

r-Epanthesis and Ryukyuan

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Abstract: Focusing on the Shuri dialect of Okinawan, this paper poses the question of whether Ryukyuan languages display evidence that speakers have adopted the analysis of verbal suffix alternations proposed for Japanese by de Chene (2016) (“Analysis A”), according to which consonant-stem allomorphs are the underlying representations of alternating suffixes and regular vowel-stem allomorphs are derived by intervocalic epenthesis of *r* at verb stem boundary. It is found that there is abundant evidence for the adoption of Analysis A in the history of pre-Shuri and that the contemporary language illustrates the logical endpoint of the changes that analysis entails, namely the total assimilation of vowel-stem inflection to the inflectional pattern of *r*-stems. Alternative interpretations of the innovative forms taken as confirmation of Analysis A are considered and rejected, notably interpretations that appeal to proportional analogy based on *r*-stem forms. When we broaden the focus to Ryukyuan as a whole, we find that all Ryukyuan languages other than Miyako display clear evidence for the adoption of Analysis A, confirming its naturalness for the alternations in question.*

Key words: Ryukyuan, Shuri, verb inflection, vowel-stem, *r*-Epanthesis

1. Introduction

de Chene (2016) investigates the alternations of Japanese verbal suffixes whose shape depends on the consonant/vowel (C/V) polarity of the stem-final segment, such as Conclusive *-u* ~ *-ru* and Causative *-ase-* ~ *-sase-*. While at least four analyses of these alternations have been proposed in the literature, de Chene notes that each makes different claims about which forms are regular and which are irregular and thus generates distinct predictions about what changes should be observed if irregular forms are eliminated in favor of regularized substitutes.

The analysis of these alternations that de Chene claims has been adopted by speakers (below, “Analysis A”) is that (a) underlying (basic, default) representations of alternating suffixes coincide with C-stem alternants, which are all vowel-initial; and (b) regular V-stem alternants are derived by a rule that inserts *r* intervocali-

* I would like to express my deep appreciation to two reviewers, whose comments have led to many improvements in content and presentation. In particular, the entirety of section 4 represents a response to issues raised by the reviewers. Remaining errors are my responsibility. Throughout, Japanese placenames and personal names (in isolation) are transcribed in a variant of Hepburn romanization (without macrons); all other Japanese words are transcribed in a variant of *kunreisiki* romanization, with length represented as gemination.

cally at verb stem boundary. If we further assume as a general principle of language change that irregular forms are subject to elimination over time, it follows from Analysis A that while (i) C-stem suffixes and (ii) V-stem suffixes that consist of the corresponding C-stem suffix preceded by *r* (Conclusive *-ru*, Provisional *-reba*, Passive *-rare-*) should (modulo unrelated changes) be stable across the range of Japanese dialects, other V-stem suffixes should be subject to replacement by innovative forms that duplicate the pattern of *-ru*, *-reba*, and *-rare-* in being made up of the corresponding C-stem suffix preceded by *r*: Imperative *-re*, Hortative *-roo*, Negative *-ran* (Western Japan), Conjunctive *-ri*, Causative *-rase-*, etc. These predictions are confirmed by the data of a nationwide survey of inflection, Kokuritu Kokugo Kenkyuuzyo (1989–2006) (below, GAJ), as well as by the descriptive literature on Japanese dialects.

The data on which the conclusions of de Chene (2016) are based, however, are limited to dialects of Japanese proper and do not extend to those of the Ryukyus. As a result, that article does not consider the question of whether or not speakers of Ryukyuan languages (Amami, Okinawan, Miyako, Yaeyama, Yonaguni), like speakers of Japanese, have adopted Analysis A for the alternations in question. The present paper answers this question in the affirmative for all Ryukyuan languages except Miyako; for reasons of space, we devote most of our attention to the Shuri dialect of Okinawan, which is a natural focus both because it is the most thoroughly documented of all Ryukyuan dialects and because it turns out to represent the logical endpoint of the changes implied by Analysis A.

The paper is organized as follows. Section 2 summarizes the basic facts of the Shuri system of verbal inflection from a synchronic standpoint. Section 3 discusses the evolution of that system and shows how it provides evidence that Analysis A was adopted by speakers in the pre-history of Shuri. Section 4 considers alternate interpretations of the changes predicted by Analysis A that have been proposed in the literature. Section 5 briefly compares Shuri, with regard to the evidence for speakers' adoption of Analysis A, first with other Northern Ryukyuan (Amami and Okinawan) dialects and then with Sakishima (Miyako, Yaeyama, and Yonaguni) dialects. In concluding, Section 6 suggests a topic for further research.

2. Synchrony: The essentials of Shuri verb inflection

In introducing the inflectional system of the Shuri verb, I will concentrate on questions of morphological segmentation and the degree to which the alternations of stems and suffixes are predictable in terms of general principles. I rely for the basic facts of the system on Kinjo and Hattori (1955), Uemura (1963), and Tshako (1997), and on the invaluable *Okinawago Ziten* (below, DOL = Kokuritu Kokugo Kenkyuuzyo 1963); readers are referred to those sources for details not provided here.

All Shuri verb stems end in a consonant; the Shuri cognates of Japanese vowel-final verb stems uniformly end in *r* (see e.g. Tshako 1997: 382–383).¹

¹ Some analyses, however, treat (some or all) Shuri *r*-stems as vowel-final, necessitating *r*-

As in Japanese, there are nine stem-final consonants. Shuri verb stems ending in the consonants *k, g, s, t, n, b, m* correspond to Japanese verb stems ending in the same consonants. *d*-stems are the result of reduction processes operating on stems ending in *BUr-*, where *B* is *b* or *m* and *U* is *u* or *i*: in that sequence, *BU* becomes mora nasal, after which *r* becomes *d*. Shuri *r*-stems, finally, correspond not only to Japanese *r*-stems (other than those that became *d*-stems) and to Japanese vowel-stems, but to Japanese *w*-stems as well.

The verbal inflectional suffixes of Shuri can be divided into three groups depending on their effect, if any, on a stem-final consonant. What we will call Class I or “neutral” suffixes do not affect a stem-final consonant, allowing it to appear in its basic form; below, we will on occasion refer to the stem of Class I forms as the “basic stem”. A number of these suffixes are illustrated in Table 1 for stems *kak-* ‘write’, *tur-* ‘take’, and *kees-* ‘return’ (Japanese *kak-*, *tor-*, *kaes-*); for the Causative forms, I follow Toyama (2013a, 2013b, 2015).

Table 1. Shuri Class I (neutral) suffixes

	/kak-/	/tur-/	/kees-/
Negative	kak-an	tur-an	kees-an
Hortative	kak-a	tur-a	kees-a
Conditional	kak-aa	tur-aa	kees-aa
Prohibitive	kak-una	tun-na	kees-una
Provisional	kak-ee	tur-ee	kees-ee
Imperative	kak-i	tur-i	kees-i
Passive	kak-arir-	tur-arir-	kees-arir-
Causative 1	kak-as-	tur-as-	*
Causative 2	kak-asimir-	tur-asimir-	kees-imir-

The affinity of the Shuri verbal paradigm with that of Japanese is clear from the forms of Table 1; among the notable differences are the raising of mid vowels and the reanalysis of vowel-stems as *r*-stems that are apparent in the Shuri forms (in addition to *tur-* ‘take’, see Imperative *-i* (J *-e*), Passive *-arir-* (J *-are-*), Causative 2 *-asimir-* (J *-asime-*)). Conditional *-aa* varies with *-awa* and corresponds to (pre-modern) J *-aba*; Provisional *-ee* alternates with *-iwa* in *-iwa-du* (*-du* Focus) and corresponds to J *-eba* (Uemura 1963: 69). Apart from the reduction of *ru* to mora nasal before *n* in the Prohibitive of ‘take’ (an option in Tokyo Japanese as well), the stems of Table 1 are nonalternating in the forms given. With the same exception, the first seven suffixes are nonalternating as well. Both Causative suffixes, however, show unexpected behavior in the paradigm of *s*-stems: the Causative 2 stem is shorter than expected, and the Causative 1 stem is lacking entirely. When we note

initial basic forms for a large number of suffixes and a rule deleting *r* after a stem-final consonant (Ashworth 1973, Arakaki 2003, Miyara 2015). In fact, apart from a slightly wider range of contexts in which stem-final *r* deletes, there would seem to be no more grounds for taking *r*-stems to be vowel-final than for so analyzing stems ending in any other consonant.

that on the basis of the other two stem-types the expected forms for ‘return’ would be **keesasimir-* and **keesas-*, respectively, it becomes clear that there is a unified explanation for the two cases: a word-level rule of haplology deletes the first of two *s*-initial syllables, resulting in **keesimir-* and **kees-*. The remaining *s* of the former is interpreted as stem-final, giving the form of the table; the latter is unusable as a Causative because it coincides with the lexical stem.²

The members of a second set of suffixes, Imperfect Conjunctive (*Ren’yookei*) *-i*, Imperfect Conclusive (*Syuusikei*) *-ju-n*, and Imperfect Adnominal (*Rentaikei*) *-ju-ru*, share the property of palatalizing a stem-final consonant, with each of *t d k* being replaced by the corresponding palato-alveolar (written *c z*), *r* deleting, and *m* becoming *n* before *j* (but not before *i*). Because these palatalizations display no lexical conditioning, I will assume that palatalized stem alternants are derived by rule rather than lexically listed, although for reasons of space I will not formulate the necessary rules here. Of these three Class II or “palatalizing” suffixes, *-i* corresponds transparently to Japanese Conjunctive *-i*, while *-ju-n* and *-ju-ru* represent grammaticalization of a construction, originally expressing progressive aspect, that consisted of the Conjunctive plus an inflected form of the auxiliary *or-* < *wor-* ‘be’. Table 2 below shows Imperfect Conjunctive, Conclusive, and Adnominal forms for the three verbs of Table 1 plus *kuug-* ‘row’ (J *kog-*), *tat-* ‘stand’ (J *tat-*), *nind-* ‘sleep’ (J *nemur-*), *sin-* ‘die’ (J *sin-*), *tub-* ‘fly’ (J *tob-*), and *jum-* ‘read’ (J *yom-*), thus illustrating all nine Shuri stem-final consonants.³

Table 2. Shuri Class II (palatalizing) suffixes

	/tur-/	/jum-/	/tub-/	/sin-/	/nind-/
Conjunctive	tu-i	jum-i	tub-i	sin-i	ninz-i
Conclusive	tu-ju-n	jun-u-n	tub-u-n	sin-u-n	ninz-u-n
Adnominal	tu-ju-ru	jun-u-ru	tub-u-ru	sin-u-ru	ninz-u-ru

	/tat-/	/kees-/	/kuug-/	/kak-/
Conjunctive	tac-i	kees-i	kuuz-i	kac-i
Conclusive	tac-u-n	kees-u-n	kuuz-u-n	kac-u-n
Adnominal	tac-u-ru	kees-u-ru	kuuz-u-ru	kac-u-ru

² The literature reveals a degree of confusion regarding the distribution and analysis of the Causative stems. DOL (entry *-simi=juN*) claims complementary distribution of the two suffixes, with *-asimir-* limited to *s*-stems (as well as failing to note the haplology involved in the *s*-stem forms). Toyama (2013a: 107, 2015: 86) avoids recognizing haplology by attaching *-asimir-* to roots rather than stems for transitives like *wak-as-* ‘boil’, a procedure that has no syntactic or morphological basis and which will not in any case work for *s*-stems that contain no suffix (e.g. *kurus-* ‘kill’). Miyara (2015: 397–398), on the other hand, treats *-asimir-* as containing Causative 1 *-as-* and then takes it to be an interesting empirical observation that *-imir-* is generally (i.e. after anything but an *s*-stem) preceded by that suffix.

³ With respect to Conclusive/Adnominal forms for which variation is reported in the literature (*keesun* ~ *keesjun*, *tujun* ~ *tuin*, *junun* ~ *jumun*), Table 2 reflects the recorded pronunciations of Okinawa Gengo Kenkyuu Sentaa (2001).

The members of our third and final set of suffixes are the Shuri counterparts of the *t*-initial Japanese suffixes that condition the alternations known as *onbin*; in Shuri, *onbin* involves the truncation of all stem-final consonants except *t* and certain instances of *r*. As in Japanese, suffix-initial *t* alternates, in Shuri along two dimensions, voicing and place of articulation (dental vs. palato-alveolar). For *d*-stems and *r*-stems, these suffix alternations are in part lexically determined, so that, for marked cases, the lexicon must record the suffix alternant that a given stem takes. For all other stems, however, the two alternations are predictable: suffix-initial *t* voices after the voiced stem finals *b*, *m*, *n*, *g* and becomes palato-alveolar (below, “palatalizes”) after the coronal and dorsal stem finals *s*, *t*, *n*, *k*, *g* (*r* and *d* < *r* trigger neither alternation). Table 3 shows Perfect (Second) Conjunctive, Perfect Conclusive, and Perfect Adnominal forms for the nine verbs of Table 2.⁴

Table 3. Shuri Class III (truncating) suffixes

	/tur-/	/jum-/	/tub-/	/sin-/	/nind-/
Perf Conj	tu-ti	ju-di	tu-di	si-zi	nin-ti
Perf Concl	tu-ta-n	ju-da-n	tu-da-n	si-za-n	nin-ta-n
Perf Adn	tu-ta-ru	ju-da-ru	tu-da-ru	si-za-ru	nin-ta-ru

	/tat-/	/kees-/	/kuug-/	/kak-/
Perf Conj	tat-ci	kee-ci	kuu-zi	ka-ci
Perf Concl	tat-ca-n	kee-ca-n	kuu-za-n	ka-ca-n
Perf Adn	tat-ca-ru	kee-ca-ru	kuu-za-ru	ka-ca-ru

As with the forms of Table 2, I will assume that the stem and suffix alternants illustrated in Table 3 are derived by rule rather than lexically listed. For *d*-stems and *r*-stems, however, there are, in addition to the unmarked types shown in Table 3, cases in which the suffix-initial *t* of Class III forms palatalizes to *c* and, for *r*-stems, cases in which stem-final *r* assimilates to the suffix consonant rather than deleting.⁵ The two *d*-stems that palatalize suffix-initial *t* (*kund*- ‘tie up’ (J *kubir*-), Perfect *kun-can*; *nnd*- ‘look’ (J *mi*-), Perfect *nn-can*), first of all, will have to be marked in the lexicon to do so.

⁴ Uemura (1963: 58) and Tshako (1997: 383), among many others, follow Kinjo and Hatatori (1955: 332) in assigning to stems what we (and e.g. Ashworth 1973: 73–80) are taking as suffix-initial *t*. That treatment, however, precludes an explanation of why the consonant in question is always a coronal stop (plain or affricated) and exchanges the two alternations we have just seen (one a simple assimilation of voicing) for a set of seven or more arbitrary alternations of stem finals (e.g. *b* ~ *d* for *b*-stems and *t* ~ *tc* for *t*-stems).

⁵ There are also four bisyllabic stems of the shape (C)V*r**r*- in whose *onbin* forms expected (C)V*r**i*-*t*- has developed to (C)V*t*-*t*-. Assuming lexical listing of the *onbin* stem alongside the basic (Table 1) stem, these are /ʔirir-, ʔit-/ ‘insert’ (J *ire*-), /ʔirir-, ʔit-/ ‘pick up’ (J *birrow*-), the Passive auxiliary /-arir-, -at-/ (J *-are*-), and the Potential auxiliary, which is homophonous with the Passive in the forms of Tables 2 and 3, but has a basic stem /-ar-/.

Historically, palatalization in *kuncan* and *nn-can* can be attributed to the high front vowel *i* in the last syllable of the original stem. Similarly, monosyllabic Shuri *ir*-stems that correspond either to Japanese *ir*-stems or to Japanese *i*-stems show palatalization of suffix-initial *t*. Further, those corresponding to Japanese *ir*-stems, as well as several that correspond to Japanese *i*-stems, also show assimilation of stem-final *r* to the suffixal consonant in place of truncation. Both types of irregularity will have to be marked in the lexicon; typical cases, with Perfect Conclusive forms indicated, are *ir-*, *i-can* ‘sit’ (J *i-* (animate existential)), *cir-*, *ci-can* ‘wear’ (J *ki-*); *ɽir-*, *ɽic-can* ‘enter, be necessary’ (J *ir-*), *cir-*, *cic-can* ‘cut’ (J *kir-*), *ɸir-*, *ɸic-can* ‘dry (intr.)’ (J *hi-*). With the exception of the four stems noted in footnote 5, however, all remaining *r*-stems—polysyllabic *r*-stems, monosyllabic *ur-* and *ar-* stems, and monosyllabic *ir*-stems corresponding to Japanese *er*-stems, *e*-stems, and *Tur*-stems (T a coronal obstruent)—all show the unmarked *onbin* pattern illustrated in Table 3 by *tur-*.

3. Diachrony: The history of Shuri *r*-stem inflection

In accordance with what we observed in section 2, Shuri *r*-stems can be divided into three groups depending on whether they correspond to Japanese *r*-stems, Japanese vowel-stems, or Japanese *w*-stems. Anticipating our conclusion that these three groups of *r*-stems represent three distinct diachronic layers, we will refer to them as primary, secondary, and tertiary *r*-stems, respectively. In this section, we will trace the historical processes as a result of which vowel-stems and *w*-stems came to assimilate to *r*-stem inflection in Shuri. In section 3.1, we adduce three types of evidence for the conclusion that Shuri must descend from an ancestor with a C-stem/V-stem distinction corresponding to that of Japanese, proceeding in section 3.2 to a consideration of how that distinction was lost. Section 3.3 traces the history of *w*-stems, which will be seen to have passed through a V-stem stage on the way to being reanalyzed as *r*-stems.

3.1. The antiquity of the C-stem vs. V-stem distinction

The observation that Shuri *r*-stems correspond to Japanese vowel-stems and *w*-stems as well as to Japanese *r*-stems does not in itself, of course, establish that Shuri descends from an ancestor with the stem-type distinctions of Japanese. In this section, we ask what evidence there is that pre-Shuri inherited the stem-type distinctions in question—most crucially, a distinction between consonant-stem and vowel-stem inflection.

Perhaps the clearest evidence that Shuri and Ryukyuan languages in general descend from an ancestor with the same C-stem vs. V-stem distinction as Japanese is that one of them, the language of the Miyako islands, preserves that distinction intact, showing none of the innovations that, in other Ryukyuan and Japanese varieties, lead in the direction of a merger of V-stem and *r*-stem inflection. Crucially, individual verbs agree (modulo sound change and with isolated exceptions) in their stem-final segment between Miyako and Japanese, and individual C-stem and V-stem suffix alternants agree in shape as well, once relatively recent changes

are factored out. Both in stems and in suffixes, then, Miyako and Japanese display a degree of correspondence with regard to the C-stem/V-stem distinction that would be difficult or impossible to explain as the result of parallel innovation. Table 4 displays partial paradigms for *kak-* ‘write’ and *oki-/uki-* ‘arise’ for Tokyo and Hirara (formerly Hirara city, now part of Miyakojima city), the administrative center of the Miyako islands, with Hirara data from Karimata (1997a), supplemented by Nakamoto (1990) and Uchima (1984).⁶

Table 4. C-stem and V-stem inflection in Hirara and Tokyo

	‘write’		‘arise’	
	Hirara	Tokyo	Hirara	Tokyo
Negative	kak-an	kak-ana-	uki-n	oki-na-
Hortative	kak-a	kak-oo	uki-∅	oki-yoo
Conjunctive	kak-ī	kak-i	uki-∅	oki-∅
Provisional	kak-iba	kak-eba	uki-riba	oki-reba
Imperative	kak-i	kak-e	uki-ru	oki-ro
Passive	kak-ai-	kak-are-	uki-rai-	oki-rare-
Causative 1	kak-as-	kak-ase-	*	oki-sase-
Causative 2	kak-asimi-	kak-asime-	uki-simi-	oki-sime-

Looking at the forms of Table 4 line by line, it is clear first that while Tokyo shows the “adjectivalization” of the Negative suffix that has been characteristic of eastern Japanese since some time before 1600 (Rodriguez 1604–1608/1955: 612), the two dialects display the same *a* ~ ∅ alternation for this suffix that goes back to the earliest Japanese. In the Hortative, Hirara *kaka* (like the corresponding Shuri form) and Tokyo *kakoo* represent alternative monophthongizations (see GAJ map 109) of *kakau* < *kak-amu*; while Hirara *uki* follows from *okiu* < *oki-mu* by the same processes that give *kaka* (i.e. progressive spreading followed by shortening), Tokyo *okiyoo* displays analogical reshaping of the expected *okyuu* (see GAJ map 106 for the geographical range of this reanalysis).

Where the two dialects differ in the first two lines of the table, then, it is Hirara that is the more conservative. In the remainder of the table, the correspondence between Hirara and Tokyo forms is essentially perfect, given centralization of *i*, raising of *e* *o*, and loss of *r* before *i* in Hirara (before secondary *i* < *e*, *r* is lost in Passive *-(r)ai-*, but retained in Provisional *-riba*). The one necessary qualification is that the Hirara Causative 1 suffix takes the consonant-final form seen in many Japanese dialects and lacks a V-stem alternant; it should also be noted that the

⁶ Inherited Conclusive and Adnominal forms have been eliminated in Hirara and most other Miyako dialects in favor of the Conjunctive (Uemura 1997: 345) and are thus absent from the table; the Conclusive/Adnominal of vowel-stems, however, displays the same suffix *-ī* that characterizes all three forms of consonant-stems (Karimata 1997a: 398–399, Nakamoto 1990: 558, Uchima 1984: 478–479).

V-stem Provisional forms of both dialects reflect leveling of an earlier stem alternation $i \sim u$. The detailed agreement between the C-stem and V-stem paradigms of Hirara (and Miyako generally) and those of Tokyo (and Japanese generally) shows that the distinction between consonant-stem and vowel-stem inflection must be attributed to proto-Japonic, the common ancestor of all Ryukyuan and Japanese varieties.⁷ It follows from this, of course, that the Shuri failure to distinguish the two classes is secondary.

We have seen that there is comparative evidence that Shuri must descend from an ancestor with a C-stem vs. V-stem distinction. There is in fact a small amount of evidence for this proposition internal to Shuri itself, in the paradigm of ‘come’ (Japanese *ko-/ku-/ki-*), whose basic stem is /*kuu-*/. The Negative of ‘come’, to begin with, is *kuu-n*, a form which, uniquely among Shuri verbal Negatives (apart from the Negative existential *neen* (see section 4.2)), shows the irregular V-stem allomorph *-n* of the Negative suffix that we saw in the Hirara data of Table 4; with Shuri *kuu-n* should be compared the innovative form *kuu-ran* that is reported for Nagahama in Yomitan Village, 20 kilometers to the north (GAJ map 83; see also Nakamoto 1990: 577–579). Similarly, Hortative *kuu* preserves irregular V-stem \emptyset (cf. C-stem *-a*), and Conditional *kuurwa* (Kinjo and Hattori 1955: 338) preserves irregular V-stem *-wa* (cf. C-stem *-awa* \sim *-aa*). In addition to comparative evidence, then, we have a degree of internal evidence that Shuri must have inherited a distinction between C-stem and V-stem inflection.

The third type of evidence that Shuri descends from an ancestor with a C-stem vs. V-stem distinction is philological, deriving from the records of Classical Ryukyuan (see Takahashi 1997: 422–423) and in particular the *Omoro Soshi* (/soosi/, historical kana spelling *sausi*), a collection of 1248 poems (excluding duplicates) in 22 volumes compiled at the Shuri royal court between 1531 and 1623 and whose texts are said to date back as far as the 12th or 13th century. Some of the *Omoro* poems have Amami origins (Takahashi 1997: 422), but most can be taken to represent a language ancestral to the modern Shuri dialect.

The language of the *Omoro Soshi* differs from contemporary Shuri in a number of respects. With regard to the contrast between mid and high vowels, while the merger of /o/ with /u/ is well under way, /e/ remains distinct from /i/ except in syllables with zero onset. Intervocalic *r* has not yet been lost before *i*. In verbal inflection, the inherited Conclusive/Adnominal form survives, and the Conjunctive + *or-* construction that subsequently, in supplanting it, restored the Conclusive:Adnominal contrast is attested only in its original progressive meaning.

⁷ This conclusion is entirely consistent with the widespread understanding (Ono 1953, Unger 1977, Frellesvig 2008, Whitman 2008) that V-stem inflection is historically secondary with respect to C-stem inflection, but not with the stronger assertion that the origins of V-stem inflection are so recent that “any reconstruction of pJ [Proto-Japanese = Proto-Japonic (see Frellesvig and Whitman 2008a: 1)] verb inflection must be based exclusively on the primary verb classes, and should not take account of the forms of the bigrade verbs” (Frellesvig 2008: 190).

Leveling of the inherited stem-vowel alternation *i/e ~ u* has gone to completion (on all these points, see Takahashi 1991a, 1991b, 1997). For our purposes, however, the most important fact about the language of the *Omorō Soshi* is that in it, the introduction of the innovative *r*-initial V-stem suffixes predicted by Analysis A, while unmistakably in progress, remains incomplete. That this process has begun is shown most clearly by the fact that innovative Imperative *-re* has been generalized to all vowel-final stems apart from ‘come’ (the Imperative of ‘do’ is unattested); that it remains incomplete is shown most clearly by the fact that conservative Conjunctive $-\emptyset$ is almost universally retained, with only a small number of monosyllabic V-stems showing innovative *-ri* (see Takahashi 1991a: 332, 342, 344). We thus have, in addition to external and internal linguistic evidence, evidence from the documentary record that Shuri’s failure to distinguish vowel-stem and *r*-stem inflection is historically secondary.

3.2. Loss of the C-stem vs. V-stem distinction

Having established that contemporary Shuri descends from an ancestor with a distinction between C-stem and V-stem inflection, we will examine in this section the process by which that distinction was lost—specifically, the process by which V-stems became *r*-stems. We will pursue the hypothesis that the crucial factor in the assimilation of V-stem to *r*-stem inflection was speakers’ adoption of Analysis A, summarized in (1), for suffixes that alternate depending on the consonant/vowel polarity of the stem-final segment.

- (1) a. Underlying representations coincide with C-stem suffixes.
 b. Regular V-stem suffixes are the result of the rule $\emptyset \rightarrow r / V_{vb}] [_ V$

As we indicated at the outset with respect to Japanese, speakers’ adoption of Analysis A is confirmed by the appearance of the regularized forms that that analysis predicts. Specifically, Analysis A predicts that any V-stem suffix alternant not consisting of the corresponding C-stem alternant preceded by *r* should be subject to replacement by an innovative form which does conform to that pattern. Regarding the mechanism of replacement, to the extent that an irregular V-stem alternant (e.g. Imperative *-ro*) ceases to be used (see de Chene 2016: 41–42), the underlying or default alternant for that suffix will be added to V-stems as well as C-stems. This will create a representation with hiatus at stem boundary to which the rule of (1b) will apply to produce the innovative *r*-initial V-stem alternant (e.g. $[[uke]e] \rightarrow [[uke]re]$ ‘receive!’). We have already seen that, in the language of the *Omorō Soshi*, the V-stem Imperative suffix (irregular verbs apart) is uniformly *-re*, in accordance with the predictions of Analysis A. It is thus clear that that analysis was already in force at the stage of pre-Shuri recorded in the *Omorō Soshi* and therefore that its adoption predates the earliest written records.⁸

⁸ While the irregular V-stem suffix that *-re* replaced is not attested in the *Omorō Soshi* (or anywhere in Northern Ryukyuan), Miyako *-ru < -ro* combined with the retention of *-ro* in north-western and central Kyushu (see GAJ maps 85–88, 91) makes *-ro* the most likely possibility.

Among the Shuri suffixes introduced in section 2, those that can be assumed to have originally had irregular V-stem alternants, apart from the Imperative and the Conjunctive, are the Negative, the Hortative, the Conditional, and the two Causative suffixes. In all five cases, these are suffixes that under the traditional Japanese analysis are added to the *Mizenkei*. Equivalently, if they are interpreted as being added to stems, they will show an $a \sim \emptyset$ alternation, with a appearing in C-stem alternants and \emptyset in V-stem alternants. Specifically, the forms that these suffixes take or would be expected to take in the language of the *Omoro Soshi* are Negative $-(a)n$, Hortative $-(a)n \sim -(a)$, Conditional $-(a)ba$, Causative 1 $-(a)s-$, and Causative 2 $-(a)sime-$. Attestation of V-stem forms for these suffixes is sparse in the *Omoro* poems; in particular, V-stem Causatives are apparently not attested at all (see Takahashi 1991b: 217–219, 1991a: 344–458). But to the extent that relevant V-stem forms do appear, they present a mixture of conservative and innovative shapes. Thus, the Conditional appears as $-ba$ in *osi-age-ba* (Omoro 3-12) and *osi-tate-ba* (Omoro 1-17 etc.), but as $-raba$ in *osi-uke-raba* (Omoro 13-3). Against this pattern of variation, it is noteworthy that attested examples of *Mizenkei* suffixes on monosyllabic V-stems (*mi-* ‘see’, *e-* ‘obtain’) are all of the form $-raX$ (see Takahashi 1991a: 333–334, 344), suggesting that, corresponding with what we observed above for the Conjunctive, shorter V-stems underwent regularization in *Mizenkei* categories before longer V-stems did.

In the *Omoro Soshi*, then, the regularization predicted by Analysis A is complete in the Imperative, in progress in *Mizenkei* categories, and barely under way in the Conjunctive. Crucial information about the stage that regularization had reached by the 18th century is provided by the texts of the *Kumiodori* (genre dating from 1719) and *Ryuka* (major collections published 1795–1802). The language of the *Kumiodori* and *Ryuka*, along with that of the *Omoro Soshi* and other early sources, is recorded in the *Okinawa kogo daiziten* (Okinawa Kogo Daiziten Hensyuu Iinkai 2011 (below, HDO)) and forms the basis for the conjugation tables of that dictionary. Those tables reveal that in the 18th century, regularization of V-stem suffixes, while still only incipient in the Conjunctive, had gone to completion in *Mizenkei* categories, leaving Conjunctive $-\emptyset$ as the only irregular V-stem suffix that had not yet been replaced by a regular r -initial substitute.

Let us now consider the role in the process of assimilation of V-stem to r -stem inflection of the Shuri suffixes that do not alternate according to the C/V polarity of the stem-final segment. For these suffixes, the Perfects in $-ta/-ti$ (Table 3) and the innovative Conclusive and Adnominal in $-ju-$ (Table 2), the question of regularization under Analysis A does not arise, because the domain of that analysis is explicitly limited to suffixes that do distinguish C-stem and V-stem alternants. Nor, given that the suffixes in question begin with consonants, will they provide occasion for application of the r -Epenthesis rule of (1b), since the intervocalic environment of that rule will not be satisfied. Forms with t -initial and j -initial suffixes, however, will have posed no barrier to the merger of V-stem with r -stem inflection because of phonological developments that eliminated stem-final r before t and j while leaving suffixal t unvoiced and unpalatalized. In the relevant

categories, in other words, deletion of stem-final *r*, by creating a vowel-final allomorph, had the effect of assimilating the *r*-stem paradigm to the pre-existing pattern of V-stem inflection and thus erasing the distinction between the two conjugation types in those categories. In Class III (*onbin*) forms, where stem-final *r* occurred before *t*, loss of *r* is complete in the *Omoro Sosbi*, and thus dates from a time before the earliest records (Takahashi 1991a: 330). In the innovative Conclusive and Adnominal in *-ju-*, loss of stem-final *r* occurred by the 18th century, more or less simultaneously, it appears, with the grammaticalization of those forms. This is shown by the conjugation tables of the HDO, in which the innovative Conclusive and Adnominal for *r*-stems display no trace of *r*, as in Adnominal *na-ju-ru* < **nar-ju-ru* < *nar-i-jor-u* (*nar-* ‘become’).

By about 1800, then, irregular Conjunctive $-\emptyset$ was the only remaining obstacle to the merger of V-stem with *r*-stem conjugation. Analysis A, as we have seen, predicts *-ri* as a regular replacement for $-\emptyset$, but by 1800, intervocalic *r* is beginning to be subject to loss before *i*. This is shown, again, by the conjugation tables of the HDO, where the Conjunctive of *nar-* varies between *nar-i* and *na-i*. As a result, what we observe in the modern Shuri Conjunctive is the result of loss of the irregular suffix alternant $-\emptyset$ in favor of default *-i* without any evidence of *r*-Epenthesis, given the constraint **ri* that was in effect at the time. Thus, the Shuri Conjunctive of *ʔukir-* ‘receive’ (J *uke-*) or *ʔukir-* ‘arise’ (J *oki-*) is *ʔuki-i* (Kinjo and Hattori 1955: 333, Uemura 1963: 59, Tsuchiko 1997: 383).

It is reasonable to assume that as long as even one suffix remained unregularized, historical vowel-stems continued to be vowel-final, and epenthetic *r* belonged to suffixes. With the elimination of the last irregular suffix alternant, Conjunctive $-\emptyset$, however, speakers will have reanalyzed hitherto suffix-initial *r* as belonging to the stem, and the merger of historical V-stem conjugation with the *r*-stem paradigm will have been complete. Even subsequent to this development, though, the *r*-Epenthesis rule of Analysis A has remained active in Shuri, as shown most clearly by ongoing regularization in the paradigm of polysyllabic *aw*-stems, discussed immediately below in section 3.3. The period of activity of that rule, then, extends from prehistoric times up through the present.

3.3. Tertiary *r*-stems

In section 3.2, we sketched the process that created the secondary *r*-stems of Shuri from vowel-stems. We saw that while merger of V-stem and *r*-stem conjugation in Perfective (*onbin*) forms and the innovative Conclusive and Adnominal was the result of loss of *r* before *t* and *j*, assimilation of V-stem to *r*-stem inflection in Class I categories and the Conjunctive resulted from accumulation in the V-stem paradigm, over a period of centuries, of innovative *r*-initial suffixes resulting from regularization under Analysis A, followed by reanalysis of originally suffix-initial *r* as stem-final. In this section, we will extend the account of section 3.2 to what we have called tertiary *r*-stems, the set of Shuri *r*-stems that correspond to Japanese *w*-stems. We should be aware from the outset, however, of the differences as well as the similarities between the two cases.

As in the case of V-stems, merger of *w*-stem with *r*-stem inflection in *onbin* forms and the Conclusive and Adnominal can be attributed to phonological change: like *r*, *w* has zero reflex before *t* and *j* (see HDO: 775), and before *t* this is already true in large part in the language of the *Omoro Soshi* (see Takahashi 1991a: 192–195). In contrast to the case of V-stems, however, no elimination of irregular suffix alternants needs to be postulated in connection with the shift of *w*-stems to *r*-stem inflection, given that *w*-stems had always taken C-stem suffixes. In extending the account of section 3.2 to *w*-stems, then, the focus will be on whether or not the innovative *r* of historical *w*-stem forms can be attributed to the *r*-Epenthesis rule of (1b) above, and in order to answer that question affirmatively, we will need to argue that *w*-stems went through a vowel-final stage on their way to *r*-stem inflection. Let us begin with some historical background.

Stem-final *w* is the reflex of proto-Japonic **p*, a consonant that when intervocalic merged with **w* in both Japanese and Ryukyuan, with *w* then deleting before any vowel but *a*. This sequence of changes was complete in Japanese by about 1100 (Frellesvig 2010: 207), and seems to have been complete in the language of the *Omoro Soshi* as well (Takahashi 1991b:5).⁹ With respect to the distribution of *w*, then, the historical stage preserved in the *Omoro Soshi* corresponds to that of contemporary Japanese: *w* occurs only before *a* and is thus found in the paradigm of *w*-stem verbs only before suffixes that begin with that vowel, for example Negative *-an*, Hortative *-a*, and Conditional *-aba*.

In the following centuries, however, *w* weakened and deleted before *a* as well when a back vowel preceded. The development *awa* > *aa*, to begin with, is attested to by *kana* spellings involving the length symbol (dash) in texts such as those collected in Hokama and Tamaki (1980), whose oldest sources (see Hokama and Tamaki 1980: 637–639) date from the early 18th century: *aa* < *awa* ‘foam’, *kaara* < *ka^wa-ra* ‘river’ (see the relevant entries of the HDO). That *w* was lost in the sequence *urwa* < *ur^wa/or^wa* as well can be inferred from the Shuri reflexes of words like **kupa* ‘mulberry’ (J *ku^wwa*) and **kupa* ‘hoe’ (J *ku^wwa*): parallel to the development of *kwii* ‘voice’ (J *ko^e*) from *kui* < *ko^e* < *ko^we*, **kupa* develops to *ku^wwa* > *kua* > *kwaa*. In both cases, that is, after intervocalic *w* disappears, the second of two adjacent vowels spreads leftwards into the first, which desyllabifies. The sequence *iwa*, finally, is stable, as illustrated by Shuri *ʔiwa* ‘rock, crag’, *ni^wa* ‘garden’ (J *iwa*, *ni^wa*).¹⁰ Both the development of *awa* to *aa* or (in the Amami dialect area) *oo* and the preservation of *iwa* are characteristic of the Ryukyus as a whole.¹¹

⁹ There are exceptions in contemporary Shuri, however: the prefix **opo-* ‘great’ (J *oo-*) is *ʔuhu-*, and **sipo* ‘salt’ (J *sio*) appears as *sipu-* in *sipukarasan* ‘salty’ (Uemura 1997: 336).

¹⁰ All three developments admit sporadic exceptions in Shuri: *ʔawa* ‘millet’; *ʔurwar-* ‘finish’; *ʔj-an* ‘doesn’t say’ < *i(j)-an* < *iw-an*. A referee points to a possible doublet for Shuri *ni^wa*, namely *naa* ‘front yard, plaza’, but also notes the possibility that that word derives from *mjaa* < *mja* ‘palace, shrine’.

¹¹ Kikajima is exceptional in retaining *awa* in two of three locations surveyed by Hirayama (1966: 89) and in having *aa* in the third. Examples for *awa* are provided by Hirayama (1966: 67, 89, 105, 117) for Northern Ryukyuan, Karimata (2005: 79) for Hirara, and Kari-

Turning now to the historical development of *w*-stem inflection, we may note first that there is a consensus that the language of the *Omorō* poems shows as yet no evidence of the eventual shift of *w*-stems to the *r*-stem paradigm (Hokama 1960: 108, Takahashi 1991a: 192, Takahashi 1991b: 8, 423). While the conjugation table of HDO: 775 would suggest that the same is true for the *Ryūka* and *Kumiodori* texts of the 18th century, examination of the entries for individual *w*-stems in that dictionary reveals that a high proportion of them are beginning to display sporadic cases of *r*-stem forms, at roughly the same time, it would seem, as *w* began to be lost before *a*. Let us now survey the situation in contemporary Shuri, classifying inherited (i.e. pre-Shuri) *w*-stems, all originally **p*-stems, by length and the vowel preceding *w*. Inherited polysyllabic *ow*-stems and *uw*-stems, first of all, are uniformly *ur*-stems in Shuri: *jatur*- ‘employ’ (J *yato^w-*), *sukur*- ‘rescue’ (J *suku^w-*). Polysyllabic *aw*-stems are en route to becoming *ar*-stems, but this process remains incomplete, as we will see in more detail immediately below. Monosyllabic *ow*-stems and *uw*-stems have become Shuri *uur*-stems, and monosyllabic *aw*-stems have become *oor*-stems: *suur*- ‘accompany’ (J *so^w-*), *suur*- ‘suck’ (J *su^w-*), *koor*- ‘buy’ (J *ka^w-*). Of the two stems in which stem-final *w* was preceded by a front vowel, finally, *wew*- ‘become intoxicated’ (J *yos^w-*) is *wiir*-, and *iw*- ‘say’, while a (short vowel) *r*-stem in most of southern Okinawa (Hirayama 1966: 272, 274), has the basic stem *ʔj*- in Shuri.¹²

We have noted that in order to extend to *w*-stems the Analysis A account of the V-stem-to-*r*-stem shift, we will need to argue that *w*-stems went through a vowel-final stage. The data cited above from monomorphemic forms showing that *w* following a back vowel was lost in pre-Shuri before *a* just as it had been lost earlier before all other vowels provides reason to suspect such a vowel-final stage, assuming of course that the introduction of *r*-stem forms in the *w*-stem paradigm did not precede the loss of *w* before *a*. More concrete evidence, however, is provided by the survival of the hypothesized vowel-final stems to this day for one subclass of inherited *w*-stems, namely polysyllabic *aw*-stems. In the DOL, stems descending from monosyllabic *w*-stems and polysyllabic *ow*-/*uw*-stems have listings that are completely parallel to those of primary and secondary *r*-stems. In particular, those stems’ Negatives, representing Class I forms, have the shape *Xran*: *tuuran* ‘doesn’t question’ (J *to^w-*) and *jaturan* ‘doesn’t employ’ (J *yato^w-*) like *turan* ‘doesn’t take’ (J *to^r-*) and *ciran* ‘doesn’t wear’ (J *ki*-). The Negatives of polysyllabic *aw*-stems, however, are in most cases listed without *r*, implying a stem that ends

mata (1997b: 405) for Ishigaki; for *iwa*, see Kokuritu Kokugo Kenkyūyūzo (1966–1974) map 193 (*niwa* ‘garden’).

¹²The long vowels of monosyllabic stems appear to be the result of influence from *onbin* forms, as suggested by (a) the fact that vowel length in the *onbin* stem (“*u-onbin*”), but not yet in the basic stem, is a distinctive characteristic of monosyllabic as opposed to polysyllabic *w*-stems already in the *Omorō Soshi* (Takahashi 1991b: 192–195) and (b) the fact that *iw*- ‘say’, the only monosyllabic *w*-stem, then and now, without *u-onbin* is also the only one that ends up without a long vowel in the basic stem.

in *a*: *waraan* ‘doesn’t laugh’ (J *waraw-*), *naraan* ‘doesn’t study’ (J *naraw-*). Crucially, it is clear at the same time that these vowel-final shapes do not represent the end point of the historical development of their respective stems: the accompanying grammatical sketch (Uemura 1963: 60; see also Tshako 1997: 383) makes it clear that Negatives of the shape *Xaran* (and parallel forms for other Class I suffixes) are also possible, and some stems (*jasina(r)an* ‘doesn’t care for, bring up’ (J *yasinaw-*), *sitaga(r)an* ‘doesn’t obey’ (J *sitagaw-*)) are listed with both alternants. That this variation represents ongoing replacement of *Xaan* by *Xaran* is confirmed not only by the fact that original monosyllabic *w*-stems and polysyllabic *ow-/uw*-stems have all developed into *r*-stems in Shuri but by the fact that polysyllabic *aw*-stems, too, have become *r*-stems in the neighboring Naha dialect (see Uchima and Nohara 2006).

In conjunction with the data from monomorphemic forms, then, the *a*-final forms of inherited polysyllabic *aw*-stems constitute reason to conclude that inherited *w*-stems of all types must have gone through a V-final stage on their way to *r*-stem inflection in Shuri.¹³ The postulated V-final stage raises certain questions, however. First, if the stem of *waraan* is really vowel-final, it is unclear why hiatus at stem boundary is not resolved by application of *r*-Epenthesis, given our conclusion above that Analysis A has been in force since prehistoric times. We should note in this connection that *waraan* is the form reported for five of six southern (main island) Okinawan locations in Hirayama (1966: 272), suggesting that it is a stable realization of the stem-suffix combination in question and not simply a short-lived transitional stage between *warawan* and *wararan*. A second question that arises in principle is why a vowel-final stem *wara-* should take consonant-stem suffixes in the first place, although this issue is rendered largely moot by the fact that by the time stem-final *w* was lost before *a*, irregular vowel-stem suffixes other than Conjunctive -Ø had already been eliminated. Let us look more closely at the nature of the stem-final element in *waraan*.

It is well known that all articulatory correlates of a consonant may be lost without affecting that consonant’s place in syllable structure, as evidenced by phenomena like rule application and allomorph selection. Thus, in French, deleted [h] (“*b aspiré*”), typically in loanwords, blocks the rules of elision and liaison, and in Turkish, deleted [ɣ] (orthographic ğ “*yumuşak ge*”) conditions the selection of consonant-stem noun suffixes. Clements and Keyser (1983; see 96–113 for French and 67–73 for Turkish) argue at length that such cases are appropriately treated by postulating representations in which the “deleted” consonant is an abstract consonantal syllable-structure position that is associated with no articulatory content, what we may call an “empty consonant”.

Correspondingly, I suggest that when *w* was lost before *a* in pre-Shuri and there was no longer any evidence for postulating final *w* in stems like ‘laugh’, those stems were first reanalyzed as ending in an empty consonant, which we may rep-

¹³For the two front-vowel *w*-stems, a tendency for stem-final *w* to be lost before *a* is apparent as early as the *Omoro Soshi* (Takahashi 1991a: 193–194).

resent as “C”. In the case of ‘laugh’, this will mean a representation /waraC-/ , and the failure of *r*-Epenthesis to apply to a form like Negative /waraC-an/ will be the result of the fact that the intervocalic environment required by that rule is not satisfied. Eventually, however, /waraC-/ will have faced competition from the vowel-final representation /wara-/ , reflecting the fact that the stem ended phonetically in a vowel. To the extent that the vowel-final representation of the stem is adopted, the Negative will be /wara-an/ , a representation which will undergo *r*-Epenthesis to give *wararan*.

Contemporary variation between conservative *waraan* and innovative *wararan*, then, along with parallel forms for other Class I suffixes, reflects ongoing reanalysis of the stem from a representation ending in an empty consonant to one ending in a vowel. Monosyllabic *w*-stems (apart from *iw*- ‘say’) and polysyllables of the shape *Xow*-/*Xuw*- will have followed this reanalysis through to completion, coming to show only *r*-initial forms for Class I suffixes. As a result, epenthetic *r* will have been reanalyzed as part of the stem, resulting in the merger of *w*-stem with *r*-stem inflection; since, as noted above, *w* had already disappeared before *t* and *j*, no barrier to this merger will have been posed by *onbin* forms or innovative Conclusives and Adnominals, where stem-final *r* had also gone to zero. Summarizing the developments we have seen in this section, a stem like that corresponding to Japanese *yatow*- ‘employ’ will have passed through four stages in pre-Shuri with regard to its stem-final segment: /jatuw-/ , /jatuC-/ , /jatu-/ , and /jatur-/ . It is only for polysyllabic stems of the shape *Xaw*- that this sequence of developments remains incomplete.

4. Alternative accounts

Above, we began with the question of whether or not Ryukyuan languages, and in particular Shuri Okinawan, display evidence that speakers have adopted the analysis (1) above (“Analysis A”) for verbal suffixes that alternate depending on the C/V polarity of the stem-final segment. On the basis of what we saw in sections 2 and 3, we can say that Shuri does indeed display evidence of the adoption of Analysis A, and in a particularly decisive form. First of all, with respect to primary vowel-stems, Shuri illustrates the logical endpoint of the changes entailed by that analysis, namely the total assimilation of vowel-stem inflection to the inflectional pattern of *r*-stems. Second, because of the creation of secondary vowel stems from historical *w*-stems and the ongoing nature of the assimilation of those vowel-stems to *r*-stem inflection, it displays evidence at the same time for intervocalic *r*-Epenthesis at verb stem boundary as a living generalization that is still being extended.

The innovative forms that we have taken as confirmation of the predictions of Analysis A, however, have been interpreted in other ways by scholars working in the Japanese linguistic and dialectological tradition. In this section I wish to examine those alternative interpretations and argue that the account based on Analysis A provides a better understanding of the innovations in question. I will divide the alternative accounts to be considered into two groups. In section 4.1, I consider

an account that attributes the relevant innovative forms to the influence of *r*-stem conjugation. This account is applicable both to developments in Shuri and other Ryukyuan dialects and to parallel developments in Japanese dialects, and because Japanese data is more plentiful, I will employ Japanese examples in discussing it. In section 4.2, I consider accounts of the Shuri developments that appeal to the points of contact among *r*-stem, *V*-stem, and *w*-stem conjugation, noted above, that result from the loss of *r* and *w* before *t*-initial and *j*-initial suffixes.

4.1. The putative influence of *r*-stem inflection

On the view developed above, when a Japanese vowel-final stem such as *mi*- ‘look’ comes to display innovative forms like Imperative *mire*, Hortative *miroo*, Negative *miran*, Conjunctive *miri*, and Causative *mirase*-, those forms are to be understood as the result of regularization—concretely, elimination of irregular suffix alternants in favor of regular substitutes—pursuant to the adoption of Analysis A as a synchronic analysis of suffix alternations. The Japanese dialectological tradition, in contrast, has tended to view such innovative forms in isolation from questions of synchronic analysis and associate their *r* with the stem-final *r* of verbs like *kir*- ‘cut’, *ter*- ‘shine’, *nar*- ‘become’, *tor*- ‘take’, and *sur*- ‘rub’. Often this association is simply presupposed, typically by use of the common label *itidan katuyoo no ra-gyoo godanka* ‘the assimilation of vowel-stem to *r*-stem conjugation’ or variants thereof. Sometimes the influence of *r*-stem conjugation in the genesis of the innovative forms is directly asserted; a recent example is Onishi (2016: 152). And in the most explicit formulations of the “*r*-stem influence” hypothesis, four-term proportions are appealed to in order to account for the innovative forms; a typical example (Matsumaru 2006: 40) is the proportion *kiru* : *kire* = *miru* : *X* (*X* = *mire*) as motivation for the innovative Imperative *mire* ‘look!’. Here, I will take such proportions as representative of the *r*-stem-based interpretation of the innovative forms in question.

In arguing that the Analysis A account of those innovative forms is to be preferred to the *r*-stem-based account, the central fact I will appeal to is that the innovations in question progress suffix by suffix (alternatively, inflectional category by inflectional category) in each dialect, as opposed to (among other possibilities) progressing stem by stem (lexeme by lexeme), progressing in random order across the set of all inflected forms, or occurring simultaneously. Thus, the city of Tsuruoka in Yamagata Prefecture (Kokuritu Kokugo Kenkyuuzyo 1953: 191–193) shows innovative forms for three of the five categories identified above (the Imperative, Hortative, and Causative), the city of Toyohashi in Aichi Prefecture is recorded (Yoshikawa and Yamaguchi 1972: 152–155) as showing innovative forms for four categories (all but the Causative), and in general, each innovative dialect is characterized by its inventory of innovative categories—under Analysis A, its inventory of innovative suffixes. In section 3.2, we saw that the same was true for various stages of pre-Shuri, in which *V*-stem Imperatives regularized first, followed by *Mizenkei* categories and finally the Conjunctive.

To say that the replacements in question do not progress stem by stem does

not mean that, for a given category, all stems come to show innovative or regularized forms at the same time. For example, shorter stems, to my knowledge, always regularize before longer ones in Japanese dialects (on this point, see e.g. Hikosaka 1999: 291), and we have seen evidence that the same was true for pre-Shuri. What it does mean is that it is unnecessary to refer to individual stems or lexemes in specifying the course of regularization in a given dialect or in comparing two dialects regarding the extent to which they show regularization. In contrast, reference to individual suffixes or categories is inescapable in such contexts, as the above examples illustrate. Under the Analysis A interpretation of the innovative forms, the suffix-by-suffix progression of the changes follows immediately from the fact that that analysis locates irregularity in suffix alternants. Under the interpretation of those forms according to which they result from “analogy” (Matsumaru 2006: 40, Onishi 2016: 152) to *r*-stem forms via proportions such as *kiru* : *kire* = *miru* : *X* (*X* = *mire*), in contrast, there is no way, I claim, to capture the fact that the changes progress suffix by suffix.

To see this, observe that when the forms of the above proportion are segmented into stems and suffixes, we obtain *kir-u* : *kir-e* = *mi-ru* : *X* (*X* = *mi-re*). In the segmented proportion, however, the stem-final *r* of *kir-* no longer plays any role; the same relationships are captured by a proportion *kak-u* : *kak-e* = *mi-ru* : *X* (*X* = *mi-re*) (*kak-* ‘write’) or, indeed, by a proportion *-u* : *-e* = *-ru* : *X* (*X* = *-re*). In order to attribute motivation for the changes to *r*-stem inflection, in other words, the proportional account must assume unsegmented forms. It must assume, that is, that in generating the innovative items, speakers analogize inflected words to one another without regard to the segmentation of those words into stems and suffixes. On this hypothesis, however, there is no way to distinguish between changes that occur suffix by suffix and changes that occur stem by stem or in random order.¹⁴

Another property of the relevant morphological innovations that is naturally accommodated only under the Analysis A interpretation is the extreme rarity, across Japanese dialects (see Kobayashi 2004: 584), of the *V*-stem *sokuonbin* forms (i.e. forms whose stem allomorph ends in mora obstruent) that are predicted by proportions like *kiru* : *kitta* = *miru* : *X* (*X* = *mitta*), where *-ta* is the suffix of the Perfect. As has been noted (de Chene 2016: 57), while the failure of forms like *mitta* to appear is mysterious under the *r*-stem-based account, it follows automatically under the account based on Analysis A: since the environment of *r*-Epenthesis is intervocalic, no prediction is generated for forms with *t*-initial suffixes. What the Analysis A account then needs to explain is why forms like *mitta* are in fact observed, at least as one option, in certain Kyushu dialects, notably those of Kagoshima and Kumamoto. Given that, with some variation reported, the dialects in question display innovative *r*-initial *V*-stem suffixes in all relevant categories (Kagoshima; see e.g. Kyuusyuu Hoogen Gakkai 1991: 240) or in all categories but

¹⁴For an example of stem-by-stem regularization, see the expansion of imparisyllabic inflection in the dialectal Greek nominal paradigm (Melissaropoulou 2013), naturally interpreted as the result of elimination of exceptions to an *ð*-Epenthesis rule.

the Conjunctive (Kumamoto; see e.g. Kyuusyuu Hoogen Gakkai 1991: 231), the natural inference is that speakers of those dialects have reanalyzed suffix-initial *r* as part of the stem (de Chene 1985: 180, de Chene 1987: 166, Konishi 2011: 49, de Chene 2016: 57) or are in the process of doing so, and that the adoption of the *sokuonbin* stem allomorph characteristic of *r*-stem inflection is a consequence of that reanalysis. This hypothesized reanalysis of suffix-initial *r* as stem-final, of course, mirrors what we claimed above has occurred in Shuri.

In discussing the *r*-stem-based account of the innovative forms under consideration, it is worthwhile, finally, to consider two claims that are sometimes made (see e.g. Matsumaru 2006) in support of that account regarding the motivation for the relevant changes. These are that (a) the putative analogical influence of *r*-stems is a result of their lexical frequency; and (b) motivation for the replacements in question is provided by the goal of reduction in number of verbal conjugation-types (*katuyoogata*). With respect to (a), note that while the frequency of *r*-stems is being invoked here to explain their influence on V-stems, the latter are in fact almost half again as frequent as the former—for example, 1388 V-stems (1261 *e*-stems, 127 *i*-stems) vs. 945 *r*-stems in the *Iwanami Kokugoziten*, 6th edition (Nishio, Iwabuchi, and Mizutani 2000 (CD version)). On frequency grounds alone, then, we should sooner expect to see influence of V-stem conjugation on *r*-stem conjugation than the other way around. Claim (b), on the other hand, is based on an equivocation inherent in the meaning of *katuyoogata*, which does not represent a unified concept. Insofar as *katuyoogata* distinctions involve the difference between regular inflection and frankly irregular patterns instantiated by at most a handful of verbs, we do of course expect to see reduction in the number of *katuyoogata* over time. The distinction between the *godan* and *itidan* conjugations, however, is the distinction between consonant-stem and vowel-stem inflection, and there is to my knowledge no principle of language change that would lead us to expect the elimination of one of those in favor of the other. Reduction in the number of *katuyoogata*, therefore, is not in and of itself a plausible motivation for the changes in question.

In this section, I have argued that regularization pursuant to the adoption of Analysis A provides a more adequate understanding of innovative forms like *mire*, *miroo*, *miran*, *miri*, and *mirase*- than an account that attempts to relate those forms to the inflection of *r*-stems. In particular, we have seen that the *r*-stem-based account, in insisting on suppression of the distinction between stems and suffixes, precludes an understanding of why the changes in question progress category by category rather than lexeme by lexeme or randomly. Our comparison of the two accounts also suggests certain more general lessons. One is that systematic morpho(phono)logical change is typically the consequence of speakers' synchronic analytic choices rather than of the extension of relations of surface similarity among word forms; another is that in attempting to understand specific instances of such change, it is important not just to have some account of the developments that did occur, but also to be able to explain why other potential developments did not.

In concluding this section, I would like to deal with two points on which doubts might arise regarding the relation between the two modes of explanation we have examined. The first of these stems from the fact that while the Analysis A account is expressed in terms of underlying forms and phonological rules, the *r*-stem-based account is expressed in terms of four-term proportions, a difference that might appear to make direct comparison between the two accounts difficult.

Four-term proportions have inherent problems as a descriptive device (Kiparsky 1972: 280): they involve individual word-forms or morphemes and thus lack generality; they cannot, in contrast to phonological rules, be related to each other by ordering or, consequently, by relations such as feeding and bleeding; and they are unconstrained and can just as easily be made to express changes that do not or could not occur as changes that do. It is nevertheless possible to express the basic derivational insight of Analysis A in proportional terms and thus bring into maximally clear focus the difference between the two accounts. A proportional version of Analysis A could, for example, take the form $-u : -ru = -e : X$ ($X = -re$) for Imperative $-re$ or $-eba$: $-reba = -oo : X$ ($X = -roo$) for Hortative $-roo$. Such proportions show that under Analysis A, in contrast to the *r*-stem-based account, innovative forms result from generalization of a pattern of suffix alternation and bear no relation to the paradigm of stems ending in *r*.

The second point on which there might be thought to be ambiguity or unclarity regarding the relation between the two accounts arises from the fact that, as we have seen, suffix-initial *r*, originally epenthetic, is eventually reanalyzed as stem-final, as has occurred both in certain Kyushu dialects and in Shuri. It is an empirical fact, in other words, that V-stems (potentially) end up as *r*-stems; in this sense, the label *itidan katuyoo no ra-gyoo godanka* can be said to be applicable to the endpoint of the relevant sequence of changes even if it is not applicable to intermediate stages thereof (Konishi 2011: 58 (footnote 2)). What is important, however, is not the applicability of one or another label, but the grammatical mechanisms postulated by a given account of the changes under consideration and the predictions that are made (or not made) about the diachronic path of those changes. In these respects, the Analysis A account and the *r*-stem-based account of innovative forms like Imperative *miré* remain sharply distinct.

4.2. Points of contact among *r*-stems, V-stems, and *w*-stems

The pre-Shuri loss of stem-final *r* and *w* before *t* and *j* that we observed in sections 3.2 and 3.3 had the result that V-stems, *r*-stems, and *w*-stems all came to have *onbin* forms of the shape XV-*t*Y and innovative Conclusives and Adnominals of the shape XV-*j*Y. The relatively recent loss of intervocalic *r* before *i* created an overlap between *r*-stems and *w*-stems in the Conjunctive as well. These points of contact among the paradigms of the three stem-types form the basis for a number of attempts in the literature to explain in proportional terms the assimilation of V-stems and *w*-stems to the *r*-stem paradigm in Shuri and other Ryukyuan dialects. Thus Kinjo and Hattori (1955: 333) suggest regarding Class I (neutral suffix) forms and the Conjunctive of stems corresponding to Japanese *ki*- 'wear', *karw*-

‘buy’, and *uke-* ‘receive’ that “these are evidently items due to analogy from the *onbin* stem” (here and below, author’s translation); this idea is echoed for *w*-stems (but apparently not for *V*-stems) by Uemura (1963: 60). While neither Kinjo and Hattori nor Uemura offer any elaboration, it seems clear that they are envisioning proportions such as *tutan* : *turan* = *ʔukitan* : *X* (*X* = *ʔukiran*) or *tutan* : *turan* = *kootan* : *X* (*X* = *kooran*), where *tur-*, *ʔukir-*, and *koor-* correspond to Japanese *tor-* ‘take’, *uke-* ‘receive’ (or *oki-* ‘arise’), and *kaw-* ‘buy’, respectively.

In parallel fashion, Uchima (1984: 247–248; see also Uchima 1982 and works cited there) suggests regarding the assimilation of *w*-stems to *r*-stem conjugation that “If analogy did operate, it was presumably Conjunctive forms that constituted its pivot.” This proposal thus envisions proportions such as *tui* : *turan* = *umui* : *X* (*X* = *umuran*), where *umu(w)-* corresponds to Japanese *omow-* ‘think’. The innovative Conclusive would support a parallel proportion *tujun* : *turan* = *umujun* : *X*, and since stem-final *i* < *i* *e* did not desyllabify in the Conclusive and Adnominal (*ʔukijuru* < *ʔukiuru* < *uke+oru*), there are also potential proportions of the same type for *V*-stems, for example *tujun* : *turan* = *ʔukijun* : *X*. It must be kept in mind that such proportions may be invalidated by phonological change; thus, for example, monophthongization of the word-final *Vi* sequences of *w*-stem Conjunctives (*wara-i* > *waree* ‘laugh’, *umu-i* > *umii* ‘think’, optional in Shuri (Uemura 1961: 65, Tsuchako 1997: 383)) will compromise the Conjunctive as a point of contact between *r*-stem and *w*-stem inflection. Setting this issue aside, however, let us ask whether the Shuri assimilation of *V*-stems and *w*-stems to *r*-stem inflection in Class I forms and the Conjunctive, explained above as the result of regularization pursuant to the adoption of Analysis A, should in fact be understood in terms of proportions of the type just illustrated. In considering this question, I will concentrate to begin with on *V*-stems.

In principle, a proportional account of a given change should argue that there is a basic/derived relationship between the first and second terms of the relevant proportions (in the terms of Kuryłowicz 1945–49, a relationship between *formes de fondation* and *formes fondées*). It should also specify a reason for the observed direction of influence—in the present case, from *r*-stems on the one hand to *V*-stems and *w*-stems on the other—that is, the grounds for the relation between the first and third terms of the proportions. Proportions based on *onbin* forms as pivot, for example, can be seen as presupposing that those forms constitute a derivational base for the rest of the verbal paradigm, so that the plausibility of the proportions in question depends on the plausibility of that derivational proposal. Even if we set aside such questions, however, there are compelling reasons to believe that the assimilation of *V*-stem to *r*-stem inflection in Shuri is not due to proportional relationships of the type just reviewed. The first argument to that effect derives from the parallelism between Shuri and Japanese developments.

We saw in section 4.1 that the diachronic process that ends with the assimilation of *V*-stems to the *r*-stem paradigm proceeds category by category in Japanese as it did in pre-Shuri—specifically, by the accumulation in the *V*-stem paradigm of innovative suffixes that consist of *r* plus the corresponding *C*-stem suffix. In

fact, the course of change in Japanese and in pre-Shuri is parallel at a finer level as well, in that (a) of the categories Imperative, Hortative, Negative, and Conjunctive, the Imperative is the least resistant to regularization and the Conjunctive the most resistant (for Japanese, see de Chene 2016: 54 (Table 7)); and (b) as we have already seen, shorter stems are less resistant to regularization than longer stems. These common features of the Japanese and Shuri developments, along with their common endpoint, strongly suggest that the two cases should be given a unified explanation. The points of contact between the *r*-stem and V-stem paradigms that we have seen in Shuri, however, do not obtain in Japanese, where *r*-stems show *sokuonbin* and Conjunctive + *or*- constructions have not been grammaticalized as inflected forms. Adopting for Shuri a proportional account based on either *t*-suffixed forms or *j*-suffixed forms as pivot will thus mean claiming that essentially identical developments in Ryukyuan and Japanese are due to totally unrelated mechanisms.

In addition to this conceptual argument against the proportional approach, there is an empirical one, namely that proportional accounts will not cover the full range of explicanda with regard to the spread of *r*-stem inflection in Shuri and in Ryukyuan more generally. This is because there are cases in which the introduction of innovative *r*-initial suffixes proceeds in the absence of the cross-paradigmatic points of contact that the proportions require. This phenomenon is illustrated in Shuri by the negative existential verb *neen* ‘doesn’t exist’, which consists historically of *nee-* < *nai* (itself meaning ‘doesn’t exist’) plus the conservative V-stem Negative suffix alternant *-n* (for commentary, see HDO: 786–787). Shuri *neen* has the paradigm of a verbal negative (see Uemura 1961: 64–65, 75–77), so that *nee-n* (like e.g. *kak-an* ‘doesn’t write’) serves not only as the Imperfect Conclusive and Adnominal, but also as the Conjunctive, and *nee-n-ta-n* (like *kak-an-ta-n* ‘didn’t write’) serves as the Perfect Conclusive and Adnominal. *nee-n* varies with *nee-ran* in the Conclusive and Adnominal, however, and *nee-n-ta-n* with *nee-ran-ta-n* (see Tshako 1997: 380). While this variation may be stable as opposed to representing ongoing replacement, it seems clear that *nee-n* is the older of the two forms and that *nee-ran* is a later innovation (Nishioka 1993: 28, Iha 1933/1975: 544–545).

Innovative *nee-ran* is naturally explained as the result of regularization under Analysis A, specifically as elimination of the irregular suffix alternant *-n* and the application of *r*-Epenthesis to the representation /*nee-an*/ (compare the variation between Shuri *kuu-n* and Yomitan *kuu-ran* for the Negative of ‘come’, noted above in section 3.1). There is no explanation for that form under a proportional account of the extension of *r*-stem inflection in Shuri, however, because the required points of contact with the *r*-stem paradigm either fail to exist or generate counterfactual predictions. In particular, the Conjunctive *tui*, Conclusive *tujun*, and Adnominal *tujuru* of *tur-* ‘take’ bear no similarity to *neen*, and while Perfect Conclusive *tutan* and *neentan* both end in *-tan*, a proportion *tutan* : *turan* = *neentan* : X would predict the unattested **neenran*.¹⁵

¹⁵Accounts of *neeran* that treat it as deriving from *nai-ar-anu* (Nishioka 1993: 28) or *nabe-*

Outside Shuri, a more general example illustrating that the introduction of innovative *r*-initial suffixes in the paradigm of vowel-final stems in Ryukyuan is not dependent on any pre-existing surface similarity with *r*-stem inflection is provided by the development of the paradigm of *sī-* < *se-* ‘do’ in Amami Oshima and, with the exception of Tokunoshima, the Amami dialect area generally (see Hirayama 1966: 201–256 and Nakamoto 1990: 669–688); for concreteness, I cite forms from Naze on Amami Oshima (Hirayama 1966: 201–203). While Negative *sīran*, Hortative *sīroo*, and Imperative *sīri* show innovative *r*-initial suffixes, the Conjunctive and Conclusive (J *si*, *si+ori*) are *si* and *sjun/sjuri*, and the Perfect Conjunctive and Conclusive (J *si-te*, *si-ta*) are *si* and *san*, displaying no trace of suffix-initial *t*. A proportion *turi* : *turan* = *si* : X or *turjun* : *turan* = *sjun* : X will thus predict Negative *san* (the attested form in Tokunoshima and in Okinawan), and a proportion *tuti* : *turan* = *si* : X will have no determinate outcome at all. It seems quite clear, then, that a proportional approach to the assimilation of vowel-stem to *r*-stem conjugation in Ryukyuan will be incapable of dealing with the full range of data that must be accounted for.

For *w*-stems, the evidence against a proportional account of the shift to *r*-stem conjugation is necessarily sparser: since *w*-stem conjugation is generally stable in Japanese,¹⁶ there is no argument from the desirability of a unified treatment of Ryukyuan and Japanese developments; and since, minor exceptions aside, there are no irregular *w*-stems in Ryukyuan, there is no opportunity to show that the relevant changes take place even in the absence of paradigmatic points of contact. There is, however, a generalization about the course of the transition from *w*-stem to *r*-stem inflection that is expected under an account according to which innovative instances of *r* originate in intervocalic epenthesis but not under a proportional account. This is that, as we have already argued for Shuri, *w*-stems go through an intermediate vowel-final stage on their way to *r*-stem inflection. In closing this section, let us look at data from the Amami dialect area in which the shape of innovative forms provides support for the hypothesis that *w*-stems shift to *r*-stem inflection only subsequent to loss of stem-final *w*.¹⁷

As noted above, monomorphemic *awa* in Amami dialects other than those of Kikaijima develops not to the *aa* observed in Okinawan, but to *oo*. Across verb stem boundary, this change is inhibited both in the three Kikaijima locations and in nine of the ten Amami Oshima locations surveyed by Hirayama

ar-anu (Tsuahako 1997: 381), where *-ar-* is the inanimate existential verb, are ad hoc in that there appear to be no other likely exemplars of such a construction. Notably, while affirmative adjectival forms involve *-ar-* throughout the Ryukyus (Uemura 1997: 348–349), adjectival negatives are not formed with *-ar-anu* anywhere in the region (GAJ map 137), and the same appears to have been true of pre-Shuri.

¹⁶ An exception is the transfer of *w*-stems to the *r*-stem paradigm reported for Aomori Prefecture (Konoshima 1961: 144).

¹⁷ Merger of *w*-stem with *r*-stem conjugation quite clearly occurs only in Northern Ryukyuan; the two paradigms remain distinct in Sakishima languages, as shown by the twenty dialectal conjugation tables of Hirayama (1967: 131–191).

(1966), and in those twelve locations there is no introduction of *r*; ‘doesn’t laugh’ is *warawan* in nine of them and minor developments thereof in the remaining three. In Koniya, the administrative center of Setouchi-cho in southern Amami Oshima, in contrast, and in all nine Tokunoshima, Okinoerabujima, and Yoronto locations, the stem vowel has shifted to *o*, so that the expected form, reported for Isen-cho in southern Tokunoshima, is *warowan*. But in Koniya and the remaining eight southern locations, we find not *warowan*, but *waroran* or variants or developments thereof (Okinoerabu *waroram(u)*, Yoron *waronnu* < **waroranu*).

The fact that, in Amami dialects, stem-final *r* in place of historical *w* is observed only in the presence of preceding *o* has no explanation under a proportional account of the shift of *w*-stems to *r*-stem inflection like those considered above: there is no reason under such an account that *warawan* should not be replaced directly by *wararan*.¹⁸ Under an account that attributes the introduction of *r* to the operation of *r*-Epenthesis, on the other hand, the restriction is expected: in order for *r*-Epenthesis to apply, *w* must be lost, and in order for *w* to be lost, the preceding *a* must shift to *o*. On this interpretation, *waroran* will reflect the development /waraw-an/ > /warow-an/ > /waro-an/ and the application of *r*-Epenthesis to the last of those representations. The distribution of the *w*-stem-to-*r*-stem shift in the Amami dialect area thus appears to support the account of that shift proposed here. Nevertheless, there is no question but that further investigation of the diachronic development of *w*-stems in the entire Northern Ryukyuan area would be welcome.

5. Beyond Shuri

To this point, we have dealt with Ryukyuan varieties other than Shuri primarily to advance our account of Shuri verbal stem types and their historical development. In particular, we have not asked concerning non-Shuri varieties whether they, like Shuri, show evidence that their speakers have adopted Analysis A. In this section, we will make a brief survey of Ryukyuan dialects in this regard.

In having completely eliminated vowel-stem inflection, Shuri is typical of many Okinawan dialects: explicit statements to the effect that there is no contrast between C-stem and V-stem inflection are available, in addition to Shuri, for Ojima on the southeast coast (Hirayama 1966: 269), Ishikawa in the south-central part of the island (Hirayama 1966: 263), and Nakijin in the northwest (Shimabukuro 1997: 365). More generally, throughout Northern Ryukyuan, distinctive V-stem inflection survives, if at all, only under very strict conditions, namely in Conjunctive forms of polysyllabic stems and sometimes in the Conjunctive-based Conclusive and Adnominal as well. Thus in Hentona (Kunigami Village) in northeastern Okinawa, for which Hirayama (1966: 256)

¹⁸While it is true that most locations that fail to show the *w*-stem-to-*r*-stem shift also retain *r* before *i* and *j*, so that the pre-existing point of contact between the two paradigms is limited to *onbin* forms, Koniya (Hirayama 1966: 221–224) shows that retention of *r* is no obstacle to the shift in question.

notes the existence of a stem-type contrast that corresponds to C-stem vs. V-stem inflection, monosyllabic historical V-stems have fully assimilated to *r*-stem inflection, and polysyllabic historical V-stems take *r*-suffixes (Negative *-ran*, Hortative *-ra*, etc.) in Class I forms. It is only in Class II forms of polysyllables, then, that *r*-stem and V-stem inflection visibly diverge. For example, whereas the primary *r*-stem *tur-* ‘take’ (J *tor-*) and the secondary *r*-stem *k’ir-* ‘wear’ (J *ki-*) have the Conjunctives *tui* (< *tur-i*) and *k’ii* and the corresponding Conclusives *tuin* and *k’iin*, the V-stem *agi-* ‘raise’ (J *age-*) has the Conjunctive *agi*, preserving irregular V-stem \emptyset , and the Conclusive *agin* (**agiin*).

While the conjugation tables of Hirayama (1966: 201–275) and the map of Nakamoto (1990: 542) present slightly different geographical distributions for retention of Conjunctive \emptyset in the paradigm of polysyllabic V-stems, it is clear that the Amami dialect area is more conservative in this regard than Okinawan. That all Northern Ryukyuan dialects show unambiguous evidence for the adoption of Analysis A, however, can be seen in the distribution of innovative *r*-initial V-stem suffixes for the Negative, Hortative, and Imperative (Nakamoto 1990: 540, 541, 544). Further, as we saw in section 4.1 with respect to the dialects of Kagoshima and Kumamoto Prefectures, the situation is very similar across the language boundary in Kyushu.

This picture changes sharply, however, when we cross the border between Northern and Southern (Sakishima) Ryukyuan into Miyako. We have already seen in Table 4 above that Hirara Miyako shows inherited irregular V-stem suffix alternants or phonological developments thereof in the Negative, Hortative, Conjunctive, Imperative, and Causative 2. That the same is true of Miyako dialects in general is shown by the maps of Nakamoto (1990: 540–544): conservative suffixes are reported for 20 of 20 locations for the Negative,¹⁹ 23 of 23 for the Hortative, 18 of 19 for the Conjunctive, and 19 of 19 for the Imperative (see also Hirayama 1967: 131–162).²⁰

The conservatism of Miyako, however, is not shared by Yaeyama dialects or by Yonaguni, all of which show evidence, in the form of innovative *r*-initial V-stem suffixes, for the adoption of Analysis A. Innovative V-stem Imperative *-ri*, to begin with, is characteristic of the entire area (Nakamoto 1990: 544), and most dialects show additional *r*-initial suffixes as well. Thus Ishigaki has Causative 1 *-ras-* and Causative 2 *-rasimi-* (Karimata 1997b: 408) and displays variation between conservative *-n* and innovative *-run* (cf. C-stem *-un*) for the Conclusive and between conservative \emptyset and innovative *-ru* (cf. C-stem *-u*) for the Adnominal (Miyara 1995: 50–51); Hirayama (1967: 165) reports variation between conservative and innovative forms for the Negative and Hortative as well. Yonaguni, similarly,

¹⁹Uchima (1984: 478), however, reports *Mizenkei -ra-* alongside \emptyset for stems such as *uti-* ‘drop (intr.)’ (J *oti-*) in Nishizato, adjacent to Hirara.

²⁰The Miyako forms reported (Nakamoto 1990: 514ff.) for ‘wear’ (J *ki-*) appear to reflect a lexeme-specific reanalysis of that stem as *r*-final followed by a phonologically regular shift of *r* to *s* (Nakamoto 1990: 531).

preserves only a single conservative V-stem suffix, Causative 2 *-mir-* < *-simir-* (Yamada 2016, de Chene 2019). Given that Miyako presumably represents the proto-Sakishima state of affairs with respect to the V-stem paradigm, we may infer that the adoption of Analysis A in Yaeyama dialects and in Yonaguni is independent of parallel developments in Northern Ryukyuan and thus offers additional evidence for the naturalness of that analysis.

6. Conclusion

We have seen that there is evidence from all branches of Ryukyuan except Miyako that speakers have adopted the analysis of (1) above (“Analysis A”) for suffixes that alternate according to the C/V polarity of the stem-final segment, as was argued for Japanese by de Chene (2016). Where coexistence of innovative and conservative forms is reported, as above for Ishigaki, it is plausible to infer that regularization under Analysis A is ongoing, and it seems likely that this holds as well for any number of varieties for which the available sources do not record variation. In the natural course of events, we might in the future expect to see continued regularization of this sort in both Ryukyuan and Japanese, with each generation maintaining or extending the range of the innovative forms. At the same time, however, it is undeniable that throughout Japonic, many of the regional varieties that exhibit the strongest tendencies toward regularization under Analysis A are endangered (regarding Ryukyuan languages in particular, see Heinrich, Miyara, and Shimoji 2015a: 1). It is thus natural to ask whether there are sources of evidence other than ongoing change that might bear on the question of how speakers analyze the suffix alternations in question.

In this connection, I would like to suggest that the role of children in advancing the elimination of irregularity and the extension of the *r*-zero alternation is an area that would benefit from more attention than it has hitherto received. There is anecdotal evidence suggesting that this role is probably significant. Thus, for example, Nakajima (1972: 111–112) notes for the town of Inami, adjacent to Kakogawa city in Hyogo Prefecture, that innovative Negative *-ran*, Hortative *-roo*, and Imperative *-re* are attested, but not Conjunctive *-ri*. He adds, however, that *-ri* occurs in the speech of children. Similarly, the consultant for GAJ point 660034 in Nagano Prefecture reports that he used innovative *mi-ran* ‘doesn’t look’ as a child, but reverted to conservative *mi-n* as an adult. Insofar as the tendency to replace irregular V-stem suffixes with regular substitutes derived by *r*-Epenthesis is rooted in child language acquisition, it probably has a secure future even if some of the dialects, Ryukyuan and Japanese, that presently exemplify it most abundantly do not.

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【要旨】

r 挿入と琉球諸語

デシエン プレント

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日本語動詞の接尾辞交替の分析として、子音動詞接尾辞が基底形にあたり、規則的な母音動詞接尾辞が動詞語幹境界における母音間の r 挿入規則の適用によって派生すると de Chene (2016) が提案している。本稿では、沖縄語の首里方言を中心に、琉球諸語においても話者がその分析（以下、「分析 A」）を採用している証拠が見られるかどうかを検討する。その結果、首里方言の歴史のなかで分析 A の採用を示す証拠が豊富にあり、また現代首里方言が、r を語幹末子音とする動詞へと母音動詞が完全に合流しているという、分析 A がもたらす変化の予測される終着点に至っていることが分かる。r 語幹動詞の活用形に基づく 4 項比例による説明をはじめ、分析 A の裏付けとされる革新的な語形の他の解釈も取り上げられ、問題点が指摘される。琉球語族全般に視野を広げると、宮古語以外のすべての琉球語において分析 A が採用されている証拠があることが分かり、その分析の自然性が改めて確認される。