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A fossilized personal article in Atayal

—With a reconstruction of the Proto-Atayalic patronymic system*—

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ABSTRACT

In Atayalic languages (Austronesian), including Atayal and Seediq, one's full name is expressed by a patronymic system. For example, *Kumu Watan* literally means "Kumu, the child (daughter) of Watan." This paper reconstructs the patronymic system of the Atayalic languages by dissecting personal names into a root and attached elements such as a fossilized personal article *y-* and a possessive marker *na*. Regarding the fossilized personal article, *y*-initial personal names and kin terms in Atayal (e.g., *Yumin* [a male name], and *yama* "son-in-law") are compared with those in Seediq, which lack the initial *y* (e.g., *Umin* [a male name], *ama* "son-in-law"). The initial *y* in Atayal derives from the personal article *i* only when the root begins with the back vowels, *a* or *u*, and the attached *i* became *y* by resyllabification. This initial *y-* is referred to as a "fossilized personal article" in this paper. That marker seems to have lost its function as the personal article since these *y*-initial personal names or kin terms can further be preceded by an element derived from the personal article *i*, i.e., *i* (a nominative case marker), *ni* (a genitive case marker), and *ki* (a coordinator). One example is *k-i Y-umin* "with *Yumin*." There is other evidence that the fossilized personal article *y-* is dropped under certain conditions, such as direct address and the attachment of the possessive marker *na*, and the prefixation of *ka-* "late." In addition, this paper examines extensive data of a patronymic system recorded in Atayalic genealogies (Utsushikawa et al. 1935) in order to investigate the actual occurrences of the fossilized personal article and the possessive marker. Based on these analyses, the patronymic system is reconstructed in Proto-Atayalic.

Keywords: Atayal, Seediq, patronymic system, personal article, personal pronoun

1. Introduction

Atayal is one of the languages spoken by indigenous peoples in Taiwan. More than twenty languages were once spoken or are still spoken by indigenous peoples in Taiwan. These indigenous tribes dominated Taiwan until three or four centuries ago. Since then, they have been oppressed by ethnic Chinese immigrating to Taiwan. In present-day Taiwan, Sinitic speakers of Mandarin, Southern Hokkien and Hakka are the majority and the indigenous peoples are said to account for only two percent of the population.¹

The indigenous languages of Taiwan—excepting Yami, which is spoken on Orchid Island—are collectively called the Formosan languages. All these languages belong to the Austronesian language

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1 Hokkien is a Sinitic language. One of its dialects is called Southern Hokkien and is spoken in Fujian Province and Taiwan.

family, including Yami which belongs to the Malayo-Polynesian subgroup. According to Blust (1999: 45), Proto-Austronesian split into ten first-order subgroups (Fig. 1).² The top nine subgroups are Formosan languages; the tenth subgroup is a non-Formosan language that is referred to as Malayo-Polynesian.

Figure 1. Subgroupings of the Austronesian languages

1. Atayalic (Atayal, Seediq)
2. East Formosan (Basay, Kavalan, Amis, Siraya)
3. Puyuma
4. Paiwan
5. Rukai
6. Tsouic (Tsou, Kanakanabu, Saaroa)
7. Bunun
8. Western Plains (Taokas, Babuza, Papora, Hoanya, Thao)
9. Northwest Formosan (Saisiyat, Pazih)
10. Malayo-Polynesian (e.g., Yami)

Map 1. Distribution of Formosan languages and Yami



The Atayalic subgroup of the Austronesian language family includes two languages: Atayal and Seediq (Map 1). According to Ogawa and Asai (1935), Atayal has two dialects: Sqliq Atayal and C'uli' Atayal. Seediq also has two dialects: Paran Seediq and Truku Seediq. To reconstruct a particular grammatical system in Proto-Atayalic, it is necessary to compare the two languages and their dialects.

This paper focuses on the morpho-phonological alternations seen in the patronymic system of Atayal in order to reconstruct the Proto-Atayalic patronymic naming system. It does so by analyzing the phonological details that pertain to the attachment of the personal article *i* and the possessive marker *na*. Because Atayal and Seediq both belong to the Atayalic subgroup of languages, personal names in Atayal are compared to those in Seediq by using a data set from Seediq. Several personal names in Saisiyat, a neighboring language of Atayal, are also mentioned to supplement the arguments.

2. Personal articles and case markers in Austronesian: Literature review

Blust and Trussel (2010) reconstructed the Proto-Austronesian *i as a “personal article” alongside

2 The present author considers this subgrouping to require further revision. In this model, Atayalic and Saisiyat belong to different subgroups. As is evident from the discussion in this paper, Atayalic shares similarities with Saisiyat in terms of personal names and the patronymic system. This is not the only grammatical aspect that they share. Although their relationship has not been established yet, this paper hypothesizes that Atayalic and Saisiyat (and probably a few other Formosan languages) compose a single larger subgroup.

with its doublet *si. Their cognate sets and the glosses explaining its functions in each language is shown in Table 1. The top two languages, Atayal and Paiwan, are Formosan languages. The others belong to the Malayo-Polynesian subgroup. All the languages in Table 1 show the identical form *i*.

Table 1. The cognate set for the Proto-Austronesian *i “personal article”

Language	Form	Gloss
Atayal	<i>i</i>	Personal case marker for nominative ³
Paiwan	<i>i</i>	Appositional particle for personal names and pronouns
Isneg	<i>i</i>	The nominative and accusative of the personal article
Itawis	<i>i</i>	Personal singular nominative and genitive article
Malagasy	<i>i</i>	Personal article, generally joined to words making a proper noun
Balinese	<i>i</i>	A particle which makes nouns refer to definite persons
Sangir	<i>i</i>	Personal article, marking personal names and kinship terms
Balantak	<i>i</i>	Personal article
Banggai	<i>i</i>	Personal article
Kambara	<i>i</i>	Personal article, used with proper names, or words that function as proper nouns
Bugotu	<i>i</i>	Personal article, seen in prefix to personal pronouns
Mota	<i>i</i>	Personal article, making a noun into a proper name

Regarding this personal article *i, Blust (1977: 7) commented as follows:

Since *i ‘personal article’ must be reconstructed in any case to account for a widespread marker used with personal names, we can assume that the initial vowel in *i-aku...also functioned to mark some grammatical relationship (probably nominative) for personal nominals.

Here, the Proto-Austroensian *i-aku is a form that is reconstructed as the first singular personal pronoun, as illustrated in the Proto-Austronesian personal pronouns shown in Table 2 cited from Ross (2006: 533).⁴ Proto-Atayalic forms reconstructed in Ochiai (2019: 24) are in the right column. However, Proto-Atayalic forms for the 2nd singular *isu and the 1st inclusive plural *ita are supplemented by the present author.⁵

Table 2. Proto-Austronesian personal pronouns

	Proto-Austronesian	Proto-Atayalic
1 st singular	*i-aku	*y-aku

3 Blust and Trussel (2010) write “prefix for persons” for Atayal, which seems to have been cited from Egerod (1980:203). Here, I show the interpretation of Ogawa and Asai (1935:26).

4 Regarding third-person pronouns, Ross (2006:16) notes that “...third person pronouns in Formosan languages either are derived from or still are demonstrative pronouns.” This is the also case in Proto-Atayalic. Ochiai (2020) said that third-person pronouns in Atayal and Seediq derive from distal demonstratives in Proto-Atayalic reconstructed as *hija and *haja, which may date back to tentatively reconstructed Proto-Austronesian *sija and *saja. Therefore, Proto-Atayalic third-person pronouns are not shown in Table 2.

5 Li (1981: 296–297) reconstructed corresponding Proto-Atayalic forms as *?isu? and *?ita?, with the glottal stop word-initially and word-finally. However, I consider these glottal stops as to be phonetic realizations.

2 nd singular	*iSu[qu]	*isu
1 st inclusive plural	*ita	*ita
1 st exclusive plural	*i-ami	*y-ami
2 nd plural	*i-mu[qu], *i-amu	*y-amu

Blust (1977) relates the initial segment *i- in *i-aku to *i ‘personal article.’ According to the forms in Table 2, forms having the initial *i with a hyphen after it, i.e., *i-aku (1SG), *i-ami (1EXCL.PL), and *i-mu[qu]/*i-amu (2PL), are analyzed as possessing the personal article *i.⁶ For these forms, Ochiai (2019) has the initial *y- in Proto-Atayalic, indicating its phonological incorporation into the following roots. Regarding Proto-Austronesian personal pronouns attached with the personal article *i-, Blust (2013: 315) points out the following.

The first thing to note about these forms is that they are bimorphemic: each word consists of a pronominal base plus a nominative case marker...that was syntactically distinct from the pronoun, but phonologically attached to it, and hence often fossilized on the pronoun in historical change. Reflexes of both nominative case markers often called ‘personal articles,’ also occur with words that function as personal nouns in languages reaching from Taiwan to the Pacific.

Along Blust’s (2013) lines, the *y- in Proto-Atayalic pronouns is said to be a fossilized personal article. The following sections show that the Proto-Atayalic fossilized personal article *y- is not only seen in the pronouns, but is also partially retained in personal nouns and kin terms in Atayal under a particular phonological conditions.

Blust (1977, 2013) considers that the personal article *i also functions as a nominative case marker. However, Ross (2006: 525) has a different viewpoint. He classified case markers into common case markers and personal case markers, and created a list of these forms in Formosan languages as well as the forms in Proto-Malayo-Polynesian (Table 3).⁷

Table 3. Case-markers in Formosan languages and in Proto-Malayo-Polynesian

	Common case markers		Personal case markers	
	Nominative	Genitive	Nominative	Genitive
Saisiyat	∅	no[ka]	∅	ni
Proto-Atayalic	*ku?, *ka?, *a?	*na-ku?, *na-ka?, *na?	*i	?

6 The abbreviations in these examples are as follows: AV (actor voice), COM (comitative), EXCL (exclusive), FUT (future), GEN (genitive), LNK (linker), NOM (nominative), SG (singular), PL (plural), RCPL (reciprocal), and UVP (undergoer voice, patient subject).

7 The table has been slightly modified by the present author. Ross shows a list for five cases (nominative, genitive, accusative, oblique, and locative). However, only the nominative and genitive are shown here. For language names in Ross (2006), Proto-Atayal has been modified as Proto-Atayalic. In Ross (2006:526), the personal case marker for the nominative in Siraya was *ta*, which has been modified as *ti* based on a description by Adelaar (2011:89–90). Also, the personal case marker for the nominative in Proto-Atayalic was *i? in Ross (2006), which has been modified to *i based on a description by Ochiai (2019:25). The personal case marker for the genitive in Proto-Atayalic was *ni? in Ross (2006). However, this reconstruction remains uncertain. While Atayal has *ni* as the personal case marker for genitive (Ogawa and Asai 1935:26), Seediq seems to lack this form. The common case-markers in Proto-Atayalic in Ross (2006) seem to represent Proto-Atayal rather than Proto-Atayalic. These forms also need revision; however, this is not addressed in this paper.

Siraya	<i>ta</i>	<i>na</i>	<i>ti</i>	∅
Paiwan	<i>a</i>	<i>nua, na</i>	<i>ti</i> (SG) <i>tia</i> (PL)	<i>ni</i> (SG) <i>nia</i> (PL)
Proto-Rukai	*ka, *ku, *na	---	*ki	---
Proto-Puyuma	*[i]na, *a	---	*i (SG) *na (PL)	*ni (SG) *na (PL)
Proto-Amis	*ku, *kiya	*nu, *[nu]niya	*ci (SG) *ca (PL)	*ni (SG) *na (PL)
Proto-Bunun	*a, *ka, *ca	---	= <i>[k]at</i>	---
Kavalan	∅/[y]a	<i>na</i>	<i>[y]a ti</i> /∅ <i>ti</i>	<i>ni</i>
Proto-Malayo-Polynesian	*∅-/*k-	*n-	*si	*ni

Based on the comparison of these forms, Ross (2006: 525–527) notes the following.

Formosan case-markers tend to be (C)V monosyllables, where C- or ∅- indicates the case, -i personal singular marker, ... , and a vowel other than -i a common singular case-marker... The distribution of initial consonants is not chance. Most obvious is that GEN [genitive] markers usually begin with *n-*, a long recognized fact.⁸

Along these lines, the Proto-Atayalic personal case marker for nominative *i shows the zero derivation from the personal article *i (i.e., *∅-i).

3. Personal articles in Atayal: Literature review

Ogawa and Asai (1935: 27) noted that the personal case marker for the nominative case is *i*, as in the example *i Watan*. However, they added that this personal case marker *i* was scarcely used. In line with Ross (2006), the personal case marker *i* in Atayal shows zero-derivation, i.e., ∅-*i*, from this personal article *i*. The personal case marker for genitive reported in Ogawa and Asai (1935: 27) is *ni*, which is thought to derive from *n-*, indicating the genitive case, and the personal article *i*. For comparison, the case markers in Atayal described in Ogawa and Asai (1935: 26) are summarized in Table 4 along with common case markers.⁹

Table 4. Case markers in Atayal

	Common case marker	Personal case marker
Nominative	<i>qu</i>	<i>i</i>
Genitive	<i>na-qu</i>	<i>ni</i> ¹⁰

8 I have omitted part of what Ross (2006:525) wrote: “-a [indicates] a personal singular marker.” This is because I disagree with it. The -a is seen only in the plural forms in Paiwan, Puyuma and Amis. Although the Bunun form =*[k]at* has -a in it, this is an enclitic, indicating that it has a different origin. Although the Kavalan form, *[y]a ti* has a in it, this is a complex form and the latter part *ti* seems to indicate the proper case-marker which is composed of the case marking *t-* and the personal article -*i*.

9 The forms in the table have been slightly modified by the present author.

10 The personal case marker for the genitive *ni* in Atayal is likely to have historically derived from the possessive marker *na* followed by the personal marker *i* (*na i > *ni*). A similar change is seen in the relational marker *ka* followed by the personal marker *i*, which became *ki*, e.g., *ka i > *ki*, in Atayal (Ochiai 2019: 22-23). These forms are expected to have become **nay or **kay; however the vowel *a* was dropped in these historical changes.

Ogawa and Asai (1935: 33) reported the function word *ki* as a coordinator in examples such as *Taymo ki Watan* “Taymo and Watan.” Regarding the coordinator *ki*, Ochiai (2019:22–23) proposed that it was historically derived from a linker *ka* followed by the personal article *i*. She reconstructed a Proto-Atayalic connector **ka* and the personal article **i* as part of the reconstruction for the inclusory construction in the Atayalic languages and said that **ka* followed by **i* became *ki* in Atayal. These three forms, *∅-i*, *n-i*, and *k-i*, derive from the personal article *i* and their functions are summarized in Table 5.

Table 5. The personal article *i* and its derived forms in Atayal

<i>i</i>	The personal case marker for the nominative
<i>ni</i>	The personal case marker for the genitive
<i>ki</i> ¹¹	A coordinator for personal nouns

4. Morpho-phonological changes in the Atayal patronymic system: Literature review

Patronymic systems in which one’s name is composed of one’s given name and one’s father’s name (or part of the father’s name) have been reported worldwide. For example, Lo (1945) introduced several patterns of patronymic systems in the Tibeto-Burman languages in which a part of the father’s name (or his full name) is integrated into the given name. For example, if the first generation has the name *En-hêng-no*, the second generation would have a name such as *No-pên-p’ei*, and the third generation *Pên-p’ei-k’o*. The last syllable of the first generation, *no*, is transferred to the first syllable in the second generation, and the last two syllables of the name in the second generation, *pên-p’ei*, are transferred to the first two syllables of the name in the third generation.

Patronymic naming systems are also seen in the Indo-European language family. In Welsh, for example, Coupland and Garrett (2010: 17) point out that the naming system entails a given name followed by the possessive marker *ap*, followed by the father’s name. For example, *Dafydd ap Ioan* is David, son of John. This naming system is also followed in some Formosan languages (which belong to the Austronesian language family) spoken in Taiwan.

According to Utsushikawa (1939), Formosan languages that use a patronymic naming system include Saisiyat, Amis, Hoanya, and Pazih. Utsushikawa (1939: 323–324) also notes that the Atayalic languages follow a patronymic system. In the Atayalic tradition, one’s name consists of two parts: a given name (hereinafter referred to as a personal name) followed by the name of a parent, usually the father. If one’s father died at a young age, the mother’s name is used. In this paper, a personal name that is used as the name of the parent is termed a “patronym.”

On the basis of this system, an example of an Atayalic name would, therefore, be *Payhu Watan* “Payhu (m.) of Watan (m.) [Payhu, who is a child (son) of Watan].”¹² But there seems to be unexplained exceptions in this naming system.¹³ According to Utsushikawa et al. (1935: data 20), a son of *Payhu Watan* is called *Yawi Payhu*, and a son of *Yawi Payhu* is called *Batu Nawî*. When *Yawi* is used as a patronym, it becomes *Nawî*. As pointed out by Yang (1957: 677), the initial *y* is substituted

11 Huang (1995:109) lists this as a comitative case marker for proper nouns.

12 Male names and female names are indicated by m. and f., respectively.

13 The observation of this phonological change is also mentioned in Iijima (1906: 10–12), Mori (1917: 169–173), Sasaki (1918: 13–29), Yang (1957), Rau (1992: 112), and Tseng (2017: 253–255). However, none of these authors, including Egerod (1980), explain the process of phonological change or the phonological condition that triggers it.

by an *n* in the patronym.¹⁴¹⁵

Then, the remaining puzzle is the initial *y* in *Yawi*, which disappears in its patronym, *Nawi*. Regarding this, Yang (1957) argues that the initial *y* is an independent element because it is sometimes omitted in the data of personal names recorded by Utsushikawa et al. (1935). As an example, Yang mentions a case where the Atayal personal name *Yawi* appears as *Awi*. He also makes reference to personal articles in the data sets of Formosan languages collected by Ogawa and Asai (1935: 26–27) in which Atayal has the *i*-functioning as a nominative marker.

Yang (1957: 680–681) draws important conclusions. One is that the *y* in *y*-initial personal names is an attached element that originates in the personal case marker for the nominative *i*. This paper refers to this marker as a “fossilized personal article” and writes it as *y-* with a hyphen. The other conclusion concerns the condition of the *y* attachment. Yang (1957: 679) states that it is attached to vowel-initial roots.¹⁶ Yang (1957: 678–679) also points out that *y*-initial names can also be used without the *y*, based on an investigation of the source used by Utsushikawa et al. (1935).

The aim of this paper is to strengthen Yang’s (1957) conclusions by supplementing them with arguments on the comparison of Atayal to Seediq (Section 5), the conditions of deletion for the fossilized personal article *y-* in Atayal (Section 6), the coexistence of forms originating in the personal article *i* in Atayal: *i* (a nominative case marker), *ni* (a genitive case marker), *ki* (a coordinator) and the fossilized personal article *y-* (Section 7), standard patronymic forms and exceptional patronymic forms observed in data from Atayal and Seediq (Section 8), and the reconstruction of the Proto-Atayalic patronymic system (Section 9).

The important point to note is that in present-day Atayal, the personal article *i* preceding a personal name and the possessive marker *na* preceding a patronym have fallen out of use except under certain conditions, which are discussed in the following sections.

5. Personal names and kin terms in Atayal and Seediq¹⁷

Egerod (1980: 195) gave Atayal examples of the personal article *y-*, which is attached to personal names and kin terms (Table 5).¹⁸ *Yaway* in the first line is a personal name, whereas the others are kin terms.¹⁹

14 On this subject, Okamatsu (1921: 222) remarks that the addition of the *n* indicates a relationship of possession (See Section 6.2). For example, the name *Watan Nawi* literally means “Watan of Yawi.” Okamatsu (1921) analyzed the possessive marker as *na* or *nu*, including the following vowel.

15 Based on my field notes, Atayal (the Squiliq dialect) has the following phonemes: vowels /a e i o u ə/, and consonants /p β t k ʔ q ʔ s x h z r l m n ŋ y w/. The consonants β and ʔ are written as *b* and *g*. Among the vowels, *e* and *o* in the penultimate syllable in the present-day Atayal are observed to date back to the diphthongs *ay* and *aw*. For example, *Payhu* in the earlier form became *Pehu* in the present form. According to Huang (1995: 16–17), Atayal (the C’uli’ dialect) has the same phoneme inventories except that it has *ɬ* and lacks the *ə*.

Also based on my field notes, Seediq (the Paran dialect) has the following phonemes: vowels /a e i o u/, and consonants /p b t d k g q ʔ s x h r l m n ŋ y w/. Among the vowels, *e* dates back either to *ə* or *ay*, and *o* dates back to *aw*. Seediq includes two dialects, Paran and Truku. The Seediq data shown in Tables 1 and 2 are from the Paran dialect. The Paran Seediq data were collected during the author’s fieldwork, unless cited otherwise.

16 Yang (1956, 1957) also describes similar phonological rules in Saisiyat in which vowel-initial personal names, such as *Obai*, become *Yobai* in an honorific form. He notes that the addition of the honorific *y* in Saisiyat only applies to vowel-initial personal names that are similar to Atayal. Yang (1957: 680) considered the addition of *y* in Atayal personal names and indicated that it has an honorific meaning, similar to Saisiyat. However, according to data from the author’s fieldwork since 2018, *y*-initial personal names such as *Yumin* and non-*y*-initial personal names like *Watan* show no difference in respectfulness in Atayal.

17 The forms of Atayal or Seediq words cited from other sources, which show many orthographical variations, are modified in this paper.

18 The phonetic representations in Table 5 were added by the author.

19 The initial letter of a personal name is capitalized throughout this paper.

Table 5. Examples of words having the initial *i* in Egerod (1980)

Forms with <i>i</i> -	Root
<i>i-Away</i> [jaway] “Yaway” (f.)	<i>Away</i>
<i>i-aba</i> [jaba] “father”	<i>aba</i>
<i>i-aya</i> [jaja] “mother”	<i>aya</i>
<i>i-aki</i> [jaki] “grandmother”	<i>aki</i>
<i>i-utas</i> [jutas] “grandfather”	<i>utas</i>

The initial *i*- is phonetically changed to the semivowel [j] by resyllabification when preceding the vowels *a* and *u*, for example, *i-ata* > *yata* [ja.ta]. This section provides Atayal personal names and kin terms and their cognates in Seediq. The Atayal kin terms in Table 6 are collected from Sasaki (1918: 9–12); Seediq cognates are from the author’s field notes.

Table 6. Kin terms in Atayal and Seediq

Atayal	Seediq	Proto-Atayalic
<i>yaba</i> “father”	---	
<i>yaki</i> “grandmother” ²⁰	---	
<i>yama</i> “son-in-law”	<i>ama</i>	*ama
<i>yanay</i> “brother-in-law”	<i>ane</i>	*anay
<i>yaŋu</i> “sister-in-law (younger)”	<i>aŋu</i>	*aŋu
<i>yata</i> “aunt”	<i>ata</i> “elder brother’s wife”	*ata
<i>yaya</i> “mother”	---	
<i>yutas</i> “grandfather”	---	
<i>ina</i> “daughter-in-law”	<i>ina</i>	*ina
<i>irah</i> “sister-in-law (elder)”	---	
<i>mama</i> “uncle”	<i>mama</i> ²¹	*mama
<i>mawan</i> “brother-in-law”	<i>mawan</i>	*mawan
<i>səwagi</i> “younger sibling”	<i>surwai</i>	*səwaði
<i>qəbəsuyan</i> “elder sibling”	<i>qubusuran</i>	*qəbəsuran

As shown in Table 6, for four of the Atayal forms (*yata*, *yaŋu*, *yama*, and *yanay*), cognate forms in Seediq lack the initial *y* (*ata*, *aŋu*, *ama*, and *ane*).²² It is not clear whether the personal article *y*- is attached or not where a root begins with a high vowel (the *i* in *ina* and *irah*).²³ For roots beginning with a consonant (e.g., *mama*, *mawan*, *səwagi*, and *qəbəsuyan*), the personal article *y*- is not observed. If we suppose that *y*- is attached to these consonant-initial kin terms, then the consonant cluster *yC*- is

20 Seediq has *baki* “grandfather,” which could be related to the Atayal *yaki*. This correspondence is irregular. It seems that the initial consonant *b* is sporadically dropped in the Atayal form, becoming *aki*, and that the fossilized personal article *y*- is attached to it.

21 This form was taken from Bullock (1874: 41). However, it is not seen in present-day Seediq.

22 Egerod (1980: 773–774) suggests that *yutas* “grandfather” derives from the root *utas* “penis,” which is also used as direct address for “grandfather.” (See Section 3.1.)

23 Even when the personal article is attached (e.g., *i-ina*), the two like vowels are probably shortened to *ina*.

produced as the onset, which is phonotactically disallowed.

Table 7 illustrates the cognate sets of personal names in Atayal and Seediq. The Atayal personal names in this table were taken from trees of 75 Atayal genealogies (4,790 tokens of a patronymic system) collected in Utsushikawa et al. (1935). The Seediq data come from the author's field notes. In Atayal and Seediq, personal names include a limited number of traditional names passed on from ancestors to descendants. Each traditional name specifies its gender. The origins of these traditional names are unknown.

Creative personal names are, however, still given in both languages. Innovative names in Atayal, for example, are taken from words for plants or animals, such as *abaw* ("leaf") and *yuyay* ("monkey"), or even from personal names in other languages like *Amuy* (from Hakka).²⁴ However, traditional names are still prevalent in the Atayalic languages. For this reason, Atayal and Seediq share a considerable number of personal names as listed in Table 3.²⁵

Table 7. Personal name cognates in Atayal and Seediq

Atayal	Seediq	Proto-Atayalic	Gender
<i>Awbiŋ</i> ²⁷	<i>Obiŋ</i>	*Awbiŋ	f.
<i>Baay</i>	<i>Bae</i>	*Baay	m.
<i>Bakan</i>	<i>Bakan</i>	*Bakan	f.
<i>Ciwas</i>	<i>Tiwas</i>	*Tiwas	f.
<i>Habaw</i>	<i>Habo</i>	*Habaw	f.
<i>Iban</i>	<i>Iban</i>	*Iban	m.
<i>Ibuq</i>	<i>Ibuq</i>	*Ibuq	m.
<i>Iwal</i>	<i>Iwan</i>	*Iwan	f.
<i>Kumu</i>	<i>Kumu</i>	*Kumu	f.
<i>Lawa</i>	<i>Lawa</i>	*Lawa	f.
<i>Lituk</i>	<i>Lituk</i>	*Lituk	f.
<i>Lubi</i>	<i>Lubi</i>	*Lubi	f.
<i>Mahuŋ</i>	<i>Mahuŋ</i>	*Mahuŋ	f.
<i>Mawna</i>	<i>Mona</i>	*Mawna	m.
<i>Pawan</i>	<i>Pawan</i>	*Pawan	m.
<i>Pinaŋ</i>	<i>Pinaŋ</i>	*Pinaŋ	m.
<i>Puhuq</i>	<i>Puhuq</i>	*Puhuq	m.
<i>Rawsi</i>	<i>Rosi</i>	*Rawsi	m.
<i>Sayta</i>	<i>Seta</i>	*Sayta	f.
<i>Sapu</i>	<i>Sapu</i>	*Sapu	m.
<i>Siyat</i>	<i>Siyac</i>	*Si(y)at	m.
<i>Takun</i>	<i>Takun</i>	*Takun	m.
<i>Tanah</i>	<i>Tanah</i>	*Tanah	m.
<i>Tapas</i>	<i>Tapas</i>	*Tapas	f.
<i>Taraw</i>	<i>Tado</i>	*Tadaw	m.
<i>Taymu</i>	<i>Temu</i>	*Taymu	m.
<i>Walis</i>	<i>Walis</i>	*Walis	m.
<i>Watan</i>	<i>Watan</i>	*Watan	m.
<i>Yabis</i>	<i>Abis</i>	*Abis	m.

24 For Saisiyat, Yang (1956: 319) lists the identical personal name for a female and suggests that it is borrowed from Hakka.

25 The Saisiyat cognate is given for the Atayal personal name *Yupas* in the last row because no Seediq cognate was obtained.

<i>Yabu</i>	<i>Abu</i>	*Abu	m.
<i>Yaway</i>	<i>Awe</i>	*Away	f.
<i>Yawi</i>	<i>Awi</i>	*Awi	m.
<i>Yukan</i>	<i>Ukan</i>	*Ukan	m.
<i>Yuma</i>	<i>Uma</i>	*Uma	f.
<i>Yumin</i>	<i>Umin</i>	*Umin	m.
<i>Yuraw</i>	<i>Udo</i>	*Udaw	m.
<i>Yupas</i>	---	*Upas (Saisiyat <i>Upas</i> ²⁸)	m.

Table 7 shows the same pattern seen in the kin terms in Table 6.²⁸ For personal names beginning with a consonant, the forms in Atayal and Seediq are identical except for slight segmental changes.

For personal names that begin with *y* in Atayal (*Yabis*, *Yaway*, *Yawi*, *Yukan*, *Yuma*, *Yumin*, and *Yuraw*), their corresponding forms in Seediq lack the initial *y* (*Abis*, *Away*, *Awi*, *Ukan*, *Uma*, *Umin*, and *Udo*), and the personal names in Seediq begin with a vowel *a* or *u*. It is likely that the personal article *i* is phonologically attached to the following personal name as *y-* under the condition that the personal name began with a back vowel, *a* or *u*. This personal article conditionally seen in Atayal is referred to as the fossilized personal article in this paper. Proto-Atayalic root forms are reconstructed without the fossilized personal article. Also, it is not clear whether the personal article *y-* is attached or not where a root begins with a high vowel *i* (e.g., *Iban*).

It is evident that kin terms and personal names in Atayal follow the same pattern. Comparison with Seediq cognates further shows that the initial *y* is an additional element originating in the personal article *i*. In consideration of the affinity of the personal article *i* and the personal names and kin terms in Atayal, it is inferred that the personal article preceded personal names and kin terms diachronically, regardless of whether its initial segment was a vowel or a consonant.²⁹ Then, the personal article **i* can be reconstructed in front of a personal name in Proto-Atayal. Even though the personal article is not seen in present-day Seediq in front of a personal name, the fossilized personal article is seen in Seediq pronouns: *y-aku* (1SG), *y-ami* (1EXCL.PL), *y-amu* (2P). Then, the personal article **i* could be reconstructed in front of a personal name in Proto-Atayalic.³⁰

6. Deletion of the fossilized personal article in Atayal

This section demonstrates that the fossilized personal article in Atayal is not part of the personal name by providing three conditions under which the fossilized personal article is removed: direct

26 There is one exception. *Awbiŋ* has no fossilized personal article, even though it begins with *a*, i.e., ***Yawbiŋ*. (The double asterisk indicates unacceptability; the first syllable in this personal name is the diphthong *aw*.) It could be the phonological complexity of the diphthong that prevented the attachment of the personal article. If this personal name is used as patronym, the possessive noun is attached and becomes *Nobiŋ* (< *Nawbiŋ*) in Paran Seediq (Section 8.2). For Atayal, no data of *Awbiŋ* attached with the possessive marker has been obtained.

27 This form is taken from Yang (1956:314). Yang (1956: 317–318) points out that one-seventh of Saisiyat personal names are shared by Atayal. The author assumes that these identical names represent retention rather than borrowing. (A few cases of borrowing are discussed in Section 8.1, however.)

28 Between the two languages, the phonological correspondence is as follows. In Seediq, the diphthongs *aw* and *ay* in Atayal correspond to the monophthongs *o* and *e*, respectively; a word-final *t* in Atayal corresponds to *c* [s] in Seediq; a word-final *l* in Atayal corresponds to *n* in Seediq; and the consonant *d* in Seediq corresponds to *r* in Atayal. These phonological correspondences are mentioned by Li (1981).

29 The form *i Watan* was reported by Ogawa and Asai (1935: 27), although they note that the marker *i* is rarely used.

30 This noun phrase, **i* followed by a personal name, in Proto-Atayalic is reconstructed in Ochiai (2019: 25) as a part of the inclusive construction of Proto-Atayalic, which is “including pronoun (**yami*, **yamu*)+**ka*+**i*+included person.” The latter part, **i*+included person, corresponds to **i*+personal name in this paper.

address, the attachment of the possessive marker *na*, and the prefixation of *ka-* “late-.”

6.1 Direct address

According to the author’s field notes and observations, personal names and kin terms are used by themselves as forms of direct address in Atayal. However, there are exceptions. Egerod (1980) points out that for the *y*-initial personal names and kin terms, the root, i.e., *Away*, *aba*, *aya*, *aki*, and *utas*, functions as a form of direct address.³¹

6.2 Replacement by the possessive marker

Egerod (1980) observes that in the patronymic system of Atayal, the possessive marker *na*, is attached before the personal name used as a patronym in some cases. Its appearance is phonologically conditioned, appearing only before a personal name that historically begins with a vowel.

The fossilized personal article *y-* is deleted at the addition of the possessive marker *na* when a personal name is used as a patronym. Egerod (1980) observes that some personal names exhibit phonological changes when used as patronyms such as *Neban*, *Newal*, *Nawi*, and *Nokan*, as shown in Table 8.³²

Table 8. Patronyms with phonological changes in Egerod (1980)

Personal name	Root	Patronym	Egerod’s analysis
<i>Iban</i> (m.)	<i>Iban</i>	<i>Neban</i>	<i>na-Iban</i>
<i>Iwal</i> (f.)	<i>Iwal</i>	<i>Newal</i>	<i>na-Iwal</i>
<i>Yawi</i> (m.)	<i>Awi</i>	<i>Nawi</i>	<i>na-Awi</i>
<i>Yukan</i> (m.)	<i>Ukan</i>	<i>Nokan</i>	---

The table shows that if *Watan*’s father is called *Iban*, *Watan*’s full name becomes *Watan Neban* rather than ***Watan Iban*. Egerod (1980) observed that these patronyms with an initial *n* derive from the possessive marker *na* and a personal name.³³ Phonological changes such as vowel shortening (*aa* > *a*) or monophthongization (*ai* > *e*) occur in these forms. For *Yawi*, Egerod (1980) uses the root form *Awi* in phonological derivation. Although he does not provide an analysis of the patronym *Nokan*, it should follow a form similar to others and be derived from *na* and *Ukan* (the latter is the root of *Yukan*): *na-Ukan* > *Nokan* in which the monophthongization of *au* > *o* is applied. To summarize, the possessive marker eliminates the *y* of the *y*-initial personal names and attaches to the root that begins with the vowels *i*, *a*, or *u*.³⁴ Therefore, there are no forms of patronyms such as ***na Yumin*, in which *na* is followed by the fossilized personal article *y*. This suggests that patronyms can be historically reconstructed as **na* + patronym rather than **na* + **i* + patronym.

This possessive marker is rarely used before personal names beginning with a consonant in the data of patronymic systems from Utsushikawa et al. (1935). However, they have a few examples

31 In addition, Ogawa (1931: 302) says that the kin term *aya* “mother” is used instead of *yaya* for direct address.

32 This marker is explained in Egerod as a “particle of adjugation; used between noun and postposed nominal modifier...” (1980: 411).

33 To be precise, Egerod (1980: 411) says *na* in Squliq Atayal is a “particle of adjugation; used between noun and postpose nominal modifier...between preposed verbal modifier and noun,” which behaves like a linker. In this sense, its use is wider than the possessive marker. Although it is not certain if *na* started from a possessive marker or a linker, this paper treats *na* seen in the patronymic system as a possessive marker. The historical development of *na* is an issue to be worked on in the future.

34 I could not find any personal names that begin with *ə* in Atayal.

of patronyms that show the possessive marker *na* before a patronym, such as *Takun na Baay*, *Mayla na Walis*, *Yuraw na Watan*, *Taja na Hakut*, *Yayut na Lokul*, and *Yuma na Lokul*.³⁵ It can be said that *na* historically appeared before the personal names used as a patronym whether its root begins with a vowel or not, however, it has fallen out of use, with the exception of personal names that historically begin with a vowel.

6.3 Prefixation of *ka-* “late”

The fossilized personal article *y* is also deleted in the presence of the prefix *ka-* to personal names or kin terms. Egerod (1980: 245) remarks that, in Atayal, *k-* [kə] is a prefix used for deceased persons and it “sometimes merges with the noun in forms which presuppose *ka-*.” As Egerod said that the earlier form of this prefix might be *ka-*, this paper proposes that this prefix dates back to **ka-* because this form is retained in the roots of personal names and kin terms that begin with a vowel. It follows that the vowel *a* in the prefix *ka-* is weakened to *kə-* when it attaches to a consonant-initial nouns.

Egerod (1980) gives the following examples: *kə-aba* (“the late father,” *yaba* “father”), *kə-aya* (“the late mother,” *yaya* “mother”), *kə-batu* (“the late Batu”), and *kə-puciŋ* (“the late Puciŋ”).

Other examples in Egerod (1980), however, show a phonological change: *kotas* (“the late grandfather,” *yutas* “grandfather”); and *Koba* (“the late Uba (m.)”).³⁶ It is likely that *kotas* was constructed by attaching the prefix *ka-* to the root *utas*: *ka-utas* > *kawtas* > *kotas*.³⁷ *Koba* is formed in the same way: *ka-uba* > *kawba* > *koba*. Then, the forms for a deceased father or mother should also be *ka-aba* and *ka-aya* instead of the forms with vowel weakening in the prefix *ka-*, *kə-aba* or *kə-aya* as reported by Egerod. Regarding these two forms, Rau (1992: 112–113) reported *kaba* and *kaya*, which are likely to indicate the expected forms *ka-aba* and *ka-aya*, even though they seem to have undergone a shortening of the like vowel.³⁸ In the forms recorded by Egerod, *kə-aba* or *kə-aya*, the prefix *ka-* underwent further vowel weakening even when the roots began with a vowel.

Tseng’s (2017) data more clearly show that the prefix is indeed *ka-*. For example, Egerod’s form for “the late grandfather” is *kotas* but the corresponding form according to Tseng (2017) is *kawtas* [kaw.tas], which is formed by prefixing *ka-* to the root *utas*, followed by resyllabification of [ka.u.tas] to [kaw.tas]. Tseng’s other examples include *Kawkan* (“the late Yukan”), *Kawbay* (“the late Yubay”), *Kawmin* (“the late Yumin”), *Kawpas* (“the late Yupas”), and *Kawraw* (“the late Yuraw”). His data set includes one example where the affix *ka-* attaches to the root that begins with the vowel *i*, which is *lkka-yrah* (“the late sister-in-law”), derived from the root *irah*.³⁹

Table 9 summarizes the pattern in three studies where the prefix *ka-* attaches to a root that begins

35 Among these patronymic systems seen in Utsushikawa et al. (1935), the first four belong to Squaliq Atayal and the rest belong to C’uli’ Atayal. The possessive marker was rare but was retained in both dialects. In the present day, Squaliq Atayal no longer uses the possessive marker *na* in the patronymic system except as a root for patronyms that begin with a vowel. In one variety of C’uli’ Atayal (the Mayrinax dialect), two examples of the possessive marker *na* in the patronymic system, where the patronym begins with a consonant, were obtained in Huang (2000: 40, 172): *Baay na Payan*, and *Baycu na Payan*. It is likely that this possessive marker *na* is retained in the patronymic system in some variety of C’uli’ Atayal.

36 This name, which begins with a *u*, is not attached to the fossilized personal article *y*. It shows an exception to the *y* attachment rule.

37 As seen in this example, the diphthong *aw*, produced by the prefixation of *ka*, becomes *o*.

38 Both Egerod (1980) and Rau (1992) address the Squaliq dialect of Atayal. Here, the variations in this dialect are observed. Tseng (2017) also addresses Squaliq Atayal.

39 The prefix *lkka-* used here seems to be a variant of another prefix *lk-*. In Rau (1992: 112–113) and Tseng (2017: 255–256), *lk-* [ləkə-] was introduced as a free variant of *k-*, the prefix for deceased persons. However, in Egerod (1980), the prefix *lk-* is explained to mean plurality. In other words, it is a “composite prefix for ancestors, including the person’s men and offspring.” In addition to this, Egerod lists more variants for deceased persons, such as *km-*, *kn-*, *lkm-*, and *krm-*.

with a vowel. Where the root begins with an *a*, both Egerod’s data (1980) and Tseng’s data (2017) in the first row show that the vowel weakens. Aside from these examples, the prefix *ka-* attaches to the root and further undergoes a phonological change in some cases (the sequence of *au* to *o* as seen in *kotas* or the shortening of an *a* from the sequence of two *a*’s as seen in *kaba*).⁴⁰

Table 9. Kin terms that begins with a vowel and the prefixation of *ka-*

Kin term	Rau (1992)	Egerod (1980)	Tseng (2017)
<i>aba</i> “father” <i>ata</i> “aunt”	<i>kaba</i>	<i>kəaba</i>	<i>kəata</i>
<i>utas</i> “grandfather”	---	<i>kotas</i>	<i>kawtas</i>
<i>irah</i> “sister-in-law”	---	---	<i>lakəkayrah</i>

7. The coexistence of the forms derived from the personal article *i* in Atayal

Section 3 discussed how the personal article *i* in Atayal derives from three function words: *i* (a personal case marker for the nominative), *ni* (a personal case marker for the genitive) and *ki* (a coordinator for personal nouns).

Section 5 discussed how the fossilized personal article *y-* originated in the personal article *i*, and fossilized onto personal names and kin terms beginning with the back vowel, *a* or *u*.

The case markers *i* and *ni* or the coordinator *ki* require personal nouns or kin terms to follow them. These forms *i*, *ni* and *ki* themselves include the personal article *i*. If these function words are followed by a personal name or kin term that begins with *y-*, e.g., *ki Y-umin* “with Yumin,” the two elements that originates in the personal article *i* appear next to each other. This section investigates whether the fossilized personal article *y-* is deleted in these cases, similar to the deletion of *y-* observed in the cases discussed in Section 6.

Earlier studies on Atayal grammar, including those by Huang (1995), dealing with the C’uli’ dialect, and Huang and Hayung (2011), dealing with the Squiliq dialect, were utilized to find examples of case markers followed by personal nouns that begin with the fossilized personal article *y*. An investigation of all the examples of *i*, *ni*, and *ki* followed by *y*-initial personal names and kin terms showed no changes in their forms. The case markers are followed directly by the fossilized personal article as demonstrated in the following examples (1–3). The segments derived from the personal article *i* are in bold face.

(1) C’uli’ Atayal *i*

pa-ingilis ***i*** *yaya*
 FUT-cry NOM mother
 “Mother will cry.” (Huang 1995: 18)

(2a) C’uli’ Atayal *ni*

nbuwun ***ni*** *yaba* *ku* *qusia*.
 drink-UVP GEN father NOM water

⁴⁰ Furthermore, Seediq also has the prefix *səkə-* indicating a deceased person, for example, *səkə-tama* (“late father”), according to Tsukida (2009: 270). The second syllable *kə*, in which the schwa undergoes vowel reduction, indicates that it dates back to the identical segment *ka-*. This prefix in Paran Seediq is *suku-*, e.g., *suku-tama* “late father.” The first syllable in Seediq, *sə-/su-*, is not seen in Atayal. This paper tentatively reconstructs **ka-* “late” to Proto-Atayalic. However, another possible reconstruction would be **sVka-*. The quality of the vowel after *s* is not clear. The prefix *ka-* is likely to be reconstructed to Proto-Atayalic.

“The water was drunk by father.” (Huang 1995: 45)

(2b) Squliq Atayal *ni*

Cingay balay qes ni yaba ru yata =nya
 many very happy GEN father and mother =3SG.GEN

“And his father and mother were very happy” (Egerod 1980: 434)

(3a) C’uli’ Atayal *ki*

Ma-tuting =cami ki Yumin
 RCPL.AV-beat =1PL.NOM.EXCLCOM Yumin

“I fought with Yumin.” (Huang 1995:44)

(3b) Squliq Atayal *ki*

Wal =simu mngka ki yaya =nya?
 go.AV =2PL.NOM Taipei COM mother =3SG.GEN

“Did you (all) go to Taipei with her mother?” (Huang and Hayung 2011: 15)

An expression such as *ki Yumin* (< *k-i i-Umin*) in (3a) has two personal markings next to each other. Their coexistence suggests that, the latter marking, i.e., the fossilized personal article *y-*, has lost its original function and is likely to be reanalyzed by the Atayal people as part of the root, i.e., to be fossilized.

8. Data of personal names in genealogies

This section provides comprehensive data of personal names in both Atayal and Seediq that exhibit phonological changes in the patronymic naming system relating to either the fossilized personal article *y* (only in Atayal) or the possessive marker *na* (in both Atayal and Seediq). The data were collected from large-scale genealogies in Utsushikawa et al. (1935) and elsewhere.

8.1 Atayal data

The data in this section illustrate the phonological change in the patronymic system. The data were obtained from 4,790 name tokens of 75 Atayal genealogies (Utsushikawa et al. 1935). The variations observed in personal names with a fossilized personal article are also discussed in this section.

As explained in Section 6.2 and shown in Table 10, the possessive marker *na* attaches to the root of personal names that begin with a vowel when used as patronym.

Table 10. Roots of personal names that begin with a vowel and their patronyms

Root	Personal name	Patronym
<i>Iban</i> (m.)	<i>Iban</i>	<i>Nayban, Iban</i>
<i>Ibuq</i> (m.)	<i>Ibuq</i>	<i>Naybuq</i>
<i>Icih</i> (m.)	<i>Icih</i>	<i>Naycih, Icih</i>
<i>Iwal</i> (f.)	<i>Iwal</i>	<i>Naywal</i> ⁴²
<i>Abay</i> (f.)	<i>Yabay</i>	<i>Nabay</i>
<i>Abaw</i> (m./f.)	<i>Yabaw</i> ⁴³ , <i>Abaw</i>	<i>Nabaw, Yabaw, Abaw</i>
<i>Abis</i> (m.)	<i>Yabis</i>	<i>Nabis, Yabis</i>
<i>Abu</i> (m.)	<i>Yabu</i>	<i>Nabu, Nyabu, Yabu</i>

<i>Abuy</i> (f.)	<i>Yabuy</i>	<i>Nabuy</i>
<i>Abuy</i> (m.)	<i>Yabuy</i>	<i>Nabuy</i>
<i>Akaw</i> (m.)	<i>Yakaw, Akaw</i>	<i>Nakaw, Yakaw</i>
<i>Alu</i> (m.)	<i>Yalu</i>	<i>Nalu</i>
<i>Amay</i> (m.)	<i>Yamay</i>	<i>Namay</i>
<i>Apu</i> (m.)	<i>Yapu, Apu</i>	<i>Napu</i>
<i>Away</i> (f.)	<i>Yaway, Nawe</i> ⁴⁴	<i>Naway, Yaway</i>
<i>Awi</i> (m.)	<i>Yawi, Awi</i>	<i>Nawi</i>
<i>Ayut</i> (f.)	<i>Yayut</i>	<i>Nayut, Yayut</i>
<i>Ubay</i> (m.)	<i>Yubay, Ubay</i>	<i>Nawbay, Yubay</i>
<i>Uhaw</i> (m.)	<i>Yuhaw</i>	<i>Nawhaw</i> ⁴⁵
<i>Ukan</i> (m.)	<i>Yukan, Ukan</i>	<i>Nawkan</i> ⁴⁶
<i>Ukih</i> (m.)	<i>Yukih</i>	<i>Nawkih, Ukih</i>
<i>Uma</i> (f.)	<i>Yuma, Uma</i>	---
<i>Umin</i> (m.)	<i>Yumin, Umin</i>	<i>Nawomin, Umin</i>
<i>Ujay</i> (f.)	<i>Yujay</i> ⁴⁸ , <i>Ujay</i>	<i>Nawujay</i>
<i>Upas</i> (m.)	<i>Yupas, Upas</i>	<i>Nawupas, Yupas, Upas</i>
<i>Urax</i> (m.)	<i>Yurax</i>	<i>Norax</i>
<i>Uraw</i> (m.)	<i>Yuraw</i>	<i>Nawraw, Yuraw</i>
<i>Urun</i> (m.)	<i>Yurun</i>	<i>Nawrun</i>

First, for personal names beginning with the vowel *i* (e.g., *Iwal*), the possessive marker *na* is attached, and it becomes *na-iwal* [nay.wal] (written as *Naywal* in this paper). The diphthong *ay* in the patronym was retained at the time of the research by Utsushikawa et al. (1935). In Egerod's example of the same personal name, the patronym is *Newal*, which demonstrates monophthongization. Like the diphthong *ay* in *Naywal*, the diphthong *aw* is retained in *Nawkan*, but it becomes the monophthong *o* (that is, *Nokan*) in Egerod's example in Table 8.⁴⁸ Table 11 summarizes the phonological changes in the roots of personal names that begin with vowels.

Table 11. Summary of phonological changes in the roots of personal names beginning with vowels

Personal name (root form)	Personal name attached with the fossilized personal article	Patronym attached with the possessive marker
<i>Away</i>	<i>Yaway</i> (< <i>i</i> - <i>Away</i>)	<i>Naway</i> (< <i>na</i> - <i>Away</i>)
<i>Ukan</i>	<i>Yukan</i> (< <i>i</i> - <i>Ukan</i>)	<i>Nawkan, Nokan</i> (< <i>na</i> - <i>Ukan</i>)
<i>Iwal</i>	<i>Iwal</i> (< <i>i</i> - <i>Iwal</i>) ⁵⁰	<i>Naywal, Newal</i> (< <i>na</i> - <i>Iwal</i>)

The patronymic system recorded by Utsushikawa et al. (1935) contains some irregularities. The root

41 *Newal* in Egerod (1980).

42 This form could have derived from the identical word *abaw* "leaf."

43 This form indicates the monophthongization of *ay* to *e*.

44 *Nyuhaw* in Tseng (2017).

45 *Nokan* in Egerod (1980).

46 The author could not find an example of *Yuma* used as patronym. However, it could have changed to *Nawma* because Seediq has a cognate *Uma* that becomes *Noma* (<*na*-*Uma*) when it is used as patronym.

47 This form must have been taken from the identical word *yujay* "monkey." However, it seems that Atayal people reinterpret the initial *y* as the fossilized personal article. Thus, the form without the *y* (that is, *Ujay*) was considered to be a root.

48 The monophthongization of this type is observed in one example in the data set of Utsushikawa et al. (1935): *Norax* (<*nawrax* <*na*-*urax*).

49 See footnote 23.

of personal names beginning with vowels should have the fossilized personal article *y-*. However, the root, as well as the forms attached to *y-*, are used as the personal names, as can be seen in *Abaw*, *Akaw*, *Apu*, *Awi*, *Ubay*, *Ukan*, *Uma*, *Umin*, *Uñay*, and *Upas*.

Second, the data set includes one example of a personal name with a possessive marker (*Nawe*), but this is expected to be a patronym.⁵⁰

Third, roots beginning with vowels should have the possessive marker *na*. However, some examples show that the bare root is used as the patronym: *Abaw*, *Ukih*, and *Umin*.

Fourth, patronyms with the fossilized personal article *y* were also identified. These are *Yabaw*, *Yabis*, *Yabu*, *Yakaw*, *Yaway*, *Yayut*, *Yubuy*, *Yuraw*, and *Yupas*. In these examples, the initial *y* is expected to be replaced by the possessive marker *na*.

Another exception is where *Nyabu* [n^habu], derived from the root *Abu*, is used as a patronym. Tseng (2017: 255) mentions a similar patronym (*Nyuhaw*; see *Uhaw* in Table 10) and points out that this derivation involves another possessive marker, *ni*.⁵¹ It is likely that the roots *abu* and *uhaw* are attached to this possessive marker and became *Nyabu* (< *ni-Abu*) and *Nyuhaw* (< *ni-Uhaw*), respectively. These irregularities are summarized in Table 12.

Table 12. Standard and irregular forms in roots that begins with a vowel

	Personal name	Patronym
Standard	Fossilized personal article <i>y</i>	Possessive marker <i>na</i>
Irregular	Root beginning with a vowel, Possessive marker <i>na</i>	Root beginning with a vowel, Fossilized personal article <i>y</i> , Possessive marker <i>ni</i>

In the standard phonological derivation, the root of personal names beginning with a vowel is attached either to the personal article *y* (in the case of personal names that begin with a back vowel *a* or *u*) or to the possessive marker *na-* (in the case of the patronym). Nevertheless, some names reject the attachment of both markers, despite beginning with a vowel, as seen in list (4) below.

(4) Personal names beginning with a vowel without *y* nor *na*

Aban (m.); *Abin* (f./m.); *Agal* (m.); *Akeyo* (f.); *Akin* (f.); *Alay* (f.); *Ali* (f.); *Amuy* (f.); *Araw* (m.); *Arits* (m.); *Ariyok* (m.); *Ataw* (m.); *Atay* (f.); *Ehen* (m.); *Ero* (m.); *Ipay* (f.); *Irin* (m.); *Iron* (m.); *Ubin* (m.); *Ubun* (m.); *Ubus* (m.); *Ulay* (m.); *Umaw* (f./m.); *Usun* (m.); *Utaw* (m)

These forms suggest a practice of innovating and borrowing that seems to have occurred recently. When these forms were adopted as Atayal personal names, the phonological derivation (the attachment of *y* or *na*) might fall into disuse. Sasaki (1918:29) notes that some personal names are borrowed from personal names in Southern Hokkien, such as *Saihu* (m.), *Tuhuy* (m.), and *Kawsay* (f.).⁵² He provides several examples of borrowed names that begin with the vowel *a*: *Akin* (f.), *Amuy*⁵³ (f.), and *Asun* (f.). These names sound like common personal names in the Sinitic languages spoken in Taiwan, such as Southern Hokkien or Hakka. *Akin* and *Amuy* both appear in the list above.

50 In present-day Atayal, the author has heard the personal name *Neban*, which should be *Iban* but is attached to the possessive marker (*na-Iban* > *Neban*).

51 This word is identical to *ni*, which was introduced in Section 3 as the personal case marker for the genitive case.

52 These Southern Hokkien forms mentioned here are 司阜 (the Chinese character is taken from Ogawa [1931: 117]), 土匪 (Sasaki 1918), and 狗屎 (Sasaki 1918), respectively.

53 Sasaki (1918) writes this as 阿妹.

Furthermore, the personal names *Ataw* and *Umaw* also appear in Saisiyat, a neighboring language of Atayal (Yang 1956:314). Some of these forms are, therefore, likely to have been borrowed from Saisiyat personal names. Last, *Ullay* and *Ali* mean “hot spring” and “sprout,” respectively, and may have been adopted as personal names recently.⁵⁴

8.2 Seediq data

The following discussion deals with two dialects of Seediq, Paran Seediq and Truku Seediq.⁵⁵ For Atayal personal names and kin terms that begin with vowels preceded by the fossilized personal article *y*, Seediq cognates lack the fossilized personal article. For example, *Yumin* in Atayal corresponds to *Umin* in Seediq (Table 7). However, the fossilized personal article is retained in Seediq pronouns such as *y-aku* (first person singular), *y-ami* (first person plural, exclusive), and *y-amu* (first person plural, inclusive) as pointed out by Ross (2006: 549). Therefore, the personal article *i* is likely to be reconstructed to Proto-Atayalic even though it seems to have fallen out of use in front of personal names and kin terms.

Similar to Atayal, in Seediq, the possessive marker *na* attaches to patronyms that begin with a vowel (see Section 6.2). For example, the patronym *Nomin* or *Nawmin* in Atayal corresponds to *Nomin* in Paran Seediq and *Nawmin* in Truku Seediq (e.g., *Watan Nawin* “Watan, the child [son] of Umin”).

In her reference grammar of Truku Seediq, Tsukida (2009: 270) explains a phonological change in patronyms. If a patronym begins with a glottal stop (i.e., a phonemic vowel), it is preceded by *na*; for example, *ʔapay* (f.) becomes *napay* (*na-ʔapay* > *Napay*), *ʔisaw* (m.) becomes *naysaw* (*na-ʔisaw* > *naysaw*), and *ʔumin* (m.) becomes *nawmin* (*na-ʔumin* > *nawmin*).⁵⁶

In Paran Seediq, Ochiai (2016: 40–41) observes the same practice. If the possessive marker *na* precedes an *a*-initial name, it shows the deletion of one of the adjacent *a*'s around the morpheme boundary, e.g., *Nabu* (*na-Abu* > *Nabu*). However, if it attaches to a patronym that begins with other vowels, *i*, *u*, or *o*, then further phonological changes occur⁵⁷: *na* and the following *i* become *ne*; *na* and the following *u* become *no*; and *na* and the following *o* become *no*. Ochiai (2016) provides the following examples to illustrate these changes: *Iyuy* (m.) becomes *Neyuy* (*na-Iyuy* > *Nayyuy* > *Neyuy*); *Umin* (m.) becomes *Nomin* (*na-Umin* > *Nawmin* > *Nomin*); and *Obij* (f.), which dates back to the earlier form *Awbij* through comparison with the Atayal cognate *Awbij* (Table 2), becomes *Nobij* (*na-Awbij* > *Nawbij* (the deletion of one *a* > *Nobij*)).⁵⁸ Truku Seediq retains the diphthongs *ay* and *aw*, whereas they are changed in Paran Seediq to *e* and *o*, respectively.

In the following sources, the author collected Seediq personal names that are attached to the possessive marker *na* in patronyms. Utsushikawa et al. (1935) include genealogies of 42 Seediq families with 3,202 name tokens. However, only five of these belong to Paran Seediq; the rest are Truku Seediq. The genealogies of the Gluban village as it appears in Jian et al. (2002) and the Nakahara village in Jian and Perin (2003) are used to supplement the Paran Seediq data. Table

54 In the data of Utsushikawa et al. (1935), yet more personal names without the fossilized personal article are observed, such as *Ahuk*, *Arin* and *Awil*; however, these personal names appear with the attachment of *na* in forms such as *Nahuk*, *Narin* and *Nawil* (and the root *Awil*) in patronyms.

55 The author bases this classification of Seediq on Ogawa and Asai (1935: 559), in which Truku Seediq includes the Truku and Toda tribes.

56 The personal name *Isaw* is not seen in the author's field notes of Seediq nor in the Seediq personal name data in Utsushikawa et al. (1935). However, this name is seen in Squaliq Atayal, according to my field notes.

57 For Paran Seediq, no data on personal names that begin with the vowel *e* were obtained.

58 The phonological process in parentheses was added by the author. It shows the historical process whereby the *n*-initial patronyms are derived.

13 shows the vowel-initial names attached to *na* when those names are used as patronyms. The reconstructed personal names appear in the left column, whereas the blank cells indicate that no data were obtained.

Table 13. Roots of personal names that begin with a vowel, and their patronyms

Personal name (Proto-Seediq)	Patronym (Paran)	Patronym (Truku)
*Abis (m.)	<i>Nabis</i>	<i>Nabis</i>
*Abu (m.)	<i>Nabu</i>	---
*Ali (f.)	<i>Nali</i>	---
*Ape (f.)	<i>Nape</i>	<i>Napay</i> ⁶⁰
*Away (f.)	<i>Nawe</i>	<i>Naway</i>
*Awi (m.)	<i>Nawi</i>	<i>Nawi</i>
*Awbiŋ (f.)	<i>Nobiŋ</i>	---
*Iban (m.)	<i>Neban</i>	<i>Nayban</i>
*Ibuq (m.)	<i>Nebuq</i>	<i>Naybuq</i>
*Iyuŋ (m.)	<i>Neyuŋ</i>	---
*Iwal (f.)	---	<i>Naywal</i>
*Udaw (m.)	<i>Nodo</i>	<i>Nawdaw</i>
*Ukan (m.)	<i>Nokan</i>	---
*Uma (f.)	<i>Noma</i>	---
*Umin (m.)	<i>Nomin</i>	<i>Nawmin</i>

9. Conclusion

Table 14 illustrates the uses of the fossilized personal article and possessive marker in Proto-Atayal and Proto-Seediq, which are reconstructed on the basis of the above discussions. The personal names used here as illustrations are *Kumu (f.), *Watan (m.), *Umin (m.), *Ukan (m.), and *Iwal (f.). These names are in the root forms common to Atayal and Seediq reconstructed in Table 7.

Proto-Atayal shows the most complex patterns depending on the initial segment of the root of a personal noun: Four types (i) to (iv) are obtained. These types in Proto-Atayal are used as a point of reference for the illustration of Proto-Seediq and Proto-Atayalic.

Proto-Atayal shows four types of patronymic systems depending on the appearance of *y- and *na. In type (i), the fossilized personal article *y- does not appear before the personal name. The possessive marker *na either appears or disappears before the patronym. In this type, both the personal name and the patronym begin with a consonant, or the personal name begins with *i*. In type (ii), *y- appears before the personal name, and *na either appears or disappears before the patronym. In this type, the root of the personal name begins with *a* or *u*. The patronym begins with a consonant. In type (iii), *na appears before the patronym. In this type, the personal name begins with a consonant or the vowel *i*, and the patronym begins with a vowel *a*, *u*, or *i*. In type (iv), both markers appear. In this case, the personal name begins with the vowel *a* or *u*, and the patronym begins with the vowel *a*, *u* or *i*.

Proto-Seediq does not use the fossilized personal article *y-*. Therefore, types (ii) and (iv) in Proto-Atayal are not seen in Proto-Seediq. In Proto-Seediq, type (ii) shows the same pattern as type (i). In this type, no markers are used. Also, type (iv) shows the same pattern as (iii). In this type, the possessive marker *na* is attached to a patronym that begins with the vowel *a*, *u*, or *i*.

In Proto-Atayalic, both the personal article *i and the possessive marker *na are reconstructed

⁵⁹ This form is from Tsukida (2009: 270).

regardless of the phonological conditions of the root-initial segments. Therefore, all types from (i) to (iv) have the same pattern. The patronymic system in Proto-Atayalic is *i personal name followed by *na patronym.

Table 14. Reconstruction of the patronymic systems in Atayalic languages

	Types	Examples
Proto-Atayal	(i) personal name, patronym	(i) *Kumu (na) Watan
	(ii) <i>y</i> -personal name (root beginning with <i>a/u</i>), patronym	(ii) *Yumin (na) Watan
	(iii) personal name, <i>na</i> -patronym (root beginning with <i>a/u/i</i>)	(iii) *Kumu Nawmin; *Kumu Naywal
	(iv) <i>y</i> -personal name (root beginning with <i>a/u</i>); <i>na</i> -patronym (root beginning with <i>a/u/i</i>)	(iv) *Yumin Nawkan; *Yumin Naywal
Proto-Seediq	(i);(ii) personal name, patronym	(i) *Kumu Watan (ii) *Umin Watan
	(iii);(iv) personal name, <i>na</i> -patronym (root beginning with <i>a/u/i</i>)	(iii) *Kumu Nawmin; *Kumu Naywal (iv) *Umin Nawkan; *Umin Naywal
	(i);(ii);(iii);(iv) *i personal name, *na patronym	(i) *i Kumu na Watan (ii) *i Umin na Watan (iii) *i Kumu na Umin; *i Kumu na Iwal (iv) *i Umin na Ukan; *i Umin na Iwal

For the personal names that show morpho-phonological alternations in Atayal, e.g., *Yawi* (personal name) and *Nawi* (patronym), Yang (1957) has already pointed out that the personal article *i* is attached to the personal names that begin with a vowel, i.e., *i-awi* > *yawi*, and that the possessive marker *na* directly precedes the personal name that begins with a vowel when it is used as a patronym, i.e., *na-awi* > *naawi* > *nawi*.

This paper supplemented Yang's (1957) analysis by detailing the conditions of this morpho-phonological alternation. The fossilized personal article *y-* is attached to the personal names that begin with back vowels, *a* or *u*. In addition, this paper made a new attempt to reconstruct the Proto-Atayalic patronymic system by comparing the data of personal names and patronyms in Atayal and Seediq.

In present-day Atayal, the personal article *i* and the possessive marker *na* have fallen out of use, with the exception of personal names that historically begin with a vowel. Also, in present-day Seediq, the personal article has fallen out of use but the possessive marker is retained in personal names that begin with a vowel.⁶⁰

60 Regarding the reason that *i* and *na* fell out of use, one possible explanation could be that the function of *i* and *na* is recoverable by other means. The function of *i* is to signify that the following noun is a person. However, the forms of personal names and kin terms in the Atayalic languages also imply that they are person. The function of *na* is to signify that the following noun, e.g., *Umin*, relates the preceding noun, e.g., *Kumu*. In other words, the following noun modifies the preceding noun. The relation of modification is also realized by the word order, modifier preceding the modifier. To take an example from Paran Seediq, *waso buja* [leaf sweet.potato] 'leaves of sweet potato' has no possessive marker and its relation of modification is realized by the word order.

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アタヤル語の化石化した人称標識 ——アタヤル語群の父子連名制の再建とともに——

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要 旨

アタヤル語（アタヤル語群）に見られる父子連名制は、例えば *Kumu Watan* 「*Watan*の子、*Kumu*」と表現するが、中には *Yawi*（男性の名）が親の名として用いられると *Nawi* に変化するという特殊な変化を伴う人名があり、Yang (1957) は母音から始まる人名には人称標識 *i* が語頭に付着すると分析した (*i-awi* > *y-awi*)。親の名は母音から始まる人名に所有標識 *na-* が付いている (*na-awi* > *naawi* > *nawi*)。本稿はこの分析を補足し発展させる。まず、この *y* はアタヤル語において語根が母音 *a* と *u* で始まる場合に付着する。次にセデック語（アタヤル語群祖語）の人名では語頭の *y* が見られないことを述べる。アタヤル語には人称標識 *i* から派生された機能語に接続詞 *ki* があり、*ki Yumin* 「ユミンと」などと表現するが、*ki* の後に *y* から始まる人名が現れるため、*y-* は人称機能を失い化石化しているといえる（化石化した人称標識 *y-* はある条件下で脱落する）。本稿はさらにアタヤル語群の家系図中の人名データを調べ *y-* や *na* の現れ方をまとめた。以上の分析を基にアタヤル語群祖語における父子連名制を新たな試みとして再建した。

キーワード：アタヤル語 セデック語 父子連名制 人称標識 再建

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