Javanese Personal Pronoun Sira’s Dynamic Change in 10th – 16th Century

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ABSTRACT
In the study of language change, often personal pronouns are one of the aspects discussed and these are an important aspect in the study of Javanese too. However, research on Javanese personal pronouns with respect to the scope of language change has not been done. In the study of language change, the data used are diachronic using current approaches such as the use of corpus linguistics. Therefore, this study aims to display the shift of sira used in 10-16th century Javanese literature using corpus linguistic and Mair’s grammaticalization approach examining data using qualitative-quantitative methods. Frequency is an important aspect in discovering shifts, and the concordance line feature and n-grams in the Antconc program reveal that the homonym form of sira serves as a modifier and an honorific marker in certain contexts, while the referent shift occurs from the third person to third and second person in the later period Javanese period. Among the various functions of sira, the use of sira is closely related to honorific aspects. Additionally, the shifts of sira into the second person pronoun cannot be separated from its function as an honorific marker.

Keywords: Corpus linguistics, diachrony, grammaticalization, old Javanese, personal pronoun

1. INTRODUCTION
In Javanese, personal pronouns serve a crucial function in characterizing the linguistic aspects of the text, as shown by Zoetmulder (1985), Hunter (2007), and Kriswanto (2016). Zoetmulder, through his discussion of linguistic characteristics in Kidung Harsawijaya text, examined the use of the pronoun sira as a referent to the third and second person. Meanwhile, Hunter and Kriswanto discussed the personal pronoun sira serving as one of the linguistic characteristics in Pararaton and Bhismaprawa text. In his study on Pararaton text, Hunter looked into the writing-history of the text by observing several linguistic elements, such as the pronoun sira being used as a referent to the third and second person. Kriswanto, using the philological approach, also examined the personal pronoun sira as one of the linguistic aspects of Bhismaprawa text. These three studies mentioned sira as one of the linguistic aspects that characterize a text. In this case, then, the research into personal pronouns in the scope of language change has not been done. In the research on language change of Javanese personal pronouns, the available studies provide an overview of personal pronouns in certain texts. Other studies also discuss personal pronouns and provide an overview of personal pronouns usage, which were carried out by Uhlenbeck (1968) who discussed the morpho-syntax aspect; Becker and Oka (1974) who discussed the deixis aspect; and Zoetmulder and Poedjawijatna (1992) who discussed the Javanese grammar framework. According to Helmbrecht (2004), various facts on personal pronouns can be synchronously placed into a wider scope of discussion (diachronic) employing grammaticalization. As language progresses, a form cannot automatically change into another more grammatical form due to the gradual shifting process that occurs. Grammatically, however, personal pronouns may change into different grammatical forms. Helmbrecht (2004) stated that in the grammaticalization process, generally, personal pronouns can change their form (from independent lexical) to clitics and affixes.

There are several studies in various languages examining the diachronic use of personal pronouns (Donohue & Smith, 1998; Zilles, 2005; Egerland, 2005; Dench, 2008; Kim, 2009; King et al., 2011; Prayogi, 2013; Yamaguchi, 2014; Ishiyama, 2019), which indicate that personal pronouns shift in the aspects of form, referent, and also grammatical function. Research using the corpus-based method was conducted by Kim...
who examined the use of the second and first-personal pronouns in English and Korean newspapers. The two pronouns are thoroughly analysed both quantitatively and qualitatively also paying attention to the interpersonal aspects of discourse and the frequency of pronouns usage utilizing Wordsmith Tools 4. Chung (2011) and Wu, He, and Feng (2016) also used the corpus linguistics approach, but they did not discuss personal pronouns; Chung discussed the affix ter-in Malay, while Wu, He, and Feng used quantitative analysis to see changes in the frequency of the use of the future marker "be going to" for 200 years. According to Wu, He, and Feng (2016), the use of a corpus-based method in language change research can assist researchers in accurately calculating the frequency in various genres of text. The novelty in this research lies in seeing personal pronouns in Javanese with respect to language change. In the research of language change, the data needed is considerable and within a certain period. Therefore, this study uses corpus linguistics for the accuracy of calculating the frequency of Javanese personal pronouns in the 10th-16th century literature. Corpus linguistics in this study is also used to see the use of Javanese second personal pronouns which have not been discussed in previous research observations. Meanwhile, various studies that discuss the personal pronoun sira in Javanese serve only as the initial point for conducting diachronic research, as has been done in other languages. In our case, the corpus-based method is employed to indicate the exact frequency of sira in certain texts and at certain periods, aiming to show changes of personal pronoun sira usage by using the grammaticalization and corpus linguistic approaches.

According to Bybee (2003), some existing literature on grammaticalization agrees that it is not sufficient to define grammaticalization as a process of lexical items into a grammatical morpheme, but it is more substantial to reveal that this process occurs in a typical construction context. Grammaticalization aims to describe how grammatical forms and constructions develop over time and explain how they are structured in a particular way. According to Mair (2004), a grammaticalization study is a study that focuses on investigating typologies and universal languages using large data. By using corpora, the grammaticalization process can be more systematic and the grammaticalization analysis can be carried out using different text genres. Mair (2004) explained that there are two forms of grammaticalization: the "dynamic" and the "static" forms. Mair emphasized that dynamic forms of grammaticalization are related to diachronic changes resulting in frequency and construction changes, while static forms are more related to grammatical descriptions. According to Hopper and Traugott (2003), changes in frequency need to be observed through diachronic studies, because the increasing frequency of construction over a long period shows the evidence of grammaticalization. The higher the frequency of the lexical items, the easier the lexical items are grammaticalized. Mair (2004) also explained that grammaticalization is often associated with frequency. According to him, frequency is an important factor among many aspects of grammaticalization. Corpus linguistics in this study is used considering several reasons. According to Mair (2012), there are three reasons for the use of corpora in grammaticalization research, namely (1) corpora can assist data search, making it more precise, systematic, and efficient; (2) the use of corpora can display syntactically and contextually authentic language data in the discourse; (3) corpora can address the problem of accurate frequency usage. The corpus linguistics in this study is not only used to facilitate researchers in data processing but also to observe the frequency of persona pronouns usage.

2. METHODS

The data source used in this research is Javanese literary text consisting of prose and poetry. The use of poetry text is based on a large number of poems when compared to prose. These texts, dated from the 10th to the 16th century, are analysed using corpus linguistics and grammatical approaches. The texts are Adiparwa (10th century) edited by Juynboll (1906), Arjunawiwaha (11th century) edited by Robson (2008), Bharatayuddha (12th century) edited by Wirjosuparto (1966), Arjunawijaya (14th century) edited by Supomo (1977), Pararaton (15th/16th century) edited Phalgunadi (1996). Based on the type, Adiparwa and Pararaton are prose text, and Arjunawiwaha, Bharatayuddha, and Arjunawijaya are poetry texts. The reason for the use of these five texts is based on the edited availability in Latin script. Additionally, various studies also used the text as data, so the result of this study can be used to either support or refute existing research. The five texts above represent different historical periods. At the data collection stage, the texts are scanned and converted into .txt format and then processed using Antconc software. This research employs qualitative and quantitative methods. The quantitative method in this study refers to the use of frequency in the analysis. In addition, the n-grams and concordance features of the Antconc software are also used in data processing and analysis. Sinclair in Cheng (2012) described a concordance as a collection of words in a certain textual environment. Through a concordance display on a computer screen, users can identify patterns and find out the meaning of certain words. Furthermore, according to Cheng (2012) n-grams is a series of two or more words that occur repeatedly in a corpus. In corpora there are a number of structured patterns that are often present, such as the presence of pronouns with certain verbs. Cheng also added that one of the functions of n-grams is to find out the vocabulary that is adjacent to a particular pronoun.
Table 1. Frequency and normalization

<table>
<thead>
<tr>
<th></th>
<th>Adiparwa (10th century)</th>
<th>Arjunawiwaha (11th century)</th>
<th>Bharatayuddha (12th century)</th>
<th>Arjunawijaya (14th century)</th>
<th>Pararaton (15/16th century)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>992</td>
<td>56</td>
<td>154</td>
<td>143</td>
<td>591</td>
</tr>
<tr>
<td>Token</td>
<td>50877</td>
<td>12027</td>
<td>21912</td>
<td>19608</td>
<td>12728</td>
</tr>
<tr>
<td>Nominalization</td>
<td>1.949/100 thousands of occurrences</td>
<td>465/100 thousands of occurrences</td>
<td>702/100 thousands of occurrences</td>
<td>729/100 thousands of occurrences</td>
<td>4.643/100 thousands of occurrences</td>
</tr>
</tbody>
</table>

This is related to how information is delivered by participants in the form of opinions, choices, and statements. N-grams can also be categorized as a discourse function, which has referential, text organization, attitude, and interactional functions. References in n-grams include time markers, place markers, and in-text markers. The attitude on n-gram refers to the attitude of the speaker and writer, while the interactional function is related to the use of politeness in speech acts.

3. FINDINGS AND DISCUSSION

After analysing all 25 Based on the normalization analysis carried out on the five texts, the frequency of sira is higher and more varied in prose texts (Adiparwa and Pararaton texts) than in poems. Some of the functions of sira found in prose texts, for example, are third personal pronouns, second personal pronouns, modifiers, and honorific markers. According to Siewierska (2004), the frequency of personal pronouns usage and their grammatical functions differs depending on the type of text, as in the English corpus of Biber et al., which shows that the use of the third personal pronoun is higher in fictional or prose texts as shown in Figure 1 and Table 1.

![Figure 1 The use of sira.](image)

3.1. The Third Personal Pronoun

Figure 2 is the graphic of the use of sira as third personal pronoun in 10th-16th century.

By using the n-grams and concordance feature, the use of sira as the third personal pronoun in the Adiparwa text is found to be accompanied more by the modifier ta both on the left or right of it with 497 total occurrences. The presence of this modifier indicates that sira serves in a syntactic function as a subject in a clause or sentence. Another construction that signifies sira as a third personal pronoun is the plural marker kabeh 'all'; occurring on the right side of sira on 27 occasions, and the preposition de 'by' occurring on the right side of sira on 43 occasions. Preposition de, occurred on the right side of sira, indicating that sira holds the syntactic function as the subject semantically, not as the doer.

The following is the use of personal pronoun sira in Adiparwa text:

(1) “Mulih ta sira ring kadayawan” (Ad)

Return MOD PRON3 PREP palace

‘he/she returns to the Palace’

In sentence (1), the third personal pronoun sira is to the right of ta particle. In this construction, sira occupies the subject function preceded by the verb mulih. The third personal pronoun sira in the sentence refers to the Maharaja Pariksit previously mentioned in the Adiparwa text. Such constructions occurred frequently in the Adiparwa texts, but unlike the Adiparwa text, the frequency of sira as a third personal pronoun in the Arjunawiwaha, Bharatayuddha, and Arjunawijaya texts is uncommon. Based on n-grams and concordance lines, the construction of the third personal pronoun sira with the prepositions de and ri to the right of sira, and particle ta to the right and left of sira only appear in occasionally. The common construction generally appearing in the three texts is the third persona pronoun sira located to the right or left of the verb although in the Pararaton text, the third personal pronoun, sira, is mostly located to the right or left of the verb. The use of ta to the left of the personal pronoun sira is less than the one to the right.

The following is the use of personal pronoun sira Pararaton text.

![Figure 2 Third personal pronoun sira.](image)
Sira in the sentence (2) functions as the third personal pronoun and replaces Ken Angrok in the previous sentence. The verb construction – S is a common construction in Old Javanese texts. Syntactically, there is no change in the third personal pronoun sira, but rather it has the bound form – nira and –ira which can be attached to nouns, passive verbs, and preposition de. In Pararaton text, the ability of the bound forms – nira and –ira to attach to passive verbs decreases and they are more attached to nouns and preposition de.

3.2. Modifiers

Figure 3 presents the decrease of the use of sira as a modifier. Helmbrecht (2004) explains that personal pronouns can occur as a modifier and a determiner, as in German and English where the personal pronoun as a determiner is optional. In Adiparwa text of the 10th century, the use of sira as a modifier is frequent. However, its use as a modifier decreases in the texts in later periods. In Pararaton text of the 15th/16th century, sira as a modifier is rediscovered with fewer occurrences than those in Adiparwa text. One of the grammaticalization forms that occur in persona pronouns is decategorialization, which occurs through the disappearance of the personal pronoun’s function as a determiner (Heine & Song, 2011). Based on graph 3, the function of sira as a modifier is not completely lost but is later rediscovered in Pararaton text. The increase of the use of sira as a modifier is affected by the prose type of the Pararaton text.

The characteristic of sira as a modifier in the Adiparwa text is its position on the right of the word hana ‘there is’ (ta) and on the left of a proper noun which refers to people owning a high position such as a King, God, or Teacher. Some of these proper nouns include brāhmaṇa, bhagavān, mahārāja, sīrī, mpu, bapa, ratu, rsi. In the Arjunawiwaha, Bharatayuddha, and Arjunawijaya texts, as a modifier on the construction of hana (ta) sira is absent.

In the Pararaton text the construction of hana (ta) sira occurs only twice, followed by a noun on the right.

3.3. Honorific Markers

Based on Figure 4, the use of sira as an honorific marker increased from the 10th century to 16th century. In the Adiparwa text, sira as an honorific marker is located to the right of the particle i or ri, and rarely to the left of the proper noun bapa. The following is an example of sira in the Adiparwa text.

(4) Makrak ta sang Çrnggi tumangis i sira bapa (Ad)
Shout MOD ART cry PREP ART father

‘Sang Smggi cries loudly to his ayah’

In sentence (4), sira does not function as a third personal pronoun, but as an honorific marker where its usage is similar to sang. In the Arjunawiwaha, Bharatayuddha, and Arjunawijaya texts, the use of sira as an honorific marker is often followed by other words such as sang and by a proper noun on the right. The following is the use of sira in the Bharatayuddha text.

(5) Sang Trigarta pati sapta mujar i sira sang Dhananjaya.
(sang Trigarta speaks seven times to sang Dhananjaya)

‘sang Trigarta speaks seven times to sang Dhananjaya’

Figure 3 Modifier sira.

Figure 4 Honorific Marker sira.
In sentence (5), *sira* is followed by another honorific marker *sang* and the person's name. According to Zoetmulder and Poedjawijatna (1992), *sira* was often used to substitute *sang* and placed to the left of an aristocratic title. Meanwhile, in the *Pararaton* text, *sira* serves as an honorific marker, which is mostly followed by proper names of those with high rank of social statuses, such as Ken (Angrok and Dèdès), Gajah, Virarāja, Mpu, Lèmbu, Kèbo, Rangga-lawe, Bango, Tunggul Ametung, Mahisa-Champaka, and Sora, with more than 300 occurrences. Heine and Song (2011) explained that the second personal pronoun may be derived from the third personal pronoun, which also serves as an honorific marker. In this context, *sira* is not only a third personal pronoun but also an honorific marker. This form of honorific addresses social relations that are commonly found in languages in Southeast Asia and East Asia (Heine & Song, 2011; Siewierska, 2004). Siewierska (2004) argued that the use of pronouns as an honorific marker is closely related to a person's social status and level.

### 3.3. The Second Personal Pronoun

Based on Figure 5, the use of *sira* as a second personal pronoun was found to be present in the text from the later period, namely the *Pararaton* text dating from the 15th/16th century. *Sira* as a second personal pronoun is used in direct sentences. In the *Pararaton* text, *sira* does not only refer to the third person, but also to the second person. According to Ishiyama (2019), the shift from third person to the second person is a common phenomenon in languages, for the purpose of politeness. In this case, Javanese is one language that recognizes politeness in its linguistic system (*unggah-unggah*). According to Rahyono (2002), the personal pronoun used by the speaker indicates the speaker's social status and position, interlocutor, and the person being talked about. In the *Pararaton* text, *sira* as a second personal pronoun is used to refer to someone who is older or more respected based on his/her social status. Siewierska (2004) also explained that the third personal honorific marker used to refer to the second person is used as noun pronominalization. In this case, personal pronouns undergo grammaticalization as a personal marking function, or its referent is changed.

The third personal pronoun here undergoes a desemantization process into the second personal pronoun; its referent indicating changes from the third person to the second person. In addition, the shift in personal pronouns referents occurs because one of the sources of construction may be from other pronouns (Helmbrecht, 2004). Heine and Song (2011) also explained that one of the sources of the second person construction comes from the third personal pronoun.

The following is the use of *sira* as the second personal pronoun in *Pararaton* text.

6) *Lah kaki isun anuguh kalih, lamun sira aja laninha, isun aja anugunana ritir samandala* (Par)

**EMP grandfather PRON1 sit - together if** **PRON2 NEG go** **PRON2 EMP wait** **PREP PRON2 territory**

‘O my grandfather who sits together, if you don’t go, will be waiting in your territory’

Sentence (6) is a direct sentence uttered by Ken Angrok to two grandfathers. By age, Ken Angrok was younger than the two grandfathers. Ken Angrok uses the pronoun *sira* to refer to the person being spoken to.

According to Hunter (2007) the shift of the third person to the second person pronoun occurs because of an internal paradigm shift in Old Javanese pronouns. This happens because, in the *Pararaton* text, there are personal pronouns used in everyday language that are included in the dialect of Old Javanese literature. He emphasizes that the use of the pronoun *sira* as the second and third personal pronouns is related to the combination of written literature with elements of oral language in the making of new literary works. *Sira* as the third person pronoun in the narrative section of the *Pararaton* text is more in written form of Old Javanese, while *sira* as the second person pronoun in the dialogue section is a dialect of spoken language. In this regard, Uhlenbeck (1968) in his research on the Old Javanese personal pronouns explained that associating the use of the Old Javanese personal pronouns with Javanese dialects faces many difficulties, especially in distinguishing archaic elements, dialect phenomena, and inadequate data distribution. Therefore, additional data is required to enable the observation of dialects in Old Javanese text.

However, if we review the text, another possibility of personal pronoun changes in the *Pararaton* text is due to the influence of the use of the first and second personal pronouns. The variation and frequency of occurrences of the second person pronoun in the *Pararaton* text are uncommon when compared to the texts of *Adiparwa, Arjunawiwuhu, Bharatayuddha*, and *Arjunawijaya*. Besides *sira*, the free form of the second person pronoun used in the *Pararaton* text is only *kita*, with three occurrences. Therefore, *sira* is used as a second personal pronoun to address the variations of the second person pronoun in the text whereas the variation of the first person pronoun used in the *Pararaton* text.

![Figure 5 The Second Personal Pronoun sira.](image-url)
consists of insun, isun, nisun, ningsun, sun, ngong, and mami. In other texts, the pronoun variation pronoun isun is not found. The variation of pronoun insun began use in texts in the 15th century. In the Old Javanese-Indonesian dictionary, it is stated that insun is a variation of personal pronouns used in ballad texts. Ballad “kidung” is a Middle Javanese poem type using a Javanese original meter (Zoetmulder, 1985). However, in this case, insun is not only limited to ballad texts, but is also found in prose text. In other prose texts, namely Bhismaprava text (17th century), Kriswanto (2016) described the occurrences of various variations of the personal pronouns, for example, one of the distinctive features of the personal pronouns is the presence of insun as the first personal pronoun and the use of sira as the second and third personal pronouns and, similar to the Pararaton text, the Bhismaprava text displays variations in the use of the second person pronoun limited to kita and ko forms.

4. CONCLUSION

Folklore Based on the discussion, the use of sira changes in each period and the various genres of data used significantly affects the frequency and variation of the function of sira. It does not only serve a function as a third person pronoun but also has a homonym form which functions as a modifier, an honorific marker. Additionally, sira serves as a second personal pronoun in the Pararaton text of the 15th/16th century. Of the various functions of sira, the use of sira is closely related to an honorific aspect. In the Pararaton text, the use of sira as an honorific marker is in line with its function as the second person pronoun in the text. Consequently, the reference shifts of personal pronoun sira are not caused by the influence of variations of personal pronoun used as the first and second person in the text. However, the construction process of sira as a second personal pronoun is also inevitable from its function as an honorific marker. This is in line with the current use of the personal pronoun in Javanese which considers the honorific aspect of the interlocutors and the person being talked about or to. Although no speech level is available in Old Javanese, yet during that period, personal pronouns were still concerned with honorific aspects.

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