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Gants is a Sogeram Language

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In this paper I address the question of the genealogical affiliation of Gants, a language of Madang Province, Papua New Guinea, that has been classified several different ways in the literature. I argue that Gants belongs to the Sogeram group of languages, a subgroup of the Madang branch of the Trans New Guinea family. More specifically, I claim that Gants is an East Sogeram language, and I also argue that the closest genealogical relative of Gants is Kursav, another East Sogeram language, but one that is spoken farther from Gants than any of the eight other Sogeram languages.

1. Introduction[1]

The field of Papuan comparative linguistics is young enough, and the size of the task large enough, that it is not yet worth reporting on every language that is reclassified with the discovery of new data. A reclassification must still exceed a threshold of noteworthiness in order to merit such a report. This paper addresses a case that I feel passes the threshold: the issue of the genealogical affiliation of Gants, a language spoken in the Bismarck Range in southwestern Madang Province, near Aiome Station.

Gants is a language that has been subjected to the opinions of many linguists, experiencing what appear to have been quite varied intellectual moods. Part of this is due, no doubt, to the fact that Gants has been known to researchers for quite some time—first contact between Gants speakers and European missionaries may have occurred as early as the 1920's (Kirschbaum 1927), relatively early for the interior of Madang—yet at the same time the language remained largely undocumented. This combination shrouded the language in a hazy fog of uncertainty, some of which I now hope to dispel. The noteworthiness of this report thus stems, partly, from the varied history our subject matter has undergone: we are settling a question that has long vexed linguists. But the reclassification of Gants is also noteworthy because, as it turns out, the language most closely related to Gants is Kursav, and Kursav is not located near at hand, as one might reasonably

[1] I would like to thank Olga Temple and Andy Pawley for helpful feedback on this paper, and I would also like to thank Andy for suggesting the research on Gants in the first place. Any errors are, of course, my own. I gratefully acknowledge research support from a U.S. Department of Education Javits Fellowship, the Living Tongues Institute for Endangered Languages, the UCSB Department of Linguistics, the UC Pacific Rim Research Program, NSF Grant BCS-1264157, ELDP Grant IGS0221, and the Centre of Excellence for the Dynamics of Language.

expect given the usual way the processes of social and linguistic diffusion are found to operate, but rather some 65km to the southeast.

We have, then, two cases to make. First, that Gants is a Sogeram language, and second, that its closest relative within the Sogeram group is Kursav. The argumentation proceeds along expected lines. Genetic affiliation is taken to be shown by shared innovations from a common ancestral stage. To demonstrate that Gants is a Sogeram language, I show that it possesses many of the defining characteristics that distinguish the Sogeram group from its closest genealogical neighbor, the Josephstaal languages spoken to the north. To demonstrate that Gants is more closely related to Kursav than to any other Sogeram language, I show that the two languages share many innovations relative to Proto-Sogeram, as reconstructed by Daniels (2015).

I begin by introducing the reader to Gants and the history of research into it (§2). I then present the evidence that Gants is a Sogeram language (§3) and that its closest relative is Kursav (§4) before concluding in §5.

2. Introduction to Gants

Gants is spoken in the Simbai area of the Schrader Range, on the northern edge of the Bismarck Range of New Guinea. It is bordered to the west by Kalam and to the south by Maring. To the north, in the lowlands by the Ramu River, is the Aren or Aiome language; it appears that Gants had only limited contact with this language before European contact. The area to the east is sparsely populated, and the linguistic affiliation of the few groups that live in this area is unknown (Daniels 2016). This area is shown in the map in Figure 1.

Contact with the Australian colonial administration took place in 1953 (Johnson & Wood 1991:71), although contact with Europeans appears to have predated that by some twenty-five years (Kirschbaum 1927; Wood 1980:24). A number of expeditions into the Simbai area took place during these early years, fueled by speculation about possible racial differences between Simbai highlanders and nearby Middle Ramu lowlanders; the interested reader is referred to Wood (1980:22–28) for a summary and relevant citations. Linguistic mention of Gants in the literature is more limited. Aufenanger (1960:249) described their counting system and gave around twenty words and phrases. A wordlist was collected by SIL a few years later (Scholtz 1965), and Z'graggen "collected only a very brief wordlist from Gantj speakers in Madang" (1971:95). Another short wordlist was collected by Andrew Pawley (pers. comm.) in 1992 from Kalam men who were married to Gants women. The community has also been studied by a pair of anthropologists (Johnson 1981; 1982; 1988; Johnson & Wood 1991; Wood 1980). For the last twenty years, however, I am aware of no research on Gants or its speakers.

The first historical-linguistic classification of Gants took place in 1961, when Stephen Wurm placed it in his East New Guinea Highlands (ENGH) Micro-Phylum, which he had proposed a year prior (Wurm 1960).[2] Gants, with Kalam and Maring, formed a small family that was a high-level branch within the micro-phylum. A few years later it was Kalam and Kobon, not Kalam and Maring, that were grouped with Gants as ENGH outliers (Wurm 1964:80; 1965:390). This classification is essentially maintained in the rest of Wurm's work, although he came to see the

[2] Incidentally, in that original paper, Wurm already described the ENGH Micro-Phylum as consisting of the ENGH Stock plus "five more distantly related languages" (Wurm 1960:126–127). This means that the ENGH Micro-Phylum probably already contained Gants in his 1960 formulation, although Wurm doesn't mention it by name until Wurm (1961).

Kalam-Kobon-Gants group as being more closely related to the rest of the ENGH languages after Pawley observed that Kalam "possesses almost all the features cited as diagnostic of membership in the [ENGH] Stock" (Pawley 1966:168). This integration of the Kalam-Kobon-Gants group into the rest of the ENGH stock caused Wurm to rename some of the nodes in his family tree (1971:551; 1975:470, 486–488; Wurm & Hattori 1981).

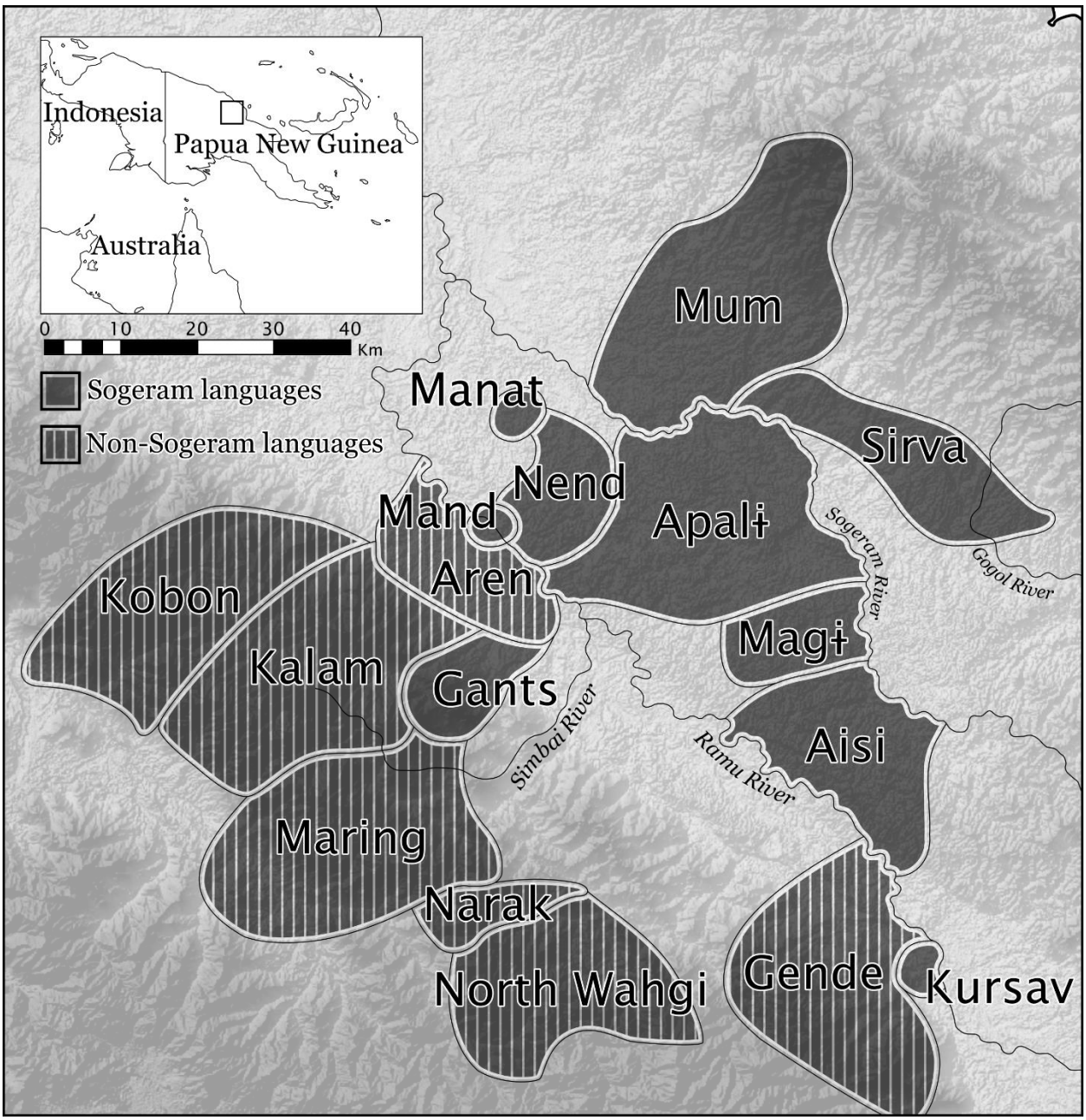

Figure 1. Gants and the surrounding languages

Papuan historical linguistics then languished for a number of years until a team of researchers, also at the Australian National University, began re-evaluating the questions Wurm and his colleagues had been asking. Andrew Pawley, who had conducted extensive fieldwork on Kalam (Pawley 1966; 1987; Pawley & Bulmer 2011), moved the Kalam-Kobon-Gants group to the Madang branch of Trans New Guinea (Pawley 1995:97) and remarked that Gants appeared to be closely related to Apali, a Sogeram language. He maintained this grouping in an unpublished manuscript a few years later (Pawley 1998a), and included Gants in the Madang branch but did not comment more specifically on its lower-level affiliation in another paper (Pawley 1998b:669). The Kalam-Kobon subgroup is then mentioned in a couple of subsequent works (Pawley 2005; Ross 2005), but no mention is made of whether the group contains Gants or not. Finally, in an entry on Madang languages for the *Encyclopedia of Language and Linguistics*, Pawley places Gants in the South Adelbert branch of Madang, which also contains the Sogeram languages (Pawley 2006). He does not offer any evidence in support of this reclassification in the paper, although he has informed me that it was based on the 1992 wordlist he collected and which I mentioned above (Pawley pers. comm.).

While I was working on a dissertation on the Sogeram languages (Daniels 2015), Pawley suggested to me that I ought to conduct some research on Gants as he believed it belonged to that family. My previous work on the family (Daniels 2010) had not included Gants as a member, but fieldwork validated Pawley's suspicions and Gants was included in the family in later work (Daniels 2014:383; 2015:51; 2016:201). The family tree presented in the last of those works is reproduced in Figure 2. The following sections, then, present the evidence to justify the assignment of Gants to Sogeram, and also the evidence that its closest relative within Sogeram is Kursav.

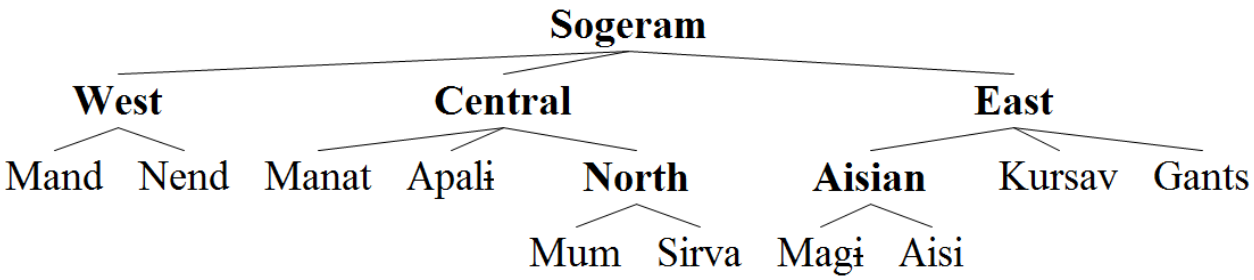

Figure 2. Family tree of the Sogeram languages (taken from Daniels 2016:201)

3. Gants is a Sogeram language

That Gants belongs to the Madang subgroup of Trans New Guinea (TNG) is clearly demonstrated by its pronouns. The Madang subgroup is defined by the replacement of the Proto-TNG first, second, and third person singular pronouns *na, *ga, and *ya with *ya, *na, and *nu (Pawley 1998b:683; Ross 2005:37). Gants clearly reflects this innovation as its singular pronouns *ya* '1SG', *na* '2SG, and *nu* '3SG' have remained unchanged since the Proto-Madang stage.

Because Proto-Madang has not yet been reconstructed in much detail, it is not possible to delineate many innovations that define the Sogeram subgroup. However, three do present themselves. The first is a simple semantic innovation to the widespread TNG etymon *kin(i,u)-

'sleep' (Pawley 2012:113), which came to mean 'stay' in Proto-Sogeram. This form is reflected as Proto-Sogeram *kɨña in its unbound form and *kɨñɨ- in its bound form (Daniels 2015:371). Gants preserves these forms as *ca*, *cɨ*- 'stay', with irregular merging of *k and *ñ to the palatal stop *c*. The Josephstaal language Anamuxra, however, preserves the form as *kn*- 'sleep' (Ingram 2003:161), demonstrating that this innovation took place at the Proto-Sogeram stage. The form is also preserved as *kn*- 'sleep' in Kalam (Pawley & Bulmer 2011:301).

The other two innovations concern the distinction between dual and plural number, a distinction that was present in Proto-Madang but was lost in Proto-Sogeram in both the free pronouns and in verbal subject agreement suffixes. In both cases Proto-Madang plurals were lost while Proto-Madang dual forms became Proto-Sogeram plurals. Both of these innovations are reflected in Gants and are not found in the Josephstaal languages or in Kalam–Kobon.

The free subject pronouns are presented in Table 1. The key thing to observe in this table is that the Gants plural pronouns are cognate with Anamuxra duals. Proto-Sogeram *r became *i* word-finally in Gants (Daniels 2015:114–115) and the pronouns all contain an apparent object suffix *–u* which does not seem to date to Proto-Sogeram. Thus the pronouns appear to have lost the word-final *a which was present in Proto-Sogeram, then undergone *r vocalization, and then appended *u*. All of these changes are plausible and establish fairly clearly that the Gants plural pronouns are cognate with the Anamuxra duals. No such link can be established with the Anamuxra plural forms, which are not retained in Gants.

Table 1. Free subject pronouns[3]

	1SG	2SG	3SG	1DU	2DU	3DU	1PL	2PL	3PL
Proto-Madang	*ya	*na	*nu/*ua	*i-le	*ni-le		*i-nV	*ni-nV	
Kalam	*yad*	*nad*	*nuk*	*ct*	*nt*	*kikmay*	*cn*	*nb*	*kik/kti*
Kobon	*(y)ad*	*ne/nɨ*	*nipe/ne*	*hol*	(3DU)	*kəl/kale*	*hon*	(3DU)	(3DU)
Anamuxra	*yi/ya*	*na*	*nŋ*	*ar*	*nar*	*nr*	*aŋ*	*naŋ*	*nŋ*
Proto-Sogeram	*ya	*na	*nu/*nɨ				*ara	*nara	*nira
Gants	*ya*	*na*	*nu*				*ayu*	*nayu*	*niu*

The most basic set of subject agreement suffixes is shown in Table 2. Again, the key comparison is between Gants and Anamuxra, although here we can only compare first and second person forms. Anamuxra, like many languages of the Madang family, exhibits syncretism in its 2DU and 3DU subject agreement suffixes. This pattern is lost in the Sogeram branch, but it is replaced by something different in each language, so that no 3PL subject agreement suffix (or pattern) can be reconstructed. Nevertheless, we see clear cognacy between the Anamuxra 1DU and 2DU forms, which contain *r*, and the Proto-Sogeram and Gants plurals, which also contain *r*. The Anamuxra plural suffixes contain an unspecified nasal consonant for which no cognate can be found in the Sogeram forms.

[3] Data come from the following sources: Proto-Madang (Ross 2000); Kalam (Etp variety, Pawley & Bulmer 2011:41); Kobon (Davies 1981:154); Anamuxra (Ingram 2001:198); Proto-Sogeram and Gants (Daniels 2015).

Table 2. Subject agreement suffixes[4]

	1SG	2SG	3SG	1DU	2DU	3DU	1PL	2PL	3PL
Proto-Madang	*-in	*-an	*-a	*-uL	*-iL	*-iL	*-un	*ai/-i	*-ai/-i
Kalam	*-in*	*-an*	*-aŋ*	*-ut*	*-it*	*-it*	*-un*	*-m*	*-ay*
Kobon	*-in*	*-an*	*-ɨp*	*-ul*	*-ɨl*	*-ɨl*	*-un*	*-im*	*-al*
Anamuxra	*-n*	*-na*	*-a/-ri*	*-r*	*-ra*	*-ra*	*-N*	*-Na*	*-Na*
Proto-Sogeram	*-in	*-na	*-i				*-riŋ	*-ra	
Gants	*-eniŋ*	*-naŋ*	*-ek*				*-ruŋ*	*-raŋ*	*-ik*

These two changes—the generalization of dual pronouns to plural meaning and the generalization of dual subject agreement suffixes to plural meaning—can certainly be construed as two manifestations of a single change, namely the generalization of dual number to plural meaning and the concomitant loss of old plural forms. Whichever way one chooses to view them, though, it is clear that these innovations are reflected in Gants. They, along with the semantic innovation to the 'sleep' verb, constitute sufficient evidence that Gants belongs to the Sogeram subgroup. However, in the next section I present evidence that Gants has undergone several innovations from Proto-Sogeram in common with Kursav, and this will double as additional evidence that Gants is a Sogeram language.

4. The closest relative to Gants is Kursav

Gants shares several innovations with Kursav, a language which is located some 65km to the southeast. It also shares some innovations with both Kursav and Aisi.

Proto-Sogeram did not have the mid vowels †e or †o, but these were created via two processes that are shared by Gants, Kursav, and Aisi. One innovation is the lowering of Proto-Sogeram *i and *u to *e and *o word-finally; the other is the lowering of *i and *u to *e and *o when the following syllable contained the low vowel *a. Thus word-final *i in *miti 'cough (n)' lowered to *e (Kursav *mite*, Gants *mire*; cf. Apali, Mum *miti*) and word-final *u in *kimu 'die' lowered to *o (Kursav, Gants *kumo*; cf. Manat *himu-*, Mum *kimu-*, Sirva *kumu-*). This change was only sporadically shared by Aisi. For example, *kamu 'fog, cloud' > Aisi *kamo*, Kursav *kamo* 'breath, wind', and Gants *kamo(ren)* reflects the change in Aisi, as does *mini 'later' > Aisi *mine(g)*, Kursav *mine(i)* 'a while', Gants *mine* 'morning'. But examples like *-siki 'maternal grandfather' > Aisi *-siki*, Kursav *-sike* and *su 'feces' > Aisi *su*, Kursav *so* show Aisi failing to participate in the change.

The second environment in which *i and *u were lowered to *e and *o was before *a. This change was also shared with Aisi, and it produced changes such as *kukra 'grow' > Aisi *kokr-*, Kursav *kokra*, Gants *kokra* 'be born'; *kuman 'arm, hand' > Aisi *komaŋ* 'branch', Kursav *-koma*; *kiman 'firstborn male' > Aisi *kemaŋ*, Kursav *keman* 'lastborn'; and *kinakina 'crooked' > Aisi *geŋ(goŋ)*, Gants *kenakena*.

Kursav and Gants underwent these vowel-lowering changes fairly regularly, but it is interesting to note that when they occasionally do not reflect these changes, they do so in tandem. So for

[4] Data come from the following sources: Proto-Madang (Pawley 2005:90); Kalam (Pawley & Bulmer 2011:66); Kobon (Davies 1981:166); Anamuxra (Ingram 2001:210); Proto-Sogeram and Gants (Daniels 2015).

example, the first vowel in *kuram 'man' did not lower to †o in either language: the reflex is *kura* in both (and *kuru* in Aisi). Likewise *mi 'thought' did not become †me, but remained *mi* in Kursav and Gants. (It seems to be reflected as *mɨ* in Aisi *mɨ(ndam)*- 'think'.) Thus, while these forms are actually shared retentions and ordinarily would not be indicative of close relationship, the fact that they constitute a shared exception to a shared innovation does suggest a shared development. This is because, if Kursav and Gants had undergone their *i- and *u-lowering changes separately, we would not expect them to have the same exceptions to the rule. The fact that they do retain the same exceptions suggests that they underwent the *i- and *u-lowering changes together.

Gants and Kursav share other irregular developments. One is the loss of word-initial *i from *iŋkwa 'give': Kursav *-bu-*, Gants *go*. Loss of initial *i was a common development in the North Central Sogeram languages Mum and Sirva, and 'give' is retained in those languages as *gu-* in Mum and *gu-* or *gwa-* in Sirva (Daniels 2015:365). But this does not appear to be a shared development with Kursav and Gants, because it is not shared by the geographically intervening languages, Magɨ and Aisi. The simplest explanation of the Kursav and Gatns reflexes is that this was a single irregular development that took place at a stage when Kursav and Gants had not yet split up into two separate languages. The fact that this change is not reflected in Aisi *igw-* 'give' or other Sogeram languages that retain initial *i further suggests that this change occurred at a time when Kursav and Gants were a single speech community.

Another irregular change shared exclusively by Kursav and Gants is the voicing and prenasalization of the same-subject verb suffix *-ta, which is reflected as *-da* in both Kursav (1) and Gants (2).

Kursav

(1) ***Kopra-da*** ***mo-da*** *suhuv=i* *akun-e* *waka.*
run-SS **go-SS** forest=LOC sleep-3SG.NFUT maybe
'Maybe he ran away and slept in the forest.'

Gants

(2) ***Wa-da*** *ga* ***tama-da*** *bɨr* *cɨ-m-ek.*
say-SS perceive **put-SS** TOP stay-FPST-3SG
'She said that and looked and stayed (there).'

This suffix is retained, with a non-nasal consonant, as *-la* in Apalɨ, *-ta* in Mum, *-ra* in Sirva, and *-tɨ* or *-ta* in Aisi (Daniels 2015:183). Thus no other language shows any evidence for reconstructing a nasal segment, although both Kursav and Gants have one. Thus, once again, the most plausible account is that, at a stage when Kursav and Gants were still one language, they underwent an irregular voicing and nasalizing change to the same-subject suffix *-ta which yielded *-da, as reflected in both languages today.

A final innovation shared by Kursav and Gants is the loss of *ɨ from the different-subject realis suffix *-ɨka (Daniels 2015:185), as shown in (3) and (4).

Kursav

(3) ***Ivo-ku*** *nuaya* *ab-e.*
hit-1SG.DS white speak-3SG.NFUT
'I hit it and the white (man) spoke.'

Gants

(4) *Pakai* ***yo-k-e*** *aba-m-ek.*
again **hit-DS.SEQ-3SG** speak-FPST-3SG
'He hit it again and it made noise.'

This suffix retains its initial *ɨ in Manat, Apalɨ, Magɨ, Aisi (5), and in the Sirva 1SG and third person forms (6).

Aisi

(5) *Ya mandɨ ga-niŋ anɨmɨnɨ* ***kɨn-ɨkiŋ,*** *ika yama*
1SG COMPL MD-LOC small **stay-1SG.DS** father.1.POSS mother.1.POSS
yaka yaŋ ab-er-uŋ.
1SG.POSS 1SG.OBJ talk-HAB-3PL
'Long ago when I was little, my parents used to talk to me.'

Sirva

(6) *Ya itu wi-vana* ***v-ii,*** *nabrɨ be asɨk gwa-s-a.*
1SG tobacco smoke-DESID **say-3SG.DS** wife.3.POSS 3SG fire give-FPST-3SG
'"I want to smoke," he said, and his wife gave him fire.'

The suffix-initial *ɨ is lost in Mand *-c*, which is a reflex of the 3SG form *-ɨk-i. It is also lost in Mum *-ha*, which appears to be an irregular development that is also reflected in the Sirva 1PL and second person forms. Mand does not undergo any innovations in common with either Kursav or Gants, and there is no evidence of contact between Mand and either Kursav or Gants. It is thus fairly clear that the Mand loss of *ɨ from this suffix is an independent development.

Mum, however, does sometimes share innovations with Kursav. But when it does, these innovations are always *also* shared by the languages in between Mum and Kursav: Sirva, Magɨ, and Aisi. These innovations, such as the creation of prenasalized stops (Daniels 2015:98), thus appear to have developed at an early stage in the history of the Sogeram family and spread through a dialect chain that included the ancestors of both the Central Sogeram and East Sogeram languages.

The distribution of this change, however, does not suggest such a history. Suffix-initial *ɨ is lost in Mum, sometimes in Sirva, and never in Magɨ or Aisi. It is therefore more plausibly accounted for as two separate innovations: one that took place in the ancestor of Mum and Sirva, and another that took place in the ancestor of Gants and Kursav.

We thus have evidence for a number of innovations shared by Gants and Kursav apart from the other Sogeram languages. These are summarized in Table 3.

Table 3. Innovations in Kursav and Gants

	Gants	Kursav	Other Sogeram languages
*i, u > *e, o / _#	✓	✓	Sometimes Aisi
*i, u > *e, o / _Ca	✓	✓	Aisi
Exceptions to *i, u > *e, o	✓	✓	
*iŋkwa ‘give’ lost *i	✓	✓	Mum and Sirva
*-ta ‘SS’ > *-da	✓	✓	
*-ɨka ‘DS.R’ lost *ɨ	✓	✓	Mand, Mum, sometimes Sirva

The table shows a couple of related sound changes that lowered high vowels. These were sporadically shared by Aisi. However, there were a few lexical exceptions to the changes that Gants and Kursav underwent that were exclusive to those two languages. Kursav and Gants also lost initial *i irregularly from *iŋkwa ‘give’; initial *i-loss is a more regular change in the North Central Sogeram languages Mum and Sirva, and it does not appear to be related to the development in Gants and Kursav. The voicing and nasalization of the same-subject suffix *-ta, and the loss of the suffix-initial *ɨ from the different-subject realis suffix *-ɨka, are two irregular morphological developments that Gants and Kursav appear to have undergone apart from the other Sogeram languages.

We thus see five innovations, plus a pattern of exceptions to two of the innovations, which suggest that Kursav and Gants developed together for a time and thus are closely related to each other.

I should note that while this evidence strongly suggests that the closest relative to Gants is Kursav, this observation does not entail the reverse: that the closest relative to Kursav is Gants. This is because the pattern of innovations observed in the Sogeram languages suggests that they descended from a dialect chain, as diagrammed in Figure 3 (Daniels 2015:50).

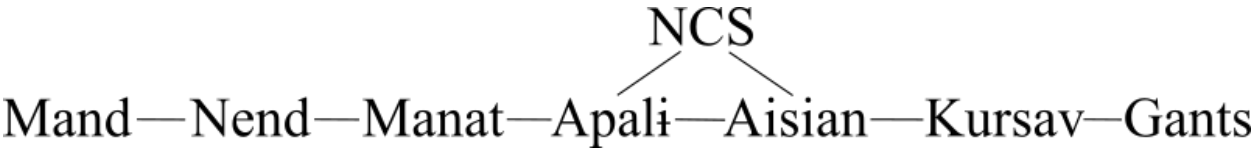

Figure 3. Sogeram contact chain

Since Gants is at one end of the chain, it only has one neighbor: Kursav. However, although Kursav shares some innovations with Gants, it also shares innovations with the Aisian languages, Magɨ and Aisi. For example, Kursav and the Aisian languages appear to share the innovation of a 3PL agreement suffix, reflected in Magɨ *-uŋ*, Aisi *-uŋ/-oŋ*, and Kursav *-o*. All three languages also lost the palatal nasal *ñ, merging it with *n. Thus while we can say that the closest relative to Gants is Kursav, we do not necessarily want to place those two languages in their own subgroup, since Kursav underwent other innovations with the Aisian languages.

The pattern of innovations in the Sogeram languages is complicated and requires further study. But as I note in Daniels (2015), the contact chain in Figure 3 is not a contradiction of the family tree in Figure 2. Although there are innovations shared by every pair of linked nodes in Figure 3,

not every link in the chain is equally strong, and it is possible to carve the chain up into the tree shown in Figure 2. This is how we can place Gants, Kursav, and the Aisian languages in their own subgroup, while at the same time observing that (i) Gants shares innovations exclusively with Kursav, and (ii) Kursav shares innovations exclusively with the Aisian languages.

5. Conclusion

In this paper I have presented evidence that Gants (i) is a Sogeram language, and (ii) is more closely related to Kursav than to the other Sogeram languages. I should note that the label 'East Sogeram' was first proposed before Gants was confirmed as a Sogeram language (Daniels 2010) and before linguists recognized the existence of Magɨ (Daniels 2016). Thus the East Sogeram branch originally consisted only of Aisi and Kursav, and 'East Sogeram' was an appropriate name. The addition of Gants, the westernmost Sogeram language, to the subgroup renders the name geographically awkward, but I believe renaming the node again would only confuse matters more.

The point that Gants is more closely related to Kursav than to any other language serves to clear up a fairly muddled literature about the genealogical affiliation of Gants. But it also serves to highlight the rather remarkable geographical fact that Gants's closest linguistic relative is spoken 65km away—farther away than any other Sogeram language. The obvious question is how this came to be, but unfortunately I cannot attempt an answer here. It is worth noting that the Ramu River runs right along the area between Gants and Kursav, and must have played some role in the population movements that led to today's linguistic distribution. Another issue to point out, as I have mentioned elsewhere (Daniels 2016:219), is that much of the area along the Ramu between Gants and Kursav remains unsurveyed. While it is somewhat sparsely populated, it nevertheless seems likely that if we knew more about what people spoke there, we might uncover some clues about how Gants came to be located so far from its closest linguistic relative.

References

Aufenanger, Heinrich. 1960. The Ayom Pygmies' Myth of Origin and Their Method of Counting. *Anthropos* 55(1/2). 247–249. doi:10.2307/40453728.

Daniels, Don. 2010. A preliminary phonological history of the Sogeram languages of Papua New Guinea. *Oceanic Linguistics* 49(1). 163–193.

Daniels, Don. 2014. Complex coordination in diachrony: Two Sogeram case studies. *Diachronica* 31(3). 379–406.

Daniels, Don. 2015. A Reconstruction of Proto-Sogeram: Phonology, Lexicon, and Morphosyntax. University of California, Santa Barbara Ph.D. dissertation.

Daniels, Don. 2016. Magɨ: An undocumented language of Papua New Guinea. *Oceanic Linguistics* 55(1). 199–224.

Davies, John. 1981. *Kobon*. Amsterdam: North Holland Publishing Company.

Ingram, Andrew. 2001. Anamuxra: A Language of Madang Province, Papua New Guinea. University of Sydney Ph.D. dissertation.

Ingram, Andrew. 2003. The morphosyntax of classifiers in Anamuxra: Details of a multiple classifier system. *Anthropological Linguistics* 45(2). 129–168.

Johnson, Patricia L. 1981. When dying is better than living: Female suicide among the Gainj of Papua New Guinea. *Ethnology* 20. 325–334.

Johnson, Patricia L. 1982. Gainj Kinship and Social Organization. University of Michigan Ph.D. dissertation.

Johnson, Patricia L. 1988. Women and Development: A highland New Guinea example. *Human Ecology* 16. 105–122.

Johnson, Patricia L. & James W. Wood. 1991. Gainj. In Terence E. Hays (ed.), *Oceania*, 71–73. (Encyclopedia of World Cultures II). Boston: G. K. Hall.

Kirschbaum, Fr. 1927. Ein neuentdeckter Zwergstamm auf Neu-Guinea. *Anthropos* 22(1/2). 202–215.

Pawley, Andrew. 1966. The Structure of Karam: A Grammar of a New Guinea Highlands Language. University of Auckland Ph.D. dissertation.

Pawley, Andrew. 1987. Encoding events in Kalam and English: Different logics for reporting experience. In Russell S. Tomlin (ed.), *Coherence and Grounding in Discourse: Outcome of a Symposium, Eugene, Oregon, June 1984*, 329–360. (Typological Studies in Language 11). Amsterdam: John Benjamins. (4 July, 2013).

Pawley, Andrew. 1995. C. L. Voorhoeve and the Trans New Guinea Phylum hypothesis. In Connie Baak, Mary Bakker & Dick van der Meij (eds.), *Tales from a Concave World: Liber Amicorum Bert Voorhoeve*, 83–123. Leiden: Leiden University.

Pawley, Andrew. 1998a. A neogrammarian in New Guinea: Searching for sound correspondences in the Middle Ramu. Unpublished ms, Australian National University.

Pawley, Andrew. 1998b. The Trans New Guinea Phylum hypothesis: A reassessment. In Jelle Miedema, Cecilia Odé & Rien A. C. Dam (eds.), *Perspectives on the Bird's Head of Irian Jaya, Indonesia: Proceedings of the Conference, Leiden, 13–17 October 1997*, 655–690. Amsterdam: Rodopi.

Pawley, Andrew. 2005. The chequered career of the Trans New Guinea hypothesis: Recent research and its implications. In Andrew Pawley, Robert Attenborough, Jack Golson & Robin Hide (eds.), *Papuan Pasts: Cultural, Linguistic and Biological Histories of Papuan-speaking Peoples*, 67–107. Canberra: Pacific Linguistics.

Pawley, Andrew. 2006. Madang languages. In Keith Brown (ed.), *Encyclopedia of Language and Linguistics*, vol. 7, 429–432. 2nd ed. Boston: Elsevier.

Pawley, Andrew. 2012. How reconstructible is Proto Trans New Guinea? Problems, progress, prospects. In Harald Hammarström & Wilco van den Heuvel (eds.), *History, Contact and Classification of Papuan Languages (Special issue of Language and Linguistics in Melanesia)*, 88–164.

Pawley, Andrew & Ralph Bulmer. 2011. *A Dictionary of Kalam with Ethnographic Notes*. Canberra: Pacific Linguistics.

Ross, Malcolm. 2000. A preliminary subgrouping of the Madang languages based on pronouns. Unpublished ms, Australian National University.

Ross, Malcolm. 2005. Pronouns as a preliminary diagnostic for grouping Papuan languages. In Andrew Pawley, Robert Attenborough, Jack Golson & Robin Hide (eds.), *Papuan Pasts: Cultural, Linguistic and Biological Histories of Papuan-speaking Peoples*, 15–65. Canberra: Pacific Linguistics.

Scholtz, Lyle. 1965. Survey word list (standard). Unpublished ms, SIL International.

Wood, James W. 1980. Mechanisms of demographic equilibrium in a small human population, the Gainj of Papua New Guinea. University of Michigan Ph.D. dissertation.

Wurm, Stephen A. 1960. The changing linguistic picture of New Guinea. *Oceania* 31(2). 121–136.

Wurm, Stephen A. 1961. New Guinea languages. *Current Anthropology* 2(2). 114–116.

Wurm, Stephen A. 1964. Australian New Guinea Highlands languages and the distribution of their typological features. *American Anthropologist* 66(4). 77–97.

Wurm, Stephen A. 1965. Recent comparative and typological studies in Papuan languages in Australian New Guinea. *Lingua* 15. 373–399.

Wurm, Stephen A. 1971. The Papuan linguistic situation. In Thomas A. Sebeok (ed.), *Current Trends in Linguistics*, vol. 8: Linguistics in Oceania, 541–657. The Hague: Mouton.

Wurm, Stephen A. 1975. Eastern Central Trans-New Guinea Phylum languages. In Stephen A. Wurm (ed.), *Papuan Languages and the New Guinea Linguistic Scene*, 461–526. (Pacific Linguistics C 38). Canberra: Pacific Linguistics.

Wurm, Stephen A. & Shirô Hattori. 1981. *Language Atlas of the Pacific Area*. Canberra: Australian Academy of the Humanities.

Z'graggen, John A. 1971. *Classificatory and Typological Studies in Languages of the Madang District*. (Pacific Linguistics C 19). Canberra: Pacific Linguistics.