日本語と中国語の比較級構文の対照研究

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要 約

本発表は、英語の比較級構文に対して提案された統語論及び意味論に基づき、日本語と中国語の比較級構文を比較し、その生成にかかわる統語的操作の違いと意味論の違いを明らかにするものである。

構成としては、まず、意味論の観点から、形容詞と比較級の意味を定義する。形容詞の意味論は、それが程度という概念を含み、また程度は基準との比較によって定まるものである故、外延的な定義が難しい。ここでは、形容詞とは、個体を形容詞スケール上の一定の程度に投射する関数であるとみなし、この定義に基づいて、絶対級構文と比較級構文の意味論を明らかにした。次に、英語、日本語、中国語からのデータを提示し、この三つの言語が、1. 形態的な有標性、2. 数量表現の位置、3. 強調の副詞、4. 否定詞との相互作用の四つの点で異なるふるまいを示すことを明らかにした。

- 1. 形態的有標性: 形態的有標性とは、絶対級形容詞と比較級形容詞のどちらが形態的により複雑であるか、 である。英語では比較級、中国語では絶対級が有標であり、日本語については有標な形式は認められなかった。
- 2. 数量表現の位置:英語では、絶対値を表す場合も、差を表す場合も、形容詞の前と決まっているが、中国語では絶対値を表す場合は形容詞の前、差を表す場合は形容詞の後に置かれる。日本語では、形容詞構文を使って絶対値を表す方法がなく、必ず名詞化を経た後にその修飾語または述語として絶対値が表される。差を表す場合は、形容詞の前に数量表現が置かれる。
- 3. 強調の副詞:中国語や日本語では、比較級を強調する副詞に、比較の対象それぞれが形容詞の表す当該特性を備える場合と、備えているかどうかを問題にしないものがあるが、英語ではそのような副詞は見つからなかった。
- 4. 否定詞との相互作用:英語と中国語には比較級構文の否定が可能なのに対し、日本語では不自然となる。

以上の違いを示し、言語による違いは多方面のパラメターが絡み合って形成されるものであり、単純に「簡単な言語」、「複雑な言語」といったようなくくり方をすることはできないと述べた。

発表資料

A Contrastive Analysis of Japanese and Chinese Comparative Construction Satomi ito Department of Asian Languages, Literature and Culture Ochanomizu University This talk is about comparative construction in different languages. Comparative construction has been discussed over 30 years in the field of formal semantics. But their discussion is mostly based on English, so today I apply the analysis of English to Japanese and Chinese, and decide which language has the best strategy to express comparison.

Outline of this talk

- Define the meaning of adjective and
 comparative construction
- 2. Data from English, Japanese and Chines
- 3. Compare three languages.
 - 1. morphological markedness
 - 2. the position of numeral expressions
 - 3. intensifiers 4. interaction with negation

This talk consists of 3 parts. First, I introduce the standard analysis of adjectives and comparative construction. As my major is formal semantics, I will define them from the semantic viewpoint.

Second, I show the data from English, Japanese and Chinese, and discuss how they are different each other.

I am going to compare these languages in four aspects. In round 1, I discuss the morphology. In round 2, I show how differently they behave in terms of the position of numeral expressions. In round 3, I discuss intensifiers which modify comparative adjectives. In the final round, we see what happens to comparatives under negation.

Truth Value

- When is the proposition John is a gentleman true?
- A. If John has a property of gentleman
 - → Intension of gentleman
- B. If John is a member of the group of
 - → Extension of gentleman

What do adjectives mean?

- When is the statement John is young true?
- A. If John has a property of young.
- → A property of young is young!B. If John is a member of the group of young
 - → Which period in life is called "young"?

Vagueness of Adjectives

- The truth value of an adjective must be judged in relation to the given circumstance.
- Suppose Tony became the prime minister of the UK at the age of 43.
- The statement 'Tony was young' is true.

 2. Suppose Tony was 43 years old when he entered

The statement 'Tony was young' is false.

Implicit Comparison Class

- We always suppose an implicit comparison class when we utter an adjective.
- For example, the statement 'Tony was young' is true in relation to the set of prime ministers of the UK, i.e., {Gordon Brown, John Major, Margaret Thatcher, James Callaghan, ... }.

Translation into degrees

- In order to tell the truth value of 'X is A' with relative to the given implicit comparison class, w need to know the degrees possessed by X and each member of the implicit comparison class
- Tony → 43-year-old
- {Gordon, John, Margaret, James, ... }.

 → {56-year-old, 47-year-old, 53-year-old, 64-year-old, ... }

The Semantics of Adjectives

- See the context and come up with a proper implicit comparison class
- Translate all individuals into degrees on the scale of the adjective
- Compare the degree of the subject with the average degree of the implicit class
- If the degree of subject is higher than the average, the statement is true.

First I introduce basic of semantics. Logically speaking, the meaning of a sentence is true or false. It might be shocking for some people, but please accept this definition.

There are two major ways to decide whether one proposition is true or not. For example, the proposition John is a gentleman is true If John has the properties of gentleman, or if John is a member of the group of gentlemen. [Click] "A" condition is called intension of gentleman, and [Click] "B" condition is called extension of gentleman.

So far, we are involved with nominal predicates. Next, we see adjectival predicates and show how they are defined.

When is a sentence like "John is young" true?

According to the definition we have just seen for nominal predicates, it will be as follows:

- if John has a property of young.
- if John is a member of the group of young people.

But [Click] "A" definition is a tautology. The property of young is young. And [Click] "B" definition has more serious problem: no one can define which period of life is called "young". For example, 42-year-old person can be called young if the average age of the group is 50 years old.

This problem on definition of adjectives is called "vagueness of adjectives".

The meaning of adjectives can't be defined clearly, because they are defined in relation to the given circumstance.

For example, [Click] suppose the situation 1, in which Tony became the prime minister of the UK at the age of 43. Then you can say "Tony was young" in relation to other prime ministers.

Then [Click] suppose the situation 2, in which Tony entered SOAS at the age of 43. In this case we do not say "Tony was young" because we are comparing Tony with other students, possibly much younger than Tony.

Not a few linguists noticed this fact and have been trying to define the proper meaning of adjectives.

When we utter an adjective we usually know in which group the individual is evaluated. This group is called "Implicit Comparison Class".

For example, in situation 1, the age of Tony is evaluated in relation to the set of prime ministers, Gordon Brown, John Major, Margaret Thatcher, and so on. These individuals compose the implicit comparison class to evaluate the truth value of "Tony was young".

Actually, the evaluation process is not straight forward. In order to tell the truth value of "Tony was young" with relative to the given implicit comparison class, we need to know the degrees possessed by Tony and each member of the implicit comparison class.

So Tony is translated into "43-year-old" and each member of the implicit comparison class is translated into his or her age at the first assignment as prime minister. After translating all individuals into degrees on the scale of youth, we can evaluate truth value of the sentence.

The truth value of adjectival predicates is judged as follows.

First, see the context and come up with a proper implicit comparison class. Next, translate all individuals into degrees on the scale of the adjective. Third, compare the degree of the subject with the average degree of the implicit comparison class. Finally, judge the truth value of the sentence. If the degree of subject is higher than the average, the proposition is true. Otherwise, it is false.

This is a quite abstract way of definition, so for those who prefer specific examples, I wrote down the whole process of evaluating "Tony was young".

The Semantics of Tony was young

- The implicit comparison class is a set of prime ministers of the UK.
- Let Tony turn into "43" and each prime minister into his/her age at first appointment as prime minister.
- Compare "43" with the average age of implicit comparison class.
- If "43" is higher than the average on the scale of youth, the statement "Tony was young" is true.

Comparative Construction

 Compare two individuals with regard to the degree each object has on the scale.

John is younger than Bill

→Compare John's age and Bill's age

The Semantics of Comparatives

- No need to come up with an implicit class
- Translate two individuals (subject and thanphrase) into degrees on the scale of the adjective
- Compare the degree of subject with the one of than-phrase
- 4. If the degree of subject is higher than the one of than-phrase, the statement is true.

Tony was younger than Margaret

- No implicit comparison class
- 2. Translate *Tony* and *Margaret* into "43" and "53" respectively
- 3. Compare "43" and "53
- As "43" is higher than "53" on the scale of youth, the statement is true.

Absolute and Comparative

- Absolute construction and comparative construction basically have the same semantics.
- The difference between absolute and comparative is whether compared objects are introduced by the implicit comparative class or than-phrase

Reference:

Cresswell, M. J. 1977" The Semantics of Degree." In Partee B. H. (ed.) *Montague Grammar*, 261-292, Academic Press, N.Y.

Kamp, J. A. W. 1975 "Two theories about adjectives." I Keenan, E. (ed.) Formal Semantics of Natural

Kennedy & McNally 2005 "Scale structure, degree modification, and the semantics of gradable predicates." Language, Vol.81, No.2, 345-381. In order to evaluate the truth value of "Tony was young", first we set up an implicit comparison class, a set of prime ministers of the UK.

Next translate Tony into 43, the actual age when he assigned as prime minister, and also translate each prime minister into his or her age at first appointment as prime minister.

Then compare 43 with the average age of implicit comparison class. As 43 is higher than the average, we conclude the proposition is true.

This whole process is necessary to judge the truth value of a sentence with an adjectival predicate.

Next we move on to the semantics of comparative construction. In comparative construction, we compare two individuals. What is exactly compared is the degrees both individuals have. For example, when you say "John is younger than Bill", [Click] you compare John's age and Bill's age. It's quite simple, actually much simpler than absolute construction we have just seen.

This is the semantics of comparative construction.

We don't have to set up a comparison class, as it is already given in the sentence.

We just translate each individual, the subject noun phrase and than phrase, into degrees.

Next we compare the degrees of subject and than-phrase.

Finally, we judge the truth value of the sentence. If the degree of the subject is higher than the one of than phrase, the proposition is true. Otherwise it is false.

As you can see, when you evaluate the truth value of the sentence "Tony was younger than Margaret", you do simpler procedure than you do to interpret the sentence "Tony was young".

No implicit comparison class is needed, so just translate two individuals, Tony and Margaret, into 43 and 53.

Then compare 43 and 53. As 43 is higher than 53 on the scale of youth, the proposition is judged true.

To conclude, absolute and comparative adjective basically have the same semantics, except the way to introduce compared objects.

In absolute construction, compared objects are introduced as implicit comparison class, while in comparative construction, they are introduced by than phrase.

The discussion so far is mostly based on the previous researches in formal semantics. This is a list of some important papers on this matter. If you are interested in the study, please consult the reference of Kennedy and McNally 2005, as most of the work is summarized there.

Outline of this talk

We have just seen the standard definition of adjectives and comparative construction. Now [Click] we take a look on data from English, Japanese and Chinese. And [Click] compare these languages in four aspects.

Comparative in English

In English, absolute form is unmarked and comparative form is marked. Markedness is a tricky problem, but at least you can say the absolute form "young" is a little shorter than the comparative form "younger".

Comparative in Japanese

- John-wa wakai. John-TOPIC young
- Comparative form is unmarked John-wa Bill-yori wakai. John-TOPIC Bill-than young (John is younger than Bill.)

In Japanese, neither of absolute or comparative is marked. Absolute form of young is wakai, and comparative form is the same as absolute one, wakai.

Comparative in Chinese

- (John is young.)
 Comparative form is unmarked.
 John bi Bill nianging. John than Bill young (John is younger than Bill.)

In Chinese, absolute form is marked, while comparative form is unmarked. In order to say "John is young" in Chinese, you have to say "John is very young" John hen nianging, otherwise the hearer interpret it as comparative, like "John is younger than someone".

At First Sight ...

It thinks the truth value of a property should be judged in relation to other things.

To summarize, [Click] English seems to be absolutist. It regards a property true in any circumstances.

[Click] Japanese seems to be lazy as it doesn't mark absolute or comparative.

[Click] Chinese is relativist. It thinks the truth value of a property should be judged in relation to other things.

Japanese scores one point

- Morpheme which distinguishes absolute/comparative is redundant.

John-TOPIC Bill-than young (John is younger than Bill.) However, Japanese win this round. The lazier, the better. As we have seen, both absolute and comparative have basically the same semantics. So morpheme which distinguishes absolute and comparative is redundant. Japanese somehow know the logical meaning of two types of construction and don't differentiate the forms of adjectives. They say John-wa Bill-yori wakai to describe comparative meaning and

Japanese scores one point

- As we have seen, absolute and comparative have basically the same semantics.
- Morpheme which distinguishes absolute/comparative is redundant.

John-wa Bill-yori wakal.
John-TOPIC Bill-than young
(John is younger than Bill.)

John wa wakai for absolute reading. This is the most efficient way to say adjectival predicates.

So as for morphology, [Click] Japanese won round 1, [Click] it scores one point here.

English Numeral Expression

 Numeral expressions precede adjectives and describe absolute values in absolute construction and differences in comparative construction

John is offeet tall. → John's height = 6 feet

John is 3 inches taller than Bill.

→ The difference = 3 inches

Next, in round two, we discuss which language is the most efficient in terms of behavior of numeral expressions. In English, numeral expressions precede adjectives and they describe absolute values in absolute construction, while they describe differences in comparative construction. So a numeral expression in the same position has two readings in English, absolute value and difference.

Japanese Numeral Expression

Numeral expressions only describe difference.

John-wo \$400 tokai.
John-TOPIC 6 feet tall
a. John is 6 feet tall.
→ Absolute-value reading is not available.
b. John is 6 feet taller than someone.
→ Difference reading is available.

Japanese, the round one winner, loses this round completely. It cannot describe absolute value in any simple way. If you add a numeral expression before an adjective, it always mean difference. "John-wa roku fiito takai" means John is 6 feet taller than someone, it doesn't mean John is 6 feet tall.

Chinese Numeral Expression

The position of NE is different.

John 6 ymm/n gao.
John 6 feet tall
(John is 6 feet tall.) → John's height = 6 feet

nn than Bill tall 3 inches

hn is 3 inches taller than Bill.)

→ The difference = 3 inche

Then we take a look on Chinese numeral expressions. Chinese numeral expressions can describe both absolute value and difference, but they take different positions to clarify their meanings. If you add a numeral expression before an adjective, it describes the absolute value, "John liu yingchi gao" means John is 6 feet tall. If you add a numeral expression after the adjective, it describes the difference between compared objects. "John bi Bill gao 3 ying1cun4" means John is 3 inches taller than Bill.

Summary of patterns

English: S NE A (absolute value)
S NE A O (difference)

Japanese: No construction
S O NE A (difference)

Chinese: S NE A (absolute value)
S O A NE (difference)
S: Subject NE:Numeral expression
O: than-phrase A: Adjective

Here is the summary of patterns of numeral expressions in three languages. English is most efficient, as the structure doesn't change at all.

Japanese fails to express proper meaning, this is a serious problem.

Chinese are doing pretty well, but it has to change the order of numeral expressions and adjectives.

It is obvious that English won round 2, but I am going to explain the behaviors of other two languages.

Japanese have to pay off

- It is too lazy to mark absolute or comparative
- As a result, adding a numeral expression to an adjectival predicate leads to ambiguity.
- numeral expressions to describe differences between the compared objects.

 How does it describe absolute value?

Why did Japanese fail to express absolute value? The answer is they are too lazy. They don't mark absolute or comparative. As a result, if you add a numeral expression to an adjectival predicate, the hearer cannot understand the exact meaning of it. So, Japanese picks relativist's side and let numeral expressions to describe the difference between the compared objects. But then, how do they express absolute value?

Japanese-style Solution

In order to express absolute values, Japanese adjectives under go nominalization and numeral expressions are converted into genitive form.

John-wa 6 filto-no takase-ga aru. John-TOP 6 feet-MOD height-SUB have (John has 6 feet height.)

In order to express absolute values, adjectives undergo nominalization and numeral expressions are converted into genitive form. Then numeral expressions modify the adjective-derived nouns, as in "John-wa roku fiito-no takasa-ga aru". As you can see, the literal meaning is "John has 6 feet height",

English and Chinese are fine

- They mark either comparative or absolute.
- Adding a numeral expression to an adjectival predicate does not cause any problem.
- Why does Chinese differentiate the position of numeral expressions?

On the other hand, English and Chinese mark either comparative or absolute, so numeral expressions shouldn't cause any problem. Then why are there two positions for numeral expressions in Chinese?

Noun-like Property of Adjectives

John $[_{VP}$ you $[_{NP}$ 6 yingchi gao]]. John have 6 feet tall (John has 6 feet height.)

Gao bi ai hao. tall than short good (Being tall is better than being short.) This is because Chinese adjectives are not true adjective. They are more like nouns. For example, you can insert a verb "have" before the numeral expression and reanalyze it as verb-object construction. So you can say "John you liu yingchi gao". In this construction, "6 feet" modifies the nouny adjective gao. Another example of noun-like property is that Chinese adjectives can be compared directly. You can say "gao bi ai hao", being tall is better than being short, without changing or adding any morpheme. These adjectives function as noun here.

Typology of Adjective

Wetzer, H. 1996. The Typology of Adjective Predication. Mouton de Gruyter.

Noun-like adjective: Chinese

Verb-like adjective: English, Japanese

Wetzer 1996 investigated languages all over the world and conclude that there are two types of adjectives in the world languages, that is, noun-like adjectives and verb-like adjectives. I assume that Chinese adjectives are noun-like, while Japanese and English adjectives are verb-like.

A-to-V Movement

• An adjective change their structural position to become a predicate.



Let's go back to the problem of the position of numeral expressions. I assume that a nouny adjective has to move to V position to function as predicate. As it moves, it goes over the numeral expression which is located in the spec of AP.



Now let's see where Chinese adjectives are located exactly. In absolute construction, the numeral expression precedes the adjective, as the adjective remains in the original position and function as noun. An adjective in this position is the argument of verb 'have' or composes a predicate by itself. Note that a noun can be predicate as long as it accompanies a numeral expression in Chinese.



On the other hand, in comparative construction, the adjective moves to V-position to be predicate. As a result, the adjective precedes the numeral expression in surface structure. This is the reason why Chinese adjectives and numeral expressions change their order.

English scores one point

- English distinguishes absolute and comparative morphologically and also has a full-fledged adjectival category.
- Thanks to these properties, there is no need to nominalize or move adjectives.

So English won round 2. English distinguishes absolute and comparative morphemes and also has a full-fledged adjectival category. Thanks to these two properties, English has no need to nominalize or move adjectives.



So the result of round 2. [Click] English scored one point here. In total, [Click] English and Japanese are competing.

Intensifiers in Comparatives

 In English, much, a lot, a great deal, etc. are used to describe the large difference between two compared objects.

John is much younger than B

Are John and Bill young? --- No one knows.

Next in round 3, we see which language has most efficient intensifiers. In English, we have intensifiers like "much", "a lot", "a great deal" etc. to describe the difference between two compared objects. For example, "John is much younger than Bill" means there is a great difference between John's age and Bill's age. But [Click] does this sentence mention anything about John and Bill's age? No one knows the answer. It could be John is 76 years old and Bill is 96 years old. The sentence doesn't say anything about whether compared objects have the property described by the adjective.

Intensifiers in Japanese

 Japanese has (at least) two intensifiers, zutto and motto. Zutto is just like much in English, while mot entails that both compared objects have the property described by the adjective.

John-wa Bill-yori zutto/molto wakai.
John-TOPIC Bill-than much young
Zutto: John is much younger than Bill.
Motto: John and Bill are young and John is

On the other hand, Japanese has two different intensifiers, Zutto and Motto. Zutto is just like much in English, it does not refer to whether compared objects have the property described by the adjective. Motto entails both compared objects have the property.

So "John-wa Bill-yori zutto wakai" means John is much younger than Bill, and "John-wa Bill-yori motto wakai" means John and Bill are both young and John is younger than Bill.

Intensifiers in Chinese

Chinese has the same distinction as Japanese

John bi Bill nianqing-de duo. John than Bill young-COMP much John is much younger than Bill.

John bi Bill geng nianging. John than Bill much young John and Bill are young and John is younger than Bill. Chinese also has two kinds of intensifiers, "de-duo" and "geng". "John bi Bill nianqing-de duo" means John is much younger than Bill, while "John bi Bill geng nianqing" means John and Bill are young and John is younger than Bill.

Japanese and Chinese Style

- Two comparisons are involved when you say motto in Japanese or geng in Chinese.
- Compare the objects with the implicit
 comparison class
- 2. Compare the subject and than-phrase

Why do Japanese and Chinese have two kinds of intensifiers? When you use "motto" or "geng", you can describe more complex meaning than "much". You can talk about two comparisons. 1. comparing the objects with the given implicit comparative class, and 2. comparing the subject with than-phrase.

Japanese and Chinese each score one

• English is absol

It is not easy to conduct two comparisons at one time.

Their adjectives are inherently comparative, adding another morpheme makes it possible to conduct one more comparison.

As I mentioned before, English is absolutist. It isn't easy for English to conduct two comparisons at one time because adjectives are absolute. On the other hand, Japanese and Chinese are relativists so just one morpheme makes it possible to conduct two comparisons at one time.

The Score

	English	Japanese	Chinese
Morphology	0	1	0
Numeral Expression			
Intensifier	0	1	1
Total	1	2	1

Now [Click] Japanese and Chinese each scored one. [Click] Japanese is winning in total.

Comparatives under Negation

• English comparative can be negated.

ohn isn't more intelligent than Bill. Meaning: John is as intelligent as Bill or John is less intelligent than Bill. Round 4 is about comparatives under negation. English comparative can be negated. For example, "John isn't more intelligent than Bill" means John is as intelligent as Bill or John is less intelligent than Bill. This seems to be trivial, but not so trivial to Japanese.

Japanese comparative under neg.

 Japanese comparative cannot be negated directly. They use different postposition hodo.

?John-wa Bill-yori kashiko-ku nai. John-TOPIC Bill-than intelligent not (Attention: do not add wa before nai!) John-wa Bill-mak kashiko-ku nai. Meaning.John is less intelligent than Bill. Japanese comparative cannot be negated directly. "John-wa Bill-yori kashikoku nai" sounds strange to me. On the other hand, "John-wa Bill-hodo kashikoku-nai" is perfect for everyone. So Japanese comparative must use different postposition to express negation.

Note that some Japanese accept the first one, yori-sentence, but they usually add wa before nai, like "John-wa Bill-yori kashikoku-wa nai". Then it sounds good. I don't know exactly what mechanism is working, but I guess wa makes the negation morpheme nai to negate the whole sentence, not comparative only, and this is the reason some Japanese accept this sentence. I don't discuss the detail today.

Chinese comparative under neg.

Chinese comparative can be negated

John bu bi Bill congming.

John not than Bill intelligent

Meaning: John is as intelligent as Bill

or John is less intelligent than Bill.

Chinese comparative is exactly the same as English. It can be negated and means two objects have the same degree or the subject is less than that of than-phrase. "John bubi Bill congming" means John is as intelligent as Bill or John is less intelligent than Bill.

English and Chinese score one

- Japanese comparatives cannot be negated because the hearer cannot find out whether absolute meaning (property) or comparative meaning (degree) is negated.
- What is negated is clear in English and Chinese, because they distinguish absolute and comparative morphologically.

So English and Chinese won round 4. I guess because Japanese doesn't mark
absolute or comparative, so when an adjective is under negation, the hearer
cannot find out which is negated. On the other hand, what is negated is clear in
English and Chinese, because they distinguish absolute and comparative
morphologically.

The Score

	English	Japanese	Chinese
Morphology	0	1	0
Numeral Expression		0	
Intensifier	0	1	1
Negation	1	0	1
Total	2	2	2

Summing up all the score, [Click] we have a draw game. Every language scored 2 points.

Actually, this game is not fair, as I chose the topics quite arbitrary.

Other Comparative Forms

There are other kinds of comparative construction.

"less than"

"-no hoo-ga"

"meiyou-"..... etc.

There is a vast variety in describing comparison. For example, English has "less than", Japanese has "-no hoo-ga", Chinese has "meiyou-", etc. As you can see, this talk is not conclusive, and there remains a lot of linguistic data to be studied. So I'd like to stay humble and just suggest an advice in comparative form.

Advice

- No language is simpler than other languages.
- No language is more advanced than other languages.
- We should look beyond the surface difference and see the whole system of one language.

No language is simpler than other languages, and no language is more advanced than other languages. That means we should look beyond the surface difference and see the whole system of one language.

You can change the word "language" into anything. For example, No literature is simpler than other literature, no culture is more advanced than other culture.

I hope you keep this advice in mind and enjoy rich variety in language, literature and culture through this SOAS / Ochanomizu University joint seminar. [click] Thank you very much.



いとう さとみ/お茶の水女子大学大学院 人間文化創成科学研究科 准教授