

Prepositional polysemy in Old Javanese? A semiotactic analysis of *ri*

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Introduction

Old Javanese is an Austronesian language that was used in the 9th-14th century in Java, Indonesia. As the language was primarily used for literary and formal (written) communication, all linguistic analyses, including the present one, are based on such works. Here the focus is on the semantics of a frequently found particle, *ri*. A large number of meanings have been assigned to this morpheme, including *in*, *at*, *on*, *to*, thus incorporating important prepositions that many languages differentiate.

The primary purpose of this paper is to try and find the ‘true meaning’ of this particle, if it has one. Maybe the morpheme is a polysemous preposition, as it appears to be on first sight; or several homonymous Prepositions, maybe it is an empty morpheme, adapting meaning from the main verb. To determine whether it is a kind of polysemy, homonymy or ‘semantical emptiness’ we are dealing with, a semiotactic analysis is made of several frequently attested constructions containing this particle *ri*. It is argued that actually none of these labels is satisfactorily applicable to *ri*; instead a broad meaning of ORIENTATION is proposed.

1. Background

Within linguistic semantics, polysemy became one of the central issues. Different theories and methods have been adopted to shed some light on this complex aspect of language, ranging from highly formal to cognitive or psycholinguistic approaches (e.g. Brugman 1997; Vanhove 2008; Rakova et al. 2007; Nerlich et al. 2003; Ravin and Leacock 2000; Cuyckens and Zawada 1997).

Function words are of particular interest to linguists concerned with polysemy, since these close-classed words are often used in several grammatical and semantic contexts without carrying a clear lexical meaning (Haspelmath 2003:211). This multifunctionality often leads to the assignment of multiple meanings to one function word. This alleged polysemic character of function words is questioned in this paper. Based on evidence from Old Javanese, it is argued that a monosemous approach might in fact be more appropriate in some cases. There is an extensive amount of research available on Old Javanese literature, but unfortunately, the linguistic aspects of the language are less thoroughly described.

In this paper a semantic analysis of one particular function word is made; this particle *ri*, is frequently found in different types of Old Javanese texts, but its meaning is quite unclear. The purpose of this paper is to describe the meaning of this Preposition. Is it a polysemous preposition, as it appears to be at first glance, carrying a number of related meanings? Are there in fact several homosemous prepositions of the form *ri*? Or is it an empty morpheme, adapting

* I would like to thank Aone van Engelenhoven and Hetty Geerdink-Verkoren, for organizing the workshop on Semiotactics that has led to this publication, and for their enthusiasm and support during the writing of this paper. Hopefully this chapter will contribute to the recognition and appreciation of semiotactics as a clever and useful approach to linguistics.

In: Hetty Geerdink-Verkoren and Aone van Engelenhoven (eds), *Searching the invariant: semiotactic explorations into meaning*, Muenchen : Lincom, 2011, 145-167.

meaning from the main verb? To solve this problem a semiotactic analysis of several frequently attested constructions containing this particle is made. But before these questions are addressed, some background information on the Old Javanese language is discussed.

Old Javanese is an older phase of the Javanese language and was used as a formal and literary language from the tenth to the fifteenth century in what is now the eastern part of Central Java and the whole of East Java (Teeuw 1965:229). The language belongs to the Western Malayo-Polynesian branch of the Austronesian language family, but is heavily influenced by the Sanskrit lexicon (Ogloblin 2005:590). In any given Old Javanese literary work, approximately 25% of the vocabulary is derived from Sanskrit. This influence of Sanskrit reflects the interest that the ancient Javanese (and other peoples in Southeast Asia) took in the flourishing Indian civilization of the time. Consequently, the major literary works produced in Old Javanese predominantly relate (in one form or another) to Indian/Sanskrit epics.

While evidence of writing in Java dates to the Sanskrit "*Tarumanegara* inscription" of 450 AD, the oldest example written entirely in Javanese, called the "*Sukabumi* inscription", is dated March 25, 804 AD. Although this is not a piece of literature, this inscription is often mentioned as the starting point of Javanese literature. In this paper, I use the *Adiparwa* as literary source. This work is the first book of the Old Javanese adaptation of the *Mahabharata* epic. It is a narrative poem written in verse form and dates back to the 10th century (Creese 2001:8).

Nowadays a derived form of Old Javanese literary and prose language called Kawi is still used on the islands of Java, Bali, and Lombok. Kawi is probably the ancestral language of modern Javanese and is commonly used in *wayang golek*, *wayang wong* and *wayang kulit*, in addition to ceremonial activities such as a Javanese weddings. The island of Lombok has adopted Kawi as its regional language, and thereby reflects the very strong influence of neighbouring East Java.

Another indication of the prominence and importance of Kawi/Old Javanese to Indonesia is the national motto : 'Unity in diversity', which is taken from an Old Javanese Buddhist text of the fourteenth century and actually reads '*Bhinneka Tunggal Ika*', which literally means 'different they are, one are they', referring to the scattered islands of the archipelago nation (Barnes 1985:93; Uhlenbeck 1964).

Old Javanese is written in a special script, called *hanacaraka*, which are the names of the first five letters combined. The script is an alpha-syllabic script (or *abugida*), a segmental writing system which is based on consonants, and in which vowel notation is obligatory but secondary (Van der Molen 1993:1-3; Soemarmo 1995). This script complicates the linguistic analysis in several manners: firstly, morpheme boundaries are sometimes less clear due to the vowel diacritics; secondly, Javanese script does not differentiate between lowercase and uppercase letters; thirdly, the lack of letter spacing complicates the readability and the use of meter in literary texts is of potential influence on the grammar (Van der Molen 1993:7). Things are even further complicated by a great number of sandhi rules.¹ In the next section some typological characteristics of Old Javanese are discussed, followed by an overview of previous explanations of the preposition *ri*.

¹ These sandhi rules will not be further discussed as they are not of primary concern in this paper. In the data analysis all morphemes affected by sandhi rules are presented in their pre-sandhi form.

2. Typology

Typologically, Javanese is an agglutinative language; hence base words are modified through extensive use of affixes. The affixes are, among others, used to derive (in)transitive verb forms, passive or active voice, aspect, mood and nominalization (for a complete overview see Ogloblin 1991). The most important affixes for this analysis are those marking voice: active voice is marked on transitive roots by the affixes *aN-/maN-* and *-um/-m-*. Combined with intransitives these affixes denote actions, transitions, movements or states. Passives are formed with *in-/in-*, but if the verb base contains the transitive suffix *-i*, the passive marker becomes *-an*. Besides suffix *-i* Old Javanese has another transitive suffix *-akĕn*, the latter is often used as causative (Ogloblin 2005:615-616).

Old Javanese particularly had VSO or sometimes VOS word orders, which became an SVO word order in modern Javanese (Ogloblin 2004:617). Verbs are not inflected for person or number. Tense is not indicated either, but is expressed by auxiliary words such as ‘yesterday’ or ‘already’. One interesting point of Old Javanese grammar is found in the personal pronoun paradigm: there are not plural pronouns. Plurality can be marked by conjoining pronouns (e.g. you and I) or by quantifiers, but often it is simply assumed from context (Becker and Oka 1974:232).

3. Previous analyses of *ri*

Where literature and culture of Old Javanese have been extensively researched, linguistic studies of Old Javanese are unfortunately not numerous. The most substantial grammatical work to date is a description of the language as used in the *Adiparwa* by P.J. Zoetmulder, which dates back to 1950. This study was not written with the intention that it would be used as a classroom textbook (Ogloblin 1991:245); therefore the analyses are not always as systematic and consequent as one would like them to be.

Zoetmulder (1983:137-141) describes the particle *ri* as an ‘introductory particle’, and distinguishes several types of constituents that can be introduced by *ri*. Why *ri* is present, or what its meaning is, remains unclear. The particle is simply translated with the Dutch equivalent needed in the context. But translations do not necessarily mirror the inherent meaning.

The translational meanings listed in dictionaries, of Dutch (Juynboll 1923:469-470; 75), English (Zoetmulder 1982:664; 1548) and Indonesian (Mardiwarsito 1981:476; 241, Suparlan 1988:243) include: ‘in, at, on, to, with, through, as, from, by, about, because, like, and towards’. Short grammatical introductions to Old Javanese such as Mardiwarsito and Kridalaksana (1984:65; 84), Teselkin (1972:94) and Suparlan (1988:243) provide a similar description of *ri*. They all use a number of the above translations, but none of them present a thorough analysis of the morpheme. The goal of this paper is to analyze the particle *ri*, using the semiotactic approach as developed by Ebeling. A brief overview of this theory in general and a description of some ideas that are key to the present analysis are discussed in the next section.

4. Semiotactics – a semantic approach to syntax

The semiotactic approach was first developed and extensively described by C.L. Ebeling for English and Russian (1954; 1978). Ebeling then defined semiotactics as a structuralist theory that combines three key points: linguistic invariants, interrelatedness of elements, and the need to define all concepts of a theory rigorously. One of Ebeling’s main points at the time was that

‘a complex meaning equals the constellation of its constituent meanings. That is, a meaning of a complex form can be completely and adequately described in terms of the meanings of the constituent forms and their interrelations.’ (Ebeling 1978:1)

In the course of time, this view has been slightly revised and semiotactics is no longer considered to be a form of structuralism, but rather an approach to language based on empirical evidence, opposing formal linguistic research (Ebeling 2006:11). The basic ideas, however, did not change.

The term ‘*semiotaxis*’ refers to the relations between meanings. Central to the theory is the principle “one form – one meaning”. The semiotactic approach advocates that syntactic relations between constituents should in fact be seen not just as relations between forms, but primarily relations between meanings. Therefore, one of the most important parts of what is generally considered to be syntax is considered to be part of semantics (Ebeling 2006:11-12). The (semiotactic) relations between words are represented by symbols, to provide a more exact and unambiguous analysis.

It is argued that meanings have clear-cut boundaries and are thus completely definable. Speakers have to select the appropriate referent (“thing meant”) as they come across a certain word, based on the distinctive features the word carries. Appropriate referents are the referents that possess all distinctive features determined for a given meaning (Ebeling 2006:24-25). An important consequence of this view is that many words, especially function words, need several differently restricted meanings, all with their own complex definition to be able to assign an appropriate referent to each variant. An attempt to find and define the appropriate referent(s) of *ri* is presented in this paper.

The symbols in the annotation designed to represent the semiotactic relations between words is too complicated and extensive to discuss in detail here. Therefore only those symbols that are relevant in the analysis of the data will be explained. First and foremost the relation of ‘oriented limitation’ represented by the symbol “–”, is of importance. Ebeling describes this relation in constructions of the form ‘x – y’ as the limiting of the possible appropriate referents for both x and y due to the mutual influence of x and y (Ebeling 2006:37-42). In principle the collective referent carries the feature ‘y’, measured according to the standard that applies for the carriers of ‘x’ (Verkoren 2009:10). In more concrete terms this means that in a phrase such as ‘the big dog’, represented semiotactically in (1).

(1) ‘dog – big’

The interpretation of both ‘dog’ and ‘big’ are dependent on the interpretation of the other item. The idea evoked by ‘big’ when used as modifier of ‘dog’ is different from the interpretation when applied to, for example, elephant or mouse. Similarly, the referent for ‘dog’ is limited by the adjective ‘big’. Both items are placed on the same horizontal line, or layer, indicating the meanings are convergent, i.e. the two meanings are referring to the same (collective) referent (Ebeling 1978:196). In (2) an example is given of divergence, where the meanings connected by the symbol of oriented limitation, combined with a downward arrow, are not referring to the same referent.

- (2) the door of the house
 '... door ↓
 - house...'

In short oriented limitation indicates that the appropriate referents of (for example) 'big dog' are a subset of the appropriate referents of 'dog'. Important to know is that the formulae constructed with the symbols are to be read from left to right; as this is the order in which the representation of the referent is constructed. Returning again to 'big dog', this means that first the referents for 'dog' are evoked, after which the range of possibilities is brought down when 'big' is taken into consideration (Ebeling 2006:38).

In the description of clauses the symbols 'Σ' and '=' are of high importance. The 'Σ' indicates a 'situation' in a nexus construction, which in turn is represented by the '=' (Ebeling 2006:154). A simple example can be found in (3).

- (3) John is eating an apple
- $$\Sigma$$
- 'John = [x; x eats y]
 [y; " "] ; apple'

The complete situation of John eating an apple is represented in this annotation, the nexus-symbol indicates that the left-sided item (John) is the most prominent participant in the activity, in this case the agent. The square brackets surrounding the verb indicate the number of valences of the verb and the fact that they belong to the same semantic construct. Since the verb is bivalent the two participants are placed on two different layers; they are said to be divergent, i.e. not referring to the same referent as was the case with the relation of convergent oriented limitation discussed in (1) above.

Finally the symbol for the relation of 'gradation' is quite frequently found in the data analysis. This relation is represented by '>' and indicates the word to the right of the symbol solely restricts the possible appropriate referents of the word immediately on the left side of the symbol. Phrases expressing someone's status as in (4) or constructions with adverbs of degree such as (5) are examples of cases in which the relation is particularly clear:

- (4) Sir John 'John > HON'
 (5) very big dog 'dog – big > very'

Example (4) shows the relation between John and him being a of honorable status is a feature belonging to John and influences the appropriate referent for John, but is not in itself influenced by John. In (5) the difference between limitation and gradation becomes apparent, [dog] and [big] limit each other's appropriate referents, but not those of [very], which is merely a characterization of the kind of [big] (Ebeling 2006:49). As I said above, the theory has first been applied to English, but has since been adapted to fit other languages as well. By now the theory has successfully been applied to Mandarin (Wiedenhof 1995), Dutch (Ebeling 2006), and Japanese (Verkoren 2009).

5. Polysemy, homonymy, invariance

Before turning to the analysis of the Old Javanese data, let us briefly focus on some theoretical points concerning the definition of meaning. As said before, the preposition *ri* has not yet been systematically analyzed up until this point. In the available literature, including dictionaries, the translational equivalents include almost all prepositions present in the respective target languages. Logically, *ri* might seem to be polysemous, as is often said of function words. To be able to argue against this analysis of *ri*, the definitions of polysemy and related terms are briefly discussed.

Haspelmath (2003:212) distinguishes three possible positions in his treatment of multifunctional grammatical morphemes: (i) the monosemist position, claiming that a grammatical morpheme has just a “vague abstract meaning [...] and all the various functions that can be distinguished [...] arise from the interaction with the context”, (ii) the polysemist position, recognizing that different senses or meanings are attached to each morpheme, but that these meanings are related to each other in some way, and (iii) the homonymist position, which advocates “totally separate meanings for each of the functions and recognizes different morphemes for each different meanings”.

These definitions are very conventional, and are not treated differently within the semiotactic framework. The basic notions of the three positions are similar; however the precise definitions Ebeling provides for polysemy differ slightly from the description given by Haspelmath. Unsurprisingly polysemy is defined as one form with (at least) two meanings; the difficulty lies in the criteria Ebeling proposes (Ebeling 2006:30; 63):

1. Both sets of distinctive features contain elements that do not belong to the other set.
2. Both meanings share at least one (semi-)distinctive feature, which forms a plausible connection between the two meanings.
3. Both meanings can, in context, immediately be accessed by the hearer without having to consider the alternatives first.

To approach the meaning of grammatical morphemes, such as *ri*, following these conditions is quite complicated, since it is not easy to find and define the distinctive features of a word without a concrete referent.

Finding an invariant meaning is highly desirable in Ebeling’s opinion, because this can simplify the linguistic analysis. But invariance is not easy to achieve; it is only reached when “all distinctive features of the meaning are present in the appropriate referents and all entities that possess these features are appropriate referents” (Ebeling 2006:63). In this concept of invariance, a monosemist position seems to be enclosed, as the goal is to find one meaning covering all uses of the morpheme. However, the conditions that have to be met before a meaning can be considered invariant are so strict, that there is little room for ‘vague’ and ‘abstract’. How and if these definitions work with respect to the Old Javanese preposition *ri* will be shown in the next section, where a semiotactic analysis of *ri* as it occurs in several semantic environments is presented.

6. Data analysis

The data I used is taken from the tenth century Old Javanese prosework called the *Adiparwa*. The *Adiparwa* is the first book of the *Mahabharatha* epic. This work is transcribed in Latin alphabet by

among others Juynboll (1906) and it is his edition I used as basic source. Since the occurrence of *ri* is highly frequent, it is impossible to discuss each instance separately. Therefore a representative set of data will be analyzed.² Of the most frequent contexts in which *ri* occurs an example is given in order to provide a clear and complete overview of the preposition's range of usage. By viewing the meaning of the preposition *ri* from a semiotactic perspective, the relation between *ri* and other constituents becomes very clear. The systematic representation of grammatical relations between elements by using unambiguous symbols shows the consistency and predictability of the linguistic environment *ri* occurs in and the function *ri* fulfills.

The examples are subdivided in three main semantic categories: 1) locational, 2) directional and 3) temporal. In the analyses of the examples the translational meanings are given (even though these translations do not necessarily represent the meaning in Old Javanese) to indicate the variety of interpretations that can be evoked by this single preposition. Note that the preposition *ri* links the main verb or noun to an external participant in the event. It is these relations or linkages that will be under consideration in this paper.

6.1 Locational

The first set of examples are instances of *ri* profiling a location within a construction. First an example of a true, topological, location will be given, subsequently examples of 'extended' location will be discussed. Because the meaning or function of *ri* is not yet conclusively determined, it is represented by the capitalization RI in the glosses (in all other cases capitalization indicates universality of meaning).

- (6) *Sira ta ma-gawe yajña ri-ng Nemisaranya.*
 3 EMPH V.AG-work offering RI-DEF Nemisaranya
 'He performed an offering in Nemisaranya.' (Juynboll 1906:2)

$$\begin{aligned} & \sum \\ 3 = & [x; x \text{ work } y] / \text{SING} \\ & [y; \text{ " }]; \text{ offering} - [v; x \text{ RI } w] \\ & [w; \text{ " }]; \text{ PNNemisaranya} - \text{DEF...} \end{aligned}$$

In the semiotactic analysis of (6) the preposition *ri* is positioned between the 'offering' and the location 'Nemisaranya' and linked to 'offering' by means of oriented limitation, represented symbolically by '-'. It is this relation that binds the two items, because the appropriate referent of 'offering' is limited by the presence of RI and the appropriate referent for 'RI' is equally limited by the semantic content carried by 'offering' to which it is linked. The square brackets surrounding RI represent the bivalency of the word: something/someone (*v*) is RI someone/something else (*w*), these two participant are divergent, they separately converge to a different valence of RI, and are therefore placed at different layers of analysis. When extending this locational designation of RI to several instances of more and less prototypical locations, the semiotactic analysis does not change, as can be seen in (7)-(10) below.³

² Abbreviations used in this thesis: 1 = first person, 2 = second person, 3 = third person, CAUS = causative, CON = connective, DEF = definite marker, DEM = demonstrative, EMPH = emphatic marker, GEN = genitive, HON = Honorific, NOM = nominalization, NON = negation, PN = proper noun, PREP = preposition, TR = transitive marker, V.AG = agentive voice, V. PAT = patientive voice.

³ The three dots preceding or following the analysis and translation indicate it is only part of the sentence that is given here. The larger context in which the examples occur can be found in the Appendix.

- (7) ...*apan maN-tambak-akěn awak-ta ri-ng we,*
 because V.AG-dam-CAUS body-2 RI-DEF water

‘...because [you] cause your body to serve as a dam in the water...’ (Juynboll 1906:9)

$$\begin{aligned} & \dots \Sigma \\ [2] &= [x; x \text{ CAUSES } y] \\ & \quad [y; \text{ “ ” }]; \quad X \\ & \quad \text{body} \downarrow = \text{dam} - [v; v \text{ RI } w] \\ & \quad - 2 \quad [w; \text{ “ ” }]; \text{ water...} \end{aligned}$$

Again, the semiotactic relation between RI and the constituent it is linked to, *apan...awakta*, is represented by the symbol for oriented limitation, as the mutual restricting of appropriate referents between RI and, in this case, ‘dam’ is similar to what we saw in (6) above. From a translational point of view, the two examples discussed so far, resemble the English preposition ‘in’, which is not really surprising considering the subgroup being called locational. However, the following examples differ in their English translational equivalent.

- (8) ...*ta sira manghala-hala ri patuk nira-ikana-atyugra tiksna*
 EMPH 3 V.AG-damage RI beak GEN.3-DEM-very.fierce sharp
 ‘...he damaged that very fierce sharp beak of his...’ (Juynboll 1906:43)

$$\begin{aligned} & \dots \Sigma \\ 3 &= [x; x \text{ damages } y] - [v; v \text{ RI } w] \\ & \quad [y; \text{ “ ” }] [w; \text{ “ ” }]; \text{ beak} - \text{sharp} > \text{wild} \downarrow \\ & \quad - 3... \end{aligned}$$

In this example the semantics of the main verb ‘damage’ indicate a relation of (negative) “affectedness” between the verb and the participant introduced by RI. Syntactically the participants represented by *y* and *w* are not convergent, as ‘beak’ is not the direct object of ‘damage’, thus it is not filling the second valence. However, when interpreting the sentence, ‘beak’ is indeed understood to be the object of damage. Therefore *y* and *w* are said to have coreferential meanings (Wiedenhof 1995:16). In English this relation could be described by the preposition ‘to’, or ‘upon’ in the context of ‘he brought disaster to the family/upon the family’. The next example shows another possible use of *ri*:

- (9) *Haywa kita-lara ri pějah ni stri-nta,*
 do not 2-V.AG-grief RI dead GEN wife-2

‘Don’t grief over your wife’s death’ (Juynboll 1906:22)

$$\begin{aligned} & \Sigma / \text{NON} \\ 2 &= \text{grieving} - [x; x \text{ RI } y] \\ & \quad [y; \text{ “ ” }]; \text{ death} \downarrow \\ & \quad - \text{wife...} \end{aligned}$$

The translational meaning of (9) would be ‘about’ or ‘over’. Again the semantics of the verb indicate a relation of “affectedness”, and whereas the construction with RI is still the same, linked to the main verb by means of oriented limitation, the English equivalent changed.

- (10) ...*sang* *Sarama-an* *tumon* *ri* *anak p-in-alu...*
 HON Sarama-CON V.AG-see RI child V.PAT-beat
 ‘...Sarama saw her child being beaten...’ (Juynboll 1906:7)

$$\begin{aligned} & \text{‘...}\Sigma \\ \text{PNSarama} &= \text{seeing} - [x; x \text{ RI } y] \\ & \quad [y; \text{ “ } \quad \text{”}]; \quad \Sigma \\ & \quad \text{child} = [m; n \text{ hits } m] \dots \end{aligned}$$

Example (10) again provides another context in which the construction with RI is used. In this instance, it is not a location that is being specified, but another situation, represented by the symbol ‘ Σ ’. This would conventionally be considered a complement clause, with *ri* as its complement. In the second situation the bivalent verb ‘hit’ is notated on only one layer, because it is in the patientive voice; the patient ‘child’ is placed at the other side of the nexus-symbol as it is the main participant in the situation. The agent valence of ‘hit’ is left out of the notation, as it does not converge with anything.

6.2 Directional

The second category contains examples of a similarly frequent use of *ri*, in contexts of direction. Again, first an example of ‘true’ direction is given, after which some more abstract instances of directionality are discussed.

- (11) ...*tuhun* *ikang* *naga* *sama-nya* *pějah*, *t-um-iba* *ri-ng* *kunda*.
 but DEM serpent.demon all-3 dead V.AG-fall RI-DEF fire.place
 ‘...but all these snakes died, as they fell in the fire-place.’ (Juynboll 1906:2)

$$\begin{aligned} & \text{‘...}\Sigma \\ \text{snake} &= \text{falling} - [x; x \text{ RI } y] \\ & \quad [y; \text{ “ } \quad \text{”}]; \text{ fire - DEF...} \end{aligned}$$

Comparing this example to the first example in the category of location, there is no apparent difference in analysis. The difference in interpretation (direction instead of location) lies within the inherent semantics of the verb ‘fall’, which is a directional verb, causing the interpretation of the sentence and hence of *ri* to be directional as well.

The ‘extended’ directionals that will be presented below include the semantic relations of affectedness, comitative, communication and benefactive/recipient. These relations are all expressed by a different construction or preposition in English, but will be shown to belong to the range of RI without exception. In (12) an example expressing benefactivity is found.

- (12) ...*maweh* *ta* *sira* *bhojana* *ri* *sira* *Mpu ...*
 V.AG-give EMP 3 food RI 3 lord
 ‘...[he] gave the lords food...’ (Juynboll 1906:7)

‘...Σ
 3 = [x; x gives y to z] - [v; v RI w]
 [y; “ ”]; food
 [z; “ ”] [w; “ ”]; lord...’

Because ‘give’ is a verb that profiles three participants, there are three layers found in this example (*x*, *y* and *z*). The participant normally expressed on the ‘z-layer’, the recipient or beneficiary, is realized as an external participant due to the presence of *ri*. In the analysis, the verb and the preposition are linked through oriented limitation, similar to all other examples. Furthermore the second valence of RI corefers with the beneficent valence of the verb ‘give’, represented by *z*.

The next few examples express comitativity and affectedness in a directional sense. Again different translational equivalents are evoked, but in the semiotactic analyses of *ri* nothing changes. Examples (13) and (14) evoke a sense of ‘relatedness’ between the main event and the participant introduced by *ri*.

- (13) *Ya tika in-ikēt ri-ng sastra de bhagawan Byasa.*
 3 DEM V.PAT-bind RI-DEF book by priest Byasa
 ‘This is related to the story [told] by priest Byasa.’ (Juynboll 1906:4)

‘Σ
 this = [y; x binds y] - [v; v RI w]
 [w; “ ”]; story ↓
 - PN*Byasa* – priest’

In this example the relation between ‘priest’ and ‘Byasa’ is represented by the symbol for oriented limitation as well, because (as we saw in (1)) the interpretation of either item is dependent on the interpretation of the other item. Here ‘priest’ is a specification of the referent of ‘Byasa’ and is at the same time partly defined by the proper noun *Byasa*.

- (14) *Anak [...] um-ilu ri sang Pandawa.*
 child [...] V.AG-join RI HON Pandawa
 ‘... the child [...] joined the Pandawa’s.’ (Juynboll 1906:5)

‘... Σ
 child = joining - [x; x RI y]
 [y; “ ”]; PNP*Pandawa* > HON...’

As was the case with the proper locational and directional examples, the semantic content of the main verbs (‘bind’ and ‘join’ respectively) in these two examples guide the interpretation of RI, at least in translation. In English the relation in (13) would be expressed by ‘to’, whereas (14) would have the meaning ‘with’. The sense of affectedness that was discussed within the category of location, is found in directional contexts as well. Examples (15) and (16) are a clausal and phrasal instance of this interpretation.

- (15) ... *těka* *maN-pějah-i* *ri* *bhagawan* *Jamadagni*,...
 come V.AG-dead-TR RI priest Jamadagni
 ‘... [they] came to kill priest Jamadagni...’ (Juynboll 1906:3)

‘... Σ
 X = coming - [x; x CAUSES y]
 [y; “ ”]; dead - [v; v RI w]
 [w; “ ”]; PN*Jamadagni* – priest...’

In this example both the bound morpheme *-i* and the free morpheme *ri* are used in one sentence. This shows the two morphemes are not variants of one another, but actually have a different function. The suffix *-i* is an applicative, thus transitivity the stem ‘dead’. The constituent introduced by *ri* is the goal of the ‘transitive dying’, i.e. the killing. The contribution of *ri* in this example is untranslatable in English, but hopefully by now the value of the construction containing RI has become clear, and the need to find English equivalents for each instance has proven to be unrealizable.

- (16) ... *capa bhagawan* *Bhrgu* *ri-ng* *sang* *hyang Agni*,...
 curse priest Bhrgu RI-DEF HON god Agni
 ‘... priest Bhrgu’s curse against the god Agni.’ (Juynboll 1906:19)

‘... curse ↓ - [x; x RI y]
 - PNB*Bhrgu* - priest [y; “ ”]; PNAgni – god – DEF > HON...’

The final kind of directional found in the data is within the context of communication. In (17) an example of such communicational direction is given:

- (17) *Maka-wěkas-an* *pa-warah-warah bhagawan* *Byasa ri* *sang* *Arjuna*
 In the end tell priest Byasa RI HON Arjuna
 ‘In the end priest Byasa told [it to] Arjuna.’

Σ
 ‘... PN*Byasa* - priest = [x; x tell y] - [v; v RI w]
 [y; “ ”]; [it] [w; “ ”]; Arjuna > HON...’

Overall, the analyses for both locational and directional contexts in which *ri* occurs are remarkably similar. The main verb is found to be of particular importance in determining the translational equivalent, as the relation between the main verb or event and the participant introduced by *ri* is the same in all cases. This relation is semiotactically represented by means of oriented limitation, indicating mutual influence between the two items.

6.3 Temporal

The last category involving *ri* consists of contexts expressing temporal relations. Whenever reference is made to a certain moment or time in the *Adiparwa ri* is used; however most of these attestations are fixed collocations, behaving very differently from the constructions with *ri* we

have seen so far. These collocations are listed in (18) but will not be analyzed in detail, as they are fully lexicalized. Their relation to the (prepositional) constructions is still identifiable, but not of primary interest here.

(18) <i>ri huwus</i>	=	in the end	<i>ri kala</i>	=	when / then
<i>ri sěđěng</i>	=	while	<i>ri wěkas</i>	=	finally / in the end / at last
<i>ri tēlas</i>	=	after			

Apart from the collocations of time, *ri* is also used in contexts referring to indicate a more specific time than the temporal adverbs formed by the collocations. It is these contexts that are of interest for the present analysis. In (19) an example of such a temporal relation is given.

(19)	...padartha-nya	pangrěwěk	sang	Aswatthama	ri-ng	wěngi,...
	content-3	suddenly.attack	HON	Aswatthama	RI-DEF	night
	'... it contains Aswatthama's sudden attack in the night.' (Juynboll 1906:5)					

'... attack ↓ - [x; x RI y]
 - PN*Aswatthama* > HON
 [y; “ ”]; night – DEF...'

This temporal context is analyzed exactly the same as the locational and directional examples above, indicating the consistency and predictability of the construction and its interpretation. The mapping of a temporal construction according to that of a spatial construction is a very common pattern (e.g. Tobin 2008:276). In this example it is not necessarily the main verb that guides the interpretation of the RI constituent, as the first participant coming to mind in connection to 'attack' is not the night but the enemy (in person or extended to a village/city/country etc). But precisely because it is 'the night' that is linked to the rest of the sentence by RI, the interpretation is unambiguously clear. It is impossible to attack the night, or to attack for the well-being of the night; the logical interpretation is to view the night as the moment of attack.

Conclusion

The main purpose of this paper was to unravel the meaning of the Old Javanese preposition *ri*. The data above shows that the contexts frequently containing the preposition *ri* represent different semantic relations. When approaching this problem from a semiotactic angle, identifying distinctive features for each attested case of *ri* and defining the exact meaning accordingly, would be key. This is a very difficult and complex undertaking, as all instances of *ri* differ slightly and would therefore need somewhat different definitions, thus resulting in a number of different RI's. However, in the case of *ri* I believe such an approach would wrongfully guide one to a polysemous analysis based on expectations about the behavior of close-classed function words and the number of translation equivalents in English⁴. Obviously the behavior and number of prepositions in English does not necessarily correspond to the number and behavior of prepositions in Old Javanese.

⁴ Or Dutch, German, French, Spanish etc. The point is that languages differ in their use and meaning of Prepositions. The situation in one language does not automatically mirror the situation in another language.

The example analysis in this paper was divided into three main categories, locational, directional and temporal. Throughout these categories the analysis of *ri* was shown to be consistent and predictable. The appropriate interpretation is decided by the direct semantic environment, i.e. context and semantics of participants involved. A rough generalization can be made concerning the type of main verb involved in the construction. Dynamic verbs combined with *ri* result in a directional interpretation of the preposition. Stative verbs in combination with *ri* lead to a locational interpretation.

This consistency and predictability shows that there cannot be polysemy, as the Hearer does not have to choose between meanings or consider different options of interpretation. To define all occurrences of *ri* in terms of (semi-)distinctive features would lead to a great number of ‘*ri*’s’, which to my believe, would further complicate the matter instead of clarifying the meaning of the preposition. A purely semiotactic analysis might not be entirely successful in this particular case. Rather than defining the meaning of the preposition in terms of distinctive features, I propose to describe the meaning of *ri* as ‘indicating a relation of orientation’. All instances of RI in the examples discussed above can be replaced by the abstract meaning of ORIENTATION making the analyses clearer without imposing a particular interpretation on the hearer. The specific interpretation of the preposition is guided by the semantic content of the direct linguistic environment, i.e. the main verb and the participant introduced by *ri*. Schematically, the grammatical construction of *ri* would be represented by (20):

(20) [x; x ORIENTATION y]
 [y; “ ”]

All possible interpretations (and English translation equivalents) can be captured under the wings of the concept ORIENTATION. The preposition *ri* is thus considered to be monosemous, with only one broad meaning with vague edges. Whether or not this is indeed the correct analysis according to speakers’ intuitions will unfortunately remain speculation, since the language has no native speakers to ask.

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Appendix – Contexts to Old Javanese example sentences

In this appendix, glossed context of the examples used in this paper are given with simple, quite literal, translations. This causes the English translation to be far from perfect, let alone representative of the literary importance of the original Old Javanese. In the glossed text, affixes are separated from their roots, to enhance comprehension of the original. This means that sounds fused by sandhi are separated as well. For example, *manambakakĕn* ‘cause to dam’, is made up from the root *tambak* ‘dam’, the prefix *maN-* and the suffix *-akĕn*.⁵ The homorganic nasal merges with *tambak*, causing the following alteration: *tambak* > *nambak* > *manambak*. The suffix *-akĕn* is simply added to the root, resulting in *manambakakĕn*. The text as transcribed by Juynboll (1906) is reproduced as well.

Context (6)

‘Hana sira bhagawan conaka ngaran ira. Sira ta magawe yajña ring Nemisaranya. Lawas ikang yajña ginawayakĕn ira, dwadacawarsa.’ (Juynboll 1906:2)

<i>Hana sira</i>	<i>bhagawan</i>	<i>conaka ngaran</i>	<i>ira.</i>	<i>Sira</i>	<i>ta</i>	
be 3	priest	Conaka name 3		3	EMPH	
<i>ma-gawe</i>	<i>yajña</i>	<i>ri-ng</i>	<i>Nemisaranya.</i>	<i>Lawas</i>	<i>ikang</i>	<i>yajña</i>
V.AG-work	offering	RI-DEF	Nemisaranya	duration	this	offering
<i>g-in-away-akĕn</i>	<i>ira</i>		<i>dwadaca-warsa.</i>			
V.PAT-work-CAUS	3		twelve-year			

‘There was a priest, his names was Conaka. He performed an offering in Nemisaranya. The duration of this offering that was performed by him was twelve years.’

Context (7)

‘Sang Uddalaka ngarananta: apan manambakakĕn awakta ring we, makanimitta bhaktinta ring guru.’ (Juynboll 1906:9)

<i>Sang Uddalaka</i>	<i>ngaran-anta:</i>	<i>apan</i>	<i>maN-tambak-akĕn</i>			
HON Uddalaka	name-2	because	V.AG-dam-CAUS			
<i>awak-ta</i>	<i>ri-ng</i>	<i>we,</i>	<i>makanimitta</i>	<i>bhakti-nta</i>	<i>ri-ng</i>	<i>guru.</i>
body-2	RI-DEF	water	because.of	devotion-2	RI-DEF	teacher

‘Your name is Uddalaka: because you caused your body to be a dam in the water, because of your devotion to your teacher.’

⁵ The capital ‘N’ in the prefix *maN-* indicates that the prefix ends with a nasal homorganic to the following sound, i.e. the onset of the root.

Context (8)

'Ndatan wighani ta sang khagendra, malēs ta sira manghala-hala ri patuk nirekanatyuga tiksna,' (Juynboll 1906:43)

<i>Ndatan</i>	<i>wighani</i>	<i>ta</i>	<i>sang</i>	<i>khagendra,</i>	<i>um-walēs</i>	<i>ta</i>	<i>sira</i>
But.not	undaunted	EMPH	HON	king.of.birds	V.AG-return	EMPH	3

<i>manghala-hala</i>	<i>ri</i>	<i>patuk</i>	<i>nira-ikana-atyuga</i>	<i>tiksna.</i>
damage	RI	beak	GEN.3-DEM-very.fierce	sharp

'But the king of birds (Garuda) was undaunted, in return he damaged his very fierce sharp beak.'

Context (9)

'Sangksepi ni wuwus mami ri kita: haywa kitalara ri pēah ni strinta, apan pagawenya nguni dumadyakēn ika.' (Juynboll 1906:22)

<i>Sangksepi</i>	<i>ni</i>	<i>wuwus</i>	<i>mami</i>	<i>ri</i>	<i>kita:</i>	<i>haywa</i>
summary	GEN	word	1	RI	2	do.not

<i>kita-a-lara</i>	<i>ri</i>	<i>pējah</i>	<i>ni</i>	<i>stri-nta,</i>	<i>apan</i>
2-V.AG-grief	RI	dead	GEN	wife-2	because

<i>pa-gawe-nya</i>	<i>nguni</i>	<i>d-um-adi-akēn</i>	<i>ika.</i>
NOM-work-3	in.former.times	being.done-CAUS	DEM

'A summary of my words to you: don't grief over your wife's death, because her actions of former times caused this being done.'

Context (10)

'Manasatap sang saraman tumon ri anak nira pinalu tanpadosa.' (Juynboll 1906:7)

<i>Manasatap</i>	<i>sang</i>	<i>sarama-an</i>	<i>t-um-on</i>	<i>ri</i>	<i>anak nira</i>
sadness	HON	Sarama-CON	V.AG.-see	RI	child GEN.3

<i>p-in-alu</i>	<i>tanpa-dosa.</i>
V.PAT-beat	NEG-fault

'Sarama was sad seeing (that) her child was being beaten without being guilty'

Context (11)

'Ikang sumahut ing wwang atuhua nira, sira maharaja Pariksit; tuhun ikang naga samanya pējah, tumiba ring kunda.' (Juynboll 1906:2)

<i>ikang</i>	<i>s-um-ahut</i>	<i>i-ng</i>	<i>wwang</i>	<i>atuhua</i>	<i>nira,</i>	<i>sira</i>	<i>maharaja</i>
DEM	V.AG.-bite	RI-DEF	human.being	old	GEN.3	3	great.king

<i>Pariksit;</i>	<i>tuhun</i>	<i>ikang</i>	<i>naga</i>	<i>sama-nya</i>	<i>pējah,</i>	<i>t-um-iba</i>
Pariksit	but	DEM	serpent.demon	all-3	dead	V.AG.-fall

ri-ng kunda.
 RI-DEF fire.place

'That one [= Taksaka] had bitten his father, the great king Pariksit, but all these (other) snakes died, as they fell in the fire-place.'

Context (12)

'Ri huwus ning yajña, maweh ta sira bhojana ri sira mphu, wineh daksina sira kabeh.' (Juynboll 1906:7)

Ri huwus ni-ng yajña, ma-weh ta sira bhojana ri
 RI complete GEN-DEF offering V.AG-give EMPH 3 food RI

sira mphu, wineh daksina sira kabeh.
 3 lord give gift.to.a.guru 3 all

'After the offering was completed he gave the lords [= Brahmans] food, [and] all of them were given gifts.'

Context (13)

'An mangkana paprang sang pandawa korawa tinanakěn de rahadyau sanghulun kabeh. Ya tika iniket ring castra de bhagawan Byasa. Kala nira gumawayakěn parwa ri pati sang Dhrtarastra Widura Sanjaya ring patapan.' (Juynboll 1906:4)

An mangkana paprang sang Pandawa Korawa
 CON thus fighter HON Pandawa Korawa

tinana-akěn de rahadyau sanghulun kabeh. Ya tika
 V.AG.-ask-CAUS by lord 1 all 3 DEM

in-iket ri-ng castra de bhagawan Byasa. Kala nira
 V.PAT.-bind.together RI-DEF book by priest Byasa time GEN.3

g-um-away-akěn parwa, ri pati sang Dhrtarastra Widura
 V.AG.-work-CAUS prose.book RI death HON Dhrtarastra Widura

Sanjaya ri-ng patapan.
 Sanjaya RI-DEF hermitage

'And thus were the fighters [the war?] of the Pandawa's and Korawa's that all you lords asked about. This is related to the book (= lessons) by priest Byasa. At the time he worked on the book, Dhrtarastra Widura Sanjaya died in the hermitage.'

Context (14)

'Makawėkas-an Narayanastra kala sang Acwatthama amanahakěn astra, makolih sang Dhrstaketu, anak sang Cedi, umilu ri sang Pandawa.' (Juynboll 1906:5)

Maka-wėkas-an Narayana-astra, kala sang
 V.AG.-end-CON Narayana-arrow time HON

<i>Acwatthama</i>	<i>amanah-akĕn</i>	<i>astra,</i>	<i>maka-ulih</i>	<i>sang</i>
Aswatthama	shoot.with.arrows-CAUS	arrow	V.AG.-defeat	HON

<i>Dhrstaketu,</i>	<i>anak</i>	<i>sang</i>	<i>Cedi,</i>	<i>um-ilu</i>	<i>ri</i>	<i>sang</i>	<i>Pandawa.</i>
Dhrstaketu	child	HON	Cedi	V.AG.-join	RI	HON	Pandawa

'It ends with the Narayana arrow, the moment Aswatthama shot the arrow and defeated Dhrstaketu, the son of Cedi, who joined the Pandawas.'

Context (15)

'Masĕnghit ikang ksatriya ring bhumandala, ratu sapinasuk ing Bharatawarsa, tĕka mamĕjahi ring bhagawan Jamadagni, bapa sang Rama Paracu.' (Juynboll 1906:3)

<i>Ma-sĕnghit</i>	<i>ikang</i>	<i>ksatriya</i>	<i>ri-ng</i>	<i>bhumandala,</i>	<i>ratu</i>
V.AG.-anger	DEM	nobleman	RI-DEF	the.whole.earth	king

<i>sa-pinasuk</i>	<i>i-ng</i>	<i>Bharata-warsa,</i>	<i>tĕka</i>	<i>maN-pĕjah-i</i>	<i>ri</i>
one-inhabitant	RI-DEF	Bharata-region	come	V.AG.-dead-TR	RI

<i>bhagawan</i>	<i>Jamadagni,</i>	<i>bapa</i>	<i>sang</i>	<i>Rama</i>	<i>Pparacu.</i>
priest	Jamadagni	father	HON	Rama	Parasu

'The noblemen of the whole world were angry, including the kings of the Bharata-region [= South Asia], they came to kill priest Jamadagni, the father of Rama Parasu.'

Context (16)

'An-mangkana capa bhagawan Bhrgu ring sang hyang Agni, matang yan lina sumangharawak nira. Ri lina sang hyang Apuy, harohara ta sarwadewata, apan tan hana magawe yajñakarma.' (Juynboll 1906:120)

<i>An-mangkana</i>	<i>capa</i>	<i>bhagawan</i>	<i>Bhrgu</i>	<i>ri-ng</i>	<i>sang</i>	<i>hyang</i>	<i>Agni,</i>
CON-thus	curse	priest	Bhrgu	RI-DEF	HON	god	Agni

<i>matang</i>	<i>ya</i>	<i>lina</i>	<i>sumanghara-awak</i>	<i>nira.</i>	<i>ri</i>	<i>lina</i>
because.of.that	when	destruction	destroy-self	GEN.3	RI	destruction

<i>sang</i>	<i>hyang</i>	<i>Apuy,</i>	<i>harohara</i>	<i>ta</i>	<i>sarwadewata,</i>	<i>apan</i>	<i>tan</i>
HON	god	Apuy	disturbance	EMPH	all.gods	because	NEG

<i>hana</i>	<i>ma-gawe</i>	<i>yajñakarma.</i>
be	V.AG.-work	sacrificial.ceremony

'And thus priest Bhrgu cursed god Agni, because of this destruction he destroyed himself. At the destruction of the god of fire [Apuy = Agni], all gods were disturbed, because sacrificial ceremonies were not performed.'

Context (17)

'Kunang cloka ning Mosalaparwa tigang atus; adhyayanya wwalung siki, padarthanya pati sang watek yadu sira kabeh, makawėkasan pawarah-warrah bhagawan Byasa ri sang Arjuna' (Juynboll 1906:6)

Kunang cloka ni-ng Mosala-parwa tigang atus; adhyaya-nya
but stanza GEN-DEF Mosala-prose.book three hundred chapter-3

wwalung siki, padartha-nya pati sang watek Yadu sira
eight one content-3 death HON group Yadu 3

kabeh, maka-wėkas-an pawarah-warrah bhagawan Byasa ri sang arjuna.
all V.AG.-end-CON tell priest Byasa RI HON Arjuna

'And the Mosal-parwa has three hundred stanzas, eight chapters, its content is about the death of all the Yadu-people; it ends with priest Byasa telling it to Arjuna.'

Context (19)

'Kunang cloka ning Soptikaparwa wwalung atus pitung puluh; adhyayanya wwalu welas, padarthanya pangrėwėk sang Acwatthama ring wengi, makawėkasan alah nira.' (Juynboll 1906:5)

Kunang cloka ni-ng soptika-parwa wwalung atus pitung puluh;
but stanza GEN-DEF Soptika-prose.story eight hundred seven ten

adhyaya-nya wwalu welas, padartha-nya pangrėwėk sang
chapter-3 eighteen content-3 attack.suddenly HON

Acwatthama ri-ng wengi, maka-wėkas-an alah nira
Aswatthama RI-DEF night V.AG.-end.CON be.defeated GEN.3

'And the Soptika-parwa is made of eight hundred seventy stanzas, eighteen chapters, its content is on Aswatthama's sudden attack in the night and ends with his defeat.'