



January 2010

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Recommended Citation

Yoder, Brendon (2010) "Syntactic underspecification in Riau Indonesian," *Work Papers of the Summer Institute of Linguistics, University of North Dakota Session*: Vol. 50, Article 1.

DOI: 10.31356/silwp.vol50.01

Available at: <https://commons.und.edu/sil-work-papers/vol50/iss1/1>

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Syntactic Underspecification in Riau Indonesian

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Indonesian is known for having a relatively simple morphological and syntactic structure. This is especially true of local varieties of the language, where contrast between categories found in Standard Indonesian is neutralized. In the Indonesian variety spoken in Riau Province, there is almost no morphological marking of grammatical categories and there is relatively free word order. Gil (1994, 2003, 2005b) develops a theory of Riau Indonesian grammar that has only one open grammatical category, which he calls S (Sentence). This means that there are no distinctions between categories like noun, verb, and adjective and no basic word order. In this paper I show that Gil's analysis does not adequately account for generalizations in Riau Indonesian syntax. I argue that Riau Indonesian has the basic lexical categories of noun, verb and adjective. Based on these lexical categories, I show that the language has basic SVO word order. I argue that Riau Indonesian can be better analyzed in terms of Role and Reference Grammar (RRG; cf. Van Valin & La Polla 1997, Van Valin 2005) since RRG accounts for generalizations in Riau Indonesian more adequately. I also use Discourse Representation Theory (Kamp & Reyle 1993, Asher 1999) to show how discourse structure can function to aid semantic interpretation of Riau Indonesian syntax in an RRG framework.

1. Introduction

There are many varieties of the Indonesian/Malay language group scattered throughout insular Southeast Asia.* Besides the standard national languages Indonesian and Malay (or Malaysian), there are many varieties spoken locally as a mother tongue; others function as languages of wider communication. Riau Indonesian is one of these languages of wider communication, spoken throughout east-central Sumatra, and now spoken as a mother tongue by a growing number of people in urban areas of Riau Province.

Indonesian has a relatively simple morphological and syntactic structure. Verbs are generally unmarked for tense and aspect, and nouns are generally unmarked for number and definiteness. The basic word order in the clause is SVO, with head preceding modifier in the phrase. While the lexicon and phonology of Riau Indonesian is very similar to that of Standard Indonesian, Riau Indonesian has some unique syntactic features that can be grouped under the general label of underspecification. Word order in the clause is somewhat free. All six basic word orders are attested (SVO, SOV, VSO, VOS, OSV, OVS). There is very little morphology. Nouns, verbs and adjectives function in non-default syntactic positions without overt marking. Based on this underspecification, Gil (1994, 2003, 2005b, 2008) generalizes that the language has only one open syntactic category, termed S (Sentence). In this model there are no distinctions between lexical categories like noun, verb, and adjective. Gil's analysis carefully avoids Eurocentrism and unnecessary syntactic categories, but may not capture certain syntactic distinctions that are actually attested in the language.

* Many thanks to John Roberts for his help in formulating the arguments in this paper during a course on Role and Reference Grammar at SIL-UND in 2009. Dr. Roberts' input was invaluable in formulating the basic approach of the paper. I would also like to thank the participants at the first Dallas-Fort Worth Metroplex Mini Conference in Linguistics for their feedback on a presentation of this material. Comments from Michael Boutin and Paul Kroeger were especially helpful. All remaining errors are my own.

In this paper I will review Gil's data and critique his syntactic analysis. I will then present an alternative analysis framed in terms of Role and Reference Grammar (RRG). I will introduce three elements that aid in the syntax-semantics interface. First I will argue that contrary to Gil's claim, Riau Indonesian has the basic lexical categories of noun, verb, and adjective. Second I will argue for a basic SVO word order based on the lexical categories. Finally, I will claim that discourse structure plays a significant role in a hearer's interpretation of utterances.

In section 2 I present a descriptive look at the syntactic phenomena found in Riau Indonesian,¹ while in section 3 I summarize Gil's analysis of these phenomena. In section 4 I claim that Riau Indonesian shows evidence for the lexical categories of noun, verb, and adjective, as well as basic SVO word order in the clause. I then show how discourse structure can facilitate hearer interpretation in spite of Riau Indonesian's rather impoverished syntax.

2. Riau Indonesian syntax

All languages have a morphosyntactic system that gives clues about semantic interpretation of constituents of a clause. Many languages show word order constraints where the clausal predicate must fill one slot, and various arguments of the predicate fill slots around it. Other languages have systems of morphological marking that distinguish between constituents in a clause. Riau Indonesian seems to provide few morphosyntactic clues of either type about the semantic interpretation of constituents in the clause.

2.1. Basic word order of the clause

All basic word orders are attested in the data. I present them below. Since Gil's data is taken from recorded spontaneous speech, the context of each utterance is given in the third line of the interlinearized example.²

SVO word order (Gil 2008:43):

- | | | | | |
|-----|------|-------|------------|-----------|
| (1) | Saya | pakai | kaca mata, | Vid |
| | 1:SG | use | glass eye | FAM David |

[Speaker putting on a new pair of glasses]

I'm wearing my glasses, David

OSV word order (Gil 2005b:248):

- | | | | | | |
|-----|---------------|-----|---------|-----|-----------|
| (2) | Abang | dia | sendiri | dia | usir |
| | elder.brother | 3 | own | 3 | send.away |

[Complaining about his younger brother Pai, who won't have anything to do with him]

His very own brother, he sent away.

SOV word order (Gil 2004:12):

- | | | | | | |
|-----|------|-------|-----|-------|-------|
| (3) | Aku | Cina | tak | makan | la |
| | 1:SG | China | NEG | eat | CONTR |

[Going out to eat, approaching a Chinese looking place]

I'm not eating Chinese.

¹ This paper is based entirely on data from Gil's papers. I have taken data and analyses from nine of his papers, all listed below in the references section. I rely most heavily on Gil 1994.

² Most of the glosses and free translations in this paper have been quoted verbatim from Gil's work. In a few cases I have made some adjustments for the sake of transparency.

VSO word order (Gil 2005b:247):

- (4) Beli aku laser, 'kan
 buy 1:SG laser Q

[Contemplating a shopping trip]
I'll buy a laser, right.

VOS word order (Gil 1999a:202):

- (5) Kampung saya sering menangkap ini saya
 village 1:SG often N-catch DEM:PROX 1:SG

[Eating crabs, speaker points to crab and says]
In my village I would often catch ones like this.

OVS word order (Gil 2008:43):

- (6) Honda pakai abang Elly
 motorcycle use elder.brother Elly

[Interlocutor tells speaker to go and buy food; speaker doesn't budge; interlocutor asks speaker why he isn't going; speaker explains]
Brother Elly is using the motorcycle.

OV word order (Gil 2008:61):

- (7) Ini pencet ha, ini pencet
 DEM:PROX press DEIC DEM:PROX press

[Playing billiards on laptop computer; speaker showing friend which key to press]
Press this one, press this one.

VS word order (Gil 2003:74):

- (8) Rekam die
 record 3

[Speaker discovers I've been recording]
He's recording.

At first glance, none of these word orders appears to be a marked construction. Notice especially the “near-minimal syntactic pair” (Gil 1994) in examples (1) and (6). The word **pakai** is the predicate in both clauses and occupies a medial position, but in example (1) the subject precedes and the object follows the predicate, while in example (6) the reverse holds: the object precedes and the subject follows the predicate. The argument that neither of these is a marked construction comes from the fact that there is no morphological or syntactic marking of the change in grammatical relations, and no apparent discourse- or context-related motivation for a non-default word order in either case.

2.2. Lexical categories

Riau Indonesian also shows what Gil calls “zero-conversion” of words from one syntactic category to another. In most languages, nouns function in the syntax as arguments of the predicate, verbs function as the predicate of the clause, and adjectives function as modifiers.³ Below I present two examples of each of the basic lexical categories (noun, verb, adjective) occurring in a non-default syntactic function (in bold print within each sentence).

³ For the sake of simplicity, here I do not distinguish between nominal modifiers (adjectives) and verbal or adjectival modifiers (adverbs). I treat them all as belonging to the same general category.

A noun functioning as the predicate of the clause (Gil 1994:182):

- (9) Orang **bahasa** **Inggeris** sama David?
 person language English with David

[discussing interlocutor's trip to the Philippines]
Did people (speak) English with (you) David?

A noun functioning as a modifier (Gil 2008:59):

- (10) Kepala **desa** itu, pindah rumah **papan** itu
 person village DEM:PROX move house board DEM:PROX

[From narrative about peeping tom]
The village head moved into that wooden house.

A verb phrase functioning as an argument of the predicate (Gil 1994:182):

- (11) **Tunggu** **taxi** susa sekali
 wait taxi difficult very

[discussing public transportation in Singapore]
Waiting for a taxi is very difficult.

A verb functioning as a modifier (Gil 2005b:247):

- (12) Beli nasi **goreng** aku
 buy rice fry 1:SG

[Group of people decide they want to play cards; somebody tells speaker to go out and buy some; speaker objects on the grounds that it's somebody else's turn to go out]
I bought the fried rice.

An adjective functioning as an argument of the predicate (Gil 1994:182):

- (13) Masok **putih,** masok **putih,** masok **putih**
 enter white enter white enter white

[playing billiards]
The white one is going in, the white one is going in, the white one is going in.

An adjective functioning as the predicate of the clause (Gil 2002:264):

- (14) Ada tak untuk **mutih** kulit di Malaysia?
 exist NEG for N-white skin in Malaysia

[Speaker wants me to buy him some skin lotion on my next trip to Malaysia]
Is there anything for making one's skin white in Malaysia?

In examples 9-13 there is no marking to show that these words are being “zero-converted” from one lexical category to another. In example 14 there is morphological marking on the adjective which indicates that it is functioning as a predicate.

I have highlighted above the basic types of underspecification found in Riau Indonesian. Word order in the clause does not seem to be specified. Nouns, verbs and adjectives do not seem to have default syntactic functions.

3. Gil's analysis

Gil argues that a presentation of the facts as above, using categories like noun and verb, phrase and clause, and default word order, is Eurocentric and unhelpful in accurately capturing the facts of non-European languages, especially languages like Riau Indonesian that are structurally very different from traditionally studied languages. Languages should be described and analyzed on their own terms, without

using categories from a particular theory or language family that may not be helpful. He proposes a theory of Riau Indonesian syntax with three generalizations to account for all the facts presented above. I repeat them below, from Gil 1994:188-189.

- i. There is only one open syntactic category, S.
- ii. Any expression X belonging to S may be associated with an interpretation belonging to any of the major ontological categories: EVENT, STATE, TIME, PLACE, THING, and possibly others.
- iii. For any expressions X and Y belonging to S, the construction XY may be associated with any interpretation derived by straightforward compositional means from the interpretations of X and Y.

In (i), Gil says that Riau Indonesian does not distinguish between thematic roles, lexical categories, or phrasal and clausal constructions. All words in the lexicon belong to the single category S, and are assigned to the syntactic slot S in any given utterance.⁴ This entails that any word and any combination of words in any order is a grammatical utterance since it is a complete Sentence. Number (ii) associates the syntactic S with semantics. There are five main ontological categories (EVENT, STATE, TIME, PLACE and THING), and any S can be associated with any of the ontological categories. Number (iii) is the compositional algorithm in the model. Any two Ss, each of which is associated freely with one of the ontological categories, can combine to form an utterance belonging to any of the five ontological categories, with a meaning derived from the meaning of the combination of the two Ss. The following syntactic and ontological category structures for sentence (13) above (Gil 1994:194) illustrates the model. I have provided the English gloss on the last line.

- iv. *Syntactic Structure:*
[_S[_S masok] [_S putih]]
Ontological Category Structure:
[_{EVENT} [_{EVENT} masok] [_{THING} putih]]
Compositional Semantic Structure:
masok ^ **putih**
enter ^ **white**

A rough translation of the output of the final compositional semantic structure would be something like, “An event associated with a going-in event and a white thing”. With this model, a sentence in Riau Indonesian could have many possible interpretations. Gil 2005b:246 shows how the sentence **makan ayam** “eat chicken”, a two-word clause identical in structure to (iv) above, could have the following interpretations:

- v. Makan ayam / Ayam makan
The chicken is eating
The chickens are eating
A chicken is eating
The chicken was eating
The chicken will be eating
The chicken eats
The chicken has eaten
Someone is eating the chicken
Someone is eating for the chicken
Someone is eating with the chicken

⁴ Gil also mentions that there is a small closed class of words that are not part of S. These are mostly operators. This class, which he calls S/S, includes negators, quantifiers, prepositions and a few others.

The chicken that is eating
 Where the chicken is eating
 When the chicken is eating

This is the extent of Gil's model for the syntactic structure and interface between syntax and semantics in Riau Indonesian. There are some advantages to this approach. It is based on a grassroots inductive approach that seeks to identify crucial factors evidenced in the language and account for them on their own terms. It avoids projecting irrelevant categories onto a syntax with no evidence for them. The claim that there are many traditional syntactic categories for which there is no evidence in Riau Indonesian seems to be correct.

The model does, however, raise several important questions. First, are all words in the lexicon unassociated with any of the ontological categories? Are words like **lari** 'run', **masuk** 'enter', and **pakai** 'use' most often realized in the syntax as predicates, while words like **rumah** 'house', **buku** 'book' and **ibu** 'mother' most often realized in the syntax as arguments of the predicate, or is there no association? A neutralization of such basic generalizations would be quite rare among the world's languages. In (v) above, even though the sentence has many possible interpretations, in each interpretation **ayam** 'chicken' is a THING while **makan** 'eat' is an EVENT. If all Ss were freely associated with any of the five ontological categories, we would expect the thirteen possible meanings above, times five for each word's possible association with an ontological category, times five for the whole utterance's possible association with an ontological category. This would generate at least a few hundred possible meanings for the sentence. Evidence for this is not satisfyingly convincing. Another unanswered question is how ontological categories are assigned to a particular S. When and how does this take place if they are unassociated in the lexicon? Can discourse structure and context be responsible for such a large part of the load of semantic interpretation?

4. An alternative perspective

In this section I present evidence that Riau Indonesian has distinctions between basic lexical categories and that these are associated with a basic word order in the syntax. I show how an RRG-based approach to the syntax-semantics interface can handle the Riau Indonesian data better than the model above. I then show how discourse structure can combine with syntactic structure to provide clues to semantic interpretation that the somewhat impoverished syntactic structure cannot provide.

Gil's model states that any word S can associate freely with any ontological category. This means that any word could be construed as an EVENT, STATE, TIME, PLACE, or THING depending on the context. No word is associated in the lexicon with any particular ontological category. In this framework, words are associated with ontological categories and the ontological categories are then associated with syntactic positions. If words in a particular grammar are not associated with ontological categories in the lexicon, then there is no way to assign them to default syntactic positions.

The RRG model has both a syntactic representation and a semantic representation. Words are associated with syntactic slots. The semantic representation is built on the clause nucleus, which functions as the predicate of the clause and is associated with a clausal semantic representation in the lexicon. So the predicate in the syntactic representation does not have to be a word associated with an event; it can be any lexical category. In order for an RRG analysis of Riau Indonesian to make sense, we need two things. First, we need to find evidence that Riau Indonesian makes syntactic distinctions between lexical categories. If, as in Gil's model, there are no such distinctions, then it is not possible to associate particular words with RRG's syntactic representation, and therefore no way to access the semantic representation. To check for evidence, in section 4.1 I will look through the data to see if there is evidence for the basic lexical categories of noun, verb and adjective. Secondly, we need to find how the basic lexical categories are identified in the syntax. This would be either morphological marking of constituents or word order. Since we already know there is very little morphological marking, in section 4.2 I will look

through the data to see if there is a basic word order. Finally, in section 4.3 I will discuss discourse structure and how it aids in interpretation of an utterance where lexical categories and basic word order are inadequate.

4.1. *Lexical categories in Riau Indonesian*

I reviewed the 154 example utterances found in Gil's ten published articles (listed below in the references section) to find whether there was a correlation between traditional lexical categories (noun, verb, adjective) and traditional syntactic functions (argument, predicate, modifier).⁵ In classifying the words into lexical categories, I used the classification found in Standard Indonesian, referring to *Kamus Besar Bahasa Indonesia* (Comprehensive Indonesian Dictionary) when necessary. I found a total of 271 nouns, 161 verbs, and 55 adjectives. In each utterance, if the noun functioned as an argument of a predicate it was put in the default category. If it had another syntactic function, I counted it as an exception. I did the same for verbs and adjectives, where the default function of verbs was predicate of the clause, and the default function for adjectives was modifier (of a noun, verb, or other adjective). For sake of simplicity, I excluded quantifiers, numerals, question words, demonstratives and auxiliary verbs. Table 1 below summarizes the results.

Table 1. 487 nouns, verbs and adjectives and their syntactic function.

	default	non-default
Noun (default=argument)	244 (90%)	27 (10%)
Verb (default=predicate)	160 (99%)	1 (1%)
Adjective (default=modifier)	27 (49%)	28 (51%)

Certain definite tendencies can be seen. 90 percent of nouns occur in the syntax as arguments of the predicate. Over 99 percent of verbs occur in the syntax as predicate of the clause. 49 percent of adjectives occur in the syntax as modifiers of other constituents. In spite of these definite tendencies, there are some exceptions. In viewing all the exceptions together, five simple generalizations can be made. Below are five grammatical rules, taken mostly from Standard Indonesian, which can account for most of the exceptions above.

- i. Nominal modifiers (nouns, verbs, adjectives) immediately follow the head noun in the phrase. See Sneddon 1996:142. 19 occurrences in the data.
- ii. Equative clauses: The predicate in an equative clause is a NP or AP in juxtaposition with the subject. 22 occurrences in the data.
- iii. Noun phrases can be headless (cf. English "four reds and a yellow"). 3 occurrences in the data.
- iv. /N-/ rule: The verbal prefix /N-/ changes nouns and adjectives to verbs. See Sneddon 1996:65-66. 6 occurrences in the data.
- v. /-kan/ rule: The verbal suffix /-kan/ changes adjectives to verbs. 2 occurrences in the data.

The first three generalizations are syntactic. The modifier construction in (i) is equivalent to the one found in Standard Indonesian, as is the equative construction in (ii). The rule in (iii) allowing headless noun phrases is not found in Standard Indonesian. This rule explains adjectives functioning as arguments of the predicate, where the adjective is a basic property of the unexpressed noun (e.g. example sentence 13 above). The fourth and fifth generalizations are morphological and list two verbalizing affixes, again with counterparts in Standard Indonesian. Table 2 shows an updated list of occurrences that are now

⁵ It is recognized that working only with published data is a serious limitation. The results presented here will need to be verified on the basis of additional data.

accounted for either in terms of their default syntactic function (as in Table 1), or in terms of the five generalizations.

Table 2. 487 nouns, verbs and adjectives and their syntactic function, after 5 rules apply.

	usage explained	usage not explained
Noun (default=argument)	268 (99%)	3 (1%)
Verb (default=predicate)	160 (99%)	1 (1%)
Adjective (default=modifier)	55 (100%)	0 (0%)

Almost all occurrences are now accounted for. There are three nouns and one verb that still do not have an explanation. These are listed below.

Nouns functioning in predicate position⁶ (Gil 2001:350, 1994:182):

- (15) Ha, Yong Dyolah ini 'kan, dia suka **peminum**
EXCL Yong Dyolah DEM.PROX NEG 3 like drinker

[Beginning folk tale, introducing main character]

Ah, Yong Dyolah, right, he used to like to drink a lot.

- (16) Orang **bahasa** **Inggeris** sama David?
person language English with David

[discussing interlocutor's trip to the Philippines]

Did people (speak) English with (you) David?

A noun in verbal modifier position (Gil 2008:53):

- (17) Aku main **seorang**
1:SG play one-person

[Speaker squabbling over who gets to play on laptop computer]

I'm playing by myself.

A verb in argument position⁷ (Gil 2002:253):

- (18) Di **berenang** makan
in swim eat

[Asked whether he is hungry, speaker answers not, and explains, alluding to their earlier trip to the swimming pool]

I ate where we were swimming.

I do not have good explanations for these apparently non-canonical occurrences. In normal spontaneous speech there is certain to be a few anomalous usages and constructions. However, since they amount to less than one percent of the total number of words in the count, they do not detract from the overall conclusion that Riau Indonesian shows definite evidence for the lexical categories of noun, verb and adjective and their associated syntactic functions of argument, predicate and modifier.

4.2. Basic word order in Riau Indonesian

I reviewed the 154 utterances again and this time made note of the ordering of constituents within the clause and phrase. My hypothesis was that the Standard Indonesian default word order (SVO in the

⁶ Note that in (15), **dia suka peminum** does not mean 'he liked drinkers', but rather 'he liked being a drinker'.

⁷ In (18), the verb **berenang** is an argument of the preposition **di**.

clause, head-modifier order in the phrase) would occur more frequently than other orderings. Some utterances contained only one basic constituent as in (19) below (from Gil 2001:348) and were not counted because ordering could not be established. The results are presented in Table 3.

- (19) Ndak Royal do?
 NEG Royal NEG.POL

[Speaker asks me where I'm staying; I say 'City Hotel'; speaker asks about the bigger hotel down the road]

Aren't you staying at the Royal?

Table 3. Word order in 118 clauses and 30 phrases.

	default	non-default
Clause [SV(O)]	90 (76%)	28 (24%)
Phrase [head – modifier]	24 (80%)	6 (20%)

There is a definite tendency toward SVO word order in the clause with 76% of all occurrences, and head-modifier order in the phrase with 80% of all occurrences. This is, however, not as overwhelming as the results of lexical categories from Table 1 above and there are many exceptions. Table 4 shows a breakdown of word order in the clause.

Table 4. Non-default word order.

SV(O)	OSV	SOV	VSO	VOS	OVS	OV	VS
90	4	3	1	2	2	3	13

All six basic word orders occur. The OV and VS word orders are from imperative and intransitive sentences, respectively, that do not have the third constituent in the structure. The non-default word orders here can be analyzed in terms of discourse as special focus structures. Table 5 gives an explanation of the special structures in use for each construction. The three basic structures are fronting for focus, “afterthought” subject, and passive voice.

Table 5. Discourse function of non-default word orders.

Word order	Discourse function	Example sentence #
SVO word order	default	(1), (10) (16), (17)
Object-initial word order (OSV, OV)	Fronting of object for focus	(2), (7)
SOV word order	Fronting of object for focus to pre-predicate (but not pre-subject) position	(3)
Verb-initial word order (VSO)	Fronting of verb for focus	(4)
Subject-final word order (VOS, VS)	Subject-final word order is also found in Standard Indonesian; it is explained by Voorhoeve as an “afterthought” subject (quoted in Vamarasi 1999)	(5), (8)
OVS word order	Unmarked passive construction. Standard Indonesian would require the passive verbal prefix <i>di-</i> ; here it is unmarked. See Gil 2002 for an analysis of this prefix in Riau Indonesian	(6)

Most of the non-default word orders can be explained as discourse focus structures. These structures are also found in Standard Indonesian. The “afterthought subject” structure may not be immediately obvious; see Vamarasi 1999 for a discussion of this phenomenon in Standard Indonesian, where it is quite common.

It is noteworthy that a non-default word order never occurs in the same phrase or clause as a non-default usage of a lexical category. There are many examples of non-SVO word order in clauses, but it seems that this only happens when the constituents are realized with their default syntactic function. Lexical nouns are arguments of the predicate, lexical verbs are predicates, and lexical adjectives are modifiers. When all constituents are realized with their default function in the syntax, their order within the syntax is more flexible. Verbs can function as arguments, and nouns and adjectives can function as predicates; but when they do so, the clause follows the default SVO pattern.

Since we have found evidence for lexical categories and SVO word order, an RRG analysis is now pretty straightforward. In approaching a clause or phrase in Riau Indonesian, the RRG grammar first locates the predicate by the default word order, morphological marking (if any), rules (i-v) under Table 1, and the rules in Table 5. Once the predicate is found, its semantic structure is pulled from the lexicon and its various argument positions are associated with elements in the syntax. Note the following example from Gil 1999a:202.

(20)	Kampung	saya	sering	nangkap	ini	saya
	village	1:SG	often	N-catch	DEM:PROX	1:SG

[Eating crabs, speaker points to crab and says]

In my village I would often catch ones like this.

In this clause, the first element is **kampung saya** ‘my village’, where **saya** ‘1sg’ is understood to modify **kampung** ‘village’ because of its postnominal position. **Kampung**, lexically a noun, is functioning as an argument in the sentence. **Nangkap** ‘catch’, a lexical verb, is functioning as the predicate of the clause and is marked with the optional verbal prefix **N-**. Next comes the proximal demonstrative **ini**, which, standing alone, can only function as an independent argument of the predicate. The last word is **saya** ‘1sg’, which, as expected, functions as an argument of the predicate. Since all clausal constituents have their default function in the clause, word order is free to change from the default SVO order. In this sentence, the subject **saya** ‘1sg’ moves to the end as an “afterthought subject” and the oblique locative phrase **kampung saya** ‘my village’ is fronted for focus.

The RRG grammar first identifies the predicate of the clause **nangkap** ‘catch’ by its verbal prefix **N-** and by its medial position. It then pulls the semantic representation of that word from the lexicon and the various arguments in the semantic representation are associated with the nouns in the syntax. I cannot provide a detailed description of syntax to semantics mapping in RRG here, so I refer the reader to Van Valin 2005 for an in-depth explanation of the model.

4.3. Discourse structure and semantic interpretation

In the RRG analysis so far, Riau Indonesian syntax has more interpretive power than in Gil’s model, but it is still not very powerful. Nouns, verbs and adjectives must appear in a certain position in the clause only if they are not functioning in their default syntactic role. Otherwise, they are somewhat free to move around. How is a hearer to decipher which noun, for example, is to be interpreted as the semantic Actor, Undergoer, instrument or locative? In a sentence with multiple verbs, how is one to know which one is the main predicate, and whether the second verb is to be interpreted as a predicate of a smaller clausal constituent, a core argument, or a modifier? It appears that Riau Indonesian syntax cannot provide interpretive clues for these things. As Gil suggests, context probably plays an important interpretive function at this level.

In Discourse Representation Theory (Kamp and Reyle 1993, Asher 1999)⁸, discourse structure can inform the semantics directly as part of the syntax-semantics interface. Utterances do not take place in isolation, but they build on each other in particular contexts. Discourse moves around particular topics, giving discourse its coherence. In any discourse there are a few key elements that are referred to again and again and various languages have different strategies for handling these repeated references. Most use pronouns, simple stand-alone words that replace the full referents; in other languages the topic is simply not mentioned after it has been mentioned once in a discourse. In these “pro-drop” languages, many sentences consist entirely of the focused element, the element being introduced into the discourse. The topic, which is the presupposition, is completely omitted.

Van Valin 2005 takes a simplified version of Discourse Representation Theory as his model for representing discourse structure. The following example, here repeated from Van Valin 2005 (172), shows how discourse builds on itself.

Table 6. A simple example of discourse representation structures.

Mary arrived.	She saw Sam.	He kissed her.
v	w, x	y, z
Mary(v) v arrive	Mary(v) v arrive Sam(x) w=v w see x	Mary(v) v arrive Sam(x) w=v w see x y=x z=w y kiss z

Each utterance in this discourse has a presupposition from the previous parts of the discourse that can be used in interpretation of the utterance. In the second sentence, *Mary* and *arrive* form the presupposition because they were introduced in the first sentence. The constituents *saw* and *Sam* are introduced as the sentence focus. The third sentence’s presupposition is the total information from the first and second sentences. In languages like English, the discourse structure is necessary to find the referents of pronouns, but it does not directly participate in the syntax-semantics linking because all the core arguments are explicated in the syntax in some way (e.g. by pronouns), including the focused elements and the topic elements already introduced in preceding sentences.

In “pro-drop” languages like Mandarin and Indonesian, the topic is often excluded in discourse-internal sentences and only the elements in focus are stated (typically the predicate). In the Riau Indonesian example below from Gil 2005a (52), there are two transitive verbs with their operators. They have two arguments in their logical structures, but none of the four arguments is explicitly stated in the syntax. The discourse structure can inform the predicate’s logical structure directly, bypassing the need to have previously mentioned elements stated in the syntax.⁹ For sake of simplicity, I have only shown the semantic representation and linking for the second predicate **disimpan-simpan** ‘put away’. I have constructed the presupposition from the context Gil provides in the third line of his transcription and include only the elements necessary for interpretation of the first clause.

⁸ Discourse Representation Theory is not part of the RRG theory of grammar, but the two theories fit nicely together. Van Valin 2005 and Van Valin and La Polla 1997 both include discussions of Discourse Representation Theory in their texts on RRG.

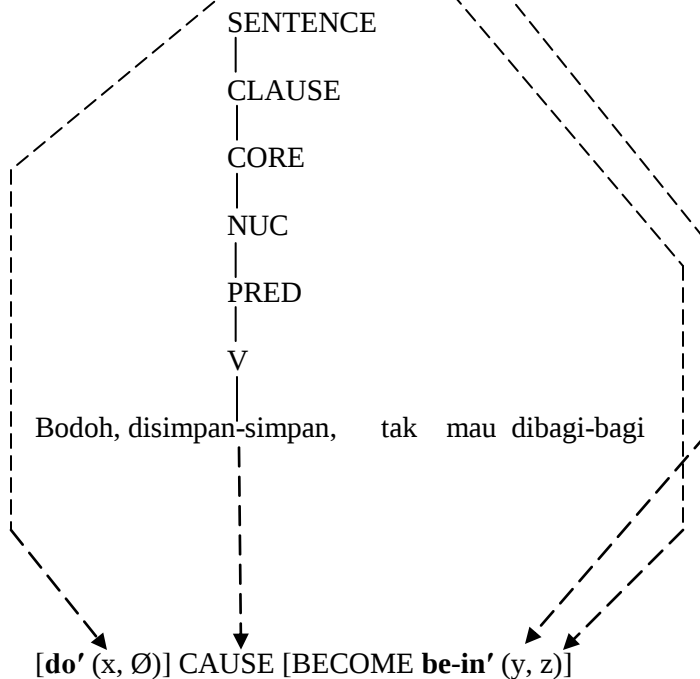
⁹ This method of representing linking between the syntax and semantics is a development of Role and Reference Grammar (Van Valin and LaPolla 1997, Van Valin 2005). The extension shown here, which links syntax, semantics and discourse, follows Van Valin 2005:170-175.

- (21) Bodoh, disimpan-simpan, tak mau dibagi-bagi
 stupid PAT-RED~put.away NEG want PAT-RED~share

[At night market, complaining about friend who was pouring his drink, bit by bit, into a bottle, instead of sharing it with his friends]

Stupid, he's putting it away, he won't share any of it.

Presupposition	Assertion
a, b	a, b, c
friend(a)	friend(a)
drink(b)	drink(b)
a have b	a have b
	bottle(c)
	a save b in c



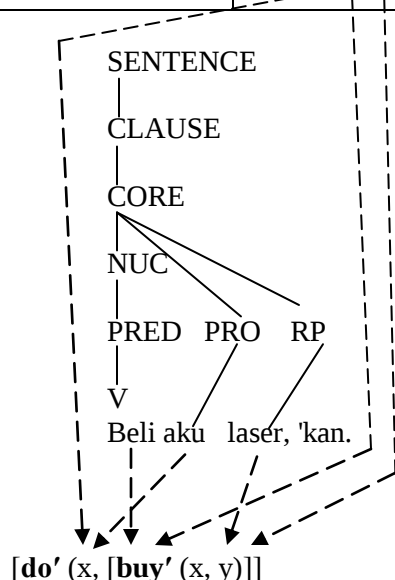
In this clause, the only part of the syntax is the predicate, which is the item in focus. Neither of the predicate's arguments is realized in the syntactic structure, although they are present in the semantic representation and also in the discourse context. In this situation, the discourse informs the semantic representation directly. The same is the case for the other two predicates in this utterance: **bodoh** 'stupid' and **dibagi-bagi** 'share'.

This type of linking has potential for explaining underspecified constituents in Riau Indonesian clauses where the constituents are present, but it is not clear which part of the logical structure they fill. The following example, repeated from (4) above, demonstrates the approach.

(22) Beli aku laser, 'kan
 buy 1:SG laser Q

[Contemplating a shopping trip]
 "I'll buy a laser, right."

Presupposition	Assertion
a, b	a, b
aku(a)	aku(a)
X(b)	laser(b)
a buy b	a buy b



Here both the discourse structure and the syntax inform the semantic representation. The discourse structure contributes the presupposition, where it is already known that the actor is going to buy something. In the assertion, the actor is simply stating what he is going to buy. The syntax by itself cannot successfully link all its parts to the semantic representation, since the two arguments are not marked for thematic role, grammatical relations, or anything else. The discourse structure by itself cannot introduce new elements; these are introduced through the syntax, and the discourse structure helps in interpreting them.

In this section I have reviewed three areas of Riau Indonesian grammar that aid in semantic interpretation of utterances. First, there are at least three lexical categories that associate with three basic syntactic functions (noun = argument of the predicate, verb = predicate, adjective = modifier). Second, basic SVO word order helps distinguish the syntactic function of lexical constituents. Special focus structures can account for non-canonical word order in the clause. Finally, discourse structure can link directly to the semantic representation of an utterance to help clarify ambiguous syntax.

5. Conclusion

Syntactically, Riau Indonesian is an unusual language. Gil's model does not impose outside grammatical notions on Riau Indonesian, instead examining the language on its own terms. A good theory of syntax should ideally be able to account for all the syntactic phenomena in a language without creating distinctions not attested in the language. However, it appears that Gil's model has gotten rid of too many

distinctions and is left with very little interpretive power. The alternative analysis, couched in terms of Role and Reference Grammar, is more insightful because it accounts for syntactic phenomena not accounted for in Gil's model, but still does not impose categories that are not attested in the language.

The model I have proposed is still rough and would need more work to account for a wider variety of sentences in Riau Indonesian. I have not detailed the distinct roles of discourse structure and syntax in the semantic interpretation of an utterance; I have simply said that both contribute to the process. Some more answers to the question of Riau Indonesian syntax-semantics interpretation may lie in information structure. Specifically, does the status of elements in the discourse (active, accessible, inactive, etc) have an influence on syntactic structure? We have only looked at clause- and sentence-level phenomena; perhaps the syntactic structure of Riau Indonesian makes crucial reference to something wider than the clause or sentence.

Abbreviations

CONTR	contrastive
DEIC	deictic
DEM	demonstrative
EXCL	exclamation
FAM	familiar
FREQ	frequentative
NEG	negative
PAT	patient orientation
POL	polarity
PROX	proximal
Q	question
RED	reduplication
SG	singular
1	first person
3	third person

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