WORKING PAPERS

IN

LINGUISTICS

The notes and articles in this series are progress reports on work being carried on by students and faculty in the Department. Because these papers are not finished products, readers are asked not to cite from them without noting their preliminary nature. The authors welcome any comments and suggestions that readers might offer.

An Equal Opportunity/Affirmative Action Institution

AN ERGATIVE INTERVENTION IN HERITAGE SAMOAN

GRANT MUĀGUTUTIʻA

Ergativity has been shown to be a fragile feature that is often disproportionately lacking in the grammar of heritage speakers (Dyribal, Schmidt 1985; Hindi, Montrul et al. 2012). The current paper presents two studies investigating morphological and syntactic ergativity in Samoan heritage language. The first study measured the rate at which heritage speakers produce ergativity, while the second probed the question of whether an increase in ergative features could be induced through carefully targeted intervention. The results revealed that although heritage speakers initially lacked key ergative features, following the intervention, a significant increase and extension in both morphological and syntactic ergative features was observed. These findings potentially carry important implications for not only linguistic theory (i.e., language development), but also language revitalization and maintenance (i.e., pedagogical methodology).

1. INTRODUCTION. Although ergativity is a widespread phenomenon among the world's languages, it remains an unfortunately understudied one, especially in the field of heritage language. What little research there is has shown that ergativity is a fragile feature that is often acquired late by children (Ochs 1982, Austin 2013, Bavin 2013, Allen 2013, Stoll and Bickel 2013), and disproportionately lacking in the grammar of heritage speakers (Schmidt 1985, Montrul et al. 2012). Given that ergativity has been found to be a fragile linguistic feature, the goals of this paper are to determine: (i) the stability of ergativity in Samoan, investigating specifically the grammar of heritage speakers, and (ii) if ergativity is indeed found to be unstable, whether targeted intervention can strengthen and restore key ergative features in the language. The investigation of these issues directly addresses both the underlying characteristics of morphological and syntactic ergativity, as well as the nature of its development in the acquisition and heritage language.

To address these issues, the current paper begins with a description of ergativity in Samoan in section 2, laying out the key features that are the target of investigation. Section 3 then presents a discussion of heritage language learners, addressing specifically the contributions that careful study of these speakers offers linguistic theory. This is followed by the presentation of two studies. The first, presented in section 4, investigates the stability of ergativity in Samoan heritage speakers, looking specifically at the production of key morphological features (i.e., case) and syntactic patterns (i.e., relative clauses). The second, presented in section 5, tests whether ergative features found to be weak or lacking in the grammar of heritage speakers can be strengthened through careful intervention. section 6 then provides a discussion of the results of both studies and their implications for both linguistic theory and language development, as well as directions for further research. Finally, section 7 offers a summary of key findings and conclusions.

2. ERGATIVITY IN SAMOAN. As defined by Dixon (1979), ergativity refers to the linguistic pattern of morphosyntactic alignment in which a language treats the sole argument of an intransitive verb (S) in the same way as it does the object of a transitive verb (O, both absolute), while the agent of a transitive verb (A) is treated differently (ergative). This contrasts with the more familiar pattern we see in English, accusativity, where S and A are treated the same (both nominative), while O is treated differently (accusative). This is depicted in table 1.

TABLE 1. Ergativitiy vs. Accusativity.

Ergativity	Accusativity

Ergativity can occur at both the morphological and syntactic level. Morphological ergativity is present when case or agreement differentiates A from O and S, while syntactic ergativity manifests itself when a syntactic process differentiates A from O and S. Syntactic ergativity is often seen in relativization, wh-questions, and topicalization, where the syntactic process differentially picks out absolutive arguments to the exclusion of the ergative argument.

Ergativity in Samoan is manifested both morphologically and syntactically. Three phenomena, one morphological (case) and two syntactic (relativization and wh-question formation), have been selected as the focus of the current study. This section will provide an overview of each phenomenon, laying out key features of each that will be used as diagnostics for measuring the stability and strength of ergative features.

2.1 MORPHOLOGICAL ERGATIVITY: CASE MARKING. Samoan is a VS/VAO language, where ergativity is most apparent in the case marking of the agent in a transitive construction (Mosel and Hovdhaugen 1992). The sentence in (1) illustrates a basic intransitive construction where the sole argument of the verb *tamo'e* 'to run' is left unmarked. In a transitive construction such as (2), however, the object of the verb is left unmarked (*le teine*, 'the girl'), while the agent (*le tama*, 'the boy') is marked with the ergative case marker *e*.

(1) *'Olo'o tamo'e le   teine.*　　　(2) *'Olo'o si'i e   le tama le teine.*
　　　PROG run the girl　　　　　　　PROG lift ERG the boy   the girl
　　　'The girl is running.'　　　　　　　'The boy is lifting the girl.'

In this way, Samoan morphology sets A apart from S and O by marking it with *e*, exhibiting an ergative pattern. As we will see, this pattern is also seen syntactically in relativization and wh-questions.

2.2 SYNTACTIC ERGATIVITY: RELATIVIZATION AND WH-QUESTIONS. The subject of an intransitive verb is relativized using a gap strategy, as illustrated in (3). The same strategy is used for relativization of the direct object of a transitive verb, as shown in (4), where the subject carries the expected ergative case.

(3) *le teine ['olo'o   tamo'e ____]*　　　(4) *le   teine ['olo'o si'i e   le   tama ____]*
　　　the girl　PROG run　GAP　　　　　　the girl　　PROG lift ERG the boy GAP
　　　'the girl that is running'　　　　　　　　'the girl that the boy is lifting'

Matters are somewhat different when the subject of a transitive verb is relativized: in addition to the usual gap, the suffix *-ina* often appears on the verb (Cook 1978, Chung 1978, Mosel and Hovdhaugen 1992). This strategy is not used for S and O-RCs.

(5) *le   tama ['olo'o si'i(ina) ____ le teine]*
　　　the boy　PROG lift.*ina*　GAP the girl
　　　'the boy that is lifting the girl'

In sum, relativization of S and O exhibits no extra verbal morphology, while A can trigger the transitive suffix *-ina*, thus, an ergative pattern. The same pattern is seen in wh-questions. As seen in (6, S-WH) and (7, O-WH), a gap is left in the embedded clause with no suffixation on the verb.

(6) *'O   ai   ['olo'o 'ata   ____]?*   (7) *'O   ai ['olo'o toso e   le tama ____]?*
     PRD who   PROG laugh GAP   PRD who PROG pull ERG the boy   GAP
     'Who is laughing?'   'Who is the boy pulling?'

A-WHs (8), however, trigger the use of the transitive suffix *-ina*, just as in relative clauses.

(8) 'O   ai   ['olo'o toso(ina) ____ le teine]?
     PRD who   PROG pull.*ina*   GAP the girl
       'Who is pulling the girl?'

These morphological and syntactic ergative patterns (i.e., case, relativization, wh-questions) are the focus of the current study, in which we first examined the stability of these features in the grammar of heritage speakers.

3. HERITAGE SPEAKERS. Heritage speakers are usually considered to be second-generation immigrants who have lived in a bilingual or multilingual environment from an early age. This means that heritage speakers grow up hearing and speaking their heritage language at home in early childhood as their L1, but at the onset of schooling, roughly around age 5, their primary language shifts to their L2, the majority language. By adulthood, this results in heritage speakers who are often much stronger in the majority language, and much weaker in their heritage language (Benmamoun, Montrul, and Polinsky 2013). These characteristics exclusive to the developmental track of heritage languages offer a unique opportunity to address a range of important issues across various subfields of linguistics. Research on heritage language can contribute to not only theoretical linguistics by revealing its more resilient features in cases of reduced input (e.g., phrase structure, word order as opposed to inflectional morphology; Benmamoun, Montrul, and Polinsky 2013), and psycholinguistics by investigating the comprehension and production of key linguistic features, but also L1 acquisition in regards to the essential characteristics of typical versus delayed development, as well as L2 acquisition, by allowing the analysis and comparison of the many grammatical facets of L1, L2, and heritage development.

This type of comprehensive investigation enabled by the study of heritage language is lacking in regards to ergativity, as there have only been two published studies that look specifically at ergative features in the grammars of heritage speakers. The first found that ergative suffixation and clause coordination were severely lacking in heritage speakers of Dyirbal (Schmidt 1985), while the second revealed that Hindi heritage speakers revealed extremely poor performance in regards to ergative case marking in comparison with their native speaker counterparts (Montrul et al. 2012). This paper seeks to build upon the findings of these initial studies first by investigating the status of ergativity in Samoan heritage speakers, and second, by exploring the sensitivity of these features to intervention.

4. STUDY 1: THE STATUS OF ERGATIVITY IN HERITAGE SAMOAN. While there has yet to be a study of the status of ergativity in heritage Samoan, studies on the L1 acquisition of Samoan have shown ergativity to be a fragile feature of the language, in that the ergative case marker is rarely produced before the age of 4 (Ochs 1982). In addition, consistent use of both morphological and syntactic ergavitiy does not occur until around age 7 (Muāgututi'a, Deen, and O'Grady 2015). The purpose of the current study is to determine whether ergativity persists in the grammar of heritage speakers, given its fragility due to both its late acquisition and the prominence of English in heritage situations. If ergative features were found to be robust in heritage speakers, this would suggest ergativity as a late acquired, yet resilient feature of Samoan. However, if they were found to be lacking or significantly weakened in heritage speakers, this would confirm the L1 findings, lending further support for the fragile nature of ergativity. Both the use of ergative case marking (i.e., morphological) and the transitive suffix *-ina* (i.e., syntactic) were targeted to address these issues.

4.1 PARTICIPANTS. A total of 30 adult heritage speakers of Samoa participated in the study, ranging from 18 to 54. All were residents of Southern California who had either been born outside of Samoa or born in Sāmoa and immigrated to the United States before the age of 7. Each participant was given a survey regarding language background to determine their language history (e.g., place of birth, education), domains of language use (e.g., home, work, church), and self-assessment of language use (e.g., confidence in Samoan and English). In table 2, the results of two of the questions most indicative of language proficiency are presented to provide an overall picture of the participants as a whole. The participants were asked to rate both their confidence in Samoan and English and the rate at which they use each language at home from 1 to 5 (i.e., 1 being the lowest, 5 being the highest).

As reported in table 2, the participants represent the typical heritage speaker, more confident and proficient in the majority language (English), while still proficient, yet noticeably less so, in the heritage language (Samoan). Investigation into the grammar of this group could therefore be a fair indication of Samoan heritage speakers more generally as a whole.

TABLE 2. Language Background Survey.

Category	**Language**	**Rate (Average)**
Confidence:	English —	**5**
	Samoan —	**3.32**
Home:	English —	**4.63**
	Samoan —	**2.67**

4.2 METHOD. Each participant was given two elicitation tasks (based on Tanaka et al. 2014). The first was a picture description task designed to elicit transitive declarative sentences in order to investigate the use of the ergative case marker *e*. The participant was shown a picture and asked, "What is happening here?" They would then produce a declarative sentence describing what was taking place in each picture. We elicited both transitive and intransitive sentences, with the latter serving as a baseline. An example of items designed to elicit both intransitive and transitive items are displayed in table 3.

TABLE 3. Declarative Production Items.

No.	Type	Picture	Target Description	Tokens
1)	Intransitive:		*'Olo'o tamo'e le teine.* PROG run the girl 'The girl is running.'	10
2)	Transitive:		*'Olo'o toso e le teine le tama.* PROG pull ERG the girl the boy 'The girl is pulling the boy.'	18

.

The second task involved the elicitation of relative clauses to investigate the use of the transitive suffix *-ina*. Each participant was shown a set of two pictures side by side. A brief description of each event within the picture was given, after which an arrow appeared over one of the characters. The participant was then prompted with the question, "Who is the arrow pointing to?" The participant would then reply using a relative clause (see Tanaka et al. 2014, Hsu et al. 2009). There were three types of pictures, each designed to elicit a different type of relative clause (i.e., S-RC, O-RC, A-RC). An example of each can be seen in table 4.

TABLE 4. Relative Clause Production Sample Items.

No.	Type	Picture	Target Description	Tokens
1)	S-RC:		*le teine 'olo'o tagi i luma o le fale* the girl PROG cry in front of the house 'the girl that is crying in front of the house'	5
2)	O-RC:		*le teine 'olo'o tūlei e le manukī* the girl PROG push ERG the monkey 'the girl that the monkey is pushing'	10
3)	A-RC		*le tama 'olo'o (ia) opo(ina) le teine* the boy PROG PRN hug.*ina* the girl 'the boy that is hugging the girl'	10

The participants' responses from both tasks were analyzed for ergative features. The results are discussed in the following section.

4.3. RESULTS. The results of the declarative task (fig. 1) reveal that heritage speakers produce the ergative case marker at a rate of just 10%. When compared with the results from native speakers from a similar study (Muāgututi'a, Deen, O'Grady 2016), who were shown to produce the ergative case at 93%, the heritage results show a clear deviation from native-like use.

FIGURE 1. Ergative Case in Declaratives.
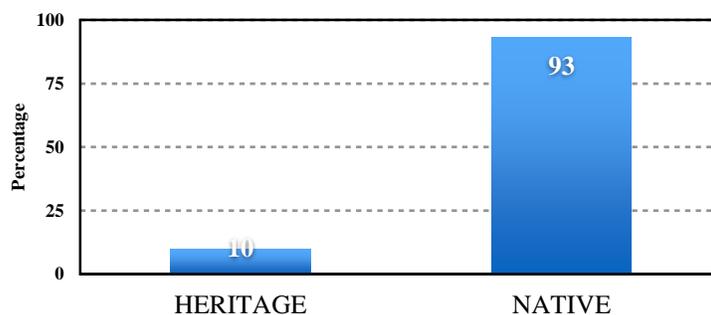
Now let us turn to the results of the relative clause production task. Because participants performed with 100% accuracy on S-RCs, we focus here on the results from the O-RC and A-RC conditions. Figure 2 shows a pattern similar to the declarative production task, as the ergative case was produced only 23% of the time in the O-RC condition—substantially lower than the rate produced by adults who performed at a 100% (Muāgututi'a, Deen, and O'Grady 2016).

FIGURE 2. Ergative Case in O-RCs.
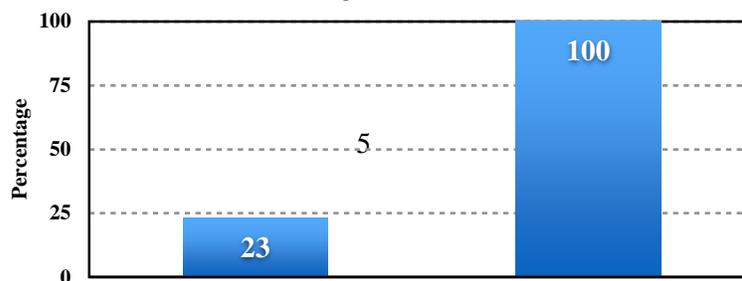
Likewise, in the A-RC condition (fig. 3), *-ina* was only produced 9% of the time, again very low in comparison with the native speaker group, who produced *-ina* at 40%.

FIGURE 3. -Ina in A-RCs.
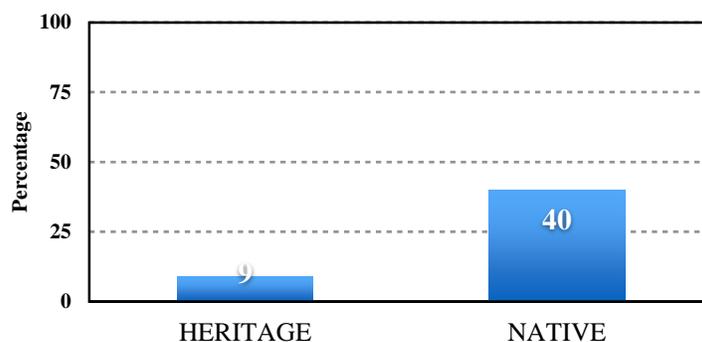
4.4 DISCUSSION. These results show that heritage speakers do not consistently produce morphological (i.e., case) or syntactic (i.e., *-ina*) ergativity. This suggests that ergativity in Samoan is indeed a fragile feature that is significantly weak in heritage speakers either due to incomplete acquisition or language attrition. In either case, while heritage speakers may have been exposed to ergativity in their language input during childhood and may even have acquired some aspects of ergative features, by the time they reach adulthood, these features of the language are conspicuously lacking. Given these results, then, the question remains as to the permanence of the deficiency of these ergative features, that is, whether these features can be recovered, or at the very least, strengthened through a targeted intervention. This issue is the primary focus of the second study.

5. STUDY 2: AN ERGATIVE INTERVENTION. The purpose of this second study was to determine whether the ergative features found lacking in heritage speakers (Study 1) could be restored through careful linguistic intervention. We consider the following two research questions. (1) If heritage speakers lack ergativity in Wh-Qs, can ergativity be restored through intervention? (2) If ergativity can be restored in Wh-Qs, will this advance generalize to RCs (a construction in which there has been no intervention at all)? If this extension does occur, it could signal the restoration a broader alignment pattern, and not simply the properties of a particular construction.

5.1 PARTICIPANTS. 10 adult heritage speakers from the ages of 19 to 40 participated in this study. All were born in the United States, and are currently residents of Oʻahu, Hawaiʻi.

5.2 METHOD. Each participant took part in three main tasks: a pretest, an intervention, and a post-test over two separate sessions. In the first, they were administered a pretest for both relative clauses and wh-questions to establish a baseline of ergativity. The relative clause pretest was the same production task used in Study 1 with 5 tokens each for S, A, and O-RCs. The wh-question pretest was a production task (based on Tanaka et al. 2014), where the participant was presented a picture blocked out by a black rectangle. They were then told by the researcher, "Someone is doing something, ask me who." The participant would then respond with a wh-question. An example of each is given in table 5.

TABLE 5. Wh-Question Production Sample Items.

No.	Type	Picture	Target Description	Tokens
1)	S-WH:		*ʻO ai ʻoloʻo siva?* PRD who PROG dance 'Who is dancing?'	**5**
2)	O-WH:		*ʻO ai ʻoloʻo fusi e le tama?* PRD who PRG hug ERG DET boy 'Who is the boy hugging?'	**5**
3)	A-WH:		*ʻO ai ʻoloʻo tuliina le tama?* PRD who PROG chase.*ina* DET boy 'Who is chasing the boy?'	**5**

Following these two pretests, participants took part in an intervention task that targeted wh-questions only. The intervention featured the same type of wh-production task with strategic modifications to draw their attention to the ergative case and *-ina* suffix. With the goal of maximizing the participants' chances of attaining the relevant ergative features, four techniques were chosen to achieve this: (1) instruction, (2) recasting, (3) prosodic emphasis, and 4) imitation. The participant was shown an example of each item type: S, A, and O. When shown the S-item, they were told that a plain verb is used when referring to a person carrying out an action on their own. When shown the A-item, they were told that *-ina* is used on the verb when referring to a person carrying out an action on someone/thing else. When shown the O-item, they were told that a plain verb without *-ina* is used when referring to a person who is receiving the action, but that under these circumstances the 'preposition' *e* is used to indicate the person that is doing the action. The participants proceeded through the task item by item. If they produced the incorrect form of the question, the researcher would recast the correct form, with prosodic emphasis on the key element, whether *e* or *-ina*. After recasting, the participant was then asked to imitate the researcher's recast with the correct forms. There were 2 S items, and 5 each of A and O items.

Immediately following the intervention, the participants were given an immediate post-test on wh-questions, to see if an increase in ergative features could be observed. The second session took place three days later, when each participant was given a delayed post-test on wh-questions to see if any improvement in the use of ergativity from session one had been maintained. In this session, the participants were also given a relative clause extension test to see if any of the ergative features attained in wh-questions were extended to relative clauses. Recall that the intervention itself contained no relative clauses—only Wh-Qs.

5.3 RESULTS. Presented in figure 4 are the results for wh-question production across all three tasks: the pretest, immediate post-test, and delayed post-test. The results show that in the pretest (fig. 4) the -ina suffix was produced at an initial rate of only 10% in A-WHs. Following the intervention, however, -ina increased to a rate of 82% in the immediate post-test. This increase was sustained in the delayed post-test, three days later, where *-ina* was produced at a rate of 80%.

FIGURE 4. A-WH Production.
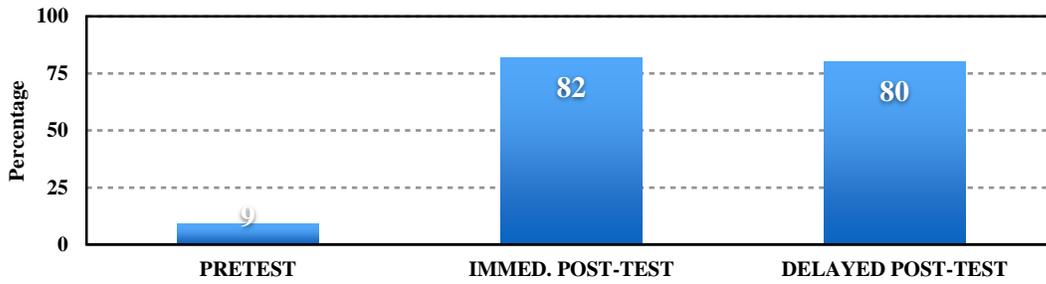
In the production of O-WHs (fig. 5), the ergative case was produced at an initial rate of only 2%.

FIGURE 5. O-WH Production.
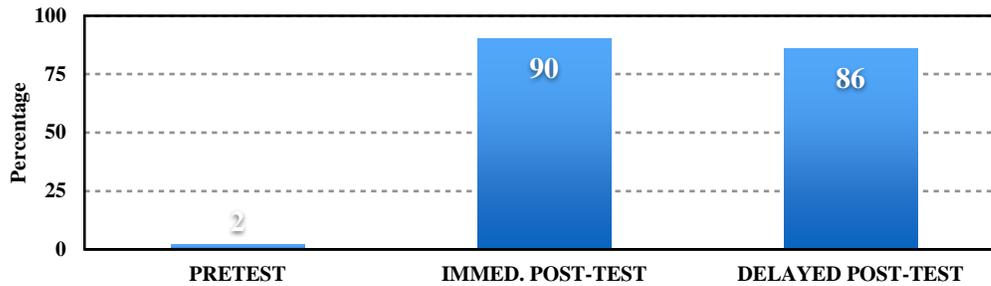
Following the intervention, the immediate post-test showed an increase in the use of ergative case to 90%. This effect was sustained in the delayed post-test, where *-ina* was produced at 86%.

    These results show a significant and sustained effect of the intervention in the production of ergative features in wh-questions, addressing the first research question.

    The next step is to see if these features were extended to relative clauses, even though there had been no intervention targeting relative clauses. Figure 6 below shows that in the RC pretest, *-ina* was produced at an initial rate of just 10% in A-RCs. In the RC extension test, however, the rate of usage increased to

FIGURE 6. A-RC Production.
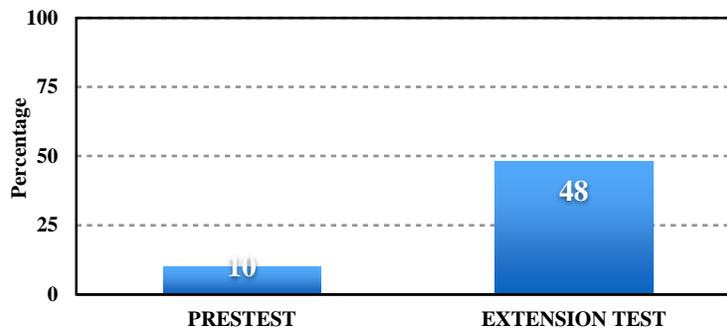
48%.

A similar result obtains in O-RCs (fig. 7), where the ergative case was produced at an initial rate of 2 but rose to 62%.

FIGURE 7. O-RC Production.
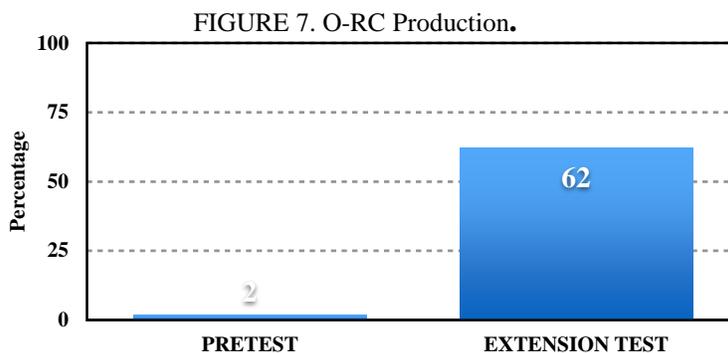
5.4 DISCUSSION. The results from Study 2 show that not only can targeted intervention significantly increase sustained use of ergative features in wh-questions, but the improvement is extended by heritage speakers to relative clauses, although at a lower, yet still significant rate. These findings suggest that although ergativity is a fragile feature of Samoan conspicuously lacking in the grammar of heritage speakers, through carefully targeted intervention, ergativity can be significantly strengthened to the point of restoring a broader alignment pattern, and not just as the property of a single construction.

6. IMPLICATIONS AND FURTHER RESEARCH. The two studies presented here have shown that both morphological and syntactic ergativity are a fragile features of Samoan, as it is acquired late in L1 speakers and conspicuously lacking in the grammar of heritage speakers. It has also been shown that these ergative features can be significantly strengthened and extended through targeted intervention in heritage speakers. While these findings have laid the groundwork for understanding the stability of ergativity in Samoan, three important issues arise that need to be addressed in order to understand the breadth of implications these results render.

The first issue involves the durability of these new-found ergative features. Study 2 had an interval of three days between sessions. While ergativity was indeed shown to be strengthened as an overall pattern of alignment (i.e., relative clauses, wh-questions), it is yet to be seen if this ergative pattern has a short-term effect for no longer than three days, or whether there has been a fundamental change in underlying grammar.

The second issue that arises has to do with whether the improvement reflects the restoration of lost knowledge (due to attrition) or whether it is merely a result of learning facts that had not previously been acquired (because of partial acquisition). This issue speaks directly to the Permanence Hypothesis, which proposes that key linguistic features acquired during critical learning periods persist in spite of changes in input and exposure later in life (Benmamoun, Montrul, and Polinsky 2013). Studies have shown that key phonological features present in heritage speakers can be accounted for by 'permanence' (Bowers et al. 2009, Oh et al. 2010). Is this also the case for ergative morphosyntactic alignment?

Finally, the third issue to be addressed involves the nature of the relationship between morphology and syntax. Typologically speaking, there are many languages with morphological ergativity without syntactic ergativity; however, there are no languages that exhibit syntactic ergativity without a morphological counterpart (Dixon 1979). The task in Study 2 involved only syntactic intervention (i.e., wh-questions). Given this typological universal in ergative directionality, would syntactic intervention result in a higher rate of morphological ergativity as opposed to vice versa? Put another way, can the full spectrum of ergativity (i.e., morphological and syntactic) be induced given only syntactic cues? Typological tendencies have shown to align with observations in L1 acquisition, in that, ergativity, although widespread, is a relatively marked phenomenon in the world's languages (compared to accusativity), and has been shown to be late acquired. Can other typological features be used as predictors

for language acquisition (i.e., L1, L2, and heritage)? This question not only addresses the relationship between morphology and syntax, but also the nature of ergativity in Samoan as well. The findings from the current paper offer a collection of intriguing research directions that would have a considerable impact on the understanding of language development.

7. CONCLUSION. This paper has shown that although ergativity is a fragile feature of Samoan, shown to be significantly lacking in the grammar of heritage speakers, it can be considerably strengthened through carefully targeted intervention. These findings have important implications in the study of language development that give rise to key issues to be addressed in further research, namely the durability of intervention effect, the ability of the permanence hypothesis to account for increased ergativity, and lastly, the effect of intervention in syntactic ergativity on morphological ergativity given typological universals.

The hope is that this further research will be taken up soon, as it will have a lasting impact in Samoan language maintenance efforts around the world. Given that there is great concern that a language shift from Samoan to English is imminent due to the growing influence of English in Sāmoa and in the diaspora (Duranti et al. 1995, Bell et al. 2002, Lesā 2009, Wilson 2010, Alofaituli 2011, Heubner 1986, Freese and Peggy 2000, Lameta 2005), the knowledge attained from this further research, specifically in the recovery of key linguistic features in heritage learners (i.e., ergativity), could aid in maintaining the vibrance of the Samoan language for future generations.

REFERENCES

ALLEN, SHANLEY. 2013. The acquisition of ergativity in Inuktitut. In *The acquisition of ergativity*, ed. by Edith Bavin and Sabine Stoll, 71–106. Philadelphia: John Benjamins Publishing Company.

ALOFAITULI, BRIAN. 2011. Language development curriculum within the Samoan congregational churches in the diaspora. University of Hawai'i at Mānoa MA thesis.

AUSTIN, JENNIFER. 2013. Ergativity in child Basque. In *The acquisition of ergativity*, ed. by Edith Bavin and Sabine Stoll, 35–70. Philadelphia: John Benjamins Publishing Company.

BAVIN, EDITH. 2013. The acquisition of ergative case in Warlpiri. In *The acquisition of ergativity*, ed. by Edith Bavin and Sabine Stoll, 107–32. Philadelphia: John Benjamins Publishing Company.

BELL, ALLAN; KAREN DAVIS; DONNA STARKS; and MELENAITE TAUMOEFOLAU. 2002. Linguists and maintenance: Pasifika languages in Manukau, New Zealand. *Oceanic Linguistics* 40(1):15–27.

BENMAMOUN, ELABBA; SILVINA MONTRUL; and MARIA POLINSKY. 2013. Heritage languages and their speakers: Opportunities and challenges for linguistics. *Theoretical Linguistics* 39(4):129–81.

BOWERS, JEFFERY S.; SVEN L. MATTYS; and SUZANNE H. GAGE. 2009. Preserved implicit knowledge of a forgotten childhood language. *Psychological Science* 20:1064–69.

CHUNG, SANDRA. 1978. *Case marking and grammatical relations in Polynesian.* Austin: University of Texas Press.

COOK, KENNETH. 1978. The mysterious Samoan transitive suffix. *Proceedings of the 4th Annual Meeting of the Berkeley Linguistics Society* 53–66.

DIXON, R. M. W. 1979. Ergativity. *Language* 55(1):59–138.

DURANTI, ALESSADNRO; ELINOR OCHS; and ELIA K. TA'ASĒ. 1995. Change and tradition in literacy instruction in a Samoan American community. *Educational Foundations* 9:57–74.

FREESE, ANNE R., and PEGGY A. HALECK. 2000. A longitudinal study of the patterns of language use in American Samoa: 1973–1978. *Pacific Educational Research Journal* 10(1):57–72.

HSU, NATALIE; G. HERMON; and A. J. ZUKOWSKI. 2009. Young children's production of head-final relative clauses: Elicited production data from Chinese children. *East Asian Linguist* 18:323–60.

HUEBNER, THOM. 1986. Vernacular literacy: English as a language of wider communication and language shift in American Samoa. *Journal of Multilingual and Multicultural Development* 7(5):393–411.

LAMETA, ELAINE. 2005. Language policy: The case of Samoa. *Directions: Journal of Educational Studies* 27(1):43–76.

LESĀ, FA‘AFETAI. 2009. The impact of Samoan Christian churches on Samoan language competency and cultural identity. University of Hawai‘i at Mānoa PhD dissertation.

MONTREAL, SILVINA; RAKESH BHATT; and ARCHNA BHATIA. 2012. Erosion of case and agreement in Hindi heritage speakers. *Linguistic Approaches to Bilingualism* 2(2):141–76.

MOSEL, ULRIKE, and EVEN HOVDHAUGEN. 1992. *Samoan reference grammar*. Oslo: Scandinavian University Press.

NARASIMHAN, BHUVANA. 2013. Ergative case-marking in Hindi child-caregiver speech. In *The acquisition of ergativity*, ed. by Edith Bavin and Sabine Stoll, 209–38. Philadelphia: John Benjamins Publishing Company.

OCHS, ELINOR. 1982. Ergativity and word order in Samoan child language. *Language* 58(3): 646–71.

TANAKA, NOZOMI; WILLIAM O'GRADY; KAMIL DEEN; C. E. KIM; R. HATTORI; IVAN BONDOC; and J. U. SORIANO. 2014. Acquisition of Tagalog relative clauses. *In BUCLD 38: Proceedings of the 38th Annual Boston University Conference on Language Development*, ed. by W. Orman and M. J. Valleau. Somerville, MA: Cascadilla Press.

OH, JANE; TERRY K.-F. AU; and SUNAH JUN. 2010. Early childhood language memory in the speech perception of international adoptees. *Journal of Child Language* 37:1123–32.

RUMSEY, ALAN; LILA SAN ROQUE; and BAMBI SCHIEFELIN. 2013. Ergative case-marking in Hindi child-caregiver speech. In *The acquisition of ergativity*, ed. by Edith Bavin and Sabine Stoll, 133–52. Philadelphia: John Benjamins Publishing Company.

SCHMIDT, ANNETTE. 1985. The fate of ergativity in dying Dyirbal. *Language* 61(2):378–96.

STOLL, SABINE, and BALTHASAR BICKEL. 2013. The acquisition of ergative case in Chintang. In *The acquisition of ergativity*, ed. by Edith Bavin and Sabine Stoll, 183-207. Philadelphia: John Benjamin PublishingCompany.

WILSON, SALAINAOLOA. 2010. Le tofi ne‘i vale tu‘ulima: Perceptions of Samoan students, teachers, and parents on the place of the Samoan language in New Zealand today. Victoria University at Wellington, New Zealand MA thesis.

granttm@hawaii.edu