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Author(s): William Raymond and Kristin Homer

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THE INTERACTION OF PARTICIPANT ROLE AND PRAGMATIC FUNCTION IN THE SELECTION OF QUESTION FORM*

William Raymond & Kristin Homer
 raymondw@rastro.colorado.edu homer@ucsu.colorado.edu
 University of Colorado, Boulder CO

1. INTRODUCTION. The constituent question function is universal, but its form varies across languages. Some languages even exhibit argument asymmetries in question form, with Subjects selecting different forms than Objects. In a cross-linguistic survey of about 70 languages almost 20% formed Subject questions differently from Object questions in semantically transitive clauses. In the Nilo-Saharan language Lango, an SVO nominative-accusative language, questioned Subjects are placed in a cleft construction also used for focusing, but questioned Objects remain in-situ following the verb, as seen in 1.

- (1) a. *gà é n à m ê ò j w à t ò ò p í ò* (Lango; Noonan 1992)
 who it REL+PART 3S.hit.PERF Opio
 'Who hit Opio?'
 b. *ò k è l ò ò j w à t ò g à*
 Okelo 3S.hit.PERF who
 'Who did Okelo hit?'

In the Mayan language Mam, a verb-initial ergative-absolutive language, both Subject and Object question words appear in sentence-initial position, the position of focus in Mam (England 1983a, 1983b). In Object questions Subjects and Objects retain their ergative and absolutive case (2a), but in Subject questions the clause is antipassivized, i.e. Subjects are marked with absolutive case and Objects with an oblique case. The resultant absolutive argument is then fronted (2b).

- (2) a. *alkyee ø-ø-tzyuu-n ky-e xiinaq* (Mam)
 who PST...3S.ABS.grab.AP 3P.OBL.PAT man
 'Who grabbed the men?'
 b. *alkyee-qa xhi tzaj t-tzyu-7n Cheep*
 who-PL ...3P.ABS DIR 3S.ERG.grab... José
 'Whom did José grab?'

If the form of an interrogative depended solely on the function of questioning, then we would expect question form to be the same for all grammatical relations in a language. However, from the data above we can conclude that factors other than the question function must be involved in selecting question form in these languages.

As mentioned, the Lango cleft in 1a and the Mam fronting seen in 2 are identical to the respective focus strategies employed in these languages. Constituent questions frequently resemble focus constructions cross-linguistically. The overlap between question and focus form is well established in the literature (cf. Croft 1990). In at least some cases there is evidence to document a diachronic relationship between Wh-words and clefts (cf. Givón 1990). There is also a pragmatic factor that would lead us to expect this overlap, since Wh-words have frequently been identified as focal elements (Lambrecht 1993, Givón 1979).¹ Some languages that

display asymmetries in constituent questions display the same asymmetry in the argument focus constructions that the questions resemble, as seen in the antipassive in the Mam focus sentence in 3a, but not in 3b.²

- (3) a. *Cheep* ϕ - ϕ -*tzyuu-n* *ky-i7j* *kab' xiinaq*
 José PST...3S.ABS.grab.AP 3S.OBL.PAT two man
 'JOSÉ grabbed the men.'
- b. *kab' xiinaq xh-ok* *t-b'iyó-7n* *Cheep*
 two men ...3P.ABS 3S.ERG.hit... José
 'José hit some MEN.'

On the other hand, note that 4 shows no asymmetry in Lango focusing equivalent to the question asymmetry exhibited in 1; both Subjects and Objects are clefted.

- (4) a. *òkélò énn àmê* *òjwàtò* *òpíò*
 Okelo it REL+PART 3S.hit.PERF Opio
 'It's Okelo that hit Opio.'
- b. *òpíò énn àmê* *òkélò òjwàtò*
 Opio it REL+PART Okelo 3S.hit.PERF
 'It's Opio that Okelo hit.'

If question form were a consequence only of Wh-words being focal elements, ALL languages should use the same construction for questions as they do for focusing, and we should find NO focus asymmetries in languages. The Mam data suggest that in addition to focusing we need to consider the linking of semantic roles and syntactic coding, since a voice alternation is employed in this language. But such an alternation is only sometimes employed. How then is the selection of question form determined in a language?

Other approaches have discussed argument asymmetries in complex constructions, but have overlooked the asymmetries in simple Wh-questions. The Principles and Parameters approach has assumed fronting via Wh-movement to be the basic principle explaining interrogative form. Wh-movement phenomena involving cross-linguistic variation in Wh-word position and Subject-Object asymmetries in extraction have played a major role in recent developments in Government-Binding theory (Chomsky 1981). They have been the major tools in the derivation of the ECP (Chomsky 1982) and the investigation of LF (Huang 1982). However, cross-linguistic research has revealed phenomena that are difficult to unify in a program utilizing inviolable principles without excessive use of parametric variation (cf. Legendre et al. 1995 for further discussion). Moreover, these principles do not explain the types of argument asymmetry discussed above.

We will show that the cross-linguistic and language internal variation found in information questions arises both from universal constraints on linking between semantic and pragmatic representations in a grammar to the syntactic forms, and from the interaction of these constraints with others in individual languages. To do this, we need to incorporate information structure and pragmatics into an analysis of question form. Alternations in voice can also be employed asymmetrically in these constructions (as in Mam); thus, some notion of the interaction between semantics and grammatical voice must be included. Finally, because everything must eventually be expressed in the syntax, the linking between pragmatics, semantics and syntax must be considered. Using the constraint-based formalism of Optimality Theory (OT) (Prince and Smolensky 1993), we will account for Subject-Object

asymmetries in constituent questions in Lango, Kwakwala, and Mam, and compare these languages to Basque, a language which lacks such asymmetries. In addition to this, we will discuss the range of Subject-Object asymmetries which should be possible in languages, and propose a theoretical mechanism by which such asymmetries can be described.

The paper is organized as follows. In §2 the survey data which formed the basis for the analysis is discussed in relation to other typological classifications of interrogatives. Then §3 lays out the motivation for the inputs, outputs, and constraints employed in the OT analysis. The constraints are applied to selected languages in §4. Finally, observations and possible extensions are discussed in §5.

2. BACKGROUND: TYPOLOGIES OF INTERROGATIVE FORM. Cross-linguistic investigation has not been concerned with categorizing languages based on observations of asymmetries involved in questioning, or on formal correspondences for different functions. Following Greenberg (1963), empirical typologies have concentrated on word order correlates (Hawkins 1983, Dryer 1991). Such typologies have categorized languages into two classes based on the position of the Wh-word in the clause: (1) languages in which Wh-fronting occurs, such as English; and (2) languages where Wh-words occur in non-initial position, either in situ (e.g. Japanese; Aoun et al. 1993a, 1993b) or in some other special position (e.g. Basque; Kiss 1993). Empirical data show that either strategy is clearly preferred overall. And while studies show at least a tendency for V-initial languages to prefer fronting and V-final to prefer in situ, no deeper insight into interrogative form is provided by these data.

The cross-linguistic survey conducted in conjunction with the current project produced results in keeping with previous studies. We found that the in situ and fronting strategies predominate in languages when they are categorized by position of the Wh-word.

Now consider the Basque data in 5 (Manandise 1988), together with 1 and 2. As in Lango and Mam, Basque shows an overlap in the forms used for Wh-questions and focus constructions. Basque, a predominantly SOV language, uses a pre-verbal position for focusing and questioning.

- (5) a. *Bonba nork egin zuen* (Basque)
 bomb-the.SG.AG who.ERG make.PRF AUX.PST
 'Who made the bomb?'
 b. *Bonba Mikelek egin zuen*
 bomb.SG.AG M.ERG make.PRF AUX.PST
 'MICHAEL made the bomb.'

Revisiting the survey data, we re-categorize languages based on the sentence form employed in forming Wh-word questions. The question forms we see employed are: (1) in situ (Japanese); (2) a special (non-fronted) clausal position (pre-verbal in Basque); (3) a cleft construction (Lango); and (4) use of sentence-initial position (Mam). In addition to focusing, some languages require a voice alternation (Mam) or a resumptive element (Vata; Koopman & Sportiche). The criterion employed here for classifying a question form as a focus construction is that the form must be the same as the argument focus construction in that language. In situ languages can be said to use an unmarked, declarative construction for questioning. The remainder of the languages in the survey form questions by using a construction reserved for questioning that is different from either the declarative

form or any focus construction (e.g. English). Note that we are not claiming that the Wh-word in an English question is not a focal element, but just that it is not marked as focused syntactically. The same is true of the *in situ* languages. This distinction is crucial and will be discussed again in the analysis section. With these form categories, the resultant typology of Wh-question forms is shown in Figure 1.

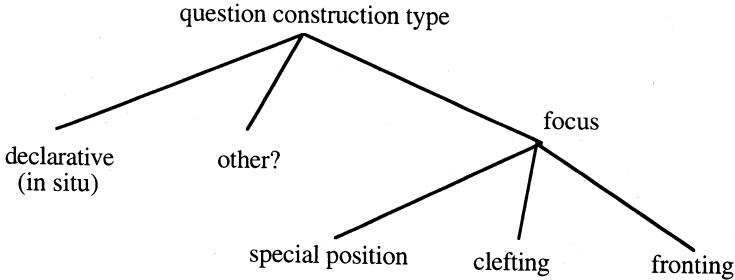


FIGURE 1. Typology of Wh form by construction type employed.

We will concentrate in this analysis on the alternation in questions between declarative and focus constructions observed cross-linguistically in Subject-Object asymmetries. Languages employing some other construction for questioning will not be discussed further in this analysis, though we will return to some speculation concerning this class later.

3. THE THEORETICAL FRAMEWORK AND IMPLEMENTATION OF THE ANALYSIS. Optimality Theory (OT), as described in Prince & Smolensky 1993, is a constraint based formalism which provides a means of exploring the interaction of grammatical constraints without specifying the content of those constraints. It is a valuable tool for examining the interplay of constraints in a variety of linguistic domains. In OT, grammar is viewed as a mapping from inputs to outputs. For a given input there is a set of candidate outputs which are evaluated for well-formedness against a set of strictly ranked, but violable, constraints of Universal Grammar. The winning candidate is the one whose highest constraint violation is lower than the highest violations of all of its competitors. The winner will be the grammatical output for a given input. Constraints are ranked in a strict dominance hierarchy. Therefore, the number of constraint violations a candidate has is not important, but the severity of the violation in the constraint ranking is crucial. Constraint rankings vary across languages, but are fixed within a particular language; thus, one ranking is assumed to hold for all constructions in a language and defines its grammar.

For an OT analysis, we must define a set of input representations and the output forms to which these are mapped. We will also define the constraints which will select the optimal output from among the set of output candidates. These will be defined in the following subsections.

3.1 INPUTS AND OUTPUTS. We assume a model of the grammar in which representations of semantic and pragmatic information are the inputs to a syntactic level where forms are selected. In explaining the selection of question form we

assume that the input representation will include a semantic role of Agent and Patient, and that one of these roles will be unknown to the speaker (the role to be questioned), thus inherently focal. We limit this analysis to the discussion of Agent and Patient questions, though it could be extended to adjunct questions as well, where asymmetries are also observed. The analysis could also be extended to focus constructions, since focused elements are also inherently focal. They differ from questioned elements in that they are asserted by the speaker and assumed unknown to the hearer.

The output level will consist of question forms. The candidate set will consist of those constructions observed as question forms in the languages surveyed. We can define the candidate set formally as follows:

(6) OUTPUT CANDIDATES:

- a. IN SITU - The Wh-word appears in the same position in the clause as the equivalent non-questioned constituent would. (Japanese)
- b. FOCUS - The construction employed for questioning is the same as that used for focusing. (Basque, Mam, Lango Subjects)
- c. FOCUS AND EPENTHESIS - The questioned element is focused, but a resumptive pronoun is found in the position in the clause where the equivalent non-focused constituent would be. (Vata)
- d. FOCUS AND VOICE ALTERNATION - The Wh-word is focused, but the case marking of the arguments in the question are the same as those of a voice construction. (Mam Subjects)

3.2 THE CONSTRAINTS. Constraints are universal principles of well-formedness, and all have been derived from generalization of observed cross-linguistic variation. Constraints are in constant conflict with each other, and the way in which an individual language ranks constraints (and resolves conflicts) determines the pattern of variation found in that language.

The constraints employed in this analysis can be divided into four classes: (1) the Faithfulness constraints, which apply to all levels of the grammar; (2) Semantic mapping constraints, which describe the preferred linkings of semantic representation and syntactic forms; (3) Pragmatic mapping constraints, which reflect the selection of information structure by pragmatic content; and (4) Surface Alignment constraints, which mediate the interaction between semantics and pragmatics. Each will be discussed in turn.

(1) **FAITHFULNESS CONSTRAINTS.** There are two constraints derived in Prince and Smolensky 1993 that have proved applicable in OT analyses of syntax as well as phonology. These ensure that outputs represent inputs as closely as possible, and eliminate candidates which are far from the intention of the speaker.

- (i) **PARSE:** everything in the input must be in the output
- (ii) **FILL:** everything in the output must be in the input

(2) **SEMANTIC MAPPING CONSTRAINTS.** The mapping of semantic roles to syntactic roles is constrained by preferred linkings of thematic roles to grammatical relations (cf. Role and Reference grammar; Van Valin 1993). For example, Agents are preferentially mapped to the syntactic role of Subject, and Patients are typically mapped to the syntactic role of Object. The constraints in (iii) and (iv) are taken from Legendre et al. 1993, and following them we assume a notion of abstract Case, defining syntactic Subject as any argument marked with either nominative or

ergative case, and Object as an argument marked with either accusative or absolutive case.

- (iii) **AGSUB**: Agents are mapped to the syntactic relation Subject.
- (iv) **PATOBJ**: Patients are mapped to the syntactic relation Object.

(3) **PRAGMATIC MAPPING CONSTRAINT**. If an argument is inherently focal (new, unknown, or unexpected) then it should be marked in the output as an argument focus relation. We have adopted Lambrecht's (1993, 1994) structural definition of a focal element as that part of the assertion which differs from the presupposition. Contrary to Erteschik-Shir (1986), we maintain that Wh-words in constituent questions may be (but are not always) in a Focus relation in the sentence. The reason they do not satisfy her dominance test is perhaps that they do not direct the hearer's attention to new information, but rather request the new information from the hearer. Following Lambrecht's (1994:348-351) suggestion that the stress accent in constituent questions is used to activate the object of inquiry in the hearer's mind rather than to provide focus, it seems reasonable that stress would fall within the presupposition, rather than on the Wh-word. Stress serves to tell the hearer what the question is about, and argument focus highlights which aspect of the proposition is unknown and desired by the speaker.

The constraint on the mapping of focal information to Focus relation is given in (v). There is a difference between focal information and a Focus relation. Focal information is part of the pragmatic representation; the Focus relation exists between some element of the clause and the proposition. Thus, a participant in an event can be focal—but not a Focus—if (v) is violated.

- (v) **FOCUS**: Focal arguments are mapped to an argument Focus relation.

(4) **SURFACE ALIGNMENT CONSTRAINTS**. There are two surface alignment constraints. The first is derived from Lambrecht's observation that French seems to have a "constraint against the co-mapping of the pragmatic relation focus and the grammatical relation Subject" (1994:27). The pragmatic relation typically found with Subjects is that of Topic, thus it is unexpected to find Subjects marked with the pragmatic relation Focus. We would expect to find a similar constraint against marking a constituent both as Topic relation and with the syntactic Object relation, because this too would be unnatural, though this plays no role in the current analysis. We summarize the first surface alignment constraint as follows:

- (vi) ***FOCSUB**: Don't focus Subjects.

The second surface alignment constraint prohibits marking a Patient as both a syntactic Object and as a Focus relation. The intuition behind this constraint is that (1) one expects the semantic role of Patient to be associated with the syntactic role of Object, and (2) one also expects a Patient to be pragmatically focal. Because of this double mapping from Patient there exists an association between the syntactic role of Object and focal information, thus to mark a Patient as Focus and Object is redundant. Again, we would expect to see a similar constraint against overtly marking Agents as both Topic relations and as syntactic Subjects.

- (vii) ***P=OBFOC**: Don't mark a constituent as both Object and Focus.

There is an important difference in they way constraints (vi) and (vii) are formulated. The *FOCSUB constraint refers only to what appears in the output and prohibits both of these relations from occurring on the same constituent regardless of its semantic role. This constraint could be satisfied by, for example, the introduction of a resumptive pronoun which would allow the focus and Subject relations to be marked on elements mapped to the same semantic relation but to appear separately in the output. (However, a resumptive pronoun would constitute a violation of FILL.) The *P=OBFOC constraint prohibits marking PATIENTS as both Focus and Object relations; thus introducing a resumptive pronoun would not satisfy the constraint, because both would still be linked to the semantic role of Patient. This constraint can be satisfied by changing the syntactic relation of the constituent, or by neglecting to mark the Focus relation.

As an example of the application of the constraints, the tableau in Table 1 gives the constraint ranking for a language with in situ Wh-words. The in situ form is selected as a consequence of the constraint ranking (from left to right across the top of the table, with the highest constraint to the left). Since the pragmatic mapping constraint FOCUS is ranked lowest, other candidate outputs for A- (Subject) questions and P- (Object) questions all violate more highly-ranked constraints than the in situ form. Constraint violations are indicated by * in the table. Candidates unranked with respect to each other are separated by dotted lines; violations of equivalently-ranked constraints are equally bad. In Table 1, FOCUS is ranked below all other constraints, which are equally ranked.

	CANDIDATES	AGSUB	PATOBJ	FILL	*FOCSUB	*P=OBFOC	FOCUS
A	a. <i>in situ</i>						*
	b. <i>focus</i>				*!		
	c. <i>foc and epenth</i>			*!			
	d. <i>foc and antipass</i>	*!	*				
P	a. <i>in situ</i>						*
	b. <i>focus</i>					*!	
	c. <i>foc and pass</i>	*!	*		*		

TABLE 1. The selection of question form in an in-situ question language.

The next section will apply the constraints to languages with an overlap in question and focus form, particularly ones which exhibit Subject-Object asymmetries.

4. AN OT ANALYSIS OF ARGUMENT QUESTION ASYMMETRIES. We begin with Basque, in which Wh-questioning and argument focusing use the same form, and there are no argument asymmetries in questioning or focusing. As seen in 8 and 9, Basque uses a pre-verbal focus position, which is also the position in which Wh-words are found for both questioned Subjects and Objects in transitive clauses. The pre-verbal focus position is not unique to Basque. It is found in a number of (predominantly V-final) languages (cf. Kim 1988).

- (8) a. *Bonba nork egin zuen* (Manandise 1988)
 bomb-the.ABS who.ERG make.PRF AUX.PST
 'Who made the bomb?'

- b. *Mikelek zer egin zuen*
 Michael.ERG what.ABS make.PRF AUX.PST
 'What did Michael make?'
- (9) a. *Bonba Mikelek egin zuen*
 bomb.SG.ABS Michael.ERG make.PERF AUX.PST
 'MICHAEL made the bomb.'
- b. *Mikelek bonba egin zuen*
 Michael.ERG bomb.SG.ABD make.PERF AUX.PST
 'Michael made the BOMB.'

The constraint ranking for Basque is found in Table 2. The semantic mapping constraints (AGSUB and PATOBJ) are ranked above the surface alignment constraints (*FOCSUB and *P=OBFOC), making voice alternations less optimal than constructions which maintain the expected mappings. Similarly, FILL is ranked above the surface alignment constraints, eliminating the possibility of epenthesis. Finally, the need to mark focal elements (FOCUS) is also ranked more highly than the surface alignment constraints, making in situ dispreferred. Thus, the focus construction wins, at the expense of a surface alignment violation for Subject and Object. To avoid a violation of FOCUS the unexpected marking of Subjects (*FocSub) is violated for Subject questions and the redundant marking constraint (*P=OBFOC) is violated for Object questions.

CANDIDATES		AGSUB	PATOBJ	FILL	FOCUS	*FOCSUB	*P=OBFOC
A	a. in situ				*!		
	b. ☞ focus					*	
	c. foc and epenth			*!			
	d. foc and antipass	*!	*				
P	a. in situ				*!		
	b. ☞ focus						*
	c. foc and pass	*!	*			*	

TABLE 2. Basque Questions.

As we saw in 1 and 4, Lango is an example of a language exhibiting an argument asymmetry in questions. Subject questions require clefting like Subject focusing; Object questions remain in situ, whereas Object focusing is also accomplished through clefting. The Lango ranking is shown in Table 3. As in Basque, voice alternation and epenthesis are dispreferred in Lango because of the high ranking of semantic mapping constraints and FILL. For Subject questions, a focus construction is most optimal, since a violation of FOCUS is worse than a violation of *FOCSUB. However, not focusing Objects produces a less severe violation (of FOCUS) than a violation of *P=OBFOC, allowing the in situ construction to win in Object questions.

Notice that the asymmetry in argument questions in Lango is captured in OT by interposing the FOCUS constraint between the two surface alignment constraints, *P=OBFOC and *FOCSUB, in the constraint ranking. We will see that asymmetries are characterized by this ranking strategy, though the type of asymmetry will depend on the constraint interposed and the ranking of the other constraints.

	CANDIDATES	AGSUB	PATOBJ	FILL	*P=OBFOC	FOCUS	*FOCSUB
A	a. in situ					*!	
	b. focus						*
	c. foc and epenth			*!			
	d. foc and antipass	*!	*				
P	a. in situ					*	
	b. focus				*!		
	c. foc and pass	*!	*				*

TABLE 3. Lango Questions.

In the Mam examples in 2 and 3 we saw an asymmetry involving a voice alternation for Subject questions which mirrors the asymmetry in the focusing. For Subjects, an antipassive is used before fronting can occur; fronted ergatives are disallowed in Mam. Fronting of the absolutive Object questions and focus elements is acceptable.

The argument asymmetry in Mam is again captured in the constraint ranking by interposing constraints between the surface alignment constraints (Table 4). This time, it is the semantic mapping constraints which are interposed. Since *FOCSUB is ranked higher than the semantic mapping constraints, the antipassive is employed to avoid a *FOCSUB violation. Focusing is still required after the antipassive, since FOCUS is a highly ranked constraint. *P=OBFOC is ranked below the semantic mapping constraints, selecting the focus construction from among the candidates for Object questions.

	CANDIDATES	FOCUS	FILL	*FOCSUB	AGSUB	PATOBJ	*P=OBFOC
A	a. in situ	*!					
	b. focus			*!			
	c. foc and epenth		*!				
	d. focus and antip				*	*	
P	a. in situ	*!					
	b. focus						*
	c. foc and pass			*!	*	*	

TABLE 4. Mam Questions.

The ranking { *FOCSUB, AGSUB, PATOBJ, *P=OBFOC } produced the Mam asymmetry in which a voice alternation is employed for Subject questions. We predict that the opposite ordering of surface alignment constraints around the semantic ones is also possible, viz. { *P=OBFOC, AGSUB, PATOBJ, *FOCSUB }. This ranking forces selection of a passive for Object questions. Kwakwala requires such a voice alternation for Object questions, as seen in 14b (Anderson 1984). Subjects are questioned and focused by fronting. The complete constraint ranking for Kwakwala is presented in Table 5.

- (14) a. *ʔənq^w-ida hənʔlida-χ-ux^wda gəla-χ mas-i* (Kwakwala)
 who.DEM shoot.OBJ.DEM grizzly bear.DEM
 'Who shot that grizzly bear?'

b. əx?id su?-s ʒohna-s-ux^wda ləgayu
 what.DEM.hit.PASS.INST John.INST.DEM hammer
 'What did John hit with the hammer?'

	CANDIDATES	FOCUS	FILL	*P=OBFOC	AGSUB	PATOBJ	*FOCSUB
A	a. in situ	*!					
	b. focus						*
	c. foc and epenth		*!				
	d. foc and antipass				*!	*	
P	a. in situ	*!					
	b. focus			*!			
	c. foc and pass				*	*	*

TABLE 5. Kwakwala Questions.

The case of Kwakwala shows that defining a set of constraints allows us to predict the existence of certain grammatical configurations. Similarly, we can predict some combinations will NOT occur in languages. Such predictions result from considering all possible orderings of constraints. This will be discussed in the next section.

5. DISCUSSION. In the analysis above we've looked at rankings which describe the facts for specific languages, but other rankings should produce other patterns of asymmetries. By using a software tool (Raymond & Hogan 1995) it is possible to explore the consequences of all possible rankings on the combination of two functions, generating an analytic typology of the form combinations. When this procedure is applied to Subject and Object constructions, we find that several additional types of construction asymmetries are predicted to be possible given the constraints of this analysis. Table 6 shows the possible combinations, with examples of languages selecting these forms if one has been identified.

		P		
CANDIDATES		a. in situ	b. focus	c. focus and passive
A	a. in situ	Japanese		
	b. focus	Lango	Basque	Kwakwala
	c. foc and epenth		Vata	
	d. foc and antipass		Mam	

TABLE 6. An Analytic Typology of Argument Question Form.

Japanese and Basque have no asymmetries, but apply in situ and focus constructions, respectively, to both arguments. Lango, Kwakwala, Vata, and Mam exemplify four asymmetry types, as shown. Five other combinations are predicted to be possible; no combinations are disallowed by the constraints as they are defined and applied to Subject and Object questions.

Further empirical investigation can help to verify the analytic typology, and hence the constraints, by corroborating the existence of these types. Also crucial to verifying the validity of the constraints is showing that a ranking applies to all

constructions in a language. This goal is pursued by extending the analysis to other related forms, such as focus constructions, topicalizing constructions, and questioning elements in embedded clauses (Van Valin, to appear). The identification of factors resulting in question forms not included in this typology also remains to be done. Examples of forms not explained include non-focus fronting; (e.g. English) and aspectual alternations (Palauan; Georgopoulos 1985).

In summary, we have shown that the selection of question form is governed by universal constraints on the syntactic representation of semantic and pragmatic information, and the interaction of these mappings. The constraints, though universal, are violable and can be variously ranked in importance across languages, allowing different languages to select different forms for questions. Interposing a constraint between pairs of mapping constraints referring to different semantic or pragmatic roles will result in argument asymmetries in question form. By defining a small set of constraints motivated by preferred representations in languages and exploring their interactions through reranking, we have explained asymmetries in a variety of languages, and predicted the existence of languages with yet other asymmetrical combinations of forms.

NOTES

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¹A similarity in focal constituency also exists between the head of a relative clause and a focused NP, and there is often formal similarity between these constructions in languages (Schachter 1973).

²Lambrecht (1993,1994) distinguishes between argument, predicate and sentence focus, and relates Wh-questions to argument focus.

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