

# THE ANALYTIC HIERARCHY PROCESS AND BASIC ENGLISH

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## ABSTRACT

Basic English is a highly organized system of simple English invented by an English scholar, Charles Kay Ogden, about 80 years ago. The main property of Basic English is its analyticity (being analytic). Basic English was possible because of the analytic property of the Modern English language; many complex words being put into more simple, basic words (e.g. 'enter' is analyzed as 'go into'). C.K. Ogden thought that the ambiguous use of words and its consequent confusion in our thought can be reduced by using Basic English. A main property of the Analytic Hierarchy Process is also its analyticity; decomposing a decision-making problem into interrelated decision elements describing the problem in a hierarchical way, goal, criteria, and alternatives. Similarities and differences between Basic English and Analytic Hierarchy Process are discussed, and on the basis of this discussion, English sentences and Japanese sentences are analyzed from the view point of Analytic Hierarchy Process and a new framework for the Analytic Hierarchy Process based on Basic English, AHP/BE, is suggested.

**Keywords:** Basic English, hierarchy, Ogden, analyticity, ambiguous use of words

## 1. Introduction

Basic English (BE), developed by Charles Kay Ogden during 1925-30, is a simplified form of English restricted to an 850-word vocabulary and a few rules of grammar. The basic idea of BE is to use simple words to explain harder thoughts. BE aims at the debabelization on the language layer and AHP aims at the debabelization on the thought layer. Both BE and AHP dream a dream of world-wide peace realization through the debabelization on each layer. For those who are not familiar with BE, BE is briefly explained in Chapter 2. Similarities and differences between AHP and BE are discussed in Chapter 3. On the basis of this discussion, BE sentences (or English sentences) are analyzed from the viewpoint of AHP in Chapter 4. Finally, a new framework of AHP based on BE, AHP/BE, is suggested in Chapter 5.

## 2. Basic English and Charles Kay Ogden[1,2]

BASIC of “Basic English (BE)” stands for “British American Scientific International Commercial”. BE is developed by a British linguist, C.K. Ogden (1889-1957), and is described in his book([1]) “Basic English : A General Introduction with Rules and Grammar (1930)”. BE has 850 basic words. Of the 850 words, 600 are names of things. Many words can be learned using pictures. 150 are words to describe things, or adjectives. The last but most important group are 100 operations: verbs, prepositions, etc. which operates other words. What we call verbs represent the basic acts or operations of our bodies or things. Practically, BE is intended as an international auxiliary language and for the first step of teaching English as a foreign language. On commemoration of the 50th anniversary of Ogden’s death, a book[2] was written by Yoshiko Aizawa, a former professor of Tokyo

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University of Arts and Design, titled “Ogden, a Genius Attracted with 850 Words”. It is written in Japanese and was published on by Hokuseido Press, Tokyo, Japan, in November 2007. Its English summary is on the web site <http://ogden.basic-english.org/books/sumogden.html>. Following are some phrases about Ogden depicted from the book.

*Ogden is a polymath. He did a great amount of work. He was a linguist, psychologist and philosopher.*

*Twenty years before the completion of BE, Ogden had started to think of a universal language.*

*The idea of a universal language which would bring the nations to better understanding, developed as early as about 100 BC, and a number of attempts had been made.*

*Ogden studied and united language theories of the predecessors. “The Meaning of Meaning” is a joint work with I.A. Richards.*

*Ogden and Richards pointed out that linguists so far had neglected the study of meaning and the relationship between language and thought. While Ogden and Richards made definitions of various words, they were struck by the fact that whatever words they defined, certain words kept coming again and again. Then they thought that with some limited set of words a simplified language might possible, that is Basic English.*

*By 1928 Ogden was convinced that 850 words could do the work of 20,000 words.*

### 3. Similarities and differences between AHP and BE

Similarities and differences between AHP and BE are discussed from the viewpoints of their analyticity, hierarchy, process, universality, propagation and dreams (see Table 1).

**Table 1 : Comparing AHP and BE**

	AHP	BE
analyticity (analytic property)	• hierarchical decomposition into goal, criteria, and alternatives	• use simple words to explain harder thought • Bentham’s suggestion that verbs can be reduced by breaking up into more elementary words
hierarchy	• goal-criteria-alternatives	• subject-verb-object
process	• process of thinking	• sentence pattern
universality (debabelization)	• unified framework of decision-making • debabelization on the thought layer	• universal language • debabelization on the language layer
propagation	• books • software tools • symposium (ISAHP)	• textbooks • material of English teaching
dreams	• world peace	• world peace

(i) Analyticity(analytic property)

AHP and BE are both analytic. As AHP stands for *Analytic* Hierarchy Process, the analyticity of AHP comes from the decomposability of decision-making process into goal, criteria and alternatives.

The analyticity of BE comes from the decomposability of many English words into basic 850 words.

(ii) Hierarchy

AHP has a hierarchical structure of goal, criteria and alternatives. The sentence pattern of S+V+O in BE *can* be regarded as a hierarchy. What AHP and/or ANP models other sentence patterns, such as S+V, S+V+C, S+V+O+C, and S+V+O+O, correspond to, is a remaining problem.

(iii) Process

From the viewpoint of the mind transition interpretation, the process of AHP can be considered as a trajectory of mind transition, and if it is expressed verbally in English, it becomes an English sentence.

(iv) Universality

AHP and its variants (such as ANP) aim at establishing a unified framework of decision making. BE aims at establishing a universal language. AHP and BE both aim at the debabelization, AHP on the thought layer and BE on the language layer.

(v) Propagation

Various software tools which automatically calculate decision making results have been developed for AHP and its variants. Textbooks of BE have been written for teaching English as a foreign language. Many of Basic words can be learned using pictures.

(vi) Dreams

Both AHP and BE dream a dream of world peace through the debabelization.

#### 4. English and Japanese sentences as AHP[3]

Let's consider a simple English sentence,

“I take an apple”.

Its basic sentence pattern is S+V+O, where S is Subject, V is Verb and O is Object. The word order is just as we think and perform an action. First a person that does act (Subject), then the act itself (Verb) and lastly the object acted on (Object). A person who thinks “I take an apple”, has just made a decision. Its AHP diagram may be shown in Fig.1. The goal of AHP corresponds to the subject I (or the subjectivity of the action). A criterion of AHP corresponds to what action to choose, where “have” expresses (a wish of) possession, “give” expresses (a wish of) supply, “get” expresses (a wish of) acquisition, and “take” expresses (a wish of) move (or to get in one's possession). It is interesting to notice that a verb in a sentence corresponds to a criterion in AHP (Fig.2). Verbs in BE are claimed to be “operations” by Ogden. They are to operate other words such as nouns. An alternative of AHP corresponds to an object acted on (or a noun). The goal of AHP corresponds to the subject, or I. This is because the goal is a will of a person thinking to do something and “I think, therefore I am (Rene Descartes)”.

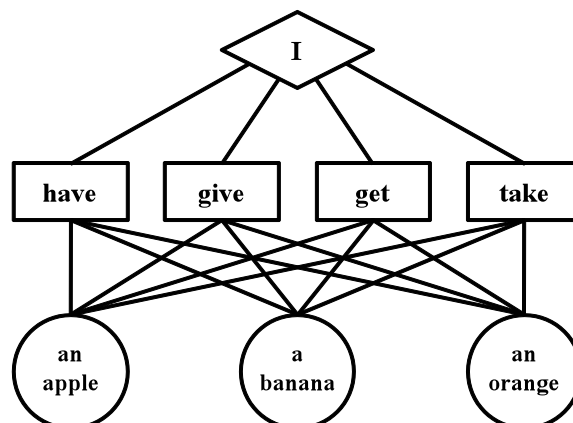
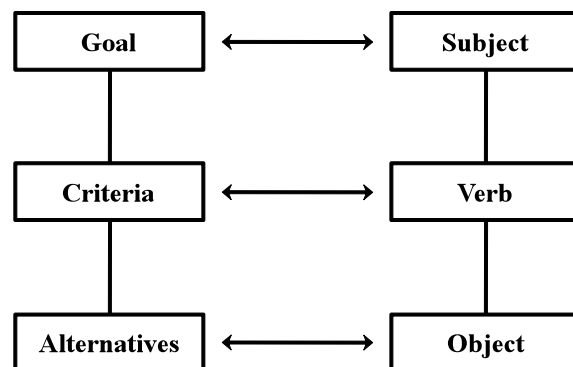


Fig.1 AHP for sentence pattern S+V+O



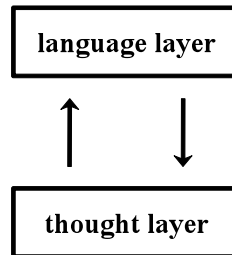
(a) Three-level hierarchy of AHP (b) Sentence pattern S + V + O

Fig.2 Correspondence between AHP and S+V+O

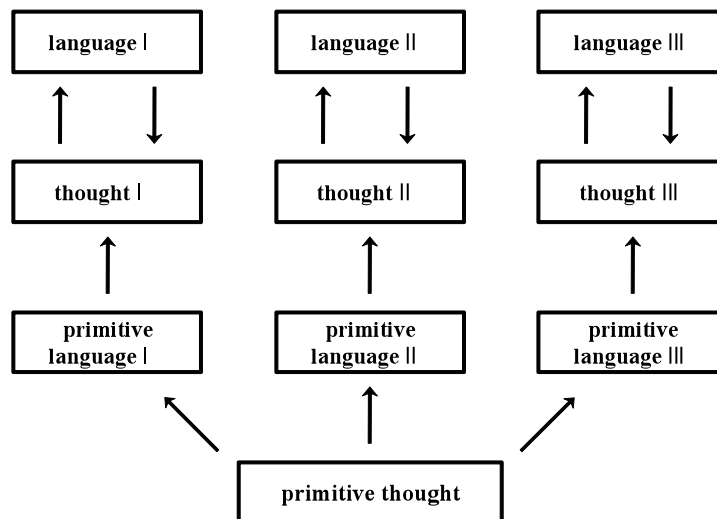
On the contrary, a Japanese sentence generally has a pattern of S+O+V, instead of S+V+O in English. From the mind transition interpretation of AHP, Japanese people first think of the object, or the alternative, and then the verb, or the criterion, and English people first think of the verb, or the criterion, and then the object, or the alternative. That is, AHP is said to be very familiar with English way of thinking.

## 5. AHP/BE

AHP and BE both dream a dream of world peace, AHP through the debabelization on the thought layer and BE through the debabelization on the language layer. Which comes first, thought or language? This may be a long lasting never-ending discussion as in “The Meaning of Meaning”([4]). This is just like which-came-first-the-chicken-or-the-egg question. Depending on how to define “thought” and “language”, their relationship can be summarized as in Fig.3 and Fig.4. Fig.3 shows general mutual dependency and Fig.4 shows spiral (or bootstrapping) evolution from primitive thought.



**Fig.3 2-level mutually dependent hierarchy of thought and language**



**Fig.4 Spiral evolution of thought and language**

Whatever the relationship between thought and language, they are mutually dependent in some senses, and in order to make the dream of AHP come true, a new framework of AHP based on BE, AHP/BE, is suggested.

With AHP/BE, the goal, criteria, and alternatives of AHP are all described in BE, thus the ambiguity accompanied with decision making is reduced as much as possible.

Fig.5 shows conventional AHP diagram for selecting PC (personal computer), and Fig.6 shows suggested AHP/BE diagram, where the criteria are rephrased in basic words. Technical words, such as PC (personal computer), are left as they are even with AHP/BE.

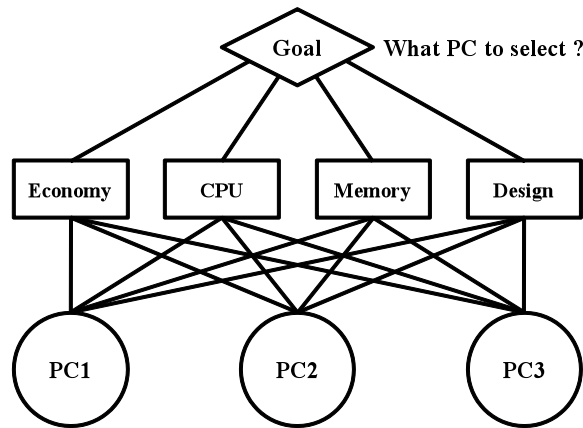


Fig.5 Conventional AHP Diagram

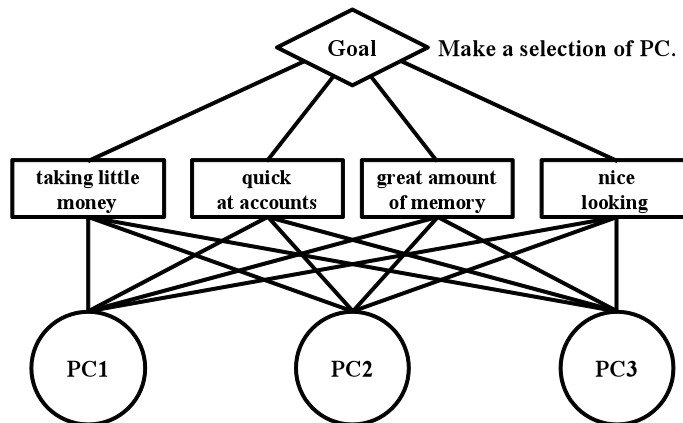


Fig.6 Suggested AHP/BE diagram

## 6. Conclusion

AHP tries to unify decision-making framework on the thought layer and Basic English (BE) tries to achieve better communication on the language layer. Since AHP and BE are both analytic, they have a degree of affinity to each other, and since thought and language are not independent, we tried to combine AHP and BE. A new framework AHP/BE is suggested and its example is shown.

Application of AHP/BE to various decision-making problems and its comparison with conventional AHP is a future research work.

## References

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