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Applying the Fluctuating Nonverbal Threshold of the Structural Differential in General
Semantics to Improve the Proximity of the English Language to the Event Level by
Utilizing Elements of the Japanese Language

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ABSTRACT

Proposed by Alfred Korzybski in 1921, the study of general semantics requires an understanding of the process of abstracting. This process is an infinite cycle of how the nervous system automatically delegates what we react to and label with our verbal systems. The labeling and inference we induce upon our experiences generates more events requiring reactions, labeling, and inference, thus starting the process of abstraction an infinite amount of times. With this model of abstraction, Korzybski concluded that language users must adhere to both an Aristotelian orientation and a non-Aristotelian orientation. By doing so, Korzybski postulated that language users could achieve a more accurate communication. He continued to teach how one could become a more effective communicator through what he called “extensional devices.” These devices, however, work to change elements of the English language.

Although the underlying conclusions of general semantics are treated as a universal set of theories applicable to all languages, the devices for which Korzybski suggest are ethnocentric and do not necessarily apply to all languages. The people of Japan, for example, effectively utilize their language in a way that the correctives Korzybski suggests are not useful. Through an in-depth critique of these correctives, one may see that the Japanese language already has the ideal set of characteristics that Korzybski wished for the English language. Therefore, there must be elements of the Japanese language that users of English could use as correctives.

By understanding the structure of Japanese language elements, historical aspects of Japanese culture, and the effects of language on the brain, I conclude that English users can borrow language characteristics from the Japanese to raise awareness of the abstraction process. Some of these correctives include embracing the use of social networking, text messaging, and computer coding.

APPLYING THE FLUCTUATING NONVERBAL THRESHOLD OF THE STRUCTURAL
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JAPANESE LANGUAGE

Alfred Korzybski and a Non-Aristotelian Orientation

Words evoke meaning. Although denoted, a word in itself carries no definition; instead, the users of words place their own meaning upon the words. Language, therefore, is a product of humankind. However, the force of a user upon his language meets a resistive force of the language. A struggle of power between the intention of the user and the experiential effects of the language generates miscommunication. One may conclude that the two forces exist merely as a sentiment of humankind's ineptitude in communicating effectively; perhaps the force of intentional meaning could overpower the resistive force of experience, if only the users (both sender and receiver of the message) could shun their respective emotions and embrace a static language. The goal of stripping language to a strictly nonbiased utility remains both theoretical and potentially impossible. Humans react to words as individuals; as such, one word may hold a different meaning to every person based on individualized experience. If one were to believe in a language devoid of experiential effects on its users, then one must also believe that miscommunication is the force responsible for causing these effects. Miscommunication, however, is not the antithesis of communication; rather, miscommunication is simply a form of communication.

To accept miscommunication as a product of communication is to recognize that language is innately flawed. Although standards may exist and definitions may be agreed upon, language will remain a human invention with human mistakes. Even the most basic of ideas could be challenged as false. For example, Isaac Newton's laws of physics were considered as universal truths for many centuries. The advent of non-

Newtonian physics challenged these “truths” and proved further that what humans “know,” may not always be universal. Often, the most basic and logically sound rules for which a particular field adheres to may be challenged. Most could argue that Aristotle spoke great truth while stating his first assumption of logic as, “A is A.” Indeed, the argument is seemingly inarguable. However, in 1921, Alfred Korzybski claimed that, “A is also not-A.”

In Alfred Korzybski’s book *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics*, he suggests that a language affects its users neurologically, experientially, and psychologically in the sense that the perception of reality by a user of a language is altered by the language itself. This theory is known as *general semantics* (Korzybski, 1933). Undoubtedly, several other scholars suggest the same connection of language and how it affects its users. Edward Sapir and his student Benjamin Whorf both postulated that a language and its users have a mutual effect on one another; their conclusion is referred to as the Sapir-Whorf Hypothesis (Wardhaugh, R., 1986; Sapir, E., 1929). As Edward Sapir stated in his article “The Status of Linguistics as a Science” in the journal *Language* (1929):

Human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression for their society. It is quite an illusion to imagine that one adjusts to reality essentially without the use of language and that language is merely an incidental means of solving specific problems of communication or reflection. The fact of the matter is that the ‘real world’ is to a large extent unconsciously built up on the language habits of the group....We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation (p. 207).

Indeed, the Sapir-Whorf Hypothesis receives much praise in the linguistic community as a concise statement of the importance language has on the thinking of its users. Ronald Wardhaugh (1986) states that, “Those who find the Whorfian hypothesis attractive argue that the language a person speaks affects that person’s relationship to the external world in one or more ways” (p. 215). There also exist similarities between general semantics and semiotics. The latter may be interpreted as an umbrella of the former. Semiotics is the study of symbols, their meaning, and how users of the symbols understand the meanings (Eco, U., 1995). The field generalizes assumptions about symbols into three broad categories, including pragmatics, which is the study of how the symbols affect its users. Therefore, pragmatics may simply be what Alfred Korzybski calls “general semantics” (Alexander, H.G., 1967). Although dozens of fields of study revolve around the notion of neuro-linguistic effects on behavior and perception, this paper will confine discussion to general semantics as founded by Alfred Korzybski.

General semantics is more than just the study of the mutual effects between language, perception and thought; it involves a process of abstraction. In order to illustrate “abstraction,” Korzybski used a model called the Structural Differential (See Figure 1). At the uppermost level—the event level—exist all known and unknown possibilities of reality. This includes submicroscopic reactions, theoretical possibilities in alternate universes, atmospheric conditions, colors, tastes, breathing, talking, smiling, etcetera. The event level is everything possible; it is an infinite series of events. Moving down the abstraction ladder of the Structural Differential reveals the object level. This is a moment when perceptions of events occur *before* verbalization. At this level the nervous system automatically chooses from all possibilities in the event level. For instance, this is when the nervous system will choose to ignore some stimuli, such as colors or objects in the peripheral vision, and focus on other stimuli, like the itch on one’s back. The next step of the abstraction process crosses into what is known as the verbal

stage. The person will now begin to label an experience, as chosen by their own nervous system. This labeling level may either be a process of assigning a language to understand the event, or may be the result of the language assigning the understanding to the individual. Either way, it leads to further abstraction to the inferential levels. These levels may continue for several steps, which is why Korzybski includes an illustration of their infinite nature by way of a jagged line. At the bottom of the Structural Differential is a looping arrow pointing back to the event level (Korzybski, A., 1933). Korzybski reminds us that reactions breed reactions; a language, labels, and inferences generate more experiences, which are included in the event level, thus continuing the process of abstracting. This is called neuro-linguistic feedback, when the brain responds to language, continuously moving through the abstraction process of the Structural Differential (Kodish, S.P., & Kodish, B.I., 2001).

Korzybski is careful to note that humans practice abstracting on a level separate from any other animal. He claims that animals only abstract as far as the object level and lack the capacity to make inferences on a level equitable to humans. The most important characteristic separating beasts from humans is a concept called, “time-binding.” Korzybski (1933) states that, “...the human class of life differs from animals in the fact that, in the rough, each generation of humans, at least potentially, can start where the former generation left off—a definition which, in the language of this particular structure, *is sharp*, and corresponds to empirical facts” (*Science and Sanity*, p. 39). Language is the vehicle by which humans evolve as time-binders. As one generation bestows a language to the next, new meanings, words, and cultures emerge. Close examination of the evolution of a language can trace back to the very symbols used to depict the words, morphing direct representations of objects as ideographs to simplistic, phonetic abstractions called letters (Ostler, N., 2005; Ouaknin, M., 1999). Words begin to describe not only the observable world, but complex ideas, feelings, thoughts, and words

themselves. In *Science and Sanity*, Korzybski (1933) calls this the “self-reflexivity” of a language:

If we reflect upon our languages, we find that at best they must be considered only as maps. A word is not the object it represents; and languages exhibit also the peculiar self-reflexiveness, that we can analyse languages by linguistic means. This self-reflexiveness of languages introduces serious complexities....The disregard of these complexities is tragically disastrous in daily life and science (p. 58).

It is no doubt that Korzybski saw the evolution of language as a key component to the creation of self-reflexiveness. Indeed, the organization of a language would benefit most users in reducing miscommunication, as the growth of language use could chaotically breach structure. In western civilization, much of this needed structure is based upon the assumptions of Aristotle.

Korzybski summarized Aristotle’s assumptions about language into what he calls the Aristotelian Orientation, which is the structure adopted by users of most modern languages. The Aristotelian Orientation consists of three basic rules as follows (Kodish, S.P., & Kodish, B.I., 2001):

1. A is A. (Identity)
2. Anything is either A or not-A. (Excluded middle)
3. Something cannot be both A and not-A. (Non-contradiction)

With these basic assumptions in mind, Korzybski postulated that a non-Aristotelian Orientation would consist of three additional rules to follow:

1. A map is not the territory. (non-Identity)
2. A map covers not all the territory. (non-Allness)
3. A map is self-reflexive. (Self-reflexiveness)

These premises do not replace Aristotle's original assumptions, but are rather in addition to them. Korzybski, therefore, would say that "A" is both "A" and "not-A". He suggests that, categorically, "A" may be described as being "A," but honoring a non-Aristotelian Orientation would require the language user to admit that "A" may not be precisely "A" (Kodish, S.P., & Kodish, B.I., 2001). For example, one may claim that, "Murder is murder." This may be true, but perhaps the philosophical differences between observers would cause a discrepancy in defining a particular "murder" as a "murder." Other considerations would include cultural background, timing, emotions, bias, inaction versus action, etcetera. The category, "Murder," is not necessarily the, "murder," in question. A, "map," is not the, "territory"; A, "word," is not the, "experience." Korzybski believes that having the Aristotelian Orientation of associating a word as the actual event leads to miscommunication and inappropriate abstractions. One may look at a René Magritte painting and claim to see a pipe, even though the object is, indeed, a painting. The second rule Korzybski proposes is one of non-allness. Any term used to categorize something is an allness term (Korzybski, A., 1933). It takes away from the individualized event and disregards important data regarding its specificity. The advent of, "either/or," severely limits how language users interpret events; the search for causation could blind users from other weighted factors not addressed in an, "either/or," statement (Morain, M.S., 1969; Korzybski, A., 1933). The final non-Aristotelian rule is that of self-reflexivity. As stated before, a language can be described using language; rules govern rules; reactions breed reactions, etcetera.

By embracing both an Aristotelian and a non-Aristotelian Orientation to language, Korzybski offers speakers a way of understanding and evaluating the abstraction process. These basic rules do not cover all of suggested methods for evaluation, though. Rather, Korzybski included dozens of practices for becoming more aware of abstracting. He dubbed these practices as "extensional devices," or exercises in language use. To

become “extensional”, as defined by Hayakawa and Rapoport (1946) in *ETC*, is to develop an, “Awareness of subverbal levels, both in the external world and in one’s own reactions...” (p. 281). To be extensional is to be aware of one’s abstracting, and one may acquire an extensional orientation through the use of Korzybski’s extensional devices. By providing these devices, Korzybski hopes to enrich future generations with methods to increase the accuracy of communication and limit the production of miscommunication.

In a self-reflexive way, Korzybski fails to escape his own Aristotelian Orientation by proposing his extensional devices. Many of the methods he offers include English-specific tactics not possible in some languages. One may consider looking into a language whose culture was not directly influenced by Aristotle in order to understand how a non-Aristotelian Orientation might work. This paper will outline some of the devices suggested by Korzybski and reveal how each one is, to some extent, Aristoteliocentric. Each corrective includes an explanation of how the Japanese language already utilizes a non-Aristotelian Orientation to evade the follies associated with the English language. The final section of this paper will outline how English users in the United States can borrow characteristics of the Japanese language and culture in order to become more extensional; the methods by which this borrowing occurs is through the use of new media in early education.

Korzybski’s Extensional Devices and Their Impracticality in Japanese

Indexing and Dating

The first extensional device Korzybski provides is indexing. Derived from his mathematical background, indexing requires the use of subscripts to similar terms (Kodish, S.P., & Kodish, B.I., 2001). For example, a conversation involving one or more vehicles would require subscripts to denote which vehicle was in reference. One man may drive a 1994 GMC Sonoma pick-up truck and claim to have the same vehicle as

some other person who also drives a 1994 GMC Sonoma pick-up truck. Truck₁ and truck₂ are of the same make, model, year, color, and style. However, truck₁ surges gasoline while idling, and truck₂ stalls while idling. Including the subscripts while speaking will remind the people involved in the conversation that, although the trucks are seemingly identical, differences exist. Indexing makes use of the non-Aristotelian notion of, “A is not-A.” The 1994 GMC Sonoma pick-up truck *is not* the 1994 GMC Sonoma pick-up truck. Indexing also utilizes the second non-Aristotelian premise of non-Allness: not all 1994 GMC Sonoma pick-up trucks are the same. The utility of indexing alleviates the narrowness of either/or questions as well. One may ask, “Do you like 1994 GMC Sonoma pick-up trucks?” The user may now respond with, “I like truck₁ but not truck₂,” even though the trucks are considered to be the same by the questioner.

Similarly, dating also utilizes a subscript, the difference being the denotation of time with the use of terms (Kodish, S.P., & Kodish, B.I., 2001). Perhaps truck₁ and truck₂ are the same vehicle, but the reference in the conversation alludes to different points of time in the truck’s_{1,2} life. Now, truck₁ refers to a 1994 GMC Sonoma pick-up truck driven in 1999 and truck₂ refers to the “same” truck_{1,2} as truck₁, only driven in 2009. The proper referencing would be truck_{1, 1999} and truck_{2, 2009}, or simply truck₁₉₉₉ and truck₂₀₀₉. Now the individuals engaged in conversation are forced to recognize that the truck being discussed is not the same. One person may claim that truck₁₉₉₉ is a great vehicle, while the other claims that truck₂₀₀₉ is terrible. Miscommunication and argument may be avoided due to the clarity of reference in time.

Korzybski saw a need for such an extensional device due to the low-context nature of the English language and English speaking cultures. Much of the referent-pronoun structure of the English language and most other Romantic languages require adherence to a strict set of guidelines originating from low-context cultures (Ostler, N., 2005). Moreover, ambiguity on the user in pronoun reference causes miscommunication.

Indexing and dating would logically be ideal for a low-context culture. By including these extensional devices, ambiguity would be lessened. However, the advent of both of these devices is also a sentiment to low-context culture. Instead of alleviating the burden of strict referencing, Korzybski added to it. Both extensional devices, in their mathematical nature, are structured to achieve clarity for individuals not involved in the context of the conversation, thus expanding upon Korzybski's notion of time-binding. The alternative to this method of low-context would be to embrace a high-context. This would strip away from the idea of language as a time-binding tool for future generations and expand upon language as a time-binding tool for archiving; the function of archiving would not be future-based, but rather "present"-based. The, "present," of course, referring to the time when the original communication occurs. Korzybski suggests using these extensional devices as time-binding vehicles to aid in reducing miscommunication for the next generation. But a high-context culture does not even have the base for indexing or dating from which Korzybski built these extensional devices.

Japanese language users interact in a high-context culture (Hara, K., 2001a). In its spoken form, the Japanese language can best be described as a topic/comment language (Allum, P. H. & Wheeldon, L. R., 2007). Usually a speaker will initiate communication through a given topic, and the supplemental comments of those involved are in constant reference to the topic. As such, most of the conversation will revolve around the initial topic, so referencing is implicit and not explicit (Allum, P. H. & Wheeldon, L. R., 2007). This phenomenon creates the high-context seen in Japanese culture and language. Due to the nature of referencing and high-context language, Japanese syntax differs greatly from that of English. Many sentence structures do not require a subject, for the reference is implied through context. The logistics of indexing in a high-context language become problematic.

The purpose of indexing is to achieve a more extensional orientation and raise awareness of one's abstracting. Korzybski argues that well defined variables in mathematics provide clear denotations absent in language use; indexing is a translated version of mathematical axioms and variable definitions (Korzybski, A., 1933). In order for a variable to be clearly defined, however, it must first be stated. In the Japanese language, the variables are not always stated, so indexing approaches the realm of impracticability. Indexing is a product of expanding low-context and moves in the opposite direction from where the Japanese language is established. Indexing is also microscopic; the terms defined through subscripts occur on a word-to-word basis. From this characteristic arises a key difference between a high-context language and a low-context language: how words relate to one another. A term used in a low-context language is independent from the sentences and paragraphs surrounding it. Proper denotation, syntax, referencing, and subject/predicate order are essential to unify the independent terms with the ideas presented throughout the speech. A low-context language requires a macroscopic view of the information surrounding a term. Most terms presented in a high-context language become well-defined not by sentences alone, but entire conversations (Hara, K., 2001a). The word lives in its language, wholly dependent upon its context. Indexing, therefore, is not only impractical, but it is also unnecessary. Terms are not merely stated, but in a continuous momentum of referencing, either implicitly through contextual understanding or explicitly restated by the speaker.

Dating also approaches the verge of unfeasibility in the Japanese language. Again, Korzybski's idea of dating as a future-oriented tool of time-binding is a sentiment of low-context. When referring to anything that may have a drastic change, Korzybski suggested using dating whenever possible. For example, when he spoke about modern science, he would include a subscript of the current year. This allowed future generations to read his work and remember that anything he said could already be

disproved, outdated, false, a reflection of the period, etcetera. In a high-context language, change is implicitly understood (Hara, K., 2001a). The nature of conversation and communication in Japanese is organic and originates from the current setting or the setting from which the message occurred. Though the lens of power, low-context seems to prevail over high-context. The independent power of words and sentences in a low-context system may provide a level utility not seen in high-context systems. However, power is no substitute for control.

Indexing and dating provide context on a microscopic scale, thus increasing the power of their denoted value. An English sentence containing well-defined terms reflects how powerful a low-context language can be. As a result, words and sentences may be taken out of context and used freely by others. This practice, however, does not necessarily produce accurate messages. Although the perception of understanding is created between users of the language, an allusion devoid of context promises miscommunication. In English, a statement can be taken out of context and hold independent and coherent meaning for its users. Like pulling out a brick from a building, an English paragraph still stands without a small piece of context; a Japanese statement would collapse. The advent of high-context in Japanese forces its senders of a message to define the topic clearly for the receivers. In English, this may not always be the case, and indexing and dating work to tear down that responsibility even more.

Quotation Marks and Hyphens

Korzybski urged users of English to use quotation marks whenever a distinction between the word and the actual phenomenon it labels are confused as being the same “thing” (Kodish, S.P., & Kodish, B.I., 2001). As stated by Mona Campbell (1969) in *Extensional and Intensional Levels of Abstraction: A Lecture for an English or Education Course*, “*Quotation Marks* show that we are aware that the word is not the ‘thing’ we are talking about, but rather a ‘reasonable facsimile.’ The use of quotes also puts the

responsibility for the wording on whosoever said it and gives a 'to-me-ness' to a statement. Their use shows an awareness and alerts the reader to the fact that the same word may have different meanings on different levels of abstraction, that the precise meaning of the word must be found in the context it is in" (Morain, S., p. 50). The use of quotation marks, therefore, is a plea for increasing the importance of context. As stated before, the Japanese language is a high-context language, and already practices such contextual devices.

The use of hyphens is yet another extensional device working to generate more contextual use in everyday language. In *Drive Yourself Sane: Using the Uncommon Sense of General Semantics*, S.P. Kodish and B.I. Kodish (2001) state:

Using hyphens, we connect terms that suggest separation of what we best understand as unified processes. The hyphen can help us remember what Korzybski called "the actual empirical complex inter-relatedness in this world." In this way we can evaluate using non-elementalistic terms such as space-time, psycho-biological, neuro-linguistic, neuro-evaluational and organism-as-a-whole-in-environments (p. 175).

There lies a ground-level problem with the use of hyphens; the punctuation of the hyphen is not used in Japanese (*Minna no Nihongo II*, 1998). Moreover, a system of connecting related words already exist in *kanji* compounds, and this practice has shaped the Japanese language over the course of several centuries (Ostler, N., 2005; Perez, L.G., 1998; Smith, P., 1997). The hyphen only works for phonetic alphabets. The Japanese language does have a phonetic alphabet—two, in fact—but their use is in conjunction with the *kanji* logography. Perhaps a brief explanation of the Japanese alphabet is in order.

The Japanese language uses both logography (represented by *kanji*) and syllabography (represented by *kana*) in their symbol systems (Nakamura, K. & Kouider,

S., 2003; Nakamura, K., Dehaene, S., Jobert, A., Bihan, D. L., & Kouider, S., 2005; Shafiullah M. & Monsell, S., 1999; Mori, Y., 2003; Halpern, J., 1999). *Kanji* are logographic symbols borrowed from China and has been in use in Japan since the fifth century C.E. (Ostler, N., 2005; Nakamura, K. & Kouider, S., 2003; Perkins, D., 1999). The written language of Japan began from this era, so the spoken language was already drastically different from Chinese, both in its structure and phonetics (Ostler, N., 2005). Richard Dettering, in an article for S.I. Hayakawa's book *Our Language and Our World*, writes that, "It has been suggested by Northrup, Hayakawa, and others, that the superior advance of Japanese over Chinese science may be due to the fact that the Chinese ideographs, when borrowed by the Japanese, lost their original "empirical" meaning and were learned as abstractions" (p. 337, note 3). As a result, most of the *kanji* adopted by the Japanese carried both the original Chinese reading, known as *on-yomi*, and several other Japanese readings, or *kun-yomi* (Halpern, J., 1999; Perkins, D., 1999).

Development of a phonetic alphabet arose in the late eighth century C.E. called *hiragana* and was accepted as an official writing system in 905 C.E. (Perkins, D., 1999). The two syllabaries of *kana* include the original *hiragana* for native words and *katakana* for foreign words (Halpern, J., 1999; Matsuoka, K., Uno, M., Kasai, K., Koyama, K., & Kim, Y., 2006). The *kana* alphabets share the same readings for each of their 48 letters, or sounds (See Figure 2) (Halpern, J., 1999). Each of these sounds may then expand to include other sounds. *Dakuten* or *handakuten*, the sounds for k, s, t, and h can change to *dakuon*, or voiced sounds, such as g, z, d, or b/p by using special marks to denote the consonant change (See Figure 3) (Halpern, J., 1999). Palatalized sounds, known as *youon*, generate an additional twenty-one sounds, and palatalized voiced sounds combine the two in special instances to create fifteen other sounds (See Figure 4) (Halpern, J., 1999). With the exception of the first five letters and the letter "ん",

pronounced /n/, all *kana* letters are syllables comprised of a consonant followed by a vowel sound, as listed in Figures 1-3 (Halpern, J., 1999).

Kanji differs greatly from the syllabaries of *kana*. Since the early part of 3000 B.C.E., a system of pictographs was used to describe tangible objects in the observable world (Ostler, N., 2005; Ouaknin, M., 1999). Eventually, these pictographs became ideographs, which took the original drawings, simplified them, and used them as particles to include with other particles to make new words (Ouaknin, M., 1999). The system is logographic rather than syllabographic, meaning that a reader cannot guess or “sound-out” the *kanji* (Flaherty, M. & Moran, A., 2004). Thus, the only way to read a *kanji* requires prior knowledge of the reading. Even then, context within the sentence and the compound of groups of *kanji* must determine the proper pronunciation, whether it be *on-yomi* or one of several *kun-yomi* (Mori, Y., 2003; Shibahara, N., Zorzi, M., Hill, M. P., Wydell, T., & Butterworth, B., 2003). Of the 50,000 or more *kanji* in existence (Ouaknin, M., 1999), only about 3,000 are actually used day-to-day by the average Japanese reader (Halpern, J., 1999; Nakamura, K. & Kouider, S., 2003). In fact, the Japanese government issued equivalency lists of *kanji* based on frequency of use (Halpern, J., 1999). These lists include the 1,945 *kanji* of the *Jouyou Kanji* list for newspapers, the 285 of the *Jinmei Kanji* list for names, and the “Ten-thousand Graded Japanese Words” list, which are essentially all the common readings and compounds of the aforementioned *kanji* lists (Halpern, J., 1999). An important aspect to remember about building a vocabulary with ideographs instead of sounds is the occurrence of multiple homophones. A single, similarly-sounding word could have dozens of different *kanji* representations (Halpern, J., 1999). Although Chinese and Japanese both use the ideographic script of *kanji*, the advent of *kun-yomi* in Japanese transforms their *kanji* into a broader group of morphemes (Matsuoka, K., Uno, M., Kasai, K., Koyama, K., & Kim,

Y., 2006; Mori, Y., 2003; Nakamura, K. & Kouider, S., 2003; Shafiullah, M. & Monsell, S., 1999). Kimihiro Nakamura (2003) describes this as an “ambiguity of phonology-to-orthography conversion” (p. 671). The idea of morphemes requires a base unit of a word to have a constant meaning, yet these ideograms, when taken alone or in combination, will usually require a different pronunciation based on the topic of the reading, the location within the sentence, the location within a *kanji* compound, the reference to other parts of the sentence, or even the audience intended (Allum, P. H. & Wheeldon, L. R., 2007; Fischer, K., 2007; Halpern, J., 1999; Matsuoka, K., Uno, M., Kasai, K., Koyama, K., & Kim, Y., 2006; Mori, Y., 2003; Nakamura, K. & Kouider, S., 2003; Shibahara, N., Zorzi, M., Hill, M. P., Wydell, T., & Butterworth, B., 2003; Yuan, B., 2007). This is a direct reflection of the high-context language that Japanese exemplifies. Japanese use *kanji* almost exclusively for nouns, roots of verbs, adjectives, and adverbs, unlike Chinese, which uses the logography for all parts of speech (Halpern, J., 1999; Nakamura, K., & Kouider, S., 2003). Therefore, Japanese utilizes *hiragana* for a phonetic reading mechanism to learn *kanji* pronunciation, grammatical use, verb conjugations, parts of speech, honorification, and other words not represented by *kanji* (Allum, P. H. & Wheeldon, L. R., 2007; Halpern, J., 1999; Nakamura, K., Dehaene, S., Jobert, A., Bihan, D. L., & Kouider, S., 2005; Perkins, D., 1991; Shafiullah, M. & Monsell, S., 1999; Yuan, B., 2007).

In brief, the Japanese language cannot use the hyphen or quotation marks like the English language can. Another issue arises from the orientation of the writing. Although modern texts do sometimes read from left to right and horizontally, the traditional orientation is right-to-left and vertical (Halpern, J., 1999). Besides, words using *kanji* cannot be broken apart into phonetic roots like English words. Hyphens are simple unfeasible in the Japanese language.

Etcetera

Korzybski used “etcetera” throughout his language to ensure that the reader would not assume all was being said within a particular statement (Kodish, S.P., & Kodish, B.I., 2001). This extensional device reflects Korzybski’s non-Aristotelian Orientation of non-Allness. Korzybski used the term “etcetera” so often that he created a series of extensional punctuation used throughout his writing (See Figure 5). The need for “etcetera” arises, again, from the low-context nature of the English language. Users of the English language need solidly defined statements in order to fully communicate the intentional meaning of statements. As a result, anything inadequately defined is wrongly interpreted as being defined well. This phenomenon is what Korzybski would call an effect of neuro-linguistic feedback; the language is now influencing the users instead of the users controlling the language (Kodish, S.P., & Kodish, B.I., 2001). If the etcetera is not explicit, then the users do not imply the etcetera. In Japanese, however, it can be argued that the etcetera is always implied. This is often ridiculed as ambiguity and vagueness in the Japanese language (Hara, K., 2005a), but the originating variable is rooted deep within Japanese culture. It is a concept called *kotodama*.

As best described by Kazuya Hara (2005a) in “The Word ‘is’ the Thing: The Kotodama Belief in Japanese Communication” from *ETC* (58 (4)):

In modern-day Japanese people’s attribution of meaning to their words, they sometimes feel as if a word itself has the power to make something happen. This concept is called kotodama, the superstitious folk belief that a soul dwelling in the words has the supernatural power to make an idea in the human brain come true simply by verbalizing it...To put it simply, koto means “the words,” and dama, the origin of which is tama, means “the spirit or soul.” It seems that the ancient Japanese might have marveled at the magical power of words by which they felt all things in the universe could be controlled. The belief in kotodama is the people’s illusion about the words or messages, to which they give meanings

superstitiously such as by praying for good fortune or for prevention of evil events. Therefore, they try to avoid verbalizing evil words and are careful to use appropriate expressions so that undesirable events do not occur (p. 280).

Hara is careful to regard the organic nature of language and how much change occurs over time. Obviously, modern-day Japanese do not believe in *kotodama* to the same degree as the ancient Japanese. For example, in ancient Japan, people were afraid to reveal their true names, for whatever could be said about a person could very well happen (Hara, K., 2005b). The words spoken were not words, but actualities. The affects of *kotodama* can still be seen in the Japanese culture and language. Because the early stages of language development in Japan grew around the notion of *kotodama*, the structure was shaped accordingly. Originating factors of *kotodama* come from the spirituality in Shinto prayer, which was later adapted to everyday use of words. The uniqueness of *kotodama* is not seen in any other modern culture (Hara, K., 2005a,b).

Due to *kotodama*'s affect, the Japanese honor both what is said and what is not said. Meaning is carried in silence to a greater degree than that of English. Hara (2005) states that, "...the fear of *kotodama*'s magical power, internalized in Japanese culture, has created the common belief that silence is a virtue and speech is a vice" (p. 282). Thus, the concept of *awase*, or other-oriented communication, develops. In interpersonal communication between users of Japanese, self emotion is subdued and caring for others takes precedence. As a result, much of what is communicated seems vague and subversive. Honorification may also be linked to *kotodama*. The original grammar of honorific forms comes from speech in prayer to the gods in Shinto and Buddhist traditions. Over time, these speech forms developed into a method for a user to show humility to a superior or elder. *Sonkeigo*, *teineigo*, and *kenjyugo* are used by the Japanese in situations requiring the recognition of social roles and superiority (Banno, E., Ohno, Y., Sakane, Y., & Shinigawa, C. 1999; Etsuko, H. & Miwa, S. 2004). *Teineigo* is

used by the speaker to show respect to the listener, while *kenjyougo* is used when speaking to a superior and shows a sign of humility toward the listener (Banno, E., Ohno, Y., Sakane, Y., & Shinigawa, C. 1999; Etsuko, H. & Miwa, S. 2004; *Minna no Nihongo* 1998). Each form has specific vocabulary, *kanji*, grammatical structure, and contextual clues specific to itself. The less formal language structure is reserved for close friends (Banno, E., Ohno, Y., Sakane, Y., & Shinigawa, C. 1999; Etsuko, H. & Miwa, S. 2004). Mastering when and with whom these language forms are used is vital to speaking and understanding Japanese.

An odd characteristic of *kotodama* is that the users of the Japanese language have a false assumption that if something is not said, then it does not exist; if the words are never spoken, then it is not true. True intentions, emotions, thoughts, and opinions must be interpreted and assumed by the receiver of a message through context. Being too straight-forward will evoke awkwardness in communication (Hara, K., 2005a,b; *Minna no Nihongo II*, 1998). As a result, users of the Japanese language are trained subconsciously from an early age to draw from the atmosphere of conversation (Hara, K., 2005a). There is a constant “etcetera” floating throughout conversations, texts, and even silence. While users of English must train themselves to recognize non-Allness, users of Japanese must train themselves to avoid Allness to a great degree.

The Fluctuating Nonverbal Threshold

The extensional devices proposed by Korzybski are a self-reflexive product of Aristotelian logic; although Korzybski proposed a non-Aristotelian Orientation, the devices by which English could be improved as an effective tool for abstraction awareness are logically Aristotelian. The cohort to, “A is A,” is simply, “A is not A.” Korzybski offers two ways to approach a mode of communication. However, the Japanese would include what Masao Kunihiro (1975) calls a “tetralemma”:

Let us ponder over a question not theologically but as an exercise in logic, and the question goes like, "Is there life after death?"...Now, in reply to this question, Kant most likely will emerge with two answers. Yes, there is life after death, affirmation. No, there is no life after death, negation. On the other hand, Lord Sakya Muni or the Indian Logician called Sanjana who was contemporaneous with Lord Sakya Muni and was responsible for the tetralemma orientation will come up with four answers. Yes, there is. No, there is not. The third answer will be: It can be said that there is and at the same time it can be said that there is not. Both affirmation and negation. ARU TOMO NAI TOMO IERU. And the last answers will be: It cannot be said that there is and at the same time it cannot be said that there is not. Both non-affirmation and non-negation. ARU TOMO NAI TOMO IENAI....Now, does this sound terribly "illogical" to you? If so you have been exposed too excessively to Aristotelian logic of the West (pp. 119-137).

Korzybski undoubtedly includes the possibilities of the tetralemma through his system of non-Aristotelian logic, but the notion of all of these existing at once is never explicitly indicated.

Ingrained within the Japanese language, and indeed within the culture, are characteristics which exhibit extensional functionality. If English language users must adopt proposed extensional devices in order to raise awareness of abstraction, while the Japanese language users already have functioning extensional characteristics, then an important step in the Structural Differential must be illustrated. As the brain and the mind interact with one another and cross over from the nonverbal realm to the verbal realm, a key component of abstraction occurs. This all-important phase of abstraction is typically represented by a single dotted line between the Event Level and the Object Level. But if a language can be improved enough to increase awareness of abstraction and more accurately interact with the Event Level, then a change must be apparent within the

Structural Differential illustration. Proposed in Figure 6 is a revised Structural Differential including the Fluctuating Nonverbal Threshold. This threshold expands when a language user continually fails to recognize abstraction and makes false evaluations; the threshold contracts when a language user practices extensional methods to raise awareness of abstraction and improve the accuracy of communication. As a result, the proximity of the Object Level to the Event Level changes based upon the language's affect on the user's brain and mind. The closer the Object Level is to the Event Level will determine the strength and frequency of connections made between the two levels. This threshold can be applied to individuals as well as cultures. In this respect, due to the extensional nature of Japanese and the need for extension in English, the Japanese language and its users have a thinner threshold than that of their English-using allies.

Although the extensional devices Korzybski proposed may not help Japanese language users raise awareness of abstraction, they do highlight the key concepts behind effective communication in Japanese. Japanese language users, therefore, are more aware of their abstraction than English users. Moreover, the society and the language were built on non-Aristotelian logic for centuries (Ostler, N., 2005). Perhaps the application of general semantics to the Japanese language will teach little to its users as far as the methods by which Korzybski proposed. Instead, English language users should learn from the more extensional Japanese language users. Suggesting the advent of *kanji*, or adopting *kotodama*, however, is not a practical means by which to learn from the Japanese. Instead, the affects and characteristics of their language should be translated into new extensional practices by English users. Korzybski believed in teaching for the next generation through the human trait of time-binding, and these new extensional exercises are of no exception. The following section highlights desirable characteristics of the Japanese language and culture, how these characteristics may be

translated into the English-speaking realm of the United States, and what education in the United States can do to teach a more extensional generation.

Extensional Practices Borrowed from the Japanese

Altering the Contextual Setting

The United States is a low-context culture, while Japan is a high-context culture (Hara, K., 2005a). The Japanese rely on both the sender and the receiver of the message to understand and interpret meaning through the implicit context of the communication. English users rely on the explicit meaning of the words used in order to extract meaning and interpret the message. As a result, English users in the United States rely on facts, value precise definitions and grammatical use, and develop a hierarchy of modes of communication, with the written word as the superior to informal conversation. In a high-context culture like Japan, more emphasis on interpersonal communication leads to a more effective method of teaching literacy. Generating the context in a high-context culture begins with interpersonal communication. Writing, therefore, is a practice of communicating the context clearly for the future audience.

The extensional devices of indexing and dating provide context for English users. The Japanese language, however, already has the context in place. The extensional advantage of increased context pulls the Event Level closer to the Object Level, since communication is more about an experience on contextual levels and less about minute labeling. What can be learned from the Japanese language, therefore, is the extensive use of context. English language users in the United States, however, have developed a low-context system of communication deeply engrained in the culture. However, recent developments in United States culture have started to increase the importance of context in day-to-day communication. The culprit for growing context rests within the advent of new media, particularly cellular phones and social networking.

Cell phones in the United States now outnumber landline phones by over two-thirds. According to the CTIA-The Wireless Association (2008), there are over 262 million cell phone subscribers in the United States, which is roughly 84% of the total population. It almost seems as if cell phones are taking over communication in the United States. Indeed, a fear of this new technology and its hold on the youth of the nation arises as a popular subject among concerned parents and teachers. Barbara Melton and Susan Shankle (2007) in *What in the World Are Your Kids Doing Online?* write:

Text messaging (TMing) gives kids a chance to be in constant contact with one another and to speak a whole new language that parents (and even many older kids) can't understand. What kid in the world could resist that? And when parents see their children, happy, quiet, not fighting with one another, busily TMing their friends, how does that look like a parenting challenge?...Alas, it is. Text messaging opens up a whole new world for your children—and therein lies the problem. While it's been true for several decades that young people had a language of their own, at least it was a language that adults could hear—or at least see (pp. 37-38).

The use of cell phones and text messaging, according to Melton and Shankle, is a deep concern for the coming generation. However, like most other media, the fear is eventually subdued and generally accepted by the culture. The same pattern arose with the release of the telegraph, the radio, the television, and the computer. Indeed, if parents and teachers fear the cell phone and try to abolish its use, then a stint in the beneficial use of the medium will prevent much needed improvement which could have otherwise been obtained earlier. Text messaging and cell phones offer a rich environment for a high-context tool in extensional practice.

Although text messaging does offer the possibility of instant communication, an often overlooked aspect of text messaging lies within the use of timing, word choice, language, and context. All of these aspects reflect the high-context nature of this new medium. For example, if one individual “texts” a friend and does not receive a reply for an extended amount of time, the context drawn from the interchange would cause the original sender to articulate upon the timing of the reply. Perhaps the friend is busy, or does not hold the message at a high importance. The same situation may arise from the language used within the replied text; less formal language could reflect a deep interpersonal connection, while more formal text could mean that the other person is uninterested or annoyed. In this way, text messaging is a training ground for drawing context from an environment. The same phenomenon applies to the *kotodama* belief in Japanese interpersonal communication. More meaning exists in what is not said rather than the words themselves. Also, the created language between users of text messages results in a high-context use of extensional meaning. Terms become well-defined through their use rather than their denoted value. Melton and Shankle (2007) offer an example of the new text messaging language:

L&k 4m3 @8

K, but il b ;-)-~

:-x...

143 (p. 63)

The translation being:

Look for me at 8.

Okay, but I'll be drunk.

I'll keep my mouth shut.

I love you (p. 63).

The coded language could be a derivative of the ever-changing, universal text messaging or a creation by the individuals involved in the communication. Either way, context is crucial.

Another rising interpersonal medium is the social network. A social network is an Internet community comprised of users who create a personal profile and interact with one another digitally, connecting millions of people through one website. Examples of social networks include Facebook and MySpace. The growth of these websites increases exponentially. Facebook adds about 6 million users every month, and MySpace boasts over 110 million users (Funk, T., 2008, p. 6). Similar to the cell phone and text messaging, social network users create and maintain a constantly changing language full of context. These websites also propel the notion of interpersonal communication, now mediated through the computer instead of face-to-face.

Harnessing the power of context through this new media is an extensional practice already present in Japanese culture and language. While the use of high-context has been the driving force of communication for the Japanese since early history (Ostler, N., 2005), United States culture must work to embrace the idea that words and statements may not need explicit definitions. Schools must adapt to the changing environment of computer-mediated communication and embrace both text messaging and social networks as tools for learning. There are real fears associated with the status quo of these media; the biggest concerns are sexual predators and identity theft in the revealing of personal information Online (Melton, B., & Shankle, S., 2007). Instead of using the technology in place, schools should create their own social networks. A school-specific website where teachers and students can interact Online and connect to real people they see every day is a safe avenue for high-context exploration.

By providing a safe social network to students early in school, teachers are able to control the conduct of students' behavior Online. It will be virtual training wheels

before the students decide to join one of the worldwide social networks. The revealing of personal information, how to detect sexual predators, and maintaining a healthy Online schedule could be learned in a controlled environment rather than the potentially dangerous real world of the Internet. This will also be beneficial to teachers who wish to keep abreast of the changing language of the Internet, how students interact with one another Online, and break down the fear of new media. Melton and Shankle (2007) list some of the benefits of Internet use for early childhood development; they propose that the Internet offers children with disabilities a way to interact with their peers outside of extracurricular activities, where they typically feel isolated (p. 224). Social networking may also help children who suffer from social anxiety (Melton, B. & Shankle, S. 2007, p. 227).

Integration of a social network into schools should not be on a per class basis. The program should not be used, for example, as a substitute for writing an English paper. Instead, the network should be available for use at all times to students and teachers. The restrictions during class time will keep the students in schoolwork, but the expectation of using the social network outside of class can help to develop these high-context interpersonal skills. Text messaging, on the other hand, may not have any feasible value to the educational system. However, the use of cell phones in school should be allowed, as long as the student does not violate classroom policies. Text messaging is the equivalent of note-passing, which has been practiced in schools for an unknown length of time. It provides a safe feature for parents to know where their children go and what they do. Text messaging also allows students to check messages whenever convenient or appropriate. Instead of banning the use of cell phones, schools should condone it.

Visual Language and Learning Submersion

One of the most beneficial aspects of the Japanese language in cognition is the study and use of *kanji*. Early in the education of children in Japan, *kanji* is taught through a systematic process of repetition and practice, not unlike mathematics. The average Japanese person knows how to read and write over 2,000 different *kanji*, each with an average of three to four different readings (Flaherty, M. & Moran, A., 2004; Halpern, J., 1999; Nakamura, K., & Kouider, S., 2003). During elementary and junior high school, one-thousand *kanji* are required to be learned (Beauchamp, E. R., 1982; Matsuoka, K., Uno, M., Kasai, K., Koyama, K., & Kim, Y., 2006). During the early stages of learning how to write, both in *kana* and *kanji*, the student must be aware of stroke-order (Halpern, J., 1999). There are exactly 28 basic strokes that are used to create most *kanji* (Halpern, J., 1999). After names or items are alphabetized, the order is further determined by the stroke-count of the *kanji* (Halpern, J., 1999). A unique aspect of Japanese can also be attributed to the ease of transcription. Aside from knowing the *kanji*, any voiced message can be written without spelling error, since all sounds voice in Japanese are syllabic and directly representative of the letters. The challenge is in the *kanji* determinant.

The neurological effects of *kanji* use are still being studied, mainly involving the processes necessary for exercised memory. (Flaherty, M. & Moran, A., 2004; Matsuoka, K., Uno, M., Kasai, K., Koyama, K., & Kim, Y., 2006). Declarative memory, which contains episodic memory and semantic memory, is a form of long-term memory (Matsuoka, K., Uno, M., Kasai, K., Koyama, K., & Kim, Y., 2006). Episodic memory refers more to the ability to recall events and experiences, whereas semantic memory is more about automatic recall of learned events (Matsuoka, K., Uno, M., Kasai, K., Koyama, K., & Kim, Y., 2006). Therefore, reading ability is a part of semantic memory, but the feelings about the words according to past experiences is due to episodic memory. A study by Mary Flaherty and Aidan Moran (2004) reveals a direct link between logographic languages, such as those utilizing *kanji*, and improved visual memory. The

study also showed that the difference between logographic and orthographic languages is the type of memory exercised while using the language (Flaherty, M., 2004). Another study by Keiko Matsuoka, Masatake Uno, Kiyoto Kasai, Keiko Koyama, and Yoshiharu Kim (2006) reveals that *kanji* reading is an involuntary process and less vulnerable to semantic degradation. Thus, *kanji* reading requires a semantic memory recall due to its involuntary nature. However, unlike the English language, reading *kanji* in Japanese deals more with semantic memory and has a global effect on the brain rather than a concentrated one (Nakamura, K., Dehaene, S., Jobert, A., Bihan, D. L., & Kouider, S., 2005). In essence, Japanese language users will have better memory recall and a stronger semantic memory simply due to the nature of the Japanese language (Flaherty, M. & Moran, A., 2004; Matsuoka, K., Uno, M., Kasai, K., Koyama, K., & Kim, Y., 2006; Nakamura, K., Dehaene, S., Jobert, A., Bihan, D. L., & Kouider, S., 2005). Also, *kanji* only accounts for the logographic elements of Japanese, and the orthographic nature of *hiragana* flexes different areas of memory in the brain. This is attributed to the idea-based system of *kanji* in Japanese versus the universal need for *kanji* in other languages, such as Chinese.

Kanji reading is placed in a different area of the brain from the orthographic scripts of *hiragana*. Language, in a phonological sense, occurs mostly in the fronto-temporal area of the left hemisphere, which is where *hiragana* is located (Nakamura, K., Dehaene, S., Jobert, A., Bihan, D. L., & Kouider, S., 2005). *Kanji*, although having similar locations within the brain, also has an extra location unique in comparison to other languages (Nakamura, K., Dehaene, S., Jobert, A., Bihan, D. L., & Kouider, S., 2005). Some *kanji* reading occurs within the bilateral medial fusiform area, which is thought of as being *kanji* specific (Nakamura, K., Dehaene, S., Jobert, A., Bihan, D. L., & Kouider, S., 2005; Nakamura, K., & Kouider, S., 2003). This location in the brain suggests a nonverbal association, which means that a reader of *kanji* first draws the

meaning of a *kanji* before actually reading the *kanji* (Flaherty, M. & Moran, A., 2004; Nakamura, K., & Kouider, S., 2003). To summarize, in the Japanese language, a *kanji*'s meaning is known before it is actually recalled phonetically. Thus, the Japanese language follows a meaning-to-phonology order of reading, whereas English is a phonology-to-meaning order of reading (Flaherty, M. & Moran, A., 2004; Nakamura, K., & Kouider, S., 2003). This reordering accounts for an interesting phenomenon in Alzheimer's patients. Because of the interconnectedness of the areas of the brain during literary activities—such as reading and writing—Alzheimer's patients who use Japanese retain all of their reading ability. However, Alzheimer's patients who speak English, with lesions in the same areas of the brain, lose either reading or writing ability (Hanson, P.P., 1990; Matsuoka, K., Uno, M., Kasai, K., Koyama, K., & Kim, Y., 2006).

The focus of *kanji* in Japanese society is necessary for literacy. As such, the methods for teaching *kanji*, although similar to teaching mathematics, works differently in the Japanese culture than it would in United States culture (Beauchamp, E. R., 1982; Beauchamp, E.R., 1992). The key difference is submersion. During the learning process, Japanese students are forced to use the *kanji* every day, whether it is read in a book, newspaper, on a sign, or homework. Advanced mathematics, perhaps as low-level as algebra, may not be used every day by students. The challenge facing teachers in the United States is to make whatever subject taught in school a practical tool for everyday life.

The English language does not have a fully integrated system of meaning-to-phonology ordered mechanisms. The components of a *kanji* can be taken individually as a means of producing similar affects on the brain. The necessary criteria are 1) visual aesthetics, 2) logical structure, 3) the need for repetition in retention, and 4) practical, everyday use. Mathematics may utilize a logical structure and require repetition, but fail to provide a practical use for students in everyday life; also, it does not necessarily

require a visually aesthetic layout, although a case can be made. Also, creativity in early mathematics is limited, and thus fails to parallel language use for English speakers.

There is a recent movement of languages which fill all of the criteria that *kanji* requires; this new “language” also integrates mathematics, problem solving, creativity, language use, and social interaction, in addition to the criteria outlined above, through various stages of development. This power language exists within computer code.

Computer languages offer a variety of learning issues for students that no other subject in school has been able to fully integrate. Perhaps the beginning language of choice would be Hypertext Markup Language, or HTML. This is the standard language in which most websites use to display information within a web browser for the Internet user. The language is responsible for displaying text, images, hyperlinks, simple styling (bulleted lists, numbered lists, headings, subscripts, etcetera), altering colors, and manipulating layouts. Using a computer language requires the developer to adhere to predetermined standards. Students will learn to create organized and visually appealing code for ease of development and readability. This is homage to the aesthetics and structure of *kanji*. Not only does learning a computer language require repetition and practice, but it can provide immediate feedback if the student is correct or incorrect through the code’s output. In more advanced uses of code, the students will have to incorporate mathematical algorithms based on what they learn in class. By requiring a coding class in school, students will be prepared to thrive in the increasingly tech savvy culture of the United States; in fact, coding literacy on a wide scale would catapult the United States ahead of other countries.

Students would also be submerged in a culture where coding is valued as a necessary skill. Basic knowledge of coding languages could prevent potentially malicious attacks to Internet users. Also, students would be able to experiment with code in their free time using the already popular websites boasting exponential growth, like

Facebook and MySpace. The lynchpin of the coding language is in its practicality. Students could use coding everyday with the media they already use. The Urban Academy High School in New York City already has computer courses offered to their students (Oppenheimer, T., 2003). Some of the courses available to students there include Video Game Programming, Internet Programming, and Photoshop. The school boasts above-average SAT scores from their students (Oppenheimer, T., 2003). Computer programming, therefore, will be the United States' answer to *kanji*. Coding is an integrated, visual system of learning, whose everyday use is beneficial to students and works to connect different areas of the brain. As a result, English users can decrease the gap within the threshold of the Structural Differential and become more extensional.

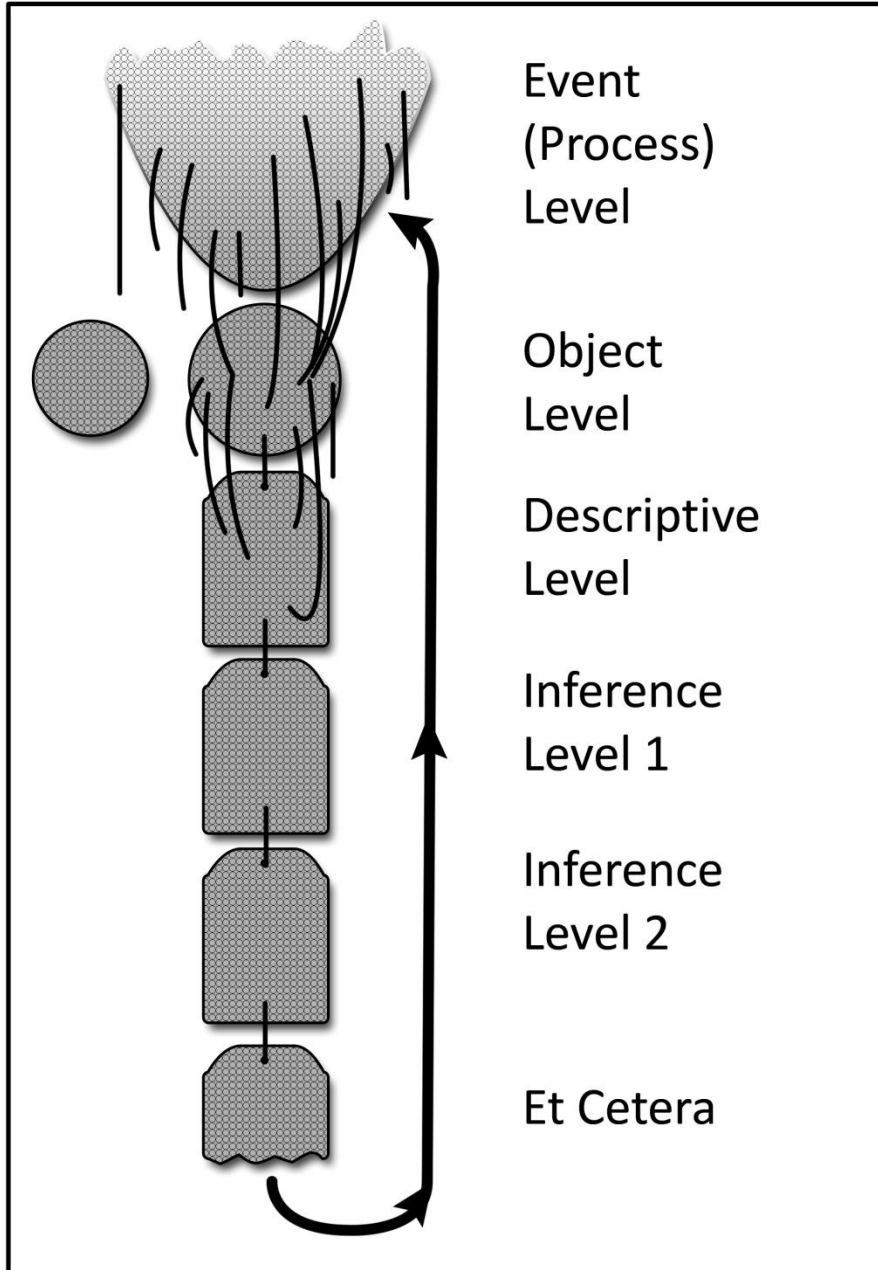
Conclusion

Providing the basis for general semantics, Korzybski revealed flaws in the English language in its shaping of the perception of reality among its users. Since the creation of general semantics, a large following of scholars and thinkers have propelled the ideas first outlined by Korzybski as a great tool for raising abstraction awareness. However, Korzybski needed to expand more upon how a language can be altered by its users to better evaluate events. By disregarding cultures whose history does not associate with the teachings of Aristotle, Korzybski missed an opportunity to strengthen his non-Aristotelian premises. Although many cultures exhibit a high-context orientation, the combination of *kanji*, phonetics, logography, symbolism, *kotodama*, and culture within Japan exemplifies how extensional a language and its users can be. Korzybski's extensional devices prove to be English-specific and miss the broader conclusions of what general semantics strives to obtain: abstraction awareness. The United States must embrace a higher context and an inclusive, systematic method of teaching communication. The organic nature of United States culture must accept the changes in

media and media use. Therefore, schools should adopt new media, such as text messaging, social networking, and computer coding, in order to adapt to the changing culture of the United States. By doing so, perhaps the next generation will become more extensional and aware of their own abstraction. Miscommunication will be lessened to variable degrees, and students will find practicality in the new media use. The nature of human beings as time-binders must find innovative solutions to ever-present problems. The next generation can only benefit.

Figures

Figure 1: The Structural Differential



Reference to Kodish & Kodish (2001) with slight visual modification.

Figure 2: Japanese Alphabet (basic sounds)

a あ ア	ka か カ	sa さ サ	ta た タ	na な ナ	ha は ハ	ma ま マ	ya や ヤ	ra ら ラ	wa わ ワ	n ん ン
i い イ	ki き キ	shi し シ	chi ち チ	ni に ニ	hi ひ ヒ	mi み ミ		ri り リ		
u う ウ	ku く ク	su す ス	tsu つ ツ	nu ぬ ヌ	fu ふ フ	mu む ム	yu ゆ ユ	ru る ル		
e え エ	ke け ケ	se せ セ	te て テ	ne ね ネ	he へ ヘ	me め メ		re れ レ		
o お オ	ko こ コ	so そ ソ	to と ト	no の ノ	ho ほ ホ	mo も モ	yo よ ヨ	ro ろ ロ	o を ヲ	

Figure 3: Dakuon (voiced sounds)

ga が ガ	za ざ ザ	da だ ダ	ba ば バ	pa ぱ パ
gi ぎ ギ	ji じ ジ	dji ぢ ヂ	bi び ビ	pi ぴ ピ
gu ぐ グ	zu ず ズ	dzu づ ヅ	bu ぶ ブ	pu ぷ プ
ge げ ゲ	ze ぜ ゼ	de で デ	be べ ベ	pe ぺ ペ
go ご ゴ	zo ぞ ゾ	do ど ド	bo ぼ ボ	po ぽ ポ

Figure 4: Youon (palatalized sounds)

kya きゃ キャ	sha しゃ シャ	cha ちゃ チャ	nya にゃ ニャ	hya ひゃ ヒャ	mya みゃ ミャ	rya りゃ リャ
kyu きゅ キュ	shu しゅ シュ	chu ちゅ チュ	nyu にゅ ニュ	hyu ひゅ ヒュ	myu みゅ ミュ	ryu りゅ リュ
kyo きょ キョ	sho しょ ショ	cho ちょ チョ	nyo にょ ニョ	hyo ひょ ヒョ	myo みょ ミョ	ryo りょ リョ

Figure 4 con't: Palatalized Voiced Sounds

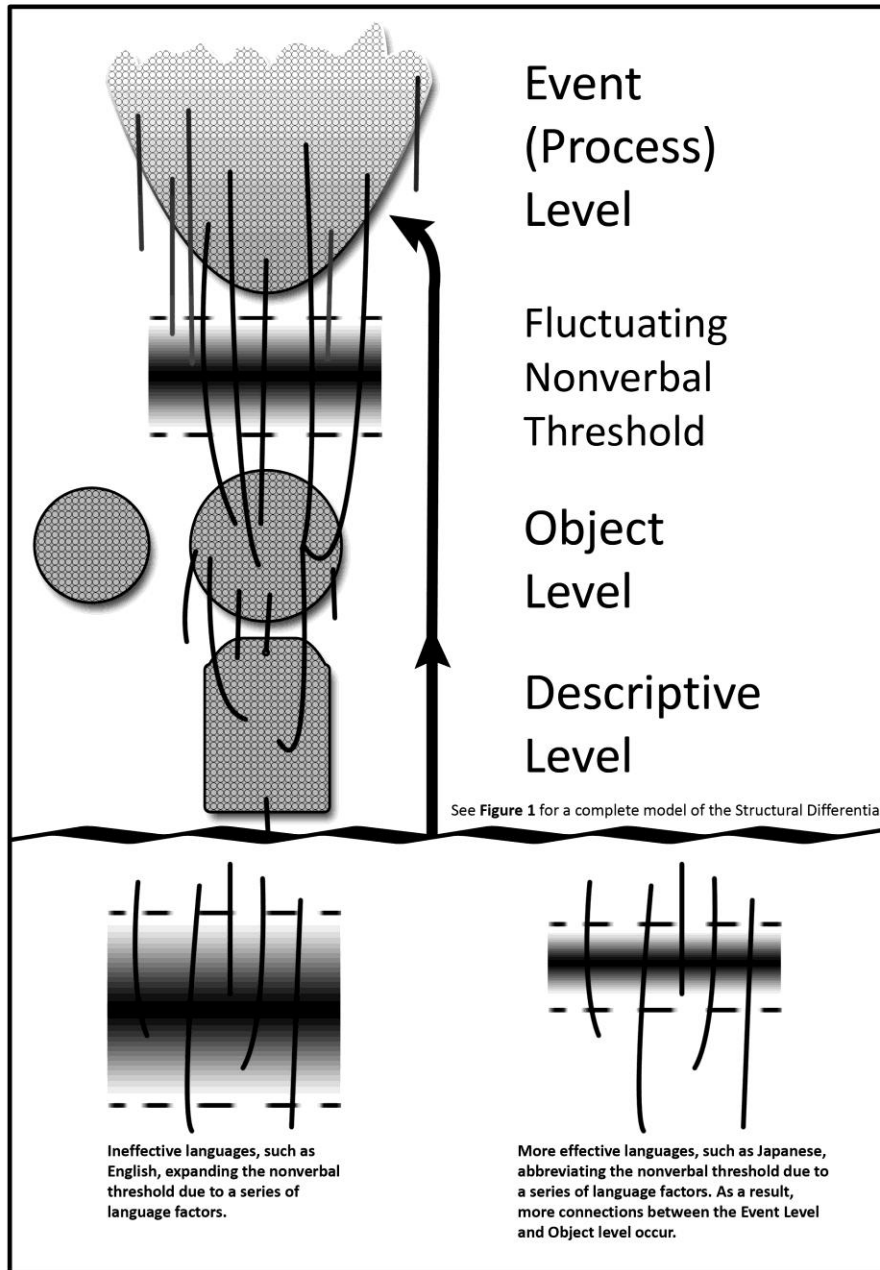
gya ぎゃ ギャ	jya じゃ ジャ	djya ぢゃ ヂャ	bya びゃ ビャ	pya ぴゃ ピャ
gyu ぎゅ ギュ	jyu じゅ ジュ	djyu ぢゅ ヂュ	byu びゅ ビュ	pyu ぴゅ ピュ
gyo ぎょ ギョ	jyo じょ ジョ	djyo ぢょ ヂョ	byo びょ ビョ	pyo ぴょ ピョ

Romaji	Figures 2-4 Key Modelled after the Kodansha Kanji Dictionary (Halpern, 1999.)
Hiragana	
Katakana	

Figure 5: Extensional punctuation used by Alfred Korzybski to denote the use of the term "etcetera."

Abbreviation	Stands for
”	etc.,
,”	,etc.
;”	etc.;
:”	etc.:
?”	etc.?
!”	etc.!

Figure 6: Detail of the Structural Differential including the Fluctuating Nonverbal Threshold



Reference to Kodish & Kodish (2001) with slight visual modification.

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