## The Distribution of Adverbial and Nominal *Wh*-forms in Balinese

Balinese exhibits a unique distribution of wh-forms. Adverbial wh-phrases (i.e., dija 'when', pidan 'where', kénkénange 'how', and adi 'why') must be fronted (1), whereas wh-nominals and *wh*-PPs must stay in situ (3):

(1)	√pidan ciang naar poh ×pidan?	(3)	<b>×apa</b> cian	g naar	√apa?
	when you eat mango when		what you	eat	what
	'When did you eat mangoes?'	'What did you eat?'			
(2)	√dibi ciang naar poh √dibi.	(4)	×poh cian	g naar	<b>√</b> poh
	yesterday you eat mango yesterday		mango you	eat	mango
			(37	,	

'You ate mangoes.'

go 'You ate mangoes.'

The illformedness of postverbal *pidan* 'when' in (1) contrasts with (2), an example in which *dibi* 'yesterday' occurs postverbally. A similar contrast is observed in the embedded setting. In (5), *pidan* 'when' must occur clause-initially (but only in the clause in which it originates), whereas apa 'what' in (6) occurs only in situ.

- polisi-é **√**pidan (5) **X**pidan Koming naar **xpidan**] inget when policeman-DEF remember when Koming eat when (O) Embedded question: 'The policeman remember when Koming ate mangoes.' (X) Root question: \*'When did policeman remember Koming ate mangoes ?'
- [**Xapa** Koming polisi-é naar √apa] (6) inget policeman-DEF remember what Koming eat what (O) Embedded question: 'The policeman remembered what Koming ate.' (O) Root question: 'What did the policeman remember Koming ate ?'

This paper will demonstrate that Balinese employs movement and in-situ strategies for whphrases depending on the grammatical category of the question word (reminiscent of but not identical to Mandarin Chinese). Comparison of Balinese and languages of the neighboring island of Java (e.g., Javanese, Madurese, Sundanese) shows that the neighboring languages are fairly similar to Balinese with respect to the distribution of nominal wh but differ with respect to adverbial wh-phrases.

We further claim that it is necessary to posit only a few basic parametric differences in order to account for the typological differences in the behavior of adverbial wh in Balinese and the neighboring languages, Javanese, Madurese and Sundanese.

Movement vs. unselective binding: Balinese *wh*-adverbials undergo overt movement as in (7), whereas nominal wh-phrases are variables unselectively bound by a question operator in the matrix scope as in (8).

 $[OP-Wh(x)_i \dots t_i \dots]$  $[OP(x) \dots Wh(x) \dots ]$ (7)(8)

The fronting of adverbial wh-phrases, on the one hand, is argued to be true WH movement for two reasons. First, the movement is obligatory in questions as in (1); second, adverbial whphrases cannot appear within syntactic islands as in (9).

- (9) \*miong-é [né **pidan** naar bé-é] melaib? (10)cat-Def COMP when eat fish-Def run 'The cat [that ate the fish when] ran?
- naar **apa**] melaib? anak [né person COMP eat what run 'The person [that ate what] ran?'

On the other hand, nominal *wh*-phrases will be interpreted by unselective binding and get wide scope, and therefore we expect no island effects. For instance, *apa* 'what' takes matrix scope from within a complement clause in (6) and within a syntactic island in (10), as shown above. In contrast, on the neighboring island of Java, Javanese, Sundanese and Madurese allow both nominal **and** adverbial *wh*-phrases to occur in situ (or fully/partially moved, depending on the language). Sentence-final *kapan* 'when' in (11) and *dha'ramma* 'how' in (12) contrast with (1) and (5) in Balinese, respectively. These facts suggest that the unselective binding account is appropriate for Javenese, Madurese, and Sundanese adverbial *wh*-phrases.

(11) Javanese

✓ kapan awakmu masak ✓ kapan? when you cook when 'When did you cook?'

- (12) Madurese (Davies 2010: p.459, (79a,b), (81))
  - ★dha'ramma Guru-na ngera √dha'ramma mored-da nyoper motor √dha'ramma? how teacher-DEF AV.think how student-DEF AV.drive car how 'How did the teacher think her student drove the car?'

As a result of employing unselective binding rather than overt movement, *wh*-adverbials in Madurese, Sundanese and Javanese are correctly predicted to scope out of the embedded clause and be insensitive to islands (Cole et al. 1999, Davies 2010).

Extreme Locality: Movement of Balinese *wh*-adverbials is further distinguished from standard *wh*-movement in that it cannot cross clausal boundaries. For example, *pidan* 'when' in (5) cannot be extracted sentence initially. We attribute this to "extreme locality", which is attested in Madurese and Sundanese (Davies 2003, Davies et al. 2009). Madurese and Sundanese ban long distance extraction of *wh*-phrases and exhibit extreme locality: wh can only move in its own clause. We show Balinese shares the property of extreme locality, and since *wh*-adverbials in Balinese have to move overtly and cannot be interpreted via unselective binding we can only get embedded question interpretations in (5). As we shall discuss in the paper, the languages we examine languages are divided into two groups depending on the presence/absence of the extreme locality restriction. Similar variation patterns among languages are attested in other language families like Bantu (Zentz 2016).

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