CHAPTER 4

ANALYSIS AND DISCUSSION

4.1 Introduction

In the last chapter, it is mentioned that grammatical theories presently available encounter problems when accounting for the argument-function linking pattern in Yami. In these grammatical theories, linking is always tied closely to the thematic hierarchy. Therefore, an argument-function linking model which is not restricted by the thematic hierarchy should be developed. However, since argument-function linking patterns vary greatly in different languages, it would be hard for one model to account for all the different linking patterns. The OT-based account thus seems promising.

In this chapter we try to design a linking model based on the concept of OT. We consult the model of Legendre et al. (1993). This model is used in linking arguments to grammatical cases. Their concept may also be applied to argument-function linking. However, the theory of Legendre et al. is claimed to be "theory-neutral", that is, it is used independently of any grammatical theory to handle the problem of case assignment. Since argument-function linking is a topic considered by many grammatical theories, here we still want to base our model on one of the grammatical theories, so that our model can be a part of a larger grammatical theory.

The grammatical theory we choose is the lexicalist theory LFG. The reason is that LFG is a grammatical theory which pays much attention to differences among languages. It is thus suitable for the special argument-function linking pattern of Yami. Moreover, LFG is one of the grammatical theories which already develop an OT-based model. Bresnan (1988) started exploring an OT-LFG. And Her (2005) also designed an OT-based LMT model. In this chapter we will modify this OT-LMT model to account for the Yami data.

The first part of this chapter introduces the OT-LMT model of Her (2005) and shows its problem when applied to the Yami data. The second part is the modified version and its application. The final part offers some discussions.

4.2 OT-LMT

OT-LMT proposed in Her (2005) is an optimality-based lexical mapping theory. OT-LMT is a sub-part of the OT-LFG grammar just as LMT is a sub-part of LFG. In OT-LMT, the rules of LMT are rendered as OT-style constraints. Thus when accounting for different languages, different constraint rankings can be used instead of different constraints.

The constraints Her proposed can be classified into three different categories. The first part is a set of a-structure (argument structure) well-formedness constraints which restrict the content of the argument structure of a predicate. These constraints are considered inviolable by Her.

(75) Well-formedness Constraints on argument roles: (Her, 2005: 8)

UniqRol(R_a, R_b): Given <..R_a-F_a..R_b-F_b..>, $R_a \neq R_b$

DescendRol(R_a, R_b): Given <.. R_a-F_a R_b-F_b..>, $R_a > R_b$ in prominence

The second category is a set of well-formedness constraints on grammatical functions. They are used to restrict the grammatical functions predicated by a predicate. Among these constraints, UniqFun ensures that each grammatical function is unique; it is thus also inviolable. The DescendFun constraint sets the order of grammatical functions according to the Markedness Hierarchy of grammatical functions. This constraint is violable since the order of grammatical functions is not always fixed and inverted structures can be found.

(76) Well-formedness Constraints on grammatical functions:

UniqFun(F_a, F_b): Given <.. R_a-F_a..R_b-F_b..>, $F_a \neq F_b$

DescendFun(F_a, F_b): Given <.. R_a-F_a ..R_b-F_b..>, $F_a \geq F_b$ in prominence

The third category is a set of argument-function linking constraints which define the linking between argument roles and functions. Among them, the constraints

AlignRolFun and AlignFunRol, which can be called alignment constraints, are considered inviolable. The other constraints are basically converted from the semantic classifications in LMT, where [r] and [o] features are given to the arguments and help to define their functions. Similar strategies are used here. For example, the LinkPtTh links patient to a [-r] function, and there is also a similar semantic classification rule in LMT. In OT-LMT, the LinkPtTh constraint is considered inviolable according to the unaccusative hypothesis. This hypothesis states that patients are universally encoded as unrestricted functions (subject or object) (Her 2005:9). The LinkResFun constraint is used to specify linking for arguments other than the patients. The other two constraints LinkUnobj and LinkUnres are default linking constraints which may apply to all argument roles.

(77) Argument-Function Linking Constraints

LinkRol(R, F): Given <..R..>, R is linked to an F such that <..R-F..>.
LinkFun(F, R): Given <..F..>, F is linked to an R such that <..R-F..>.
LinkPtTh(R, F): Given <..R-F..>, where R = pt/th, F is [-r]
LinkRolRes(R, F): Given <..R-F..>, where $R \neq \hat{\theta}$, F is [+r]
LinkUnobj(R, F): Given <..R-F..>, F is [-o]
LinkUnres(R, F): Given <..R-F..>, F is [-r]

For each specific language, a language-specific constraint ranking may be used. There may also be some construction-specific constraints as well. This affords OT-LMT more flexibility to account for a wide range of data. For example, in Her (2005), a constraint ranking of Mandarin Chinese is proposed, shown in (78).

(78) OT Ranking of Lexical Mapping Constraints (Chinese) (Her 2005: 10)

UniqRol/DescendRol/UniqFun/LinkRol/LinkFun

>>

LinkPtTh

>>

LinkRolRes

>>

DescendFun

>>

LinkUnobj/LinkUnres

The argument-function linking of a simple transitive sentence in Mandarin is presented in (79). (Recall that subject is encoded as [-r.-o]; object is [-r, +o] and oblique is [+r, -o])

(79) Input a-structure: (agent, patient)

Output	LinkPtTh	LinkRolRes	DescendFun	LinkUnobj	LinkUnres
(O,S)			* !	*	
(O,OL)	* !			*	*
→ (S,O)				*	
(S,OL)	* !				*
(OL,S)			* !		*

Therefore the output is an a-structure where agent links to subject and patient to object, the correct linking in Mandarin.

In Mandarin there is a locative inversion construction. Canonically, given the input (theme, location), theme is linked to the subject and location to the oblique. But in the locative inversion construction, theme is linked to the object while location is linked to the subject. The constraint ranking used previously can not produce the correct result. Her thus proposed an additional constraint for the locative inversion construction. It is called LinkLocInv.

(80) LinkLocInv(R, F): Given a-structure $<R_a – F_a \ R_b – F_b>$, where R_a = th[foc] and R_b = loc, F_b is [-r -o].

This new constraint is ranked after LinkPtTh. With this additional constraint, the linking of Mandarin locative inversion receives the correct result (81).

(81) Input a-structure: (theme, location)

Output	LinkPtTh	LinkLocInv	LinkRolRes	DescendFun	LinkUnobj	LinkUnres
→ (O,S)			*	*	*	
(O,OL)		* !			*	*
(S,O)		* !	*		*	
(S,OL)		* !				*
(OL,S)	* !		*	*		*

However, when we apply this model to account for Yami, we run into some problems. In Yami, the voice construction decides the linking of subjects. We thus need to pose an additional constraint for the voice construction, LinkVoice:

(82) LinkVoice: Given <..R-F..>, where R is selected by the voice marker, F is [-r, -o]

This constraint is used to account for the fact that in Yami the subject linking is decided by the voice marker. Therefore it specifies that the voice marked argument be linked to [-r, -o] function, which is the subject. This constraint is ranked higher than LinkPtTh in Yami since voice is a very prominent device in Yami.

Furthermore, recall that in Yami a PV sentence has the patient as subject and the agent as object. The constraints we have so far still predict an incorrect a-structure with the ranking suggested above, shown in (83). (The capitalized form in the input structure represents the argument selected by the voice marker)

(83) Input a-structure: (agent, PATIENT)

Output	LinkVoice	LinkPtTh	LinkRolRes	DescendFun	LinkUnobj	LinkUnres
(O,S)				* (?)	*	
(O,OL)	* !	*			*	*
(S,O)	* !				*	
(S,OL)	* !	*				*
(OL,S)				* (?)		*

A winning candidate cannot be obtained because the two candidates (O,S) and (OL,S) have a tie, both with a violation of DescendFun, which penalizes linking of a higher role to a lower function. Once we reset the constraint ranking and have LinkUnres before DescendFun, we get a correct result for Yami PV sentences, as in (84).

(84) Input a-structure: (agent, PATIENT)

Output	LinkVoice	LinkPtTh	LinkRolRes	LinkUnres	DescendFun	LinkUnobj
→ (O,S)					*	*
(O,OL)	* !	*		*		*
(S,O)	* !					*
(S,OL)	* !	*		*		
(OL,S)				* !	*	

However, this constraint ranking would still have problems when AV sentences are considered. The linking result of Yami AV sentences is in (85).

(85) Input a-structure: (AGENT, patient)

Output	LinkVoice	LinkPtTh	LinkRolRes	LinkUnres	DescendFun	LinkUnobj
(O,S)	* !				*	*
(O,OL)	* !	*		*		*
→ (S,O)						*
(S,OL)		* !		*		
(OL,S)	* !			*	*	

For an AV sentence in Yami, the agent is linked to the subject while the patient is linked to the oblique. However, the LinkPtTh constraint which is considered inviolable in Her's model links patient to a [-r] function, which is either subject or object.

Therefore, it can be concluded that Her's model cannot account for the Yami data when the linking pattern in Yami is so different to the linking pattern in Mandarin. However, the concept of OT is still a very useful one when two different languages are considered. Therefore, we will revise Her's model and change some of his constraints. The revision is made considering the Yami linking pattern and its difference to Mandarin so that the new version can be used to account for both languages.

4.3 The new model

This section is a proposal of the new argument-function linking model. This model based itself on Her's OT-LMT. The first part of this section discusses the problems of some of the constraints of Her's when they are applied to Yami. The second part of this section is our revised version of the linking model.

4.3.1 The problems of the constraints in OT-LMT

The linking pattern of Yami has been discussed in chapter two. The most prominent feature of the Yami linking pattern is that for a transitive sentence, the patient is realized as subject, while the agent is realized as object. However, in OT-LMT, the agent is almost always mapped to subject due to the DescendFun constraint. This constraint links the highest function to the highest role. Therefore agent would be mapped to subject. In fact, in almost all linking theories, this hierarchy is followed so that none of these theories can account for an agent-object linking pattern. For example, Lødrup (1999) has mentioned that linking theories cannot account for the Norwegian presentational focus construction, where the agent is realized as object. Thus, he also mentioned that Optimality Theory can be a more promising approach to this problem. Indeed the mechanism of OT provides two possible solutions to this problem. The first one is to have another constraint ranked higher. This is also the approach that Lødrup used. There is no DescendFun constraint in his model, but he has another constraint with a similar purpose, a constraint that directly prevents agentive objects. But for the presentational focus construction, he made a specific constraint to make sure that in the presentational focus construction the agent is realized as object. This is quite similar to what Her has done in dealing with the locative inversion in Mandarin. Therefore, for Yami, we could also try to set a higher constraint to override DescendFun.

However, it has been proved that even when we create LinkVoice constraint and rank it higher than DescendFun, we still can not handle the Yami data completely. Therefore, we may choose to directly cancel the DescendFun constraint. There is another reason to apply this approach. Both locative inversion and presentational focus are special constructions, therefore it is reasonable to make specific constraints for them. However in Yami the patient-subject and agent-object linking is an ergative linking pattern as has been discussed, and should be seen as a typological difference compared to the accusative linking pattern. According to the basic concepts of OT, typological differences should be handled through different constraint rankings. Therefore, although the voice constructions in Yami can be handled through

LinkVoice constraint, the DescendFun constraint, which blocks the patient-subject linking, should be substituted by using different constraint rankings. Therefore in our new model we choose to do without the DescendFun constraint.

The other problem of the constraints in Her's OT-LMT is the LinkPtTh constraint. In Her's model the LinkPtTh constraint is inviolable because it "reflects the unaccusative hypothesis that cross-linguistically the primary patient/theme is encoded as an unrestricted (-*r*) GF, i.e., SUBJ or OBJ." (Her 2005: 9) According to the description in Chapter 2, patient in Yami indeed can be realized as OBL in non-PV sentences, and OBL is not an unrestricted function. Therefore the constraint which links patient/theme to [-r] functions should be violable. In fact, according to the concept of OT, it is better not to have inviolable constraints, because the basic idea of OT is to find the winning candidate that violates the least constraints.

Therefore, due to the problems mentioned above, we will revise the OT-LMT model. The revisions we make also benefit from the linking model of Legendre et al. (1993). However it still follows the fundamentals of OT-LMT.

4.3.2 A revised OT-LMT

In our revised model, we preserve three basic inviolable well formedness constraints of Her's OT- LMT: UniqRol, DescendRol, and UniqFun, repeated below. They define the basic shape of the argument structure. These constraints are all from the well-formedness constraints in Her's OT-LMT. Note again that the previous DescendFun is not included in our model here.

(86) Well-formedness Constraints

UniqRol(R_a, R_b): Given <..R_a-F_a..R_b-F_b..>, $R_a \neq R_b$

DescendRol(R_a, R_b): Given <.. R_a-F_a R_b-F_b..>, $R_a > R_b$ in prominence

UniqFun(F_a, F_b): Given <.. R_a-F_a..R_a-F_b..>, $F_a \neq F_b$

In addition to the well-formness constraints above, we also pose the following set of linking constraints. All constraints here are violable.

(87) Linking Constraints:

LinkVoice**:** Given <..R-F..>, where R is selected by the voice marker, F is [-r,-o]

AgtUnres**:** Given <..R-F..>, where R is the agent, F is [-r]

PtThUnobj**:** Given <..R-F..>, where R is the primary *pt/th* or the only *pt/th*, F is [-o]

PtThUnres**:** Given <..R-F..>, where R is the primary *pt/th* or the only *pt/th*, F is [-r]

AgtUnobj: Given <..R-F..>, where R is the agent, F is [-o]

LinkResFun: Given <..R-F..>, where R ≠ $\hat{\theta}$ or *pt/th*, R is [+r]

LinkVoice constraint, which has been mentioned before, serves the function of linking the argument selected by the voice marker to the grammatical subject. Since the voice system does not only occur in Yami, this constraint can therefore also be used to deal with the voice system in other languages. For example, the passive voice in English.

The four constraints AgtUnres, PtThUnres, AgtUnobj, PtThUnobj are used to define the linking of agent and patient. For agent and patient linking, in Her's OT-LMT, the only constraint is LinkPtTh, which specifies patient with an [-r] feature. Other linkings are accomplished by the DescenfFun constraint. Since we have rejected the DescendFun constraint, these four constraints replace the function of the DescendFun constraint and will provide more flexibility that we need. The idea of setting up these four constraints comes from the linking model of Legendre et el (1993). In their model they made all the possible linkings as constraints, and the ranking of the constraints then decides which linking is the winning candidate. Here we use a similar strategy: the two features [-r] [-o] are distributed to agent and patient. Thus we have four possible combinations as constraints.

Finally the LinkResFun constraint is the same as in Her's OT-LMT system, which is used to define the linking of peripheral arguments.

Using these constraints, the linking pattern of Yami can be correctly handled. The linking pattern of Yami is repeated here:

(88) Possible sentence types and linking patterns in Yami:

1. AV:
   a. AV without pt/th: V<ag > → <subject>
   b. AV with (oblique) pt/th: V <ag, pt/th > → <subject, oblique>

2. PV:
   a. PV with only pt/th argument: V <pt/th > → <subject>

b. PV with agent and pt/th: V <ag, pt/th > → <object, subject>
c. PV with theme and location: V <th, loc> → <subject, oblique>

3. LV or IV:
a. LV with agent, patient, and location:
V <ag, pt/th, lc> → < object, oblique, subject>
b. IV with agent, patient and instrument:
V <ag, pt/th, ins> → <object, oblique, subject>
c. IV with agent and instrument:
V <ag, ins> → V <object, subject >

And we propose the following constraint ranking to account for Yami; the reason for this constraint ranking will be discussed later.

(89) LinkVoice >> AgtUnres >> PtThUnobj >> PtThUnres >> AgtUnobj >> LinkResFun

After identifying the constraint ranking, we can now apply these constraints to different Yami sentence types. First, when there is only one argument, it would be linked to subject since the only argument is also the argument selected by the voice marker. Take an AV sentence with agent only as an example. The linking result is shown in (90).

(90) Input a-structure: (AGENT)

Output	LinkVoice	AgtUnres	PtThUnobj	PtThUnres	AgtUnobj	LinkResFun
→ S						
O	* !				*	
OL	* !	*				
O2	* !	*				

And then we look at sentences with more than one argument. First, consider a transitive PV sentence, where the patient is selected by the voice marker and linked to subject, and agent is linked to object. The following result emerges in (91):

(91) Input a-structure: (agent, PATIENT)

Output	LinkVoice	AgtUnres	PtThUnobj	PtThUnres	AgtUnobj	LinkResFun
→ (O,S)					*	
(O,OL)	* !			*	*	
(S,O)	* !		*			
(S,OL)	* !			*		
(OL,S)		* !			*	

The winning candidate is (O,S), as correctly predicted. In an AV sentence where the agent is selected by the voice marker, the output should have the agent linked to subject and patient linked to oblique, as in (92).

(92) Input a-structure: (AGENT, patient)

Output	LinkVoice	AgtUnres	PtThUnobj	PtThUnres	AgtUnobj	LinkResFun
(O,S)	* !				*	
(O,OL)	* !			*	*	
(S,O)			* !			
→ (S,OL)				*		
(OL,S)	* !	*				

Again the winning candidate is (S,OL), as correctly predicted by the theory. Finally we consider the LV or IV sentence where there are three arguments. For example, with the locative selected by the voice marker, agent is linked to object, and patient to oblique. The linking is shown in (93).

(93) Input a structure: (agent, patient, LOCATIVE)

Output	LinkVoice	AgtUnres	PtThUnobj	PtThUnres	AgtUnobj	LinkResFun
(OL,O,S)		* !	*			*
→ (O,OL,S)				*	*	*
(OL,OL,S)		* !				*
(S,O,OL)	* !		*			
(OL,S,O)	* !	*				*

The winning candidate is (O,OL,S), which is the correct result. However, it is also possible that an IV sentence has only two arguments, agent and instrument. In this case the instrument is the selected argument and linked to subject while the agent is linked to object, as in (94).

(94) Input a structure: (agent, INSTRUMENT)

Output	LinkVoice	AgtUnres	PtThUnobj	PtThUnres	AgtUnobj	LinkResFun
(S,O)	* !					*
(S,OL)	* !					
→ (O,S)					*	*
(OL,S)		* !				*
(OL,O)	*!	*				*

The winning candidate is (O,S), which is also the correct result. Therefore the three major sentence types in Yami are all accounted for in our revised model. Recall that Yami also has a sentence type where the verb does not have a voice marker. This kind of sentences can be considered as basic simple sentences in Yami. The linking here is just like that of a PV sentence, where patient is linked to subject and agent to object. Since there are no voice markers, the LinkVoice constraint simply does not apply or applies vacuously.

(95) Input a-structure: (agent, patient)

Output	LinkVoice	AgtUnres	PtThUnobj	PtThUnres	AgtUnobj	LinkResFun
→ (O,S)					*	
(O,OL)				* !	*	
(S,O)			* !			
(S,OL)				* !		
(OL,S)		* !				

The revised model again predicts (O,S) as winning candidate, correctly.

Next, we apply this revised framework to account for the Mandarin data; the only adjustment needed is a Mandarin-specific constraint ranking. We propose the following ranking:

(96) Mandarin:
LinkVoice >> PtThUnres >> AgtUnobj >> AgtUnres >> PtThUnobj >> LinkResFun

(97) Yami:
LinkVoice >> AgtUnres >> PtThUnobj >> PtThUnres >> AgtUnobj >> LinkResFun

Then ranking for Yami is also listed above as a contrast. A basic transitive sentence in Mandarin has agent as subject and patient as object. Sentence (98) is an example of a typical transitive sentence in Mandarin.

(98) Ta da wo
He(subject) beat me(object)
He beat me.

With the new ranking, this sentence can have a linking result as in (99).

(99) Input a structure: (agent, patient)

Output	LinkVoice	PtThUnres	AgtUnobj	AgtUnres	PtThUnobj	LinkResFun
(O,S)			* !			
(O,OL)		* !				
→ (S,O)					*	
(S,OL)		* !				
(OL,S)				* !		

The winning candidate is (S,O), which is the correct result. The same constraint ranking can also be used for English because the linking pattern of an English transitive sentence is the same as Mandarin.

We will now apply this set of constraints to account for locative inversion sentences in Mandarin. Here we still include the LinkLocInv constraint of Her's and place it after LinkVoice for Mandarin. Therefore, ranking in Mandarin is revised as follows:

(100) LinkVoice >> LinkLocInv >> PtThUnres >> AgtUnobj >> AgtUnres >> PtThUnobj >> LinkResFun

The linking result is in (101). Note that LinkVoice is omitted due to space constraints and its lack of immediate relevance in Mandarin.

(101) Input a structure: (theme, location)

Output	LinkLocInv	PtThUnres	AgtUnobj	AgtUnres	PtThUnobj	LinkResFun
→ (O,S)					*	*
(O,OL)	* !				*	
(S,O)	* !				*	*
(S,OL)	* !					
(OL,S)		* !				*

The winning candidate is (O,S) Which is the correct result for a Mandarin locative inversion sentence.

Finally, as mentioned earlier, the LinkVoice constraint is applicable in accounting for the voice system in other languages. Here we take English passive as an example. The constraint ranking for English is the same as in Mandarin, repeated in (102).

(102) Constraint ranking for English:
LinkVoice >> PtThUnres >> AgtUnobj >> AgtUnres >> PtThUnobj >> LinkResFun

In a typical English active sentence as "John kicks Bill", the agent is the subject and the patient is the object. The linking is entirely the same as in a Mandarin transitive sentence. However, English has a passive construction, in which the verb is marked by a passive marker and the patient becomes the subject. We may consider the patient in an English passive sentence like "Bill is kicked by John" as the selected element by the passive voice marker, the LinkVoice constraint, can then be applied, and the linking of an English passive sentence can be examined within our revised linking model. The result is shown in (103)

(103) Input a structure: (agent, PATIENT)

Output	LinkVoice	PtThUnres	AgtUnobj	AgtUnres	PtThUnobj	LinkResFun
(O,S)			* !			
(O,OL)	* !	*	*			
(S,O)	* !				*	
(S,OL)	* !	*				
→ (OL,S)				*		

The result is patient as subject and agent as oblique, which is the correct result for an English passive sentence. Therefore, our model has achieved the basic assumption of OT, that is, to account for different languages only with different constraint rankings. In the following section, we will have some discussion about this revised OT-LMT framework.

4.4 Discussion

4.4.1 Motivations for the constraints and rankings

A unique aspect to this revised OT-LMT model is the four constraints which specify linking for agent and patient. The reason to use the two unmarked features, [-r] and [-o], is that agent and patient are the arguments that most often serve as subjects. And the features for subject classification are the two unmarked ones, [-r,-o]. Therefore, these two features are distributed to agent and patient, and the four possibilities thus incorporated into the newly proposed four constraints.

Next we will have a closer look at the language-specific rankings we proposed. In English and Mandarin alike, PtThUnres is the first constraint, which is similar to the LinkPtTh constraint in Her's OT-LMT. As mentioned before, in English and Mandarin the unaccusative hypothesis is observed. That is, in these languages the patient always serves as one of the unrestricted [-r] functions, i.e., subject or object. Thus, the first constraint for English and Mandarin is the constraint which specifies patient as [-r]. This also echoes the semantic classification in the conventional LMT.

In Yami, however, it is just the opposite, where the agent always serves as one of the [-r] functions, subject or object. In PV and LV sentences agent links to object, while in AV sentences it is the subject. Thus, the first constraint in Yami should specify agent as [-r], which is accomplished by the AgtUnres constraint.

The second constraint in line for Mandarin and English is AgtUnobj because in these languages the agent is hardly ever linked to object. Canonically the agent is subject; in passive sentences it is demoted to an oblique function marked with the by-phrase. In Yami; however, the second constraint is PtThUnobj, as patient is never linked to an object function in the language. In PV sentences, patient is subject, while in AV and LV sentences it is an oblique function.

The two different rankings thus show that English and Mandarin form one type of languages but Yami belongs to a different typological group, which may represent the ergative-accusative dichotomy.

4.4.2 Prediction about markedness

These constraint rankings bring about certain predictions regarding the markedness of different sentence types in the languages discussed. First we will consider the sentences of different voices in Yami. Ignoring the influence of the voice marker for the time being, we find the winning candidate of PV sentences, (O,S), violates only the AgtUnobj constraint. The winning candidate of AV sentences, (S,OL), violates the PtThUnres constraint, which is higher than AgtUnobj. The winning candidates of LV sentences, (O,OL,S), violates two constraints, PtThUnres and AgtUnobj. In OT, a greater number of violations or the violation of higher constraints indicate that the output may be more marked.

Therefore, in Yami, the output of a PV sentence, (O,S), is the least marked. This nicely explains the fact that in Yami when the verb has no voice marker, the linking is precisely to (O,S). In fact, Ho (1990) also mentioned that the PV sentences occur most frequently in Yami.

We now look at English and Mandarin. In the constraint ranking we have set up for these languages, AgtUnobj is ranked higher than PtThUnobj. So in these languages (O,S) is more marked than (S,O) since the former violates the higher-ranked AgtUnobj, while the latter violates the lower-ranked PtThUnobj. Thus, in English and Mandarin the basic transitive sentence receives (S,O) as the output. In this regard, the passive form in English, which violates AgtUnres by having an output of (OL,S), is more marked than the active (S,O) linking. However, (OL,S) is still less marked than (O,S) since AgtUnres is ranked lower than AgtUnobj in English.

Therefore, we can make the tentative claim that this revised model not only predicts the correct linking results in these different languages, it also correctly predicts the relative markedness of different linking possibilities in these languages.