

Benlai* as a Relative Past Marker— Contrastive Semantics, Anchor Time and Discontinuity Reading

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Benlai can function as an adverbial and as an adjective. As an adverbial, it sometimes has a discontinuity reading while at other times it does not. As an adjective, *benlai* exhibits the same semantic behavior. We argue that *benlai* shows contrast depending on whether a proposition holds at different times; it provides an extra time located in the past of the argument time (a time taken as an argument by a verb, which is by default instantiated to the time of utterance), and specifies that the proposition it introduces holds at the extra time. When the context indicates that a proposition *benlai* presents holds only at a latter time, not at an earlier time, *benlai* indicates that this proposition also holds at the argument time because the contrast requirement has been contextually satisfied. When the context does not provide any contrastive information, *benlai* then indicates that the proposition does not hold at the argument time, and the sentence thus receives a discontinuity reading. We also argue that the fact *benlai* shows contrast on different elements inside a VP comes from the interaction of negation and different focused elements and hence is not part of the semantics of *benlai*. As for adjectival *benlai*, following the argument that nouns also take a time argument, we argue that, in Mandarin, some nouns have a temporal constraint, ruling out the possibility for these nouns to refer to a change from “being a property” to “not being a property”, while other nouns do not have this kind of constraint. When *benlai* modifies nouns of the former type, no discontinuity reading can be derived because of the temporal constraint; when *benlai* modifies nouns of the latter type, a discontinuity reading is derived. We furthermore propose that *benlai* serves as a relative past marker, because it asserts a time located in the past of another time, which a verb takes as an argument in its semantics, and indicates that whatever *benlai* modifies holds at the extra time.

Key words: *benlai*, relative past marker, contrast, semantics, Mandarin Chinese

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1. Introduction

In the literature, e.g. Bai (2010), Tao (2000), Zhao (2007), *benlai* has been claimed to describe a proposition which contradicts/contrasts what the proposition should be. See the examples in (1).

- (1) a. ta benlai hui qi jiaotache
he originally can ride bicycle
'Originally, he could ride a bicycle. (But now he cannot.)'
b. Xiaomin benlai xihuan Xiaomei
Xiaomin originally like Xiaomei
'Originally, Xiaomin liked Xiaomei. (But now he does not.)'

The examples in (1) show a contradiction or a contrast: a situation holds at a past time but does not hold at another time, presumably speech time. (1a) means that at some past time he had the ability to ride a bicycle, but, at another time, by default the present time, he has no such ability. (1b) means that at some past time Xiaomin liked Xiaomei, but at another time, defeasibly the current time, he does not anymore. We refer to readings of this type as 'discontinuity reading' because the proposition presented by *benlai* holds at a past time, but ceases to hold at another time, presumably the time when the sentence is uttered (for short, time of utterance).

Fan (2001) examines *benlai jiu* and observes examples that do not show (at least not the same kind of) a discontinuity reading as discussed above. See (2).

- (2) ta benlai jiu pang xianzai geng pang le
he originally JIU¹ fat now more fat Prc²
'Originally, he was fat. Now, he is even fatter.'

Although (2) does not have a discontinuity reading as the examples in (1), Fan (2001)

¹ *Jiu* has attracted the attention of many Chinese linguists, such as Biq (1988), Lai (1999), Hole (2004), etc. It has many semantic functions that are not expressed by lexical entries in English (Hole 2004:20). We use the capital JIU as its gloss. Among its many semantic functions, here it is used to emphasize the realization of an eventuality at an early time, earlier than some contextually-specified expectation. This is what Hole classifies as "[t]he presence or absence of evaluational component of meaning (Hole 2004:24)."

² The abbreviations used in this paper include: CL: a classifier, DE: a modifier-modifiee marker, Dur: the durative marker, Pass: a passive marker, Pfv: the perfective marker, Poss: a possessive marker, Prc: a particle, Prg: the progressive marker, Q: an interrogative marker, REL: a relative marker.

suggests that (2) still describes contrast because the sentence denotes different degrees of being fat. Increase of degree qualifies as a type of contrast.

However, there are examples with *benlai* which express neither a discontinuity reading nor an increase of degree of any kind, as the following.

- (3) a. ta benlai jiu renshi Ma zongtong
 he originally JIU know in person Ma President
 ‘He knew President Ma in person a long time ago!’
- b. wo benlai jiu zhidao zhe jian shi
 I originally JIU know this CL matter
 ‘I knew about this matter a long time ago!’
- c. Zhangsan gongke benlai jiu xiewan le
 Zhangsan assignment originally JIU write-finish Prc
 ‘Zhangsan finished the assignment a long time ago!’

None of the examples in (3) has a discontinuity reading. (3a) does not mean that he knew President Ma in person but he does not now. Neither does (3b) express that the speaker knew about this matter before but he does not now. (3c) does not denote that Zhangsan finished the assignment long ago but he does not now. Neither do those examples refer to increase of degree of any type. It is obvious that *jiu* plays an important role here because all of the examples in (3) contain *jiu* but none of the examples in (1) includes this particle.

Besides, what are discontinued are not always the situations described by the sentences. In (1a), what is discontinued is his ability to ride a bike. In (1b), what is discontinued is Xiaomin liking Xiaomei. In these two examples, what are discontinued are the situations expressed by the sentences. However, in (4), this is not the case.

- (4) a. Zhangsan benlai lai le
 Zhangsan originally come Prc
 ‘Originally, Zhangsan came. (Therefore he was here before, but he is not now.)’
- b. Lisi benlai yingde guanjun
 Lisi originally win championship
 ‘Originally, Lisi won the championship. (But, it was canceled somehow later. So, he does not have the trophy now.)’
- c. Wangwu benlai zuo le yi ge dangao
 Wangwu originally make Pfv one CL cake
 ‘Originally, Wangwu made a cake. (But the cake is gone now.)’

(4a) does not mean that Zhangsan is not coming now. Nor does (4b) express that Lisi is not winning the championship now. (4c) does not denote that Wangwu is not making a cake now. What is the semantic function of *benlai* in these examples? What are discontinued in the examples in (4)? What attributes to the distinction with respect to discontinuity shown in (1) and (4)?

In the examples above, *benlai* serves as an adverbial which modifies a sentence. However, *benlai* can also be used as an attributive adjective to modify a noun. *Benlai* also shows a variation in the discontinuity reading of the DP where it serves as a modifier. See the examples in (5).

- (5) a. zhe ge guojia benlai de guofang buzhang xianzai shi zongtong
this CL country original DE defense minister now be president
'The former minister of defense of this country is the president now.'³
- b. xin banjinlai de zhuozhi bi jiaoshi li
new move REL desk compare classroom inside
benlai de zhuozhi xiao⁴
original DE desk small
'The desks that were newly moved in are smaller than the ones that have been in the classroom.'

In (5a), *benlai de guofang buzhang* 'lit. original minister of defense' has a discontinuity meaning, i.e. who used to be the minister of defense is no longer the minister of defense, whereas in (5b) *jiaoshi li benlai de zhuozhi* 'lit. the original desks in the classroom' does not have a 'discontinuity' meaning, that is, what used to be desks are still desks.

This paper aims to deal with the semantics of *benlai*. We discuss the following questions: First, when does *benlai* induce a discontinuity reading and when does it not? What role does *jiu* play here? How about adjectival *benlai*? What causes the (dis)appearance of the discontinuity reading of the nominal phrases with *benlai*? Secondly, when *benlai* induces a discontinuity reading, exactly what is discontinued? What attributes to

³ Note that we try to translate *benlai* as semantically precisely as possible. Therefore, we do not use 'original' in the English translation of these two examples. Instead, we use phrases that can best match the semantic function of *benlai* in this example (and the examples that follow) whenever necessary, especially when *benlai* serves as an attributive adjective.

⁴ Note that some studies claim that *benlai*, when serving as an adjective, can only go with abstract nouns; cf. Bai (2010), Mao et al. (2008), Zhang (2006), Zhao (2007), etc. However, the Google search we conducted showed that *benlai* can also go with concrete nouns, as in examples (5a-b).

discontinuity of different kinds as discussed above? Thirdly, does adverbial *benlai* and adjectival *benlai* have a unified semantic function? How are the semantics of these two usages of *benlai* related to each other?

This paper is organized as follows. In §2, we critically review previous studies on the syntax and semantics of *benlai* and present their problems. In §3 we present our analysis and account for the semantic behaviors of *benlai* under discussion. Section 4 concludes this paper.

2. Literature review

There are a few studies devoted to the syntax and/or semantics of *benlai*, e.g. Bai (2010), Fan (2001), Mao et al. (2008), Tao (2000), Zhang (2006), Zhao (2007), which we review in chronological order below. Zhu (2008), Zhu & Shu (2007) discuss the grammaticalization of *benlai*. We do not review these studies here because they are not directly related to our research questions.

Tao (2000) conducts research on a group of adverbs he refers to as ‘adverbs of time and assertives’, including *benlai*. He suggests that adverbs of time provide time for the sentence they go with. Besides, he also suggests that “*benlai* entails a presupposition, i.e. the current state of affairs contradicts what is supposed to be (Tao 2000:59).” See example (6a) below. (6a) entails that the speaker actually did win the award, although it is not explicitly stated.

- (6) a. an zhengfu guiding wo benlai bu gou
 according to government regulation I originally not enough
 de jiang de
 receive award Pre
 ‘According to government regulations, I was not supposed to be eligible
 for the award.’ (= Example (4) in Tao 2000:59)
- b. youxie benlai faxing shijiwan fen,
 some originally publish hundred thousand something copy
 xianzai die dao liang san wan fen⁵
 now fall to two three ten thousand copy
 ‘Some originally published some hundred thousand copies. Now, they
 slipped to twenty or thirty thousand copies.’

⁵ (6b) is an abridged version of Example (14) in Tao (2000:63). Only the most relevant part is presented here.

He also observes a discourse function for *benlai*. He suggests that a clause with *benlai* usually precedes other clauses which specify eventualities contrasting the eventuality denoted by the clause with *benlai* (Tao 2000:62). Look at (6b). The clause with *benlai* is followed by another clause which expresses an eventuality contrasting the clause with *benlai*, i.e. one hundred thousand something copies vs. twenty or thirty thousand copies. He refers to this function of *benlai* as ‘a forward linking textual function’.

Tao’s paper is enlightening in that he observes that *benlai* provides time for the sentence it goes with and that *benlai* has a discourse function: a sentence (or clause) with *benlai* attracts clauses describing contrastive information to follow.

However, Tao’s study has at least two problems. First, he fails to observe the (dis)appearance of the discontinuity meaning of *benlai* as demonstrated in (1) and (3) and therefore his generalization cannot explain this effect. Secondly, a sentence with *benlai* is not necessarily followed by a sentence providing contrastive information. See (7) below.

- (7) a. wo benlai liaojie ni de yisi ni xianzai
I originally understand you Poss meaning you now
yi jieshi wo faner yitouwushui
already explain I however very confused
‘Originally, I understood what you meant. However, after your explanation,
I am very confused now.’
- b. wo benlai jiu liaojie ni de yisi #ni xianzai
I originally JIU understand you Poss meaning you now
yi jieshi⁶ wo faner yitouwushui
already explain I however very confused
‘I understood what you meant as early as long ago. #After your explanation,
however, I am very confused now.’

As shown in the two examples in (7), while in (7a), the discourse is felicitous with the latter clause providing contrastive information, yet in (7b) the discourse becomes infelicitous with such a clause! The contrast shown by (7a) and (7b) suggests that Tao’s theory about the discourse function of *benlai* needs further examination.

Fan (2001) examines the patterns of *benlai jiu*. He suggests that the semantics of *benlai jiu* indicates that there is an increase in the degree of the state denoted by the clause following the clause with *benlai jiu*. See (8).

⁶ The pound sign # is used to indicate that the marked sentence (or clause) renders the discourse infelicitous.

- (8) zhe haizi benlai jiu pang xianzai geng pang le
 this child originally JIU fat now more fat Prc
 ‘This kid was originally fat. Now he is even fatter.’

In (8), the second clause describes an increase in the degree of obesity, compared to the state of obesity described by the sentence with *benlai jiu*. That is, *benlai jiu* denotes contrast, one in the degree of a property.

Fan also observes that some examples do not seem to show any contrast, as in (9), where A asks why B became thin and B answers that he has (always) been thin, which implies that there is no change in the degree of thinness. Fan explains this example as follows. A has an assumption that B was not thin, but he observes that B is thin. That is, there is a contrast between B being not thin in the past and B being thin at the present time. However, under the function of *jiu* the degree of difference is zero,⁷ i.e. B has no change in the degree of being thin.

- (9) A: ni zenme shou le
 You why thin Prc
 ‘Why did you become thin?’
 B: wo benlai jiu shou
 I originally JIU thin
 ‘I have (always) been thin!’

Zhang (2006) discusses the usages of adjectival *benlai* and adverbial *benlai*. She suggests that adjectival *benlai* goes only with abstract nouns. Adverbial *benlai* has two meanings: First, it means ‘as a matter of course; what is supposed to be, based on senses’, and, second, it means agreement with other’s opinions.

Zhao (2007) makes the following observations about *benlai*: First, *benlai* means what is supposed to be, based on senses, and implies a change. Secondly, *benlai jiu* indicates an increase of degree.⁸

Mao et al. (2008) deal with the adjectival usages of *benlai*. They make fine-grained distinctions among the nouns that can go with *benlai*. In addition to abstract nouns, they point out that *benlai* can go with concrete nouns, which, however, must be in a possessive relation with the determiner and must be an indispensable part of the determiner, e.g. *ta benlai de mingzi* ‘his original name’. They further suggest that this is why examples

⁷ Note that Fan simply makes this statement (Fan 2001:123), without explaining the function of *jiu* under this circumstance.

⁸ Zhao’s generalizations about *benlai* are identical to Fan (2001) and Zhang (2006); however, he does not cite these two works in his paper.

such as *benlai de zhuozi* ‘original desk’ are bad because *zhuozi* ‘desk’ can hardly be considered as an indispensable part of something.

Finally, Bai (2010) suggests that *benlai* means ‘as a matter of course; what is supposed to be, based on senses’.⁹

The five papers reviewed above all share a major problem: the authors do not observe that *benlai* shows a variation in whether it denotes a discontinuity reading, as demonstrated in (1) and (3), and therefore they cannot answer the first research question raised in §1. Besides, there are some other problems with their generalizations. Zhang (2006), Zhao (2007) and Bai (2010) all propose that *benlai* means something like ‘as a matter of course’. Take (3a) as an example. In this sentence *wo benlai jiu renshi Ma zongtong* ‘I knew President Ma in person a long time ago’, *I knew President Ma in person* is definitely not a matter of course! In addition, Fan (2001) and Zhao (2007) both propose that *benlai jiu* indicates an increase of degree. Let’s put aside the seeming counterexample (9) discussed in Fan (2001) aside. Example (3a) *wo benlai jiu renshi Ma zongtong* ‘I knew President Ma in person a long time ago’ does not imply any increase of degree because it can be continued by a clause that does not talk about the degree of understanding, as in (10), while, for (8), if *xianzai geng pang le* ‘now more fat *Pre*’ is removed, the sentence *zhe haizi benlai jiu pang* ‘this child originally *JIU* fat’ does not (at least not necessarily) get an increase of degree reading. In other words, the contrast in degree reading of *benlai jiu* is, at least partially, brought out by the latter clause specifying an increase of degree.

- (10) *wo benlai jiu renshi Ma zongtong ni buyong huaiyi*
I originally *JIU* know in person Ma President you need not doubt
‘I knew President Ma a long time ago. You do not need to doubt it.’

In sum, we review six papers in this section: Tao (2000), Fan (2001), Zhang (2006), Zhao (2007), Mao et al. (2008) and Bai (2010). They fail to observe that *benlai* involves a variation in whether it denotes a discontinuity reading and therefore they cannot answer the first question to be answered in this paper. Neither can they answer the second or third questions because they do not take relevant examples into consideration. Furthermore, there are counterexamples to their generalizations as well. Hence a re-examination of the semantics of *benlai* is called for.

⁹ Note that Bai (2010) reaches the same conclusion as Zhang (2006) but does not cite the previous reference.

3. Contrast, anchor time, and *benlai*

In this section, we discuss the semantics of *benlai*. We argue two points. First, *benlai* shows contrast in whether a proposition holds at different times. Inducing a discontinuity reading is only the last resort for *benlai* when no contrastive information of the kind as stated above is available. Second, *benlai* provides an extra time, in addition to the time which a verb takes as an argument and which is by default instantiated to the time of utterance (for short, argument time).¹⁰ The additional time serves as an anchor time, located in the past of the argument time, and *benlai* specifies that the proposition it presents holds at the anchor time or that the entity referred to by a nominal phrase modified by *benlai* is true of the property denoted by the nominal phrase at the anchor time.

This section includes four parts. We discuss adverbial *benlai* first. In §3.1, we discuss the notion of contrast in relation to adverbial *benlai*. In §3.2, we argue that adverbial *benlai* provides an additional time, and examine where the additional time comes from and what its function is. In §3.3, we discuss adjectival *benlai* and explain how the semantics of adverbial *benlai* can be extended to adjectival *benlai*. In §3.4, we formalize our generalizations and provide formal semantics for both adverbial *benlai* and adjectival *benlai*.

3.1 Contrast and *benlai*

In the literature such as Tao (2000), Fan (2001), Zhao (2007), et al., it has been suggested that *benlai* indicates contrast. The examples examined in these studies actually show a contrast in the realization of the proposition presented by *benlai*: The proposition holds at a past time but does not hold at the time of utterance, i.e. discontinuity reading. This contrast can be made explicit by a *but* clause. See the examples in (11).

- (11) a. ta benlai bu lai
 he originally not come
 ‘Originally, he would not come.’
 b. ta benlai bu lai keshi houlai haishi lai le
 he originally not come but later still come Prc
 ‘Originally he would not come. But later he still came.’

¹⁰ In this respect, *benlai* is similar to futurities discussed in Copley (2009). She proposes that an English futurate is actually a plan about a situation, and that the futurate introduces an extra time, the time when the plan is made, in addition to the future time when the situation is planned to take place. *Benlai* and futurities differ in that *benlai* provides an additional time in the past of the time of utterance while futurities provide one in the future.

- c. ta benlai zai kan shu
he originally Prg read book
'Originally, he was reading.'
- d. ta benlai zai kan shu keshi xianzai zai kan dianshi
he originally Prg read book but now Prg watch TV
'Originally, he was reading. But, now, he is watching TV.'

In (11a), *benlai* presents the proposition *ta bu lai* 'he not come', and (11a) means that *ta bu lai* 'he not come' holds at a time previous to the time of utterance but does not hold at the time of utterance. The contrastive reading is made explicit by the *but* clause in (11b). In (11c), *benlai* presents the proposition *ta zai kan shu* 'he Prg read book', and the sentence means that *ta zai kan shu* 'he Prg read book' holds at a time prior to the time of utterance but does not hold at the time of utterance.

In addition to this type of contrast, Fan (2001) suggests that the contrast does not have to be in the realization of an eventuality but instead in degree. See (12). Fan claims that examples like (12) still describe a contrast, one in the degree of the child being fat. This kind of examples also contrasts in the realization of the proposition *benlai* presents. (12) means that his child being fat (at a certain degree) holds at a past time, but his child being fat at that degree does not hold at the time of utterance.

- (12) ta de haizi benlai jiu pang xianzai geng pang le
he Poss child originally JIU fat now more fat Prc
'His child was originally fat. Now, he is even fatter.'

There are other types of contrast that are not covered in the literature. As a matter of fact, *benlai* can show contrast in the adverbial that modifies a situation, or in the adverbial that modifies a situation and the situation itself. See the examples below.

- (13) a. ta benlai hen kuaide zai paobu xianzai biande bijiao man
he originally very quickly Prg run now become comparatively slow
'Originally, he was running quickly. Now, he became slower.'
- b. Xiaomei benlai hen gaodingde zai kan dianshi zenme dianshi
Xiaomei originally very happily Prg watch TV why TV
hai zai kan que xiande hen shengqi
still Prg watch but appear very angry
'Originally Xiaomei was watching TV happily. Why did she look angry although she is still watching TV?'

- c. Xiaomin benlai zai jiaoshi kanshu, danshi xianzai que paodao
 Xiaomin originally at classroom read but now but run to
 jiaoshi wai kan
 classroom outside read
 ‘Originally, Xiaomin was reading in the classroom. But now he ran out of the classroom and read outside.’
- (14) a. Xiaomin benlai zai jiaoshi kanshu, danshi xianzai que zai
 Xiaomin originally at classroom read but now but at
 caochang da qiu
 playground play ball
 ‘Originally, Xiaomin was reading in the classroom. But now he is playing ball on the playground.’
- b. Xiaomei benlai hen gaoxingde zai kan dianshi xianzai que
 Xiaomei originally very happily Prg watch TV now but
 bao zhe shu tongku
 hold Dur book cry sadly.
 ‘Originally Xiaomei was watching TV happily. But now she is crying sadly, holding a book.’
- c. ta benlai hen kuaide zai paobu xianzai zai xiuxi le
 he originally very quickly Prg run now Prg rest Prc
 ‘Originally, he was running quickly. Now he is taking a rest.’

In (13a), *benlai* indicates a contrast in manner. The sentence with *benlai* describes a *he run fast* event, and at the time of utterance, instead of running fast, he has slowed down. That is, *benlai* indicates a contrast between *fast* and *slow*. In (13b), *benlai* describes a contrast between *happy* and *angry*: The sentence with *benlai* denotes a *Xiaomei watch TV happily* event and at the time of utterance she became angry. In (13c), *benlai* shows a contrast in the location of the situation, i.e. between *in the classroom* and *outside the classroom*. These examples show a contrast in the adverbial modifications of the sentences.

On the other hand, *benlai* can show a contrast both in the adverbials and the situations themselves. The examples in (14) are of this kind. In (14a), *benlai* indicates a contrast both between *in the classroom* and *on the playground* on the one hand, and between *to read* and *to play ball* on the other. In (14b), *benlai* describes a contrast both between *happily* and *sadly*, and between *to watch TV* and *to cry, holding a book*. (14c) is very interesting in that, although there is an adverbial in the sentence with *benlai*, yet, *benlai* in this example simply shows a contrast between *to run* and *to rest*, but not a

contrast in the adverbials, because *not quickly* is not an appropriate property for the verb *xiuxi* ‘to rest’.

Based on the above discussion, we can show that *benlai* has the following syntactic and semantic property. Here we assume a syntax of an introductory level, ignoring concepts such as VP-shell, TP, AspP, the X' level, etc., because they do not really affect the semantics of *benlai*. Extension of the idea proposed here to a full-fledged, updated version of syntax is always possible.

- (15) a. $[_{VP} \textit{benlai} [_{VP} Q]] \rightarrow \neg Q$
 b. $[_{VP_1} \textit{benlai} [_{VP_2} \textit{Adv} [_{VP_3} Q]]] \rightarrow \neg \textit{Adv} \text{ or } \neg VP_2 \text{ or } \neg Q^{11}$

(15a) means that, when *benlai* goes with a VP, *Q*, the sentence actually means $\neg Q$. Note that *Q* can be negative and this generalization still holds because, when $Q = \neg P$, $\neg Q = \neg \neg P = P$. (15a) successfully captures the semantics of the examples in (11). On the other hand, (15b) means that, when *benlai* goes with a VP, *Q*, modified by an adverbial *Adv*, the sentence has three possible readings: $\neg \textit{Adv}$, $\neg VP_2$ or $\neg Q$. (15b) accurately captures the semantics of the examples in (13) and (14).

One interesting question to ask is whether *benlai* requires a contrastive reading or whether it induces a contrastive reading. We argue that, instead of inducing a contrastive reading, *benlai* requires contrastive information with respect to whether a proposition holds at different times, and that inducing a discontinuity reading is only the last resort for *benlai* when no contrastive information of the type stated above is available.

The evidence comes from examples that do not show any type of the contrast discussed above. In comparison, consider the examples in (16).

- (16) a. wo benlai jiu renshi Zhangsan
 I originally JIU know Zhangsan
 ‘I knew Zhangsan in person (a long time ago)! (I still do now.)’
 b. wo benlai jiu renshi Zhangsan #keshi xianzai bu renshi le
 I originally JIU know Zhangsan but now no know Prc
 ‘I knew Zhangsan in person (a long time ago)! #But I don’t know him now!’
 c. wo benlai jiu renshi Zhangsan #xianzai geng renshi le
 I originally JIU know Zhangsan now more know Prc
 ‘I knew Zhangsan in person (a long time ago)! #I know him more now!’

¹¹ Note that here \neg simply represents negation and that it is not treated as a logical connective because *Q*, *VP*, and *Adv* are not propositions.

(16a) is a grammatical sentence. However, (16a) does not have a discontinuity reading as in (15a) and (15b), and this is why it renders the discourse infelicitous to add a *but* clause, which indicates that the speaker does not know Zhangsan anymore, as in (16b). Furthermore, it is not possible for (16a) to describe a contrast in degree as well, as shown in (16c), where the latter clause denotes an increase of degree of knowing Zhangsan.¹² Since there is no adverbial in (16a), the possibility of denoting contrast in the properties denoted by an adverbial is also ruled out.

If *benlai* does not denote a contrast of any type described in (16), then what does the sentence actually mean? Does it denote a contrast of some sort, as the other examples with *benlai* discussed above? We believe so. Look at (17).

- (17) A: ni renshi Ma zongtong!?
 You know Ma President
 ‘You know President Ma in person?!’
 B: ni xianzai cai zhidao wo benlai jiu renshi ta
 You now CAI know I originally JIU know he
 ‘You didn’t know that until now? I knew him in person a long time ago!’

(17) clearly demonstrates the contrastive function of *benlai*, other than contrast of the types summarized in (15). At the time of utterance, A is very surprised at the fact that B knows President Ma in person, with an implication that A did not think that B knew President Ma before the speech time. B’s reply shows a contrast in time: instead of the time when A realizes that B knew President Ma in person, B actually implies that he knew President Ma in person a long time ago! As one can see, there is a contrast between the time when A assumed that A knew President Ma in person and the time when B actually knew Present Ma in person.

(17) is a strong piece of evidence for our argument that *benlai* requires contrastive information and inducing a discontinuity reading is only the last resort for *benlai* when no contrastive information is available with respect to whether a proposition holds at different times. All the examples discussed above, except for (17), denote a contrast in the realization of the propositions presented by *benlai*, as summarized in (15). Nevertheless, what B says in (17) does not describe that. If *benlai* denoted that, what B says would mean that B knew President Ma in person a long time ago but does not now. However,

¹² One might argue that (16c) is infelicitous because in Chinese the verb *renshi* ‘to know (somebody) in person’ does not allow for different degree of knowing. This argument is true, but does not affect our argument for *benlai* here. Since *renshi* ‘to know (someone) in person’ does not allow for different degrees of knowing, *benlai* in this example does not (and cannot) denote a contrast in degree of knowing as well.

this is not the reading for the *jiu* sentence B utters. In the *jiu* sentence B utters, *jiu* indicates a contrast between an early time and a later time: It specifies that the *wo renshi Ma zongtong* ‘I know President Ma’ event occurs at an early time, rather than at some later time implied by A’s statement. Since *jiu* provides a contrast, *benlai* takes it and does not induce a discontinuity reading. However, in the other examples, no contrastive information is available for *benlai* and therefore *benlai* induces a discontinuity reading so that the contrastive requirement of *benlai* can be satisfied.

Note that *jiu* can simply indicate that a situation occurred early but does not say anything about contrast between an early time and a later time. In this kind of *jiu* sentences, *benlai* induces a discontinuity reading because no contrastive information is available. Consider (18a).

- (18) a. ta benlai zuotian jiu wancheng le ta de zuoye¹³
 he originally yesterday JIU finish Pfv he Poss homework
 zhishi houlai faxian cuowu suoyi xianzai zai chongxie
 only later find mistake so now Prg re-do
 ‘Originally he finished his homework as early as yesterday. It is just that he found some mistakes and therefore he is re-doing the homework right now.’
- b. zher jiu shi women xuexiao
 here JIU be our school
 ‘Here is our school!’
- c. zao zai kangzhan shiqi women jiu renshi le
 early at war against Japan period we JIU know Prc
 ‘We knew each other as early as in the period of the war against Japan.’
- d. wo san dian jiu lai le
 I three o’clock JIU come Prc
 ‘I came at 3 o’clock earlier than expected.’

¹³ Without the second part, this *jiu* sentence is actually ambiguous: it can also describe a contrast between an early time and a later time, and therefore the proposition modified by *benlai* holds both at a past time and at the time of utterance. This reading can be brought out if we add an appropriate sentence after it. See (i).

(i) ta benlai zuotian jiu wancheng le ta de zuoye ni ganma ma ta
 he originally yesterday JIU finish Pfv he Poss homework you why scold he
 ‘He finished his homework as early as yesterday! Why are you scolding him (for not finishing his homework)?’

In (18a), *jiu* does not express a contrast between an early time and a later time. Instead, the speaker simply makes a judgment that his having finished his homework yesterday is early. Since there is no contrastive information here, *benlai* invokes a discontinuity reading and hence this sentence means that the proposition *he finish his homework yesterday* holds at a time prior to the time of utterance but does not hold at the time of utterance.

With respect to function of *jiu*, one could suggest that *benlai* itself implies a discontinuity, which may be abolished precisely by means of *jiu*. It is possible that the fundamental function of *jiu* is identification, as in (18b-c). In (18b), *jiu* is used to identify *here* with *our school*, and in (18b), *jiu* identifies the time of *we know each other* with the period of the war against Japan. It could be imagined that *benlai* establishes a cut between what obtained at the time and what was the case subsequently, and *jiu* bridges the discontinuity induced by *benlai*. One may also suggest that *benlai* presupposes semantically a cut and hence contrast is induced rather than required.

We agree that the semantics of *jiu* plays a significant role here. However, we would like to maintain our proposal that *benlai jiu* shows a contrast in whether a proposition holds, for the following reasons.

To begin with, it is also observed that *jiu* can be used to contrast two times, as in (18d). In (18d), *jiu* indicates a contrast between an expected (later) time and an earlier time when the event actually occurred. *Benlai jiu* in (16a) and the utterance of B in (17) can be used only in a context where the proposition *benlai* presents is assumed not to hold at a later time.¹⁴ Take (17) as an example. At a later time, A learns about the fact that B knew President Ma in person. B uses *benlai jiu* to claim that he knew President Ma in person a long time ago, to contrast A's assumption that B knew President Ma in person at a later time.

Furthermore, without a context where a proposition is assumed to hold at a later time, such as (17), *benlai jiu* cannot denote that the proposition holds both at a past time and at the time of utterance. Take (18a) as an example. With no context as stated above, *benlai jiu* in (18a) cannot describe that his finishing his homework holds both at a past time (yesterday) and at the time of utterance, even though *jiu* plays a role in the semantics of the whole sentence.

Lastly, the examples with *benlai jiu* indicating an increasing degree, such as (12), also support our proposal. With no context describing an assumption that a proposition holds at a later time, *ta de haizi benlai jiu pang* 'he DE child originally JIU fat' cannot mean that his child being fat (at a certain degree) holds both at a past time and at the

¹⁴ Note that we do not deny the identification function of *jiu* in (16a) and in the statement of B in (17). We simply wish to emphasize that *benlai jiu* in these two sentences does show contrast in whether a proposition holds at different times.

time of utterance, but means that his child being fat (at a certain degree) holds at a past time, but his child being fat at that degree does not hold at the time of utterance.

In short, *benlai jiu* can describe a proposition which holds both at a past time and at the time of utterance only when there is a context indicating an assumption that the proposition holds at a later time. Otherwise, *benlai jiu* can only describe a proposition which holds at a past time but does not hold at the time of utterance. That is, *benlai jiu* in (16a) and in the utterance of B in (17) shows a contrast in whether a proposition holds.

One interesting question that can be raised is whether sentences with *benlai* and sentences with *benlai jiu* have the same presupposition. We agree that *benlai* presupposes semantically a cut, but we disagree that because of the presupposition of *benlai*, contrast is induced, rather than required. Let us look at an example of presupposition: *John's sister lives in Taipei*. This sentence presupposes that John has a sister. Semantically, the apostrophe indicates a possessive relation between John and the one referred to by *John's sister*. Even though the presupposition describes a possessive relation between John and the one referred to by *John's sister*, it does not seem necessary to claim that the possessive semantics of apostrophe is induced by the presupposition. The same line of reasoning can be applied to the case of *benlai*. Therefore, we agree that *benlai* presupposes a cut in the sense that a proposition holds at a past time, but not at the time of utterance.

How about *benlai jiu*? We have shown that in some cases, such as (12) and (18a), *benlai jiu* behaves just like *benlai* in that they both describe a proposition that holds at a past time but not at the time of utterance. However, *benlai jiu* in (16a) and (17) denotes that a proposition holds both at a past time and at the time of utterance. What is the presupposition of *benlai jiu* in this kind of context? When (16a) is uttered alone, the listener automatically supplies a context where the proposition is assumed to hold at a later time. That is, when *benlai jiu* describes a proposition that holds both at a past time and at the time of utterance, it triggers a presupposition that the proposition is assumed to be true at a later time. This presupposition is not a “cut” in the sense proposed by one of the anonymous reviewers, but it should be clear that both the “cut”, i.e., the presupposition of *benlai*, and the presupposition of *benlai jiu* are a contrast in whether a proposition holds at different times.

Now we discuss exactly what is discontinued. We find that some *benlai* examples such as those in (19) do not mean that the proposition *benlai* presents is true at a time prior to the time of utterance but is false at the time of utterance. So, exactly what is discontinued and what can distinguish different types of discontinuity?

- (19) a. Zhangsan benlai lai le
 Zhangsan originally come Prc
 ‘Originally, Zhangsan came. (Therefore he was here, but he is not now.)’

- b. Lisi benlai yingde guanjun
 Lisi originally win championship
 ‘Originally, Lisi won the championship. (But, it was canceled somehow later. So, he does not have the trophy now.)’
- c. Wangwu benlai zuo le yi ge dangao
 Wangwu originally make Pfv one CL cake
 ‘Originally, Wangwu made a cake. (But the cake is gone now.)’

If we look at the examples in (19) more closely, we can find that it is the resultative states caused by the events described in (19) that are discontinued¹⁵ in these examples. In (19a), he came and therefore he has a change of location: from somewhere else to here. *Benlai* specifies that this resultative state was true at an earlier time but false at the time of utterance. In (19b), *benlai* specifies that Lisi’s possession of the trophy is true at an earlier time but false at the time of utterance. The statement that Lisi won the championship caused the state of Lisi possessing the trophy. In (19c), *benlai* indicates that the cake existed at a previous time but does not exist at the time of utterance. The statement that Wangwu made a cake brought the cake into existence.

The examples in (19) also reveal that verbs that denote a change, i.e. change of location, change of possession, and verbs of creation/consumption will have their resultative states discontinued when they go with *benlai*. The reason is simple: when a change is done or something is created or consumed, the action that causes the change or the creation/consumption cannot be undone. What can be ‘undone’, i.e. discontinued, is the resultative states the actions lead to.

To sum up, we argue that *benlai* shows contrast in whether a proposition holds at different times, that *benlai* asserts an anchor time in the past of the argument time, and specifies that the proposition which *benlai* modifies holds at the anchor time. Whether the proposition holds at the argument time depends on whether there is contrastive information concerning the realization of the proposition at different times in the context.

What is contrasted can be an adverbial, if there is one, a VP consisting of an adverbial and another VP, or a VP that consists of a verb (and a direct object if the verb is transitive).

At this point, we can answer the research questions with regards to discontinuity readings and the role of *jiu* in discontinuity readings. What is referred to as a ‘discontinuity reading’ actually comes from the contrast requirement of *benlai*: whenever *benlai* needs to induce a contrastive reading that the proposition it presents holds at a time

¹⁵ Note that there is a similar kind of distinction with respect to discontinuity in the case of the experiential *guo* in Chinese. Interested readers are referred to Wu (2008) for details.

anterior to the time when the sentence is spoken but does not hold at the time when the sentence is uttered, a discontinuity reading surfaces.

The role of *jiu* is as follows: When *jiu* indicates a contrast between two times, the contrast provided by *jiu* satisfies the contrast requirement of *benlai* and therefore no discontinuity reading is necessary; when *jiu* does not provide contrastive information, a discontinuity reading appears.

For verbs that denote a change, i.e. change of location, change of possession, etc., and verbs of creation/consumption, what are discontinued are the resultative states caused by the actions denoted by the verbs. For the other types of verbs, what is discontinued is the proposition that *benlai* presents.

3.2 Anchor time and *benlai*

Tao (2000) refers to adverbs such as *benlai* as ‘adverbs of absolute time’, although he does not explicitly discuss what time *benlai* provides for an eventuality it goes with. The examples examined so far seem to suggest that *benlai* indicates a past time for the sentence it goes with. However, this is not entirely true. See (16). The event which *benlai* presents with in (16) is a future one because of the modal *hui*,¹⁶ and therefore *benlai* cannot simply be suggested to provide a past time for the sentence it goes with because a past time is not compatible with a future temporal phrase such as *mingtian* ‘tomorrow’.

- (20) ta benlai mingtian hui huijia
he originally tomorrow will return home
‘Originally, he will return home tomorrow. (But there is a change of plan now.)’

Then, what time does *benlai* provide? What is the function of the time provided by *benlai*? Why is it compatible with a future temporal phrase? Let us examine the examples below. The (a) examples do not contain *benlai* and the (b) examples do.

- (21) a. Zhangsan ai Xiaomei
Zhangsan love Xiaomei
‘Zhangsan loves Xiaomei.’¹⁷

¹⁶ Refer to Wu & Kuo (2010) for a discussion of the future reading of *hui*.

¹⁷ Although Chinese is not marked for tense, this sentence receives a present-tense reading based on Lin (2003, 2006), Smith & Erbaugh (2005), etc.

- b. Zhangsan benlai ai Xiaomei
 Zhangsan originally love Xiaomei
 ‘Originally, Zhangsan loved Xiaomei.’
- (22) a. Zhangsan mingtian hui lai
 Zhangsan tomorrow will come
 ‘Zhangsan will come tomorrow.’
- b. Zhangsan benlai mingtian hui lai
 Zhangsan originally tomorrow will come
 ‘Originally, Zhangsan will come tomorrow.’
- (23) a. Lisi zuotian lai le
 Lisi yesterday come Prc
 ‘Lisi came yesterday.’
- b. Lisi benlai zuotian lai le buguo jintian yi zao
 Lisi originally yesterday come Prc but today early morning
 jiu zou le
 JIU leave Prc
 ‘Originally, Lisi came yesterday. But he left early morning today.’

As we can see from the above examples, *benlai* provides an additional time. (21a) provides a single time, i.e. the time when the eventuality holds.¹⁸ But, in (21b), with *benlai* added in the sentence, in addition to the time when the sentence is uttered, which is also the time when *Zhangsan bu ai Xiaomei* ‘Zhangsan not love Xiaomei’ is true, an extra time is added: The time when *Zhangsan ai Xiaomei* ‘Zhangsan love Xiaomei’ is true. Besides, the former time is after (= in the future of) the latter time. These two behaviors, an extra time and a fixed temporal order between the two times, come from the contrast requirement of *benlai*.

As discussed in the previous section, *benlai* requires contrastive information regarding whether a proposition holds at different times. When no contextual contrastive information of the kind as stated above is available, *benlai* induces a contrast reading by expressing that the proposition it presents holds at a time prior to the time when the sentence is spoken but does not hold at the time when the sentence is uttered. On the other hand, when there is contrastive information of the kind described above in the context, *benlai* states that the proposition it presents holds at the extra time it provides,

¹⁸ According to Reichenbach (1947) or Klein (1994), there are at least two more times to determine the tense and aspect of a sentence, i.e. reference time or topic time, and time of utterance. But the sentence (21a) itself simply provides the time when the situation holds, i.e. event time or time of situation. The same reasoning applies to (22a) and (23a).

and also holds at the time of utterance. That is, the semantic function of *benlai* is: To add a time, which is located in the past of the time of utterance, and to specify that the proposition it presents holds at this added time. When no contextual contrastive information is available, *benlai* further indicates the proposition it presents does not hold at the time of utterance, while, with contextual contrastive information available, *benlai* does not indicate that the proposition ceases to hold at the time of utterance. The temporal relation of a discontinuity reading of *benlai* can be represented as (24).

- (24) *benlai*(P) is true at time t iff $\exists t', t' \prec t$, P is true at t' and whether P is true at the time of utterance depends on whether contrastive information is available concerning whether P holds at different times.

(24) accurately captures the semantic contribution of *benlai* when it is used to present a situation. Let us look at examples (21b)-(23b). In those examples, no contrastive information of the kind as described above is available and therefore *benlai* further specifies that the proposition it presents does not hold at the time of utterance. This is why these examples all get a discontinuity reading. (21b) means that Zhangsan loved Xiaomei in the past but he does not love her any more at the time of utterance. That is, for (21b) to be true at the time of utterance, there must be a time in the past of the time of utterance, and the proposition which *benlai* presents, i.e. *Zhangsan ai Xiaomei* 'Zhangsan love Xiaomei', is true at the past time, while the negative counterpart of the proposition holds at the time of utterance. Where does the past time come from? We argue that *benlai* provides it for the sentence.

(22b) means that at some past time the speaker made a prediction that Zhangsan would come tomorrow, but at the time of utterance the speaker predicts that Zhangsan will not come tomorrow. In other words, for (22b) to be true at the time of utterance, the speaker made a prediction, at some past time, that Zhangsan would come tomorrow, and at the time of utterance the speaker predicts that Zhangsan will not come tomorrow. Again, *benlai* provides the past time.

(23c) means that at some past time, which is part of yesterday, Zhangsan came and he was here, but at the time of utterance he is no longer here. To put it another way, for (23b) to be true at the time of utterance, there must be a past time, which is part of yesterday, and Zhangsan came and was here at the past time, while at the time of utterance he is not here any longer. Again, *benlai* provides the past time.

Now, we need to determine the kind of time that *benlai* provides. Reichenbach (1947) uses three times: event time, time of utterance, and reference time. Klein (1994) argues that Reichenbach's reference time is not well-defined, and proposes topic time, which refers to the time about which the speaker makes an assertion, along with the two other times: time of situation and time of utterance.

Is the time provided by *benlai* one of the three times defined by Klein? We do not think so, based on (22b). It is easy to identify the time of utterance and the time of situation for (22b). *Mingtian* ‘tomorrow’ is the topic time for (22b), based on Klein’s definition. Since all three times proposed by Klein have been identified, the time provided by *benlai* cannot be one of them. We refer to the time provided by *benlai* as ‘anchor time’ because it serves as a time to which is anchored the evaluation of the truth value of the proposition presented by *benlai*. When necessary, the anchor time serves as a reference point, in the future of which the negative counterpart of the proposition presented by *benlai* is true. We do not use the term ‘reference time’ to avoid any possible confusion with Reichenbach’s notion of reference time.

One strong support for this position about the time provided by *benlai* comes from the relative linear order between *benlai* and *yijing* ‘already’. Wu (2003:265) argues that the temporal phrase before *yijing* ‘already’ is a reference time and the one after *yijing* ‘already’ is the time that includes the event time. See (25).

- (25) a. ta zuotian xiawu yijing zou le
 he yesterday afternoon already leave Prc
 ‘He had already left by yesterday afternoon.’
 b. ta yijing zai zuotian xiawu zou le
 he already at yesterday afternoon leave Prc
 ‘He already left yesterday afternoon.’
- (26) a. ta benlai yijing lai le
 he originally already come Prc
 ‘Originally, he already came.’
 b. *ta yijing benlai lai le
 he already originally come Prc

In (25a), *zuotian* ‘yesterday’, which is located to the left of *yijing* ‘already’, is the time after which the *he leave* event occurred, while in (25b) *zuotian* ‘yesterday’, which is located to the right of *yijing* ‘already’, is the topic time, in the sense of Klein (1994), which includes the time when the *he leave* event occurs. That is, what we refer to as anchor time in this paper needs to appear to the left of *yijing* ‘already’, instead of to the right.

It is borne out that *benlai* can only occur before *yijing* ‘already’, but not after it, as in (26). This relative order between *benlai* and *yijing* can be easily explained as follows. When *benlai* is added to a sentence, an anchor time is provided. Hence, if *yijing* and the verb it modifies form a phrase first, and then *benlai*, along with the new phrase, form

another phrase, *benlai* provides an anchor time and the left of *yijing* is the accurate position for an anchor time. This is the case for (26a).

On the other hand, if *benlai* and the verb it modifies form a phrase first and an anchor time is provided, when *yijing* comes in, the anchor time will be located to the left of *yijing*. This is not an accurate position for an anchor time and hence this word order is out. This is the case for (26b).

In sum, we argue that the time provided by *benlai* is an ‘anchor time’ because it serves as a time to which is anchored the evaluation of the truth value of the proposition presented by *benlai*. When necessary, the anchor time serves as a reference point, in the future of which the negative counterpart of the proposition presented by *benlai* is true.

3.3 Adjectival *benlai*

Zhao (2007) and Mao et al. (2008) discuss adjectival *benlai*. Zhao proposes that only abstract nouns can be modified by *benlai*. While agreeing with Zhao’s generalization, Mao et al. (2008) also observe examples where *benlai* modifies concrete nouns when the concrete nouns are in a possessive relation with and an indispensable part of the determiners. They suggest that that is why examples such as *benlai de shu* ‘original DE book’, *benlai de zhuozi* ‘original DE desk’, *benlai de xuexiao* ‘original DE school’, etc., are ungrammatical.

However, we conducted a Google search and found many examples, both in simplified and standard Chinese,¹⁹ where *benlai* modifies concrete nouns with no relationship of the kind proposed by Mao et al. (2008) with their determiners. See (27).

- (27) a. kao yan keyi cong benlai de xuexiao
 take the exam for graduate program can from original DE school
 kaodao qita geng hao de xuexiao ma
 pass the exam and go to other more good DE school Q
 ‘If one wants to take the examination for graduate programs, can he take
 (and pass) the exam and then go to a better one from his original graduate
 program?’

¹⁹ Finding the data both in simplified Chinese (used in China) and standard Chinese (used in Taiwan) prove that there is no dialectal difference with respect to whether *benlai* can go with concrete nouns without the constraint proposed in Mao et al. (2008).

- b. benlai de laoshi ruguo xiang dao ta xiao renjiao
 original DE teacher if want go to another school teach
 xuyao jingguo yiban de yingpin chengxu
 need pass general DE application procedure
 ‘If the original teachers want to go to teach at another school, they have to pass the general application procedure.’

In (27), there are no explicit determiners in the sentences. Even though one suggests that there is an implicit determiner in (27a), that is, *xuesheng benlai de xuexiao* ‘student original DE school’ and one in (27b), i.e. *xuexiao benlai de laoshi* ‘school original DE teacher’, it is difficult to claim that students who wish to go to a better graduate program or teachers who want to teach at another school are an ‘indispensable’ part of a graduate program or a school. It is true that students and teachers are indispensable parts of a graduate program or a school. Nevertheless, (27a) is not about all students, but about students who wish to go to a better graduate program. Along the same lines, (27b) is not about all teachers, but about teachers who want to find a new job.

Furthermore, adjectival *benlai* also show (dis)appearance of discontinuity readings, which no previous literature on the adjectival usage of *benlai* has addressed. See the examples below.

- (28) a. Zhangliang benlai de mudi shi fuguo²⁰
 Zhangliang original DE purpose is revive his country
 ‘Zhangliang’s original purpose was to revive his country.’
 b. huazhuangpin yangai le ta benlai de mianmu
 makeup cover Pfv he original DE appearance
 ‘Makeup covered his original appearance.’
 c. zhe ge gudong benlai de gongneng meiyou ren zhidao le
 this CL antique original DE function no person know Prc
 xianzai bei nalai dang zhuangshi
 now Pass take serve as decoration
 ‘Nobody knows what the original function of this antique is anymore.
 Now, it is used as a decoration.’
 d. zhe ge guojia benlai de guofang buzhang xianzai shi zongtong
 this CL country original DE defense minister now be president
 ‘The former minister of defense of this country is the president now.’

²⁰ (28a) is translated from one example in Mao et al. (2008:278).

- (29) a. *xin banjinlai de zhuozi bi jiaoshi li benlai de*
new move REL desk compare classroom inside original DE
zhuozi xiao
desk small
'The desks that were newly moved in are smaller than the ones that have been in the classroom.'
- b. *Yikai benlai de wanju jiqiren yijing huai le xianzai you*
Yikai original DE toy robot already broken Pfv now again
mai le yi ge xin de
buy Pfv one CL new DE
'Yikai's old toy robot has already been broken. Now, he bought a new one.'
- c. *Xiaohua benlai de xiaogou yijing zoushi le xianzai ta meiyou*
Xiaohua original DE doggy already lost Pfv now he not
yang chongwu
keep pet
'Xiaohua's original dog has already been lost. Now, he does not keep a pet.'
- d. *Xiaomei benlai de yinbiaoji bei tou le*
Xiaomei original DE printer Pass steal Pfv
'Xiaomei's original printer has already been stolen.'

The examples in (28) and those in (29) show an interesting contrast: In (28), the head nouns that *benlai* modify show a discontinuity reading as discussed in §3.1, while in (29) they do not. The subject of (28a) refers to the thing which was Zhangliang's purpose but no longer is now. In (28b), *benlai* indicates his appearance before he put on makeup. In (28c), *benlai* talks about the past function of the antique, not its current one. In (28d), the person referred to by the subject of the sentence is no longer the minister of defense of the country.

On the other hand, at the time of utterance, all of the head nouns of the subjects in (29) remain as they were. In (29a), the desks are still desks at the time of utterance. In (29b), the toy robot is still a toy robot, though broken, at the time of utterance. In (29c), the doggy remains a doggy, and in (29d) the printer remains a printer.

Now, the question is why, when modified by *benlai*, some nouns allow for a discontinuity reading whereas others do not? Studies on noun phrases that take a time argument, e.g. Enç (1981, 1986), Musan (1997, 1999), Tonhauser (2000, 2002), etc., may shed some light on this question. These studies observe that noun phrases may be under the scope of some time operator. For example, (30) does not tell us whether the

president under discussion is a former president or the present one. As a matter of fact, under an appropriate context it might even refer to a future president.

(30) The president was a fool.

Tonhauser (2000, 2002) proposes that an NP takes a time argument, just like a verb.²¹ We propose that, at least in Chinese, in terms of whether they have a temporal constraint on their time arguments, nouns²² can be classified into two groups: one has no constraint on its time argument, and the other has a constraint: Suppose that *N* is a noun of this group, *x* is its individual argument, *t'* its time argument, *t* another time, and $t' \prec t$, it is not allowed that *N*(*x*) is true at *t'* but is not true at *t*. That is, the latter group of nouns do not allow a change of property from being the entity denoted by the noun to not being the entity. In other words, the former group describes some temporary property, whereas the latter denotes a permanent one, a distinction similar to the one between stage-level and individual-level predicates (Kratzer 1995). Furthermore, we suggest that nouns modified by *benlai*, as in the examples in (28), belong to the former group, while those in (29) belong to the latter group.

Given this distinction between these two groups of nouns and the semantics of *benlai* as discussed in §3.1 and §3.2, we can explain the readings of the examples in (28). We have argued that, when no contrastive information is available, *benlai* induces one by expressing that the proposition it presents holds at a time anterior to the time when the sentence is spoken but does not hold at the time when the sentence is uttered. Here, since nouns take a time argument and denotes a property, we can say that *benlai* in (28) indicates that the property it presents holds at a time anterior to the time when the nominal phrase is spoken but does not hold at the time when the phrase is uttered.

On the other hand, the examples in (29) do not allow *benlai* to do what it does to the nominal phrases with *benlai* in (28) because the head nouns modified by *benlai* in the examples in (29) have a temporal constraint as described above. As a result, no discontinuity reading is possible for those nominal phrases in (29).

²¹ In fact, Tonhauser (2000, 2002) proposes a dynamic semantics for those NPs because she takes contextual influence on the temporal interpretation of NPs into consideration. Enç (1981, 1986) and Musan (1997, 1999) also propose their own theories. Here we adopt (part of) Tonhauser's proposal because (as far as we can tell) it is simplest in terms of formalism, and it fits our purpose perfectly without any evaluation of the advantages or disadvantages of these theories.

²² Tonhauser (2002) suggests that possessives and adjectives also introduce a time argument. In this paper, we keep the discussion simple and focus only on nouns. We believe that the analysis proposed here can be extended to examples where possessives or adjectives introduce a time argument.

One interesting question is what *benlai* means in the sentences in (29) if they do not express a discontinuity reading. As discussed in §3.1, when contrastive information is available in the context, *benlai* can express that the proposition it presents was true a long time ago (and remains true at the time of utterance). (17) is repeated below as (31) for the purpose of illustration.

- (31) A: ni renshi Ma zongtong!
 You know Ma President
 ‘You know President Ma in person?!’
 B: ni xianzai cai zhidao wo benlai jiu renshi ta
 You now CAI know I originally JIU know he
 ‘You don’t know that until now? I knew him in person a long time ago!’

What B tries to emphasize is that he knew President Ma a long time ago and certainly he knows President Ma in person now. That is, *benlai* in examples of this kind has a meaning similar to *it has always been the case that the proposition presented by benlai is true*, in addition to an emphasis on an earlier time when the proposition holds. These two senses of *benlai* are exactly what adjectival *benlai* expresses. Therefore, in (29a), *jiaoshi li benlai de zhuozhi* ‘classroom inside original DE desk’ refers to all entities²³ that were and have been desks in the classroom. In (29b), *Yikai benlai de wanju jiqiren* ‘Yikai original DE toy robot’ refers to the individual that was and has been Yikai’s toy robot. In (29c), *Xiaohua benlai de xiaogou* ‘Xiaohua original DE doggy’ refers to the creature that was and has been Xiaohua’s doggy’. In (29d), *Xiaomei benlai de yinbiaoji* ‘Xiaomei original DE printer’ refers to the thing that was and has been Xiaomei’s printer’.

To sum up, in this section, we argue that adjectival *benlai* has exactly the same type of semantics as adverbial *benlai*. The variation in the discontinuity reading of adjectival *benlai* comes from the inherent property of the nouns *benlai* modifies. When *benlai* modifies nouns that have a temporal constraint, which rules out the possibility of a change of property from being the entities denoted by the nouns to not being the entities, no discontinuity reading is available. In this case, *benlai* + noun describes an entity which was and has been the thing denoted by the noun. On the other hand, when *benlai* modifies nouns with no such temporal constraint, a discontinuity reading surfaces.

²³ Since Chinese nouns are usually not morphologically marked for number, here we do the translations based on the number information provided by the context.

3.4 Formalizing the ideas

In the previous sections, we have argued for the following two points: First, *benlai* requires contrastive information as to whether a proposition holds at different times, and inducing a discontinuity reading is only the last resort when no contrastive information of the kind stated above is available in the context; and second, *benlai* provides an extra time, referred to as anchor time, because it serves as a time, to which the evaluation of the truth value of the proposition presented by *benlai* is anchored. When no contrastive information of the type is available in the context, the anchor time serves as a reference point, in the future of which the proposition presented by *benlai* is not true. On the other hand, when there is contrastive information of the kind in the context, the proposition holds at a time in the future of the anchor time.

In addition, in the last two sections, we say that the proposition presented by *benlai* holds or does not hold at the time of utterance. However, to make the statement more precise, what we refer to as the time of utterance in the previous sections is actually the time taken as an argument by a verb, which is instantiated to a contextually salient time, usually the time of utterance. A verb is assumed to take a time argument, in addition to its nominal (or prepositional for some verbs) arguments. This time argument is instantiated to a contextually salient time, which is by default the time of utterance. We refer to this time which a verb takes as its argument as “argument time”. Thus, it is more precise to say that the anchor time provided by *benlai* is located in the past of the argument time, instead of the time of utterance. Henceforth, we use the term “argument time” to substitute for the time of utterance, unless the argument time has been instantiated to the time of utterance.

Besides in §3.1, we have discussed examples where the contrast is in the adverbial only, the adverbial and the verb phrase it modifies, or in the verb phrase only with the adverbial ignored. Relevant examples are repeated below.

- (32) a. ta benlai hen kuaide zai paobu xianzai biande bijiao man
 he originally very quickly Prg run now become comparatively slow
 ‘Originally, he was running quickly. Now, he became slower.’
- b. Xiaomin benlai zai jiaoshi kanshu, danshi xianzai que zai
 Xiaomin originally at classroom read but now but at
 caochang da qiu
 play ground play ball
 ‘Originally, Xiaomin was reading in the classroom. But now is playing
 ball on the play ground.’

- c. ta benlai hen kuaide zai paobu xianzai zai xiuxi le
 he originally very quickly Prg run now Prg rest Prc
 ‘Originally, he was running quickly. Now he is taking a rest.’

(32a) shows a contrast in the adverbial: At a past time he was running *quickly*, but at the time of utterance²⁴ he is running *slowly*. (32b) shows a contrast in the adverbial and the verb phrase it modifies: At a past time Xiaomin was *reading in the classroom* but at the time of utterance he is *playing ball on the play ground*. (32c) shows a contrast in the verb phrase and the adverbial is ignored because quickly or slowly cannot be an appropriate property of *rest*: At a past time he was running quickly, but now he is taking a rest.

So, how should we deal with these examples? Does *benlai* need to cope with these variations? We do not think so because these variations come from the interaction of negation and focus.

It has been observed that negation in Chinese does not always negate the proposition; e.g. Ernst (1995), Huang (1988), Liu (2003), Lee & Pan (2001), Qiao (2006), et al. For example, Lee & Pan (2001:717) propose that “[t]he negator *bu* associates with the focus if there is one to its left, and thus introduces a tripartite structure; otherwise it negates the adjacent word.” We suggest that the different types of contrast denoted by *benlai* as those in (13), (14), and (32) come from the interaction between negation and focus.

We have argued in the previous sections that, when no contrastive information of the kind stated in (33a) is available in the context, *benlai* induces one by expressing that the proposition presented by *benlai* holds at a time in the past of the argument time, but does not hold at the argument time. That is, *benlai* introduces negation. (13), (14), and (32) have a discontinuity reading. Since the interaction between negation and different focused elements leads to different readings, the same result applies to *benlai*. To put it another way, different contrastive readings of *benlai* as shown in (13), (14), and (32) are a result of the interaction of negation and different focused elements. Hence, the semantics of *benlai* does not need to accommodate these readings. That is, the different types of contrast denoted by *benlai* as those in (13), (14), and (32) come from the interaction between negation and focus, and what is contrasted is whether a proposition holds at different times.

The above generalizations can be stated as follows: *Benlai* provides a time t' , located in the past of the argument time t taken by the verb of the sentence with *benlai*, and asserts that the proposition it presents holds at t' . Furthermore, when the context

²⁴ In the examples in (33), the argument time is instantiated to the time of utterance because no other contextually salient time is available. So, we use “the time of utterance” here.

provides no contrastive information regarding whether a proposition holds at different times, then *benlai* specifies that P is not true at t , whereas, when there is contrastive information of the kind as stated above available in the context, *benlai* indicates that P is also true at t . In the latter case, the contrast requirement is satisfied in the context, not in the sentence with *benlai*. We state this idea as in (32).

- (33) a. Contrastive Requirement for *benlai*:
Benlai shows a contrast in whether a proposition holds at different times.
- b. A proposition presented by *benlai* is true at an argument time t if and only if there is a time t' in the past of t and the proposition is true at t' .
- c. The proposition is true at t only when contextual information indicates that the proposition does not hold at t' ; otherwise, the proposition does not hold at t .

The same type of semantics as in (33b-c) also fits adjectival *benlai*. Nouns have been argued to take a time argument, just like verbs, e.g. Enç (1981, 1986), Musan (1997, 1999), Tonhauser (2000, 2002), et al. For those nouns which have a temporal constraint as discussed in §3.3, only the first clause of (33c) applies and therefore they do not get a discontinuity reading, whereas for those nouns which do not have such a constraint, the second clause of (33c) applies and they get a discontinuity reading.

Based on (33b-c), we propose the semantics of *benlai* as in (34). (34a) is the semantics for adverbial *benlai* and (34b) is the semantics for adjectival *benlai*. Note that the two semantics are very similar except for the semantic type of the variable P they take. This difference captures the syntactic behavior that adverbial *benlai* modifies a proposition while adjectival *benlai* modifies a noun, which is treated as a property in terms of its semantics.

- (34) a. Adverbial *benlai*
 $[[benlai_{adv}]] = \lambda P \in D_{\langle i, t \rangle} \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge P(t') \wedge P(t)]$ or
 $\lambda P \in D_{\langle i, t \rangle} \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge P(t') \wedge \neg P(t)]$, where P is the resultative state of a proposition which contains a verb of change (of location/possession) or a verb of creation/assumption and P is the situation presented by *benlai* otherwise.
- b. Adjectival *benlai*
 $[[benlai_{adj}]] = \lambda P \in D_{\langle e, \langle i, t \rangle \rangle} \lambda x \in D_e \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge P(x, t') \wedge P(x, t)]$, or
 $\lambda P \in D_{\langle e, \langle i, t \rangle \rangle} \lambda x \in D_e \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge P(x, t') \wedge \neg P(x, t)]$

Adverbial *benlai* is treated as a sentence operator, which takes a proposition as its argument. (34a) is the semantics for adverbial *benlai*. It says that *benlai* takes three arguments, P , which is of type $\langle i, t \rangle$ ($D_{\langle i, t \rangle}$), and t' , t , both of which are of type interval (D_I). In addition, *benlai* specifies two things: First, t' is located in the past of t , and, second, a proposition P is true both at t' and at t , or, the proposition P is true at t' but false at t . (34a) also specifies that P is the resultative state of a proposition which contains a verb of change of location/possession or a verb of creation/assumption or the situation presented by *benlai* otherwise.

(34b) is the semantics for adjectival *benlai*. It basically says the same thing as (34a), except that, instead of a proposition, i.e. a type $\langle i, t \rangle$ element, adjectival *benlai* takes a type $\langle e, \langle i, t \rangle \rangle$ element, i.e. a predicate, as its argument. In other words, *benlai* takes a nominal argument which, in addition to an argument of type $\langle i, t \rangle$, also takes an argument of type e , which stands for an entity. Adverbial *benlai* takes a proposition (type $\langle i, t \rangle$) as its argument and adjectival *benlai* takes a predicate (type $\langle e, \langle i, t \rangle \rangle$) as its argument because a noun is semantically treated as a property (type $\langle e, \langle i, t \rangle \rangle$).

Furthermore, we propose that *benlai*, as an adverbial, has the semantics of $[t' \prec t \wedge P(t') \wedge P(t)]$ only when the sentence with *benlai* is connected to another sentence with rhetorical relation *Contrast*, following the ideas of Segmented Discourse Representation Theory (SDRT) proposed by Asher & Lascarides (2003) about the influence of rhetorical relations on semantics. We propose a meaning postulate as (35):

$$(35) \quad \llbracket \text{benlai}_{\text{adv}} \rrbracket = \lambda P \in D_{\langle i, t \rangle} \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge P(t') \wedge P(t)] \Leftrightarrow \\ [\text{Contrast}(\alpha, \beta) \wedge \text{benlai}(\alpha)] \text{ with the same condition on } P \text{ as in (34a).}$$

(35) basically says that adverbial *benlai* has the semantics $[t' \prec t \wedge P(t') \wedge P(t)]$ if and only if α is a sentence with *benlai* and rhetorical relation *Contrast* connects α to β . Using this meaning postulate and SDRT, (35) accurately captures the intuition that *benlai* has this type of semantics only when contrastive information is available in the context. Adjectival *benlai* does not need a rule like (35) because whether a nominal phrase with *benlai* has a discontinuity reading does not depend on the context, but on whether the head noun has a “no discontinuity” constraint.

Let us do semantic derivations for the following examples to see how the semantics (34) and the meaning postulate (35) work to derive accurate readings and to block inaccurate readings. Below, sentences are listed under (a) and semantic derivations are given under (b).

- (36) a. Zhangsan benlai xihuan Xiaomei
 Zhangsan originally like Xiaomei
 ‘Originally, Zhangsan liked Xiaomei.’
- b. $[[\text{Zhangsan xihuan Xiaomei}]] = \lambda t'' \in D_I [\text{like}'(\text{Zhangsan}', \text{Xiaomei}', t'')]$
 $[\text{benlai}] ([\text{Zhangsan xihuan Xiaomei}])$
 $= \lambda P \in D_{\langle i, t \rangle} \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge P(t') \wedge \neg P(t)]$
 $(\lambda t'' [\text{like}'(\text{Zhangsan}', \text{Xiaomei}', t'')])$
 $= \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge \lambda t'' [\text{like}'(\text{Zhangsan}', \text{Xiaomei}', t'')](t') \wedge$
 $\neg(\lambda t''' [\text{like}'(\text{Zhangsan}', \text{Xiaomei}', t''')](t))]$
 $= \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge [\text{like}'(\text{Zhangsan}', \text{Xiaomei}', t')] \wedge$
 $\neg[\text{like}'(\text{Zhangsan}', \text{Xiaomei}', t)]]$
- c. Default Time of Utterance
 If there is an expression ϕ of type $\langle i, t \rangle$, then by default $[[\phi]](\text{TU}) = 1$.
- d. $\lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge [\text{like}'(\text{Zhangsan}', \text{Xiaomei}', t')] \wedge$
 $\neg[\text{like}'(\text{Zhangsan}', \text{Xiaomei}', t)]](\text{TU})$
 $= \exists t' \in D_I [t' \prec \text{TU} \wedge [\text{like}'(\text{Zhangsan}', \text{Xiaomei}', t')] \wedge$
 $\neg[\text{like}'(\text{Zhangsan}', \text{Xiaomei}', \text{TU})]]$

As we can see in (36b), when the semantics of *benlai* is applied to the semantics of *Zhangsan xihuan Xiaomei* ‘Zhangsan like Xiaomei’, we get a reading that the *like* situation holds at t' but does not hold at t , and t' is in the past of t . There is still a lambda-bound time variable t , i.e. the time argument of the verb *xihuan* ‘to like’, at the end of the semantic derivation when *benlai* is applied to *Zhangsan xihuan Xiaomei* ‘Zhangsan like Xiaomei’. Along the same line of Lin (2000:113), we propose a Default Time of Utterance rule (36c): If at the end of a semantic derivation, there is still a lambda-bound variable of type i (interval), then the variable is, by default, instantiated to the time of utterance (TU). In (36d), the variable t is instantiated to TU and we get the reading: $t' \prec \text{TU}$, the *Zhangsan like Xiaomei* situation holds at t' , but does not hold at TU. Here, *benlai* induces a discontinuity reading because no contrastive information is available in the context. Let us look at another example with a verb of change of location.

- (37) a. lisi benlai lai le
 Lisi originally come Prec
 ‘Originally, Lisi came.’

- b. Resultative state of $[\text{Lisi lai}] = \lambda t'' \in D_I [\text{here}'(\text{Lisi}', t'')]$ ²⁵
 $[\text{benlai}] (\lambda t'' \in D_I [\text{here}'(\text{Lisi}', t'')])$
 $= \lambda P \in D_{<_i, \triangleright} \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge P(t') \wedge$
 $\neg P(t)] (\lambda t'' \in D_I [\text{here}'(\text{Lisi}', t'')])$
 $= \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge \lambda t'' \in D_I [\text{here}'(\text{Lisi}', t'')](t') \wedge$
 $\neg(\lambda t'' \in D_I [\text{here}'(\text{Lisi}', t'')](t))$
 $= \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge \text{here}'(\text{Lisi}', t') \wedge \neg \text{here}'(\text{Lisi}', t)]$
 $= \exists t' \in D_I [t' \prec \text{TU} \wedge \text{here}'(\text{Lisi}', t') \wedge \neg \text{here}'(\text{Lisi}', \text{TU})]$
(Default Time of Utterance)

(37a) contains a verb of change of location. Therefore, *benlai* takes the resultative state of (37a) as its argument. Since no contextual contrastive information is available, *benlai* induces a discontinuity reading. *Benlai* is applied to the resultative state. With Default Time of Utterance, we can get the reading that $t' \prec \text{TU}$, Lisi being here holds at t' but does not hold at TU. The semantic derivation (37b) gives us the correct reading. Let us look at an example with *jiu*.

- (38) a. Xiaomei benlai jiu xihuan Dahua
Xiaomei originally JIU like Dahua
‘Xiaomei liked Dahua a long time ago! (and she still does now.)’
b. $\text{jiu}(\alpha) \Leftrightarrow \exists \beta \wedge \text{Contrast}(\alpha, \beta)$
c. $[\text{Xiaomei xihuan Dahua}] = \lambda t'' [\text{like}'(\text{Xiaomei}', \text{Dahua}', t'')]$
 $[\text{benlai}] ([\text{Xiaomei xihuan Dahua}])$
 $= \lambda P \in D_{<_i, \triangleright} \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge P(t') \wedge P(t)]$
 $(\lambda t'' [\text{like}'(\text{Xiaomei}', \text{Dahua}', t'')])$
 $= \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge \lambda t'' [\text{like}'(\text{Xiaomei}', \text{Dahua}', t'')](t') \wedge$
 $\lambda t'' [\text{like}'(\text{Xiaomei}', \text{Dahua}', t'')](t)]$
 $= \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge \text{like}'(\text{Xiaomei}', \text{Dahua}', t') \wedge$
 $\text{like}'(\text{Xiaomei}', \text{Dahua}', t)]$
 $= \exists t' \in D_I [t' \prec \text{TU} \wedge \text{like}'(\text{Xiaomei}', \text{Dahua}', t') \wedge$
 $\text{like}'(\text{Xiaomei}', \text{Dahua}', \text{TU})]$ (Default Time of Utterance)

One of the semantic functions *jiu* has is to express contrast, as formalized in (38b). Since *jiu* provides contrastive information, *benlai* does not induce a discontinuity reading and hence the first clause of (34a) is used. With Default Time of Utterance, we derive a

²⁵ To keep the formalism simple, we do not translate the sentential *le* in this sentence. In addition, we translate *here* as *here'*, without dealing with its deictic property. These simplifications do not affect the semantics of the sentence.

reading that $t' \prec \text{TU}$, *Xiaomei like Dahua* holds at t' and *Xiaomei like Dahua* holds at TU.

Let us look at a few examples of nominal phrases. First, we formalize the “no discontinuity” constraint for nouns that do not allow a change of property in (39), and then do semantic derivation for two typical examples. As we can see below, adjectival *benlai* functions exactly the same as adverbial *benlai*.

- (39) No discontinuity constraint for nouns that do not allow for change of property:
Suppose N is a noun that does not allow for change of property, x an argument of type e and t an argument of type interval, $\text{Benlai}(N(x, t))$ is true at $t \Leftrightarrow \neg t' [t' \prec t \wedge N(x, t') \wedge \neg N(x, t)]$

- (40) a. *benlai de guofang buzhang*
original DE defense minister
'the original minister of defense'
b. $\llbracket \text{benlai} \rrbracket (\llbracket \text{guofang buzhang} \rrbracket)$
 $= \lambda P \in D_{\langle e, \langle i, t \rangle \rangle} \lambda x \in D_e \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge P(x, t') \wedge \neg P(x, t)]$
 $(\lambda y \lambda t'' [\text{minister_of_defense}'(y, t'')])$
 $= \lambda x \in D_e \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge \lambda y \lambda t'' [\text{minister_of_defense}'(y, t'')]$
 $(x, t') \wedge \neg (\lambda y \lambda t'' [\text{minister_of_defense}'(y, t'')]) (x, t)]$
 $= \lambda x \in D_e \lambda t \in D_I [t' \prec t \wedge [\text{minister_of_defense}'(x, t')] \wedge$
 $\neg [\text{minister_of_defense}'(x, t)]]$

- (41) a. *benlai de zhuozi*
original DE desk
'original desks'
b. $\llbracket \text{benlai} \rrbracket (\llbracket \text{zhuozi} \rrbracket)$
 $= \lambda P \in D_{\langle e, \langle i, t \rangle \rangle} \lambda x \in D_e \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge P(x, t') \wedge P(x, t)]$
 $(\lambda y \lambda t'' [\text{desk}'(y, t'')])$
 $= \lambda x \in D_e \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge \lambda y \lambda t'' [\text{desk}'(y, t'')]$
 $(x, t') \wedge \lambda y \lambda t'' [\text{desk}'(y, t'')]$
 $(x, t)]$
 $= \lambda x \in D_e \lambda t \in D_I \exists t' \in D_I [t' \prec t \wedge \text{desk}'(x, t') \wedge \text{desk}'(x, t)]$

In (40a), *guofang buzhang* ‘minister of defense’ does not obey the no discontinuity constraint (39) and therefore *benlai* induces a discontinuity reading. The semantic derivation gives us a reading that $t' \prec t$, and x is the minister of defense at t' but not at t . On the other hand, in (41a), *zhuozi* ‘desk’ obeys the no discontinuity constraint (39). Hence, *benlai* does not induce a discontinuity and we get a reading that x was a desk and remains a desk.

To sum up, in this section, we propose three points. First, *benlai* obeys a contrastive requirement: It must show a contrast in whether a proposition holds at different times. Second, *benlai* provides an extra time, which is located in the past of the argument time, and expresses that a proposition presented by *benlai* holds at the extra time. When the context provides contrastive information of the kind stated above, then *benlai* states that the proposition also holds at the argument time because the contrastive requirement is satisfied contextually. On the other hand, when no contrastive information of the type is available, in addition to the semantics that the proposition holds at the extra time, *benlai* also expresses that the proposition does not hold at the argument time so that the contrast requirement is satisfied. Besides, *benlai* can indicate contrast on different elements in a VP, e.g. on the adverbial, on the adverbial and the VP it modifies, or on the VP with the adverbial ignored. We propose that these different readings come from the interaction between negation and different focused elements in the sentence and are not part of the semantics of *benlai*. Therefore, we can say that *benlai* shows a contrast in whether a *proposition* holds at different times, but not a constituent in a proposition. Finally, we provide truth definitions and semantics for both adverbial and adjectival *benlai* and demonstrate how the proposed semantics of adverbial and adjectival *benlai* work to derive the desired readings and to block inaccurate readings.

4. Conclusion

In this paper, we address three questions. First, when does *benlai* induce a discontinuity reading and when does it not? What role does *jiu* play here? Secondly, when *benlai* induces a discontinuity reading, exactly what is discontinued? What attributes to discontinuity of a different kind as shown in (1) and (4)? Thirdly, does adverbial *benlai* and adjectival *benlai* have a unified semantic behavior? How are the semantics of these two usages of *benlai* related to each other?

We argue that *benlai* shows a contrast in whether a proposition holds at different times and that *benlai* induces a contrastive reading by expressing that the proposition it presents holds at a time anterior to the argument time but does not hold at the argument time when no contextual contrastive information of the type as described above is available. What is referred to as a ‘discontinuity reading’ actually comes from the contrastive requirement of *benlai*: Whenever *benlai* needs to induce a contrastive reading that the proposition it presents holds at a time anterior to the argument time but does not hold at the argument time, a discontinuity reading surfaces.

The role of *jiu* in a discontinuity reading is as follows: when *jiu* indicates a contrast between two times, the contrast provided by *jiu* satisfies the contrast requirement of

benlai and therefore no discontinuity reading is necessary; when *jiu* does not provide contrastive information, a discontinuity reading appears.

For verbs that denote a change, i.e. change of location, change of possession, etc. and verbs of creation/consumption, what are discontinued are the resulative states caused by the actions denoted by the verbs. For the other types of verbs, what is discontinued is the proposition that *benlai* presents.

Furthermore, we argue that the time which *benlai* adds is a time, anchored to which the truth evaluation of the proposition presented by *benlai* is performed. This anchor time is located in the past of the argument time. In addition to providing an extra time, *benlai* specifies that the proposition it presents holds at the anchor time. When no contrastive information is available in the context, *benlai* indicates that the proposition it presents also holds at the argument time. On the other hand, when no contrastive information is available in the context, *benlai* specifies that the proposition it presents does not hold at the argument time.

We also argue that adjectival *benlai* has exactly the same type of semantics as adverbial *benlai*. The variation in the discontinuity reading of adjectival *benlai* comes from the inherent property of the nouns *benlai* modifies. When *benlai* modifies nouns that have a temporal constraint, ruling out the possibility of a change of property from being the entities denoted by the nouns to not being the entities, no discontinuity reading is available. In this case, *benlai* + noun describes that an entity was and has been the thing denoted by the noun. On the other hand, when *benlai* modifies nouns without such a temporal constraint, then a discontinuity reading surfaces.

Finally, we formalize the proposed generalizations. We show that adverbial *benlai* and adjectival *benlai* have the same type of semantics except that the former takes an argument of type $\langle i, t \rangle$ (a proposition) while the latter takes an argument of type $\langle e, \langle i, t \rangle \rangle$ (a noun). We formalize contextual contrast information as a meaning postulate in SDRT. The temporal constraint for nouns that do not allow for change of property is formalized as well. We demonstrate how the semantics of *benlai* interact with the meaning postulate and the temporal constraint to derive accurate readings and to block inaccurate readings.

Based on the above analysis, we argue that *benlai* is a relative past marker in Chinese for the following reason. It provides an extra time, located in the past of the argument time, and specifies that the proposition it presents holds at the extra time. That is, when *benlai* is used, the time to evaluate the truth value of the proposition or nominal phrase that *benlai* modifies is shifted to a time in the past of the argument time. When the argument time is instantiated to the time of utterance, *benlai* has the semantic function similar to the past tense in English, in terms of determining the temporal reference of the proposition they present, although *benlai* has an additional function: contrast. When

the argument time is instantiated to a time other than the time of utterance, *benlai* asserts an extra time located in the past of the argument time. Under this circumstance the extra time can be either a past time or a future time. Given the analysis here, Chinese can be argued to be a language with relative tense, at least, relative past.

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「本來」為相對過去標記—— 相對語義、錨點時間及不持續性

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「本來」可以當副詞或形容詞使用，不管是當副詞或形容詞，在某些情況下「本來」可以有「不連續」的語意，但是在其他情形下卻不能。我們認為，「本來」必須在命題在不同時間上是否成立顯示對比。「本來」在被動詞帶為論元的論元時間之前找出一個時間，並宣稱其所引領之命題在這個過去時間為真。如果文章脈絡中已有該命題在稍後之時間方成立的訊息並暗示其在稍早之時間並不成立，則「本來」標示該命題在過去時間為真，以為對比；如篇章脈絡中沒有任何該命題於何時成立之訊息，則「本來」標示命題在論元時間不成立，以在過去時間成立但在論文時間不成立來滿足對比要求。至於「本來」當形容詞用時，我們接受名詞亦帶時間論元的說法，並提出，漢語名詞可分兩類：一類允許性質改變，一類不允許。「本來」修飾前者時，可以獲得「不連續」的語意，但修飾後者時不行。我們提出，形容詞「本來」與副詞「本來」的語意完全相同，僅差別在所修飾的成分不同。另外，我們也提出，「本來」可以視為一種相對過去的標記，因為「本來」標示其所修飾之命題或名詞在一過去時間為真。

關鍵詞：本來，相對過去標記，對比，語義學，漢語