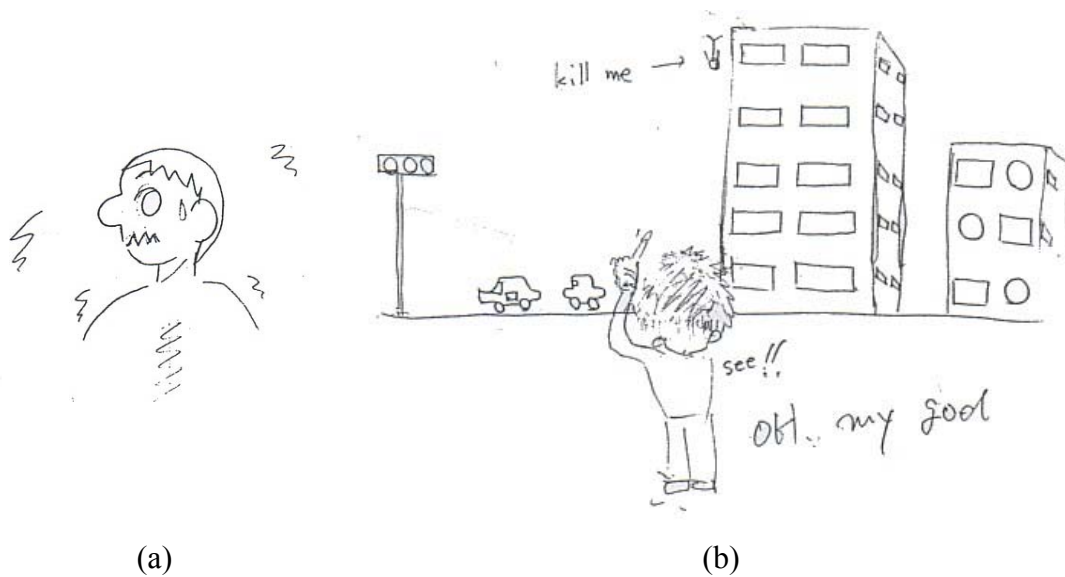
Figure 4.20b. Two illustrations of *zotto*

Eye expressions/movements.

Sub-Category	Number of Words	List of Word Items (Group#)
Eye Expressions/ Movements	3	*shobo-shobo(#5), uttori(#1), kyoro-kyoro(#10)*

I will now discuss the three words that I placed in the Eye Expressions/ Movements sub-category. All five subjects described images of bleary, tired-looking eyes for the word *shobo-shobo* ("to narrow or blink one's eyes, unable to open them properly"). Three of those five people said that *shobo-shobo* is a word that conjures up an image of old people. Three of them also mentioned that the word is associated with the "miserable feeling of a light, gloomy drizzle." The next word *uttori* ("a drunken-like, pleasant feeling caused by seeing something beautiful; to be in an ecstatic and trance-like state due to amazement/fascination with something beautiful and agreeable") generated verbal responses from four out of five participants that dealt with looking at a beautiful woman in an absorbed, vacant way. There was one particularly good drawing for the positive image evoked by this word, as shown in Figure 4.21:

Figure 4.21. Illustration of *uttori*

All five people reacted to the word *kyoro-kyoro* ("to look around restlessly,
nervously, curiously"), giving similar descriptions of images of looking around, with
"moving eyes busily," "being ill at ease," "restlessly but curiously," and "as if
looking for something." Four of the respondents drew wonderful pictures illustrating
their images, as shown in Figure 4.22a and Figure 4.22b:

(a)   (b)   (c)
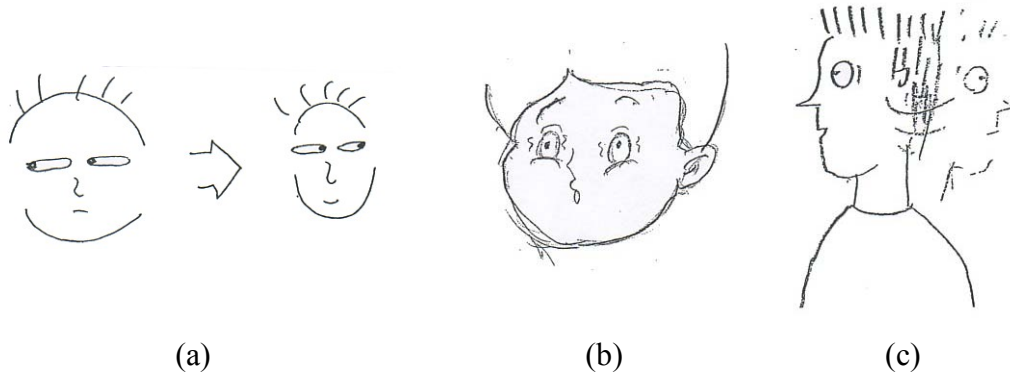
Figure 4.22a. Three illustrations of *kyoro-kyoro*
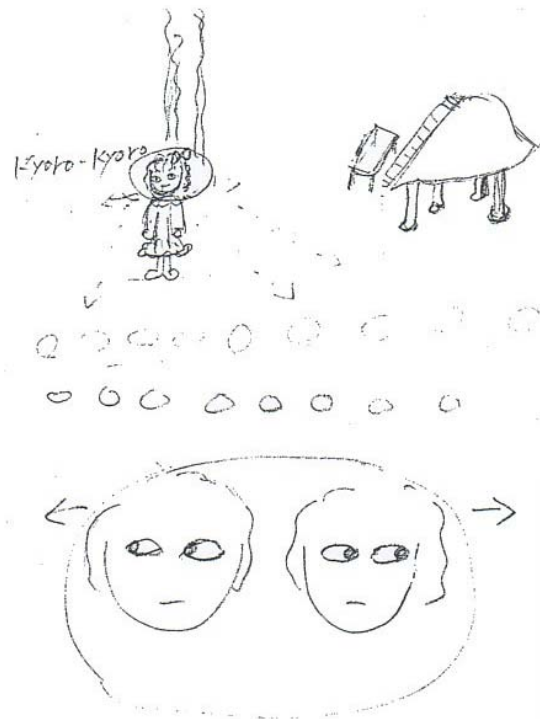
Figure 4.22b. Illustration of *kyoro-kyoro*

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Pleasant/soft/fresh.

Sub-Category	Number of Words	List of Word Items (Group#)
Pleasant/Soft/ Fresh	9	*shittori(#3), hoka-hoka(#10), nuku-nuku(#9), funwari(#5), fuka-fuka(#1), fuwa-fuwa(#2) sappari(#3), sukkiri(#5), sukatto(#10),*

In the next sub-category of Pleasant, Soft, and Fresh sensations, there were nine words. Three of the words were associated with pleasant feelings and these generated positive images in the minds of the participants. The word *shittori* ("a soft and gentle feeling with just the right amount of moisture") evoked verbal descriptions of images of "young, smooth, fresh, moist skin (like in the Shiseido commercials) and of women (in particular, Japanese women wearing kimono)" from all five of the group's members. The second word *hoka-hoka* ("to feel warm and pleasant; fresh, steaming, piping-hot, delicious-looking food; to feel comfortably warm") generated both good verbal descriptions from the participants, such as "something warm, especially warm and delicious-looking food; steaming hot"; "fresh from the oven, steaming hot"; "moderately hot"; and "feeling when we use a mattress which has been sunned in the daytime; feeling when we see a piping hot sweet potato or bread fresh from the oven; what we say about someone's purse when they have enough money to live without financial problems," as well as these drawings to describe pictorially their mental images, as shown in Figure 4.23:

(a)   (b)   (c)
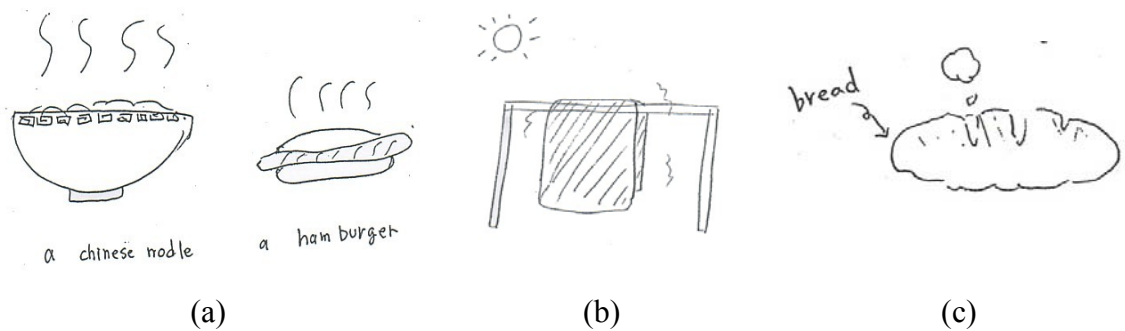
Figure 4.23. Three illustrations of *hoka-hoka*

A similar word *nuku-nuku* ("to be comfortably warm from the inside; a warm, cozy feeling") elicited from all five group members positive images of comfort and warmth. One of the participants also mentioned the idea of "peaceful and rich" when thinking of the word *nuku-nuku,* referring to an alternate meaning of "an easy, carefree time; a pleasant feeling, based on being able to look out for oneself without any troubles or difficulties." One group member said that this word sometimes evokes a negative image, one that is often associated with a vexatious or averse feeling. One person drew an especially good illustration for *nuku-nuku,* as shown in Figure 4.24:
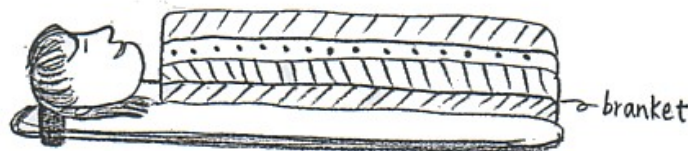
Figure 4.24. Illustration of *nuku-nuku*

Three words in this sub-category are associated with sensations of softness. The first word *funwari* ("to feel soft and light; the floating and drifting action of

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something light and soft") evoked positive images in the minds of participants that were described as "soft, fluffy, lightly," "warm, soft, fuzzy," "soft and warm, like angel hair or a futon in the sun," and "softly, mildly, tenderly, gently." *Fuka-fuka* ("to feel fluffy, soft and comfortable") generated positive images of soft, down-filled pillows, sun-dried futons, and soft cat fur. In this group, one participant drew a great illustration, as shown in Figure 4.25:

Figure 4.25. Illustration of *fuka-fuka*

The third word *fuwa-fuwa* ("to be light and extremely soft and fluffy with a floating feeling") prompted similar positive responses from all five group members who mentioned the characteristics of softness and floating and gave vivid examples, such as a floating balloon, a cloud, a pillow, sponge cake, and cotton candy, to illustrate their images.

The final three words in this sub-category have to do with sensations of freshness. It is interesting to note that they are among the 16 words of the entire group of 100 words that are not reduplications. The first word *sappari* ("to feel refreshed, clean; a fresh, finished condition"), elicited nearly identical responses from all five people who said that the image is one of feeling refreshed and clean after taking a bath, a shower, or shaving. The next word *sukkiri* ("to feel refreshed, clean, energetic; an elevated mood following the end of a problem or nuisance"), also

prompted a consensus of responses from its group. All five people mentioned a "good, clean, refreshed feeling" one has after a bath. One person drew a good picture illustrating such a feeling, as shown in Figure 4.26:

Figure 4.26. Illustration of *sukkiri*

Three group members gave additional meanings for the word *sukkiri:* "shapely, neat, well-formed (in reference to appearance)"; the visual image of a "clean room which is in order"; and "feeling good after a trouble is solved." The third word *sukatto* ("to feel fresh and alert; freshness, vigor, vividness; free of all ill feelings or animosity") generated a variety of responses: "feeling cooled down after a haircut," "a clear blue sky," "drinking a refreshing soft drink," and "feeling relieved after saying all I wanted to say." In addition, there were two great illustrations for *sukatto*, as shown in Figure 4.27:

(a)   (b)
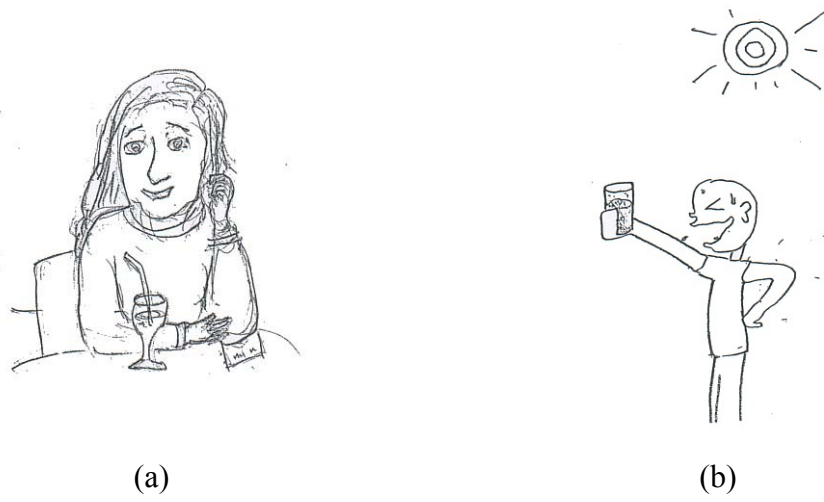
Figure 4.27. Two illustrations of *sukatto*

Visual/movement of light.

Sub-Category	Number of Words	List of Word Items (Group#)
Visual/Move-ment of Light	7	*kira-kira(#6), gira-gira(#7), chika-chika(#8), pika-pika(#9), kukkiri(#6), teka-teka(#10), tsuya-tsuya(#6)*

The next sub-category I will discuss is the Visual/Movement of Light group of seven words. Four of these words are used to describe the movement of light. The first word, *kira-kira* ("to glitter, to twinkle; beautiful, intermittent shining, not irritating to the eyes; the blinking or glittering of small objects or points"), generated several vivid verbal descriptions of participants' images: "eyes that are twinkling," "someone heard good news, his eyes brightened," "a diamond brightens," "a starry night," "the ice tree shining in the sun," and "the glittering sea." There were several good drawings as well, as shown in Figure 4.28:
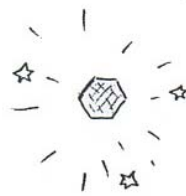
Figure 4.28. Five illustrations of *kira-kira*

Gira-gira ("to glitter, to glare, to shine glaringly on and off") elicited some interesting responses, all having to do with eyes: "my eyes when I don't get to sleep," "sun shines, I close my eyes," "look like eye bright," "glaring eyes," "The sun is shining bright," "My eyes bright up," and "I found only cat and dog of eyes in the dark." Again, there were several noteworthy illustrations, as shown in Figure 4.29:

(a)   (b)   (c)
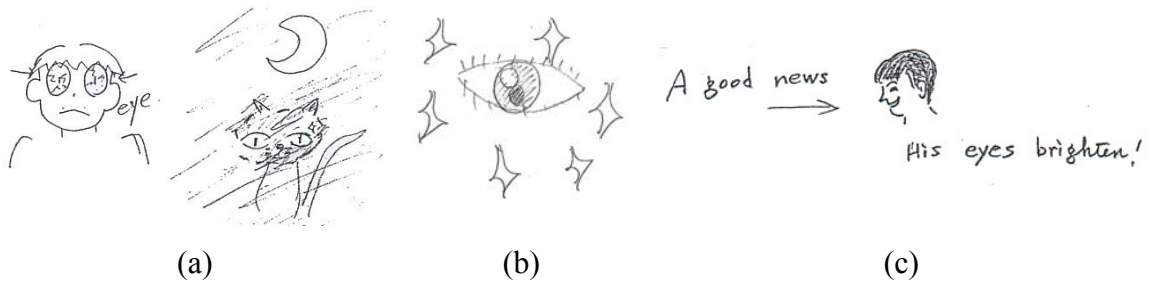
Figure 4.29. Three illustrations of *gira-gira*

The word *chika-chika* ("small, sharp, dazzling flicker that irritates one's eyes")
evoked several expressive verbal descriptions: "An eye's state when people go into a
well-lighted place from dark," "A state that the electric bulb almost burn out, "
"dazzling light," "My eyes are stinging when I move light place from poor light,"
"when lights go out or flash on and off" and "rub my eyes." And again, participants
drew several impressive illustrations, as shown in Figure 4.30a and Figure 4.30b:

(a)   (b)
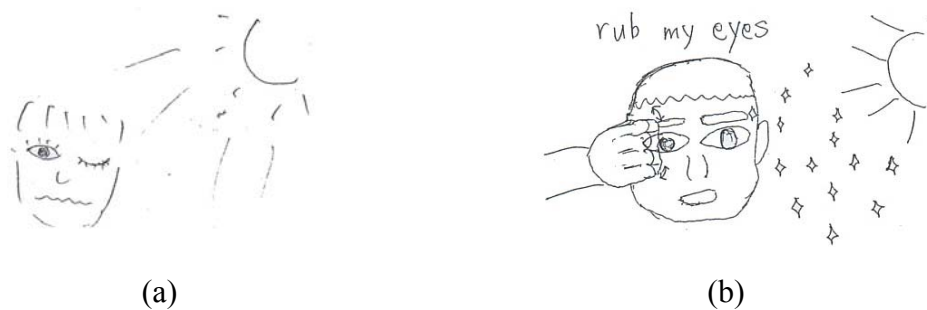
Figure 4.30a. Two illustrations of *chika-chika*

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| (a) | (b) | (c) |
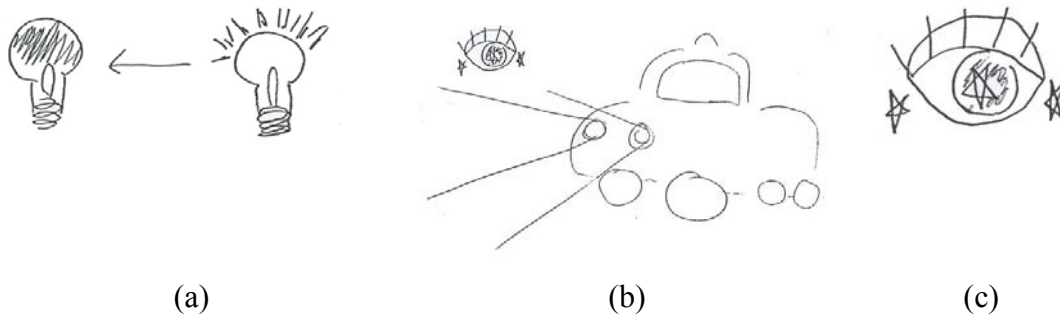
Figure 4.30b. Three illustrations of *chika-chika*

For the word *pika-pika* ("to sparkle, to glitter, to twinkle; the glittering of a polished object; to be shiny, dazzling"), four of the five people used the words "new" and "clean" to describe their images. Two people added the idea of "shiny." There was one very detailed drawing of the mental image evoked by the word *pika-pika*, as shown in Figure 4.31:

They are new shoes.
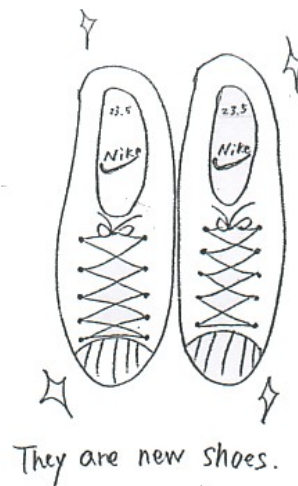
Figure 4.31. Illustration of *pika-pika*

Three words in this sub-category are related to visual perception or the way things appear. The first word, *kukkiri* ("distinctly, clearly, conspicuously standing

out; easily visible"), evoked a variety of images in the minds of the five group members. Three of the five verbally as well as pictorially described images of Mt. Fuji standing out clearly above the clouds. One of the three drawings that were nearly identical is shown in Figure 4.32:
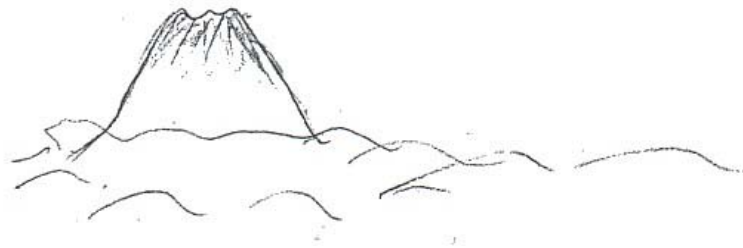
Figure 4.32. Illustration of *kukkiri*

One person described the mental images evoked both verbally and pictorially as well. The drawings, as shown in Figure 4.33, were particularly good:
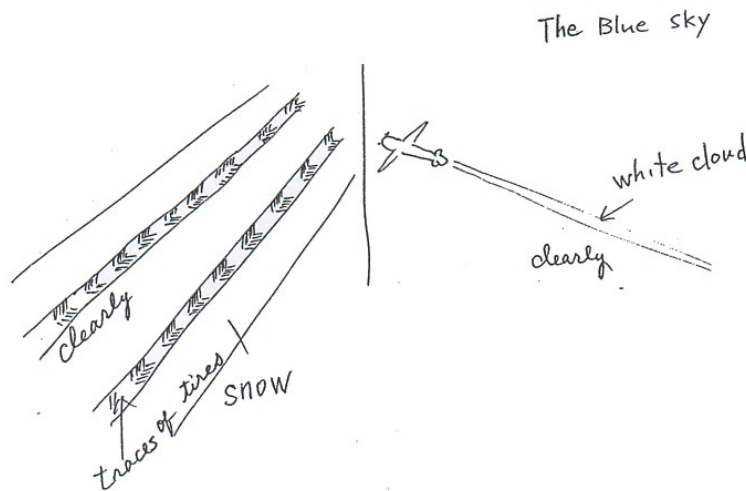
Figure 4.33. Illustration of *kukkiri*

The fifth group member had yet another vivid illustration, as shown in Figure 4.34:
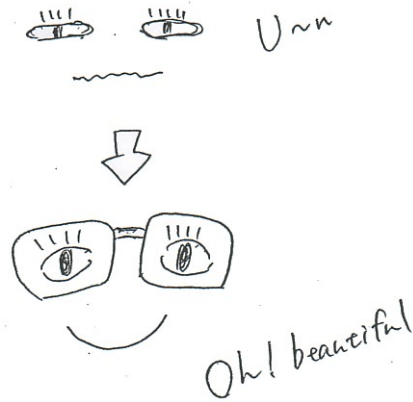
Figure 4.34. Illustration of *kukkiri*

The word *teka-teka* ("a smooth surface with a cheap shine; shiny, brightly, gaudy") prompted very similar responses, both verbal and pictorial, from the group. Four of the five participants wrote about "glossy, shiny surfaces" such as "shiny bald heads," "shiny hair plastered with pomade," and "the shiny seat of slacks which are well-worn." And four of the five people drew very similar pictures to illustrate their images, as shown in Figure 4.35:

| (a) | (b) | (c) | (d) |
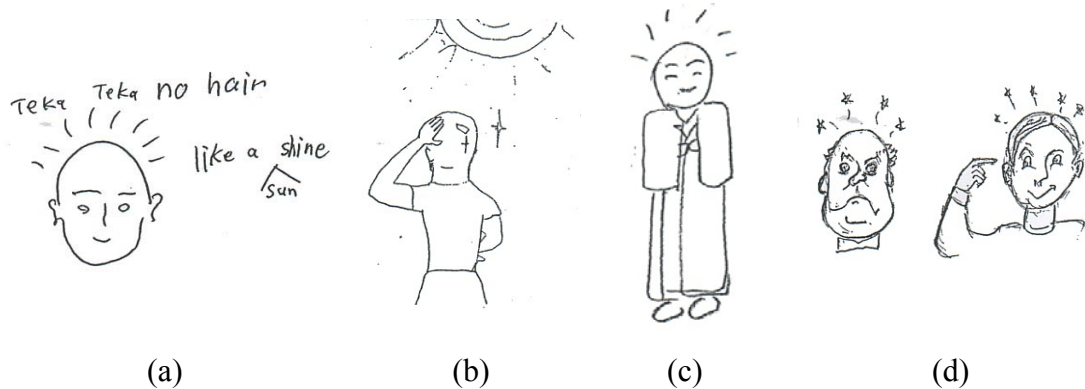
Figure 4.35. Four illustrations of *teka-teka*

Tsuya-tsuya ("to look lustrous, to be glossy, glistening, shiny") generated an interesting set of participant responses. Two people gave verbal responses talking about a lustrous complexion. Drawings by three of the respondents very vividly illustrated various kinds of surfaces that may be described using the word *tsuya-tsuya*, including hair, skin, leaves, fruit, rice, and automobiles. Other drawings for the word were particularly good and serve to illustrate the images very clearly, as shown in Figure 4.36:

(a)

(b)   (c)
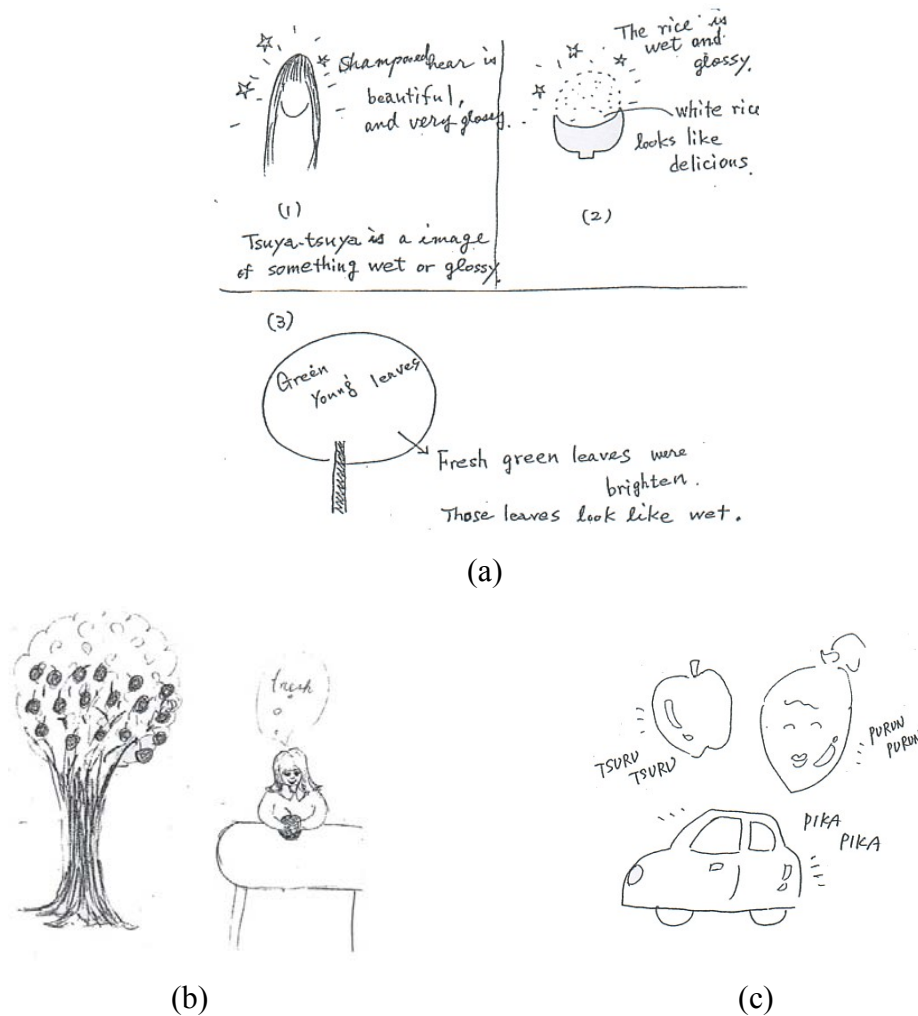
Figure 4.36. Three illustrations of *tsuya-tsuya*

Sound/noise.

Sub-Category	Number of Words	List of Word Items(Group#)
Sound/Noise	3	*zawa-zawa(#2), wai-wai(#7), gaya-gaya(#6)*

There were three words in the sub-category of sound/noise. The first word *zawa-zawa* ("to be astir, stirringly, noisy; said of the annoying sound of people's voices and movements with an exciting and tense atmosphere") elicited only verbal descriptions, such as "like party talk but quiet," "noisy and crowded," "everyone talking in class," "noise, people talking same time," and "many persons murmur all at once." All five group members described their images as negative ones. *Wai-wai* ("the clamorous sound of excited people, commotion; a great number of people crowding together") was described by all five participants with both verbal descriptions and good illustrations. The verbal descriptions were similar and included the phrases, "make merry, pleasure, hurrah," "a crowd is noisy, " "everyone very very enjoy," "everyone very noisy, cheering at ball game," and "people enjoy." Likewise, the five illustrations were nearly identical, as shown in Figure 4.37a and Figure 4.37b:

(a)   (b)
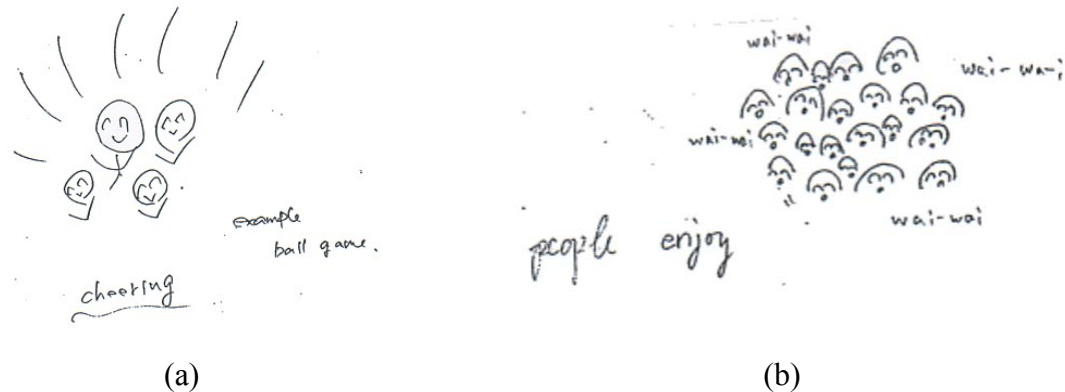
Figure 4.37a. Two illustrations of *wai-wai*

(a)
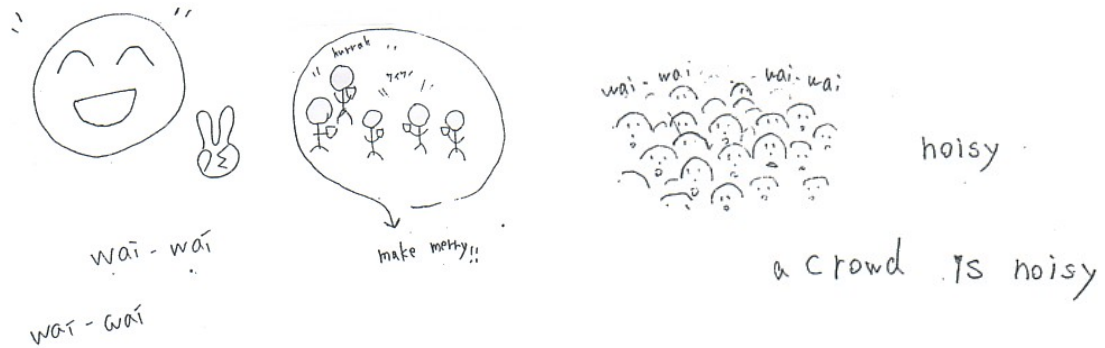
(b)   (c)

Figure 4.37b. Three illustrations of *wai-wai*

Gaya-gaya ("the loud clamor of many voices; a noisy situation with many people speaking at the same time") is very close in meaning to *wai-wai*. For the word *gaya-gaya,* the group members wrote these verbal descriptions of their images: "a lot of people were chattering in the hall," "the hall clamor voices of people," and "a lot of people come together; they are noisy in the classroom, in the meeting, and in the airport or the station," and drew these pictures, as shown in Figure 4.38:

<div align="center">(a)   (b)</div>
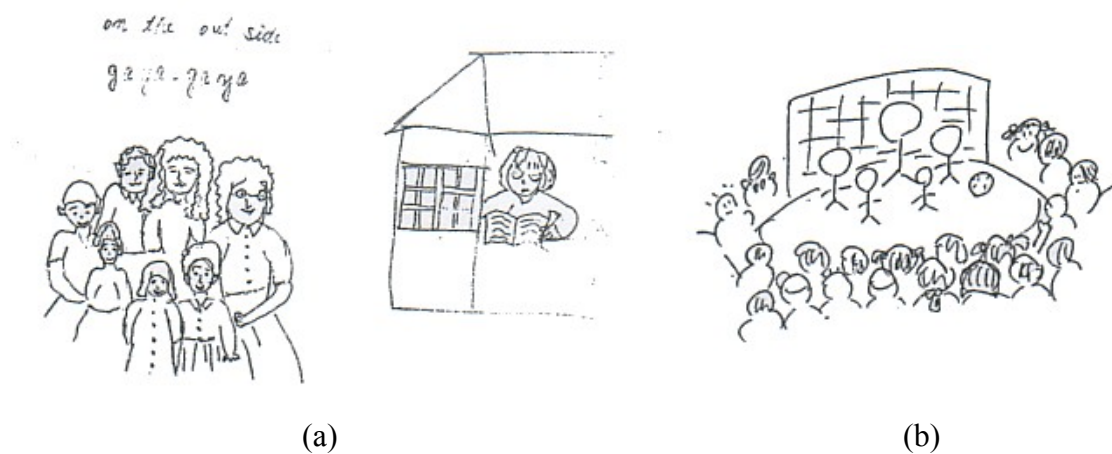
Figure 4.38. Two illustrations of *gaya-gaya*

Limited space, time, and amount.

Sub-Category	Number of Words	List of Word Items (Group#)
Limited space, time, amount	4	*kichi-kichi(#9), sure-sure(#7), giri-giri(#6), chobo-chobo(#7)*

I will now examine the four words that I placed into the sub-category of limited space, time, and amount. Participants in the group that was given the first word *kichi-kichi* ("to be jam-packed and tight, leaving no room") produced similar verbal descriptions of their mental images, including: "too small," "too tight," and "pinch tight, barely, jam." In addition there was one very expressive drawing for this word, as shown in Figure 4.39:
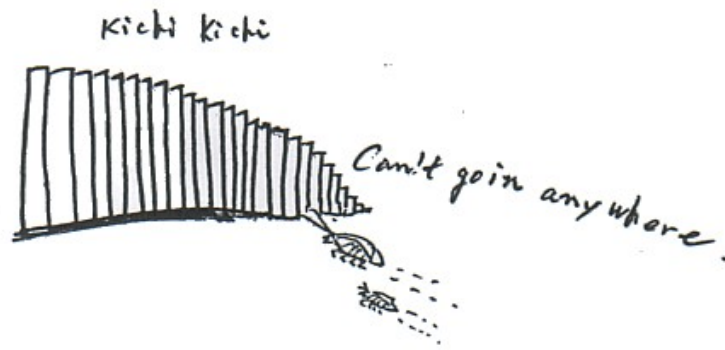
Figure 4.39. Illustration of *kichi-kichi*

Subjects responded to the word *sure-sure* ("to be very close, barely, extremely close to the edge, focusing on approaching a limit extremely closely") describing the images evoked using expressions such as "too close," "barely," "fly close to the surface of the sea," "It's very danger," and "being at the very limit, the edge." There were two illustrations in this group that show clearly the slightly different shades of meaning for *sure-sure*, as shown in Figure 4.40:

(a)   (b)

Figure 4.40. Two illustrations of *sure-sure*

The next word *giri-giri* ("with very limited time, space, or quantity; barely within a limit") is very close in meaning to both *kichi-kichi* and *sure-sure*. Two people gave very similar verbal descriptions: "I catch the bus *giri-giri*" and "I caught the bus just in the time." Three respondents described their images pictorially as shown in Figure 4.41:

(a)

(b)   (c)
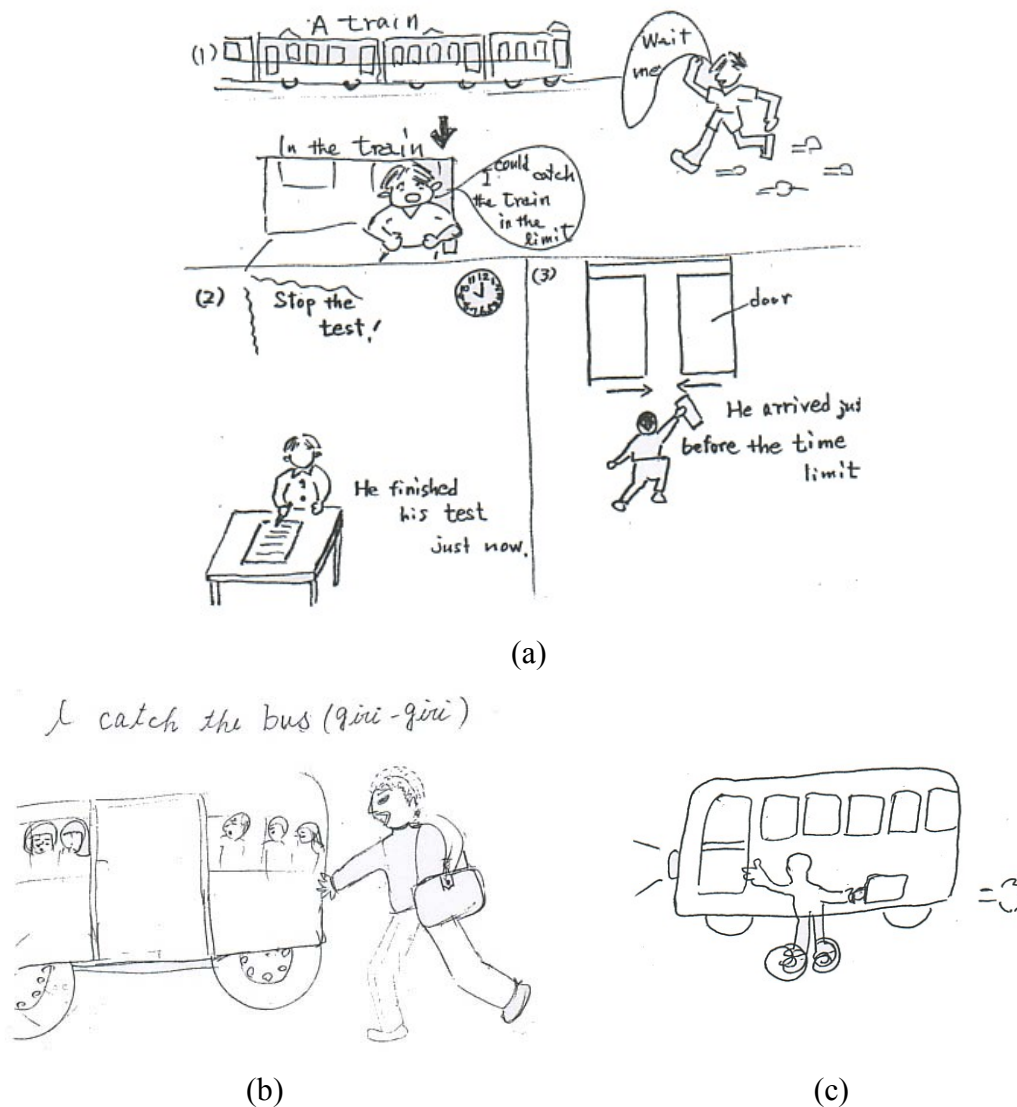
Figure 4.41. Three illustrations of *giri-giri*

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Semantic commonalities among these three words are shown very clearly in the many evocative drawings.

The fourth word in this category is *chobo-chobo* ("to be extremely small in quantity; sparse, scattered, very few") is slightly different in that it refers to a limited amount of something tangible rather than something abstract like time. Interestingly three participants drew nearly identical pictures of water faucets with very similar verbal examples, too: "Water is trickling down from the tap," "The water has lost its force," and "It's running just a little." One person drew a picture of someone eating small amounts of rice in each mouthful, as shown in Figure 4.42:

Figure 4.42. Illustration of *chobo-chobo*

The fifth person showed a dish of ice cream disappearing as someone eats it little by little.

Contour.

Sub-Category	Number of Words	List of Word Items (Group#)
Contour	2	*une-une(#4), kune-kune(#5)*

The last sub-category had two very similar words in it. *Une-une* ("to be winding, meandering, undulating") evoked images of "a zigzag hiking path on mountain," "winding, meandering, zigzag, meander its way across the plain," "wandering river," and "a winding mountain path, a meandering stream, bend image" in the minds of the group members. The second word *kune-kune* ("to be winding, meandering, curving gently") produced a consensus of verbal responses from a completely different group of participants, including: "meandering stream, winding road, be crooked, wind," "the snake crawl," "crooked body," "many curves like a snake," and "curves, snake moves."

Category III—Actions and Movement

I divided the 21 words in the Actions and Movement category into five sub-categories: (1) Hurried/Disconnected/Flustered, (2) Walking, (3) Prompt/Brisk Actions, (4) Movement in the Air/Water, and (5) Directional Movement.

Hurried/disconnected/flustered.

Sub-Category	Number of Words	List of Word Items (Group#)
Hurried/ Disconnected/ Flustered	6	*atafuta(#2), seka-seka(#1), bata-bata(#8), oro-oro(#8), moji-moji(#10), mago-mago(#9)*

The first sub-category, the Hurried/Disconnected/Flustered sub-category, I assigned six words. It is interesting to note that out of 100 words as many as six fell into this group. A possible explanation might be that in Japanese society, one that is

structured along vertical-line relationships of command and submission, an individual's behavior is continually being suppressed or otherwise altered with regard to the surrounding environment. Therefore, the Japanese tend to pay a great deal of attention to what is considered "proper" behavior in the company of others and as a result of this, the Japanese language contains a large number of sound symbolic words that describe people's gestures, behaviors, both those in accordance with the expected norms of propriety and in the case of this group of words, those contradicting them. The first word *atafuta* ("hurriedly, helter skelter, in a flurry, in a feverish haste") prompted verbal descriptions, but no drawings, from the group members: "I am hurry and don't think," "confused," "hurry, panic," "signs it is confused," and "when I am late to work, I forget something." *Seka-seka* ("hurriedly, restlessly, fidgety; to be busy and unsettled") evoked similar images in the minds of the participants who described them both verbally and pictorially. The verbal descriptions all had common elements of being busy, hurrying, feeling restless and bustling about producing a stressed feeling. One person gave a particularly good example, "You can't remain a place in order to have a lot of things to have to do. You keep doing something all the time." There was one very detailed drawing for the word *seka-seka*, as shown in Figure 4.43:

Figure 4.43. Illustration of *seka-seka*

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All five group members used both verbal descriptions and drawings in response to the third word *bata-bata* ("to spend one's day in a hurry-scurry way; to act in a busy, hasty, unsettled manner"). All of the verbal descriptions mentioned the words "hurry" and "busy." There were four outstanding drawings, shown in Figure 4.44:

(a)   (b)   (c)   (d)
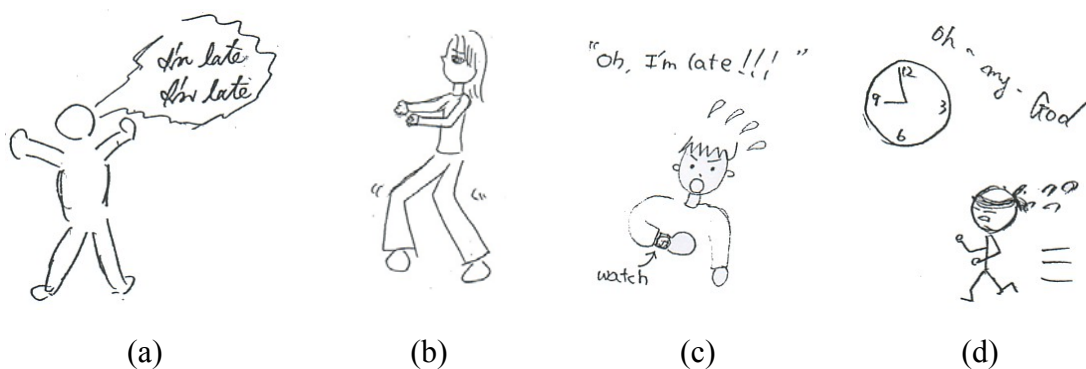
Figure4.44. Four Illustrations of *bata-bata*

Group members responded to the fourth word *oro-oro* ("to be confused, worried and not knowing what to do when something frightening, unexpected, or sad has occurred") with the following verbal descriptions: "confusion," "a state that people are flurried without confidence," "when you get confused," "when I don't know what I should do," "forget very important stuff," "the bad news upset her greatly." Two drawings done by this group were especially expressive, as shown in Figure 4.45:

Figure. 4.45   Two Illustrations of *oro-oro*

Moji-moji ("timidly; uneasily holding back action due to shyness; fidget, hesitatingly") elicited great verbal descriptions as well as good drawings from group members. The verbal descriptions included the following: "shy," "be restless, nervously," "The boy squirmed in embarrassment," "What's fidgeting you?" "twist and turn with quick movements uncomfortably," "does not speak or act for a short time, usually because uncertain, embarrassed, or worried about what to say or do," "someone behaving nervously and unable to do what they want to do." Four participants drew pictures that readily communicate the meaning of *moji-moji,* as shown in Figure 4.46:

<center>(a)</center>

<center>(b)</center>

<center>(c)</center>

<center>(d)</center>
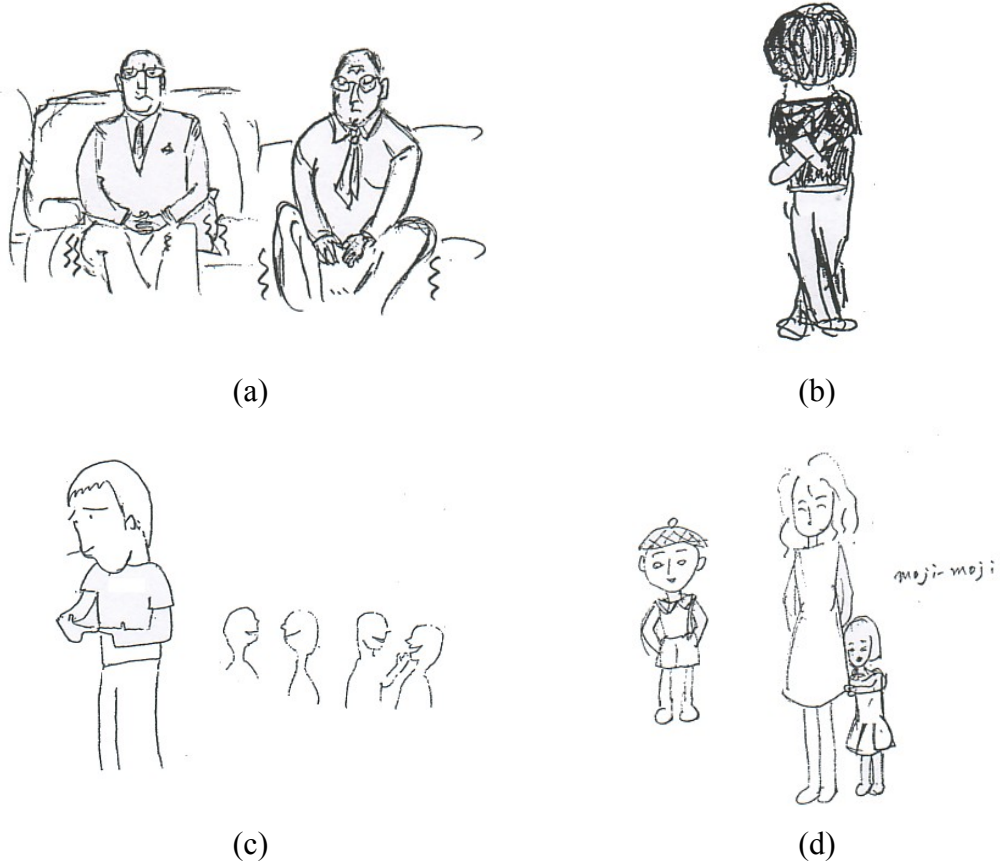
<center>Figure 4.46. Four illustrations of *moji-moji*</center>

Participants responded to the last word in this sub-category *mago-mago* ("to be confused, not knowing what to do; to spend one's time uselessly") with verbal descriptions focusing on the notions of hesitation and confusion and with two wonderful illustrations, as shown in Figure 4.47:

(a)   (b)
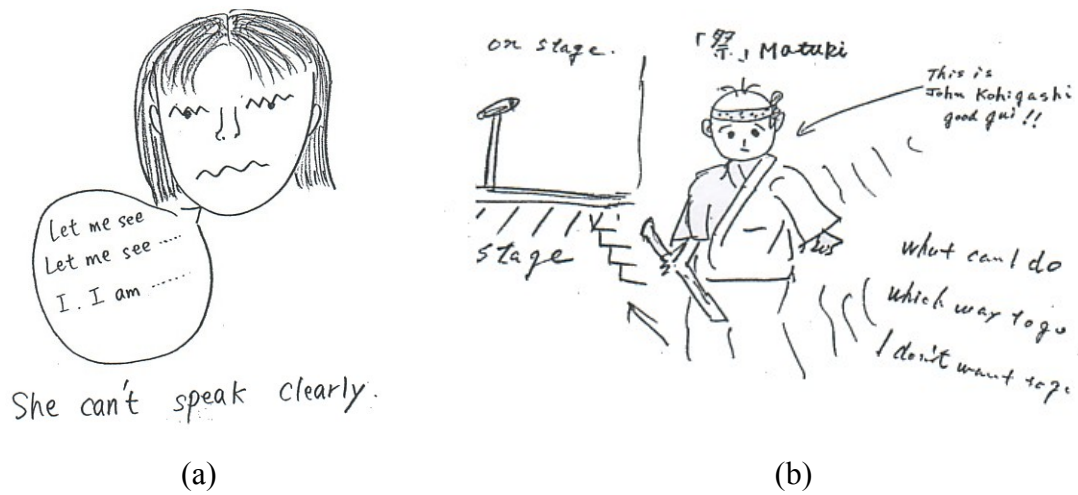
Figure 4.47. Two illustrations of *mago-mago*

Walking.

Sub-Category	Number of Words	List of Word Items (Group#)
Walking	5	*noro-noro(#1), noso-noso(#2), choko-choko(#3), toko-toko(#9),tobo-tobo(#10)*

There were five words in the next sub-category of walking. The first word is *noro-noro* ("to wander about slowly, sluggishly—emphasizes the slowness of movement") prompted negative images in the minds of its group members who primarily responded with verbal descriptions: "late, slowly, idly, dull," "walking turtle—when action and movement are slow," "walk—old man," "when I walk so slow to school, maybe I don't wanna go," "you're doing something too slow; I think you don't want to do this or you don't know how to do." One person drew a great illustration, as shown in Figure 4.48:

Figure 4.48. Illustration of *noro-noro*

Noso-noso ("slowly, lazily, sluggishly moving, lumbering") is a word close in meaning to *noro-noro*. The five people who described this word all used "slow, heavy movement" and gave examples of a turtle, an elephant, and a big person. In contrast was the third word *choko-choko* ("small movements continuing on and has a feeling of bustling about in an unsettled, nervous manner") that generated images described as: "small, mouse, fast," "small steps, walk on toes," "when my grandfather takes fast, small steps," "*hamu-chan* [a cartoon character], mouse walking" and "walking fast step." The fourth word, also describing a particular way of walking, is *toko-toko* ("small steps of toddlers and toys") in response to which participants gave these verbal descriptions: "walk not so fast, same pace," "used to describe a child, two or three years old, walking," "a baby walks slowly," and "on the trot."

All five group members who reacted to the word *tobo-tobo* ("to plod along wearily, to trudge along; said of a walk which gives the impression that one is tired, sluggish") described the mental images as: "to plod along," "cheerless," "walking wearily," "the look of walking without energy," "the girl plodded her way home," and "walk slowly and with heavy steps especially because tired or unhappy."   Four respondents drew nearly identical pictures for this word, as shown in Figure 4.49:

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Tobo-tobo（トホトホ）

Walk slowly and with heavy steps, especially because are tired or unhappy.

(a)

(b)

(c)
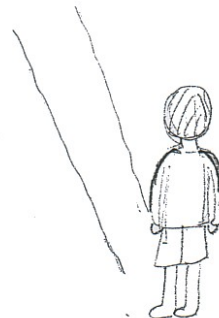
(d)

Figure 4.49. Four illustrations of *tobo-tobo*

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Prompt/brisk actions.

Sub-Category	Number of Words	List of Word Items (Group#)
Prompt/Brisk Actions	2	*sassato(#4), kibi-kibi(#2)*

There were only two words that I placed in this sub-category. *Sassato* ("walking/moving quickly, hastily, unhesitatingly") elicited no pictures at all from the participants but did prompt these verbal descriptions: "fast, quick, with a quick movement; be quick about it," "angry image—I went out of the room angrily; I am always scolding my son—please, *sassato* do it!" and "Mothers often say to their children, *sassato shinasai* [do it quickly]." The responses that respondents gave for the word *kibi-kibi* ("to be energetic, spirited, brisk, lively in words and actions with neither dallying nor wasting time") included: "like army, rules, proper way to do something," "quick," "my job's way, proper," and "at full strain, active touch."

Movement in the air/water.

Sub-Category	Number of Words	List of Word Items (Group#)
Movement in the air/water	4	*hira-hira(#3), chira-chira(#2), yura-yura(#1), yusa-yusa(#3)*

There were four words in this sub-category. *Hira-hira* ("something light, thin, and soft which flaps, flutters, sways, or falls") elicited beautifully descriptive verbal responses from its group members: "light, think, beautiful—a butterfly fly, a leaf drop, a ribbon is blowed by wind," "fall light thing," "small thing falls—papers, leaves," "a paper fall, in autumn leaves fall—a beautiful but sad image," and "a butterfly fly, float." *Chira-chira* ("something small and light drifting, fluttering down; casting glances, s small weak light flickering on and off") interestingly evoked four different verbal responses addressing the variety of semantic nuances for this

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word: "like cheating on an exam," "sometimes I can see, sometimes not see," "light go on and off," and "a little snowing." *Yura-yura* ("to sway, swing, waver softly in the air; flicker, to curl upwards") triggered images described as follows: "something moves in wind—neutral image," "smoke in the sky, swing, sway, candle flicker," "fire of candle sway," "blowing wind," and "You are so drunk, so you aren't walk straight, and keep moving right and left." One drawing was given, as shown in Figure 4.50:
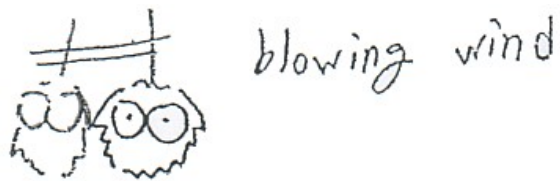
Figure 4.50. Illustration of *yura-yura*

Yusa-yusa ("things of considerable weight swaying slowly") evoked interesting images for its group members, described verbally as: "shaking heavy things—fat boy's body," "The tree is fluttering in the wind," "My body moves, I am fat," "Konishiki sumo wrestler, fat jiggle," and "something shaking, like trees in wind; sumo's fat body shake when walks."

Directional movement.

Sub-Category	Number of Words	List of Word Items (Group#)
Directional Movement	4	*jiwa-jiwa(7), jiri-jiri(8), kuru-kuru(6), guru-guru(9)*

I will now examine the four words in the sub-category concerning directional movement. *Jiwa-jiwa* ("to proceed slowly, but surely; to attack slowly and steadily, has the feeling of something encroaching inconspicuously and unpleasantly; to seep slowly, bit by bit") prompted a combination of verbal and pictorial responses that addressed both of the major meanings of the word, as shown in Figure 4.51:

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The flood spend over the whole village.

water $\rightarrow$ water water

(a)

by degrees

dripping

slowly

(b)   (c)   (d)

Body is more and more sweat

sweat

(e)
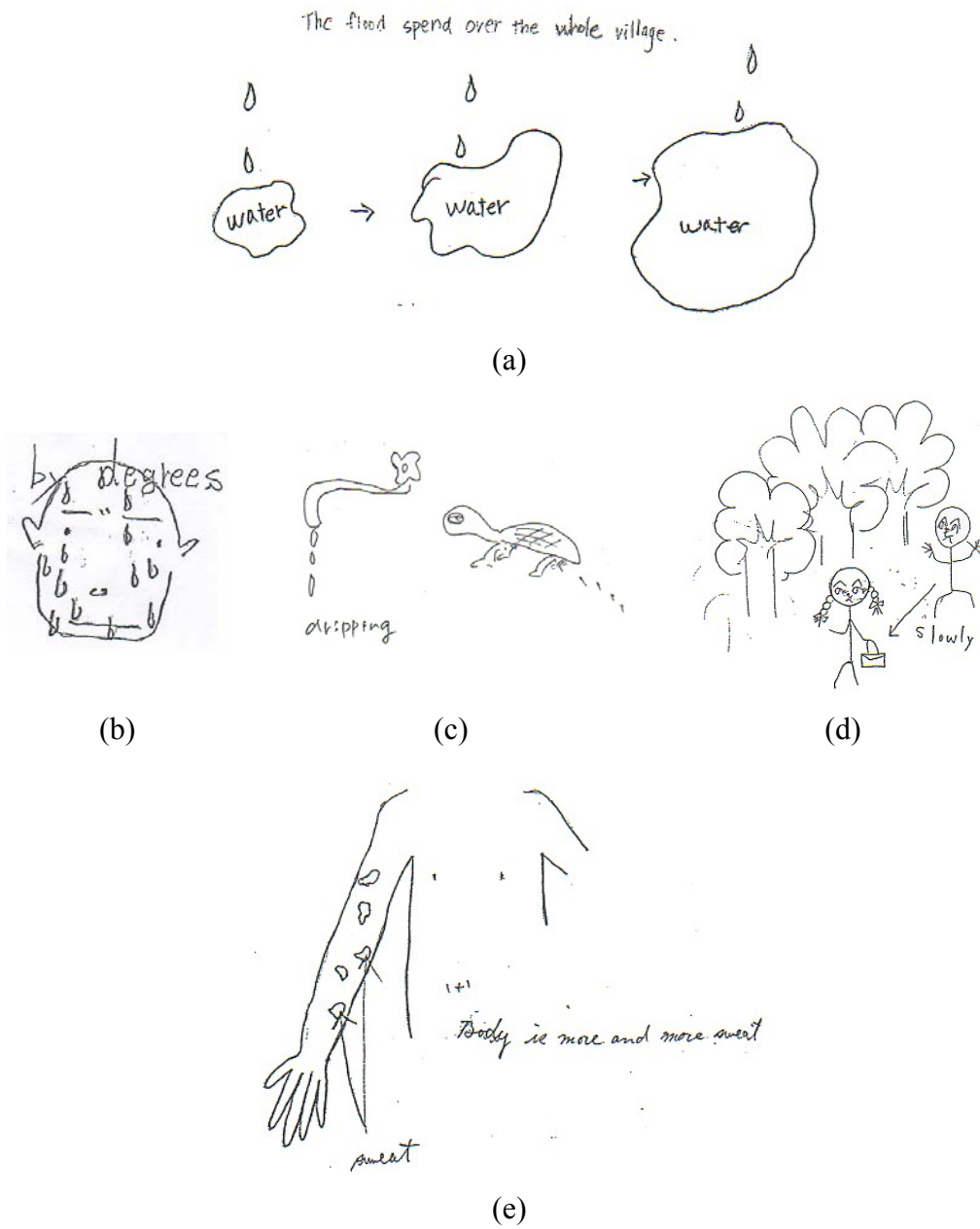
Figure 4.51. Five illustrations of *jiwa-jiwa*

The pictorial responses of subjects for the word *jiri-jiri* ("to proceed slowly but surely; gradually encroach on; sizzling, burning; intense burning sunshine; sound of alarm clock ringing") corresponded nicely to the various diverse connotations of this word, as shown in Figure 4.52:

(a)

(b)

(c)
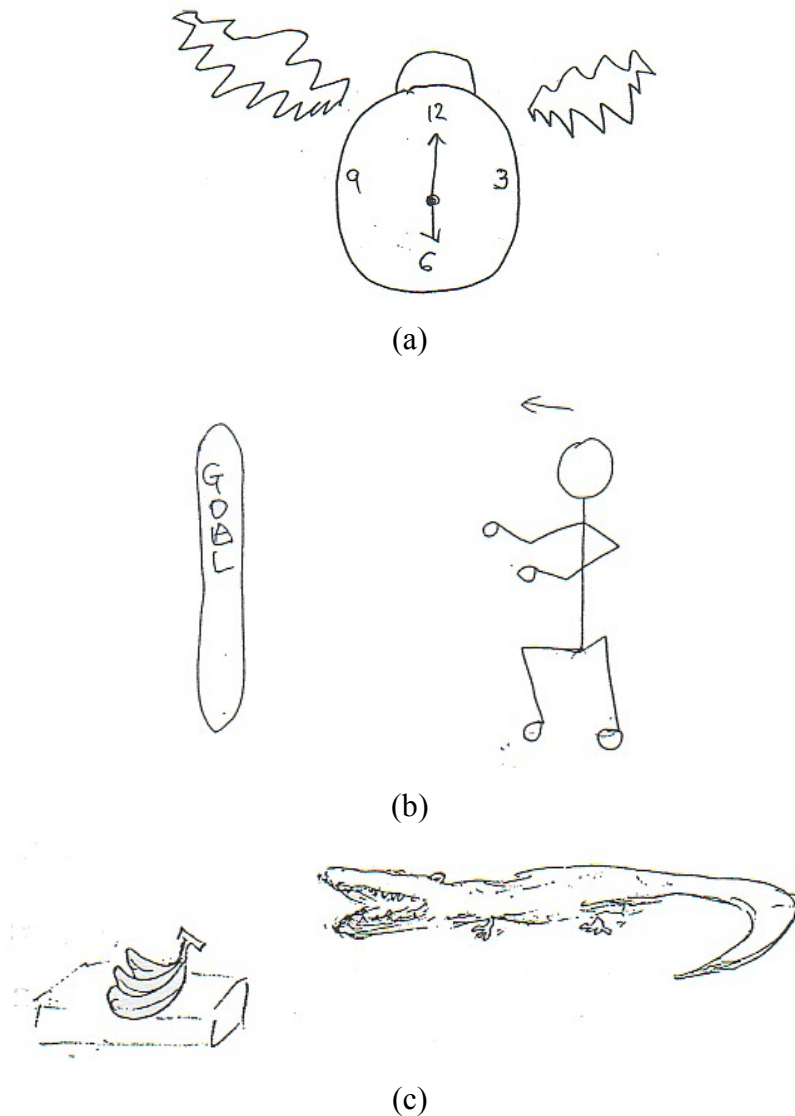
Figure 4.52. Three illustrations of *jiri-jiri*

Both *kuru-kuru* and *guru-guru* are used to describe types of circular movement. The word *kuru-kuru* ("to rotate continuously; to twirl, to wind/coil around; something light spinning around") generated both verbal and pictorial responses from the participants in its group. The verbal descriptions had some common elements, such as feeling dizzy, eyes rolling, and something like a windmill or top spinning. The drawings were similar as well, as shown in Figure 4.53:

(a)

(b)

(c)   (d)
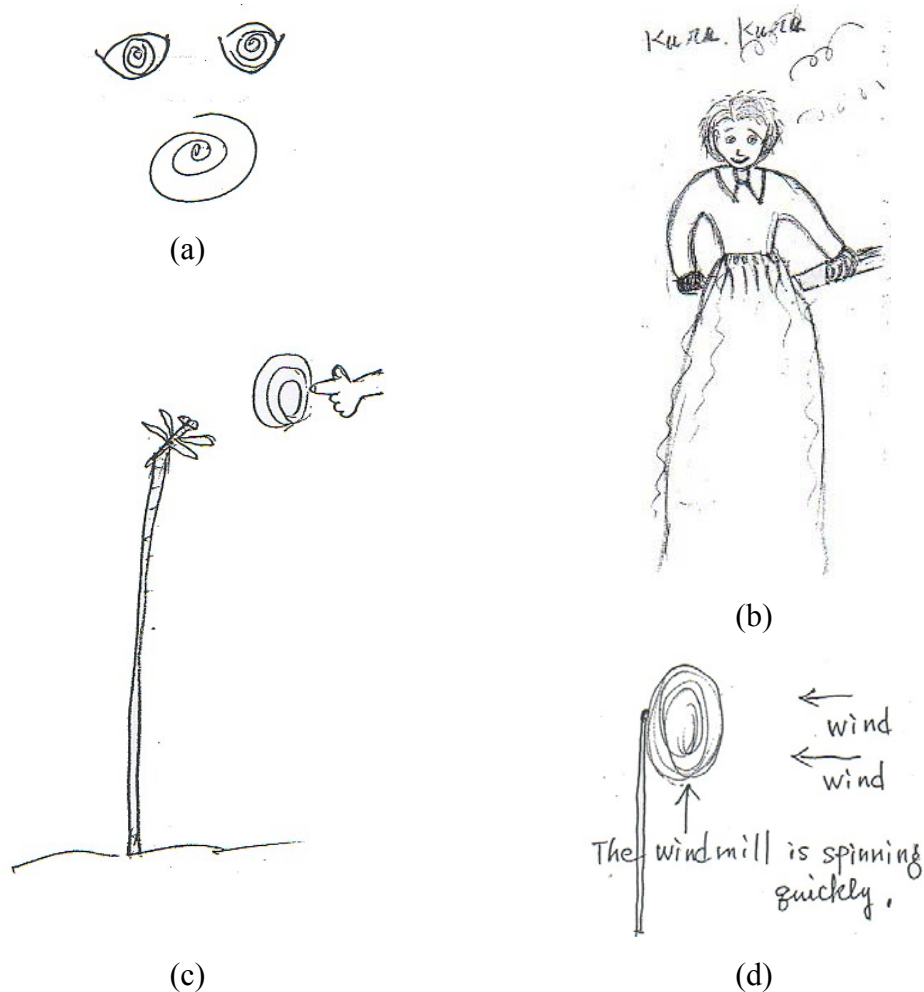
4.53. Four illustrations of *kuru-kuru*

Guru-guru ("to rotate continuously; heavier object rotates more slowly; feel dizzy") elicited verbal and pictorial responses that were very much like those for *kuru-kuru*. Once again, there were rolling eyes, rotating objects, and a dizzy feeling one has after riding a roller coaster, as shown by the illustrations in Figure 4.54:

| (a) | (b) | (c) |
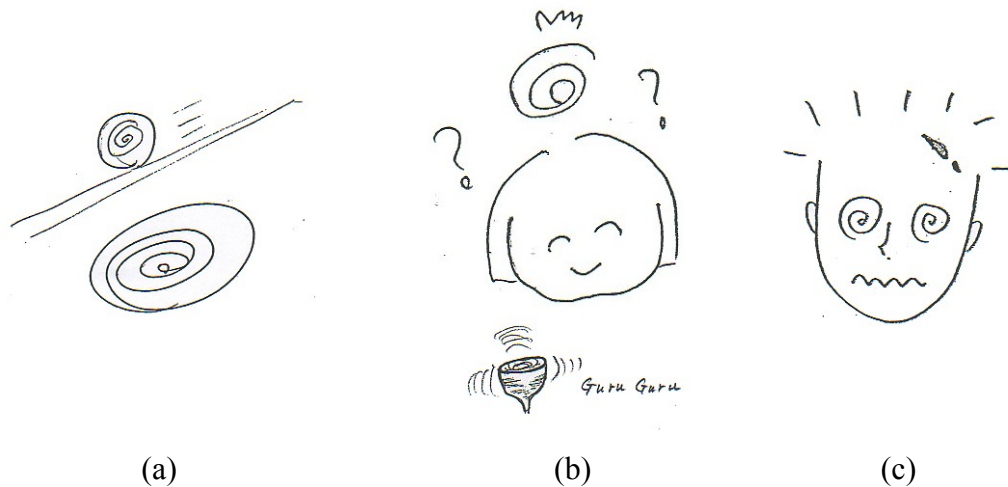
Figure 4.54. Three illustrations of *guru-guru*

Category IV—State

I divided the 12 words in this category into three sub-categories: (1) Confusion/Disorder/Disharmony, (2) Progress, and (3) Miscellaneous.

Confusion/disorder/disharmony.

Sub-Category	Number of Words	List of Word Items (Group#)
Confusion/ Disorder/ Disharmony	7	*bara-bara(#7), mecha-mecha(#6), mecha-kucha(#6), gucha-gucha(#1),kocha-kocha(#3), gocha-gocha(#2)kichin(#4)*

There are seven words in this first sub-category. Participants responded to the first word *bara-bara* ("something lacking unity, disjointed, in a state of disorder; to be broken into bits and pieces; to be scattered") with both verbal descriptions of their mental images: "scattered," "take a machine to pieces," "everyone got separated after finishing high school," "out of order, broken, my car," and "broken," and with several good drawings as well, as shown in Figure 4.55:

(a)   (b)

(c)   (d)
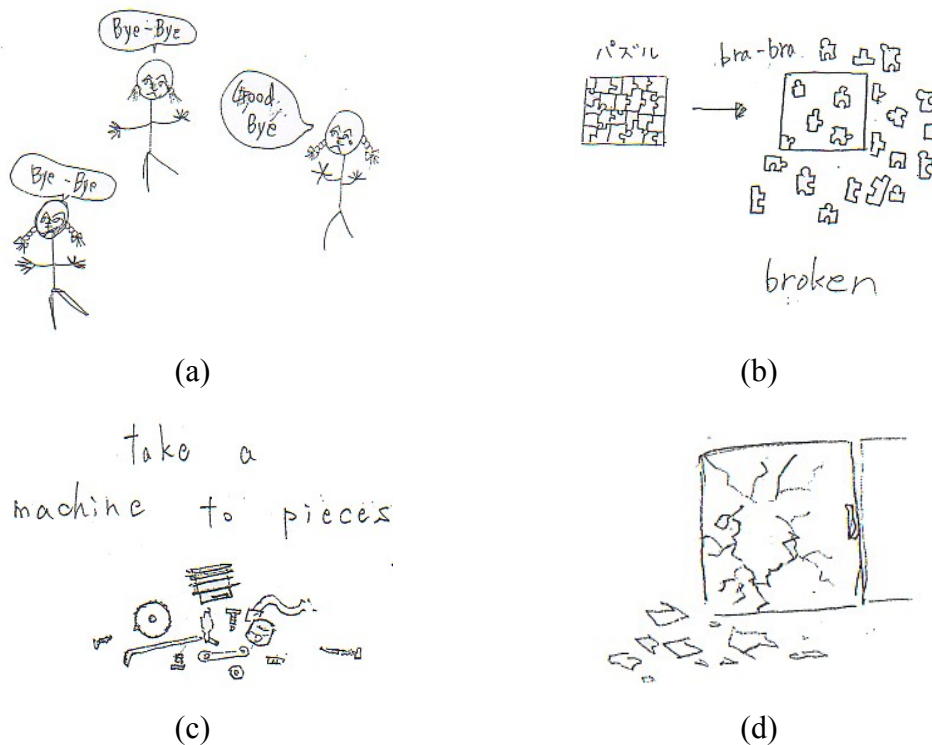
Figure 4.55. Four illustrations of *bara-bara*

Participants reacted to the word *mecha-mecha* ("to be in pieces, smashed to bits; to be all screwed up; to be ruined; to be thrown into confusion") by giving verbal descriptions of the images evoked by the word, such as "dog messed up the flowerbed," "a car ran into the wall and was demolished," "a look that something was

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broken; a look that room is littering," and "The flowerbed had been damage a dog," and by drawing detailed illustrations, as shown in Figure 4.56:
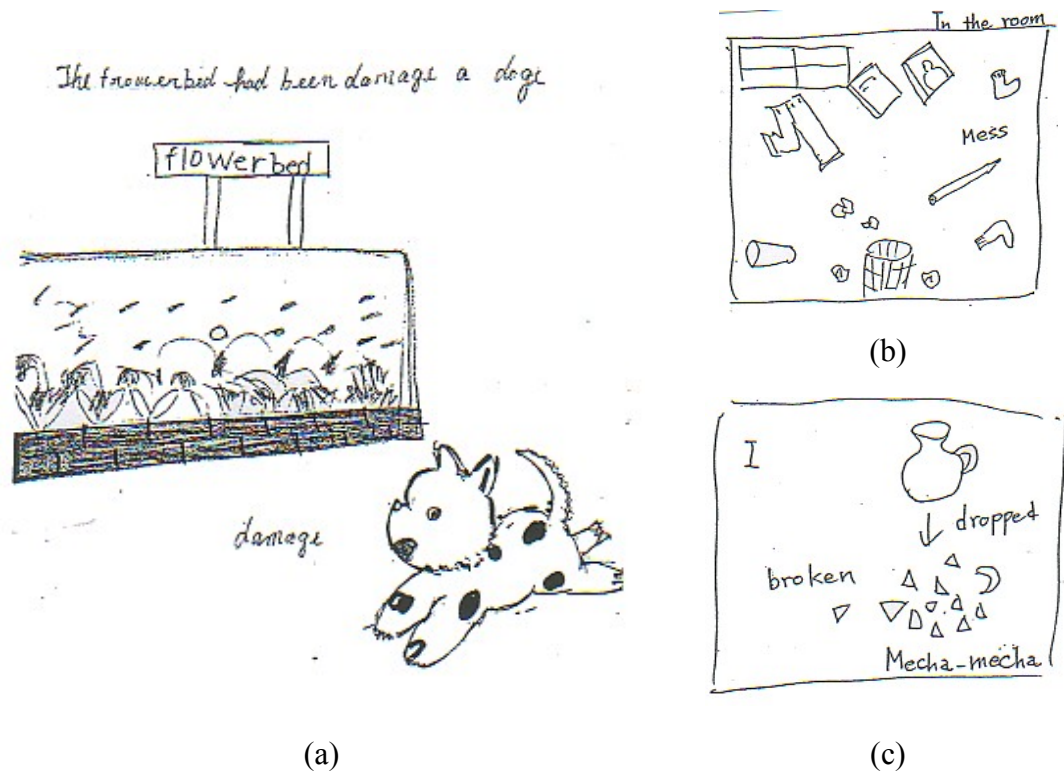
Figure 4.56. Three illustrations of *mecha-mecha*

The next word *mecha-kucha* ("to be all screwed up; to be ruined (events); to be thrown into confusion; to be incoherent, confused, messy, destroyed, broken, disordered") triggered good verbal descriptions, such as "an image of mess," "on the desk make a total of mess," "we gave up the plan for a pouring rain," "scatter toys about child's room," as well as pictorial representations, as shown in Figure 4.57:

(a)

(b)   (c)

Figure 4.57. Three illustrations of *mecha-kucha*

Four of the five people looking at the word *gucha-gucha* ("something in awful disarray, higgledy-piggledy; to lose shape from an excess of moisture with a greater sticky feeling to it and centering on the object being unable to maintain its shape; chewing sounds; stirring or mashing a substance") responded only with verbal descriptions: "when I mix *hanbaagu*, it is *gucha-gucha*; too soft mud"; "mud, mire, mixer, mixing"; "when dropped tofu; when play mud"; and "you cook some hamburger steaks, so you mix meat like *gucha-gucha*." One person used the word "scattered" and drew this picture to describe the mental image, as shown in Figure 4.58:
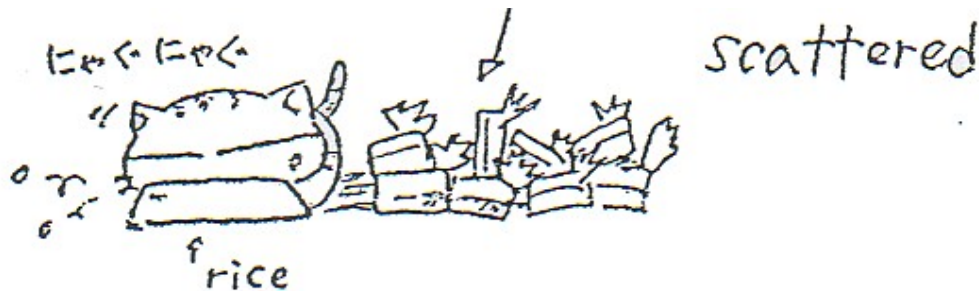
Figure 4.58. Illustration of *gucha-gucha*

Four people in the group looking at the word *gocha-gocha* ("to be confused, in a mess; a disorderly mixture of objects") thought of negative images of "messy rooms" and "messy desks." The next word, *kocha-kocha* ("a disordered mixture of different types of small objects; light emphasis on a confused state"), is similar to *gocha-gocha* in meaning but less extreme. As with *gocha-gocha*, the descriptions offered by the participants were all verbal for *kocha-kocha*: "my room is little messy," "a little messy," "messy," and "things are scattered but it is easy that we gather them together; things, many, small, various."

Interestingly, there was only one word with the contrasting emphasis on an orderly state. This was the word *kichin* ("properly, neatly, orderly, organized, tidy

and clean") for which all participants responded verbally, including these comments: "neat, properly," "I must put away futon properly," and "I must do properly."

Progress.

Sub-Category	Number of Words	List of Word Items (Group#)
Progress	4	*zun-zun(#3), gun-gun(#4), meki-meki(#5), sura-sura(#10)*

I will now discuss the four words in the Progress sub-category. All of the participants responded to the word *zun-zun* ("rapid, remarkable, smooth progress toward a destination or goal") with verbal descriptions: "like an action for future purpose," "go straight walking, determined action," "when I go to place I something to do, purpose," "grass is grow," and "someone walk his way with sure purpose, nobody can stop his action." The next word, *gun-gun* ("vigorous, striking progress; something progressing or growing very rapidly; forcibly and quickly placing one's strength again and again into something") elicited only verbal descriptions from its group members: "increase quickly; in summer weeds and grasses grow quickly," "grow well; the grass grew knee high," "something goes up quickly, increases size," "hot image; the thermometer is quickly rising," "an appearance—children grow very fast, plants grow very big." The next word *meki-meki* ("marked, remarkable progress, improvement, growth") elicited similar verbal responses from its group, including: "make remarkable progress; remarkably, rapidly," "remarkably," "remarkably, rapidly," "His health improved rapidly. The plants grow up rapidly," "a positive image of plants growing up rapidly; go up grade, progress." The last word in this sub-category *sura-sura* ("the smooth, unbroken progression of spoken remarks, a job, reading, writing, speech") inspired its group members to offer these verbal descriptions: "smooth," "smoothly, easily, fluently," "something proceeding smoothly, without a hitch," "The matter went very smoothly/She reads English fluently/He gave ready answers to my questions," and "Say when something is going

well and is free of problems or troubles/say when a movement has no sudden break or changes the direction or speed/say when something can be done or obtained quickly and easily." There were also three very good illustrations for *sura-sura*, as shown in Figure 4.59:

(a)

(b)   (c)
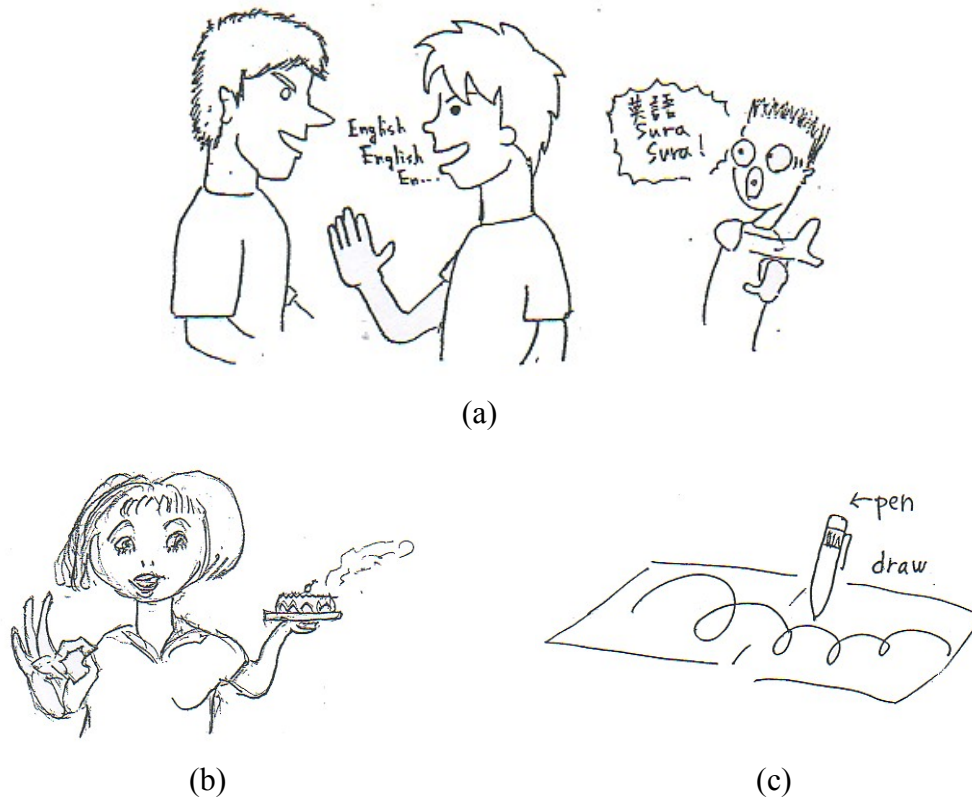
Figure 4.59. Three illustrations of *sura-sura*

Miscellaneous.

I placed the last word in this broad category in a sub-category of its own because it did not fit with any other sub-category. *Nami-nami* ("describes the state of a vessel container being filled to overflowing") prompted the respondents to give some interesting and different responses. Two people drew pictures of glasses full of water, as shown in Figure 4.60:
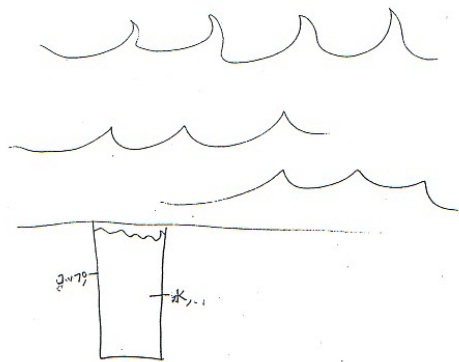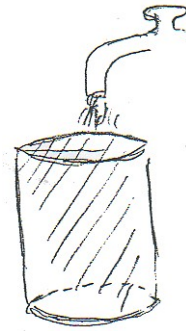
(a)   (b)

Figure 4.60. Two illustrations of *nami-nami*

Two other people used the word "extraordinary" in connection with the word, and one person said that *nami-nami* evoked the image of "a normal thing" and drew this picture to illustrate it, as shown in Figure 4.61:
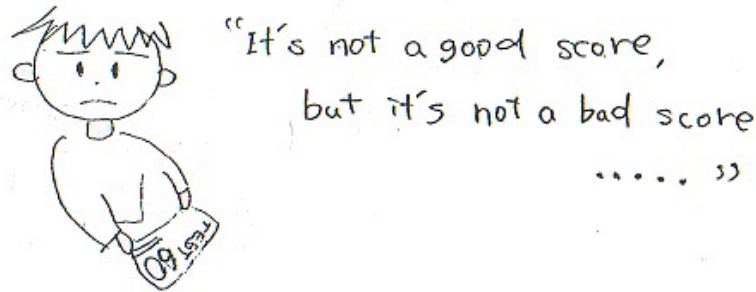
Figure 4.61. Illustration of *nami-nami*

Category V—Climatic/Environmental Conditions

Category	Number of Words	List of Word Items(Group#)
Climatic/ Environment Conditions	4	*soyo-soyo(#2), shito-shito(#4), ura-ura (#8), hissori(#4)*

I will now examine the four words that I placed in the last broad semantic category, Climatic/Environmental Conditions. Only three participants responded to the first word *soyo-soyo* ("a breeze blowing gently and softly") giving the following verbal descriptions of the images evoked: "wind blows calmly and leaves shake," "something moves in the wind," and "gentle wind." The other two group members gave no responses. This could have been because this word is a rather classical form, used mainly in poetry and may not have been familiar to the participants who were young college students. *Shito-shito* ("a fine rain or snow falling lightly") elicited similar verbal descriptions from all five people in its group: "a slow drizzle," "gently, softly drizzling rain or snow," "soft, quiet snowing," "It is raining quietly," and "We have a rainy season called 'tsuyu' and it lasts about a month. It has been raining on and off, feel very depressed." All five of the participants who responded to the word *ura-ura* ("to be refreshingly bright; warm and pleasant spring sunshine") gave verbal descriptions: "spring's warm day," "beautiful day view," "springtime, it make someone feel good," "the good feeling one has on a bright, sunny day," and "find day, peaceful, Ebino," as well as drawing strikingly similar pictorial representations of their mental images, as shown in Figure 4.62a and Figure 4.62b:

(a)   (b)
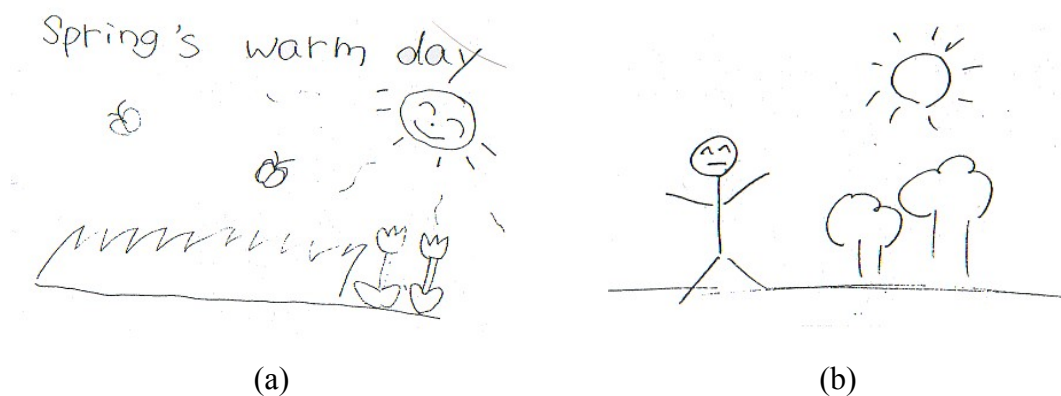
Figure 4.62a. Two illustrations of *ura-ura*

(a)
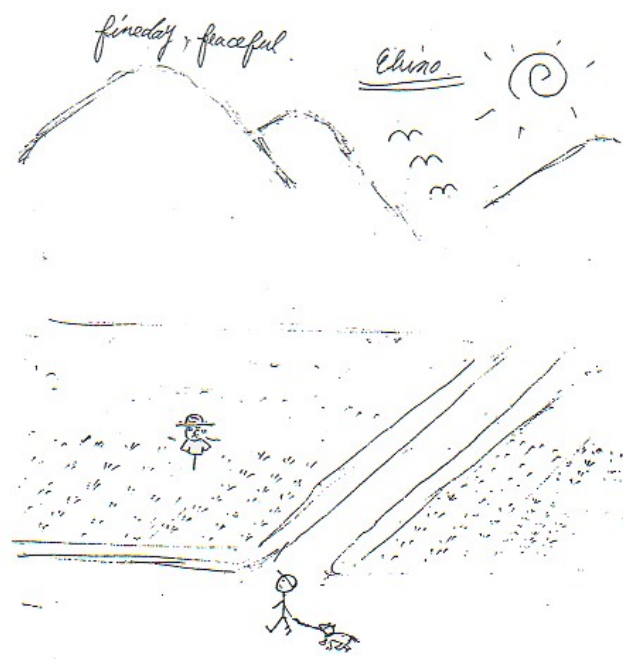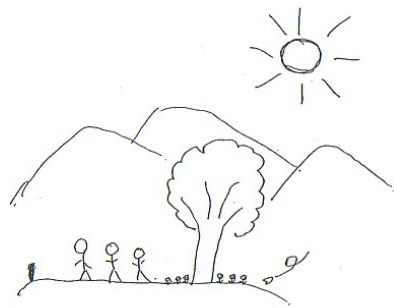
(b)
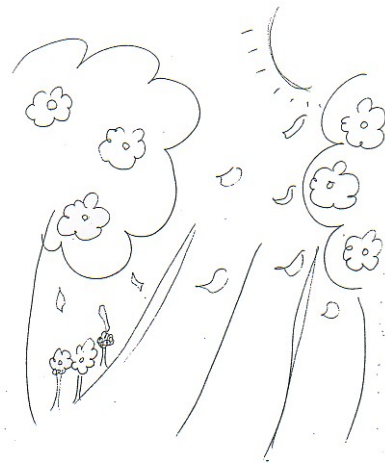
(c)

Figure 4.62b. Three illustrations of *ura-ura*

The fourth word *hissori* ("to be still, hushed; lonely, solitary centering on the psychological feeling of loneliness; a situation where there is a total absence of people and noise") prompted verbal responses only from its group members: "quiet, still, like late night—a positive image," "This is the feeling I am alone in house, secret thing sometimes," "lonely image—since my husband's death, I have leading a lonely life," "disappear, fall in, sink" and "in secret, calm."

There were 10 words out of the entire group of 100 words that have already been discussed in other categories but that have alternate meanings all having to do with weather, climate, and environment. I will now discuss them briefly. *Bara-bara* (discussed in State: Confusion/Disorder/Disharmony) can also refer to the sound of hail or grain-like objects falling against something and scattering. The word *chira-chira* (discussed in the Movement in the air/water sub-category) is often used to describe lightly falling snowflakes. *Jiri-jiri* (discussed in the Directional movement sub-category) can mean hot, direct sunlight and intense, burning sunshine. *Gira-gira* (discussed in the Visual/Movement of light sub-category) refers to the glaring, blazing sun. *Sukatto* (in the Pleasant/Soft/Fresh sub-category) can be used to describe clear, dry weather that is pleasantly fresh. *Fuwa-fuwa* (in the Pleasant/Soft/Fresh sub-category) is very often used to describe big, puffy snowflakes. The words *shittori* and *hoka-hoka* (both discussed in the Pleasant/Soft/Fresh sub-category) can be used to describe "a calm, delicate tranquil atmosphere" and "warm, cozy, comfortable temperature" respectively. *Shobo-shobo* (discussed in Eye Expressions/Movements) is sometimes used when talking about a light, gloomy rain accentuating the miserable feeling it implies. *Kan-kan* (discussed in the Anger/Irritation sub-category) has the additional meaning of "to shine brightly, blazingly centering on the sunlight." While most of these alternate meanings were given by at least one of the participants in each group that examined these 10 words, they were not the most common responses.

Conclusion

There were many interesting verbal and pictorial responses given by participants in this study as they reacted to sound symbolic vocabulary words. I grouped these responses into five broad categories based on meaning that were similar to categories used in several of the dictionaries I consulted (Akutsu, 1994: Chang, 1990; and Millington, 1993). These categories were not as much an attempt to establish rigid, linguistically correct semantic groups as they were my effort at devising a way of thinking about sound symbolic vocabulary words that might be useful in designing classroom instruction, particularly thematically based teaching that would coordinate well with many of the textbooks presently being used in university-level language classrooms.

In examining the data collected from the 50 native Japanese speaker participants in this study, I discovered not only patterns of commonality and regularity but also differences in their verbal and pictorial responses that were vivid, interesting, and very revealing. As shown in the Group Consensus Table below, there was a high degree of commonality among the participants' responses in this study.

Group Consensus Number of Participants in Agreement	Category I Emotional Aspects (26 words)	Category II Physical Aspects (37 words)	Category III Actions and Movement (21 words)	Category IV State (12 words)	Category V Climatic/ Environmental Conditions (4 words)	Total (100 words)
5	26	30	16	6	2	80
4	0	4	3	4	1	12
3	0	2	2	1	1	6
2	0	1	0	1	0	2

Table 4.3 Group Consensus

However, it is important to point out that there was also a small degree of diversity among group members. These results provide support for the ways in which individuals with both shared and unique experiences construct the meaning of words. The responses were the outward representations of the meaning that each individual participant constructed based on personal background knowledge and diverse life experiences, and yet there was so much consistency that the notion of a community of language users who agree to a large degree on the meanings of vocabulary terms was supported.

In addition, the data from the Agreement with Dictionary Definition(s) Table, as shown in Table 4.4, even more clearly illustrates this notion of community. An overwhelming percentage of the 500 total responses given in this study were in agreement with the definitions found in a number of dictionary sources I consulted (Akutsu, 1994; Chang, 1990; Gomi, 1989; Millington, 1993; and Ono, 1988). It is interesting to note, however, just as in the Group Consensus Table, that data in the Agreement with Dictionary Definition(s) Table indicate a small percentage of divergence from the norm. These data seem to point to yet another characteristic of sound symbolic vocabulary, namely, its flexibility allowing for an individual speaker's expression and creativity. While adhering for the most part to complex and unique linguistic conventions that set them apart as a distinct lexical group (as discussed in Chapter Two), sound symbolic expressions are often "personalized" by slight deviations from these rules in order to create new feelings, perspectives, or effects. For example, the Japanese poet Kusano Shinpei coined some rather unique sound expressions, such as *gubuu, geTgege* (where T represents a glottal stop), and *riirii ririru ririruThuThuThu*, to imitate various frog voices in his frog poems (cited in Hirose, 1981).

Number of People in Agreement with Dictionary Definition(s)	Category I Emotional Aspects (130 Responses)*	Category II Physical Aspects (185 Responses)	Category III Actions and Movement (105 Responses)	Category IV State (60 Responses)	Category V Climatic/ Environmental Conditions (20 Responses)	Total (500 Responses)**
Agree with Primary Definition Only	66	134	77	39	16	332 (66.4%)
Agree with Primary and Additional Dictionary Definitions	39	38	12	9	0	98 (19.6%)
Agree with Dictionary Definitions other than Primary	11	5	7	3	0	26 (5.2 %)
Agree with Primary Dictionary Definition and Additional Definition(s) Not Listed in Dictionary	7	4	3	1	1	16 (3.2%)
Response not in Dictionary	7	3	3	5	1	19 (3.8%)
No Response	0	1	3	3	2	9 (1.8%)

*26 words x 5 respondents
**100 words x 5 respondents

Table 4.4. Agreement with Dictionary Definitions

The fact that out of 500 total responses there were only 9 cases where a participant gave no response (see Agreement with Dictionary Definitions Table), either verbal or pictorial, seems to support the claim that sound symbolic words have high sensory imagery-arousing potential (Kita, 1997; Occhi, 1996; Sakamoto, 1991; Yamasaki, 1992; and Yang, 1985), making them the kind of "image-hospitable" language material that would be well-suited for use with elaboration strategies based on a dual visual/verbal dynamic (Gray, 1997; Manalo, 1999; Paivio, 1980; Sadoski & Paivio, 2001, Wang & Thomas, 1992). Another interesting point emerging from the data was that, although they were instructed to do so by my research assistants per my guidelines, the participants specifically mentioned whether the mind image evoked was negative, positive, or neutral only 72 times, as shown in the following table:

Affect Number of Times Participants Referred to Images as:	Category I Emotional Aspects	Category II Physical Aspects	Category III Actions and Movement	Category IV State	Category V Climatic/ Environmental Conditions	Total
Negative	9	15	10	3	1	38
Positive	10	17	1	4	1	33
Neutral	0	0	1	0	0	1

Table 4.5. Affect

Although this may seem to indicate that participants were not following directions, my interpretation is that most responses so clearly were either positive or negative that respondents may have thought it unnecessary to add the label positive or negative to their responses.

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In this dissertation study, I set out to elicit from Japanese native speakers verbal, pictorial, and contextual representations of the sensory mental imagery evoked by a set of 100 sound symbolic words. Grouping the representations into five broad semantic categories, I presented the results I obtained from the 50 participants verbally and visually to demonstrate the vividness and richness of the descriptions and to give a glimpse at the sound-sense connections native speakers make with sound symbolic expressions. Supporting those descriptions are the data presented throughout the chapter concerning frequency of use, group consensus, and agreement with definitional norms. Based on the results of this study, I propose that native-speaker-generated imagery-based verbal, pictorial, and contextual representations have great potential as promising classroom tools in the teaching of this important, yet overlooked body of words in communicative, proficiency-based language classrooms. I will offer some suggestions in the next chapter as to how these representations might be utilized by those educators involved with classroom instructional design in the future.

CHAPTER FIVE

EXPANDED IMPLICATIONS FOR
INTEGRATING SOUND SYMBOLIC EXPRESSIVE VOCABULARY
INTO CLASSROOM INSTRUCTION

In this chapter I will discuss some expanded implications for integrating sound symbolic expressive vocabulary into Japanese classroom instruction that emerged from this dissertation project. First, I will examine the relevant theoretical assumptions I use as a basis for the instructional recommendations I will offer. I will then briefly describe a suggested curriculum, discussing the incorporation of direct vocabulary instruction into a thematically based communicative approach to teaching Japanese. Finally, I will provide an example vocabulary lesson, giving a glimpse at model instructional events exemplifying the classroom application of theoretically based strategies.

Relevant Theoretical Assumptions Underlying Classroom Instruction

The underlying foundation for the overall instructional model I embrace is based on the constructivist model of learning that emphasizes the notion that knowledge is actively constructed by learners. From the constructivist perspective, learners are seen as active seekers and processors of input, who select and attend to features of the environment, transform and rehearse information, relate new information to previously acquired knowledge, organize knowledge to make it more meaningful, and utilize effective retrieval strategies to activate and apply stored knowledge (Schunk, 2000). In order to describe my instructional design based on this constructivist perspective, I will discuss the following major components of instruction: 1) structuring the framework for learning, 2) facilitating construction of meaning, and 3) teaching strategies for constructing meaning and improving long-term retention.

Structuring the framework for learning. The learning framework, from a constructivist perspective, encompasses attention to learner knowledge and the organization of the material to be learned. Effective instruction facilitates the positive interaction between existing knowledge and new information by organizing the material to be learned in meaningful ways. Cognitive approaches such as represented in the

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constructivist model emphasize that one of the most important elements in the learning process is what the learner brings to the learning situation. What the learner already knows is much like a scaffold that supports the construction of all future learning and that determines to a great extent what the learner will pay attention to, perceive, learn, remember, and forget (Woolfolk, 2001).

However, it is possible that learners may not have sufficient pre-existing knowledge with which new information may be linked. In such a situation, the teacher must help students build necessary background knowledge prior to introducing new information. In the case of teaching Japanese sound symbolic vocabulary, the use of metalinguistic previews to set the stage for learners would be advantageous. Because students would not likely have any pre-existing knowledge of this very specialized vocabulary in Japanese carried over from their knowledge of sound symbolic vocabulary in English, teachers could facilitate meaningful learning by presenting to students basic linguistic information about these words to help foster metalinguistic awareness. Such information might include the common characteristics of sound symbolic words, their function in the Japanese language, where they are encountered in authentic language use, and the cultural connotations they evoke. These previews would benefit students by giving them a clearer understanding of sound symbolic vocabulary in relation to Japanese language learning as a whole as well as providing a structural framework onto which subsequent learning could be constructed.

Organization of the material to be learned is important to ensure meaningful cognitive processing. Research has shown that well-organized material is easier to learn and to recall. Learning is enhanced by classifying and grouping bits of information into clearly organized chunks. Organizing sound symbolic words into semantic categories as I did with the data examined in Chapter Four could help students make stronger connections with similar categories in their pre-existing knowledge base. Organizing these words in such a way would also facilitate instruction based on a thematic approach.

Facilitating construction of meaning. In the constructivist model, encoding is the process whereby information is interpreted and prepared so that one can remember it

for the long term. The two major types of encoding strategies are maintenance rehearsal and elaborative rehearsal. Because maintenance rehearsal, that is, reciting information over and over, does not focus on how to-be-learned information is related to the learner's pre-existing knowledge base, the effects of such encoding are only temporary and the information is quickly forgotten (Gredler, 2001). By contrast, elaboration, the second type of encoding strategy, is a form of rehearsal that facilitates learning by keeping the new information active in working memory, increasing the chance that is will be permanently stored in long-term memory. What exactly is elaboration? It is the process of adding to information being learned in the form of examples, details, visual aids, or anything that serves to link new information to existing knowledge (Schunk, 2000). Elaboration builds extra links to a learner's existing knowledge and provides the learner with several alternative cues that can be used to retrieve information. The more students elaborate new ideas, the more they make them their own, the deeper their understanding will be, and the better their ability to recall the information will be. Teachers can help students to elaborate by asking them to relate new information to their own experiences, by having them illustrate their mental imagery via drawings, and by having them explain their connections to classmates (Woolfolk, 2001). The resulting elaborated networks of knowledge include the learners' interpretation of the new information combined with their own personal constructions and inferences. Using such enriched knowledge networks to guide them, learners can make more sense of new material and can have more ways of making associative connections between the new and the known. When encountering new and unfamiliar material, as in the case of Japanese sound symbolic vocabulary, learners will need to learn to use cognitive strategies to become more efficient and successful vocabulary builders.

Teaching strategies for constructing meaning and improving long-term retention. Cognitive elaboration strategies are a means of bringing about more meaningful interaction with the material to be learned through active involvement of the learner. Such strategies include the processes of construction and integration by which the learner actively builds internal connections in working memory and external connections to prior

knowledge. Because the learner is interacting with the new information, leaving a more distinctive trace in memory, stronger assimilation and retention of material is more likely to occur. Elaborative processes can be verbal, where learners construct statements about the underlying meaning of to-be-learned information, or nonverbal, where learners construct mental images associated with the material. I use dual coding theory, as discussed earlier in Chapter Two, as the theoretical foundation for the imagery and illustration-based strategies I propose as classroom tools to teach Japanese sound symbolic vocabulary.

Dual coding theory asserts that one's previous experiences, or prior knowledge, are the basis from which mental representations derive. The experience can be linguistic or nonlinguistic, which develops into two distinct yet interconnected mental systems, one for representing and processing language and the other for processing nonlinguistic information through the generation and analysis of mental images derived from visual, auditory, tactile, and other sensory input (Zhang & Schumm, 2000). The two systems organize and process information differently; language operates more sequentially and imagery more simultaneously. The activation of representations in one "code" can be linked with previously activated representations in the other "code." Mental images can be labeled or described using language and language can stimulate the generation of mental images.

Elaboration strategies, particularly those using mental imagery, provide a visual base to help learners span linguistic barriers, something that is especially important in foreign language vocabulary learning (Hodes, 1994). Imagery-based strategies help learners isolate and identify important material, recall prior knowledge, provide interaction with the content, and enhance information acquisition (Hodes,1994). Visual imagery helps learners to "package" information more efficiently than by using words alone. Strategies that use a pictorial-verbal input combination make the associations between new and old information stronger and more long lasting. Despite the seeming advantages of using imagery and illustration-based strategies to enhance learning, they have not been utilized to their maximum potential in formal classroom instruction

(Oxford & Crookall, 1990). It is important for teachers to encourage students to use these kinds of elaboration strategies to allow for deeper processing of the material to be learned that will lead to improved overall learning. Using verbal as well as visual cues can contribute to a more thorough elaborative interaction with the new material, resulting in more meaningful and efficient learning.

One type of elaboration strategy that is potentially very promising for education in general, and in particular for foreign language vocabulary instruction, is imagery mnemonics (Pressley, Levin, & Delaney, 1982). Mnemonics may be thought of as formal techniques used for organizing and encoding information in ways that make it more likely to be remembered (Gray, 1997). Using imagery-based mnemonic strategies to teach sound symbolic vocabulary words would enable students to become more active participants in the learning process by encouraging them to think about the nature and meaning of the material to be learned and how it relates to their own lives.

I propose using imagery and illustration-based elaboration strategies combined with metalinguistic previews to teach sound symbolic vocabulary in the university-level Japanese language classroom. Before actual study of sound symbolic vocabulary items is undertaken, the teacher should present a general preview of the sound symbolic system in Japanese to set the stage for subsequent learning and to better focus the learners' attention. This preview would be designed to give the students background information and would include a basic explanation of the common linguistic characteristics of sound symbolic words, their function in the language and where they are encountered, among other kinds of information. The preview would ideally be presented in small, manageable segments over an extended number of class periods during the time normally devoted to vocabulary instruction. Elaboration strategies would come into play as actual vocabulary items are introduced to students. For each new word introduced, students would be provided with a verbal definition (or definitions in the case of multi-meaning words, of which there are many in Japanese) along with several vocabulary illustrations that have the ability to represent information more economically than would be possible otherwise. These vocabulary illustrations, drawn by native speakers as visual

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representations of their "mind pictures" evoked by the words, would serve as mnemonic aids, prompting students to generate their own individual mental images based on personal experience. Asking students to illustrate their images would ensure more active involvement with the words. Having students share their illustrations with classmates, compare them with the native speakers' drawings, and discuss similarities and differences would give them the opportunity for increased elaborative practice. The teacher could also provide students with several example sentences in which the new words are used appropriately.

Using elaboration strategies that capitalize on the interplay of verbal and pictorial/visual components increases the amount of attention learners bring to the learning task, provides a meaningful context for more effective meaning construction, induces more active elaborative interaction with the new material, and results in more successful learning and improved long-term retention of the information. However, students may not be aware of the advantages of such elaborative procedures for acquiring new vocabulary; so teachers must increase student awareness of these strategies and train students in how to use them (Lawson & Hogben, 1996). Using metalinguistic previews and imagery and illustration-based elaboration strategies, combined with the inherent appealing nature of sound symbolic words, can be a promising instructional tool for language teachers in their attempt to enhance student motivation, engagement, and enjoyment in learning Japanese.

Instructional Guidelines for Teaching Japanese Sound Symbolic Vocabulary

The mastery of vocabulary is an essential component in the acquisition of a foreign language and plays an important role in classroom success. Therefore, one would naturally expect vocabulary to be a top instructional priority for language teachers. However, the opposite is often the case. Vocabulary is not explicitly taught in most language classes, and students are often expected to "pick up" vocabulary on their own without any guidance from the teacher. Too often vocabulary instruction involves merely giving students lists of words to memorize and providing little, if any, opportunities to practice (Oxford & Crookall, 1990). In the initial phase of learning a foreign language,

the student is primarily concerned with mastering the structure, basic vocabulary (often chosen to illustrate the structure), correct pronunciation, etc. However, as soon as the initial phase is over, when the student is just beginning to feel able to communicate about everyday matters, the frustration of not knowing enough vocabulary tends to set in. Indeed, it is the acquisition of vocabulary that is identified by most students as their single greatest source of problems (Kang & Golden, 1994).

It is the responsibility of language teachers to ensure that students understand the real-world purpose for building vocabulary, whether it is in the student's first language or in a foreign language. A rich vocabulary helps individuals to communicate more effectively. The more words one knows and uses appropriately, the better that individual is able to communicate knowledge and feelings to others. Vocabulary development remains a vital component of language learning. Without an extensive vocabulary, it is extremely difficult for students to use all of the grammatical structures and useful expressions that they spend so much time learning in comprehensible communication.

What does it mean to say that one "knows" a word? Learning vocabulary is much more than learning the simple meanings of individual words. The learning of a word is a long, gradual process, one that takes place in many small steps over a period of time. The multifaceted components of word knowledge are the following (from Laufer, 1990):

- <u>Form</u>: recognizing the spoken and written form; being able to pronounce and write the word correctly
- <u>Word Structure</u>: recognizing the base form and possible ending devices to create alternate derivative forms
- <u>Syntactic Behavior</u>: what grammatical roles the words play in the language
- <u>Meaning:</u> referential (concepts the word represents), affective (connotations of the word), and pragmatic (the suitability of the word in a particular situation)
- <u>Lexical Relations</u>: relations of the word with other words
- <u>Common Collocations</u>: the occurrence of the word with other words, notably verbs and particles

Effective vocabulary instruction should be thorough, focused, and designed to motivate the learner, to help create or sustain an interest in words, and to deepen word knowledge in many ways by encouraging learners to make multiple connections between new and known information, by requiring learners to exercise a sufficient amount of mental effort when approaching a learning task, and by exposing learners to words many times over an extended period of time.

In contrast to first-language vocabulary acquisition that occurs primarily as a result of massive exposure to rich language contexts, acquisition of vocabulary in a foreign language may require direct teaching and constant reinforcement and practice, especially for difficult words (Kang & Golden, 1994). Because not all of the words students must learn for communicative competence in a language can be taught in a classroom setting, teachers should select the vocabulary to teach very carefully and strategically, focusing on the following criteria (Nagy, 1998):

- Words worth learning—words that are related to unit/chapter themes; words that are used frequently by a high percentage of native speakers; words that can be used in many different contexts
- Words that need instruction—words that represent new and difficult concepts; words for which context does not make meaning clear; words for which there are no first-language single-word equivalents
- Words with some extra pay-off—words that illustrate some strategy or general language principle, such as common prefixes/suffixes; words that are fun to say and that are motivating to students

Sound symbolic words play an important role in all styles and forms of Japanese but they are particularly important in the everyday informal spoken language of most native speakers (Bruch, 1986). However, these words can be a source of difficulty for language learners because, despite learner expectations, there are really no equivalent forms or synonyms in English to facilitate learning. Moreover, contextual clues provide little, if any, help in uncovering the meaning of unfamiliar words. As a lexical group, sound symbolic words are intriguing and aurally appealing to learners; they have an

inherent ability to engage learners in meaningful vocabulary learning (Kimizuka, 1967).

For all of these reasons, teachers of Japanese might consider incorporating this sizeable body of unique expressions into classroom vocabulary instruction, the result of which would be the increased involvement of learners in more challenging, motivating, interesting, and enjoyable learning experiences.

The number of words that should be taught in a single vocabulary lesson depends on the type of words to be taught and on how much effort is required on the part of the learner. Sound symbolic words need intensive instruction that is very thorough and systematic. In a typical 15-20 minute segment of a 50-minute class period, it is reasonable to teach only one or two words in order to optimize learning in the initial stages of exposure to sound symbolic words. After students become more familiar with these words, several words relating to a common theme might be introduced in one lesson. Teachers should be encouraged to expose learners to vocabulary words in general and to sound symbolic words in particular using a variety of techniques and activities that are designed to encourage learners to be actively involved in the process of constructing meaning, to engage the learners' interest, and to increase motivation for the most meaningful learning experience to occur.

How can sound symbolic vocabulary words be most effectively integrated into Japanese language instruction? I suggest that metalinguistic previews that are designed to set the stage for the subsequent introduction of actual vocabulary items be initiated toward the end of the first year of language study. In that way, by the time a student reaches the second year, he/she should have built up sufficient background knowledge to serve as a framework for new learning and should have acquired enough general vocabulary knowledge to establish meaningful contexts for learning expressive vocabulary.

There are several techniques a teacher might utilize in teaching new vocabulary to students. Underlying these techniques is the notion of association or making relevant connections. Because it has been suggested that native speakers do not remember words as separate lexical items but rather as part of integrated semantic networks, it makes

sense in foreign language teaching and learning to focus on the kinds of relationships that connect individual lexical items together in such semantic networks (Oxford & Crookall, 1990). Grouping words on the basis of some common theme or characteristic can make vocabulary learning easier by reducing the number of elements to be learned and can facilitate longer lasting retention by linking new target language material with existing knowledge (Tohsaku, 1999). This approach is often seen in language textbooks where vocabulary items are associated with units or chapters organized along the line of thematic sets, such as my family, my house, everyday life, food, and shopping, among many others. An example of this kind of word grouping technique using sound symbolic vocabulary might be a group of words describing subtly different types of body pain,such as *kiri-kiri, gan-gan, hiri-hiri, chiku-chiku, zuki-zuki* as discussed in the Physical Aspects—Pain section of Chapter Four, used in a chapter on The Body and Health, perhaps in various scenarios depicting patients in a doctor's office, describing the nature of their physical complaints. Another example of this technique might be a group of words relating to weather, such as s*oyo-soyo, shito-shito, ura-ura, hissori, bara-bara, chira-chira, gira-gira, sukatto, fuwa-fuwa, shittori, hoka-hoka, shobo-shobo, and kan-kan* as discussed in the Climatic/Environmental Conditions section of Chapter Four, used in a textbook chapter on Weather and Climate. As additional words are added to the semantic groups as learning progresses, students should be encouraged to add the new words to existing word groups in individual vocabulary notebooks. This is particularly effective when the teacher reviews and expands on previous work. Each time the semantic group is re-visited in increasingly greater depth, the new vocabulary items and concepts introduced can be anchored to already-existing semantic networks.

Word and concept association tasks, what I earlier called elaboration, involve making connections between a new word or concept and the learner's pre-existing knowledge resulting from personal experience. Teachers can guide students to make meaningful associations by asking questions such as: "Does the new word remind you of an event; of a particular spatial arrangement; of something that is repeated; of a taste, sound, smell; of an image; of an emotion; of interesting information? Does the new

word have a distinctive sound, and in what context did you first hear or see the word?" Students can then compare their answers to such questions to give them the chance to see if their classmates have made similar or different associations, thus increasing the in-depth interaction between learner and instructional input.

Using materials that combine visual/pictorial elements with verbal elements is yet another association technique with great promise for classroom instruction. Instruction in which visual input is used to reinforce verbal input increases the attentional focus of the learner, increases the meaningfulness and the organization of new material, promotes active involvement of the learner in the construction of meaning, and facilitates overall learning and better retention. Students need to be trained to use such associative techniques. Teachers can use pictorial material—cartoons, simple line drawings, pictures from various sources—to help students make connections between their experience and the new material. Focusing on such visual relationships stimulates meaningful learning and retention of vocabulary input and offers the significant advantage of being clearer and more precise, with little need for time-consuming and lengthy verbal explanations. Using the provided graphic aids for guidance, students would be instructed to generate personalized mental images to demonstrate their own construction of meaning and would be asked to visually represent the images by drawing them. Students would then share their pictures, making comparisons and noting contrasts, discussing the relationship between their own original drawings and the to-be-learned material. Students would benefit from classroom discussion that would enable them to learn from each other. If teachers would consider using these kinds of instructional practices that center on the active engagement of learners in individualized meaning-making, there could be an increase not only in motivation and enjoyment but also in meaningful, long-lasting learning, the ultimate goal of classroom instruction.

Two other techniques that involve association and that could prove to be useful classroom instructional tools are physical response and physical sensation. The physical response technique involves actual physically acting out, or dramatizing, new vocabulary material, thus providing some degree of context for the items to be learned.

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The underlying assumption of this technique is that language is learned more efficiently when words are linked with physical movement, thus activating different parts of the brain and stimulating the activation of prior knowledge and its connection with the new material in multiple ways (Tohsaku, 1999). This method might be used when teaching sound symbolic words that describe various ways of walking, laughing, or smiling, as they lend themselves nicely to kinesthetic expression. Such a combination of motion and verbal input may well serve to enliven the language classroom by encouraging students to participate actively in the learning process and in the personal construction of meaning. Another potentially useful technique to teach sound symbolic vocabulary is physical sensation (Oxford & Crookall, 1990). This technique provides a small amount of context in terms of a physical association with a new word. Awareness of highly specific physical sensations, such as warm/cool, smoothness/roughness, help learners monitor and sometimes alter their own mental or physical states. This technique might be used in teaching sound symbolic words as follows. Learners might train themselves actually to experience an adverse feeling such as prickliness when dealing with words that have negative connotations and a pleasant feeling of calm when considering words with positive connotations.

It is not enough for teachers simply to introduce such associative techniques into classroom instruction. Entertaining games that reinforce semantic associations, such as Bingo, Word Categories, Odd Man Out, I Spy, and Shipwreck, among numerous others, could be integrated into classroom teaching, adding an element of enjoyment to the learning process (Machalias, 1991). It is essential that learners be actively engaged in meaningful tasks and activities that serve to extend the connections made between new and known material and help to create greater learner ownership of the material.

The cultural connection to language is particularly evident in sound symbolic vocabulary in Japanese. As in any language, there are many words and phrases to describe what is important to native speakers or what stands out in their perception of the world around them (Millington, 1993). Because Japanese sound symbolic vocabulary

is very culturally-linked, it is essential that cultural content be included in classroom instruction, using discussion, brainstorming, and metalinguistic previews to enable learners to build appropriate cultural background knowledge, setting the stage for more accurate and meaningful construction of meaning. Teachers should introduce sound symbolic words in real-world contexts using animation, comic books, newspapers, magazines, movies, TV dramas, children's stories and songs and popular music. In Figure 5.1 at the end of this section are some examples of sound symbolic words found in Japanese comic books.

The wide range of comic books and other multimedia materials available offers teachers of Japanese a valuable resource for developing instructional materials that would be highly motivating, interesting, and culturally authentic. Integrating sound symbolic vocabulary into Japanese language instruction provides many opportunities to bring culture into the classroom. For example, the very important role that weather plays in the everyday lives of the Japanese people is strikingly evident in the many sound symbolic expressions that exist in the language to describe so precisely one's perceptions about weather, how it literally assaults all of one's senses, and how it profoundly affects one's deepest feelings (Millington, 1993). In the data sample I examined in Chapter Four, out of 100 total words, as many as 14 words had some connection with weather and climate, illustrating the importance that weather plays in Japanese daily life. Without some sense of the ways these words allow culture to "shine through," learners cannot truly understand the sound-sense connection these very unique words reveal.
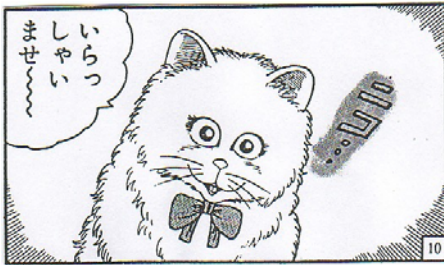
(a)

(b)

(c)

(d)

(e)

(f)

(g)

Figure 5.1. Examples of smile words from *Totoro, Dragon Ball Z, and What's Michael*

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An Example Vocabulary Lesson—A "Snapshot" View

In this section, I will present an example vocabulary lesson, a "snapshot" of what might happen in the 15-20-minute portion of the class period devoted to vocabulary study in a university-level Japanese classroom. This lesson might be typical of one taught at the beginning of the study of sound symbolic vocabulary with a focus on thoroughly exploring one or two related words. It is important to note that the introduction of sound symbolic words in the 15-20 minute segment allotted to vocabulary instruction would necessitate leaving out some other element of vocabulary. One of the most difficult decisions a teacher must make regarding any kind of instruction is what to include and what to leave out. It is not possible in a limited amount of time to cover every area of language that students might possibly need.

I will begin with a brief verbal description of the basic instructional steps in such an introductory lesson. Then I will provide more specific information about a typical beginning lesson using a chart format. The first step in the lesson, and the first challenge for the teacher, is to capture and enhance the students' attention. Then the teacher sets an expectation for learning by letting the students know the goals of the lesson, arousing their natural curiosity for learning, and by providing the incentive for learning. The next step is to remind students of what they already know that is related to the new material to be learned. By bringing this prior knowledge from long-term memory to working memory, students are then ready to make connections between new and known information. The teacher at this point presents the new material, highlighting important aspects or key features. Then the students become actively involved with the new material, interacting with it in various ways to move it permanently into long-term memory. During this stage, the teacher provides students with learning guidance and elaboration opportunities using concrete, meaningful examples. Students must then demonstrate their understanding of the material by actively doing something with it. The teacher checks for understanding and either reinforces or corrects. Students then practice using a variety of activities/strategies. It is at this point in the lesson design that the teacher explains to learners the type of assessment that will be used to determine if they

have really understood the material presented. Assessment can take the form of formal assessment (quizzes, tests) or informal assessment (teacher observation, sharing the outcomes of group work with the whole class, among other possibilities). The teacher then brings the lesson to a close, briefly stating what has been accomplished, reinforcing key concepts, and establishing a frame of reference for the next lesson.

The following framework, based on Gagne's Phases of Learning (as cited in Gredler, 2001), presents the instructional sequence involved in a typical vocabulary lesson in a slightly different format from the prose description, exemplifying how the theoretical constructs I discussed earlier can be applied to classroom teaching.

LESSON STEPS	INSTRUCTIONAL ACTIONS
Preparation for Learning	Getting students mentally prepared for lesson
Attention	Gaining and focusing attention using questions, unusual event, change of learning environment
Expectation	Stating the lesson objective—what students will accomplish
Enhance Meaningfulness	Stimulating recall of prior knowledge; relating lesson to students' individual experiences
Construction of Meaning	
Instructional input	Presenting lesson content; providing concrete, meaningful examples in form of illustrations combined with verbal explanations
Encoding	Guiding learning; asking students to generate own mental images relating to new word and to illustrate them; asking students to use new word in sentence

Performance

Active engagement	Eliciting student performance; students working in pairs or small groups to share drawing, compare and contrast with each other, discuss relationship of their drawings to native speakers' illustrations
Reinforcement	Providing feedback to students

Closure   Briefly summarizing lesson by reviewing key concepts; establishing frame of reference for next lesson

Retrieval   Explaining means of assessing learning

Next I will present a specific example of one of the early sound symbolic vocabulary lessons, giving the actual language used by the instructor. Note that this lesson follows the same lesson steps as in the previous section, again based on Gagne's Phases of Learning (in Gredler, 2001).

TEACHER SCRIPT

Attention   "How many of you woke up this morning to the sound of your alarm clock going off? The new word we will learn today has something to do with the sound of an alarm clock."

Expectation   "Today we will learn about a new sound symbolic word—*jiri-jiri*."

Enhance meaningfulness   "You remember in our last vocabulary lesson we learned the word *kan-kan*. Who can tell me what *kan-kan* means? That's right…it means "blazingly hot sunlight." But it has another meaning, doesn't it? And that other meaning is "the high, clear sound when something is struck intermittently." *Jiri-jiri* is a similar kind of word because it, too, has more than one meaning. I'm sure that you

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	recall the fact that many sound symbolic words in Japanese have more than one meaning. That is somewhat like words in English. Both of the words *kan-kan* and *jiri-jiri* have something to do with intense sunshine. That is something we who live here in Texas can definitely relate to, isn't it?"
<u>Instructional input</u>	"I want you to look at these illustrations on the transparencies showing the various meanings for our new word *jiri-jiri*. First, let's look at two different pictures for the meaning "to proceed slowly but surely or to gradually encroach on." [Show pictures of alligator and person running toward a goal] Isn't it interesting how the same word can create such different mental images? You will notice the next picture which shows us another of the several meanings for the word. [Show picture of meat that is burned] And still a different picture gives us another meaning, that of the sound of an alarm clock. [Show picture of alarm clock]. And our last illustration reminds us that *jiri-jiri*, like *kan-kan*, can refer to intense, burning sunshine. I want you to think about how each of the pictures we looked at today helps us better understand the meanings of *jiri-jiri*."
<u>Encoding</u>	"Now I want you to think about how these illustrations might remind you of something from your own life experiences. I want you to create in your mind a very vivid picture of that experience. Next I want you to draw a visual representation of that picture in your mind."
<u>Active engagement</u>	"Now that you have drawn your own pictures, I want you to share them with the other members of your group, comparing and contrasting them. I am sure your drawings will be quite different because you all have had very different experiences in your lives but you might be surprised to find ways in which they are similar. Then discuss in your group how your original drawings compare to

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	those done by the Japanese native speakers. Try to compose a sentence using one of the meanings for *jiri-jiri*."
<u>Reinforcement</u>	"All of you have drawn very interesting pictures of your own unique mental images. Can you see how doing that will help you to recall the meanings of the word in the future?"
<u>Closure</u>	"Today we learned the new word *jiri-jiri* which has several very different meanings. It is very much like another word we learned in our last lesson, *kan-kan*. Both words have to do with the hot sun. I am sure we all can think of many ways to use these words in our daily conversations. In our next class we will learn another sound symbolic word that is used to describe sunshine—but a very different kind…"
<u>Retrieval</u>	"When we finish our chapter on weather, we will have a test over the sound symbolic words we have learned. For some of the questions, you will choose one correct word out of three choices to best complete sentences. For other questions, I will give you some frames from Japanese comics and ask you to choose the best word to complete the blank frame from a word bank. You might want to begin reviewing the words we have covered in this chapter."

This lesson "snapshot" is only an example of what one of the early lessons in sound symbolic vocabulary teaching might look like. It is important to keep in mind that before actually introducing sound symbolic words to students, the teacher would have presented a metalinguistic preview over a period of time to build necessary background knowledge about these words in order to set the stage for more accurate construction of meaning. In addition, this "snapshot" of what one of the early lessons in the instructional sequence would be like focuses on only one or two words whereas subsequent lessons would likely introduce several related words in each lesson. Classroom teachers might consider incorporating one sound symbolic vocabulary lesson per week into the

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curriculum so as not to displace completely the teaching of other necessary vocabulary items.

Conclusion

In this chapter I discussed some expanded implications for integrating sound symbolic expressive vocabulary into Japanese classroom instruction using strategies connected to imagery-based meaning making of native speakers that emerged out of this dissertation project. First, I examined the relevant theoretical assumptions I used as a basis for the instructional suggestions I offered. I then briefly described a possible curriculum, discussing the incorporation of direct vocabulary instruction into a thematically based communicative approach to teaching Japanese. Finally, I provided an example vocabulary lesson, giving a glimpse at model instructional events exemplifying possible future classroom application of theoretically based strategies.

CHAPTER SIX

SUMMARY, IMPLICATIONS FOR FUTURE RESEARCH, AND CONCLUSION

Summary

Japanese is a language that has a vast inventory of sound symbolic expressions that are used to make subtle distinctions among experiences. Sound imitation (*giseigo*), also called onomatopoeia, is used to reflect physical, audible noises relating to the actions or movements of people, animals, and things. Manner imitation (*gitaigo*), also referred to as mimetics, represents the manner of actions or states. These two major categories may be further broken down into sub-categories: *giseigo* that are used to imitate the voices of animate objects; *giongo* that represents the sounds of nature; *gitaigo* that are descriptive and symbolic representations of inanimate and animate states and conditions as well as of natural change, movement, and growth; and *gijoogo* that describe human emotional and psychological states. Sound symbolic expressions are encountered in a wide variety of linguistic and cultural contexts, from classical literature to pop-culture comics, from traditional poetry to everyday conversation. They are incorporated into product names and advertising. They are used in newspaper headlines and comic books. They are used by celebrities and by ordinary people alike. They are used to describe what an individual encounters in an ongoing interaction with the surrounding environment. They are used to suggest one's innermost thoughts, feelings, and psychological states. Sound symbolic expressions allow a speaker to express subtle semantic nuances not otherwise available so economically in the Japanese lexicon. These words have common characteristic features and a structural consistency that sets them apart from other lexical groups in Japanese. Sound symbolic expressions are power-packed combinations of descriptive, affective, sound-sensory, and cultural information.

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And yet, despite their undeniable presence in nearly all areas of language use and the important roles they play there, sound symbolic words have been virtually excluded from language textbooks and classroom instruction. Typically only a handful of the thousands of existing sound symbolic words are ever introduced to students with little or no explanation of their common characteristics and systematic structure, their unique ability to express precise meanings and subtle nuances in meaning, or the extensiveness of their use in the everyday linguistic lives of the Japanese people.

This dissertation is intended to make a contribution to the field of Japanese language teaching by exploring the world of sound symbolism. First, my claim that this important lexical group has been underrepresented in Japanese textbooks and in classroom instruction was confirmed by textbook authors and language teachers who participated in a questionnaire survey. Second, I set out to capture the essence of the mental images evoked in the minds of native speakers using verbal and pictorial representations. I suggest that such representations could provide a key to unlocking the meaning that real-life language users construct for this elusive group of words. Long-range effects of this dissertation on the future design of more effective language instruction may well help students successfully develop their knowledge of and ability to communicate using real-life Japanese, enhance meaning construction for sound symbolic vocabulary, and make significant progress along the path to higher levels of proficiency.

As a framework for this dissertation, I looked to the research literature on the characteristics of Japanese sound symbolic vocabulary and vocabulary acquisition in L1 and L2. I presented information about Japanese sound symbolism and the syntactic, phonological, morphological, and semantic characteristics of such words in order to spotlight their highly complex, systematic nature as well as the important linguistic role they play. I then discussed several aspects of vocabulary acquisition including: vocabulary development and language proficiency guidelines; what it

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means to "know" a word; vocabulary development and various pedagogical approaches; L1 and L2 vocabulary learning and instruction; imagery-based strategies for L2 vocabulary acquisition; Dual Coding Theory; the Keyword Method; using visual materials to facilitate learning; and using visual stimuli and imagery.

A close examination of several currently used Japanese language textbooks revealed that, in actuality, sound symbolic vocabulary is underrepresented in them and consequently, in classroom instruction as well. As a first step, I contacted several textbook authors and several dozen university-level language teachers, asking for responses to questions about teaching language in general and sound symbolism in particular. All five textbook authors and six language teachers out of several dozen that I contacted responded to my questionnaires, giving interesting, though diverse, answers to my questions. The textbook authors, for the most part, agreed that although sound symbolic vocabulary words may not be among the words absolutely necessary for basic, beginning-level communication, they do play an important role in the language and should be introduced to students in manageable increments, using systematic instruction in natural contexts, at a point when students have acquired adequate background knowledge and enough basic vocabulary to make learning meaningful. The Japanese language teachers, as well, expressed differing opinions regarding the teaching of sound symbolic words. While it may not be practical to include a large number of sound symbolic words in classroom teaching due to instructional constraints such as a lack of sufficient classroom time and existing teaching materials as well as minimal communicative necessity, several of the language teachers reported that it would be fun to teach these words to students who would likely find them very appealing and interesting. The textbook authors and language educators who responded to my questionnaires, though few in number, provided valuable insights about the teaching of foreign language, and in particular, about teaching sound symbolic vocabulary. Though they expressed divergent views, all of the respondents expressed a common interest in providing to students quality

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classroom instruction, designed to promote the acquisition of more proficient communicative skills.

The heart of this dissertation lies in the eliciting of native speakers' imagery-based representations of sound symbolic vocabulary items. As a teacher of Japanese, I am very interested in the question of why sound symbolic vocabulary words that are so extensively and systematically used in a vast array of linguistic contexts are so noticeably missing in Japanese language textbooks and classroom instruction. But even more important is the question of how to develop meaningful language instruction including these words in such a way that both captures the imagination and interest of teachers and students alike and also facilitates communicative proficiency using real-life Japanese. This study was an attempt to provide a glimpse at the imagery evoked in the "mind's eye" of native speakers when they encounter sound symbolic words and to elicit from them verbal, visual, and contextual representations that could then be used in future classroom instructional design.

The inspiration for my idea to use the images generated by native speakers in response to sound symbolic words came several years ago while I was teaching English to Japanese college students during an intensive three-month study in the United States. As part of their coursework, the students were required to write daily journal entries, recording their thoughts, feelings, and reactions to their new experiences while learning English here. Several of the students, though they encountered little difficulty in expressing themselves, chose to draw pictures for me to help me better understand what they were attempting to communicate. I was very impressed by the powerful ability of these drawings to communicate thoughts and feelings so clearly and precisely that I encouraged them to continue writing in English as well as drawing their wonderful pictures for the remainder of the semester. By the end of the course, I had collected many of their drawings that even now bring back vivid memories of that group of students and our experiences together. Shown in

Figure 6.1a and Figure 6.1b are four examples of the drawings done by these students:
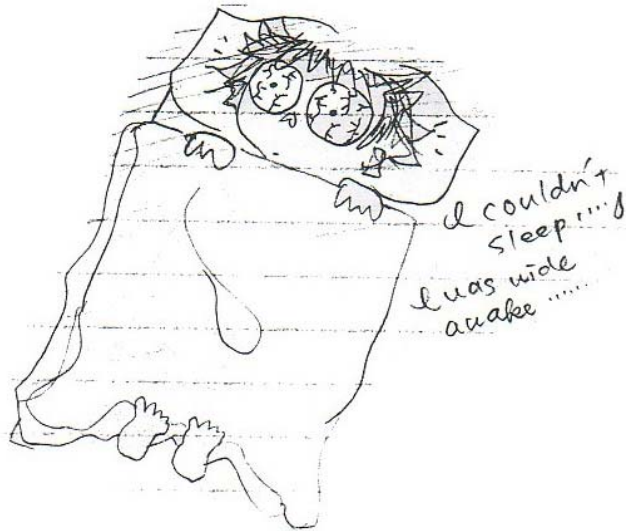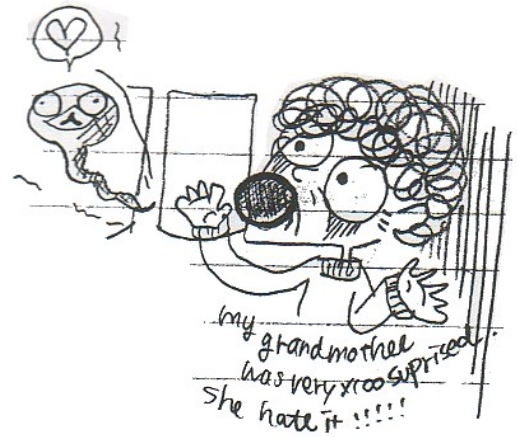
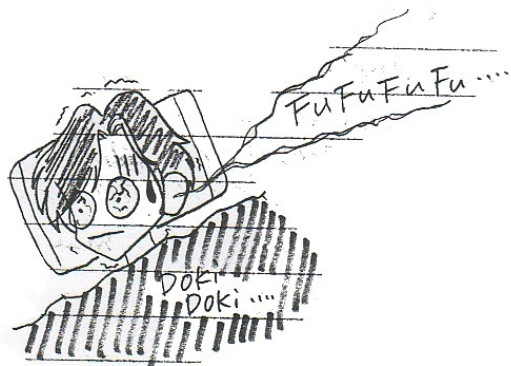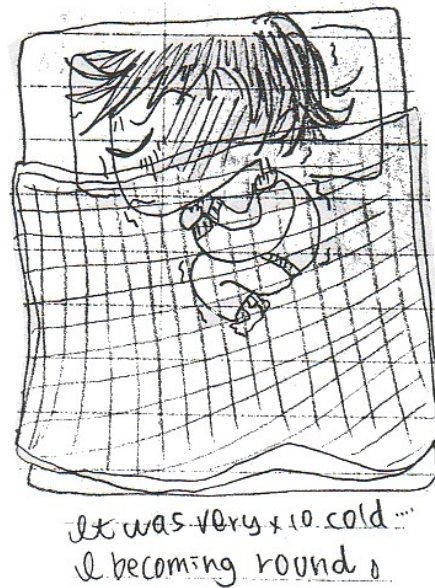(a)   (b)

Figure 6.1a. Two student drawings

(c)   (d)

Figure 6.1b. Two additional student drawings

As a result of this experience, I then considered the possibility of having native Japanese speakers describe for me, either verbally or by drawing, the mental pictures that would likely be evoked by sound symbolic words.

Several years before this, I had conducted a small pilot study in which Japanese graduate students responded to six sound symbolic words using verbal descriptions of the mental images the evoked. These descriptions were incredibly vivid representations of the words' meanings as well as the affective connotations. The study I conducted for my dissertation was an extension of this pilot study and of my experience with the Japanese college students learning English. In this study I elicited from 50 native Japanese speakers their imagery-based verbal, pictorial, and contextual representations of 100 sound symbolic words. The participants were organized into 10 groups of 5 members each. Each group looked at a set of 10 sound symbolic words.

After collecting and preparing the data, I sorted the 100 words into a small number of manageable groups, that were then re-grouped into five broad semantic-based domains: Emotional Aspects, Physical Aspects, Actions and Movement, State, and Climatic/Environmental Conditions. I examined each meaning-based group of words, searching for commonalities and individual variations. There was an amazing variety of responses given to the words. Most of the participants gave both verbal and pictorial descriptions of their mental images that revealed underlying group patterns that could be useful in designing instruction. The individual variations that occurred are indicative of the fact that many sound symbolic words have several meanings and are used in very different situations. The insights derived from these native speaker-generated verbal, pictorial, and contextual representations may prove helpful in the development of constructivist-based instructional design that includes this important, yet overlooked body of vocabulary words.

Finally, I described the implications for teaching that I saw from my literature review, survey of textbook authors and instructors of Japanese, and native speaker

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responses to 100 sound symbolic words. These expanded implications relate to the following areas: (1) taking a constructivist/dual coding instructional approach using imagery-based strategies, and (2) integrating sound symbolic vocabulary into language instruction. The constructivist model of learning views learners as active seekers and processors of input, who select and attend to features of the world around them, transform and rehearse information, relate new information to previously acquired knowledge, organize knowledge to make it more meaningful, and utilize effective retrieval strategies to activate and apply stored knowledge (Schunk, 2000). Structuring a learning environment based on constructivist ideas involves: facilitating a positive interaction between existing knowledge and new information by organizing the material to be learned in meaningful ways; helping students build necessary background knowledge prior to introducing new information; and facilitating the construction of meaning through active involvement with new material and elaborative linking to personal experience. Implications for sound symbolic vocabulary instruction include the use of metalinguistic previews, semantically based thematic units, and imagery-based elaboration strategies with pictorial-verbal stimuli. Research evidence supports the use of instructional techniques and materials (based on Dual Coding Theory) with a combination verbal-visual associative mode of presentation that facilitate more efficient encoding, deeper processing, more meaningful learning, and superior memory performance.

Developing rich vocabulary knowledge is fundamental in the building of communicative competence and high levels of proficiency in a foreign language. Even though sound symbolic words play an important role in all styles and forms of Japanese, particularly in everyday informal speech, they have been virtually excluded from language textbooks and classroom instruction. Emerging from this dissertation project are implications for integrating sound symbolic vocabulary into language instruction: using thematically based semantic associative techniques and materials that combine pictorial and verbal elements; using highly motivating, interesting and

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authentic materials to reinforce the close connection sound symbolic words have with culture; encouraging students to generate mental images and to illustrate them; and facilitating classroom interaction focusing on sharing, comparing, and discussing the new information in relation to existing knowledge. Instructional practices such as those I suggested that center on the active engagement of learners in the construction of meaning may well result in more meaningful, long-lasting learning experiences. I presented a vocabulary lesson "snapshot" with instructional sequence and teacher script for a typical beginning lesson, showing possible future classroom application of teaching practices that are grounded in established theory and supported by research evidence.

Implications for Future Research

Though possibly seen as a limitation of the study discussed in this dissertation, the small sample size of 50 participants who responded to 100 sound symbolic vocabulary nevertheless revealed many interesting and surprising consistencies as well as considerable idiosyncratic variation in the verbal, pictorial, and contextual responses given. While it might be interesting to conduct future studies with more native speakers responding to a greater number of words, I suggest that researchers concentrate on studies that examine how strategies such as I have proposed are actually used in real classrooms by students learning Japanese. Further studies could be carried out with students of various age groups and at various stages of learning Japanese and would be designed to determine if students can understand and process new information more successfully using metalinguistic previews and imagery/illustration-based elaboration strategies than with traditional vocabulary techniques, if students enjoy using such strategies, and most importantly, if students actually use these strategies when faced with new learning tasks. Qualitative measures such as learner interviews could be used to gain greater insights into learner reactions to these strategies.

More research studies in the future might focus on documenting sound symbolic word usage in various real-life language contexts. Frequency counts could be done in a wide range of mediums in which sound symbolic words are found, such as comic books, children's stories, classical literature, songs, newspaper headlines, and product advertisements, to name but a few. Such studies would serve to emphasize the undeniable presence of sound symbolic vocabulary in the linguistic and cultural lives of the Japanese people.

Yet another potential area for future work with sound symbolic vocabulary is the development of appropriate textbooks and supplementary teaching materials, perhaps using native speaker-generated imagery-based illustrations to facilitate learning. Researchers and language educators need to collaborate with one another in such an effort to establish research-based instructional guidelines for curriculum development that includes the teaching of sound symbolic vocabulary.

An additional area for possible research in the future is an exploration of the cultural sensitivities related to sound symbolic words. According to Miller (1982), there is a widespread belief among the Japanese that the distinctiveness and sincerity of their language makes them assume that the language is exceptionally difficult to learn. According to this belief, not only is the language complex and intricate, but it is also so spiritual that no one but the Japanese can truly understand it (Ramsey & Burk, 1983). Sound symbolic words are considered to be part of the "native vocabulary" that many Japanese people held, and perhaps even today still hold, as a sacred area of "Japaneseness." An examination of the notion that sound symbolism is one of those native aspects of *kokugo* that foreigners should not or could not learn might prove to be quite intriguing.

Conclusion

The goal of this dissertation was to contribute to the field of Japanese language teaching by exploring the world of sound symbolism. My claim that sound symbolic vocabulary has been underrepresented in Japanese textbooks and in classroom instruction was confirmed and elaborated on by textbook authors and language teachers who participated in a questionnaire survey. They provided valuable insights concerning sound symbolism and Japanese language teaching. The image-based nature of meaning construction by native speakers for sound symbolic vocabulary using verbal, pictorial, and contextual representations was also investigated.

The far-reaching significance of this dissertation lies in the future potential that an instructional approach using native speaker representations--their actual "verbal sketches" and pictures--has to help students in foreign language classrooms become more strategic, independent learners; to empower them with the tools necessary to learn new words they might encounter; to facilitate more complex cognitive connections between what they already know and what they need to learn; and to enhance their motivation and enjoyment in the learning process. Such an instructional design may well be a promising educational tool, particularly in foreign language education, encouraging learners to become more actively involved in constructing meaningful learning experiences that ultimately lead to improved learning and retention/recall as well as to increased enjoyment and personal satisfaction. Long-range effects of this dissertation may well be influential in language classrooms where students learn to use imagery-based strategies to increase their knowledge of and ability to communicate effectively using real-life Japanese where sound symbolic vocabulary abounds, to greatly expand their word power, and to make significant progress along the challenging path to higher levels of language proficiency in Japanese.

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APPENDICES

APPENDIX A

TEXTBOOK AUTHOR QUESTIONNAIRE

1. When preparing a language textbook, how do you decide what areas to include and which to leave out? In language there are so many areas from which to choose, what criteria do you use?

2. How do you decide when/at what level to first introduce the topic? Throughout the textbook series, how often do you reintroduce the topic?

3. Why do you feel that the particular area of sound symbolism has been so underrepresented in Japanese language textbooks to date?

4. Do you feel that the topic of giseigo/gitaigo is difficult to approach in a textbook? Why?

5. How did you decide on the actual examples of sound symbolism which were used in the textbook?

6. From a native speaker's point of view, how are these words/expressions learned?

7. Do you feel that it is possible for non-native speakers to grasp/have an understanding of this important group of words in Japanese? If so, how can we Japanese language teachers facilitate this process in a classroom setting? Because not all students of Japanese will have an opportunity to visit Japan to learn the language in a natural environment, how can we facilitate learning in the classroom?

8. What are your suggestions for integrating these words into current Japanese language curricula?

9. What approach should be used to teach these words—thematic, association with specific verbs and/or situations, etc?

10. Is it realistic to exclude such a vast body of words that plays such a vital role in Japanese from Japanese language textbooks?

11. What do you feel is the role of sound symbolic/expressive words in Japanese?

12. How many words would a student have to be exposed to in order to be able to recognize newly encountered words as belonging to this unique group?

13. What about the common structure/form of sound symbolic words? When/how are they used? When do you feel these aspects should be introduced to students—at the beginning level, intermediate level, or advanced level?

14. Considering the fact that many language students never get beyond a beginning level, do you feel it would be beneficial to students to provide them with a structural framework to which they could then relate new information/words when encountered?

APPENDIX B

SOUND SYMBOLISM QUESTIONNAIRE

1. Why do feel that the area of sound symbolism has been so underrepresented in
    Japanese language textbooks and formal classroom instruction? Is it realistic to
    exclude such a vast body of words that plays such a vital role in Japanese from
    language textbooks?

2. What do you feel IS the role of sound symbolic/expressive words in Japanese?
    Why do Japanese speakers use them at all? Are native speakers consciously
    aware of the use of sound symbolic expressions in language? Do you think that
    there is a connection between these words and expressing one's identity?

3. Do you feel that the topic of sound symbolism is difficult to approach in a
    textbook? In the typical language classroom? Why?

4. Do you feel that it is realistically possible for non-native speakers to grasp/have
    an understanding of this significant group of words in Japanese? If so, how can
    we Japanese language teachers facilitate the acquisition of this specialized
    vocabulary in a classroom setting?

5. Taking into consideration the fact that many students of Japanese will not have
    an opportunity to learn the language in a natural environment, how can we best
    facilitate this area of language acquisition in our language curricula?

6. What are some suggestions for integrating sound symbolic vocabulary into
    currently available Japanese language curricular materials? What approach
    should be used to teach these words--thematic, association with specific verbs
    and/or situations?

7. How are sound symbolic words learned by native speakers? Are they introduced
    in formal classroom instruction?

8. What is it about a word/expression that enables meaning? The sound qualities?
    Context? Can you guess the meaning of an unknown word in isolation? If so,
    how? What do you feel accounts for your associations with certain sounds?
    How does a speaker come to know these?

9. Unfortunately, many university-level language students never get beyond the
    second-year level of a foreign language. In efforts to facilitate the acquisition of
    communicative competence in "real/authentic" Japanese, do you feel it would be
    beneficial to introduce language students not only to actual examples of sound
    symbolic expressions but also to an overview of the common structure/forms,
    phonological and syntactic aspects, cultural connotations, etc. throughout the first
    two years of language study? In this way, would they not be better equipped to
    process unfamiliar words when encountered in a variety of linguistic situations?

APPENDIX C

QUALITATIVE DATA SET (SELECTED EXAMPLES)

<u>sassato</u>

1: smooth image; prompt image; sound of sweeping; walking quickly; refreshing, positive feeling; doing something troublesome that you want to finish quickly

2: visual image of the action being done; used to describe swift physical movement; auditory image, too; connotates that whatever needs to be done is unfavorable and that's why it should be done as soon or as quickly as possible; there's a chemical wiping cloth named "sassa"; associated with cleaning or homework

3: image of cleaning (mothers especially); doing an efficient, quick job

4: My mother is working as a housekeeper, such as sweeping, cooking, cleaning and washing plates

5: quickly, smoothly, without interruption or delay; my image of "sassato" is doing some work which is not very enjoyable; to do things quickly and those things have to be done but they are not interesting

<u>noro-noro</u>

1: sluggish and slow like an elephant; slow, swinging motion; snail—slowness and wavy motion; not such a negative feeling; "goofy"; kinda cute

2: kinesthetic image; what can be done more quickly is being done slowly; jam-packed road with slow-moving vehicles; image of unwilling inmates being transferred, walking slowly

3: image of snails, cars in a traffic jam, dragging one' body to walk; maybe fat people

4: a tortoise is moving; cars are moving in a Japanese traffic jam

5: slowly, unenthusiastically, unwillingly; a turtle; the image is negative; dull and probably "stupid" in a sense

<u>yura-yura</u>

1: swinging and slow image; very relaxing and poetic image; the breeze blowing; a shimmering image, like mirages on the road in hot weather

2: a flexible item is swaying, such as seaweed in a fish tank, a candle flame, or a minor earthquake

3: a willow in the wind; flowers swaying in the wind in the field

4: seaweeds are waving in the water

5: slow movement from right to left; it should be slow, I feel

<u>gocha-gocha</u>

1: messy; an image of trash; negative image; confused; someone is whining and complaining (in Osaka dialect)

2: visual image-- very unorderly situation; chaotic; toy box; verbal image—someone is complaining about something pointlessly

3: things of disorder; unorganized image

4: my roommate's room; relationship between a lot of guys and girls, who would date anybody

5: things are not in order; an image of so many things in a drawer—the drawer is full—you can't find what you want because the drawer is so gochagocha shite iru.

<u>iso-iso</u>

1: not stable, restless; emotional—a little nervous, anticipatory (as before a first date); also indicates a hurriedness with no real reason

2: nothing comes to me; I never use this, but I think people use it to indicate that one is hurrying to go home; very poetic phrase to me

3: female image; formality; being superficial

4: My grandmother and my aunts are leaving for someplace special without men

5: hurrying with happiness; heading somewhere where we can have fun;
"Arumando-san"!

biku-biku

1: frightened, nervous, cowardly; a jerky image; kinda negative; sharp

2: physical/emotional image; being afraid of something ominous approaching and
shivering; being afraid of getting caught; a timid rookie pitcher

3: small things/creatures like cats or kids being small and trembling; hoping things
won't go wrong or become worse than already are

4: I am about to tell my secret to my parents; my pappy came to my house for the
first time and he was shaking

5: timid, expecting something wrong to happen; an image of abused children—
I don't like biku-biku because it gives me an image of poor small kids without
protection; anxious students in class

APPENDIX D

SOUND SYMBOLIC VOCABULARY GROUPS

GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5
zoku-zoku	zawa-zawa	wana-wana	gaku-gaku	buru-buru
niko-niko	nita-nita	niya-niya	hera-hera	hoku-hoku
yura-yura	soyo-soyo	yusa-yusa	sassato	nonbiri
uttori	atafuta	shittori	hissori	sukkiri
gucha-gucha	gocha-gocha	kocha-kocha	biku-biku	odo-odo
iso-iso	kibi-kibi	sowa-sowa	uki-uki	waku-waku
noro-noro	noso-noso	zun-zun	gun-gun	meki-meki
seka-seka	chira-chira	hira-hira	une-une	kune-kune
fuka-fuka	fuwa-fuwa	choko-choko	shito-shito	shobo-shobo
ninmari	gyotto	sappari	kichin	funwari

GROUP 6	GROUP 7	GROUP 8	GROUP 9	GROUP 10
kowa-gowa	puri-puri	ira-ira	hotto	pun-pun
kuru-kuru	wai-wai	gan-gan	zuki-zuki	chiku-chiku
mecha-mecha	sure-sure	nami-nami	kichi-kichi	kyoro-kyoro
kukkiri	shiku-shiku	kiri-kiri	toko-toko	tobo-tobo
kira-kira	chobo-chobo	oro-oro	mago-mago	moji-moji
tsuya-tsuya	gira-gira	chika-chika	pika-pika	teka-teka
hiri-hiri	zotto	ura-ura	kan-kan	sura-sura
giri-giri	bara-bara	bata-bata	guru-guru	sukatto
gaya-gaya	jiwa-jiwa	jiri-jiri	nuku-nuku	hoka-hoka
mecha-kucha	hara-hara	hiya-hiya	kera-kera	kusu-kusu

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