

From Spec to Head: A Theory of ‘Predicativization’*

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1 Introduction

This paper advances a theory of lexicalization for Japanese that, I argue, governs the use of an adverb as the main (adjectival) predicate of a sentence. To illustrate the phenomenon in question, observe the following sentences:

- (1) a. Konyuu-wa sakana-ga **sappari** ure-nai.
this.week-TOP fish-NOM at.all sell_V-NEG.PRES
‘Fish doesn’t sell at all this week.’
- b.* Konyuu-wa sakana-ga **sappari** ure-ru.
this.week-TOP fish-NOM at.all sell_V-AFFR.PRES
- (2) Konyuu-wa sakana-no ure-yuki-ga **sappari**-da.
this.week-TOP fish-GEN sell_N-gen-NOM at.all-COP.PRES
‘The sales of fish are in a slump this week.’

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On the one hand, the grammaticality contrast in (1) shows that when *sappari* ‘(not) at all’ is used as an adverb, it must occur in the negative context. On the other hand, (2) shows that *sappari* can also occur as the main predicate of a sentence. Importantly, (2) contains no overt negative element in it, yet it is considered a paraphrase of (1a); it seems that the negative meaning is somehow part of *sappari* as a lexical item in (2). Supposing so, one is urged to wonder how it is possible for predicative *sappari*, as opposed to adverbial *sappari*, to be lexicalized with the negative meaning. This paper addresses the question in syntactic terms.

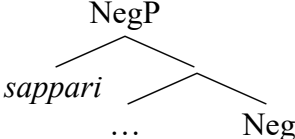
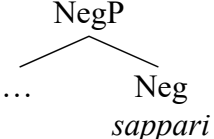
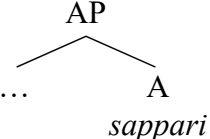
The rest of the paper is organized as follows. Section 2 introduces a syntactic mechanism of lexicalization—call it ‘Predicativization’—to generate ‘deadverbial’ predicates like *sappari* in (2). Additional data are presented in Section 3 to buttress the Predicativization analysis being proposed. In Section 4, I extend the domain of inquiry from negatively intensifying adverbs like *sappari* to aspectual adverbs like *mada* ‘still, (not) yet’ to lend further support to the theory of Predicativization. Section 5 concludes the paper.

2 Predicativization

I propose that predicative *sappari* is lexicalized with a negative meaning as a result of adverbial *sappari* in SpecNegP getting reanalyzed as the Neg head:

- (3) *Predicativization*
Interpret an X^0 adverb in SpecNegP as occupying the Neg head, and turn the category Neg into A.

An illustration of Predicativization is given in (4), as applied to *sappari*.

- (4) a.  b.  c. 

I assume that adverbial *sappari*, being a negatively intensifying adverb, occupies SpecNegP, as in (4a) (cf. Aoyagi & Ishii 1994, Kataoka 2006, and the references therein). I also assume that *sappari* is an X^0 constituent, as there is no evidence to the contrary. Given Predicativization, as defined in (3), *sappari* first undergoes ‘reanalysis’ as the Neg head, as in (4b). Then, it gets categorially reinterpreted as A, as in (4c).¹ The outcome is predicative *sappari*; it is associated with the negative meaning, expectedly, as it goes through the stage of being the Neg head, that is, in (4b).²

The gist of Predicativization is the reanalysis of a Spec constituent as a head constituent—that is, the transition from (4a) to (4b)—which finds theoretical support from the ‘Head Preference Principle’ (HPP), an economy principle put forth by van Gelderen (2004, 2011):

¹ The category of the complement of Neg in (4a) and (4b) is verbal and that of A in (4c) is nominal, as determined by head-complement selection. Compare the gloss of *ure* as ‘sell_V’ in (1a) and that of *ure* as ‘sell_N’ in (2).

² While it certainly conveys some negative connotation to it, whether predicative *sappari* (and other similarly derived adjectives) can license negative polarity items or not is yet to be determined. Given its final category as A, not Neg, however, it is not farfetched even if it cannot. See Kishimoto (2014) for the discussion of a related phenomenon.

(5) *Head Preference Principle (HPP)*

Be a head, rather than a phrase.

(van Gelderen 2011: 13)

Van Gelderen (2011: 13) argues that ‘[t]he Head Preference Principle is relevant to a number of historical changes [...]: whenever possible, a word is seen as a head rather than a phrase.’³ The size condition (i.e. X^0) imposed on the input adverb in SpecNegP in its definition certainly qualifies Predicativization as a context-specific variant of the HPP.

The categorial shift from Neg to A in the process of Predicativization—that is, the transition from (4b) to (4c)—may well be considered an automatic consequence of the age-old thesis that adverbs and adjectives form a single lexical category, being complementarily distributed (see Baker 2003, and the references therein); an X^0 constituent is an adverb in Spec, while it is an adjective as a predicative head.⁴ Also, it is worth pointing out that the negative lexical item in Japanese, *-nai* (see (1a)), is adjectival with respect to declension (e.g. *-nai/-nakatta* NEG.PRES/NEG.PAST vs. *akai/akakatta* red.PRES/red.PAST). At least morphologically, therefore, the lexical category A is congenial to the functional category Neg in the language in the first place.

Having introduced Predicativization as a syntactic mechanism to derive predicative *sappari* from adverbial *sappari*, along with some preliminary theoretical and empirical buttressing thereof, the next section examines two sets of data whose grammaticality judgements uphold Predicativization.

3 Two Cases in Support of Predicativization

This section presents sets of data to lend empirical support for (a subpart of) the formulation of Predicativization and for the derived status of adjectival predicates in question. In Section 3.1, I will examine a negatively intensifying adverb that is most likely phrasal. In Section 3.2, I will turn to an adverb that may, for some speakers, be positively intensifying as well as negatively intensifying.

3.1 For the X^0 Status of Adverbs

Predicativization requires that an input adverbial constituent be an X^0 element. This requirement predicts an XP adverb not to be subject to Predicativization. This prediction seems to be borne out. Witness the following examples with *sukosimo* ‘(not) a bit’:

- (6) a. Konyuu-wa sakana-ga **sukosi-mo** ure-nai.
 this.week-TOP fish-NOM a.bit-ADD sell_v-NEG.PRES
 ‘Fish does not sell a bit this week.’
- b.* Konyuu-wa sakana-ga **sukosi-mo** ure-ru.
 this.week-TOP fish-NOM a.bit sell_v-AFFR.PRES

³ For example, van Gelderen (2011) considers the reanalysis of English demonstrative pronoun *that* as a complementizer is driven by the HPP.

⁴ Adjectives like predicative *sappari* are often called ‘adjectival nouns (AN)’ because of their noun-like declension (e.g. copula *-da* suffixation). See Baker (2003: Section 4.6.1) for an argument against AN as an independent category.

- (7) * Konyuu-wa sakana-no ure-yuki-ga **sukosi-mo-da**.
 this.week-TOP fish-GEN sell_N-g_{ON}-NOM a.bit-ADD-COP.PRES

On par with *sappari*, *sukosimo* is a negatively intensifying adverb and it must occur in the negative context; compare (6a) and (6b). Differently from *sappari* in (2), however, *sukosimo* cannot be a predicate, as the ungrammaticality of (7) suggests. As a negatively intensifying adverb, *sukosimo* is most qualified to occupy SpecNegP, like *sappari* does (see (4a)). Then, why does *sukosimo* fail to be a predicate?

I argue that the problem lies in the structural size of *sukosimo*: It is an XP constituent, not an X⁰ constituent, as required by Predicativization. A piece of suggestive evidence for the XP status of *sukosimo* comes from the fact that it is bimorphemic: It consists of the independently occurring adverb *sukosi* ‘a bit’ and the additive suffix *-mo* ‘also’. Also, *sukosimo* can be considered to form a polar pair with *sukosiwa* ‘at least a bit’, that is, an adverb that is arguably the syntactic composite of *sukosi* with the topic marker *-wa*. (8a) contains *sukosi* as an independently occurring adverb and (8b) contains *sukosiwa*.

- (8) a. Konyuu-wa sakana-ga **sukosi** ure-ru daroo.
 this.week-TOP fish-NOM a.bit sell_V-AFFR.PRES will
 ‘Fish will sell a bit this week.’
- b. Konyuu-wa sakana-ga **sukosi-wa** ure-ru daroo.
 this.week-TOP fish-NOM a.bit-TOP sell_V-AFFR.PRES will
 ‘Fish will sell at least a bit this week.’

If *sukosimo* is phrasal, as being argued here, its failure to be a predicate despite its likely occurrence in SpecNegP straightforwardly ensues from the specification of the size of input adverbials in the definition of Predicativization in (3).

3.2 For the Derived Status of Adjectives

Predicativization is a syntactic device to weld the negative meaning to an X⁰ adverb and derive an adjectival predicate. That is, I am arguing that the adjective in question is not a basic one, freely available from the inherent categorial unity of adjectives and adverbs (see Section 2), but is derived by a lexicalization procedure like Predicativization. Be that as it may, how can one empirically argue for the derived status of adjectives?

Suppose that there is a lexical item that is not only used as a negatively intensifying adverb but can also be used as a positively intensifying one. If the lexical item, when used as an adjectival predicate, has a negative usage, but lacks a positive one, then one can conclude that its adjectival status is a derived one, not a basic one; if it is a basic one, its positive usage must be available too, given the adjective-adverb categorial unity. The question is whether there is any lexical item that constitutes such a testing ground. I suggest that *zenzen* ‘(not) at all’ is a case in point:

- (9) a. Konyuu-wa sakana-ga **zenzen** ure-nai.
 this.week-TOP fish-NOM at.all sell_V-NEG.PRES
 ‘Fish does not sell at all this week.’

- b.# Kōnsyuu-wa sakana-ga **zenzen** ure-ru.
 this.week-TOP fish-NOM at.all sell_V-AFFR.PRES
- (10) Kōnsyuu-wa sakana-no ure-yuki-ga **zenzen**-da.
 this.week-TOP fish-GEN sell_N-gōN-NOM at.all-COP.PRES
 a. ‘The sales of fish are in a slump this week.’
 b.* ‘The sales of fish are at their peak this week.’

While Japanese speakers agree to use *zenzen* as a negatively intensifying adverb, as in (9a), not all of them use it as a positively intensifying adverb, as in (9b).⁵ Of importance here is the fact that predicative *zenzen* is unambiguous in (10): The sentence has the negative meaning (10a), but lacks the positive meaning (10b), even for those who are willing to accept (9b). The unambiguity of (10), therefore, points to the derived nature of predicative *zenzen*, which in turn lends empirical support to the theory of Predicativization.⁶

Leaving the topic of negatively intensifying adverbs, I will investigate in the next section the behavior of aspectual adverbs to further buttress Predicativization as a syntactic phenomenon.

4 Aspectual Adverbs

It is not the case that only negatively intensifying adverbs like *sappari* and *zenzen* can be predicates with the negative meaning; *mada* ‘still, (not) yet’, an aspectual adverb, can function as a negative predicate, as well. Observe the following pair of synonymous sentences:

- (11) a. Kaseki-wa **mada** mitukar-a-nai.
 fossil-TOP still get.found-EPEN-NEG.PRES
 ‘Fossils are yet to be found.’

⁵ Surely, the positive usage of adverbial *zenzen* is not a recent development, but some prescriptive pressure for the ‘proper use’ of *zenzen* has been around long enough for most Japanese speakers to regard its positive usage as deviant from the present-day norm. For a recent diachronic study of *zenzen*, see Okazaki (2019), for example.

⁶ Incidentally, *zenzen* has the synonym *mattaku* ‘(not) at all’, which differs from *zenzen* in that it cannot be used in the same positive context as (9b) across the board, as in (ib), and that it fails to serve as the main predicate, as in (ic).

- (i) a. Kōnsyuu-wa sakana-ga **mattaku** ure-nai.
 this.week-TOP fish-NOM at.all sell_V-NEG.PRES
 ‘Fish does not sell at all this week.’
 b.* Kōnsyuu-wa sakana-ga **mattaku** ure-ru.
 this.week-TOP fish-NOM at.all sell_V-AFFR.PRES
 c.* Kōnsyuu-wa sakana-no ure-yuki-ga **mattaku**-da.
 this.week-TOP fish-GEN sell_N-gōN-NOM at.all-COP.PRES

The absence of predicative *mattaku* in (ic), I contend, should be attributable to an independent factor, rather than taking it to counter Predicativization. The negative use of predicative *mattaku* may be ‘blocked’ by its positive use, such as in the interjective *mattaku-da* at.all-COP.PRES ‘absolutely’ or *mattaku-no uso* ‘(at.all-GEN lie) absolute lie’. It is beyond the scope of the present paper to settle this issue, however, and likewise for a general discussion on *mattaku*.

- b. Kaseki-no hakken-wa **mada**-da.
 fossil-GEN discovery-TOP still-COP.PRES
 ‘The discovery of fossils is yet to come.’

In (11a), *mada* occurs as an adverb, while it occurs as a predicate or adjective in (11b). If adverbial *mada* should—despite its aspectual semantics—belong to the category of negatively intensifying adverbs at all, on a par with *sappari* or *zenzen*, then predicative *mada* can certainly be considered a product of Predicativization. Adverbial *mada*, however, cannot be categorically negatively intensifying, as it also occurs in affirmative sentences, where it conveys the meaning ‘still’:

- (12) Kaseki-wa **mada** mitukar-u.
 fossil-TOP still get.found-AFFR.PRES
 ‘Fossils still get found.’

It is thus farfetched to base-generate *mada* in SpecNegP as a negatively intensifying adverb.

Things become more complicated when *moo* ‘already, (not) any longer’, the aspectual pair to *mada*, is taken into consideration:⁷

- (13) a. Kaseki-wa **moo** mitukar-a-nai.
 fossil-TOP already get.found-EPEN-NEG.PRES
 ‘Fossils no longer get found.’
- b.* Kaseki-no hakken-wa **moo**-da.
 fossil-GEN discovery-TOP already-COP.PRES

Like *mada*, *moo* can occur as an adverb in negative sentences, where it means ‘any longer’, as in (13a); it nevertheless fails to serve as the main predicate of a sentence, as in (13b), contra *mada*.

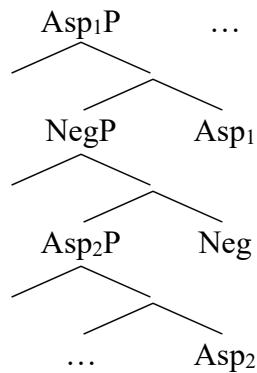
There are two puzzles here. First, how is it possible for *mada* to become a negative predicate, even though it is an aspectual adverb, not a negatively intensifying one? Second, why is it that *moo* cannot be a negative predicate, unlike *mada*, even though it can occur in negative sentences, like *mada*? I will argue below that these questions can be answered uniformly in structural terms.

For the sake of argument, I first assume that in Japanese, the NegP occurs in the region of aspect in the spirit of Cinque (1999), sandwiched by two Asp categories:⁸

⁷ I refrain from exemplifying the positive usage of ‘already’ for reasons of space; some complexities irrelevant to the present discussion arise from tense. See van der Auwera (1993) for issues pertaining to aspectual adverbs in general.

⁸ I am abstracting away from the precise nature of each of the aspectual heads around NegP in (14). See Cinque (1999: Sections 4 and 5) for discussion and details.

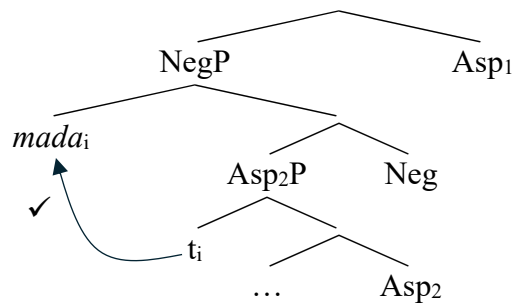
(14) *NegP in the Region of AspPs*



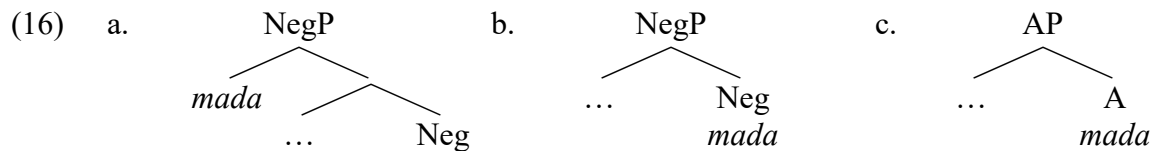
Second, I assume that while *mada* can occupy SpecAsp₂P (i.e. the lower Spec), *moo* cannot do so; it may only occupy SpecAsp₁P (i.e. the higher Spec).

With these assumptions in place, one can easily see that *mada* can undergo movement from SpecAsp₂P (i.e. its base-generated position) to SpecNegP, as depicted in (15).

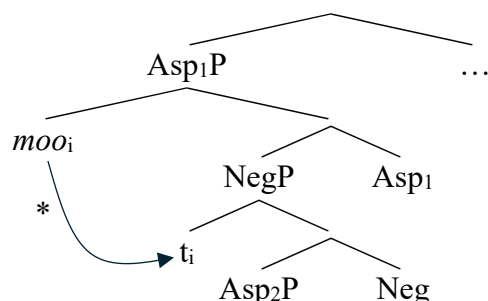
(15) *Upward Movement of mada to SpecNegP (Licit)*



The movement from SpecAsp₂P to SpecNegP is upward and is licit. Once in SpecNegP, *mada* will be subject to Predicativization, and eventually come to head an AP:



In contrast, base-generated in SpecAsp₁P, *moo* cannot help but move downward to SpecNegP:

(17) Downward Movement of *moo* to SpecNegP (Illicit)

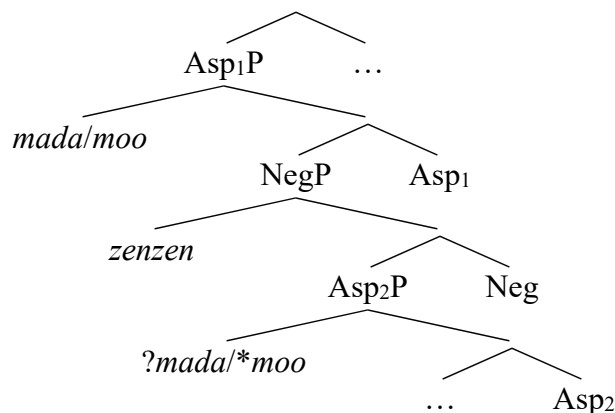
In general, lowering movements are illicit. Therefore, *moo* has no chance of being in SpecNegP, and accordingly, no chance of being eligible for Predicativization. The grammaticality contrast between (11b) and (13b) thus ensues.⁹

A word is in order on the second assumption, namely that *mada* may occur in the Spec position lower than SpecNegP (i.e. SpecAsp₂P), while *moo* must occur in the Spec position higher than SpecNegP (i.e. SpecAsp₁P). That this is not a sheer stipulation can be seen from the linear order possibilities of *mada* and that of *moo* relative to negatively intensifying adverbs like *zenzen*:

- (18) a. Kaseki-wa **mada** zenzen mitukar-a-nai.
 fossil-TOP still at.all get.found-EPEN-NEG.PRES
 ‘Fossils are yet to be found at all.’
- b.? Kaseki-wa zenzen **mada** mitukar-a-nai.
 fossil-TOP at.all still get.found-EPEN-NEG.PRES
 ‘Fossils are yet to be found at all.’
- (19) a. Kaseki-wa **moo** zenzen mitukar-a-nai.
 fossil-TOP already at.all get.found-EPEN-NEG.PRES
 ‘Fossils are no longer found at all.’
- b.* Kaseki-wa zenzen **moo** mitukar-a-nai.
 fossil-TOP at.all already get.found-EPEN-NEG.PRES
 ‘Fossils are no longer found at all.’ [intended]

On the one hand, both *mada* and *moo* have no difficulty preceding *zenzen*, as in (18a) and (19a). On the other hand, the two aspectual adverbs part ways when they follow *zenzen*; while the *zenzen-mada* order is marginally acceptable, as in (18b), the *zenzen-moo* order in (19b) sounds much worse than the *zenzen-mada* order, to the extent of being ill-formed. The distribution of the three adverbs observed here can be structurally interpreted à la (14) as follows:

⁹ As a matter of movement, things will remain the same even if the movement in question targets the Neg head, not SpecNegP. In this vein, Predicativization per se can be redefined accordingly, and negatively intensifying adverbs will not necessarily be base-generated in (but will necessarily be base-generated lower than) SpecNegP. Predicativization will then free itself from the HPP (5)—a welcome result, arguably.

(20) *Structural Distribution of mada, moo, and zenzen*

The negatively intensifying adverb *zenzen* occupies SpecNegP, as before. If *zenzen* plays the role of pivot, the position to the left of it corresponds to SpecAsp₁P and that to the right of it corresponds to SpecAsp₂P. Given the grammaticality judgements here, the assumption made above on the structural position that *mada* and *moo* can occupy is empirically motivated.

In sum, this section has demonstrated how Predicativization finds support from the domain of aspectual adverbs. In particular, the syntactic characterization of Predicativization was reinforced, given that the availability of an aspectually oriented negative predicate hinges upon whether the movement of an input aspectual adverb to SpecNegP succeeds or not.¹⁰

5 Conclusion

The preceding sections argued for Predicativization, a syntactic lexicalization device, owing to which the negatively intensifying adverbs *sappari* and *zenzen*, and the aspectual adverb *mada* came to be used as adjectival predicates. The initial motivation for Predicativization is the acquisition of a negative meaning when these lexical items are used as adjectives; when they are used

¹⁰ All things being equal, *imada(ni)*—i.e. an aspectual adverb to which one can conspicuously trace back *mada*'s etymological lineage—should occupy SpecAsp₂P and be able to undergo movement to SpecNegP so as to go through Predicativization, on a par with *mada*. The fact, however, falls short of this expectation:

- (i) a. Kaseki-wa **imada(ni)** mitukar-a-nai.
 fossil-TOP still get.found-EPEN-NEG.PRES
 'Fossils are yet to be found.'
 b. Kaseki-wa **imada(ni)** mitukar-u.
 fossil-TOP still get.found-PRES
 'Fossils still get found.'
 c.* Kaseki-no hakken-wa **imada(ni)**-da. cf. (11b)
 fossil-GEN discovery-TOP still-COP.PRES

The reason for the ill-formedness of (ic) might either be (i) that *imada(ni)* is an XP, as opposed to an X⁰, or (ii) that *imada(ni)* is registered as a 'fossilized' lexical item and resists participating in any lexicalization procedures as such. Due to space limitations, I hasten to suggest that the phonological weakening of *imada(ni)* to *mada* favors the first possibility, as it is reminiscent of Giusti's (2001) view of the diachronic development of Latin *ille* as a demonstrative pronoun in SpecDP into the definite article in D in descendant Romance languages, much in line with the HPP.

as adverbs, the negative meaning is conveyed by an independently occurring negative head (e.g. *-nai*). The essential theoretical assumptions here are (i) that the adjective-adverb unity in category (or conversely, the categorial duality of adjectives and adverbs) should not tolerate a difference in meaning such as negation between the adjectival and adverbial uses of a single lexical item, and (ii) that there is no covert negative morpheme available in natural language. From the first assumption, it follows that adjectival *sappari*, *zenen*, and *mada* are derived predicates, not basic, underived ones. From the second assumption, it follows that the source of negation in the derivation of those adjectives is not morphology but some other component. It is to be concluded then that it is syntax that leads to the negative semantics for the derived adjectives, that is, the Neg head and its projection. The syntactic characterization of Predicativization itself is indirectly supported by whether SpecNegP can be a possible landing site for the movement of aspectual adverbs.

To the extent of its success, Predicativization, as syntactically characterized here, makes a case for a general enterprise of understanding lexicalization in syntactic terms (Hale & Keyser 1993, 2002, Marantz 1997, among others). Moreover, it might well be considered a virtual case of ‘**anti**grammaticalization’—an arguably impossible phenomenon (Haspelmath 2004)—in that Predicativization involves the categorial shift from a functional (i.e. Neg) to a lexical category (i.e. A), the opposite of what is commonly observed in grammaticalization phenomena.

Although there are remaining loose ends to tie, both empirical and theoretical, the pursuit of Predicativization stops here at present, awaiting future research.¹¹

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¹¹ One theoretical question, for example, is how much structure is called for in the derivation of deadverbial adjectives. I suspect that only portions around NegP, not the whole clausal structure, get activated in the mental lexicon.

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