

Internal Innovations of Gane Language in South Halmahera, North Maluku A Historical Linguistics Study

Burhanuddin*, Mahyuni, Sukri

Fakultas Keguruan dan Ilmu Pendidikan, Universitas Mataram, Mataram, Indonesia

*Corresponding author. Email: burhanuddin.fkip@unram.ac.id

ABSTRACT

This study explains the internal phonological and lexical innovations in Gane language. An internal innovation refers to transformation or difference of a language in aspect of phonology and lexicon which is not shared, especially, with other languages within a language group or family. For this purpose, interview fieldwork with Gane speakers were conducted using 200 basic vocabulary and 500 cultural vocabulary of Gane language. In addition, an associated data from Taba language that has a close genealogy of kinship with Gane language was also collected. Following the principles of data analysis in the historical linguistics study, data analysis employed a comparison method. Analysis revealed that as a result of historical, geographical and contextual differences, Gane language has undergone internal innovations or changes that distinguish it from other languages, including those that have a close kinship (e.g., Taba language). Secondly, internal innovations occurring in Gane language consisted of innovation in phonology (characterized with regular and irregular changes) and lexicon. Thirdly, to identify phonological and lexical innovations in a language, it requires a sufficient data from other family member of the language group. Fourthly, methodologically, identification of an internal innovation can ideally be done through employing the methodological principles applied in the historical linguistics study. Presumably, internal innovations can also be found in other linguistic aspects, such as morphology, syntax or semantics, areas which are legitimate for study.

Keywords: *Internal innovation, phonology, lexicon, historical linguistics*

1. INTRODUCTION

The concept of 'internal innovation' in this paper refers to the differences or changes in a language, which are not identified in other languages (including those in similar family group) and which also become the distinguishing features from other languages, as a result of social, historical and geographical environment and pathways. Such innovations (changes or differences) can appear in the levels of phonology, morphology, syntax, and semantics which can be discovered through comparing these elements with their proto forms, from which a group of the related languages originated. Comparison with the proto languages aims at understanding the patterns of changes and change development from the historical perspective, while comparison with other family members needs to do to understand the relative changes of a language with respect to other languages, which is used as a benchmark of innovation. Given comparison with the

proto languages does not always indicate an internal innovation, lexical comparison between Gane lexicons and those of others, which was conducted in this study, is legitimately important to identify such changes.

As widely recognized, Gane language is one of six Austronesian languages spoken in South Halmahera, North Maluku Province, Indonesia. The other five are Buli, Maba, Sawai, Gebe, and Taba. The speakers of these languages also spread in other regions and live side-by-side with the speakers of non-Austronesian languages. Blust (1993), Kamholz (2014), and Burhanuddin et al. (2019a) grouped these Austronesian languages into South Halmahera Subgroup. Further, these linguists argued that South Halmahera Subgroup historically separated into Central-Eastern-South Halmahera subgroup (which comprises of Buli, Maba, Sawai, and Gebe) and *Southern-South Halmahera subgroup* (consisting of Gane and Taba). Thus, genetically, Gane has a close relationship with Taba.

For this reason, identification of internal innovations in Gane is more legitimate if comparison is made with Taba language, compared to with other related languages

Studies on Austronesian languages in South Halmahera (Buli, Maba, Sawai, Gebe, Gane, and Taba) were mainly conducted from the point view of historical linguistics. This means that such studies tended to present similarities among these languages, especially in the phonological and lexical aspects. For instance, studies by Blust (1993), Kamholz (2014), Jumalia (2016), and Burhanuddin et al. (2019a) described both qualitative and quantitative evidence of similarities. Likewise, convergent evidence of similarities was also demonstrated among languages in South Middle-East Halmahera and South-South Halmahera groups. However, internal innovation in these languages is widely under-researched. Specifically, this study offers explanation of internal innovations in Gane language.

Given such focus, a couple of relevant studies (e.g., Adriani & Kruyt, 1914; Whisler & Whisler, 1995; Ross, 1994; Bowden, 2001; Burhanuddin et al., 2016; Burhanuddin et al., 2017a; 2017b; Burhanuddin, 2018; Febriningsih & Taha, 2018; Taha, 2019; Duwila & Nurfani, 2019; and Burhanuddin et al., 2019a; 2019b; 2019c) are worth mentioned. Whisler and Whisler (1995) described the phonology of Sawai language, but this was conducted synchronically and has different aspect and object with that of the present study. Bowden (2001) took similar approach when studying Taba language, focusing on describing the structures of Taba languages, including phonology, morphology, syntax, semantics and lexicon. Ross (1994) described the concept of South Halmahera-West New Guinea subgroup with sources of data different with Blust (1993) and Kamholz (2014). Burhanuddin et al. (2016) emphasizes the urgencies of linguistic studies on South Halmahera-West New Guinea subgroup. A number of studies in this group have been done to explain status of Gebe ethnic from historical linguistic perspective (Burhanuddin et al., 2017a), internal innovation of Sawai ethnic (Burhanuddin et al., 2017b) and Taba (Burhanuddin, 2018). Among these previous studies, the current research has a relatively close link to the work of Burhanuddin et al. (2017b) and Burhanuddin (2018). They are distinctive particularly on the research object. Whilst the previous studies took Sawai and Taba languages, this research chose Gane language. Febriningsih and Taha (2018) explained the concept of politeness in Ternate Melayu language, while Taha (2019) and Duwila and Nurfani (2019) were keen to explore the proclitic of personal pronominal in Taba language and markers of personal pronoun of Ternate language, respectively. Other previous research examined the complexities of phonetic changes of Austronesian ethnic group in South Halmahera (Burhanuddin et al., 2019a), testing the hypothesis of

Adriani and Kruyt (1914) regarding the characteristics of South Halmahera-West New Guinea (Burhanuddin et al., 2019b), and unveiled the characteristics of South Halmahera-West New Guinea based on the data from Taba language (Burhanuddin et al., 2019c). These previous researches clearly differ from the current study with regard to the research object and focus. Considering these focuses, internal innovation in the phonology and lexicon of Gane language remains unexplored.

2. METHOD

This research focused on Gane language as an object. Data of 200 basic vocabulary and 400 cultural vocabulary in Gane from 3-5 Gane speakers (age 45 to 60 years) living in Gane village, Gane District of South Halmahera were collected using the interview method with note-taking technique. Criteria for informant selection were those who have a very least frequent visit external to Gane village and who are able to speak Indonesian language. Similar approaches were undertaken to collect data from Gane speakers who live in Makian Island. The interviews lasted for maximum of three hours, then continued in the next days to ensure the well-being of the participants, until 600 lexicons were all collected. The data from Taba language were also collected as (of course with informants in that language) a benchmark and comparison through which the internal innovation of Gane language can be traced. Taba was selected as it has a close genealogy of kinship with Gane.

Data were then brought for analysis employing the comparative methods between Lexicons of Taba and those of Gane, in line with the analytical framework of historical linguistics study. Lexicons compared were those that have had similar meaning (semantic), is closely identical, and share similar proto etymons. These criteria are crucial to ensure that the phonological internal innovations revealed are trustworthy. To identify phonological internal innovations, lexicons which are different and unexplainable, as they are shaped from different etymons or proto forms, were not compared. However, these lexicons were comparable to identify lexical internal innovations through comparing two similar lexicons, which are not generated from similar ancestors nor unexplainable. Results of analysis then were managed through the stages used in qualitative tradition, including data reduction, data display, and inference (Miles & Hubermans, 1984).

3. FINDINGS AND DISCUSSION

As previously expressed, the concept of ‘internal innovation’ in this paper refers to the typical characteristics of a language that distinguish it from other languages (especially those with similar

genealogy) formed through the gradual transformation and development of the language over times. Internal innovation in this paper specifically addresses both phonological and lexical innovations. To identify these internal innovations, 600 lexicons of Gane languages were compared with lexicons from other language in Austronesian family in South Halmahera, in this case Taba language. This comparison sharpens the typical characteristics of internal innovation in Gane.

3.1. Phonological innovations

Analysis identified a number of phonological innovations which differentiate Gane language from other Austronesian languages in South Halmahera, including Taba language.

First, Gane language produces phoneme /f/ in the last position regularly, but other Austronesian languages in South Halmahera, e.g., Taba uses phoneme: /s/.

Gloss	Gane	Taba
roof	yɔta <u>f</u>	yata <u>s</u>
wash	ha <u>t</u> ɔta <u>f</u>	tata <u>s</u>
to suck	sɔda <u>f</u>	sɔda <u>s</u>
saliva	di <u>d</u> if	idi <u>s</u>

The difference of vowel sounds in the lexicons that express the meaning of ‘roof’ and ‘wash’, is presumably the result of irregular dissimilation-assimilation processes, which also explains the presence of the syllable *ha-* in *hatɔtaf* and /d/ in the beginning position of *didif* ‘saliva’ in Gane.

Second, Gane language regularly produces phonem /ʔ/ in the final position, while Taba language uses phonem: /ø/.

Gloss	Gane	Taba
father	bapa <u>ʔ</u>	baba
open	ayolu <u>ʔ</u>	yolo
eye	ntɔ <u>ʔ</u>	mtɔ
vomit	wawa <u>ʔ</u>	wa
leprosy	pado <u>ʔ</u>	pado
buy	tua <u>ʔ</u>	tua
green	ijo <u>ʔ</u>	ijo
inside	lilo <u>ʔ</u>	lo
imitate	damu <u>ʔ</u>	tamɔi
sinking	mdudi <u>ʔ</u>	hamdudi

The difference of consonant sounds in the lexicon which expresses the meaning of ‘father’ is presumably the result of irregular dissimilation-assimilation processes, which also explains the presence of /a/ in the beginning position of a lexicon: *ayoluʔ* ‘open’. Lexicon: *wa* ‘vomit’ is assumed to transform from: **wawaʔ* > **waaʔ* > **waʔ* > *wa*. Whereas, lexicon: *tamɔi*, is assumed to change from **damuʔ* > **damu* > **tamu* > **tamo* > *tamɔi*, or reversely from **tamɔi* > **tamɔ* > **tamu* > **damu* > *damuʔ*

Third, there is a regular addition of syllables in the beginning position (: *ha-*, *pa-*, *ba-*, *ka-*, *ga-*, *le-*) in Gane language, but not identified in other Austronesian languages in South Halmahera, e.g., Taba.

Gloss	Gane	Taba
to kill	<u>h</u> apun	pun
blackout	<u>h</u> amɔt	mɔt
above	<u>p</u> ayau	yase
sparkling	<u>b</u> alawei	hawei
east	<u>k</u> atimu	timu
worm	<u>g</u> alet	let
flow	<u>g</u> asik	kis
two	<u>l</u> epu	plu
four	<u>l</u> effɔt	phɔt, and so on

Lexicon: *gasik* is assumed to transform from: **gasik* > **sik* > *kis* (metathesis), as in Taba language, the lexicon used to express such meaning is: *kis*.

Fourth, there is a regular addition of phoneme /a/ in the beginning position in Gane language, but not identified in other Austronesian languages in South Halmahera.

Glos	Gane	Taba
open	<u>a</u> yluʔ	yolo
pee	<u>a</u> miu	mioi
left	<u>a</u> balit	balit
to step on	<u>a</u> lika	liko
wash	<u>a</u> wɔs	was
close	<u>a</u> tɔnaʔ	tonak

Fifth, Gane language regularly produces phoneme /u/ in penultima syllables (open syllables) or undergoes a regular dissimilation process (*o-u*), but such process was not observed in other Austronesian languages in South Halmahera. For example, Taba language maintains /o/ or assimilation process (*o-o*).

Gloss	Gane	Taba
root	w <u>o</u> lu	w <u>o</u> w <u>o</u>
little	m <u>o</u> tu	moto
hand	k <u>o</u> mu	komo
heart	y <u>o</u> cu	yoco
cheek	f <u>o</u> fu	oho
trait	w <u>o</u> su	woso
open	ay <u>o</u> lu	yolo

Sixth, Gane language regularly produces phonem/u/ in penultima syllables (open syllables) or possesses the sequence of vowel: *i-u* (in different syllables), but in Taba language these vowels appear as: /o/ or possesses the sequence of vowel: *i-o*.

Gloss	Gane	Taba
forehead	dild <u>i</u> lu	dild <u>i</u> lo
armpit hair	gig <u>i</u> lu	giglo
chest	pipp <u>i</u> du	pappido
beside	lik <u>s</u> u	likso

Seventh, Gane language regularly produces phoneme /u/ in penultima syllables (open syllables) or undergoes assimilation process: *u-u* regularly, but in Taba, /o/ appears or undergoes a dissimilation process: *u-o*.

Gloss	Gane	Taba
Sound	<u>bub<u>u</u>k</u>	<u>buk<u>o</u></u>
blow	<u>uf<u>u</u></u>	<u>uh<u>o</u></u>
mouth	<u>sum<u>u</u></u>	<u>sum<u>o</u></u>
nose	<u>usn<u>u</u></u>	<u>hun<u>g</u>o</u>
nail	<u>kuy<u>u</u></u>	<u>kuy<u>o</u></u>

Eighth, Gane language regularly produces phoneme /u/ in the final syllables or possesses the sequence of vowel: *a-u* (in different syllables) regularly, but Taba language uses phonemes: /ɔ, o/ or possesses the vowel sequence of: *a-ɔ*.

Gloss	Gane	Taba
long	<u>ɲa<u>ncu</u></u>	<u>ɲa<u>ncɔ</u></u>
edge	<u>day<u>u</u></u>	<u>day<u>ɔ</u></u>
brother	<u>ta<u>nu</u>?</u>	<u>ta<u>ncɔ</u>?</u>
naked	<u>hakaw<u>at</u>ul</u>	<u>kaw<u>at</u>ɔl</u>
to stab	<u>sa<u>?</u>gu?</u>	<u>sag<u>o</u></u>
to chew	<u>ca<u>k</u>um</u>	<u>ca<u>m</u>ɔk</u>
horn	<u>tad<u>u</u>k</u>	<u>tatt<u>ak</u>o</u>

Ninth, Gane language regularly produces phoneme /f/ in the beginning position, but Taba language uses phoneme: /h/.

Gloss	Gane	Taba
kiss	<u>fɔtan</u>	<u>hɔtan</u>
ringworm	<u>fɔn</u>	<u>hɔn</u>
bat	<u>fɔnik</u>	<u>hɔnik</u>
cheek	<u>fɔfu</u>	<u>o<u>h</u>o</u>
to count	<u>yɔ<u>f</u>an</u>	<u>yɔ<u>h</u>an</u>
centipede	<u>lifan</u>	<u>lih<u>an</u></u>
to lough	<u>mlif</u>	<u>taml<u>ih</u></u>
island	<u>waf</u>	<u>wah<u>ɔ</u>,</u> and so on

The lexicon which expresses the meaning of ‘cheek’ undergoes dissimilation-assimilation process. Assimilation process appears if the proto form of the lexicon is changing from *fɔfu > *hɔhu > *hohu > *hoho (assimilation) > *ɔhɔ, otherwise, dissimilation takes place if it follows *oho > *ofo > *ofu > *ɔfu > fɔfu pattern.

Tenth, Gane language regularly produces phoneme /l/ in the penultima syllables, while in Taba language, it appears as phoneme: /d/.

Gloss	Gane	Taba
late afternoon	<u>mama<u>l</u>in</u>	<u>mama<u>d</u>in</u>
straight	<u>milɔ<u>l</u>an</u>	<u>maddɔ<u>d</u>an</u>
edge, side	<u>lik<u>s</u>u</u>	<u>dik<u>s</u>o</u>

In Taba language, there are double ‘d’s (consonant cluster), as in *maddɔdan*. The phoneme /d/, which

occurs in front of /l/ (in Gane language, as in *milɔlan*), is a replacer of /l/. Otherwise, phoneme /d/ in Taba innovates to be /l/ in Gane.

Eleventh, Gane language regularly produces phoneme /s/ in the beginning position, but Taba language uses phoneme: /c/.

Gloss	Gane	Taba
poop	<u>si<u>w</u>u</u>	<u>ci<u>o</u>i</u>
fart	<u>si<u>t</u>u</u>	<u>ci<u>t</u>o<i>i</i></u>
going up	<u>sa<u>p</u>ak</u>	<u>co</u>

Twelfth, there is a regular shortening process in Taba language through the omission of consonant located in the middle position, and then being encrypted. However, this omission is not identified in Gane language.

Gloss	Gane	Taba
men	<u>mawon</u>	<u>mon</u>
inside	<u>lilo?</u>	<u>lo</u>
to rise	<u>ɲcapak</u>	<u>ɲco</u>
youngest	<u>mayau</u>	<u>mo?</u>
name	<u>sona</u>	<u>so</u>
not	<u>tesin</u>	<u>te?</u>
vomit	<u>wawa?</u>	<u>wa</u>

Some lexicons in Taba language are suspected to evolve from: *mawon (sinkop) > *maon (encryption) > mon ‘men’. Lexicon: lo ‘inside’ < *lo? < *lio? (encryption) < *lilo?. Lexicon: *ɲcapak ‘to rise’ > *ɲcaak (sinkop) > *ɲcok (encryption) > ɲco. Other lexicons in Taba seemingly undergo the equivalent processes.

Thirteenth, Gane languages regularly produces phoneme /a/ in both penultima and ultima syllables, but this was not discovered in Taba language that consistently uses phoneme: /o/.

Gloss	Gane	Taba
step on	<u>lik<u>a</u></u>	<u>lik<u>o</u></u>
rotten	<u>lek<u>a</u>t</u>	<u>lek<u>o</u>t</u>
mountain	<u>uw<u>a</u>t</u>	<u>ut<u>o</u></u>
when	<u>hapis<u>a</u>k</u>	<u>pais<u>o</u></u>
red	<u>malak<u>a</u></u>	<u>mak<u>ɔ</u>t</u>

It seems that there are two kinds of change processes on the lexicon that expresses the meaning of ‘mountain’, which are syncope and metathesis. Lexicon: *uwat > *uwot (syncope) > *uot (metathesis) > uto, or reversely: *uto > *uta (metathesis) > *uat (apocope) > uwat.

Fourteenth, Gane language regularly produces phoneme /i/ in penultima syllable, but other Austronesian languages in South Halmahera, including Taba uses: /ɛ, e/.

Gloss	Gane	Taba
what	pui	εapue
how	pehapui	dohapue
spear	kalaj	kalae?
this	ajini	inε

Fifteenth, Gane language regularly produces phoneme /w/ in the middle position but other Austronesian languages in South Halmahera, e.g., Tabasues: /ø/ (zero) and sometimes: /h/.

Gloss	Gane	Taba
to confess	maguwo	tuo
right	awoyan	oyan
flood	kiwis	kihisi
men	mawon	mon
mountain	uwat	uto
poop	siwu	cioi

Sixteenth, Gane language regularly phoneme /ø/ in the beginning position but other Austronesian languages in South Halmahera, including Taba language uses: /n/.

Gloss	Gane	Taba
to fly	opa	nopa
swing	agiaki	nagiaki
not yet	igou	nigowo
yawn	huap	nihuap

Seventeenth, Gane language regularly phoneme /ø/ in the final position but other Austronesian languages in South Halmahera, including Taba language uses: /i/.

Gloss	Gane	Taba
fart	situ	citoi
pee	amiu	mioi
to imitate	damu?	damoi

The addition of phoneme: /a/ in *amiu* ‘pee’ in the beginning position and of phoneme /?/ in the final position such as in *damu?* ‘to imitate’ occur regularly in Gane language.

Eighteenth, Gane language regularly produces phoneme: /?/ in the final position but other Austronesian languages in South Halmahera, including Taba language uses: /k/.

Gloss	Gane	Taba
elope	hilosa?	alosa _k
lean, stake	basisela?	assola _k
close	atona?	tona _k
grandfather	tete?	tete _k
lift	tega?	tede _k

Nineteenth, Gane language regularly produces phoneme /ŋ/ in the middle position but other Austronesian languages in South Halmahera, including Taba language uses: /n/.

Gloss	Gane	Taba
Pregnant	səŋan	sənan
window	janəla	janəla
to swallow	təŋlak	təlan

The lexicon that expresses the meaning of ‘to swallow’ undergoes metathesis (change in phonemic sound), which is in Gane: *ŋ-la* and Taba: *la-ŋ* and determines whether or not the phoneme /k/ is appearing.

Twentieth, Gane language regularly produces phoneme /s/ in the middle position but other Austronesian languages in South Halmahera, including Taba language uses: /h/.

Gloss	Gane	Taba
not yet	tešu	tehu
nose	usnu	huŋo
gill	yoŋnu	yoŋho

In the lexicons that express the meaning of *hidung* ‘nose’ and ‘gill’, both dissimilation (phonetic differentiation) and metathesis occurred. For lexicon that expresses ‘nose’, the change process might begin from *usnu > *uhnu > *usno (dissimilation) > *usŋo > *uhŋo (metathesis) > huŋo. Conversely, it might change from *huŋo > *suŋo > *suju (assimilation) > *sunu (metathesis) > usnu. Likewise, in lexicon: *yoŋnu* ‘gill’, presumably the change process starts from *yoŋnu > *yohnu > *yohŋu (assimilation) > *yohŋo (metathesis) > yoŋho.

Besides regular phonological internal innovations, it was found a number of irregular innovations in phonology which distinguish Gane language from other Austronesian peers. These irregular innovations are presented below.

1. Gane language produces phoneme /u/ or possesses the phonemic sequence of: *a-u* (positioned in the different syllables), while this phoneme appears as /a/ or follows the phonemic sequence of: *a-a* in Taba language. For example, lexicon which expresses the meaning of ‘mother’, in Gane, is expressed as: *mamu*, but in Taba: *mama*. Such change is also found in other lexicon that has the meaning of ‘to shoot’: in Gane: *tablu*, in Taba: *tabal*.
2. Gane language produces phoneme /u/ or possesses the phonemic sequence of: *ε-u* (positioned in different syllables), while this phoneme appears as /a/ or follows the phonemic sequence of: *ε-a* in Taba language. For example, lexicon for ‘rotten’, in Gane, it appears as: *pesnu*, while in Taba: *pesam*. Presumably, the lexicon *pesnu* transforms from: **pesna* < **pesma* < **pesam*, otherwise: *pesam* < **pesan* < **pesna* < **pesnu*.
3. Lexical metathesis in Gane language is more frequent than that in other Austronesian languages in South Halmahera. Metathesis: *s-k* occurs following the sequence of: *k-s* in the Taba lexicon for ‘flow’, which is in Gane, it is expressed as: *gasik*, but in Taba: *kis*. The appearance of the first syllable *ga-* in

- Gane language is regular, thus: *kis* < **sik* (metathesis) < **gasik* (apheresis).
4. Gane language undergoes a metathesis: *a-l*, but Taba language follows: *l-a* pattern, as exemplified in the lexicon for ‘big’: in Gane: *loal*, but in Taba: *lolo*. It is likely that the lexicon *loal* appears as the result of the process: *loal* < **lola* (metathesis) < **lolo* (assimilation), otherwise: *lolo* < **lola* (dissimilation) < *loal* (metathesis).
 5. Gane language undergoes a metathesis: *a-t*, but Taba language follows the sequence of: *t-o* (by which phoneme /a/ alters to /o/ regularly in Taba), as exemplified in the lexicon that expresses the meaning of ‘rotten’, in Gane: *lekat*, but in Taba: *lekto*. It seems that lexicon: *lekat*, comes from the process: *lekot* > *lekto* (metathesis), otherwise: *lekto* > **lekot* (metathesis) > **lekat*.
 6. Gane language undergoes a metathesis: *l-u*, but Taba language follows the sequence of: *a-l* (by which phoneme /u/ occurs as /a/), as exemplified in a pair of lexicons that expresses the meaning of ‘to shot’, which in Gane: *tablu*, in BTb: *tabal*. If *tablu* is considered the proto form, the innovation follows **tablu* > *tabul* (metathesis) > *tabal* (assimilation), or conversely **tabal* > **tabul* (dissimilation) > *tablu* (metathesis).
 7. Gane language undergoes a metathesis: *n-t* but Taba language follows the sequence of: *k-n* (by which phoneme /t/ appears as /k/), as exemplified in the lexicon that expresses the meaning of ‘meat’, which in Gane: *wəntu*, but in Taba: *wəknə*. If *wəknə* is considered the proto form, the innovation follows: **wəknə* > *wəntə* (partial assimilation parsial) > *wəntə* (metathesis) > *wəntu* (dissimilation), otherwise **wəntu* > **wəntu* (metathesis) > **wəknə* > *wəknə* (assimilation).
 8. Gane language undergoes a metathesis: *a-t*, but Taba language follows the sequence of: *t-o* (by which phoneme /a/ occurs as /o/), as exemplified in the lexicon that expresses the meaning of: ‘mountain’, which in Gane: *uwat*, but in Taba: *uto*. If *uwat* is considered the proto form, the innovation follows **uwat* > *uat* (syncope) > *uta* (metathesis) > *uto*, otherwise **uto* > **uta* > **uat* (metathesis) > *uwat*.
 9. Gane language undergoes a metathesis: *f-n*, but Taba language follows the sequence of: *n-h* (by which phoneme /f/ occurs as /h/), as exemplified in the lexicon that expresses the meaning of ‘bat’, which is in Gane: *fnik*, but in Taba: *nhik*. As previously stated, phoneme /f/ in Gane appears regularly as /h/ in all positions in Taba language. If the proto form is **fnik*, the innovation becomes: **hnik* > *nhik*, or **nhik* > **nfik* > *fnik*.
 10. Gane language undergoes a metathesis: *k-m*, but Taba language follows the sequence of: *m-k*, as exemplified in the lexicon that expresses the meaning of ‘chew’, which is in Gane: *cakum*, but in Taba: *camək*. If the proto form is **cakum* the innovation becomes: **cakom* > *camək* (metathesis), or **camək* > **camuk* > *cakum*.
 11. Gane language undergoes a metathesis: *n-u*, but Taba language follows the sequence of: *u-m* (by which phoneme /n/ appears as /m/), as exemplified in the lexicon that expresses the meaning of ‘rotten’, which is in Gane: *pesnu*, but in Taba: *pesam*. If the proto form is **pesnu*, the change follows: **pesna* > **pesma* > *pesam* (metathesis), or **pesam* > **pesan* > **pesun* > *pesnu*.
 12. Gane language undergoes a metathesis: *t-lu*, but Taba language follows the sequence of: *la-t* (by which phoneme /u/ is presented as /a/ or otherwise), as exemplified in the lexicon that expresses the meaning of ‘girl’, which is in Gane: *dawatlu*, but in Taba: *dawalat*. If the proto form is **dawatlu*, the change follows > **dawatla* (assimilation) > **dawalat* (metathesis), or conversely **dawalat* > **dawalut* (dissimilation) > **dawatlu* (metathesis).
 13. Gane language undergoes a metathesis: *s-a*, but Taba language uses the sequence of: *i-s* (phoneme /a/ changes into /i/ or vise-versa), as in a lexicon that means ‘parsimonious’, which is in Gane: *sakakar*, but in Taba: *iskakar*. If the proto form is **sakakar*, the innovation is **sakakar* > **sikakar* (dissimilation) > **iskakar* (metathesis), otherwise **iskakar* > **askakar* > **sakakar* (metathesis).
 14. Gane language undergoes a metathesis: *a-p*, but Taba language uses the sequence of: *p-a*, as exemplified in the lexicon that expresses the meaning of ‘when’, which is in Gane: *hapisak*, but in Taba: *paisə*. If the proto form is **hapisak*, the innovation is **hapisak* > **apisak* (apokop) > **apisa* > **paisa* (metathesis) > *paisə*, otherwise **paisə* > **paisa* > **paisak* > **apisak* (metathesis) > *hapisak*.
 15. Gane language produces phoneme /l/ in the middle position, but appears as /r/ in Taba, as exemplified in the lexicon that expresses the meaning of ‘rattan’, which is in Gane: *wəli*, but in Taba: *wəri*.

There are a number of other instances of irregular internal innovations that distinguish Gane language from other Austronesian family members in South Halmahera, including Taba language.

3.2. Lexical Innovations

Despite a number of studies have reported both qualitative and quantitative evidence of a close relationship between Gane and Taba languages (Blust, 1993; Kamholz, 2014; Jumalia, 2016; and Burhanuddin,

2018), Gane language shares a number of different lexicons with other Austronesian languages in South Halmahera, including Taba language. This finding suggests that some lexicons in these languages derive from different etymons. Some of these differences are reported below.

Gloss	Gane	Taba
cloud	malukut	lobi-lobi
good	fia?	masure
to burn	sekit	soŋ
to take a turn	waik	tapuka?
fruit	bōbu?	sapō
fur	lōŋku	balul
flower	saya	bunga
to hunt	hantōntōn	tasuŋa?
lake	talaga	owek
close	dekin	ncebak
cold	alō?	midin
to dig	olai	pait
to bite	pakat	babas
day	hawe	ŋan
to tie	sōwat	alika
wife	kawan	mapin
to sew	hadin	abeit
street	lōlan	tagil
needle	laim	somo
word	bing	makalusō, and so on

Besides lexicons mentioned above, it was found other lexicons which undergo an innovation, each of which expresses the meaning of ‘tiny’, ‘to knock’, ‘dirty’, ‘nail’, ‘skin’, ‘yellow’, ‘to throw’, ‘slippery’, ‘tongue’, ‘to play’, ‘sun’, ‘dream’, ‘mosquitoes’, ‘hot’, ‘stomach’, ‘to cut’, ‘to beat’, ‘back’, ‘grass’, ‘ill’, ‘wing’, ‘little’, ‘narrow’, ‘afternoon’, ‘who’, ‘husband’, ‘sharp’, ‘soil’, ‘cry’, ‘ear’, ‘bond’, and ‘snake’.

Further examinations indicate that some lexicons in Gane language are distinctive to those in all other Austronesian languages in South Halmahera as the result of internal innovation. Some of these lexicons in Gane language are presented below.

Gloss	Gane
cloud	malukut
to burn	sekit
to split up	sagal
to give	yatak
fruit	bōbu?
fur	lōŋku
to hunt	hantōntōn
to bite	pakat
to tie	sōwat
wife	kawan
talk	biŋ
evening	bakomo
sun	soŋ, and so on

4. CONCLUSION

There are some main conclusions that can be drawn from the findings of this study. Firstly, as an entity that has grown and developed in the different and complex geographical, social and historical contexts, Gane language inevitably undergoes internal innovations which distinguish it from other languages, including Austronesian languages in South Halmahera which share similar genealogy. Secondly, there are two types of internal innovations in Gane language, namely phonological and lexical innovations. Phonologically, innovation can be divided into regular and irregular changes. Internal innovation could also be identified in other linguistic elements, such as morphology, syntax, or semantics. Thirdly, inquiries regarding phonological and lexical innovations require sufficient data about other languages that have a closer relationship with the research object (the language investigated). Fourthly, methodologically, to identify the types of internal innovations of a language, as this study illustrates, it requires the research approach employed in the historical linguistic tradition as a framework. Finally, knowledge of internal innovations does not only explain the typical features of a language, but also help elucidate the reciprocal relationship and influence among languages and how the phonemic sounds are changing.

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