

Syntax of the Hell: Two Types of Dependencies *

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1. Introduction

Wh-questions like (1) have been of continual interest to researchers since Pesetsky (1987) pointed out their significance for the theory of movement:

- (1) a. Who the hell said that?
b. What on earth do you want me to say?
c. What the Dickens/the fuck are you talking about?
d. Why the hell did he leave so early?

Such questions differ from normal *wh*-questions in a number of ways, as have been observed. First, although normal *wh*-phrases may stay in situ (as in multiple questions), expressions like *what the hell*, *what the Dickens*, *who on earth*, etc. (henceforth, *wh-the-hell* expressions) must always be moved to Spec, CP:

- (2) a. **What** did you buy for whom?
b. Who bought **what** for him?
- (3) a. **Who the hell** saw what?
b. *Who saw **what the hell**?
c. **Who the hell** did you persuade to buy what?
b. *Who did you persuade to buy **what the hell**?

In this respect *wh-the-hell* behaves a bit like adjuncts (Huang 1982):

- (4) a. **How** did he try to fix which car?
b. *Who tried to fix the car **how**?

* We are thankful to several people for their helpful comments at the NELS Conference and afterwards, particularly Klaus Abels, Ben Bruening, Daniel Hole, Richard Larson, Miyuki Sawada, Sze-Wing Tang, and Alexander Williams.

- c. Tell me **why** he bought what.
- d. *Tell me what he bought **why**.

Secondly, *wh-the-hell* expressions must occur as a (continuous) constituent:

- (5) a. ***What** did he buy **the hell**?
- b. ***What** are you talking about **the Dickens**?

Thirdly, *the hell*, *the Dickens*, *on earth*, etc., behave like polarity items in that their occurrence generally requires the presence of a *wh*-word:¹

- (6) a. *John bought the book **the hell**.
- b. *They left for home **the hell**.

In addition, unlike normal *wh*-questions, *wh-the-hell* sentences are used generally when the speaker has some particular attitude about them (being impatient, annoyed, etc.). In embedded *wh-the-hell* questions, the attitude may be attributed to the speaker as in (7), or to the matrix subject (the ‘internal speaker’) as in (8). The contrasts below show that sentences are ‘strange’ with predicates that are incompatible with the attitude:²

- (7) a. It’s a complete mystery **why the hell** he left.
- b. *?It’s entirely obvious **why the hell** he left.
- c. It’s entirely obvious **why** he left.
- (8) a. John wonders **why the hell** Bill said that.
- b. *?John already knows **why the hell** Bill said that.
- c. John already knows **why** Bill said that.

In this paper we shall examine *wh-the-hell* questions in two other languages, (Mandarin) Chinese and Japanese. It will be our goal to provide a unified account for such sentences in all three languages, despite the different syntactic properties that will be observed.

2. Chinese

2.1. *Daodi*

In Chinese, questions with the semantics and pragmatics of English *wh-the-hell* questions are rendered by sentences illustrated below, each containing the adverb *daodi*, lit. ‘to the bottom’ in addition to an appropriate *wh*-word (see Kuo 1996 for additional examples and observations described below):

- (9) a. ta **daodi** mai-le **shenme**?
he *daodi* bought what

¹ But cf. *Get the hell out of here!*, though not **Get on earth out of here!* (Ben Bruening, p.c..)

² See den Dikken and Giannakidou (2002) for similar examples.

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‘What the hell did he buy?’

- b. **daodi shei** na-zou-le nei-ben shu?
daodi who take-away-PERF that-CL book
‘Who the hell took away that book?’
- c. **daodi** ni **yao-bu-yao** chengren zuocuo-le zhe-jian shi?
daodi you want-not-want admit do-wrong-PERF this-CL thing
‘Do you fucking want to admit that you have done this thing wrong, or not?’
- d. wo jiushi bu xiaode **daodi** ta **weishenme** mei lai.
I just not know daodi he why not come
‘I simply don’t know why the hell he did not show up.’

Such sentences may be direct (9a-b) or indirect questions (9c). The following observations are relevant. First, *daodi* must occur in construction with a *wh*-phrase (including an A-not-A phrase in an A-not-A question) in its c-domain. (10a) is ungrammatical³ because no *wh*-phrase occurs in the sentence, and (10b) because the needed *wh*-phrase is not c-commanded by *daodi*:

- (10) a. *ta **daodi** zou-le.
he daodi left-PERF
- b. ***shei daodi** xiang yao zhe-fu hua?
who daodi think want this-CL picture

Secondly, unlike the *wh-the-hell* expressions, *daodi* and its *wh*-associate (as we shall call it) do not form a constituent. This is clear from (9a) and (9c-d). Rather, *daodi* is an adverb occurring in a preverbal or pre-IP adjunct position, while the *wh*-associate occurs in an argument position (in the case of *who*, *what*) or non-argument position (*why*, *how* or the A-not-A constituent). Thirdly, while *wh-the-hell* must occur in Spec, CP, both *daodi* and its *wh*-associate occur in situ. Fourthly, like the *wh-the-hell* questions, *daodi* questions also imply some attitude of impatience or annoyance on the part of the speaker.

- (11) *?wo zao yijing zhidao [ta **daodi lai-bu-lai**] le
I early already know he daodi come-not-come PRT
‘I have known for a long time whether he will fucking come or not.’

Finally, another important requirement of *daodi* is that it must occur in the scope of an interrogative CP. (12a) is ungrammatical with matrix verb ‘wonder’, because *daodi* occurs outside of the relevant embedded CP. But (12b) is well-formed with matrix verb ‘hope’, because in this case the sentence is a direct question and *daodi* is contained in the relevant matrix CP:

³ Unless *daodi* means ‘after all, eventually’.

- (12) a. *ta **daodi** xiang-zhidao ni hui mai **shenme**
 he daodi wonder you will buy what
 (Intended) He wonders what the hell you will buy.
- b. ni **daodi** xiwang ta hui mai **shenme**?
 you daodi hope he will buy what
 ‘What the hell do you hope that he will buy?’

Hence, there are three elements that enter into the formation of a Chinese *wh-the-hell* question: a Spec of CP with [+Q], the adverbial *daodi*, and the *wh*-associate, which form a chain of successive c-command.

2.2. *Daodi* and Islands

Note that with respect to their positional relationship, these elements can occur locally to, or at a distance from, each other. In (9a) the three elements occur locally within the same clause. In (13) below, the *wh*-phrase occurs at a distance from the matrix Spec of CP. In these cases, *daodi* has the choice of occurring at a distance from the *wh*-associate (and hence locally with the matrix Spec of CP) as in (13a), or locally with the *wh*-associate (and hence at a distance from the relevant Spec, CP) as in (13b):

- (13) a. ni **daodi** juede wo yinggai mai **shenme**?
 you daodi feel I should buy what
 ‘What the hell do you feel I should buy?’
- b. ni juede wo **daodi** yinggai mai **shenme**?
 you feel I daodi should buy what
 Same as (a)

But how far can the long-distance relationship be? Let’s consider *daodi* questions with island constructions. The following pair, from Kuo (1996), illustrates the effects of a weak island induced by a non-bridge verb.

- (14) a. ni **daodi** tongyi ta mai **shenme** gei ni?
 you daodi agree s/he buy what for you
 ‘What the hell do you hope that s/he will buy for you?’
- b. *ni tongyi ta **daodi** mai **shenme** gei ni? (non-bridge verb)
 you agree s/he daodi buy what for you

In (14a) *daodi* occurs in the matrix clause and in (14b) it occurs in the weak island together with the *wh*-associate. As the contrast shows, the latter strategy is ungrammatical. Compared to the grammatical (13b), (14b) illustrates the effects of a non-bridge-verb island with respect to the positioning of *daodi*.

Similar effects are observable with *wh*-islands and complex NPs. (15a) has two readings, depending on which of *shei* ‘who’ and *shenme* ‘what’ is associated with *daodi*

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and treated as the target of the matrix question. (15b), however, is unambiguous, having only the reading according to which the *wh*-associate ‘what’ together with *daodi* has embedded scope.

- (15) a. ni **daodi** xiang-zhidao **shei** mai-le **shenme**? (ambiguous)
you daodi wonder who bought what
i. Who the hell is the x such that you wonder what x bought?
ii. What the hell is the y such that you wonder who bought y?
- b. ni xiang-zhidao **shei daodi** mai-le **shenme**? (unambiguous)
you wonder who daodi bought what
i. Who is the x such that you wonder what the hell x bought?
ii. *What the hell is the y such that you wonder who bought y?

And (16) shows that *daodi* cannot occur within a relative clause and have matrix interrogative scope:

- (16) a. ni **daodi** zui xihuan [wo piping **shei** de wenzhang]?
you daodi most like [I criticize who DE article]
Who the hell is the x such that you like the article in which I criticize x?
- b. *ni zui xihuan [wo **daodi** piping **shei** de wenzhang]?
you most like [I daodi criticize who DE article]

We have seen that a *daodi* question may be grammatical with a *wh*-associate located within a syntactic island as long as *daodi* is not itself also in the island. This is true of the above examples where the *wh*-associate is an argument. With adjunct *wh*-phrases, however, the situation is different. As the following examples show, *daodi* questions are ill-formed with adjunct *wh*-associates located within an island, regardless of whether *daodi* is outside of the island or not:

- (17) a. *ni **daodi** tongyi [ta **mai-bu-mai** shu]?
you daodi agree s/he buy-not-buy books
(Intended) did you agree that he bought books, or did you agree he didn't?
- b. *ni tongyi [ta **daodi mai-bu-mai** shu]?
you agree he daodi buy-not-buy books
- (18) a. ni **daodi** xiang-zhidao [**shei weishenme** mai shu]?
you daodi wonder who why bought books
i. Who the hell is the person x s.t. you wonder why x bought books?
ii. *What the hell is the reason x s.t. you wonder who bought books for x?
- b. ni xiang-zhidao [**shei daodi weishenme** mai shu]?
you wonder who daodi why bought books
i. Who the hell is the person x s.t. you wonder why x bought books?

ii. *What the hell is the reason x s.t. you wonder who bought books for x?

- (19) a. *ni **daodi** zui xihuan [wo **weishenme** mai de shu]?
 you daodi most like [I why buy DE book
 *What the hell is the reason x such that you like the books I bought for x?
- b. *ni zui xihuan [wo **daodi weishenme** mai de shu]?
 you most like [I daodi why buy DE book
 *What the hell is the reason x such that you like the books I bought for x?

Summarizing, a *daodi* question can be formed with a *wh*-associate in a syntactic island only if (a) *daodi* is itself outside of the island, and (b) the *wh*-associate is an argument, but not if *daodi* is itself inside the island or the *wh*-associate is an adjunct.⁴

3. Proposal

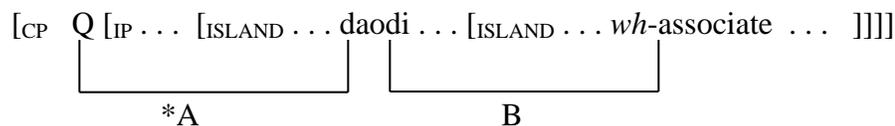
How do we account for the differences between Chinese and English we have observed so far, and for the island sensitivity of *daodi*?

First, we would like to claim that some of the Chinese-English differences with respect to *wh-the-hell* questions simply reflect general differences in the degree of analyticity between the two languages: Chinese is highly analytic while English is, relatively, synthetic. In *wh*-questions, it is generally assumed that there is a dependency between a $C_{[+Q]}$ and a *wh*-phrase, which *together* make up the question. In Chinese, $C_{[+Q]}$ and the *wh*-phrase are discontinuous (with the *wh*-phrase staying in situ), whereas in English $C_{[+Q]}$ and the *wh*-phrase are continuous: they form a phrase located in the left periphery.⁵ Similarly, for *wh-the-hell* questions:

- (20) a. English *wh-the-hell*: continuous, synthetic, with a single phrase in Spec, CP.
 b. Chinese *wh-the-hell*: discontinuous, analytic, with *daodi* and a *wh*-phrase in situ.

Secondly, the island facts associated with *daodi* questions can be seen as exhibiting the following pattern, with a discontinuous sequence of three elements that form two dependencies:

- (21) The pattern: two dependencies



⁴ Note that all of (17)-(19) are also ungrammatical even if *daodi* does not occur there. That adjuncts exhibit strong island effects is of course already well known in the literature.

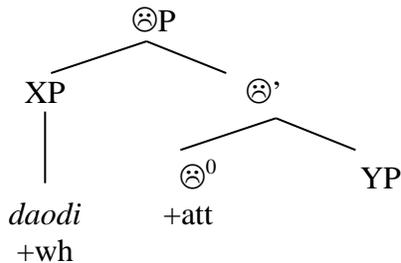
⁵ As proposed in Tsai (1994), we might think of the *wh*-phrase in Comp as the synthesis of a *wh*-prefix with an indeterminate indefinite noun (-at, -ere, -en, for *what, where, when*, etc.), whereas the Chinese *wh*-word is the discontinuous stretch of $OP_{[+Q]} \dots \text{ shenme, etc.}$

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where (a) Dependency A is illicit if it crosses an island and (b) Dependency B is fine crossing an island, unless the *wh*-associate is an adjunct. These dependencies are mediated by *daodi*.

Thirdly, in the wake of Cinque (1999) we propose the existence of an (interrogative) Attitude Phrase ($\textcircled{\ominus}\text{P}$, read ‘Attitude Phrase’) in the ‘cartography’ of IP which gives rise to the special pragmatic flavor of *daodi* questions as noted above.⁶ In other words, the existence of this projection signals that you have “a question with an attitude”:

(22) The Attitude Phrase



More specifically, *daodi* is an adverb that occupies the Spec of the $\textcircled{\ominus}\text{P}$. The head of $\textcircled{\ominus}\text{P}$, $\textcircled{\ominus}^0$, contains the logophoric feature of attitude. *Daodi* contains (weak) [+wh] which requires checking by some *wh*-phrase in its c-domain. This is done by (covertly) moving the *wh*-associate to $\textcircled{\ominus}\text{P}$, adjoining it to *daodi*. (Dependency B) This covert movement does not exhibit island effects if it involves *wh*-argument associates, as usual; it does exhibit island effects if adjunct *wh*-associates are involved, again as usual. The interrogative CP dominating $\textcircled{\ominus}\text{P}$ has [+Q] that needs to be checked off. This is done by covert movement of the adjoined *wh*-associate + *daodi* (or *daodi+wh*) into Spec, CP. (Dependency A) This covert movement will exhibit island effects (ECP or Shortest Move or whatever), as expected, because the *daodi+wh* phrase is an adjunct. For familiar minimality reasons, movement B must occur prior to movement A.

This mechanism derives all the relevant facts in Chinese. As for English, we claim that the relevant facts also follow, except that the movement is overt for both dependencies (the relevant +Q and +Wh features being ‘strong’). There are two possibilities in how this works. One possibility is that *the hell, on earth, the Dickens, the fuck, etc.*, are merged as Spec of $\textcircled{\ominus}\text{P}$, c-commanding a *wh*-phrase below it. Overt movement of *what, etc.* occurs as soon as *the hell, etc.* (with strong +wh) are merged. This checks the [+wh] feature of *the hell*, followed by overt movement to CP, when C (with strong +Q) is merged. The other possibility is to say that the entire phrases *what the hell, who on earth, etc.*, are merged directly at positions on a par with normal *wh*-phrases. There is a $\textcircled{\ominus}\text{P}$ whose empty Spec contains a strong [+wh] waiting to be checked which triggers movement. In either possibility, an adjunct constituent with a [+wh] feature is

⁶ Cf. Lasnik and Saito (1992), Kuo (1996), to which we shall return briefly below. The $\textcircled{\ominus}\text{P}$ is not unlike the Source/Self/Pivot phrase or Point-of-View phrase as proposed in Huang and Liu (2001) for hosting logophoric reflexives. In the typical cases, the $\textcircled{\ominus}\text{P}$ expresses the attitude of the speaker or the matrix subject (what Sells 1987 calls the external and internal Source).

involved which, like the [+wh] adjuncts *how* and *why*, cannot stay in situ even when the Spec, CP is already filled with another *wh*-phrase:

- (23) a. What the hell did you give to whom?
b. *Who did you give what the hell to?
c. *To whom did you give what the hell?
d. *What did you give to who the hell?⁷
- (24) a. (Tell me) why you bought what (?)
b. *(Tell me) what you bought why (?)

How does *wh-the-hell* behave with respect to islands? The following data are representative: *What the hell* and *who the hell* appear to exhibit less severe island effects than *why the hell* and *how the hell*:

- (25) a. ?*What the hell do you wonder who bought?
b. ?*What the hell did you meet the man who wrote?
c. ??Who the hell did he whine that you should talk to?
- (26) a. *Why the hell do you wonder who bought the book?
b. *Why the hell did you meet the man who bought the book?
c. *Why the hell did he whine that you should talk to the manager?

The difference in degree of deviance between (25) and (26) is on a par with that found between (a) and (b) below, the former a Subjacency violation and the latter an ECP/minimality violation:⁸

- (27) a. *?What_i do you wonder [who bought t_i]?
b. *Why_i do you wonder [who bought the book t_i]?

This result seems surprising in the face of our claim that *the hell* entails movement through an adjunct position, whether the *wh*-associate is itself an adjunct or not, thus inducing ECP/minimality effects on both (25) and (26). But recall that *daodi* in Chinese may occur either locally with a *wh*-associate in the same clause, or at a distance in a higher clause. We see no reason not to assume the same for English. That is, for sentences in (25), a possibility exists for \ominus P to be merged into the matrix IP outside the islands containing the argument *wh*-phrases *who* and *what*. The requisite movement will produce only Subjacency (or CED) effects. This possibility also exists where *the hell* is

⁷ Interestingly, when an additional *wh*-phrase is added, a *wh-the-hell* phrase in situ becomes more acceptable: *?Who gave what the hell to whom?* We do not offer an explanation here but simply note that there is a point of similarity to the “additional-*wh*” effect that has been noted since Chomsky (1981): The effect of **Tell me what you bought why* is pretty much “washed away” in *Tell me what who bought why*.

⁸ Lasnik and Saito (1992) treated examples like (25) as being deviant as ECP/minimality violations, but our informants largely agree that they contrast with (26) in the same way that (27a) contrasts with (27b).

associated with *why* or *how*; however, the results will still be severe as in (26) since movement of *why* or *how* alone is enough to produce ECP/minimality effects, as is well known. Thus the pattern shown in (25)-(26) is exactly as predicted.

4. Japanese

Our proposal in the previous section is crucially based on the difference in the degree of analyticity between Chinese and English. Let us examine Japanese against this background. Based on the typology of several constructions such as *wh*-questions and conditionals, Tsai (1994) argues that Japanese “stands in between Chinese and English” in the degree of analyticity. In this section, we show that this three way dichotomy also holds for a question with an attitude, albeit in a slightly different manner than what Tsai intended. Specifically, we argue that Japanese employs either a Chinese or an English strategy for forming the two types of dependencies in *ittai* questions.

(28) shows some typical examples of *ittai* questions (cf. Pesetsky 1987 and Lasnik and Saito 1992). Like *wh-the-hell* questions and *daodi* questions, *ittai* questions also imply some attitude of impatience or annoyance on the part of the speaker.

- (28) a. kare-wa **ittai nani-o** katta no?
he-top ittai what-acc bought Q
'What the hell did you buy?'
b. **ittai** kare-wa **nani-o** katta no?
ittai he-top what-acc bought Q
Same as (a)

As illustrated below, the distribution of *ittai* is essentially parallel to that of *daodi*. First, (29) shows that *ittai* requires the presence of a *wh*-phrase in its c-domain (cf. (10)). Second, *ittai* must be in the scope of an interrogative CP, as shown in (30) (cf. (12)).

- (29) a. *kare-wa **ittai** hon-o katta.
he-top ittai book-acc bought
b. *kare-wa naze **ittai** kita no?
he-top why ittai came Q
(30) a. kare-wa Hanako-ga **ittai nani-o** katta ka sira-nai.
he-top Hanako-nom ittai what-acc bought Q know-neg
'He does not know what the hell Hanako bought.'
b. ***ittai** kare-wa Hanako-ga **nani-o** katta ka sira-nai.
ittai he-top Hanako-nom what-acc bought Q know-neg

Discussion of the island sensitivity of *ittai* can be kept brief, as it mirrors that of *daodi*. In principle, *ittai* and a *wh*-associate can occur at a distance:

- (31) a. **ittai** Taro-wa Hanako-ga kimi-ni **nani-o** okutta to omotta no?
 ittai Taro-top Hanako-nom you-dat what-acc sent that thought Q
 ‘What the hell did Taro think that Hanako sent to you?’
- b. Taro-wa Hanako-ga **ittai** kimi-ni **nani-o** okutta to omotta no?
 Taro-top Hanako-nom ittai you-dat what-acc sent that thought Q

Note that (31b) also shows that *ittai* (as well as its *wh*-associate) may occur in situ.

When the *wh*-associate is an argument and occurs within an island, relevant examples are fine if *ittai* is outside an island (e.g., 32). When the *wh*-associate is an adjunct within an island, sentences are bad regardless of where *ittai* is located as in (33):

- (32) a. **ittai** kimi-wa [Hanako-ga **dare-ni** ageta hon]-o yonda no?
 ittai you-top Hanako-nom who-dat gave book-acc read Q
 Who the hell is the x s.t. you read the book that Hako gave to x?
- b. *kimi-wa [Hanako-ga **ittai dare-ni** ageta hon]-o yonda no?
 you-top Hanako-nom ittai who-dat gave book-acc read Q
 Same as (a)
- (33) a. ***ittai** kimi-wa [Hanako-ga **naze** kaita hon]-o yonda no?
 ittai you-top Hanako-nom why wrote book-acc read Q
 What the hell is the reason x s.t. you read the book that Hako wrote for x?
- b. *kimi-wa [Hanako-ga **ittai naze** kaita hon]-o yonda no?
 you-top Hanako-nom ittai why wrote book-acc read Q
 Same as (a)

Parallelism between *daodi* and *ittai* goes even further. Yanagida (1996) argues that *ittai* occurs higher than VP adverbs such as *yoku* ‘often’ as shown below. Following Yanagida, we can interpret this fact as indicating that *ittai* must appear higher than VP.

- (34) a. kare-wa **ittai** yoku **nani-o** kau no?
 he-top ittai often what-acc buy Q
 ‘What the hell does he often buy?’
- b. ?*kare-wa yoku **ittai nani-o** kau no?
 he-top often ittai what-acc buy Q

Let us now examine the manners in which the two types of dependencies are formed in *ittai* questions. We already saw that *ittai* and its *wh*-associate need not form a constituent on the surface (e.g., 28b). We assume that the latter moves covertly to the former in such cases. When *ittai* and a *wh*-associate are adjacent, as in (28a), we would like to argue that they may form a constituent in either overt syntax or covert syntax. Cleft examples such as (35) confirm the idea that that *ittai* + *wh*-associate may be together in overt syntax.

- (35) kimi-ga yonda no wa [Chomsky-no **ittai nani-ni** tuite-no hon] desu ka?
you-nom read C top Chomsky-gen **ittai** what-dat about-gen book be Q
'(lit.) About what the hell book of Chomsky's is it that you read?'

Once we have established that Japanese forms Dependency B in a manner analogous to Chinese or English, it is easy to demonstrate that the same point applies to the formation of Dependency A in this language. The fact that *ittai* and the *wh*-associate may occur in situ (e.g., 31b) immediately suggests that Dependency A may be formed covertly in this language. Furthermore, consider examples such as the following, in which *ittai* + *wh*-associate has undergone long-distance scrambling.

- (36) [Chomsky-no **ittai nani-ni** tuite-no hon-o] Taro-wa kimi-ga
Chomsky-gen **ittai** what-dat about-gen book-acc Taro-top you-nom

kattta ka tazuneta no?
bought Q asked Q

'About what the hell book of Chomsky's did Taro ask whether you bought?'

Takahashi (1993) argues that (long-distance) scrambling of a *wh*-element into a clause headed by Q counts as overt *wh*-movement in Japanese. Given his analysis, nothing excludes the possibility that the fronted constituent in the above example undergoes *wh*-movement in overt syntax.

Summarizing, we have shown that Japanese forms the two types of dependencies either overtly or covertly, thus standing in between Chinese and English.

5. Further Issues

5.1 More on Dependency B

An alternative analysis, which dispenses with Dependency B, has been briefly considered by Lasnik and Saito (1992) and explored at some length by Kuo (1996). According to this view, elements like *daodi* and *ittai* move to the spec of interrogative CP independently of the *wh*-associate. This alternative analysis also captures the locality effects examined so far. Take (14b) as an example. The alternative analysis would attribute its badness to the movement of the adjunct *daodi* out of an island.

We would like to provide two arguments in favor of positing Dependency B. First, recall that both *daodi/ittai* and the *wh*-associate must be in the c-domain of the interrogative CP. Recall also that there is an additional requirement: *daodi/ittai* must c-command the *wh*-associate, not vice versa (see (10b) and (29b)). Under the alternative approach introduced above, it is unclear why there is such an asymmetry between the two elements. Our analysis provides a simple explanation for this fact. As discussed earlier, elements like *daodi* and *ittai* require the presence of a *wh*-phrase, but the latter does not require the presence of the former (i.e., ordinary *wh*-questions without *the hell/daodi/ittai*). We could interpret this fact as showing that it is the requirement of

daodi/ittai that motivates Dependency B. Given the recent target-based view of movement (Attract or Agree), it is natural that *daodi/ittai* must occur higher than the *wh*-associate.

Second, languages like Japanese are known to possess a certain class of elements triggering intervention effects. For example, the *sika* phrase (which, together with negation, means ‘only’) in Japanese cannot intervene between Q and a *wh*-phrase:

- (37) a. ?*Taro-sika nani-o tyuumon-shi-na-katta no?
 Taro-only what-acc order-do-neg-past Q
 What is the thing x s.t. only Taro ordered x
- b. nani-o Taro-sika tyuumon-shi-na-katta no?
 what-acc Taro-only order-do-neg-past Q

As Miyagawa (1999) and Watanabe (2000) have claimed, *naze* ‘why’ is, for some reason, exceptional in this respect:⁹

- (38) a. kimi-wa piza-sika naze tyuumon-shi-na-katta no?
 you-top pizza-sika why order-do-neg-past Q
 ‘Why did you order only pizza?’
- b. kimi-wa naze piza-sika tyuumon-shi-na-katta no?
 you-top why pizza-sika order-do-neg-past Q
 Same as (a)

Now, ungrammaticality of (39b) is of great interest. In this example, the *sika* phrase is located between *ittai* and a *wh*-associate. This fact immediately follows if there is a dependency between them (Dependency B).

- (39) a. kimi-wa piza-sika **ittai naze** tyuumon-shi-nak-atta no?
 you-top pizza-sika ittai why order-do-neg-past Q
 ‘Why the hell did you order only pizza?’
- b. *kimi-wa **ittai** piza-sika **naze** tyuumon-shi-nak-atta no?
 you-top ittai pizza-sika why order-do-neg-past Q
 Same as (a)

5.2. D-linking and Movement

Finally, let us touch on Pesetsky (1987), who claims to the effect that non-D-linked phrases force movement, exhibiting island sensitivity, while D-linked phrases do not

⁹ One possibility is that *naze*, being an adjunct, can be base-generated in the spec of CP (see Aoun and Li (1993) and Rizzi (1990)): In that case, the dependency between Q and *naze* is trivially established. It is then crucial for our discussion that such a derivation be unavailable for (39b) to be discussed below. Several possibilities come to mind but we cannot discuss them here due to lack of space.

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move, hence no LF island effects. *Wh-the-hell*, being “aggressively non-D-linked”, must move. This is why *the hell* is incompatible with *which*-phrase (e.g., 40a). But notice that *daodi* and *ittai* are fully acceptable in ‘which’-questions, as shown below:¹⁰

- (40) a. ***Which the hell** book does he want to read?
- b. ta **daodi** yao kan **na** yi ben shu?
he daodi want see which one CL book
‘Which the hell book does he want to read?’
- c. kimi-wa **ittai dono** hon-o yomi-tai no?
you-top ittai which book-acc read-want Q
‘Which the hell book do you want to read?’

There is another difference between *the hell* and *daodi/ittai*. While *the hell* cannot occur with *whether*, *daodi* and *ittai* are fine in A-not-A questions and yes-no questions, respectively:

- (41) a. *I wonder **whether the hell** you want to buy this book or not.
- b. ni **daodi mai-bu-mai** shu (ne)?
you daodi buy-not-buy book (Q)
‘Will you buy books or not?’
- c. kimi-wa **ittai** sono hon-o katta no? (kaw-anak-atta no?)
you-top ittai that book-acc bought Q buy-not-past Q
‘Did you buy that book or not?’

It is quite possible that *which*-questions and yes-no/A-not-A questions fall into the same category in terms of D-linking properties, in the sense that they both assume the existence of set(s) from which felicitous answers are drawn.

Our point goes as follows. While *the hell* signals non-D-linking, *daodi* and *ittai* are fully compatible with D-linked elements. Hence, *daodi* and *ittai* are not the complete equivalents of *the hell* after all. However, regardless of whether they are D-linked or not, all of them (*daodi ... wh*, *ittai ... wh*, and *wh-the-hell*) (a) involve some logophoric attitude, and (b) exhibit island effects. This suggests that the driving force of movement may not be non-D-linking per se, but the existence of a movement-triggering adjunct position (viz. the attitude phrase). It also may not be the non-

¹⁰ Being aware of the Japanese fact, Pesetsky indeed offers the speculation that *dono* ‘which’ is not inherently D-linked. According to his view, examples like (40c) are grammatical only on the non-D-linked reading. But this is untenable, since *ittai + dono* is perfectly fine in a clear D-linked context.

(i) Taro to Jiro to Hiroshi no uti, kimi-wa ittai dono hito-ga suki-na no?
Taro and Jiro and Hiroshi gen among you-nom ittai which man-nom fond-be Q
‘(lit.) Among Taro, Jiro, and Hiroshi, which the hell man do you like most?’

referential nature of a *wh*-word per se. Everything moves, but if it has to move through that adjunct position, then island properties ensue.

In fact, there are expressions closer to *what the hell* in Mandarin such as *shenme mingtang* ‘what name and title’ and *shenme gui* ‘what ghost’ and also in Taiwanese such as *shimi waNko* ‘what bowl-and-pot’.

- (42) a. nimen zai tanlun **shenme mingtang** ya? (**na yige mingtangi*)
 you at discuss what name-&-title PRT which one name-&-title
 ‘What the hell are you guys discussing?’
- b. li ti kong **shimi waNko**? goa long thiaN bo. (**tuei chite waNko*)
 you at say what bowl-&-pot I all hear not which one bowl-&-pot
 ‘What on earth are you talking about? I can’t figure out a thing?’

These expressions cannot occur with ‘which’: **na yige mingtang* ‘which name and title’, **na yige gui* ‘which ghost’; **tuei chite waNko* ‘which bowl-and-pot.’ Note also that *daodi* can co-occur with those ‘the hell’ expressions:

- (43) a. ni **daodi** zai gao **shenme gui**? (Mandarin)
 You daodi at do what ghost
 ‘What the hell are you up to?’
- b. li **taote** ti kong **shimi waNko**? (Taiwanese)
 You daodi at say what bowl-and-pot
 ‘What the hell are you talking about?’

German facts are noteworthy in this context. Wiltschko (1997) analyzes *wh + zum Teufel* ‘wh + to the devil’ as a non-D-linked *wh*-phrase, but this language also has the adverbial element *eigentlich* (Daniel Hole (p.c.)), which we think corresponds more closely to *daodi/ittai*. As shown below, *wh + zum Teufel* and *eigentlich* can co-occur.¹¹

- (44) **Wer zum Teufel** hat das **eigentlich** gemacht?
 who to.the devil has that eigentlich done
 ‘And, who on earth did that?’

6. Conclusion

Our goal in this paper has been to provide a unified analysis of a *wh*-question with an attitude in English, Chinese, and Japanese. In doing so, we provided strong empirical evidence for positing two kinds of dependencies in this type of *wh*-question. Different languages form such dependencies at different points in the derivation, from which the apparent asymmetry in the extraction pattern between English vs. Chinese/Japanese follows straightforwardly. Finally, in connection with Pesetsky’s (1987) view of

¹¹ As expected, *eigentlich* is perfectly fine in ‘which’-questions (thanks to Klaus Abels (p.c.) for the information), just like *daodi* and *ittai*.

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movement, we have shown that *daodi/ittai* are not the complete equivalents of *the hell* and that it is not non-D-linking per se, but the existence of an Attitude Phrase that makes movement obligatory.

References

- Aoun, Joseph, and Y.-H. Audrey Li. 1993. *Syntax of scope*. Cambridge, Mass: MIT Press.
- Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- Cinque, Guglielmo. 1999. *Adverbs and functional heads*. New York: Oxford University Press.
- Dikken, Marcel den, and Anastasia Giannakidou. 2002. From hell to polarity: 'aggressively non-D-linked' *wh*-phrases as polarity items. *Linguistic Inquiry* 33: 31-61.
- Huang, C.-T. James. 1982. *Logical relations in Chinese and the theory of grammar*. Doctoral dissertation, MIT.
- Huang, C.-T. James, and C.-S. Luther Liu. 2001. Logophoricity, attitudes and *ziji* at the interface. In *Long Distance Reflexives, Syntax and Semantics* 33, ed. Peter Cole, et al., 141-195. New York: Academic Press.
- Kuo, Chin-man. 1996. The interaction between *Daodi* and *wh*-phrases in Mandarin Chinese. Ms., University of Southern California.
- Lasnik, Howard, and Mamoru Saito. 1992. *Move α* . Cambridge, Mass.: MIT Press.
- Miyagawa, Shigeru. 1999. Reconstruction and ECP effects. Ms., MIT.
- Pesetsky, David. 1987. *Wh*-in-situ: movement and unselective binding. In *The Representation of (In)definiteness*, ed. Eric Reuland and Alice ter Meulen, 98-129. Cambridge, Mass: MIT Press.
- Rizzi, Luigi. 1990. *Relativized minimality*. Cambridge, Mass: MIT Press.
- Sells, Peter. 1987. Aspects of logophoricity. *Linguistic Inquiry* 18: 445-479.
- Takahashi, Daiko. 1993. Movement of *wh*-phrase in Japanese. *Natural Language and Linguistic Theory* 11: 655-678.
- Tsai, W.-T. Dylan. 1994. *On economizing the theory of A-bar dependencies*. Doctoral dissertation, MIT.
- Watanabe, Akira. 2000. Absorption: interpretability and feature strength. Ms., University of Tokyo.
- Wiltschko, Martina. 1997. D-linking, scrambling and superiority in German. *Groninger Arbeiten zur germanistischen Linguistik* 41:107-142.
- Yanagida, Yuko. 1996. Syntactic QR in *wh*-in-situ languages. *Lingua* 99: 21-36.

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