

## Head Movement: Analysis of Minimalist Programme

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### Abstract

This paper examines issues related to strong features and weak features in head movement which involves a comparison between Modern Standard English (MSE) and Early Modern English (EME) which have experienced the process of language evolution. The difference can be seen in the movement of non-auxiliary verbs (nonauxiliary) limited (finite) that move to the INFL position in the two English grammars. Thus, the analysis of grammar in these two phases of the English language is analyzed according to the Minimalist Program approach in line with the latest development of Generative Transformation (TG) theory. Therefore, this paper aims to describe the process of head movement of nonauxiliary verbs that are limited (finite) to the INFL position in both phases of English grammar development in addition to solving the issues. The findings of the study or the results of the analysis show that in Early Modern English (EME) grammar, nonauxiliary verbs that are limited (finite) move to the INFL position due to the compatibility of strong features brought by the limited verbs (finite). This is proven again by using the power of metaphor proposed by Chomsky. Next, the analysis of findings also found that only verbs that represent the compatibility of strong features (strong features) that match can move to the INFL position, and vice versa for verbs that represent the compatibility of weak features (weak features) that are very weak to move to the INFL position. Among other issues highlighted in this article is also the subject-verb compatibility aspect which involves the relationship between INFL and specifier.

**Keywords:** Head Movement; Minimalist; Strong Features; Weak Features, Finite

### Introduction

Nik Safiah Karim et al. (2010) define syntax as a field of linguistics that studies the form, structure, and construction or construction of sentences. Syntax not only studies the sentence construction process but also the grammar rules or formulas that underlie the method of combining and arranging words or groups of words to form sentences in the language. The field of syntax discusses the main elements of a sentence consisting of phrases, clauses, and aspects of their construction, as well as the division of subjects and predicates.

While according to Ahmad Khair Mohd Nor, (2003) the term syntax comes from the Greek language, namely sun which means "with" and tattein which means "to put together". Therefore, etymologically, syntax can be interpreted as "putting words together to form a group of words or sentences". The word suntattein later became the term syntaxis in Dutch, and syntax in English.

Based on the title of the study related to head movement in two English grammars, the researcher will explain a few terms that will be used in this study to facilitate the reader's understanding process. The terms will be defined according to the definition given by Andrew Radford (1997) in his book entitled *Syntactic Theory and The Structure of English: A Minimalist Approach*. Six terms will be defined which are the focus of discussion in this study. The first term is about head movement. Head movement means the movement of a word from one head position to another. For an example of head movement from V to me. The second term is related to compatibility (agreement). Agreement means two verbs (or expressions) are said to agree in the aspect of some grammatical feature (s) if they have the same value for the relevant feature (s): so, in a sentence such as his smoke, the Vern smoke is said to agree with its subject he because both are third person singular expressions.

The third and fourth terms are about strong features which means a strong feature triggers movement: and a weak feature cannot trigger movement. For example, a finite verb carries strong agreement features in Early Modern English, and so raises to INFL; but a finite verb carries weak agreement features in Modern Standard English, and so cannot move to INFL but rather remain in situ. Meanwhile, regarding weak features which means a weak feature is one which could not be a trigger movement: a strong feature could be a trigger movement. For example, a finite verb carries weak agreement features in Modern Standard English, and so raises to INFL; but a finite verb carries strong agreement features in Early Modern English, and so can move to INFL but rather remain in situ. In addition, the fourth term is a limited verb (finite). Limited verb (finite verb) means the term finite verb/ clause denoted by an auxiliary or nonauxiliary verb of a clause which can have a subject with a nominative case like I/ we/ he/ she/ they. Thus, if we compare the two brackets in the:

- (i) What if [people annoy her]?
- (ii) Don't let [people annoy her]

We find that the bracketed clause and the verb annoy in (i) are finite because, in place of the subject people, we can have a nominative pronoun like they; by contrast, the bracketed clause and the verb annoy are non-finite in (ii) because people cannot be replaced by a nominative pronoun like they only by and objective pronoun like them). For example:

- (iii) What if [they annoy her]?
- (iv) \*Don't let [they annoy her]

By contrast, a verb or clause which have a subject with objective or null case is non-finite; hence the bracketed clauses and bold-printed verb are nonfinite in the example below:

- (v) Don't let [they **annoy** you]
- (vi) You should try [to PRO **stay** calm]

In general, finite verb carries tense/ agreement properties, whereas nonfinite verbs are tenseless and agreement fewer forms (i.e forms which do not overtly inflect for tense/ agreement – e.g infinitive forms like be, and +ing/+n participle forms like being/been are nonfinite).

Next, the fifth term is attraction. This term can be defined as an operation by which features carried by one constituent percolate up to (and are inherited by) another. Lastly is the term percolation which means an operation (also known as attraction) by which a feature that is attached to one category comes to be attached to another category higher up in the structure.

### **History of Minimalist Program Development**

Humans have very complex brains. Until now many more questions about the human brain have not yet been explored. The brain has various functions or tasks that help humans cope with their daily lives. The most interesting part is the language part. Scientists say that the left side of the brain is the part dedicated to language. Humans manipulate parts called Wernicke's area and Broca's area to speak and hear and are assisted by the Arcuate fasciculus nerve to bring the codes seen or heard to certain parts (Grodzinsky & Amunts, 2006). Chomsky (2006) has described this relationship in his discussion of the brain and its abilities.

However, what is very interesting to discuss in this article is the history of syntactic analysis or sentence structure of a language. Languages in the world have various structures. Structure means the sequence of basic words that make up the basic syntactic structure of the language. For example, the syntactic structure of the Malay language has a sequence of the subject (S), verb (K), and object (O). While the syntactic structure of the Japanese language has a SOK sequence. In general, this sequence can also form sequences such as KOS, KSO, OKS, and OSK (Ouhalla, 1999). This sequence proves that languages in this world can consist of languages that have sequences as explained above. Naturally, this is true because in this world all sequences are still represented by at least one language. For example, SKO is Malay and English; SOK is Japanese and Korean; KOS such as Fijian and Malagasy; KSO is such as Ancient Arabic, and Modern Irish; OKS such as the Hixkaryana language of the Amazon River, Brazil; OSK is such as Xavante language in Mato Grosso, Brazil and Waroa in Sungao Orinoco, Venezuela. Hixkaryana in the Amazon River, Brazil; OSK such as Xavante language in Mato Grosso, Brazil and Waroa in Sungao Orinoco, Venezuela.

### **Minimalist Program Pioneer**

Noam Chomsky is the father of generative linguistics. He was born on December 7, 1928, in the capital of Pennsylvania, which is Philadelphia. His ability to speak and write critically was evident at a very young age. When he was 10 years old, he managed to produce an article about fascism (Wikipedia, 2009). He got his higher education close to where he lives. At a young age, when he was 21 years old, he managed to get a degree. He was awarded a Bachelor of Arts by the University of Pennsylvania in 1949 in philosophy and linguistics. In the same year, he ended his bachelorhood with a linguist named Carol Schatz. Marriage is not an obstacle for him to continue his interest in linguistics. He continued his studies at the same university. After two years, in 1951, he produced a brilliant thesis entitled *The Morphophonemic of Modern Hebrew*. He was awarded a master's degree from the same university. His writing is still referred to and criticized now by language experts. His wisdom was evident when he successfully continued his studies to the Doctorate level at the same university without feeling bored. He was also awarded a scholarship by Harvard University while he was completing his Ph.D. thesis. So, part of his thesis was done at Harvard. This advantage was used by him to shorten his thesis writing. He managed to complete his thesis in a short time. It took him only three years to produce an excellent Ph.D. thesis entitled *Syntactic Structure* in 1955.

### Literature Review

The study was conducted by Kartini Abd Wahab entitled *The Verb Phrase Construction in Malay: A Minimalist Program Approach*. This study about affixes and lexical verbs in Malay occupy the same head position in the verb phrase (VP). This raises the question of how it is these two different morphemes with different syntactic categories - one a functional head and the other a lexical head - could occupy the same head position in a verb phrase of a sentence in Malay. This article will attempt to shed some light on this question. In this article, we will analyse verb phrase structure in Malay using the Minimalist Program Approach. Based on Larson (1988) and Chomsky (1995), we will posit the VP shell hypothesis in which the verb phrase structure in Malay has two layers of the VP: one is the VP and the other is a small v (little verb phrase vP). Based on these two layers of the verb phrase, this discussion will revolve around the notion that each of these two layers has its own head and projections in its own VP structures. The head position of the VP node is occupied by the lexical verb while the affix is based-generated on the head v of the vP, which is a functional category. We will use, as examples, Malay active and passive sentences and demonstrate how this two-layer analysis could adequately describe Malay sentences. We assume that each sentence has its own functional heads which are used to hold affixes: active or passive affixes.

Besides, the study was also conducted by Mashudi Kader entitled *Kategori Pro Kosong yang Berfungsi Sebagai Kata Nama*. This study about Malay sentences normally consists of subjects that are phrasal nouns. In certain cases, however, Malay sentences begin with a constituent called the pro zero categories. This article investigates the structure of Malay sentences that do not conform with the Chomsky models, REST and the Theory of Government and Binding. Since such patterns are common in classical Malay texts, Malay grammar is not necessarily conformed to Western models.

### Methodology

This study uses a document analysis method based on the books **Syntactic Theory and The Structure of English: A Minimalist Approach**.

### Noam Chomsky's Contribution

The development of Nahu Transformation has started in 1957 with the existence of the writing book *Syntactic Structure* 1957. In 1965, Chomsky introduced the Standard Theory. He has shown a difference in this theory. The most controversial thing is about Base Structure and Surface Structure. Base Structure is often abbreviated to S-D and Surface Structure is often abbreviated to S-L. For him, every type of sentence has both structures.

The presence of a sentence needs to go through S-D to S-P. In general, S-D represents the meaning level of the sentence while S-P represents the meaning. Then there are Logical Forms and Phonetic Forms at the next level. All movements that occur can occur from S-P to Logical Form before the sentence is mentioned by the speaker.

However, the theory introduced by Chomsky has undergone several stages of change. This is said to be so because, after the birth of the theory of generative transformation in the year (1957), there was also the Theory of Power and Binding (1981) then the latest theory introduced by Chomsky is the Minimalist Program Theory (1995). The advantage of the existence of these new theories is to fill the loopholes and weaknesses in previous theories. The more constraints there are, the better the theory is.

### Discussion/ Analysis

It is quite interesting to recall the meaning of negative statements such as in (16) and interrogatives in (18) which are seen as no longer grammatical if used in MSE (Modern Standard English) grammar. This raises the question of what is the nature of the changes that have been experienced during the process of language evolution. The possible answer that can be given or stated for this finite (nonauxiliary) verb is to move to the INFL position in EME (Early Modern English) grammar, however, this situation is no longer compatible or adaptable in MSE (Modern Standard) grammar English). Therefore, for example, the verb (nonauxiliary) can move to the INFL position in the sentence for EME (Early modern English), as can be shown in the data of the sentence (16). Then, from the INFL position it moves to the COMP position, indirectly it becomes an interrogative form as shown in the data example of the sentence (18), but there is no movement or movement to the INFL position as well as the movement to the COMP position is quite possible or probable for verbs (nonauxiliary) in MSE (modern standard English).

There is a question that arises why the verb (nonauxiliary) that is limited (finite) can move to INFL position in EME (Early Modern English) but not in current English grammar. By considering or using the metaphor of 'strength' (strength) presented by Chomsky, we may be able to suggest that the limited (finite) verb by bringing or generating corresponding compatibility characteristics for example by looking at the strength of personal pronouns (strong person) and specifier-features in EME (Early Modern English) grammar. Meanwhile, the grammar in MSE (Modern Standard English) has weak compatibility characteristics. With this, we may be able to assume that only verbs that carry strong compatibility features or those that match can move to the INFL position. For verbs that have weak compatibility characteristics, they can only move to the INFL position.

Another question that can be highlighted or discussed in this issue is what determines whether the finite verb generates compatibility about strong features or weak features. The probability of a reasonable answer is to relate the compatibility of inflections generated by finite verbs. This is said to be so because the limited (finite) verb has a strong compatibility feature in languages that are generated by the compatibility of the most appropriate inflections. Meanwhile, languages that have weak feature compatibility (weak features) generate inflection compatibility that is quite inconsistent. In this regard, it is interesting to note that the third person singular pronoun +s is the only inflectional concordance found in (present tense) for verbs in Modern Standard English (MSE) grammar, in the English language used in the period Shakespearean we can examine three present tense inflections, namely second person singular +st, third person singular +th and +s. It can be displayed in the example sentence (20) below as follows:

- a. Thou see how diligent I am (Petruccio, *Taming of the Shrew*, IV.iii).
- b. The sight of love feedeth those in love (Rosalind, *As You Like It*. III.v).
- c. It looks ill, it eats drily (Parolles, *All's Well That Ends Well*, I.i).

For this reason, we may raise questions or argue back that the limited verb (finite) which has strong compatibility features in EME (Early Modern English) grammar is related to the inflection compatibility matching system that is generated and is quite opposite to the limited verb (finite) which has weak feature compatibility (weak features) in MSE (Modern Standard English) grammar considering the relatively low morphological compatibility in modern English. (See Rohrbacher 1994 and Vikner 1995 for an exploration of the correlation between the strength



and characteristics of compatibility and the compatibility relationship of inflectional compatibility in a variety of languages).

The difference in the strength of the compatibility characteristics generated by finite verbs in EME (Early Modern English) grammar and MSE (Modern Standard English) grammar can be reflected in the next syntactic difference between the grammar. In grammar at the EME level (Early Modern English) is a language structure that is a null subject, this can be explained in the example sentence (21) below as follows:

- a. Hast any more of this? (Trinculo, *The Tempest*, II.ii)
- b. Lives, Sir (Lago, *Othello*, IV.i, in reply to 'How does Lieutenant Cassio?')

Following the presence of an empty subject in the sentence above which occurs in the position or position of the nominative case, (causing it to be the subject of a limited clause). There is a difference related to the case characteristics from being a PRO subject that is not limited (finite) which has an empty case (null case) and then as a whole is taken or placed as a differentiator to an empty subject with a conventional form which is known as a pro (better known as pro-small (little pro) which is different from the big PRO which is also known as (big PRO). On the other hand, in grammar at the MSE (Modern Standard English) level, is a language that does not have an empty subject (non-null subject). This is because, if seen in the current sentence data in (21) above requires a real subject. For example, in the example sentence below as follows in the italics:

- a. Have *you* any more of this?
- b. *He* is alive, sir.

Therefore, as can be stated above that the finite verb has a null subject in grammar such as EME (Early Modern English) which brings compatibility with strong features. However, it does not involve language as in the MSE (Modern Standard English) grammar which brings the compatibility of weak features. This raises the question of why this situation occurs. A clear and meaningful suggestion that can be used is to consider the compatibility characteristics of the most appropriate system for inflectional compatibility. the compatibility of the inflection on the verb is to identify the empty subject (null subject) for example, the use of the + st inflection on the word hast as in sentence (21) above which is the inflection of the second person singular pronoun. Then, with that reason allows us to identify the empty subject (null subject) which acts as the subject of the singular second-person pronoun that has the same characteristics as thou. However, in weak feature compatibility (weak features) such as MSE (Modern Standard English) grammatical languages, morphological compatibility is too inconsistent to allow the identification of a null pro subject, for example, as in the sentence if we asked \*can help? This clearly shows that we have no way to explain that the compatibility that is made will form or the presence of the word can in the sentence that has lost or dropped the subject for example I, you, he, they, or so on.

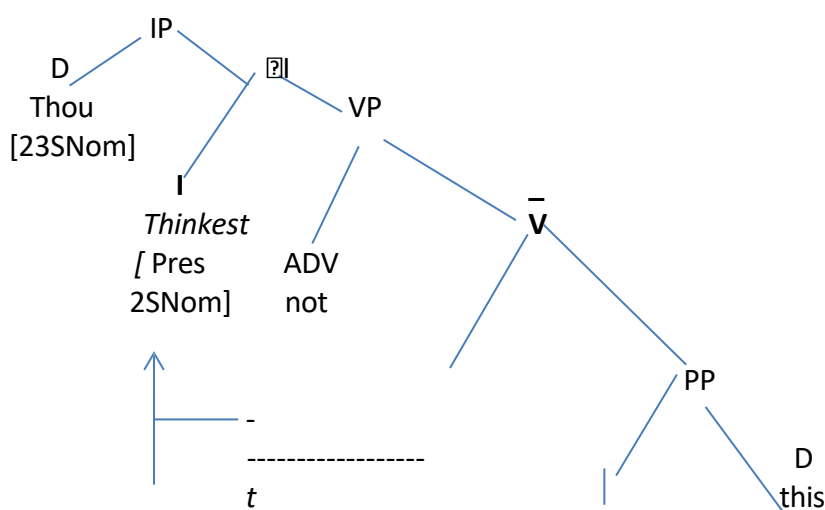
This can also be seen through the study of the Malay language conducted by Mahsudi Kader, 2003 entitled Empty Pro Categories That Function in Name Phrases also lists examples of sentence data that experience the empty pro category in the subject position. Example sentences like below:

- a. *Sedang hujan lebat sekarang.*

- b. *Memang benar bahawa Ali itu kaya.*
- c. *Sudah ada seekor ular di dalam lubang itu.*

In our discussion, it has been suggested that there are parameterized variations across languages related to finite verbs, whether they bring compatibility with strong or weak features as well as features related to relative strength. Then, these characteristics will determine whether the verb (nonauxiliary) can move or be placed in the INFL position and whether the empty subjects are also allowed or not. However, there are still questions that can be raised related to why the finite verb needs to be placed or moved from position V to the position I for languages such as EME (Early Modern English) which bring or represent the compatibility of characteristics the strong one. Perhaps one answer that can be given to this question is to create a theory that is, the Checking Theory. With this theory, it can be assumed that movement is the last mechanism by which the head can determine the appropriate characteristics (maintained) or otherwise (restricted). As discussed above, finite verbs in EME (early modern English) grammar bring strong feature compatibility, therefore finite verbs are moved to the INFL position to check the compatibility of strong features, for example involving personal pronouns/specific characteristics) to prevent the subject's need to occupy a specific position in the IP. To see how this situation occurs by considering the syntactic elements in a sentence (16e) above, thou thickest not of this which in the sentence uses the negative word that is not. The verb thickest is initially located in the V head position to represent the VP phrase, (bringing the compatibility of strong features) and then the verb is placed or moved to the INFL position as in sentence (23) below, (the [2SNom] is a feature of thou which is marked as the head feature of the second person singular pronoun for thou. Next, the [pres] feature of the preposition thickest also marks the head feature of the present tense and the [2SNom] is the feature brought by thickest are specifier features that mark the facts required by the subject of the singular second person pronoun that acts as a specifier for all other features that are omitted or unmarked. The following is an illustration to explain the description above:

(23)

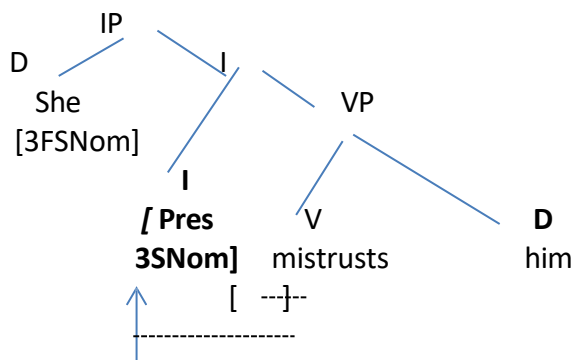


This is said because the compatibility of the subject-verb involves a local inspection relationship between the INFL and the specifier, which has shown a clear effect on the transfer of thickest from V to me in (23) that allows the characteristics of the specifier to be inspected. This is due to the specifier ending in INFL, so starting from this we can check the characteristics of the specifier (2SNom) against the characteristics of the same head movement (2SNom). So, the corresponding set of features, the specifier features are deleted together with the features of the nominative case of thou (because the related features cannot be explained in detail), to ensure that the derivation will never contradict. Therefore, based on the analysis using the metaphor developed by Noam Chomsky, we can say that the movement from V to INFL is motivated by the consideration of greed - that is, by selfish desire under the characteristic verb element of its morphological properties. The movement of thickest to INFL also ensures that INFL carries tense features (that is, the main characteristics of head movement under the thickest element), and is likewise interpreted in LF (that is, at the level of logical form).

As we have seen, the compatibility properties of limited nonauxiliary verbs in EME are checked by moving the verb into INFL, so that verbs that are in a special relationship under their subject, and person/number/specifier features can be checked. Nevertheless (from our discussion during the previous chapter) it has been stated that the characteristics of finite verb specifiers for nonauxiliary have been examined in a rather different way in MSE - as we can illustrate about sentences like the one below:

24 She mistrusts him

Example (24) is an IP headed by an empty INFL constituent, so the verb mistrusts is in the V head in the VP position, and the subject she occupies the specifier position in the IP. It has been suggested in the previous chapter that head movement and specifier features for nonauxiliary verbs are limited (finite) from V to INFL in MSE, to meet the requirement that INFL carries tense features (to be defined at LF), and to enable the specifier feature of the verb to be checked. In the case of (24), the per location will work in the way that has been shown in (25) below (to simplify the exhibition, we only show the features that are directly relevant to our discussion here):



When the bold-printed head features and specifier features have been dipped into the INFL, the specifier features (3SNom) (requiring a third singular nominal subject) can be checked for compatibility with the head (3FSNom) - his features and are thus



eliminated (along with the unduplicated nominative head feature). Chomsky (1995c) refers to the filtering process (percolation) of relevant features as an attraction (his idea is that INFL in a structure like (25) attracts relevant features brought by mistrust).

Therefore, EME and MSE use two very different ways to study the compatibility properties of finite (nonauxiliary) verbs: EME uses verb movement from V to INFL: and MSE uses head- and specifier attraction characteristics of verbs from V to INFL. The two different ways of examining the features associated with finite verbs connect directly to the relative strength of the agreements carried by the verb. In languages like EME where verbs have strong agreement features, the agreement is checked by movement: in languages like MSE where verbs carry weak agreement features, the agreement is checked by percolation. Since the main goal of any theory is to explain why things are the way they are, an important question we need to ask is why strong features should be examined by movement and weak features by attraction. The answer to this question might be lies like the two different operations. Traction involves the movement of a set of grammatical features carried by the head itself (without corresponding movement of phonetic features) - more specifically, the movement of grammatical features that cannot be checked otherwise. For example, in (25) above, the tense / agreement - disbelief feature is attracted to the INFL, but the phonetic feature (represented by the spelling form disbelief) remains attached to node V. On the other hand, head movement (head movement) involves the movement of phonetic features and co-head grammar (our discussion here is simplified by leaving the semantic features to one side): thus, in (23) above not only the tense / agreement features thickest moves to the INFL, but so does its phonetic feature (represented by thought spelling form). We might suspect that what is meant by a word like thickest in (23) to carry strong agreement features is that this strong agreement feature cannot be separated from the phonetic features carried by the related word). On the other hand, what is meant by saying that verbs like disbelief in (25) have weak grammatical features is that the relevant grammatical features can transfer to the INFL itself, with the phonetic features carried by the stranded word (for example: left) V head position changing to VP.

We may rather consider that as an effect arising from the principle of economy, only a minimal set of features is required to satisfy some grammatical conditions through movement in each structure. So, because INFL requires tense features and (3SNom) specifier features such as mistrusts percolate to INFL in (25): because these features are weak, they can be separated from the phonetic features brought by mistrusts, and thus the economic principle requires that only this feature of tense / compatibility needs to move. On the other hand, the verb thickest in (23) carries strong compatibility features (2SNom), with the result that not only these features but also phonetic features are brought by thickest to the INFL (so that the whole effect of the word thickest is transferred to the INFL). The issue of attraction is more economical than movement because movement affects both the phonetic properties and the grammatical features carried by a word, whereas attraction involves the movement of grammatical features only: therefore, the principle of the economy will ensure that attraction would be preferred to move wherever possible [for example: in structures like (25)], with movement only forced where the relevant checked feature is strong (for example in 23)].

### Conclusion

The question in this article can be concluded with a discussion about the compatibility of strong features (weak features) and weak features (weak features) in head movement which involves a comparison between grammar in Modern Standard English (MSE) and Early Modern English (EME). This English grammar has undergone a process of language evolution. Among other issues highlighted in this article is also the subject-verb compatibility aspect which involves the relationship between INFL and specifier. The analysis of grammar in two phases of the English language is analyzed according to the Minimalist Program approach.

This can also be seen in the development of Malay grammar, which also experienced the process of language evolution, for example from classical Malay to the modern Malay language that is used today. The similarity can be seen in the section that shows Malay also has a sentence with a pro null subject structure as discussed in this article.

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