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The absolutive *ia* particle in Samoan*

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1 Introduction

Samoan is an ergative-marking, non-tonal Polynesian language in which ergative case is marked segmentally, but absolutive case has been said to be unmarked. However, Yu (2011, 2016) showed that in fact, absolutive case is marked by a high edge tone (H-) realized at the right edge of the word preceding the absolutive argument. The evidence for this came from phonetic and phonological analysis of intonational patterns in the spoken utterances of a systematically varied set of syntactic structures.

In this paper we show that an absolutive argument is also optionally marked with a preceding segmental particle, *ia*. This particle has been mentioned in passing in a few places in the literature (Mosel and Hovdhaugen 1992, p. 51, example 143; Vonen 1988, p. 38-39), but to our knowledge, no more than brief anecdotal descriptions of its distribution exist. Using the same set of syntactic structures as in Yu (2016), we show that *ia* is licit before absolutives, but not before ergatives or obliques. We also show that where an absolutive H- appears, *ia* is also licit, and where an absolutive H- does not appear, *ia* is illicit. That is, the distributions of absolutive H- and *ia* coincide.¹

The distribution of *ia* sheds light on two mysteries about the Samoan absolutive H-. First, there are other H- tones that systematically appear in Samoan elsewhere than before absolutive arguments: an H- also always appears between a fronted argument and the predicate and before the connective in conjunctive and disjunctive coordination. The relation between all these different H-s is unclear. However, *ia* is not licit before these other H-s: *ia* is restricted to appearing before absolutive H-s. This suggests that the grammatical sources of H-s in Samoan are not unified. The coincidence of the appearance of the absolutive H- and the licitness of *ia* also offers a possible avenue for explanation of how there could be a tonal case marker in Samoan when case markers are otherwise segmental. We hypothesize that the diachronic origin of the absolutive high may come from leftward tonal reassociation of the pitch accent on absolutive *ia*, upon deletion of the segmental material of *ia*.

The remainder of this introductory section provides background information on Samoan phonology and syntax relevant to the present discussion. Section 2 reports on elicitations, materials and methods. Section 3 summarizes the distribution of *ia* and H-. Section 4 sketches a possible diachronic origin of the absolutive H- from the segmental elision of *ia* and the tonal reassociation of its pitch accent with the immediately preceding mora. Section 5 concludes.

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¹But unlike the distribution of absolutive H-, the distribution of *ia* seems to be sensitive to information structure, see Section 3.1.

1.1 Language background

Samoa is an Austronesian language from the Independent State of Samoa and the (U.S.) Territory of American Samoa, with about 413,000 speakers in all countries (Lewis et al., 2014). It is in the Polynesian family in the Samoic-Outlier branch (Pawley, 1966, 1967), which has a number of ergative-marking languages, including Samoan.

1.2 Segmental phonology and word stress

The phoneme inventory of Samoan consists of the consonants /p, t, (k), ʔ, f, v, s, (h), m, n, ŋ, l, ɻ/ and the vowels /i, e, a, o, u/ and their lengthened counterparts, e.g. /i:/ (Zuraw et al., 2014).

All Samoan examples in this paper are given using IPA symbols and appear in square brackets when in-line in the text. In-line in the text, we occasionally use Samoan orthography (always italicized), where [ŋ] is written as *g* and [ʔ] as ‘.

The inventory of phonotactically licit syllable shapes in Samoan is limited to those in which every consonant is followed by a vowel: monomoraic [(C)V], and bimoraic [(C)V:] and [(C)VV]. The basic footing pattern, as observed in monomorphemes, consists of a moraic trochee at the right edge of the word (Zuraw et al., 2014). Primary stress is on the final vowel if it is long, and otherwise on the penultimate vowel.

1.3 Word order and case-marking

Samoa has default VSO word order, although there can be substantial variability in word order (Ochs, 1982) (e.g. VOS, SVO, OVS are all licit); the interaction of word order choice with discourse structure is also quite variable between speakers. Samoan marks ergative case on the subject of a verb-initial transitive sentence with the preposition [e], as in (1a).² Absolutive case on the direct object of a transitive sentence and the subject of an intransitive sentence, such as (1b), has been said to be unmarked (Chung 1978, p. 54-56; Ochs 1982, p. 649; Collins 2014, p. 94), but Yu (2011, 2016) showed that it is preceded by a H- and in this paper, we show that it can be preceded by the particle *ia*. The intransitive sentence (1b) also illustrates the prepositional element [i] as a marker of oblique case. This preposition marks stative agents (see Chung, 1978, p. 29), indirect objects, locatives, temporal expressions, sources, and goals (Mosel and Hovdhaugen, 1992, p. 144). Before pronouns and proper names, *iā* [ja:] rather than [i] marks oblique case.

(1) Case-marking in transitive and intransitive sentences³

a. Transitive sentence

na lalaja *(e) le malini H- (ia) le mamanu.
 PAST weave ERG DET marine ABS (ABS) DET design

‘The marine wove the design.’

b. Intransitive sentence

na ŋalue H- (ia) le malini (i le mamanu).
 PAST work ABS (ABS) DET marine OBL DET design

‘The marine worked (on the design).’

²All sentences are from elicitations with our primary consultants, and in sections where noted, from other consultants as well.

³For brevity, the morpheme *le* is glossed as DET, a determiner marking specificity on singular nouns. An exception is (9), where a detailed gloss is of relevance.

Case marking can be optional. The segmental ergative case marker *e* is rarely used in *tautala leaga* (Mosel and Hovdhaugen, 1992, p. 9).⁴ Ochs (1982) found that the frequency of use of the ergative case marker *e* is quite variable across social contexts.

While *ia* does not seem to make an appearance in Churchward's (1951) Samoan grammar, a few sources in the literature remark that absolutive arguments are preceded by the particle *ia* (Mosel and Hovdhaugen 1992, p. 51, example 143; Vonen 1988, p. 38-39). Mosel and Hovdhaugen (1992) state:

The noun phrases are subclassified according to their case marking. Syntactically, the most relevant types of noun phrases are: presentative noun phrases... absolutive noun phrases, which are either unmarked or marked by the preposition *ia* (Hovdhaugen 1987:154f., Vonen 1988:38f.), ergative noun phrases marked by the preposition *e*... (p. 51)

The absolutive preposition *ia* is always optional. It is mostly used before proper names of persons and is seldom used in literary texts. (p. 143)

Vonen (1988, p. 38-39) states that (bracketed material added by us):

The absolutive marker [ia] is much less used in Samoan than in Tokelauan. In Samoan, it is always optional and when used, it mostly occurs in the same position as [Tokelauan] *ia*. [Samoan] *ia*, however, can be followed by an article.⁵ See Hovdhaugen (1987:154-155).

Hovdhaugen (1987, p. 154-155) has an entry on *ia* (*ia*⁴) which states:

*ia*⁴: (prebasic modifier) optionally indicates the subject of a sentence, often with an emphatic function. *Fo'i mai loa ia 'Olo i Sāmoa* "Olo returned immediately here to Samoa"; *'Ua fānau ia Lau* "Lau has given birth"; *E iai ia teine ia a to'aluā* "There were those two girls"; *Fa'alogo mai i Pulotu ia Saveasi'uleo i le ōi atu a Tai'i* "In Pulotu Saveasi'uleo heard the moaning of Tai'i"; *'Ua sau ia le tagata Fiti* "The man from Fiji came"; *'Ua leva ona fai 'āiga ia le Tuiuea ma le tuafafine o tama* "The Tuiuea and the sister of the boys had for a long time lived together". In existing descriptions of Samoan, there is no analysis which covers the function of *ia*⁴ in our texts. Milner (1966:81) has a prebasic particle *ia* "which has the effect of bringing into relief the operative word or words in an utterance. In verbal constructions, it may be used before either the subject or the object." In Moyle (1981:17) we find the following interesting observation: "Following a pause in the narration, usually as a memory lapse, 'o followed by a noun or proper name may become *ia*." In our texts, there are a few examples which may be explained in the way Moyle does and especially important are some cases of self-correction by the narrator: *Ma le tuafafine o tama, ia Sina* "And the sister of the boys, Sina"; *Sā lē malie ia le tamā ma fa'apea* "The father was not pleased and said";

⁴Samoan is well-known for having two distinct registers: *tautaula lelei* 'good language'—used in literary contexts and Westernized institutional contexts like in church and school, as well as with foreigners, and *tautaula leaga* 'bad language'—used in traditional ceremonies and meetings, as well as between family members and between friends (Shore 1977, 1980; Duranti 1981, p. 165-168; Ochs 1988, p. 196; Duranti 1990, p. 4-5; Mosel and Hovdhaugen 1992, p. 7-11). One of the most striking contrasts between the two registers is in the segmental phonology: /t/ and /k/ → /k/ and /n/ and /ŋ/ → /ŋ/ from *tautaula lelei* to *tautala leaga*.

⁵For Hovdhaugen (1987) and Vonen (1988, p. 43), articles mark specificity, partitivity and number. We are unsure what is meant by 'prebasic modifier'. The category seems to include articles (Mosel and Hovdhaugen, 1992, p. 27).

Sā lagona e le sau'ai ā le, ia le manogi atu a Feti'iti'ioleola “The ogre sensed the smell of Feti'iti'ioleola”; *Ona fai atu lea ia Pulotu, ona fai atu lea 'o Pulotu* “Then Pulotu said, then Pulotu said”. But Moyle’s description covers only a few of our examples and the restriction to subject-marking clearly differs from Milner’s description.

In contrast to the *ia*’s in Milner’s Samoan dictionary (reprinted edition: Milner 1993, p. 81) and Moyle (1981), Hovdhaugen’s *ia*⁴ is restricted to appearing before subjects and doesn’t just occur in contexts of speech repair or hesitation after pauses, and all the example sentences in Hovdhaugen (1987, p. 154-155) place *ia*⁴ only before absolutes. Only one of the other *ia*’s listed by Hovdhaugen (1987, p. 155) is also listed as appearing before DPs, which he glosses as ‘the . . . in question, those just spoken about’. It’s unclear from the entry whether or not this *ia* is also restricted to preceding absolute arguments.

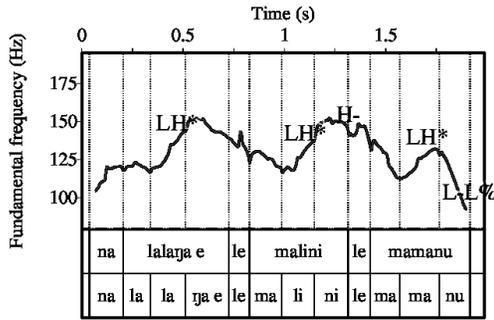
With absolute *ia* in Samoan having been so little studied, its morphosyntax is currently poorly understood. Hovdhaugen (1987, p. 154) states that *ia*⁴ precedes only the (absolute) subject, often with an ‘emphatic’ function. But with our consultants we found that there was no clear-cut restriction on the licitness of absolute *ia* as a function of discourse structure when we manipulated contexts for informational and contrastive focus. In addition, the utterances of *ia* we elicited were not in the context of disfluencies or hesitations—they occurred in fluent utterances and were not obligatorily preceded or followed by a pause. It is possible that usage of *ia* has shifted considerably over time. While our consultants were all familiar with absolute *ia*, they never volunteered it and their metalinguistic intuitions about its usage were incredibly variable (see Section 3.1).

1.4 Overview of intonational system

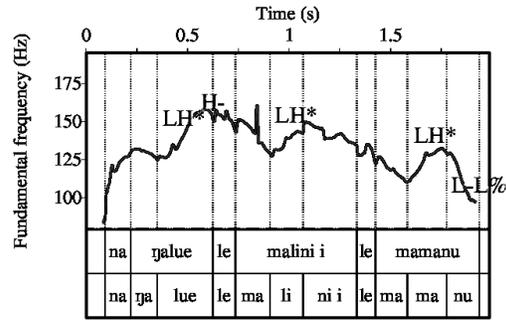
Knowledge of the distribution of sentence-medial high edge tones in Samoan is helpful for comparison with the distribution of *ia*. Basic intonational patterns in Samoan have been described in Orfitelli and Yu (2009), Yu (2011), and Calhoun (2015). The figures in (2) compare the fundamental frequency (f₀, the acoustic correlate of pitch) contours for the transitive sentence in (1a) versus the intransitive sentence in (1b). Each primary stress is tonally marked with a rising pitch accent annotated as LH*. The pitch accent realizations seen here are representative. The low target ‘L’ typically appears to be aligned to the beginning of the stressed mora. The high ‘H’ peak of the pitch accent is reached in the syllable following the stressed syllable it’s associated with. This phenomenon of PEAK DELAY is observed cross-linguistically (Silverman and Pierrehumbert, 1990; Xu, 1999, 2001; Myers, 2003). A high edge tone, H-, occurs in both declaratives, though in different locations. The f₀ contour over a word can be seen to continue to rise and stay high in the syllable following the stressed syllable when an H- is present at the end of the word. The end of the declaratives fall to a low boundary tone, annotated as L-L%.

- (2) F0 contours for the basic VS(O) declaratives in (1a) and (1b). Pitch accent rises (LH*) occur over primary stressed syllables. An H- occurs before the absolutive object in (a) and before the absolutive subject in (b).

a. Transitive declarative



b. Intransitive declarative

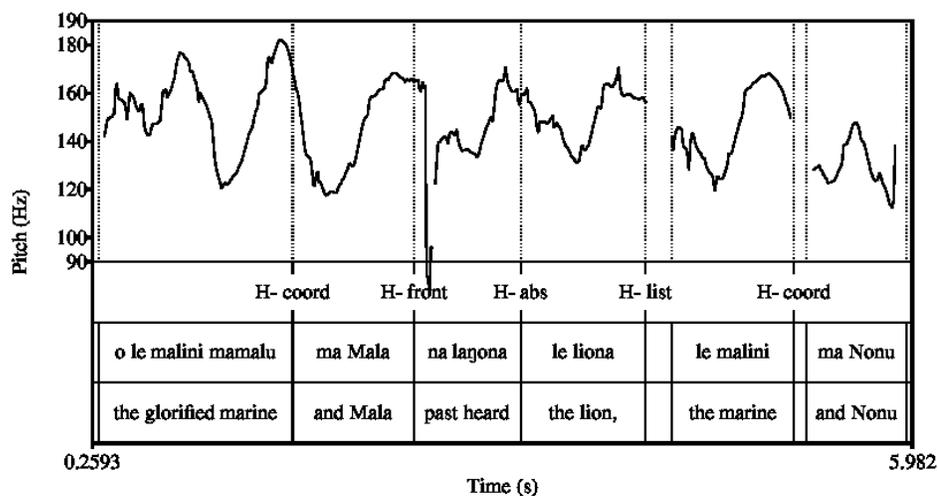


1.4.1 Sentence-medial high edge tones

There are multiple sentence medial high edge-aligned tones in Samoan. We introduce most of them here in (4), which shows the f0 contour for (3). This includes the H- that always appears in coordination, preceding the conjunction [ma] (glossed as CONJ), the H- that always appears between a fronted non-pronominal DP argument and the predicate (glossed as FRONT), the absolutive H-, and the H- that always delineates members of a list (glossed as LIST). There is one other H- that appears sporadically that we haven't shown here, which is the H- introduced at the end of prosodic phrases, whose presence depends on the speaker's choice of prosodic phrasing and hesitations. In this particular utterance, there is a lot of lengthening where H-'s occur in (4), though curiously not before the absolutive. The precipitous dip in the f0 contour immediately after the fronted DP is due to glottalization preceding [na]. The gaps in the transcription indicate silences, which also end with some glottalization.

- (3) ʔo le malini mamalu H- ma Mala H- na laʔona H- le liona, H-
 TOPIC DET marine glorified CONJ CONJ Mala FRONT PAST hear ABS DET lion LIST
 le manini H- ma Nonu.
 DET fish CONJ CONJ Nonu
 'The glorified marine and Mala heard the lion, the fish, and Nonu.'

- (4) An f₀ contour demonstrating most of the H-'s in Samoan. The gaps in the annotation indicate silence. While the f₀ contour for both coordination highs in this utterance appear to fall slightly after peaking, we don't find the fall at all perceptually salient—it may appear due to a drop in subglottal pressure.



2 Materials and methods

All data referred to in this paper were elicited and recorded from our consultants' speech. Information about the consultants is given in Section 2.1. Information about elicitation procedures is provided in Section 2.2, and the methods used for phonetic and phonological analysis of the data are explicated in Section 2.4.

2.1 Consultants

Data were collected in a Samoan community in the Los Angeles area in sessions in 2014-2015 with one main consultant, aged 19 when the first author started working with him in 2007. He was born and raised in Upolu and had moved to the Los Angeles area in 2003.⁶ Data were also elicited and recorded in Auckland, New Zealand in July 2015 from three additional female speakers. Our primary consultant in Auckland was 48 and had grown up in Apia and moved to New Zealand from there in 2009; another was aged 19 and had grown up in Savai'i and been in New Zealand since age 10, and the last was aged 23 and had grown up in Savai'i and moved to New Zealand in 2008. All of them spoke primarily Samoan in daily life and were literate in Samoan, but also spoke English fluently. English was used as the contact language.

The data described in this paper was elicited in *tautala lelei*, except for the 23-year-old, who requested working with us in *tautala leaga* because she was not used to *tautala lelei*.

⁶The work here all concerns Samoan as spoken in Samoa, and not Samoan spoken in American Samoa. Mosel and Hovdhaugen (1992, p. 8) wrote: 'Today we find a very marked difference in intonation between the two variants [from Samoa versus American Samoa]'.

2.2 Elicitation procedures

Elicitation sessions with the primary consultants involved developing and/or checking words and sentences to be recorded and recording sessions, while sessions with secondary consultants were based on materials checked with the primary consultants and focused more on recording sessions. In sessions involving the development of stimuli, the consultant was asked to help construct Samoan sentences either from some starting scenario or from an English sentence, to judge whether Samoan sentences from the literature or constructed by the author were licit, and to provide alternative ways to construct sentences, if any. During recording sessions, elicitation items were presented individually written on slides on a computer screen, and they were elicited in randomized order. The consultant was asked to read each sentence twice. For the consultant from Los Angeles, no systematic discourse context was provided for recording sessions: sentences were elicited ‘out of the blue’ unless pronouns or pro-drop was present, in which case a context was provided with a referent. For all other consultants, explicit discourse contexts were constructed using question-answer pairs and scenarios.

2.3 Recordings

All recordings were made directly to a computer through a head-mounted microphone (Shure SM10A), whose signal ran through a Shure X2u pre-amplifier and A-D device; recordings in Auckland were made to a Marantz PMD661 MKII. All recordings were made in a quiet room at a sampling rate of 22,050 Hz with 16-bit precision.

2.4 Analysis

All sound files were segmented and annotated using Praat (Boersma and Weenink, 2012). Each sentence was segmented by word and syllable and transcribed intonationally. See Yu (2016) for details on: (a) analysis of the pitch contours, done using Praat’s autocorrelation algorithm as implemented in VoiceSauce v1.19 (Shue et al., 2011), and (b) statistical analysis done with R (R Core Team, 2014).

3 The distribution of *ia*

Yu (2011, 2016) used phonetic data to show that an H- always precedes the absolutive argument in a variety of syntactic structures. The set of syntactic structures included intransitive, transitive and ditransitive sentence frames, with varying word orders. A variety of absolutive arguments were tested, including singular and plural, specific and non-specific nominals, as well as pronouns and nominalized verb phrases.

Here, we show that in this same set of syntactic structures, *ia* tracks the absolutive argument as well. That is, THE DISTRIBUTION OF H- AND *ia* COINCIDE TO PRECEDE THE ABSOLUTIVE ARGUMENT. Only representative examples of each syntactic structure in Yu (2016) are shown here due to lack of space; for a complete list of sentences, see Yu (2016). We begin this section with a description of our consultants’ metalinguistic intuitions about the distribution of *ia* (Section 3.1). We then show that restrictions on the position of *ia* and H- pattern with restrictions on the position of the ergative and the oblique (both segmental) case markers in Samoan (Section 3.2-Section 3.4). Finally, we show that the H- co-occurring with *ia* is distinguished from other, non-absolutive high tones (Section 3.4.2).

3.1 Consultants' metalinguistic intuitions about *ia*

All consultants needed prompting to consider using absolutive *ia*, but expressed awareness of a distinction between absolutive *ia* and *ia* used in hesitation and filled pauses. Their metalinguistic intuitions about when they would use absolutive *ia* were varied. Our primary consultant in Los Angeles expressed no sense of restriction on its usage 'out of the blue'. Our primary consultant and the 19-year-old in Auckland found it licit under most discourse conditions, whether the absolutive argument was under broad focus or contrastive focus, or whether was given or new (see Yu (2016) for details of discourse contexts). The primary Auckland consultant did express a sense that she would use *ia* for 'emphasis' and preferred to put a pause before *ia* and then pronounce *ia* with high amplitude and pitch, but also found it licit to pronounce *ia* highly reduced and co-articulated with the preceding phonetic material. There were some sporadic question-answer pairs where both consultants did not find *ia* licit, but we could find no systematic pattern to them. The 23-year-old could only recall being taught about where *ia* was licit in grammar exercises in school, but otherwise said she did not use *ia*. She had a systematic restriction on *ia*: she found it illicit before common nouns—this is consistent with Mosel and Hovdhaugen's (1992) note that *ia* is mostly used before proper names (Section 1.3).

In summary, usage of absolutive *ia* in contemporary Samoan appears to be greatly in flux, but consultants still had systematic intuitions about where it was licit and where it was not. In the rest of this section, we explicate the syntactic distribution of *ia* for our consultants.

3.2 Basic transitive and intransitive sentences

From work with our primary consultant in Los Angeles, we found that in transitive sentences, *ia* may precede the absolutive argument, but not the ergative argument, and an H- always precedes the absolutive argument. This distribution is summarized in (5).

- (5) Distribution of absolutive *ia* and H- in transitive sentences
- a. V [*e* S] [H- (*ia*) O]
 - b. V [H- (*ia*) O] [*e* S]

This can be seen from manipulating word order in transitive sentences, as exemplified in the sentence pair in (6). VSO order is given in (6a) and VOS order in (6b). In VSO order, the first argument takes ergative case; in VOS order, it takes absolutive case.

- (6) a. na tatala-(ina) [*e* le tama] [H- (*ia*) le faitotoʔa]
 PAST open-(INA) ERG DET boy ABS (ABS) DET door
 'The boy opened the door.'
- b. na tatala-(ina) [H- (*ia*) le faitotoʔa] [*e* le tama]
 past open-(INA) ABS (ABS) DET door ERG DET boy
 'The boy opened the door.'

In intransitive sentences, we found that *ia* may precede the absolutive subject, but not the oblique PP, and an H- always precedes the absolutive subject. This distribution is summarized in (7).

- (7) Distribution of absolutive *ia* and H- in intransitive sentences
- a. V [H- *ia* S] ([*i* DP])
 - b. V ([*i* DP]) [H- *ia* S]

Evidence comes from comparing VSO transitive sentences to VSX intransitive sentences (*X* denotes an oblique argument), as exemplified in the sentence pair in (8). An H- appears and *ia* is licit before the subject only in intransitive (8a); no H- appears before the subject, nor is *ia* licit before the subject in transitive (8b). Moreover, in VSX and VXS intransitive sentences, *ia* is only licit before the subject and not before oblique PPs.

- (8) a. na manoji [H- (ia) le manu] [i le maile] i le afaifi.
 PAST smelly ABS (ABS) DET bird OBL DET dog OBL DET evening
 ‘The bird was smelly to the dog in the evening.’
 b. na lajona [e le manu] [H- (ia) le maile] i le afaifi.
 PAST hear ERG DET bird ABS (ABS) DET dog OBL DET evening
 ‘The bird heard the dog in the evening.’

In summary, absolutive *ia* and H- track the absolutive argument of simple transitives and intransitives, regardless of word order.

3.3 The distribution of absolutive *ia* is insensitive to properties of nominals

Thus far, we have only presented distributional data for absolutive *ia* and the absolutive H- with specific and common nominal phrases that are singular or plural, such as *le manu* ‘the bird’ or *manu* ‘the birds’. What about other types of nominal phrases? As a case in point, Niuean case-marks common and proper nouns/pronouns differently (Massam, 2001). In this section, we provide data on the distribution of *ia* and the H- in a variety of nominal phrases from Mosel and Hovdhaugen (1992, Ch. 6). To preview: whether an absolutive nominal phrase is specific or non-specific, proper or common (Section 3.3.1), pronominal (Section 3.3.2), or a nominalization (Section 3.3.3), *ia* is licit before it, and an H- precedes it.

3.3.1 Specificity

In work with our Auckland consultants, we found that the absolutive high appears and *ia* is licit before both specific and non specific nominals, regardless of whether they are singular or plural. (9) illustrates these four conditions on the object nominal *meleni*. For elicitation details and sentence contexts, see Yu (2016).

- (9) e leʔi momoli e Manoji H- (ia) {le / ∅ / se /
 PRES NEG bring ERG Manoji ABS (ABS) SPEC.SG / SPEC.PL / NON.SPEC.SG /
 ni} meleni i le fale.
 NON.SPEC.PL melon OBL SPEC.SG home
 ‘Manoji didn’t bring {the melon/the melons/any melon/any melons} home yet.’

Whether the absolutive nominal is singular or plural, specific or non-specific, does not affect the distribution of *ia*/H-.

3.3.2 Pronouns and proper names

The sentences in (10), elicited from the primary consultant in Los Angeles, show that absolutive *ia* is licit before postverbal pronouns⁷ (which are free-standing) and that postverbal pronouns must be preceded by an absolutive H-. The pronoun used here *ma:ʔua* is a regular dual form, translated as ‘we/us two’.

⁷Before preverbal, clitic pronouns, we have found that *ia* is not licit and that H- is not realized, see Section 3.4.1.

(10) H- precedes a postverbal absolutive pronoun: transitive and intransitive sentences

a. na laɣona e Mamanu H- (ia) ma:ʔua
 PAST hear ERG Mamanu ABS (ABS) 1.DU.EXC

‘Mamanu heard us two.’

b. na manoŋi H- (ia) ma:ʔua i le liona
 PAST smelly ABS (ABS) 1.DU.EXC OBL DET lion

‘We two stank to the lion.’

Sentence (11), elicited with the Auckland consultants in manipulations of specificity, shows that *ia* is licit preceding an absolutive proper name and that it is preceded by an absolutive H-.

(11) e leʔi ŋalue H- (ia) Melani i ni mamananu i le fale.
 PRES NEG work ABS (ABS) Melani OBL NON.SPEC.PL design OBL DET house

‘Melani didn’t work on any designs yet at home.’

3.3.3 Nominalizations

The data in this section, elicited from the primary consultant in Los Angeles, show that *ia* and H- precede absolutive derived nominals and that *ia* and H- occur on absolutive arguments within derived nominals, regardless of whether the derived nominal itself is absolutive or not. (We elicited the same pattern of data with other sentences with our primary Auckland consultant under broad focus on polarity, e.g. ‘Did X? No, it is not the case that X’.)

First, *ia* is licit and an H- appears before an absolutive nominalized verb (e.g. before *le lalaŋa* in (12a)), but *ia* is illicit and no H- appears before the same nominalized verb when it is oblique in (12b). Though not shown, the contrast extends to other absolutive and oblique nominalization pairs.

(12) a. Absolutive nominalization: Preceded by absolutive *ia* and H-

e {faʔa-le:-lelei / leaŋa} H- (ia) [le lalaŋa mamananu a malini]_{abs} i le
 PRES {do-NEG-good / bad} ABS (ABS) DET weave design GEN marine OBL DET
 afaifi

afternoon

‘The marine’s weaving of the design is not good.’ (faʔa-le:-lelei: poorly done, leaŋa: superstition) (based on Mosel and Hovdhaugen (1992, p. 545, example 13.100))

b. Oblique nominalization: Not preceded by absolutive *ia* and H-

e matamata H- (ia) le malini [i le lalaŋa o le mamananu]_{obl} i
 PRES watch ABS (ABS) DET marine OBL DET weave GEN DET design OBL

le fale

DET house

‘The marine watches the weaving of the design at home.’

Note that in (12b), *ia* and H- do precede the matrix absolutive argument *le malini*.

Second, the distribution of *ia* and H- also tracks absolutive arguments internal to nominalizations, regardless of whether the nominalization itself is absolutive, in (13a), or oblique, in (13b).

- (13) a. Absolutive *ia* and H- within an absolutive nominalization
 e iloa-atu e le malini H- (ia) [le momoli-ina e le liona H- (ia)
 PRES spot ERG DET marine ABS (ABS) DET deliver-INA ERG DET lion ABS (ABS)
 le manini]_{abs} i le ala.
 DET fish OBL DET street
 ‘The marine spots the delivering of the fish by the lion in the street.’
- b. Absolutive *ia* and H- within an oblique nominalization
 na faʔalopololo H- (ia) le malini [i le momoli-ina e le liona H-
 PAST listen ABS (ABS) DET marine DET OBL deliver-INA ERG DET lion ABS
 (ia) le manini]_{obl} i le ala.
 (ABS) DET fish OBL DET street
 ‘The marine listened to the delivering of the fish by the lion in the street.’

Nominalizations with a transitive predicate may maintain an ergative-absolutive alignment, as in the pair in (13a)-(13b). Alternatively, the alienable genitive marker *a* is used to mark the agent, as in (14a), or the inalienable genitive marker *o* is used to mark the theme, as in (14b). See Collins (2014, to appear) for a description and analysis of nominalizations in Samoan.

- (14) a. e {faʔa-ler-lelei / leaʔa} H- (ia) [le lalaʔa mamananu a malini] i le
 PRES {do-NEG-good / bad} ABS (ABS) DET weave design GEN marine OBL DET
 afiafi
 afternoon
 ‘The marine’s weaving of the design is not good’ (faʔa-ler-lelei: poorly done, leaʔa:
 superstition) (based on Mosel and Hovdhaugen 1992, p. 545, example 13.100)
- b. e iloa-atu e le malini H- (ia) [le momoli-ina o le malala]_{abs} i le
 PRES spot DET ERG marine ABS (ABS) DET deliver-INA gen DET charcoal obl the
 ala
 street
 ‘The marine spots the delivering of the charcoal in the street.’

Checking whether absolutive *ia* is licit on the potentially absolutive argument *mamananu* in (14a) was not part of the elicitation plan, but absolutive H- is not detected there. The lack of *ia* and H- is consistent with a pseudo-incorporation analysis of *mamananu*, where bare NPs are genuinely unmarked, see Section 3.4.2. In summary, *ia* is licit and an H- appears before nominalized predicates that are absolutive subjects or objects. Within a nominalization, arguments that receive genitive case are not preceded by an H-, but arguments that may be preceded by *ia* do.

3.4 Where *ia* is illicit

Thus far, we have shown that *ia* is licit before absolutive arguments in a variety of syntactic environments. We have also shown that *ia* is not licit before ergative arguments, oblique PPs, or genitive arguments.

In this section, we show other systematic patterns where *ia* is illicit. First, we show cases where *ia* is illicit, but additionally, other case markers are also illicit (Section 3.4.1). Second, we show that *ia* is not licit before all bare NPs: for example, *ia* is illicit before pseudo-incorporated objects and Mosel and Hovdhaugen’s (1992, p. 88, example 300) *isu mamafa* noun-verb compounds (Section 3.4.2). Finally, we show *ia* is licit only in a subset of cases where H-’s appear, namely before

absolutive arguments, but not in coordination nor between fronted arguments and the predicate (Section 3.5).

3.4.1 *ia* is illicit where other case markers are also illicit

Case marking cannot occur in fronted arguments. Although case in non verb-initial sentences is not yet well-understood, fronted arguments, which are preceded by ‘*o*’, cannot instead, or additionally, be preceded by ergative *e*, absolutive *ia*, or oblique *i*, as exemplified in the transitive and intransitive sentences in (15), (cf. 1).⁸

- (15) No case marking in non verb-initial word order
- a. ʔo *e le malini H- *ia na lalaŋa le mamanu.
 TOPIC ERG DET marine front *IA PAST weave DET design
 ‘The marine wove the design.’
- b. ʔo *ia le malini H- *ia na ŋalue (i le mamanu).
 TOPIC ABS DET marine front *IA PAST work (OBL DET design)
 ‘The marine worked on the design.’
- c. ʔo *i le mamanu H- *ia na ŋalue H- (ia) le malini
 TOPIC OBL DET design front *IA PAST work ABS (ABS) DET marine
 ‘It was the design that the marine worked on.’

In some instances, pronouns can occur as clitics preceding the verb. As seen in (16a), with a transitive predicate, the ergative pronoun cannot be marked with the ergative marker *e*. For the sake of completeness, we show that it cannot be marked with absolutive *ia* either. Similarly, in (16b), with an intransitive predicate, the absolutive pronoun cannot be marked with absolutive *ia*. See Section 3.3.2 for examples suggesting that freestanding, non-cliticized pronouns can be overtly case marked.

- (16) a. No case marking on preverbal pronominal clitic [ma:]
 na {*e / *ia} ma: {lalaŋa-ina / lalaŋa:} H- (ia) mamanu
 ‘We two wove the designs.’
- b. No case marking on preverbal pronominal clitic [ma:]
 na *ia ma: manoŋi i le liona
 ‘We two stank to the lion.’

In summary, neither absolutive *ia* nor H-, nor other (segmental) case markers are licensed on fronted arguments or preverbal clitic pronouns. This data was confirmed with all consultants.

Focus sensitive *na‘o*. Calhoun (2014) first noticed that an H- does not co-occur with absolutive arguments under *na‘o* ‘only’.⁹ We found, additionally, from our Auckland consultants, that no case morphemes can co-occur with *na‘o*, whether the H- or segmental, in (17). These examples show *na‘o* combining with nominals bearing different cases. Case markers are shown to be ungrammatical in positions preceding and following *na‘o*.

⁸In the examples in (15), the H- indicated marks the right edge of the fronted argument. This tone is not the absolutive H- that co-occurs with *ia*. See Section 3.5.

⁹For a semantic analysis of *na‘o* and related material, see Hohaus and Howell (2015).

- (17) Case marking cannot co-occur with *na'o*
- a. *Na'o* in ABS subject. Context: Were Melina and Melani bad to the lion?
na leaŋa *H- *ia naʔo *H- *ia Melina i le liona.
PAST bad ABS ABS only ABS ABS Melina OBL DET.SPEC lion
‘Only Melina was bad to the lion.’
- b. *Na'o* in ABS object. Context: Did Melina hear the lion and the bird?
na laŋona e Melina *H- *ia naʔo *H- *ia le liona.
PAST hear ERG Melina *ABS *ABS only *ABS *ABS DET.SPEC lion
‘Melina heard only the lion.’
- c. *Na'o* in ERG subject. Context: Did Melina and Melani hear the lion?
na laŋona *e naʔo *e Melina H- (ia) le liona.
PAST hear *ERG only *ERG Melina ABS (ABS) DET.SPEC lion
‘Only Melina heard the lion.’
- d. *Na'o* in OBL PP. Context: Was Melina bad to the lion and the bird?
na leaŋa H- (ia) Melina *i naʔo *i le liona.
PAST bad ABS (ABS) Melina *OBL only *OBL DET.SPEC lion
‘Melina was bad to only the lion.’

The same is true if the argument under *na'o* is fronted (e.g. in *na'o le liona na lagona e Melina.*, the fronted counterpart of (17b)).

3.4.2 *ia* is not licit before all bare NPs

Up to this point, one could hypothesize that *ia* is licit and an H- appears before any bare NP, i.e. any segmentally unmarked NP. This hypothesis is consistent with the distribution of H- and *ia* for weather verb sentences (Mosel and Hovdhaugen, 1992, p. 107): an H- occurs and *ia* is licit before the bare NP, as shown in (18), checked with the Los Angeles consultant.

- (18) a. na {timu / vevela} H- (ia) Apia
PAST {rain / hot} ABS (ABS) Apia
‘It rained in Apia / It was hot in Apia.’
- b. na {timu / vevela} H- (ia) le Aso Sā
PAST {rain / hot} ABS (ABS) DET day sacred
‘It rained on Sunday / It was hot on Sunday.’

However, there are cases where H- does not appear and *ia* is illicit before bare NPs. First, an H- does not appear and *ia* is illicit before pseudo-incorporated objects (checked with both primary consultants and the 19-year-old in Auckland). This distribution is consistent with Massam’s (2001) syntactic analysis of pseudo-incorporation for Niuean: though unmarked, the pseudo-incorporated object does not check absolutive case.

- (19) An example of pseudo-incorporation
- a. V-S-O-Adv transitive without PNI, ABS-marked specific singular/plural object
na fufulu leaŋa e Manoŋi H- (ia) meleni i le ala
PAST wash bad ERG Manogi ABS (ABS) melon OBL DET street
‘Manogi washed the bad melons in the street.’

- b. V-O-Adv-S with PNI, unmarked object, ABS-marked subject
 na fufulu *ia meleni leaʔa H- (ia) Manoʔi i le ala
 PAST wash *ABS melon bad ABS (ABS) Manogi OBL DET street
 ‘Manogi melon-washed badly in the street.’

Second, an H- does not appear and *ia* is illicit before Mosel and Hovdhaugen’s (1992, p. 88, example 300) *isu mamafa* compounds, in which a verb modifies a noun (checked with our primary consultant in Auckland).

- (20) a. e *ia isu mamafa H- (ia) le malini
 PRES/GENR *ABS nose heavy ABS (ABS) DET.SPEC marine
 ‘The marine has a cold (lit. a heavy nose).’
 (see Mosel and Hovdhaugen, 1992, p. 88, example 4.97)
- b. e *ia manava leaʔa H- (ia) le malini
 PRES/GENR *ABS stomach bad ABS (ABS) DET.SPEC marine
 ‘The marine has a bad stomach.’

3.5 *ia* cannot co-occur with all sentence-medial high edge tones

Having shown that *ia* is not licit before just any bare NP, we show here that *ia* is not licit before all sentence-medial high edge tones, in data checked with all consultants but the 23-year-old. In Section 1.4, we stated that H-’s occur systematically not only before absolutive arguments, but also in coordination, and between fronted arguments and the predicate. However, while *ia* is licit where absolutive H-’s appear, it is illicit where H-’s appear after fronted arguments, as well as in coordination. We already showed in (15) that *ia* is illicit between fronted arguments and the predicate.

In the coordinations in (21), *ia* is illicit both before and after the conjunct [ma] whether the coordinated arguments are ergative or absolutive.¹⁰ However, as described in Section 1.4.1, a H- nevertheless appears before the conjunct. The same distributional facts for *ia* and the H- are true if the coordinated arguments are common nouns, or if the coordination is a disjunction with *po’o* ‘or’.

- (21) Coordination
- a. na ʔalue H- (ia) Ioane *ia H- ma *ia Sina i le mamanu
 PAST work ABS (ABS) John *ABS CONJ CONJ *ABS Sina OBL DET design
 ‘John and Sina worked on the design.’
- b. na lalaʔa e Ioane *ia H- ma *ia Sina H- (ia) le mamanu
 PAST weave ERG John *ABS CONJ CONJ *ABS Sina ABS (ABS) DET design
 ‘John and Sina wove the design.’

4 Discussion

In the previous sections, we have shown that absolutive arguments in Samoan are optionally preceded by the segmental case marker *ia*, which consistently co-occurs with H-. This dual absolutive marking is observed generally, and is insensitive to the syntactic nature (subject of intransitive, object of transitive predicates, proper names, pronouns, and nominalized verbs) and certain semantic

¹⁰Vonen (1988, p. 39) notes that absolutive *ia* is illicit after the conjunction *ma*, too.

properties (specificity and number) of the marked nominal. Restrictions are observed in environments where bare NPs are independently expected not to be case marked (pseudo-incorporation) or where ergative and oblique case marking are also banned. This distribution strongly suggests that *ia* and H- are both absolutive case markers in Samoan, although the use of *ia* as an absolutive case marker in contemporary Samoan seems to be infrequent while the appearance of the absolutive H- appears to be exceptionless. In the remainder of this section, we sketch out a possible connection between absolutive *ia* and H-.

4.1 *ia* as the tonal source of the absolutive H-

All the non-absolutive case markers in Samoan are segmental; so are TAM morphemes; so are—to the best of our current knowledge—all other inflectional morphemes in Samoan (other than coordination, which is segmentally as well as tonally marked). Why then, is a single inflectional morpheme in Samoan tonal, if the rest are segmental? We hypothesize that the origin of the absolutive H- is the pitch accent on the particle *ia*. In Samoan stress assignment, FOOTBINARITY requires that a foot must contain exactly two moras, and this is an undominated constraint (Zuraw et al., 2014, p. 280). Thus, absolutive *ia* forms a proper footing domain, and it receives initial stress since Samoan stress assignment also requires that a foot have stress on its initial mora (RHYTHMTYPE=TROCHEE is undominated). In contrast, all other case markers are monomoraic—ergative *i*, oblique *i* or genitive *a* and *o*—and thus form subminimal feet and are unstressed. As the only stressed case morpheme, absolutive *ia* doubly marks absolutive case: segmentally via the string [ia], and tonally with the LH* rising pitch accent on *ia*. We know of no work on change over time in the frequency of or context for the use of absolutive *ia*. All that is apparent is that it is always optional in contemporary Samoan. However, if absolutive *ia* was frequently used but then became reduced or dropped over time, perhaps just the tonal event became sufficient as the absolutive case marker. Perhaps at one point, the frequency of usage of absolutive *ia* was like the variable frequency in the usage of ergative case marking (Section 1.3), before the overall frequency of absolutive *ia* became very low in all spoken language contexts.

The process of segmental deletion and tonal re-linking that would be involved in this proposed origin of the absolutive H- is typical of tonal behavior in natural language. A characteristic property of tone is its stability: even if the segmental material hosting a tone deletes, a tone will remain and be re-associated to remaining segmental material (Yip 2002, p. 67; Hyman 2011, p. 210). We illustrate the process in (22), using *manu* as an example of the word immediately preceding absolutive *ia*. The re-association of the tone on *ia* to the adjacent mora to the left is what would be expected in tonal reassociation: a tone that remains when its segmental host is elided will always dock to an adjacent tone-bearing unit (Hyman and Schuh, 2015).

But why dock onto the adjacent mora to the left rather than the right? There are a couple reasons we can speculate about, which coincide with principles proposed by Hyman and Tadadjeu (1976, p. 62) to play a role in determining whether a floating tone docks to the left or the right. One has to do with syllabic structure and Samoan phonotactics, and the other has to do with the shape of the f0 contour introduced by docking the tone. The source tone is associated to the initial vowel [i] in *ia*. To the left of *ia* is always a vowel, since Samoan phonotactics forbids word-final consonants. To the right of *ia* could be a word-initial consonant or a vowel, and this segment would also be further away from the initial [i] vowel in *ia* than the vowel to the left of *ia*. Docking to the left thus would allow ‘easier access to a syllabic segment’ that could bear tone (Hyman and Tadadjeu, 1976), and would be consistent with an idea mentioned in Clements and Ford (1979, fn. 18) that ‘a tone that has been “set afloat” reassociates to the nearest neighboring vowel (that is, one not separated from the deleted vowel by a consonant), regardless of direction’. In addition,

by docking to the left, the orphaned tone can be realized as a high upstepped from the high tone of the preceding pitch accent, as a continuation of the rising f₀ contour from the pitch accent, and edge tones are often upstepped from preceding tones (Pierrehumbert and Hirschberg 1990, p. 177-178; Truckenbrodt 2007). In contrast, the orphaned tone docking to the mora to the right might necessitate a sudden drop to hit the low target for the upcoming stressed mora, and either maintenance of a high f₀ from the preceding primary stress, or a dip in the f₀ contour between the previous pitch accent and the absolute high tone. In short, the f₀ contour created by docking the tone to the left rather than the right produces no new inflection points in the f₀ contour, while docking to the right would certainly create new inflection points: in this sense, docking to the right produces a more ‘natural’ contour which, loosely speaking, might also take less articulatory effort (Hyman and Tadadjeu, 1976).

- (22) Proposal: segmental deletion and tonal reassociation of pitch accent on absolutive *ia* as the source of the absolutive H-



There is precedent for this kind of process for case morphemes. One classic example comes from the genitive (associative) construction in Grassfields Bantu languages. We’ll use Bamileke-Dschang and Bamileke-Medumba (Niger-Congo, Cameroon) as exemplars (Voorhoeve, 1971; Tadadjeu, 1974; Hyman, 1985; Bird and Stegen, 1993; Bird, 1999; Hyman, 2004).¹¹ In Bamileke-Dschang, a possessive ‘*N*₁ of *N*₂’ is constructed as a noun-noun sequence, where the possessed comes first and the possessee comes second, with the associative marker in between. The associative marker depends on the class of *N*₁ and is /é/ or /è/ for all but one noun class (Hyman, 1985, p. 2). However, Hyman (1985, fn. 4) remarks that the associative marker /é/ or /è/ ‘usually drops out in running speech, though it is possible for it to be heard in slower pronunciations;’ the other (/á/) is also (less frequently) elided or assimilated—for instance, /sónj è sónj/ ‘bird of bird’ may be realized as /sónj ‘sónj/ (assimilation, with H tone spread from the first [sónj]) or /sónj ‘sónj/ (deletion), where the orphaned genitive L is the source of the downstep. Thus, Bamileke-Dschang provides an example where a genitive tonal morpheme has its source in the frequent deletion/assimilation of the genitive case marker in running speech. This is a synchronic alternation between tone as an arbitrary co-exponent of genitive case along with the segment [e] (i.e. as /é/ or /è/), and tone as the sole exponent of genitive case (a L or H tone depending on noun class).¹² Note the parallels with Samoan: segmental deletion of case markers is typical in some speech contexts, namely, in *tautala leaga*, and absolutive *ia* is always optional. When absolutive *ia* is present, tone—via a LH* pitch accent—is a co-exponent of absolutive case, along with [ia]. When *ia* is segmentally deleted, the H is the sole exponent of absolutive case.

Bamileke-Medumba provides a diachronic example where a genitive tonal morpheme is likely to be a tone left behind after historical segmental deletion of the proto-Bantu connective. In this language, a ‘*N*₁ of *N*₂’ construction is formed simply as *N*₁ *N*₂. For instance, given [jú] ‘thing’ and

¹¹ Another synchronic example comes from Mongsen Ao (Tibeto-Burman, India), which has an agentive case marker [nə] that carries an underlying mid tone like other case markers in the language (Coupe, 2008, p. 64-65). However, unlike the other case markers, the segmental material in [nə] can be elided, leaving agentive case to be solely marked by tone. This segmental deletion of [nə] can happen when it is preceded by the 1SG pronoun [ni], which has a L tone, leaving the M tone on the deleted [nə] to be associated to [ni]. The tonal reassociation results in a LM rising tone on [ni], the only contour tone in the language.

¹² This terminology for tonal exponence comes from Hyman (2013, p. 18).

[mén] ‘child’, ‘thing of child’ is constructed as the string [jú ^{!!}mén], where ^{!!} indicates a double-downstep. Voorhoeve (1971, p. 52) analyzes both nouns as having both a floating L prefix and a final floating L stem tone, and for there to be a floating H genitive morpheme in between the nouns. Voorhoeve (1971, p. 52) remarks that his analysis is diachronically well-supported: every posited floating tone can be traced to being a tone orphaned after segmental deletion. As shown in (23), the floating L prefix can be traced to the segmentally deleted proto-Bantu noun prefix *kì*; the final floating L stem tone to deletion in the originally disyllabic noun stem, and the genitive morpheme H tone to the proto-Bantu connective, which can be L or H depending on noun class. Samoan might move towards a situation like in Bamileke Medumba, if the absolutive *ia* eventually disappears completely.

- (23) Vowel deletion and tonal reassociation of orphaned tones as source of the genitive tonal morpheme and other floating tones in Grassfields Bantu (Hyman, 2004, example 23)

<p>a. Proto-Bantu reconstruction</p> <p>*kì - jùmà + kí-á + mù - jáná</p> <p style="padding-left: 2em;">L - H L + H + L - H L</p> <p>‘thing of child’</p>	<p>b. Bamileke-Medumba</p> <p>jú ^{!!}mén</p> <p>L H L H L H L</p> <p>‘thing of child’</p>
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Currently though, the exponence of the Samoan absolutive is closer to the situation of synchronic alternation in Bamileke Dschang, although further work remains for us to examine whether or not the H- and *ia* are in complementary distribution currently. Preliminary evidence suggests that the H- and *ia* may co-occur, so an account for contemporary Samoan might instead be that there are multiple ways for absolutive case to be spelled out, where one exponent of absolutive case lacks some of the features present in another. It will be difficult to further explore this since the use of absolutive *ia* in contemporary Samoan appears to be very much in flux.

5 Conclusion

In this paper we have presented empirical data on the distribution of the absolutive particle *ia*, which has only been mentioned in passing in the literature. The data shows that absolutive arguments in Samoan are optionally preceded by the segmental case marker *ia*, which consistently co-occurs with H-. This dual absolutive marking is observed generally, and is insensitive to the syntactic nature (subject of intransitive, object of transitive predicates, proper names, pronouns, and nominalized verbs) and certain semantic properties (specificity and number) of the marked nominal. Restrictions are observed in environments where bare NPs are independently expected not to be case marked (pseudo-incorporation) or where ergative and oblique case marking are also banned. This distribution strongly suggests that *ia* and H- are both absolutive case markers in Samoan, although the use of *ia* as an absolutive case marker in contemporary Samoan seems to be infrequent, even near-moribund, while the appearance of the H- as an absolutive case marker is robust, possibly exceptionless.

The systematic syntactic distribution of absolutive *ia* also clarifies the source of the absolutive H-. Absolutive *ia* is licit before absolutive H-'s, but not H-s that occur in coordination and fronting. This suggests that the source of the absolutive H- is distinct from that of the other H- tones. Furthermore, *ia* itself may be the diachronic source for the absolutive H-, a lone tonal morpheme in a sea of segmental morphemes. We have hypothesized that the diachronic origin of the absolutive high may come from leftward tonal reassociation of the pitch accent on absolutive *ia*, upon deletion of the segmental material of *ia*. We are currently exploring if there is further evidence for this hypothesis

from older Samoan narratives and studying relatives of *ia* and the exponence of absolutive case in languages related to Samoan.

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