Residential Burial Re-use in Coastal Ilocos Sur, Philippines

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Abstract

A pervasive practice that we see in house societies is residential burial as a means by which house societies are able to supplant themselves into a landscape. Residential burials are dug directly underneath stilt houses. It is argued in this paper that the very same practice is seen in Sapilang site (CE 1200 to CE 1600, CE 1800- CE 1900), Ilocos Sur, Philippines. Residential burial re-use is a historically established practice among the Tingguians and their ancestors (i.e. Cole 1922; Gironière 1854). Archaeological markers of this practice also appear in Sapilang site (i.e. Lara 2011; E. Lim 2012; Lim and Basilia 2012) and other parts of Ilocos like Galimuyod (Ingel 2015) and Nagsingcaoan (Canilao 2011). Is there a method by which we can independently validate the burial practice? To answer this question the paper will explore how chi square statistical procedure and its corresponding Cramér's V values can provide quantitative confirmation. Supporting evidence will come in the form of a strong association between arbitrary stratigraphic level and tradeware specimen count, earthenware specimen count, and more importantly fragmented human remains counts in four trenches in the Sapilang archaeological site. The paper will also use correlation statistical analysis to see the nature of the relationship of the three archaeological materials with one another as well as with site stratigraphic levels. The four excavation trenches selected for this paper are Waig 5, Kapasanglayan 1 and Kapasanglayan 2, all of which have a varying presence of human remains in association with cuts

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indicative of burial re-use; and, Waig 3 which is used as control-- non burial trench.

Introduction

There is growing emphasis towards tapping heterarchical or bottom-up approaches in understanding processes that propel social complexity in Southeast Asia, which is a complete departure from earlier hierarchical models or top- bottom approaches. In Thailand, heterarchical modes can be seen in the analysis of Metal Age (2000 BCE- CE 500) sites (see White and Eyre 2011) and has provided some archaeological markers used in identifying heterarchical societies. Heterarchical societies are apparently signaled by house societies. In the Philippines, Baretto-Tesoro has successfully laid out a procedure to discerning archaeological markers of agency Vis a Vis identity and status competition based on burial goods (see Barretto-Tesoro 2008).

This paper explores the nature of social organisation of polities in Pre-contact to Contact period coastal Ilocos Sur, Luzon, Philippines. Often hinged upon a dichotomy between processual and post-processual approaches in archaeology is the tension between structure and agency. Also related to this dichotomy is the tension between hierarchy and heterarchy. The former presents culture as organised and rigid moving from simple to complex, whereas the latter presents culture as adaptive, resilient, and negotiable. Heterarchy basically argues that leadership positions in polities (i.e. chiefdoms) are quite volatile and actively negotiated. Chiefs cling on to very fragile positions that can be snatched from them by more "innovative" individuals or families. Thus, in terms of archaeological correlates we see practices that invoke house societies or ancestry as a way to establish oneself in the landscape-- often in the center of villages. In the case of the data from Thailand we see this as residential burials (White and Eyre 2011).

These burials become centers for ritual practices that consolidate these societies under the leadership of a chief. In the case of the Philippines, Barretto-Tesoro (2008) demonstrates how burials invoke the spirit world as an important organising principle for societies. Ancestors of the chiefs watch over communities and responsible for protecting or inflicting pain upon submissive or rebellious members of the society. Thus, these ancestors must remain gratified by virtue of keeping the status quo of power.

This article will present data from coastal Ilocos Sur as viewed using heterarchical perspective. The paper will show how the polity that occupied Sapilang site has become obsessed with supplanting themselves over the landscape through the practice of residential burial.

Archaeological Data from Sapilang and Nearby Areas

There are several trenches is Sapilang site (National Museum [NM] code I-2011-H1) (Figures 1-2) that seem to exhibit Residential burial re-use. The most telling example would be Nabatbati trench which was excavated in 2011.

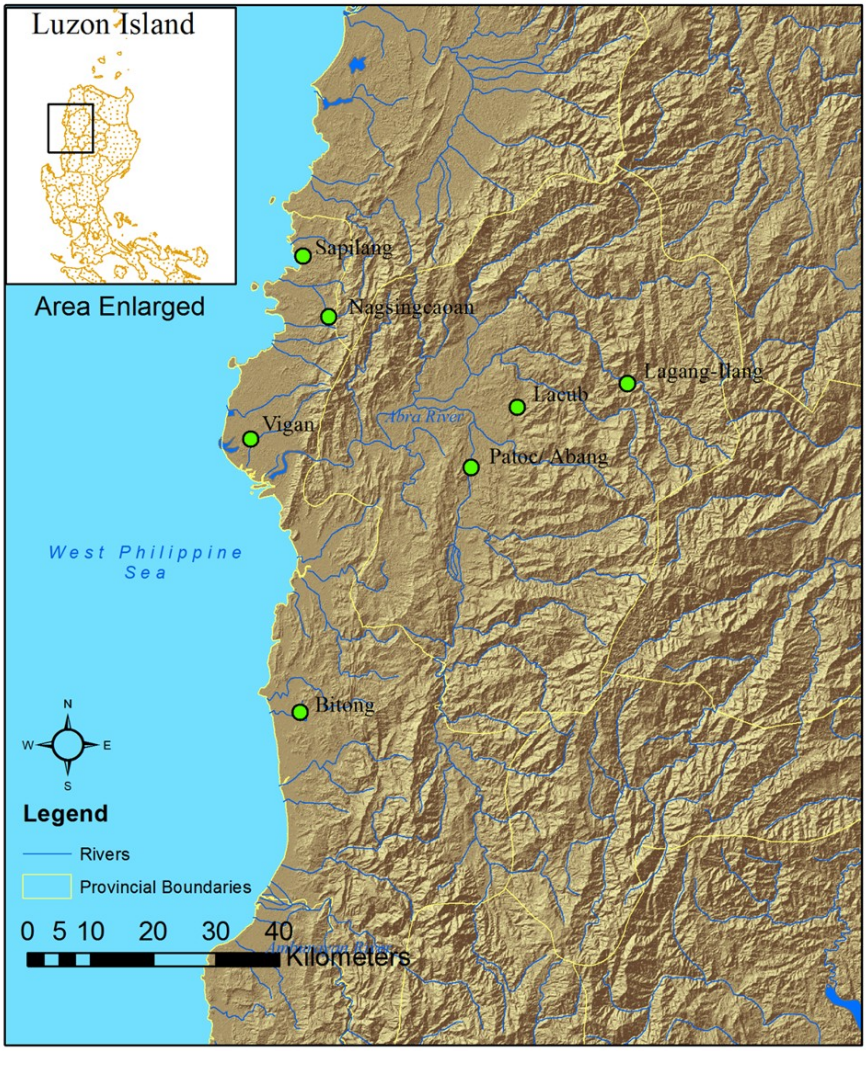

Figure 1: Location Map of archaeological sites in Ilocos Sur and Abra. Based on ASTER digital elevation model. ASTER GDEM is a product of METI and NASA.

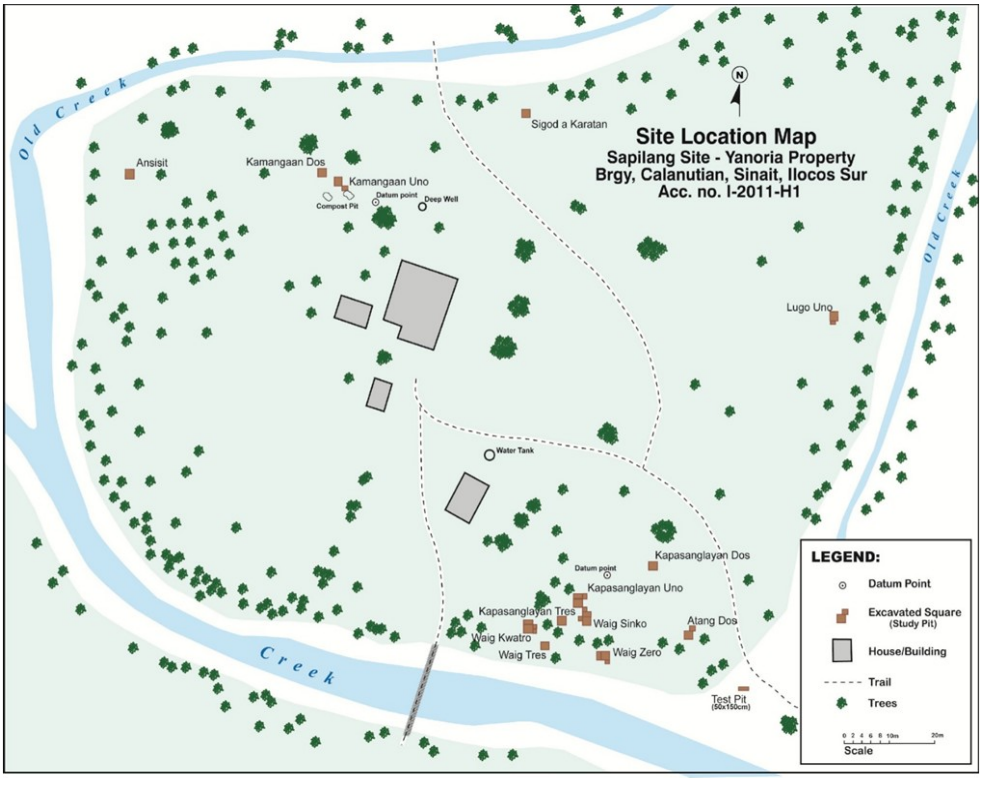

Figure 2: Map of Sapilang Site with NM Site code I-2011-H1 (Illustrated by Eduardo Bersamira 2012).

Lara (2011: Appendix A) was able to investigate an earlier burial cut that was disturbed by a later burial episode…

> The following sequence of events is thus proposed: digging of a pit (Context 419) from Layer 4, placing of the human remains and fill within the pit (Context 422); placing of the stones on top of the fill (Context 423); deposition of Layer 3 (Context 402); digging of the second pit (Context 406) from Layer 3 which also disturbed the human remains at the bottom (Context 407); redeposition of fill (Context 408), and; finally deposition of Layer 2 then Layer 1. The digging of the second pit brought some of the skeletal elements at higher levels (Context 414). The stones were probably placed on top of the fill to mark or cover the grave (Appendix A).

Lara illustrated the cross cutting relations through a plan view photograph of the trench (Figure 3).

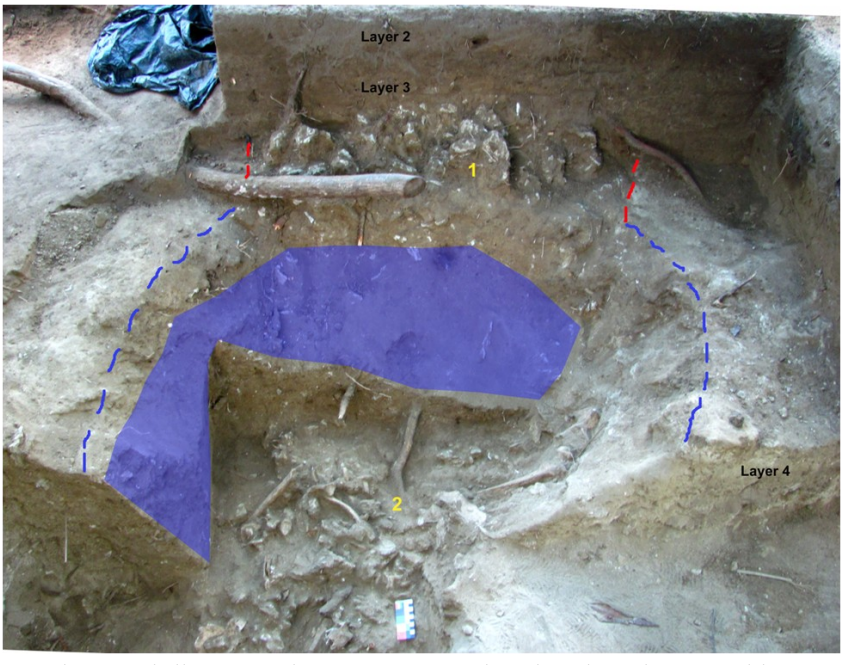

Figure 3: Photo and illustration by Myra Lara with red outline showing older grave cut, blue outline showing later grave cut; number 1 showing stones piled atop original burial pit [living floor?], number 2 indicating original burial (2012: 157).

A year later, analyses of two new adjacent trenches Waig 5 and Kapasanglayan 1 also seem to indicate residential burial re-use. Lim and Basilia (2012: 38) describe the cross cutting relations and the fills found in Waig 5 trench:

> Perhaps similar to the Nabatbati trench during the 2011 excavation of the Sapilang site, the CBD [cemented beach deposits] was deliberately shattered to create a burial pit. What is curious of this burial in Waig 5 is the fact that another pit was dug years (presumably) in the same area where the primary burial was. Despite the fragmented condition of the human bones found in the second, smaller pit (context 119), it is probable to assume that these bones don't belong with the more articulated primary burial…This practice of burying another person in an already used burial is not uncommon in the Philippines. Presumably, the remains were related to one another (36).

As for Kapasanglayan 1, a total of 52 human bone fragments were recovered including one human incisor. Kapasanglayan 3 was similar to

Kapasanglayan 1. Other sites in Ilocos Sur also show evidence of residential burial. In 2011, members of the Ilocos Sur Archaeological Project team conducted ethnographic and archaeological survey at Barangay Nagsingcaoan, Cabugao and was led by Barangay Captain Phillip Bringas to a contemporary stilt house with a residential burial underneath (Canilao 2011: Appendix F). Residential burial was also investigated at Barangay Bitong, Galimuyod by Maria Ingel (2015: 1-6). The oral history she gathered is quite illuminating…

> Eighty-year-old resident Eusebio Diaken Balao-as, who was born in Bitong in 1935, explained that the burial discovered under the school grounds is one among the several that had been found around the community over the years. Some residents have discovered similar remains when they dug up for the foundation of their houses – whether these houses were completely new, or built to replace or improve their existing houses. These residents were not however previously aware of the presence of these burials on their lots, thus indicating that the identities of the buried individuals were not known, and their kinship with the present population could not be exactly established. (Ingel 2015: 4).

Historical and Ethnographic Background

Sapilang appears to be a coastal maritime trading centre, which was home to the common ancestors of Ilocanos and Tingguian/ Itnegs or the proto-TI. There is a strong cultural and linguistic relationship between the two with the former being acculturated into Spanish colonial culture with cursory retention of some of the indigenous customs while the latter retaining more of the indigenous culture by virtue of remaining somewhat independent from Spanish colonial rule (see Azurin 1991; Keesing 1962).

It is argued that Sapilang site saw active use from the 12th to the 16th centuries AD, having established maritime trading ties with China, mainland Southeast Asia, and Indo-Malaysia based on the analyses of artefacts recovered from two excavation seasons (see Canilao ed. 2011, 2012).

Immediately after the conquest of coastal northwestern Luzon by Capitan Juan de Salcedo and his soldiers in the late 1570s there seems to be a mass migration into the interiors away from the coastal areas which was actively being subdued (see Keesing 1962; Newson 2009). Artefacts from Sapilang show a striking similarity to those of the Tingguian/Itneg indigenous group who today have relocated to the northwesterly Cordillera hills and Abra valley west of the Ilocos coastline (Canilao 2015).

The preliminary analysis of cross-cutting relations within four main trenches in Sapilang site indicates that there is a practice of residential burial. Burying under the house is a historically documented Tingguian/ Itneg practice (see Gironière 1854). As for the manner of burial and body treatment an excerpt from Gironière would cast some light…

> […] the idea struck me to go down to the ground floor of the cabin… I placed my light before me, and espied a corner, where sat the dried black corpse of a Ting[g]uian in the same state as a mummy… I felt satisfied that this well was a tomb, and that lower down I should see more Ting[g]uians in a state of preservation (Gironière 1854: 115-116)

Fay-Cooper Cole (1922) also observed the residential burial with re-use among the Tingguians. He explains…

> Burial in most of the valley towns is beneath the house, "as it is much easier to defend the body against evil spirits, and the grave is also protected against the rain." In Manabo and many mountain villages, however, burial is in the yard. It is customary to open a grave already occupied by several of the relatives of the deceased (Cole 1922: 287).

In the same account Cole provides a description on the body treatment, corresponding beliefs, even cross sections of the known grave cuts of the Tingguian (Cole 1922: 287-294) (Figure 4). It should be noted at this juncture that residential burial is common across the Philippines from Luzon to Mindanao.

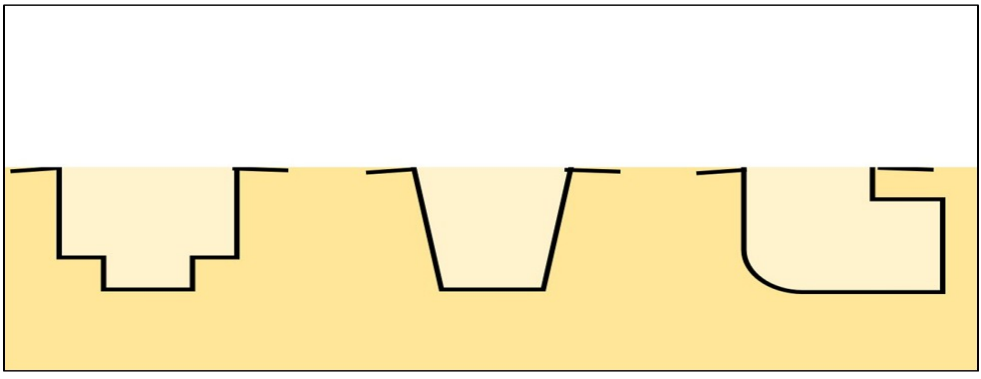

Figure 4: Patterns of residential burial cuts according to Fay-Cooper Cole (1922: 287) (redrawn by author 2015).

The burial areas in Sapilang site also appear to be located directly underneath stilt reed and bamboo houses. Nabatbati and Atang Uno trenches both feature postholes that perforate into a consolidated/ cemented beach deposit lens. Nabatbati, Waig Singko and Kapasanglayan Uno also feature newer burial features (cut and fill) within earlier burial features (see Lara 2012; Lim and Basilia 2012). Interestingly, apart from the archaeological evidence of residential burial and re-use we also learn from the Gironière account about continuity of this practice among the early 19th c Tingguian/Itneg in the settlement of Lagang-ilang, Abra (Figure 1).

Gironière was a French traveler beholding savage customs who wanted to publish his memoirs, thus, a close reading of his account will reveal textual techniques that allude to ethnographic magic-- tapping on suspense, thrill and most of all the emphasis placed on wild, savage behaviour (of the "other"). So the account must not be taken verbatim. The basic element that can be extracted, however, is that there was indeed a practice of residential burial re-use among the Tingguian/ Itneg. As for the question of why burials did not cross-cut one another by then it can be argued that at this point mummification techniques are already available which negates the function of burial fills to facilitate decomposition of burials. In another work I have argued that mummification was a phenomenon that started in the 18th century based on wealth accumulation of the high status Kadangyan Ibaloi of Kabayan (see analysis in Canilao 2011: 40). Interestingly anthropologist Fay-Cooper Cole who conducted ethnographic work in 1908 Patoc, Abra was able to collect a bamboo death chair similar to those used by Cordillerans who practice mummification. This object is now in the Field Museum in Chicago (Catalogue 109104). Cole also took a picture of the corpse of

Malakay who appears to be in early stages of mummification (Patoc, Abra). This photographic plate is in the photo- archives of the Field Museum (CSA29013). As shown above burial re-use appears to be archaeologically and historically documented in the area. It would be interesting to explore if it is possible to get quantitative confirmation using statistical procedure. It should be emphasised that the argument in this paper does not rely on the statistical data alone but is built on a foundation of historical ethnographic sources and archaeological excavation analysis.

Statistical Confirmation

For the statistical evaluation, the variables selected for this paper are site natural and arbitrary stratigraphic levels[1] , and specimen counts of tradeware sherds, earthenware sherds, and fragmented human remains. Apart from mainland Asian tradeware sherds, there were also trade beads, ivory, and carnelian artefacts excavated from the site. These artefacts can be examined further in a second order examination. Stratigraphic layers were selected because of its ability to provide a relative chronology of site occupation of the area based on the law of superposition. Tradeware sherd count was selected because these are exotic ceramics, majority of which were identified as 14th to 16th century Chinese and Vietnamese ceramics and also central to a prestige goods economy (see Junker 1999 and 2004).

There should be a noticeable increase of these "bankable stores of wealth" (see Junker 1999 and 2004) over time as this site becomes even more articulated into the Indian Ocean- South China Sea maritime trading network that included East and Southeast Asia. It is important to point out that this increase would be a direct result of emergent social complexity more than bare population increase. Volume of earthenware by virtue of sherd counts was selected because this clay is still locally available, presently dubbed the damili[2] tradition by the Ilocanos.

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[1] Upon removal of top soil, Waig Tres and Kapasanglayan Uno begins with mid-yellowish brown (Layer 2). Waig Singko and Kapasanglayan Dos begins with light greyish brown (Layer 1). Arbitrary level typically measured in 10 or 15 cm spit.

[2] This is the local earthenware pottery tradition of Ilocos region including La Union and adjacent interiors. In contemporary times, this type of pottery is more visible in the City of Vigan. The ISAP team conducted ethnographic field visits of traditional damili pottery making in 2011 and 2012.

If the earthenware pottery tradition is locally available and mainly used for utilitarian purposes between the 12th to the 16th c then we should see its regular occurrence in the stratigraphic levels, with any increase attributable to an increase in population over long periods of time as contrasted to wealth (status goods) accumulation. The principle being that more households would have increased consumption of these utilitarian vessels. It is also important to note at this juncture that the pottery tradition was encountered by Fay-Cooper Cole among the Tingguians of Abang and Lakub (1922: 427-428).

Again it should be stated that for the statistical analysis to proceed the trenches that will be selected from the ISAP excavations would need to have a presence of human remains with indicators for burial re-use. The three trenches that qualify are Waig 5, Kapasanglayan 1 and Kapasanglayan 2. Waig 3 was selected as control-- a non-burial trench.

Human remain fragments are also considered in this paper because the occurrence of disjointed, disarticulated (fragments of) human remains within higher stratigraphic levels in certain trenches like Waig 5 and Kapasanglayan 1 invite deeper investigation. The hypothesis is that there may be possible re-use of burial trenches, where newer graves are dug within already existing graves. The data on the tradeware sherd, earthenware sherd, and human remain fragment counts were taken from the National Museum Specimen Inventory spread sheet of 2012 season[3]. The recorded depth provenience and in some cases context numbers were matched to the excavation trench reports also for the 2012 season (Lim and Basilia 2012; Basilia *et al.* 2012; K. Lim 2012; Pineda 2012).

These reports include vertical profiles that allow us to plot specimen stratum provenience. It should be noted that the data available to the author at the writing of this paper only includes specimen counts. Actual size measurements and weight per specimen would be an even accurate unit of analysis and can be gathered in future analyses. At the moment, the specimen counts would suffice since we are trying to see if there is a statistically significant patterning that deviates from what would otherwise be seen in the case of random sorting(i.e., in the case of site deposition, natural taphonomic processes).

3 prepared and encoded by ISAP team member Maria Rebecca Ferreras

It should be stated that the Waig Singko was a 6 meter square trench while Kapasanglayan Uno was a 7 meter square trench. They began as 4 meter square trenches but extended when the burial re-use layers were encountered. Thus, in the areas not cut by the burial re-use there appears to be in situ context of the layers.

Statistical Procedures

The Chi Square statistical tool was used in this paper because it allows us to observe if there is a departure from the expectation of random sorting or if there is a possibility that data patterning is not due to chance. In this paper, I want to test if the distribution of tradeware sherds, earthenware sherds, and human remain fragments across the trench strata is due to random sorting or human behaviour such as habitation and burial of the dead.

The null hypothesis that will be tested then is if there is a high chance that the observed distribution of materials across stratigraphic levels is due to random sorting (natural taphonomic processes). The test will be conservatively pegged at the 0.05 level of statistical significance, or 95% probability that the pattern is not due to chance.

The correlation statistical tool was another tool selected because of its ability to measure the relative strength of relationships between the three materials and the stratigraphic levels. We can see if there is a statistically significant relationship between tradeware volume and stratigraphic levels, or earthenware volume and stratigraphic levels, and human remain fragments and stratigraphic levels.

We can also see if there is a statistically significant relationship between tradeware sherds and earthenware sherds, tradeware sherds and human remain fragments, and earthenware sherds and human remain fragments. The null hypothesis that will be tested is, if the population correlation for the preceding pairs of variables is equivalent to 0.0 or that our observed correlation coefficient (r) value is due to random error. The test will be conservatively pegged at the 0.05 level of statistical significance, or 95% probability that the correlation coefficient is not due to random error.

Analysis

The specimen inventory data spreadsheet was re-coded for Statistical Package for the Social Sciences (SPSS) analysis and a series of descriptive statistics were under taken. What can be noted off-hand is that trenches, which contain some burial cuts and fills with fragments of human remains, Waig Singko, Kapasanglayan Uno, and Kapasanglayan Dos appear to show some occurrence of tradeware sherds within lower arbitrary levels (Levels 3 and 4).

This is not the case with Waig Tres, which has no human remain fragments and has the occurrence of tradeware sherds at its highest stratum (Level 2). Perhaps this is due to an undisturbed stratigraphic profile in Waig Tres. Overall, the box and whiskers plot clearly show that tradeware sherds are more prevalent in higher stratigraphic levels (Figure 5).

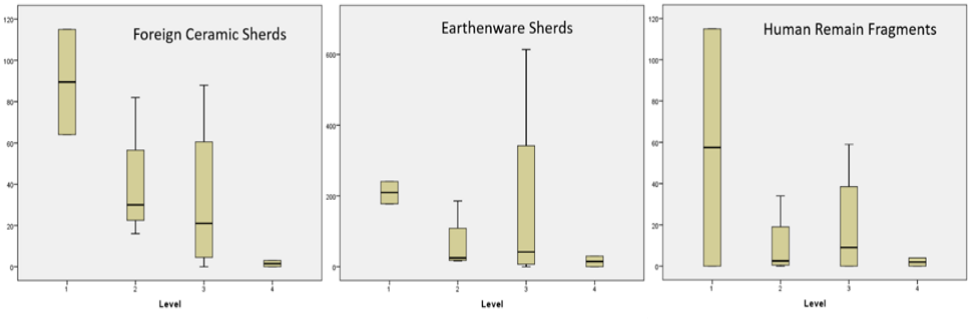

Figure 5: Box and whisker plots of the materials per level note the prevalence of foreign ceramic sherds in higher stratigraphic levels. Earthenware also refers to sherds and not whole pieces.

The SPSS coded specimen inventory data was analysed using chi square and correlation statistical analysis. The resulting chi square value for all four trenches allow us to reject the null hypothesis not only at the conservative 0.05 level (95%) but even at the 0.001 level (Figure 6). We can confidently argue that there is at least 99% probability that the observed distribution of the materials across stratigraphic levels is not due to random sorting or again natural taphonomic processes. The distribution appears to be affected by some cultural behaviour and it is possible that this may be associated to habitation and burial practices. In each individual trench we also reject the null hypotheses with the following levels of significance: Kapasanglayan Uno at least 99% (0.000 level), Kapasanglayan Dos at least 99% (0.000 level), Waig Tres at least 99% (0.000 level), and Waig Singko at least 99% (0.000 level).

Chi-Square Tests

trench		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Kap1	Pearson Chi-Square	78.963[b]	4	.000		
	Likelihood Ratio	74.212	4	.000		
	Linear-by-Linear Association	6.985	1	.008		
	N of Valid Cases	1059				
Kap2	Pearson Chi-Square	19.774[c]	2	.000		
	Likelihood Ratio	15.042	2	.001		
	Linear-by-Linear Association	.221	1	.638		
	N of Valid Cases	294				
Waig3	Pearson Chi-Square	13.525[d]	1	.000		
	Continuity Correction[e]	12.322	1	.000		
	Likelihood Ratio	13.548	1	.000		
	Fisher's Exact Test				.000	.000
	Linear-by-Linear Association	13.440	1	.000		
	N of Valid Cases	159				
Waig5	Pearson Chi-Square	122.854[f]	4	.000		
	Likelihood Ratio	120.243	4	.000		
	Linear-by-Linear Association	23.531	1	.000		
	N of Valid Cases	602				
Total	Pearson Chi-Square	427.844[a]	6	.000		
	Likelihood Ratio	448.659	6	.000		
	Linear-by-Linear Association	300.409	1	.000		
	N of Valid Cases	2114				

a. 1 cells (8.3%) have expected count less than 5. The minimum expected count is 2.42.

b. 1 cells (11.1%) have expected count less than 5. The minimum expected count is 1.96.

c. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .71.

d. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.02.

e. Computed only for a 2x2 table

f. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.62.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.273	.000
	Cramer's V	.193	.000
N of Valid Cases		1059	

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.259	.000
	Cramer's V	.259	.000
N of Valid Cases		294	

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.292	.000
	Cramer's V	.292	.000
N of Valid Cases		159	

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.452	.000
	Cramer's V	.319	.000
N of Valid Cases		602	

Figure 6: results using chi square with corresponding Cramer's V values.

The Cramér V values also reveal the following relative strength of association between levels and materials: Kapasanglayan Uno is 0.193 at 0.000 level, Kapasanglayan Dos is 0.259 at 0.000 level, Waig Tres is 0.292 at 0.000 level, Waig Singko is 0.319 at 0.000 level. This means that relative to the other trenches Waig Singko materials show a stronger association with stratigraphic levels followed closely by Waig Tres. It can be argued then that the distribution of artefacts within these two trenches can be better approximates to whatever cultural practice affected these deposits.

Perhaps the strong association shown by the Cramér V value between levels and materials in Waig Singko can be attributed to the practice of burial re-use with the presence of human remain fragments and tradeware pieces from earlier burial and habitation contexts becoming fill material for later burials within middle to lower stratigraphic levels. Within Waig Singko, an earlier burial (context 118 [cut] and 119 [fill]) was also cut by a later burial (context 120).

As mentioned above, this similar burial re-use pattern was also observed in the Nabatbati trench in 2011 season. This would account for the occurrence of tradeware sherds in lower strata as part of the fill materials. Waig Tres; on the other hand, had no human remains not even fragments. Instead what we see in Waig Tres appears to be attributable to

earthenware, stoneware and blue and white sherd accumulation and deposition over time that is directly linked to habitation perhaps midden formation and not burial. It can be argued further that if agricultural plow zone activity caused the disarticulation of human remains and the spreading of these materials all over the site then we should see fragments in higher stratigraphic levels of non-burial trenches such as Waig Tres.

The SPSS coded specimen inventory data was also run using the correlation statistical tool (Figure 7). The results show that there is no statistically significant correlation using Spearman's Rho and Kendall's Tau between levels and earthenware, this may be explained by the fact that this measure is only viable within longer periods of time. There is, however, a statistically significant correlation between tradeware sherd counts and stratigraphic levels with a Spearman's Rho correlation coefficient -0.653 at 0.05 level and Kendall's Tau correlation coefficient -0.533 at 0.05 level. It appears that more counts appear in higher levels in the stratigraphy. It can be argued then that the entry of Vietnamese and Chinese ceramics increased well within this relatively short period of time.

Correlations

			Level	Foreign Cer. Sherds	Earthenware Sherds	Human Remains
Kendall's tau_b	Level	Correlation Coefficient	1.000	-.533	-.396	-.150
		Sig. (2-tailed)	.	.025	.097	.549
		N	12	12	12	12
	Foreign Ceramics Sherds	Correlation Coefficient	-.533*	1.000	.815**	.318
		Sig. (2-tailed)	.025	.	.000	.173
		N	12	12	12	12
	Earthenware sherds	Correlation Coefficient	-.396	.815**	1.000	.385
		Sig. (2-tailed)	.097	.000	.	.099
		N	12	12	12	12
	HumanRemains	Correlation Coefficient	-.150	.318	.385	1.000
		Sig. (2-tailed)	.549	.173	.099	.
		N	12	12	12	12
Spearman's rho	Level	Correlation Coefficient	1.000	-.653*	-.478	-.178
		Sig. (2-tailed)	.	.021	.116	.581
		N	12	12	12	12
	Foreign Ceramics Sherds	Correlation Coefficient	-.653*	1.000	.916**	.437
		Sig. (2-tailed)	.021	.	.000	.156
		N	12	12	12	12
	Earthenware sherds	Correlation Coefficient	-.478	.916**	1.000	.477
		Sig. (2-tailed)	.116	.000	.	.117
		N	12	12	12	12
	HumanRemains	Correlation Coefficient	-.178	.437	.477	1.000
		Sig. (2-tailed)	.581	.156	.117	.
		N	12	12	12	12

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 7: Spearman's R and Kendall's Tau Correlation.

This statistical result is interesting because it can be an indication of chiefly wealth or status good accumulation which is a function of long distance trade versus bare population increase. Also worth noting is the high correlation value between tradeware and earthenware with a Spearman's Rho correlation coefficient 0.916 at 0.000 level and Kendall's Tau correlation coefficient 0.815 at 0.000 level. This can be investigated further but an initial hypothesis would be that this correlation has something to do with (again) demographic trends - gradual population increase and exponential wealth accumulation/ increase.

Recommendations

The results of this statistical analysis allow us to see patterning that appears to be correlated to residential burial re-use. More precise measurements can be pursued in a second order data gathering and analysis at the Archaeological Studies Program where we can note MNI and actual size measurements and weight per specimen (i.e., grams per meter cube of deposits). A second order analysis will also be able to discern status and identity when important variables like trade beads, metals such as bronze and gold, and other exotics like ivory are also included.

But for now, the data available from archaeological, historical, and ethnographic, and statistical datasets already present interesting results. It seems that the polity that occupied Sapilang site was pre-occupied with supplanting themselves over the landscape through the practice of residential burial. This practice has taken place over several generations to the point that we see a case of multiple residential burials in the same location (coastal with riverine nexus). Over time the dominant family would cut into existing burials in order to deposit their own direct ancestors.

Acknowledgements

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within the land of Fe Yanoria, which straddles the northern area of the site. The project was made possible by support from Ilocos Sur Governor Luis "Chavit" Singson and Vice Governor Deogracias "DV" Savellano. This paper was based on an individual project for the course ANTHRO 455 (Fall 2014) at the University of Illinois at Chicago under Dr Laura Lee Junker. I thank Laura for teaching me statistical methods that can be used in archaeological analysis.

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