# On the syntax of coordination in Menominee[i]

Meredith Johnson & Bryan Rosen
University of Wisconsin-Madison

1   Introduction

Menominee is an Algonquian language that shows ergative verb agreement: transitive verbs agree with their objects, and intransitive verbs agree with their subject. This paper investigates the two coordinators in Menominee: *taeh* and *mesek*. We argue that *taeh* coordinates TPs while *mesek* coordinates *v*Ps.

To account for the distribution of the two coordinators, we propose a minimalist syntactic analysis of ergativity based on Murasugi 1992 and Campana 1992. We argue that absolutive arguments are always base-generated as the complement of V, and check their case against T. In contrast, ergative arguments are base-generated in spec, *v*P and receive case from *v*. This is exemplified in (1a) for a transitive verb and (1b) for an intransitive verb.

1.   a.
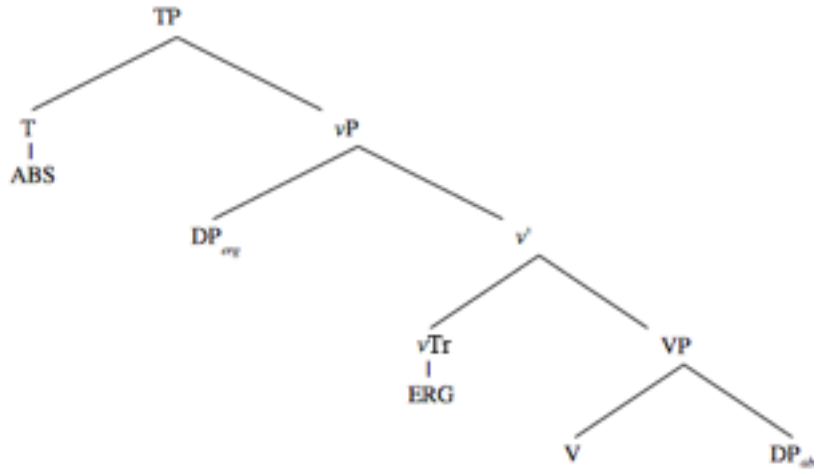
b.
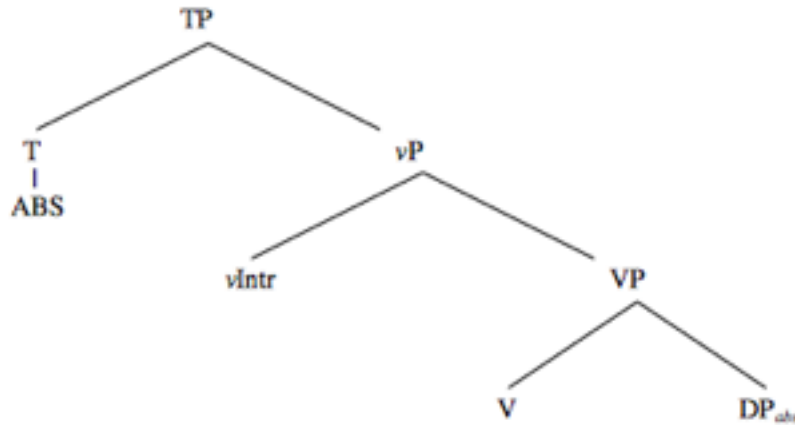
Crucially for our analysis, absolutive arguments of transitive verbs are case-checked in a higher position than ergative arguments are.

The paper is structured as follows: section 2 reviews the Menominee coordination data first presented in Johnson, Macaulay & Rosen 2011 (henceforth JMR). Section 3 outlines the syntactic analyses of ergativity proposed in Murasugi 1992 and Campana 1992. Section 4 illustrates how our analysis makes the correct predictions for Menominee coordination data. Finally, section 5 concludes the paper and suggests typological implications.

2   Coordination data from Menominee

JMR 2011 conducted a study of coordination in Menominee based on a corpus of 50 texts, in addition to elicited data. In this section we review their findings. As they describe, *taeh* is a second position clitic that can attach either after the first word or phrase of the sentence. These two possibilities are shown below in (2a) and (2b). (2a) shows *taeh* attaching after *akom*, which is the first word of the noun phrase 'these old people.' In (2b), *taeh* attaches after the entire noun phrase 'four winters.' *Mesek* always appears between its two coordinands, as in (2c), where it joins the verbs 'laugh' and 'cry.'[ii]

2.   a.   Akom taeh keckīwak   nekēs-kenuakok   's   pas   kahkānemaeseyan
                these *taeh* old.person.PL 1.CP-they.stop.me AOR might I.rush.ahead
                's   kataēw-macēq-nāp-kehtekaēwenaeniweyan.
                AOR going.to-in.pitiful.pretense-I.be.a.farmer
                'And these old people stopped me from rushing to be a pitiful excuse for
                a farmer.' (PE 005)

b.   Nīw pepōn taeh nekēs-awēh-kanapac-wāpahtan   emes
        four winter *taeh* 1.CP-go.and-maybe-I.go.to.school there
        'I went to school there for four winters.' (BLS 017)
c.   Sosaēt kēs-āyaēniw mesek kēs-māw.
        Joseph CP-laugh   *mesek* CP-cry
        'Joseph laughed and cried.' (SS 6/1/01)

When two noun phrases are joined, *mesek* is always used, and again appears between the two coordinands:

3.   Sosaēn kēs-mīcwah   mēnan   mesek ataēhemenan.
        Susan CP-she.eat.them blueberries *mesek* strawberries
        'Susan ate blueberries and strawberries.' (MF 6/10/10)

However, both *taeh* and *mesek* can be used to join verb phrases. The relevant data illustrating the environments in which *taeh* and *mesek* are used are given in (4)-(9) below:

As seen in (4), *mesek* is the coordinator used to join intransitive verbs with same subject:

4.   Kēs-kesīqnehciwaēw mesek ketaēw-cēpāhkow
        CP-**she**.wash.dishes *mesek* going.to-**she**.cook
        'She washed dishes and she's going to cook.' (MF 10/7/10)

(5) illustrates that *taeh* coordinates intransitive verbs that have different subjects:

5.   Nekot metaēmoh wāwēkew; okīqsan   taeh taēwan.
        one   **woman**   RED.she.live **her.son**.OBV *taeh* he.exist.OBV
        'A certain woman lived there; and she had a son (her son existed).' (FP 001-002)

As example (6) demonstrates, *mesek* is used to join transitive verbs with the same object:

6.   Nekēs-tepāhan anaēcēmenan mesek Sāpatīs pas   kēsam.
        1.CP-I.buy   **peas**   *mesek* John   might he.cook.**them**
        'I bought peas and John might cook them.' (MF 3/31/11)

In contrast, (7) shows that *taeh* used to coordinate transitive verbs with different objects:

7.   kaeqceh new ohsāpameken;   kan taeh onaēwānan
        near   EMPH he.look.at.**him**.from.there NEG *taeh* he.did.not.see.**him**
        'He_i was watching him_j from close by; but he_j didn't see him_i.' (TAT 089-090)

In all cases of coordination of one transitive verb with one intransitive verb, *taeh* is used. (8) exemplifies coordination of a transitive and intransitive verb with same subject, and

the example in (9) shows *taeh* is used when the subject of the transitive verb and object of the transitive verb are the same.

8.   Nekot kaeqc-enaēniwan ahkīheh   ahpākenaewen,   enes taeh
      one   old-man   on.the.ground **he**.throw.him.onto.ground there *taeh*
      wahkēc wēyōh   cew-kaēqc-nīmit.
      on.top   his.body EPIS-intensely-**he**.dance
      'He threw one old man down on the ground, and he must have danced hard
      there on top of him.' (BM 045-046)

9.   Nahāw,   ayāpaēw, kekātaew-nīmihen   kaēh;   yōm taeh
      well.then stag   2.going.to-I.make.**you**.dance at.any.rate this *taeh*
      nēk   kena-kiaqtāhsemim.
      my.house 2.will-**you**.dance.round.a.circle.AI
      'Now then, Stag, I am going to have you dance; and around my house you will
   dance.' (LNX 047-048)

        JMR 2011 argues that the syntactic distribution of the two coordinators is determined by the status of the absolutive argument: when the absolutive arguments of the two verb phrases are identical, *mesek* is used (cf. (4) & (6)). Conversely, when the two absolutive arguments are distinct, *taeh* is used. (cf. (5) & (7)). Furthermore, the absolutive argument must stand in the same relation to both verbs: if the absolutive argument is the subject of one intransitive verb and the object of a transitive verb, then *taeh* is required (cf. (9)). In the next section, we will review previous approaches to the syntax of ergativity in order to provide a syntactic analysis of this data.

3   Syntax of ergativity: Murasugi 1992 & Campana 1992

Murasugi 1992 and Campana 1992 both use an early minimalist approach to explain the syntax of ergative case assignment. Before we review their proposals, however, we will first outline some basic contemporary minimalist assumptions about case assignment.
        In the Minimalist Program, the subject (in a nominative-accusative language) is base-generated as the specifier of *v*P, which is located above VP. *v* is responsible for assigning ACC case, and T assigns NOM case. The object, when present, is always base-generated as the complement to the verb. The structure of a transitive verb and its arguments is shown in (10):
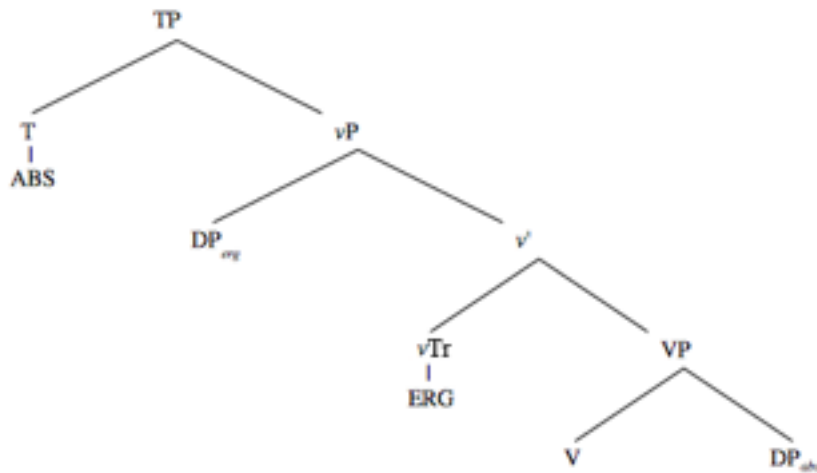
10.

TP
├─ T
│ │
│ NOM
└─ vP
   ├─ DP$_{nom}$
   └─ v'
      ├─ v
      │ │
      │ ACC
      └─ VP
         ├─ V
         └─ DP$_{acc}$
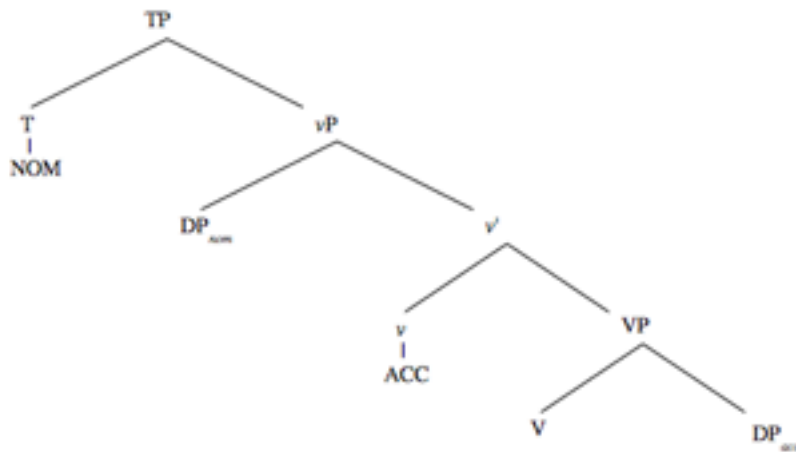
   Campana 1992 uses an earlier minimalist framework in which nominative case is checked[iii] by the head AgrS(ubject) and accusative case is checked by the head AgrO(bject). In a parallel analysis, Murasugi 1992 argues that nominative case is checked by T, and accusative case is checked by a lower head, Tr(ansitivity). As for ergative-absolutive languages, both Campana and Murasugi argue that the head that is responsible for checking nominative case in nominative-accusative languages checks absolutive case in ergative-absolutive languages, and the head that checks accusative case also checks ergative case. Thus, for Campana 1992, AgrS checks absolutive case, and AgrO checks ergative case, and for Murasugi 1992, T checks absolutive case and Tr checks ergative case. Crucially, the notion of 'logical subject' or 'logical object' plays no role in case-assignment in these analyses.
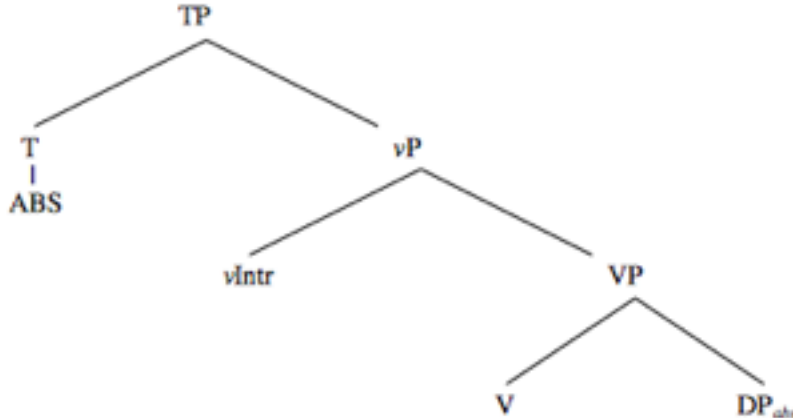
   In our analysis, we follow the approaches used by Campana and Murasugi, and update them using more recent minimalist terminology. We argue that T is responsible for checking absolutive case, and *v* is responsible for ergative case. For transitive verbs, the ergative argument is base-generated in the specifier of *v*P and receives case from *v*Tr. The absolutive argument is base-generated as the complement of V, and is case-checked by T. This can be seen in (1a), repeated as (11):

11.

```
                    TP
               ╱         ╲
             T             vP
             │          ╱     ╲
            ABS       DP         v′
                       erg    ╱     ╲
                            vTr       VP
                            │      ╱     ╲
                           ERG    V      DP
                                            abs
```

For intransitive verbs, the absolutive argument is still base-generated as the complement to the verb and is case-checked by T. Since there is no external argument, *v* is Intr instead of Tr. This is shown in (1b), repeated as (12) below:

12.

```
                    TP
               ╱         ╲
             T             vP
             │          ╱     ╲
            ABS      vIntr       VP
                              ╱     ╲
                             V      DP
                                       abs
```

Crucially, the absolutive argument is case-checked in a high position in both transitive and intransitive clauses. In transitive clauses, the absolutive argument is case-checked by a structurally higher head than the ergative one.

4   Syntactic analysis of Menominee coordination

In this section we present our syntactic analysis of Menominee coordination. To account for the difference between the two coordinators, we propose that the same T head can

case-check two absolute arguments if the arguments are co-indexed and in the same structural relationship. Note that this proposal is not unlike the constraints on across-the-board movement (Ross 1967, Postal 1974): if two arguments are identical and in the same structural relationship, then they can both be extracted, as seen in the examples in (13)-(15):

13.   I wonder what$_i$ [John bought e$_i$] and [Peter sold e$_i$].

14.   * I wonder what$_i$ [John bought e$_i$] and [Peter sold e$_j$].

15.   * I know a man who$_i$ [Bill saw e$_i$] and [e$_i$ likes Mary].

In (13) above, the *wh*-word 'what' corresponds to the object of both verbs, and thus can undergo *wh*-movement from both conjuncts. (Here, the 'e' stands for 'empty category', and serves as a notional device indicating that movement has occurred from that position.) In contrast, the sentence in (14) is ungrammatical because the two objects are not identical, as indicated by the differing indices. In (15), the two arguments that are extracted are identical, but they not in the structural relationship: since one is an object and one is a subject, across-the-board movement is blocked.

    With this proposed constraint on absolute case-checking in mind, we can then capture the facts of coordination by appealing to a distinction in the size of the coordinands of the two coordinators: *taeh* joins TPs, while *mesek* joins *v*Ps. Since *taeh* coordinates TPs, the two verb phrases will each have a position for their own absolute argument.

    The trees for examples (5) and (7) above are shown in (16) and (17).[iv] In (16), the absolute arguments of the two intransitive verbs are case-checked by two separate T heads:

16.   a.   Nekot metaēmoh wāwēkew; okīqsan   taeh taēwan.
            one   **woman**   RED.she.live **her.son**.OBV *taeh* he.exist.OBV
            'A certain woman lived there; and she had a son (her son existed).' (FP 001-002)

b.
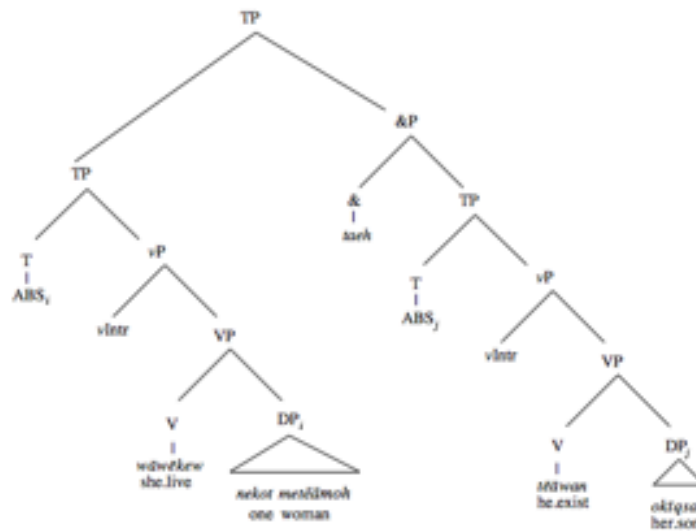
In the first coordinand, the T head assigns case to the subject 'that woman', and in the second coordinand, the T head assigns case to 'her son.'

In (17), both the absolutive and ergative arguments of the two transitive verbs are case-checked by separate T and *v*Tr heads.

17.   a.   kaeqceh new   ohsāpameken;   kan taeh onaēwānan
              near   EMPH he.look.at.**him**.from.there NEG *taeh* he.did.not.see.**him**
              'He_i was watching him_j from close by; but he_j didn't see him_i.' (TAT 089-090)

       b.
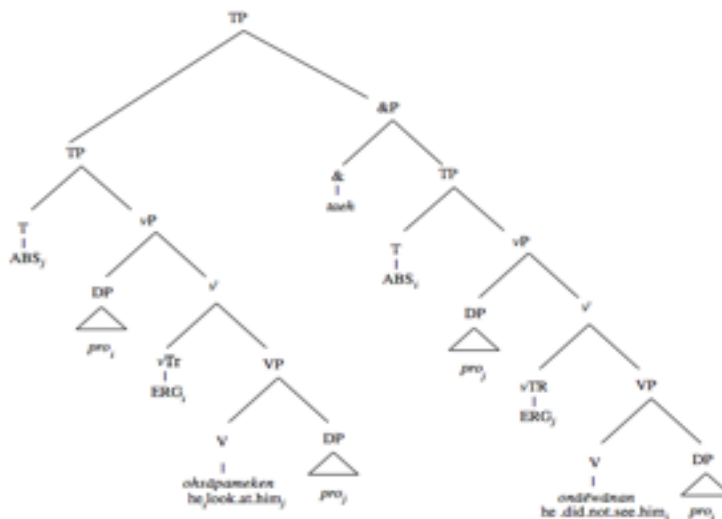
In this first coordinand, the subject 'he$_i$' receives ergative case from *v*Tr, and the object 'him$_j$' gets absolutive case from T. In the second coordinand, the subject 'he$_j$' is case-checked by *v*Tr, and the object 'him$_i$' receives absolutive case from T.

In contrast, if *mesek* joins *v*Ps, the T head checking absolutive argument will be outside the scope of coordination for both transitive and intransitive verbs, and thus the absolutive arguments necessarily must be the same for both verb phrases. The trees for examples (4) and (6) above are given in (18) and (19). In (18), we see that the absolutive arguments ('she' and 'she') of the two intransitive verbs are both case-checked by the same T.

18.　　a,　　Kēs-kesīqnehciwaēw mesek ketaēw-cēpāhkow
　　　　　　　CP-**she**.wash.dishes　*mesek*　going.to-**she**.cook
　　　　　　　'She washed dishes and she's going to cook.' (MF 10/7/10)
　　　　b.　　[tree]

In (19), the absolutive arguments ('peas' and 'them', which are coreferential) of the two transitive verbs are both case-checked by the same T. The two ergative arguments ('I' and 'John') are distinct, and each are case-checked by their own *v*Tr.

19.　　a,　　Nekēs-tepāhan anaēcēmenan mesek Sāpatīs pas　　kēsam.
　　　　　　　1.CP-I.buy　　**peas**　　　*mesek* John　might he.cook.**them**
　　　　　　　'I bought peas and John might cook them.' (MF 3/31/11)
　　　　b.　　[tree]

The fact that coordination of one transitive and one intransitive verb must involve *taeh* can be explained by the difference in structural relationship between the absolutive argument of a transitive verb and the absolutive argument of an intransitive verb. While they are both complement to V, a transitive verb does have additional structure and an ergative argument, which thus means that they do not not stand in the same structural relationship. This is illustrated in (20) below.

20.　　a.　　Nahāw, ayāpaēw, kekātaew-nīmihen　　　　　　kaēh;　　　yōm taeh
　　　　　　　well.then stag　　　2.going.to-I.make.**you**.dance at.any.rate this　*taeh*
　　　　　　　nēk　　　kena-kiaqtāhsemim.
　　　　　　　my.house 2.will-**you**.dance.round.a.circle.AI
　　　　　　　'Now then, Stag, I am going to have you dance; and around my house you will dance.' (LNX 047-048)
　　　　b.　　[tree]

Note that we are not showing movement of the absolutive argument for case-checking. At this time, we are remaining agnostic about the nature of case-checking in Menominee: either the absolutive arguments move into the specifier of TP to check their case under Spec-Head agreement (Chomsky 1993), or case is assigned through a form of long distance agreement called Agree (Chomsky 2000).[v] Furthermore, the word order

facts do not immediately lend themselves to one analysis over another. Shields 2004 concludes that most preverbal arguments contain new or focused information. Therefore, we can not conclude that preverbal absolutive arguments moved to receive case; instead, it is possible that they underwent a focus movement.

5   Conclusion

As we have shown above, the choice of coordinator in Menominee is sensitive to the status of the absolutive arguments in the coordinands: *taeh* is used is the absolutive arguments are distinct and/or in differing structural positions with respect to the verb, while *mesek* is used only when the two absolutive arguments are identical and in the same structural relation. We have argued that this data is consistent with a syntactic analysis of ergativity in which absolutive arguments are always base-generated as the complement of V, and check their case against T, and ergative arguments are base-generated in spec, *v*P and receive case from *v*. By proposing that absolutive case-assignment is sensitive to the same conditions as across-the-board movement, we are able to account for the distribution of the two Menominee coordinators: *taeh* coordinates TPs and *mesek* coordinates *v*Ps.

In future research, we plan on determining if the intransitive verbs in Menominee can be split into unaccusative and unergative categories, and what relevance, if any, this may have for the coordination data. We also plan on continuing work to see if the two approaches to case-checking can be empirically teased out, and what implications this may have for theories of ATB movement. Lastly, we hope to investigate this phenomenon in other Algonquian languages. A preliminary text-based study done by Johnson & Rosen 2010 found similar facts for Potawatomi. It would be interesting to know if other languages in the family pattern the same.

Notes

[ii] Abbreviations used in examples include the following: AOR – aorist; CP – completive; EMPH – emphatic; EPIS – epistemic; NEG – negative; OBV – obviative; PL – plural; RED – reduplication. Elicited data are noted with the speaker's initials and are followed by a date. Data that come from stories are indicated with a source code and line number. The following codes represent stories from Bloomfield 1928: FP – Frog Prince; LNX – Lynx Tries to Kill a Stag; PE – Personal Experiences; TAT – Tales of Ancient Times. BLS is the code for the elicited story Bill's Life Story, and BM is the code for Bead Man, a story found in Bloomfield's Notes in the Smithsonian archives.

[iii] In more recent minimalist literature, case assignment has been replaced with the operation of case 'checking'. Since there are no empirical differences between the two, we will not distinguish between the two analyses here, and instead use the terms interchangeably.

[iv] We are assuming, following LeSourd 2006's arguments for Maliseet-Passamaquoddy, that Algonquian languages are not pronominal argument languages. Instead, both null and overt arguments are represented syntactically.

[v] If case is assigned through Agree, the ergative argument in the specifier of *v*P would be case-checked first, and thus would become "invisible", allowing T to "see" the DP in the complement of V.

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