Are A-not-A Questions Alternative Questions or Wh-Questions?*

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The A-not-A question is a special form of Chinese interrogative sentences. Some grammarians have claimed that it is a special type of wh-questions. This paper shows that this claim is unconvincing because the arguments based on island constraints and intervention effects are not well supported by evidence. It concludes that it is more natural to classify A-not-A questions as alternative questions.

Key words: A-not-A question, alternative question, wh-question, island constraint, intervention effect, focus

1. Typology of questions

I classify questions pragmatically into three types. The person that asks the question may present a proposition and ask for confirmation or disconfirmation. I call this type of question “confirmatory question”. The person may present more than one option and ask for a choice. I call this type of question “alternative question”. The person may ask for a choice among options not explicitly mentioned, but the domain is understood or demarcated to a certain extent. This is what is commonly called “constituent question” or “wh-question”.

The above classification is pragmatic. Each type may be syntactically realized in various forms across languages and even in one language. Each form may have a special term in the grammar of a language. For instance, the so-called yes-no question in English is a kind of confirmatory question and the particle question in Chinese ending in ma is also a kind of confirmatory question. They have different forms and different names.

Now let us consider a special kind of Chinese interrogative form known as “A-not-A question” or “V-not-V question” since Chao (1968). It is formed by duplicating the predicate (typically a verb or an adjective) or part of it with the negation morpheme between the two copies, e.g. lai-bu-lai? ‘come-not-come’; leng-bu-leng? ‘cold-not-

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cold’. Its form suggests that it belongs to the category of alternative question. However, it has been claimed by some linguists that it is more similar to wh-questions since the two share two important properties, viz. island constraints and intervention effects. I will address the two topics respectively in the next two sections.

Before going any further, let us clarify a minor argument in the literature in favor of lumping the A-not-A question and the wh-question together into one class. It is so argued in Hsieh (2004), etc. on the basis of the fact that neither of them can be answered by *shi de* ‘yes’ and that either of them may co-occur with emphatic adverbs like *daodi* ‘at all’, *jiujing* ‘ever’. But these facts only show that the A-not-A question is not a confirmatory question. Only confirmative questions can be answered by yes or no. One cannot use yes or no to indicate a choice between two options presented without any inclination toward one or the other. Only confirmation questions exclude the appearance of adverbs like *daodi, jiu jing*. One does not use an adverb that expresses high uncertainty when one has formed one’s opinion and merely asks for confirmation. Since these tests only single out the confirmatory question but do not distinguish the alternative question from the wh-question, they fail to prove that the A-not-A question is a kind of wh-question.

2. Island constraints

It was first observed in Huang (1982) that the A-not-A question, unlike the alternative question, cannot appear in island constructions. On the basis of this observation he hypothesized that the A-not-A question contains an abstract question morpheme (Q-operator), which, just like a wh-operator, undergoes LF-movement to the scope position of CP. Such a movement is subject to the familiar island conditions such as the Complex Noun Phrase Constraint and the Sentential Subject Constraint. (Examples will be provided shortly.)

But not all wh-expressions in Chinese are sensitive to these constraints. All nominal wh-expressions are not, so a more precise characterization is that:

(1) Questions with adjunct wh-expressions and A-not-A questions are subject to the island constraints.

It was pointed out in Xu (1990), etc. that even this generalization is too strong. In fact, some adjunct wh-expressions behave like nominal wh-expressions. Although wording

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1 Following the convention in grammar, I put hyphens to call attention to A-not-A forms like *lai-bu-lai*. There is no hyphen in writing Chinese characters.
Are A-not-A Questions Alternative Questions or Wh-Questions?

like (1) continues to appear in the recent literature, what it actually means is that

(2) Questions with weishenme ‘why’ and A-not-A questions are subject to the island constraints.

If island constraints are diagnostic criteria in the classification of questions, then (2) disconfirms rather than confirms that the A-not-A question should be grouped together with the wh-questions because most wh-questions are insensitive to them.

Since the A-not-A question is conceptually a kind of alternative question, the next step is to see if other alternative questions are also subject to island constraints. If some of them, not necessarily all of them, do, then island constraints should not be used as criteria for the classification of questions at all.

To ascertain whether the A-not-A question and the alternative question differ systematically it is necessary to test sentences in which each of the two forms appears in island configurations. In so doing we must be aware of the fact that grammaticality or acceptability is complicated by other factors as well.

Let us consider simple alternative questions and A-not-A questions first. The following three forms have no difference in acceptability.

(3) a. Ta renshi ni haishi bu renshi ni?

he know you or not know you

‘Does he know you or doesn’t know you?’

b. Ta renshi haishi bu renshi ni?

he know or not know you

c. Ta renshi bu renshi ni?

he know not know you

Hagstrom (2006) uses each of the above as a relative clause and reports that in the two alternative questions with haishi ‘or’, (4a) and (4b), are equally good in contrast to the starred A-not-A question (4c).²

(4) a. Ni xihuan [renshi ni haishi bu renshi ni] de ren?

you like know you or not know you MM³ person

‘Do you like people who know you or people who don’t know you?’

² (4a) is his example (30a), (4b) is his (30c) and (4c) is his (32).
³ The Chinese relative clause precedes its head and is closed by the particle de, which, in fact, is a modifier marker (glossed MM), used to mark modifiers of any syntactic category.
b. Ni xihuan [renshi ni haishi bu renshi] de ren?
you like know you or not know MM person
‘Do you like people who know you or don’t?’

c. *Ni xihuan [renshi-bu-renshi ni] de ren?
you like know-not-know you MM person
‘Do you know people who know you or don’t know you?’

In my intuitive judgments, not only (4c) is less acceptable, but (4b) also requires more
time and effort to process and understand than (4a). I suspect that the English translation
of (4b) is less acceptable compared with that of (4a). My suspicion is confirmed by
intuitions of some native speakers of English. The elliptical forms of both languages
may be less acceptable for the same reason. Whatever it is, it cannot be fully accounted
for by singling out the A-not-A form.

Alternative questions can appear in various forms as the result of repeated applica-
tion of conjunction reduction or anaphoric ellipsis. The more reduction or ellipsis takes
place, the more time it takes for mental processing and understanding. The following
forms show a decreasing degree of acceptability.

(5) a. Ni xihuan renshi ni de ren haishi xihuan bu renshi ni de ren?
b. Ni xihuan renshi ni de ren haishi bu renshi ni de ren?
c. Ni xihuan renshi ni de haishi bu renshi ni de ren?
d. Ni xihuan renshi ni haishi bu renshi ni de ren?
e. Ni xihuan renshi haishi bu renshi ni de ren?
f. Ni xihuan [renshi bu renshi ni] de ren?

Although the A-not-A question (5f) may not be syntactically derived in the same way as
the other forms, it is obviously even less complete than any of those above it and therefore
not surprisingly less acceptable.

The so-called complex NP in Chinese is in the form of a relative clause followed
by a head noun. An alternative question anchored in such a construction is potentially
open to two interpretations. Let us call them the N-alternative reading and the V-
alternative reading. Take for example *ni maile haishi mei mai de shu ‘you-bought-or-
ot-bought-MM-book’. The N-alternative reading asks for a choice between two entities.
One is a book which you bought and the other is a book which you didn’t buy. The V-
alternative reading asks for a choice between the two descriptions of the same entity. In
such a case there is only one book involved. The question is whether it should be
described as a book which you bought or as a book which you didn’t buy. The latter
interpretation leads to unacceptability. So what is crucial for acceptability is whether the
expression under consideration can be interpreted as N-alternative.
As has been shown, ellipsis affects acceptability. But it is not the only factor. In the above examples in (4) and (5) the head of the relative clause ren ‘person/people’ represents a generic class of people. If the head refers to a specific individual, acceptability decreases in most of the forms.\(^4\) Compare (4a) with (6) below.

(6) *Ni xihuan nage renshi ni haishi bu renshi ni de ren? you like that know you or not know you MM person

‘Do you like the person who knows you or who doesn’t know you?’

If only one specific person is involved, it is impossible to obtain an N-alternative reading. The English counterpart of (6) is equally impossible.

Chinese generally does not use morphological forms to distinguish the singular from the plural or the generic from the specific; nevertheless, such an underlying difference does exist and it affects the acceptability of A-not-A questions in different configurations. Compare the following pairs.

(7) a. *Xin bu xin Shangdi de ren zai yanshuo? Believe-not-believe God MM person is speaking

b. Ni ziji shuyu xin bu xin Shangdi de ren? yourself belong-to believe-not-believe God MM people

‘Do you yourself belong to people who do or don’t believe in God?’

(8) a. *Jia bu jia tang de kafei zai zhuozi shang? Add-not-add sugar MM coffee PREP table on

b. Ni pingshi he jia bu jia tang de kafei? you normally drink add-not-add sugar MM coffee

‘Do you normally drink coffee with or without sugar?’

Why are the b-forms not as bad as the a-forms? In the a-forms, the A-not-A question is part of the subject. It is well known that the subject tends to serve as the topic and therefore tends to be interpreted as specific. Some examples cited in the literature and intended to illustrate island effects are unacceptable on this account. In the b-forms, the A-not-A question is contained in the predicate or in the object and is therefore nonspecific and more acceptable.

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\(^4\) Only in (5a) and (5b) are there two coordinated head nouns. Hence it is possible to have an N-alternative reading. They are alternative questions. There cannot be two head nouns in an A-not-A question.
The specific-nonspecific contrast exists in alternative questions as well as in A-not-A questions.

(9) a. *Xin haishi bu xin Shangdi de ren zai yanshuo? 
   believe or not believe God MM person is speaking
   b. Ni ziji shuyu xin haishi bu xin Shangdi de ren?
      yourself belong-to believe or not believe God MM people
      ‘Do you yourself belong to people who do or don’t believe in God?’

(10) a. *Jia haishi bu jia tang de kafei zai zhuozi shang?
      add or not add sugar MM coffee PREP table on
      b. Ni pingshi he jia haishi bu jia tang de kafei?
         you normally drink add or not add sugar MM coffee
         ‘Do you normally drink coffee with or without sugar?’

So while we do see ungrammatical sentences cited in the literature with the A-not-A form appearing in island configurations, it needs more solid evidence to prove that those sentences are free of other complications and that A-not-A questions and alternative questions differ systematically with regard to the Complex NP Constraint.

Let us move on to sentential subjects. Some A-not-A questions contained in a sentential subject, too, are not absolutely unacceptable. Their difference from the corresponding alternative questions is minimal.

(11) a. [Jiu li jia bu jia bingkuai] hao?
      wine in add not add ice.cubes better
      ‘Which is better, adding ice cubes in wine or not?’
      b. [Jiu li jia haishi bu jia bingkuai] hao?
         wine in add or not add ice.cubes better

To the best of my knowledge, such examples have never been documented in the literature. There may be other reasons why some A-not-A questions are less acceptable than others. It needs further research. If the common belief that all A-not-A questions obey the island constraints and no alternative questions do is unreliable, one is forced to further revise (2) as (12).

(12) Some wh-questions, some A-not-A questions and some alternative questions are subject to the island constraints.
3. Intervention effects

The combination of a wh-word with a quantificational or focusing element leads to ungrammaticality in certain configurations. This is known as intervention effects. This issue has received attention for more than ten years since Beck (1996). Soh (2005) cites examples to show intervention effects in Chinese.

(13) *Ta ye qu-bu-qu?
    he also go not go
    ‘Is or isn’t he also going?’

(14) *Ta ye weishenme ma ta?
    he also why scold he
    ‘Why did he also scold him?’

From such examples she makes the following generalization:

(15) Questions with wh-adjuncts and A-not-A questions are sensitive to intervention effects.

Why are sentences like (13) and (14) ungrammatical? Soh assumes that the Q-operator in the A-not-A question and the wh-word weishenme ‘why’ must undergo covert feature movement to C and Spec C respectively at LF and that the movement is blocked because the focus element ye intervenes between its original position and landing position. In note 3 of Soh (2005:145) she tries to justify her treatment of the Q-operator in an A-not-A question as an adverbial wh-expression. It is because it patterns like weishenme in its inability to escape an island. But it is not clear why a construction that violates island constraints should show intervention effects as well.

In the following sections we consider why focus elements and quantifiers give rise to intervention effects and whether alternative questions as well as A-not-A questions are sensitive to such effects. Finally, we briefly observe whether wh-nominals as well as wh-adjuncts are sensitive to intervention effects.

3.1 Focus elements

The focus elements, e.g. ye ‘also’, zhi ‘only’, cited in Soh (2005) are taken from a category of adverbs that have been found to affect the grammaticality or acceptability of A-not-A questions in previous research. This phenomenon has been well documented in the literature, e.g. Li & Thompson (1979), Tang (1981, 1984), Ernst (1994), Zhang (1996),
Liejiong Xu

Wu (1997a, 1997b) and is revisited more recently in Law (2006). The researchers all agree that the presence of some adverbs, but not others, restrict the formation of A-not-A questions, but they use different names to call them and propose different accounts. Zhang (1996) provides a list of 14 types of adverbs, which he calls “presupposition triggers”. With the presence of such an adverb, the verb is interpreted as presupposed. He states the constraint as follows: V of A-not-A questions cannot be presupposed. Law (2006) calls those adverbs “predicate-related adverbs” and observes that a sentence that contains a predicate-related adverb entails one without it. For example, *ta ye qu ‘he is also going’ entails ta qu ‘he is going’. He prefers to use the logical term entailment, but it is not different from Zhang’s presupposition in effect. The distinction between his predicate-related adverbs and predicate unrelated adverbs is semantic, even though his solution appears to be syntactic, which hypothesizes that a predicate-related adverb is a potential A-bar binder that prevents the A-not-A operator from moving across it at LF. This account is similar to the one proposed in Soh (2005), in which the blocker is called an intervener.

If presupposition or entailment, whatever it is called, is the reason for the unacceptability of A-not-A questions like (13), then one naturally expects the alternative questions parallel to them to be similarly restricted. The expectation is borne out. As we can see, (16) is indeed as unacceptable as (13).

(16) *Ta ye qu haishi bu qu?
    he also go or not go
    ‘Is or isn’t he also going?’

Wu (1997a, 1997b) provides an alternative explanation for the unacceptability of sentences like (13). It is a model-theoretic account, but it also involves the notion of presupposition. Questions can be viewed as partitions in the light of Groenendijk & Stokhof (1984) and Higginbotham (1993). A question, expressed by an interrogative form, is a partition of the possible states of nature into cells. An A-not-A question makes a bipartition into two cells C₁ and C₂, one representing the affirmative and the other the negative. The two cells must be mutually exclusive in the sense that they do not overlap. The partition must be exhaustive in the sense that there cannot be a state that is neither C₁ nor C₂. These are the semantic conditions an A-not-A question must satisfy. In the case of (13), the partition is between C₁ (the person is going with someone else or going like someone else) and C₂ (the person is not going with someone else or not going like someone else). Thus C₁ presupposes someone else is going but C₂ presupposes someone else is not going. It is obviously a contradictory presupposition. If Wu’s account is correct, it would be strange that it should not apply to alternative questions like (16) as well.

Let us compare another minimal pair.
Are A-not-A Questions Alternative Questions or Wh-Questions?

(17) *Ta you qu-bu-qu?
he again go not go
‘Is or isn’t he going again?’

(18) *Ta you qu haishi bu qu?
he again go or not go

Both the A-not-A question and the alternative question are asking for a choice between C₁ (the person is going again) and C₂ (the same person is again not going). The former presupposes that he went last time and the latter presupposes that he didn’t go last time. Once again there is obviously a contradiction in presupposition. Thus the partition view of questions rules out the alternative question as well as the A-not-A question.

Now we insert the focus element you ‘again’ into another alternative question in a different syntactic construction. Likewise, it is not acceptable.

(19) *Ta you he kafei haishi cha?
he again drink coffee or tea
‘Did he drink coffee or tea again?’

This alternative question is asking for a choice between C₁ (he drank coffee again) and C₂ (he drank tea again). The former presupposes that he had drunk coffee last time and the latter presupposes that he had drunk tea last time. Once again, the alternative question involves contradictory presuppositions. But this time there is no A-not-A question parallel to it. If one follows Soh (2005)’s proposal, it would be most natural to assume that there is a Q-operator in the alternative question and that intervention effects obtain where the focusing adverb blocks its covert feature movement to C. But she only points out that A-not-A questions are comparable to wh-questions with weishenme, but does not mention that they share the relevant property with alternative questions.

3.2 Quantificational expression

Another kind of intervener is quantifiers. In Soh (2005)’s analysis the movement of the A-not-A operator will be blocked if a quantificational expression like meiyou ren ‘nobody’ appears along its path of movement.

(20) *Meiyou ren hui-bu-hui qu Meiguo?
no one will not will go US
‘Will or won’t no one go to the US?’
Again, it is not mentioned that quantificational expressions produce similar intervention effects in other alternative questions. But evidently they do as well.

(21) *Meiyou ren hui qu haishi bu hui qu Meiguo?  
    no one will go or not will go US  
    ‘Will or won’t no one go to the US?’

(22) *Meiyou ren hui qu Meiguo haishi Yingguo?  
    no one will go US or UK  
    ‘Will no one go to the US or UK?’

The partition account can deal with these sentences. The questions in (20) and (21) ask for a choice between $C_1$ (nobody will go to the US) and $C_2$ (nobody won’t go to the US). But this is not an exhaustive partition as it leaves the possible state that some will go and others won’t, thus violating the semantic condition of exhaustivity on the partition view of questions. The same condition is imposed on the A-not-A question and on the alternative question. The questions in (22) ask for a choice between $C_1$ (nobody will go to the US) and $C_2$ (nobody won’t go to the UK). This, too, is not an exhaustive partition as it leaves the possible state that some will go to the US and others will go to the UK. If a referential expression replaces the quantifier in the above examples, the sentences become acceptable since now the partition is exhaustive.

One may observe that the unreduced forms of alternative questions are more acceptable. Compare (23) with (21) and (24) with (22).

(23) Meiyou ren hui qu Meiguo haishi meiyou ren bu hui qu Meiguo?  
    no one will go US or no one not will go US  
    ‘Will no one go to the US or will no one not go to the US?’

(24) Meiyou ren hui qu Meiguo haishi meiyou ren hui qu Yingguo?  
    no one will go US or no one will go UK  
    ‘Will no one go to the US or will no one go to the UK?’

Does this show that the partition account leaks and that, after all, alternative questions are different from A-not-A questions? No. What is the context in which questions like (23) and (24) are appropriately used? They are typically used in the contexts of echo questions. For instance, A hears B say nobody would like to go to the US but in A’s opinion UK is the last place one may choose to go to. Then A may use the unreduced form (24) to ask B for confirmation, but he will not use the reduced form (22) in such a case. B’s reply to question (23) is probably (25a) but not (25b).
   no one will go US
   ‘No one will go to the US.’
   
b. Meiguo.
   US

3.3 Focus crossing

Hagstrom (2006) explicitly denies that intervention effects appear in alternative questions with the explicit presence of the conjunction haishi. He cites an example that never appears elsewhere in the literature, which is numbered below as (26) in contrast to the A-not-A question in (27).5

(26) Ni zhi xihuan yige ren haishi bu zhi xihuan yige ren?
   you only like one person or not only like one person
   ‘Do you only like one person or not only like one person?’

(27) *Ni zhi xi bu xihuan yige ren?
   you only like-not-like one person
   ‘Do you only like one person?’

This appears to be new evidence in support of his claim that the A-not-A question differs from the alternative questions. Although we native speakers of Chinese agree with him about the grammaticality judgment of (26), we find on closer inspection that this sentence does not form a minimal pair with (27). A significant comparison should be made between (27) and (28).

(28) *Ni zhi xihuan yige ren haishi zhi bu xihuan yige ren?
   you only like one person or only not like one person
   ‘Do you only like one person or only not like one person?’

In (28) the focus element zhi precedes and takes scope over the negation marker bu just as it does in (27), but in (26) their order is reversed. A-not-A questions (and their corresponding alternative questions) ask for a choice between V and not-V, in this case for a choice between xihuan ‘like’ and bu-xihuan ‘not like’, not one between zhi ‘only’ and bu zhi ‘not only’. This correction is crucial because now the alternative question with haishi turns out to be as unacceptable as the corresponding A-not-A question without the presence of the conjunction. Whereas (26) supports his claim about the difference

5 (26) is his example (61) and (27) is his example (52).
between the two question forms, (28) is a counterexample to it.

Why is (26) acceptable and why is (28) unacceptable? The contrast lies in the latter part of the conjoined VP, repeated below for easy comparison.

(29)  a. bu zhi xihuan yige ren
       not only like one person

    b. *zhi bu xihuan yige ren
       only not like one person

Both of (29a) and (29b) contain two adverbs, bu ‘not’ and zhi ‘only’. Each of them is a focus-sensitive operator to be associated with an expression interpreted as focus. Focus-sensitive operators in Chinese are relatively flexible in word order. The general rules are (i) that it must be placed in a position that c-commands the expression targeted for focalization and (ii) that the former must be placed as close to the latter as possible. In (29a) the focus of bu is zhi xihuan yige ren ‘only like one person’ or simply zhi ‘only’ and the focus of zhi is most likely to be yige ren ‘one person’. In (29b) the focus of zhi is also most likely to be yige ren but then the association between the operator and the focus is intervened by another operator bu. Where there are two operators and two foci, their association chains should be in serial order but do not cross each other. This accounts for the contrast between (26) and (28) and accounts for the unacceptability of (27) and (28). This issue is not relevant to the difference between the A-not-A question and the alternative question.

3.4 Other wh-questions

Soh (2005) provides examples to show that weishenme ‘why’ is sensitive to intervention effects, but claims that all wh-adjuncts are, including the A-not-A operator. In this last section we briefly consider questions with wh-nominals. Compare the following sentences:

(30)  a. *Ta zhi shenme shihou mai-le diannao?
       he only what time bought computer
       ‘Only when did he buy a computer?’

    b. *Ta zhi weishenme mai-le diannao?
       he only why bought computer
       ‘Only why did he buy a computer?’

Soh takes expressions like shenme shihou ‘what time’, nali ‘what place’ as wh-nominals. With the presence of the focus element zhi ‘only’, neither of the above sentences is
good. Some speakers may find (30a) better than (30b). It is when they take it as an echo question. We know that a question asking for reasons cannot be an echo question (Hu 2002).

Now let us try wh-questions containing a quantifier as a potential intervener.

(31) a. Shenme jijie meiyou ren qu gongyuan?
    what season no one go park
    ‘In what seasons no one goes to park?’

b. *Meiyou ren shenme jijie qu gongyuan?
    no one what season go park

The contrast between (31a) and (31b) is parallel to Soh’s examples cited below:

(32) a. Weishenme meiyou ren cizhi?
    why no one resign
    ‘Why did nobody resign?’

b. *Meiyou ren weishenme cizhi
    no one why resign

If (32b) is ungrammatical because weishenme undergoes covert feature movement to Spec C at LF and thus the movement is blocked by the intervening quantifier, then the same thing must happen with wh-nominals like shenme jijie ‘what season’ in (31b). So there is no difference between wh-adjuncts and wh-nominals in this respect.

Therefore the generalization stated in (15) should be revised as

(33) Wh-questions, alternative questions and A-not-A questions are all sensitive to intervention effects.

With regard to intervention effects, it is unnecessary to split wh-questions into nominal wh-questions and adverbial wh-questions, it is unnecessary to take A-not-A questions out of alternative questions and it is unnecessary to join A-not-A questions with adverbial wh-questions.

Now we return to the observation made at the beginning of this article. The A-not-A question is similar to alternative questions in form and in meaning. However, for a quarter of a century some linguists have claimed that it is a special type of wh-question. I have shown here that the claim is unconvincing because the arguments based on island constraints and intervention effects are not well supported by evidence. The conclusion is that it is more natural to classify A-not-A questions as alternative questions.
References


