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Native American Ethnogenesis in the early 18th Century of the Southeast US.

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Abstract. Governor Robert Johnson of Carolina prepared a report in 1719 that provides the first reliable enumeration of native populations in the Southeast US significant for two reasons: 1) it is a comprehensive, time-stamped compendium of information on the size and distribution of native populations in the US Southeast, and 2) it reflects the earliest and in some cases only population profile for native southeastern groups (several went extinct within the next 10-20 years). The ultimate significance of the Johnson report is the knowledge it provides on Native American demography in the first half of the 18th century after Virgin Soil diseases had run their course across the region. In this presentation we examine the size, location and ethnolinguistic affiliation of the diverse groups enumerated in Johnson's report in light of the ethnogenesis taking place among remnant populations at this critical moment in Native American history of the Southeastern US.

Key words. Ethnogenesis, Southeast US, Native American demography, Johnson report, XVIII century.

Etnogénesis entre los Amerindios a principios del siglo XVIII en el Sudeste de los Estados Unidos

Resumen. El gobernador Robert Johnson de Carolina preparó un informe en 1719 en el cual presenta la primera enumeración confiable de las poblaciones nativas del sureste de los Estados Unidos, significativo por dos razones: 1) es un compendio exhaustivo, con temporalidad de la información sobre el tamaño y la distribución de las poblaciones nativas en el sudeste de los Estados Unidos, y 2) refleja los más tempranos y, en algunos casos, los únicos perfiles de grupos nativos del sudeste americano (varios se extinguieron en los siguientes 10 a 20 años). El significado particular del informe Johnson es el conocimiento que proporciona sobre la demografía de los amerindios en la primera mitad del siglo 18, después que las epidemias de "Suelo Virgen" habían afectado a toda la región. En este trabajo se examina el tamaño, la ubicación y la filiación etnolingüística de los diversos grupos enumerados en el informe de Johnson, a la luz de la etnogénesis que tenía lugar entre las poblaciones remanentes en este momento crítico en la historia nativa americana del sudeste de los Estados Unidos.

Palabras claves. Etnogénesis, Estados Unidos de América, demografía amerindia, Informe Johnson, siglo XVIII.

Introduction

Governor Robert Johnson of Carolina (USA) prepared a report in 1719 preserved in the British Public Records that contains the first reliable enumeration of native populations in the southeast. Crane (1981) remarked on the value of the Johnson report early in the 20th century and Mooney (1928) used it to anchor his estimates of native population loss following contact. Other authors cite or make reference to Johnson's report including Milling (1940), Swanton (1952), Waddell (1980), and Wood (1989). However, beyond acknowledging the significance of this report and using it to derive total population numbers for southeastern natives groups the utility of the Johnson report for assessing the situation of native groups early in the 18th century has largely been ignored.

Many excellent historical sources portray the period from 1660-1776 as one of intense contact for southeastern Indians. Specific events include outbreaks of epidemic disease in 1692-3, 1738-9 and 1750 (Adair 1974; Englund 1973; Thornton 1990). The transformation of the production system is particularly notable native domesticates including corn, beans, squash and turkeys were complemented or replaced with European domesticates such as peach, watermelon, pigs, chickens and cows (Newman 1979). Numerous sources discuss the global political and economic transformations of native societies during the colonial period (Corkran 1962; Crane 1981; Gearing 1974; Gilbert 1943; Hatley 1993) for which the trade in deer hides is often singled out as the engine of change (Corkran 1962; Gearing 1974; Gilbert 1943). The transformation of Native Southeastern groups took place in the context of England, France and Spain fighting to decide which European power would control North America (Crane 1981).

This Battle for Empire is a grand narrative that provides little room for explaining or understanding the process of Native American transformation on the Southern Frontier. Elsewhere (Gragson and Bolstad 2007), four grand narrative theories, not to be confused with explanations, have been characterized for the region.

Production theories emphasize the placement and size of towns as a function of the properties of the physical environment and its suitability for agriculture or the extraction of game (e.g., Corkran 1962: 8). Force-in-numbers theories emphasize the need for towns to be militarily strong by having many able warriors and/or being close to another town that had many able warriors (e.g., Thornton 1990). Origin theories are often abstract or indeterminate, but emphasize mythology, clan and parentage, or language as the foundation for ethnic identity (e.g., McLoughlin 1984; Oliphant 2001; Reid 1976). Imperial theories emphasize a native group's attraction to or involvement in trade with the British, the French, or the Spanish and typically reference imperial rivalries that originated in Europe and played out in America (e.g., Corkran 1962; Hatley 1993).

The 1719 Johnson report is significant for two reasons. First, it is a comprehensive, time- stamped compendium of information on the size and distribution of native populations in the southeast as compiled and synthesized from multiple sources by a knowledgeable scribe. This means that the information itself was quality-assured when compiled making it possible to compare the native groups on the principal they are stationary populations (Keyfitz and Caswell 2005). Second, the Johnson report represents the earliest and in some cases only population profile for native southeastern groups. The unique features of the Johnson report relative to other information on Native American groups from the early Colonial period is the nominal information on age and sex, along with the distance and direction of population centers from Charles Town (now Charleston, South Carolina). Colonial enumerations typically focus either on the total population with no distinction made as to the numbers of different age and sex categories, or more commonly, they simply report the warrior population that approximates "able-bodied males."

In seeking to understand contact we are moving away from unilinear conquest histories in which European military supremacy combined with deadly infectious agents devastate passive native populations in the Americas (Emberling 1997; Sider 1994; Whitehead 1992). Instead, there is an acknowledgement that indigenous communities were actively engaged in an attemptto determine their long-term survival through processes of accommodation, adaptation, mergers and fissions as colonial policy and epidemic disease effected a new sociopolitical order (Hill 1996; Stojanowksi 2010). Not only are their seeming parallels between the processes unfolding in the early historic period with the circumstances during the pre-contact period in the Southeast (Anderson 1994; Hally 2006; Kowalewski 1995)but the need still remains for answering the question of "What shaped the Indians of the eighteenth-century South?" (Hudson 2002). To this purpose, a more thorough use of selected early accounts like the Johnson report can provide the foundation for developing key insights into the process of ethnogenesis. For this paper I use time specific documents that are also highly accurate in the context of their origin within a model- based approach (Ibáñez, *et al.* 2007; Kohler and van der Leeuw 2007) to provide a geographic and population snapshot of 20 native groups inhabiting the Southeast ca. 1715.

Sources

The two key pieces of documentary evidence used in this article are the Johnson report and the Barnwell manuscript map. The Johnson report is in the form of a letter preserved in the British Public Records (Johnson 1719). The enumeration of age, sex and location of 20 native groups is presented as a table (reproduced and annotated in table 1)

prepared by John Barnwell. Barnwell's *Manuscript Map of Southeastern North America* (1721) ca. 1721 is housed at Yale University (Cumming 1998), and measures 53 ¼ in. by 31 in. (132.7 cm by 78.8 cm) with a scale of 1 in. to ca. 19 ½ miles (2.54 cm to ca. 31.4 km). The map represents the area from the Gulf of Mexico in the south to the Ohio River in the north, and from the Mississippi River in the west to the Atlantic coast in the east. A full-scale, full-color photographic reproduction of this map was used in preparing this article.

The Johnson report was prepared in 1719 yet clarifies the information dates to *just prior* to the Yamassee War of 1715-16. Relative to the "discovery" of America by Columbus and the Spanish incursions into the New World that followed, the British developed first-hand knowledge of the southeast relatively late. John Lederer (1670), James Needham and Gabriel Arthur (1673-4), John Lawson (1700), Thomas Nairne (1708) and John Barnwell (1708-1712) built British knowledge of the landscape and native population of the Coastal Plain, Piedmont and Appalachian Mountains. By 1715, knowledge had shifted from fancifully speculative to grounded specificity making it possible for Governor Johnson to respond in his report to the question from the British Crown as to "what is the strength of the several nations of Indians in the neighborhood of Carolina and are their inclinations for us or for the French or Spaniards" (Johnson 1719).

The Johnson report was prepared during a period of political and economic turmoil in the Carolina colony. The events that would culminate in the December 1719 rebellion that ended the proprietary government of the colony were already in motion, and the British had a sense of urgency to defend their trade in trans-Appalachian against French incursions. Both issues were in fact related (Sirmans 1966). The British Board of Trade opposed proprietary colonies as a matter of policy so tacitly supported the Carolina resident's rebellion against the Proprietors engendered by their administrative neglect of the colony. This meant that French subversion of Carolina trade was not merely an attack against the Proprietors, but against British interests. The comprehensive nature and quality of the information contained in the Johnson report is thus due to the rapidly evolving social, economic and political situation at the time it was compiled. The nature and character of the report is attributable to how it was compiled.

The tabulation of native populations as seen in table 1 is sourced to the journals of Cap^{t} Nairn, John Wright Esq^{r}, and Price Hughes Esq^{r} as "compared & corrected by the journals and observations made by John Barnwell while he was employed by the Governmt Amongst them." Barnwell was not merely compiling evidence in the safety of an office far removed from the events and sources. He drew from the personal records of men he had been closely associated with for many years, and joined

their information to that which he had collected himself in his own travels to create a "best-knowledge" picture of the situation of native populations in early 1715. All the referenced individuals had solid reputations in early Carolina society and were good observers with extensive knowledge of the backcountry as revealed in such documents as *Nairne's Muskhogean Journals* (Nairne 1988) and his Map of South Carolina (Crisp 1711). Barnwell was in a unique position to ensure the quality of the Johnson report.

John "Tuscarora Jack" Barnwell emigrated from Ireland to the Carolina colony ca. 1701 and became a distinguished Indian Fighter with first-hand knowledge of frontier lands from Virginia to north Florida. He was also said to be the greatest planter in the Port Royal District (Crane 1981; Sirmans 1966). Barnwell also served in the Carolina House of Commons (1712 to 1719) and on the Board of Indian Trade (1716 to ca. 1725) (Crane 1981; Daniell, *et al.* 1955). As a renowned negotiator with an expansive view of British Frontier imperialism, Barnwell was sent to England in 1720 as an agent of the Carolina Assembly to justify the Proprietor Rebellion. It was during this trip that Barnwell most likely authored the work for which he is justly famous, the *Manuscript Map of Southeastern North America* (Barnwell 1721; Gragson and Bolstad 2007). This mother map described as "the first detailed English map of the southern frontier extant" (Crane 1981: 350; Cumming 1998) incorporates and expands on the native population information that Barnwell first included in the 1719 Johnson report.

Methods

Two limitations of the Johnson report must be noted as they relate to the inferences that can be derived from the information. This is an enumeration not a native census (Stengers 1990). This means it consists of population counts rather than individual responses from members of an aggregate. The collection of individual records by a census did not become routine in most European countries until the late 18th or early 19th centuries, and the first Native American census was only carried out after the American Revolution of 1776 (Hollingsworth 1969; Willigan and Lynch 1982). Second, the Johnson report is a one-time enumeration thus providing a single snapshot of the processes of fertility, mortality and migration of the listed native populations providing limited understanding of demography by comparison to repeat observations on the same population separated in time. Nevertheless, the information can still be used to draw inferences about the nature and direction of demographic forces at work on the listed populations in 1715 (Hollingsworth 1969; Stengers 1990; Willigan and Lynch 1982).

Table 1

Tabulation of Southeastern native populations from Johnson 1719 as it appears in the original, including formatting. (The columns for Other Names and Language Stock are additions.) Original title: An Exact account of ye number and strength of all the Indian Nations that were subject to the Governmt of South Carolina and Solely Traded with them in ye beginning of ye year 1715 taken out of ye journals of Capt Nairn John Wright Esqr Price Hughes Esqr & compared & corrected by the journals and observations made by John Barnwell while he was employed by the Governmt Amongst them.

Distce from Chas Tw		Other Names*	Language Stock*	No of Sett	Men	Womn	boys	girls	Total No of Souls	
90 miles Southwest	1 the Yamasees	Yemassee	Muskogean	Ten	413	345	234	228	1215	
130 miles Southwest	2 the Apalatchicolas		Muskogean	Two	64	71	42	37	214	
140 miles West	3 the Apalalehees	(merged with Creek after Yamasee War)	Muskogean	Four	275	248	65	55	623	
150 miles West NE	4 the Savanos	Shawano; Shawnee; Savano; Savannah	Algonquian	Three	67	116	20	30	283	
180 miles WNW	5 The Euchees	Uche; Yuchee; Tsoyaha	Isolate (>Siouan)	Two	130	270	wo & Child		400	
220 miles W & by N	6 The Ochesees or Creeks		Muskogean	Ten	731	837	407	421	2406	
440 miles west	7 The Abikaws		Muskogean	Fifteen	502	278	366	327	1773	
390 miles WSW	8 The Tallibooses		Muskogean	Thirteen	636	710	311	486	2343	
430 miles SW by W	9 the Albamas	Alabama	Muskogean	Four	214	276	161	129	770	
					3032	3446	1816	1698	9992	9992
	The Charokees (viz)		Iroquoian							
450 miles NW	10 the upper settlement			Nineteen	900	980	400	480		
390 miles NW	11 the middle settlement			Thirty	2500	2000	950	900	11530	11530
320 miles NW	12 the lower settlement			Eleven	600	620	400	480		
640 miles W	13 The Chikesaws	Chickasaw	Muskogean	Six	700	1200	wo & Child		1900	
200 miles NNW	14 the Catapaws	Catawba; Kadapaw; Atakwa; Cattoways; Esaws; Usheree	Siouan	Seven	570	900	wo & Child		1470	

Table 1 (Continuación)

170 miles N	15 The Sarows	Saura, Suala, Sara, Sawro, Cheraw, Sarow, Sarraw	Siouan	One	140	370		w° & Child		510	
100 miles NE	16 The Wacconassus		Siouan	Four	210	400		w° & Child		610	
200 miles NE	17 the Cape Fears		Siouan	Five	76	130		w° & Child		206	
70 miles N	18 The Santees	Seretees, Sattees	Siouan	Two	43	} 60		w° & Child		125	
120 miles N	19 The Congarees		Siouan	One	22						
80 miles NE	20 The Waneaws		Siouan	One	36	70		w° & Child		106	
60 miles NE	21 The Seawees		Siouan	One	57			Men w° & Child		57	
Mixt wth y^{e} English	22 (??vans)		?	One	80	160		w° & Child		240	
Settlement	23 Corsaboys	Cusabos, Cussabees	Muskogean	Five	95	200		w° & Child		295	5519
									Total		28041

Note: for category “Mixt wth ye English” the word following 22 is illegible. It could be Slaves or Servants; the last three letters appears to be “vans”, and there appear to be two preceding letters.

Some corrections were also imposed on counts and placement in light of other evidence. For example, the counts of Yamasee men, women, boys and girls are assumed correct so that the sum equals 1,220 rather than the reported 1,215. Similar corrections (noted in Table 1) were made to the values for the Apalalehees, Savanos, Ochesees, Abikaws, Charokee, Tallibooses, and Albamas. The geographic placement of native groups in the Johnson report was by reference to their distance from Charles Town (i.e., Charleston, SC) in miles and direction using a 32-point compass. Towns were first located using the distance and direction according to the Johnson report, then adjusted using the Barnwell map and complementary ethnic, population, and placement information drawn from Hudson (1976) Milling (1940), Swanton (1952) and Waddell (1980).

Distances in the Johnson report were most likely estimated from travel time as determined from a chronometer or watch, a procedure commonly mentioned in period reports (e.g., Chicken 1894). It lacks precision by comparison to later methods and some groups were repositioned. For example, the Albamas were listed in the original as 430 miles (692 km) SW by W, which would place them in the Gulf of Mexico so they were positioned on land at a distance of 375 miles (603 km) SW by W. The errors in distances in the Johnson report range from ~10 miles (~16 km) for native groups in the vicinity of Charles Town to ~100 miles (~160 km) for those at the maximum recorded distance, such as the Cherokee and Chickesaw. The maximum error for all placements based on a straight-line distance (which travelers were not following) is around 30%. As for the direction of native groups from Charles Town, these are generally correct with some exceptions. For example, the Savanos are listed as being 150 miles (241 km) West NE (not a cardinal direction), and they were repositioned to 150 miles (241 km) SW. Despite such inaccuracies, the final placement of native groups is suitable for comparing their relative geographic distribution.

Ethnohistoric information is seldom abundant enough to provide meaningful results using common parametric procedures even if it did not violate common assumptions of these procedures. In this article I rely on distribution-free procedures such as the bootstrap and permutation methods (Chernick 1999; Good 2001; Simon and Bruce 2001) and local rather than global analysis (Fotheringham, *et al.* 2000).

Results

Four dimensions of the groups listed in Johnson's report and presented in table 1 are detailed in the next section: group ethnicity, location and size, and population structure.

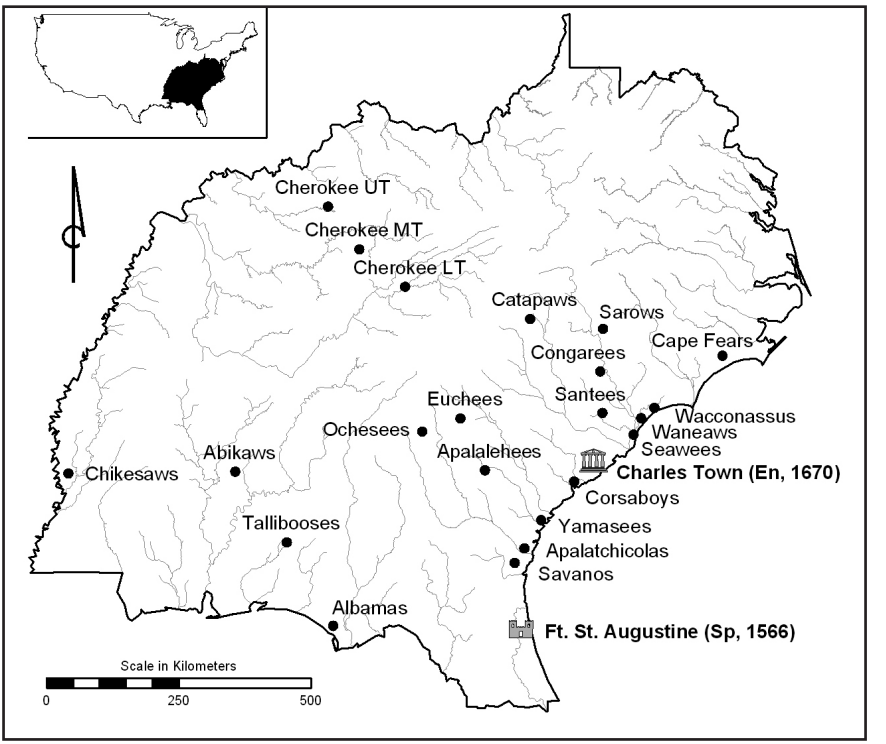
Group Ethnicity: The Johnson report enumerates the population of 21 groups, 20 of which are Native American, using names common in the early 18th century. This is the first and only enumeration of some of the

listed groups. For example, the Waneaws, Seawees and Santees all disappear as identifiable groups shortly after 1720. The last group in the enumeration, labeled "Mixt wth y^{e} English" most likely did not refer to a defined group. The absence of a distance and direction further suggests the enumerated individuals were diffused across the region. The category probably refers to the children of a union between trappers or traders and a Native women (that could be a slave). There are ample references to such situations in the ethnohistoric literature and in some contexts they are termed Anglo-Métis or Countryborn. These individuals were equivalent to "Mestizos" in the casta system used in the Spanish colonies in America. Excluding the "Mixt wth y^{e} English" group, the 20 Native American groups can be classified into the four major language families historically recorded in the Southeast. These were the Algonquian, the Iroquoian, the Muskogean, and the Siouan.

Group Location: The Johnson report provides information on the location of native southeastern groups at the moment of the Yamasee War of 1715 (Map 1) – one of the critical junctures affecting the distribution of groups across the region. In brief, the leader of the Lower Creek along with a polyethnic conglomerate attempted to rid the area defined by Charles Town of the English, and the conflict quickly expanded throughout the Carolina frontier. The insurgency was not successful and in its aftermath Lower Creek towns (shown on Map 1 as Ochesees) relocated to the Chattahoochee River region from where they had originated taking with them remants of the Yamasee and Apalachee (shown as Apalalehees) (Worth 2000).

The displacement of native groups from traditionally occupied areas was not a phenomenon exclusively associated with the aftermath of the Yamasee War. The Johnson report also records prior movements. For example, most Shawnee lived in what is now Kentucky and Ohio beyond the normal radius of English exploration at the beginning of the 18th century. However, one band known as the Savanos moved south in the early 1700s and took up residence on the Savannah River (see Map 1) the present border between South Carolina and Georgia (Hudson 1976).

There are also absences from the Johnson report that further establish its timeliness, for example the Westo. They first appeared in the James River area around 1756 and in 1663 they also settled along the Savannah River (Bowne 2005). From 1675 to 1679, Westo trade with Carolina thrived as the Westo provided the colony with slaves from various Native America groups allied with the Spanish as well as under the protection of the English. Nevertheless, the alliance between Carolina and the Westo effectively blocked the colony from establishing a trade relations with other groups in the region. This eventually lead to war in 1679 and the ultimate destruction of the Westo in 1680. The final fate of surviving Westo was probably enslavement and shipment to work on sugar plantations in the West Indies (Gallay 2002).



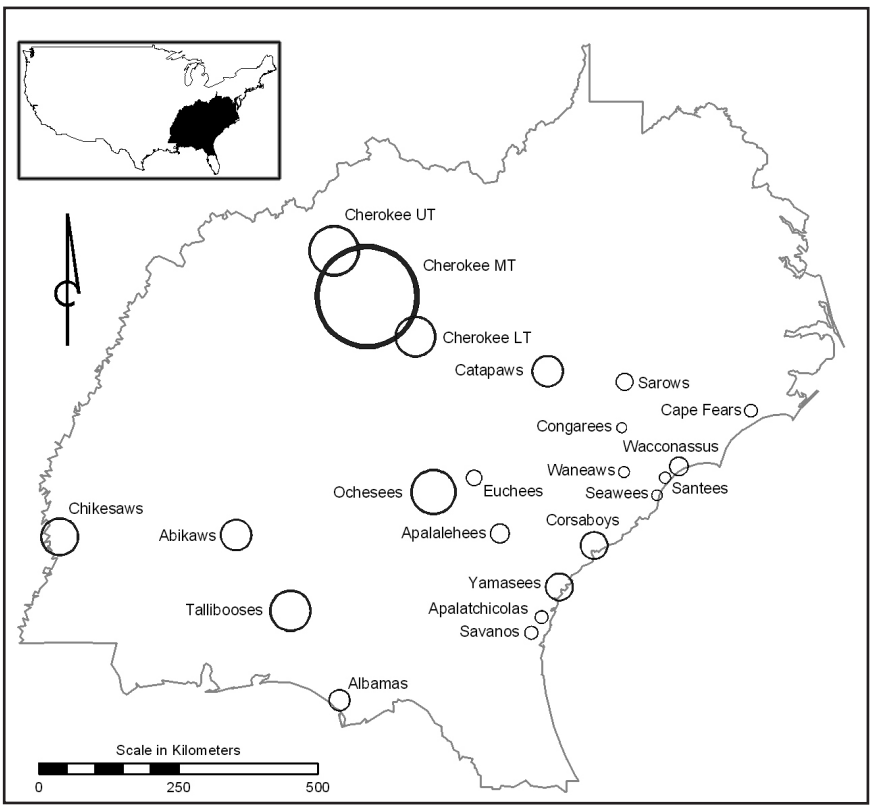
Map 1
Location of native populations across the Southeast.

The names by which many of the ethnic groups were known early in the 18th century are often in reference to where on the southeastern landscape a group was characteristically encountered by the British. For example, the Cape Fear Indians were located on the Cape Fear Peninsula, the Albamas were located on the upper course of the Alabama River, and the Congarees were located on the Congaree River.

Groups overall were located a median distance of 150 miles (241 km) from Charles Town (95% CI of 100 to 200 miles, 160 to 320 km). The closest were the Corsaboys. They were located some 35 miles south of Charles Town on or in the vicinity of Palawana Island (near St. Helena Island, SC), which was ceded to them by colonists about 1712. The most distant were the Chickesaws reportedly 640 miles (1,030 km) due west of Charles Town. Based on Barnwell, however, they were more likely west-by-north at a distance of approximately 500 miles 805 km). The distribution by language groups indicates the Iroquoian Cherokee were concentrated in the Appalachian Mountains to the northwest of Charles Town. The Muskogean groups were south and west of Charles Towns on

the Atlantic coastal plain and the coastal plain of the Gulf of Mexico. The Siouan groups were located north and northeast of Charles Town along the coast and major rivers of the area.

Group Size: The total Native American population recorded in the Johnson report is 26,296 individuals distributed across 156 towns, for a median of 157 individuals per town (95% CI of 103 to 197). The median group size was 610 (95% CI of 240 to 1,470) distributed across a median of 4 towns per group (95% CI of 2 to 6). The difference in absolute population size across the groups exceeds two orders of magnitude based on logged population values (Map 2).



Map 2
Size distribution of native populations across the Southeast.

The largest group was the Cherokee with a total reported population of 11,210 sub-divided into 19 Upper settlements with a total population of 2,760; 30 Middle settlements with a total population of 6,350; and 11

Lower settlements with a total population of 2,100. There is near-parity between the total population of Iroquoian speakers at 11,210 and Muskogean speakers at 11,064, residing respectively in 60 and 69 towns. The third, distantly largest population comprised Siouan speakers of which there were 2,959 individuals residing in 22 towns. The smallest language group comprised Algonquian speakers with a total population of 233 individuals residing in 3 towns. At the other extreme in size and distribution were the Seawees with a total population of 57 residing in a single town.

Population Structure: All Native American enumerations from the Colonial period underestimate the true population to a greater or lesser degree (Englund 1973; Goodwin 1977; Thornton 1990). While this is almost certainly true of Johnson's report as well, the Johnson report does contain nominal information on age and sex that is rarely available in other period accounts. For most of the groups in the Johnson report, numbers of (adult) men, (adult) women, boys and girls are listed. The median proportions for the four age-sex categories enumerated in the Johnson report are: men 32.5%, women 31.0 %, boys 18.2% and girls 18.1%. There is no indication in the report as to the breakpoint ages separating men from boys or women from girls. The convention in Native American societies, according to some authors (Cook 1976), was that boys became men at around 12–15 years of age. No comparable convention seems to exist for girls so they are similarly assumed to become women at 12-15 years of age.

The nominal age and sex information makes it possible to consider two important characteristics of the tabulated populations: the sex ratio and the proportion of each category relative to the total population. The latter measure in particular is important for the insight it can provide on the accuracy of the individual enumerations and the size of each group. The sex ratio of males to females – based on the sum of men and boys relative to the sum of women and girls – for the 16 groups for which sufficient information is available yields a median ratio of 1.1 indicating near parity between males and females (95% CI is 0.9 to 1.3). By reference to this confidence interval, the Savanos (sex ratio = 0.6) along with the Abikaws (sex ratio = 1.4) and Catapaws (sex ratio = 1.5) are all outliers. In converting sex ratios to *z*-scores, the only remaining outlier group is the Savanos. Their score of 2.3 is equivalent to a p-value of ~0.01 or approximately one chance in 93. In considering the sex ratio by language family, all groups are in the range of 1.0-1.2 with the exception of the Algonquin-speaking Savanos.

While there is near-parity within age groups – there is no statistical difference between men and women or between boys and girls – the proportions of boys and girls relative to that of men and women are

significantly different. The median for this ratio derived from the Johnson report is 62.5% adults (sum of men and women) vs. 37.2% children (sum of boys and girls). In all enumerated populations, there are typically more adults than there are children both as individual groups as well as language groups. The ratio is respectively 1.7 and 1.9 adults for every child. The question is what do these ratios suggest about the biotic potential of and environmental pressure on these populations.

Discussion

It is generally assumed that the biggest demographic impact of the European arrival on Native American populations took place during the first century of contact (Crosby 1976; Thornton 1997), although the population nadir was reached in approximately A.D. 1900. Relatively slight rates of population decline, ranging from -.25% to -1.0% per year, are required over this 400 year period to account for the Native American losses inferred across the period of contact (Thornton 1997). The Mission period in La Florida from 1600-1706 is marked by a shift in population structure from isolation-by-distance to a decrease in phenotypic variability, which indicates that after 1650 there was a single biological population across the Spanish colonial area (Stojanowksi 2010). The shift was more than biological, as it parallels a decline in local and regional systems of social and economic integration that had existed during the proto-historic and initial contact period. In effect, the entire fabric of indigenous society was transformed and redefined by European trade and the effects of demographic collapse. Native populations became more sedentary, their dependence on maize agriculture increased, and they were incorporated into the emerging American-European market economy centered on Charles Town and St. Augustine (Bowne 2005; Stojanowksi 2010; Worth 2000).

Long-term alteration in the demographic regimes of Native American populations that prevented these populations from recovering from the early impact of disease could result from relatively modest changes in fertility and mortality. No direct evidence exists on these demographic moments for the native populations recorded in the Johnson report. However, model life tables can be used to establish what changes in crude birth and death rates are implied and then used to infer which is more important in population decline (Coale, *et al.* 1983). According to Thornton (1997), the most appropriate tables given they are consistent with skeletal, historical and contemporary “aboriginal- like” populations are the Model West Female life tables with the lowest rates of life expectancy at birth: mortality levels 1 (20 years), 2 (22.5 years), and 3 (25 years). These are respectively shown as M1, M2 and M3 on Figure 1 for men, women, boys and girls for all groups recorded in the Johnson 1719 report.

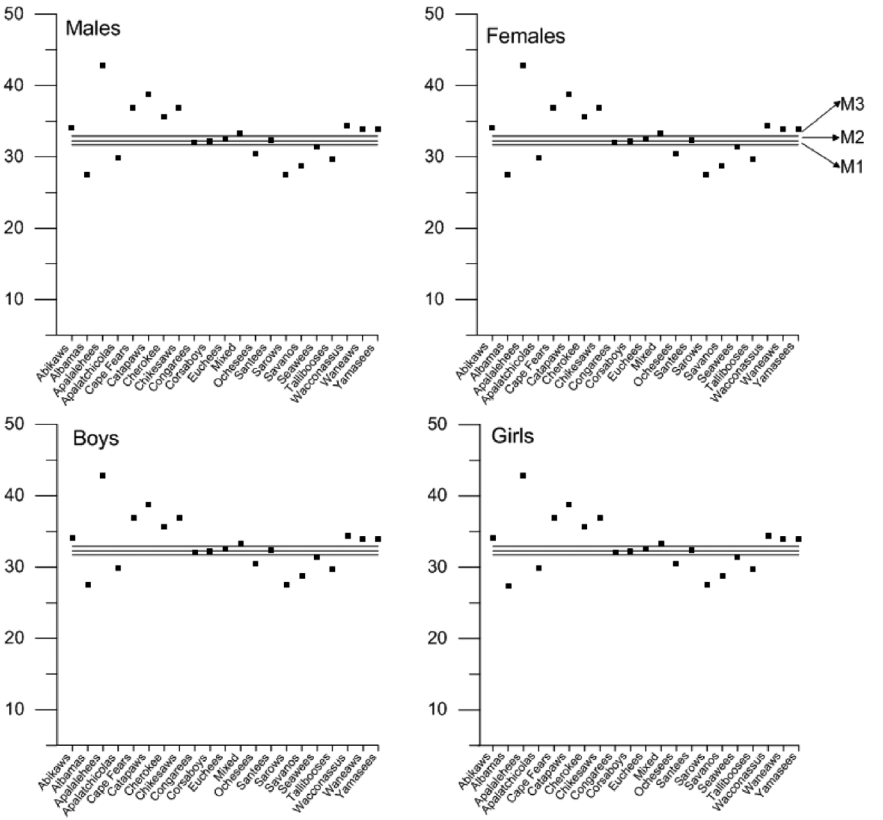


Figure 1
Native populations as reported in Johnson 1719 relative to Model Life Tables.

A cross-section of Native American skeletal populations (Weiss 1973) displays near-parity between adults (55%) and children (45%). Does this then suggest that the populations in the Johnson report are displaying the effect of contact on children (e.g., an inverted population pyramid)? This could be the result of increased mortality due to the greater vulnerability of this age class combined with sexual abstinence and/or early termination prior to or shortly after birth that has sometimes been reported among Native American populations. Nevertheless, the parsimonious explanation for most of the disparity in the Johnson report may simply be the undercounting of children. Drayton makes a passing comment in comparing a 1775 enumeration of the Cherokee population (by Pearis) to one completed in 1741 (by Lieutenant-Governor Bull) in which he notes there were about 1,000 boys 12-15 years and “an abundance of children” (Drayton 1821: 407-8). The implication, in effect,

is that the 'boys' and 'girls' recorded in the Johnson report may in fact refer to individuals between approximately 10 and 15 years of age, meaning there is no record at all for younger children. It is known that the basic pattern of the age-specific force of mortality is strikingly similar across a wide range of human populations irrespective of culture and historicity (Wood, *et al.* 2002). The discrepancy is more likely an artifact of early eye witnesses simply ignoring or not paying attention to individuals below a certain age.

Thornton (1997) states that in the case of Native American enumerations in which only men are counted, the number of men can be multiplied by three to derive the total populations. This implies that men would equal 33.3% of the population whereas women plus children would equal 66.7% of the total population. This is approximately true in the case of the Native American populations reported by Johnson in that men, overall, represent 34.5% of the population whereas women plus children equal 65.5%. Nevertheless, Cook (1976), based on work by Krzywicki (1934) and Brackenridge (1814) who examined the relation of the general population to each warrior for nearly every Indian tribe north of Mexico reaches the conclusion that 4 is the best multiplier to approximate total population from the number of warriors. In the two instances I found where the author reports both total population and number of men (i.e., Crane 1981; Varnod 1724) the ratio is respectively 2.8 and 3.0. When warriors are given rather than men, Thornton states the number can be multiplied by four to derive the total population. In the two instances where authors provide both a total population as well as number of warriors (CRNC II in Goodwin 1977; Hunter 1730) the ratios are respectively 3.5 and 3.2.

Conclusion

The ultimate significance of the Johnson report stems from the insights it provides on native southeastern population at a critical moment in history. By the second half of the 17th century and over 150 years since first European contact when the British began their incursion to the southeast, so-called virgin soil diseases had already run their course among native populations (Thornton, *et al.* 1992). The British concern centered on the inclination of native groups "…for us or for the French or Spaniards" in function of Britain's commercial and military interests. The Johnson report, unlike most other period enumerations that only recorded warriors or able-bodied adult males, provides counts of men, women, boys and girls as well as the number and distribution of towns occupied by each group in the southeast. Ethnohistoric explanations of Native American population size and distribution often

conflate first- and second-order processes (Gragson and Bolstad 2007) that refer respectively to the effect of physical forces (e.g., elevation) relative to social forces (e.g., alliance) on the size and location of human populations. A more thorough use of selected early accounts such as Johnson's 1719 report and the discrete information they contain on age, sex, distance and direction at critical moments in history are critical for developing key insights into the process of ethnogenesis among native southeastern populations.

Sturtevant's essay on "Creek into Seminole" introduced the concept of ethnogenesis into American anthropology (Sturtevant 1971), but the process must be understood as much more than a survival strategy for remnant native populations in consequence of European contact exacerbated by the introduction of pathogens, military action or missionary activity. Not so long ago, southeastern groups during the16th and 17th century were viewed as exemplars of benign, organic social integration where chiefs acted as mediators of economic and political exchange (viz., Fried 1967; Service 1962; Steward 1955). The separate and distinct native societies with firm and fixed boundaries that have been described as tribes in the sense of Fried (1967) may in fact be better understood as the design of colonial administrators seeking to increase rigidity of cultural differences as a strategy of control (Emberling 1997).

Historical records provide limited yet compelling evidence for extensive exchange networks uniting disparate social communities in the Southeast as well as power structures and inherent social inequalities within groups during the protohistoric period (Dobyns 1983; Ramenofsky 1987; Sattler 1996). There is also clear evidence that warfare was ubiquitous and endemic both pre- and post-contact (DePratter 1991; Gibson 1974). Despite the size of the Southeast region and the documented range of cultural and linguistic variability, genetic distance ordination results indicate long-range movement and biological integration across large areas during the protohistoric and early contact period (Stojanowksi 2010). While the historic literature for the Southeast has tended to focus on demographic collapse and social extinction following contact, the diverse evidence in support of extensive exchange, social inequality, and conflict is equally supportive of cycles of societal collapse and regeneration that extend backward into prehistory and forward to the present (Alfred and Corntassel 2005; Friedman 1992). It is also true that not all change was merely a function of contact -- climate between 1550-1850, the so-called Little Ice Age, was both unstable and deteriorating yet little as been achieved beyond speculating what effect these changes had on Native Southeastern groups.

Limited genetic diversity among Southeastern populations and their isolation-by-distance population structure indicate broad regionally

defined systems of migration and mate exchange are in place from late pre-contact through the start of the 18th century. However, social identities change and evolve to produce novel and unique forms with ephemeral connections to the past (Barth 1969; Harper 2013). The acts of individuals and the provisions of specific treaties can be hugely significant on long-term historical trajectories, such that ethnogenesis in the Southeast is not only more complex it was more complicated than early interpretations about the process. For example, initial views that multiethnic towns and chiefdoms were evidence for the adoption of refugees from European contact is giving way to an understanding that multiethnic chiefdoms were already common in the 16th century before major disease outbreaks took place in the region (Sattler 1996). Paramount chiefs appear to have exerted a degree of linguistic and ritual hegemony on multiethnic groups under their authority that depending on the circumstance simply led to witnesses perceiving ethnic homogeneity.

The moment in time captured by the Johnson report is significant because it demarcates the effective end of the Spanish influence and rise of the British influence on native coastal and interior populations in the Piedmont and trans-Appalachia. Ponce de León founded La Florida in 1513, while Pánfilo de Narváez and de Soto carry out entradas respectively in 1528 and 1539-43. Missionization of native populations in what is today Florida and Georgia with influence radiating into Alabama and Louisiana follows between 1600-1700. The Westo, an Erie group displaced by the Five Nations Iroquois from the US-Canadian border area immigrated to the James River area of Virginia in 1656 bringing with them firearms (Bowne 2005; Crane 1981; Smith 1987). Their attacks on and slave raiding among interior populations of Georgia and South Carolina initiated a climate of fear across the region (Crane 1981; Ethridge 1984; Swanton 1952), and also served as the catalyst for armed aggression against Spanish missions by Apalachicola, Yamassee, Uchise, and Creek that had devastating effects. The effective end of Spanish influence came with the attacks by Colonel James Moore of Goose Creek (Carolina Colony) on the Guale missions (Georgia-Florida border) in 1702, and the Apalachee and Timucua missions (Florida Panhandle) in 1704, 1705 and 1706 leaving St. Augustine and the Castillo de San Marcos as the last remnant of Spanish presence in La Florida (Bowne 2005).

English presence in the Southeast begins in 1585 with the establishment of the lost colony of Roanoke and the more successful colony of Jamestown in 1607. Several decades of conflict with the Powhatan confederacy follow, but the English ultimately defeated them in 1646. The Restoration of the English Monarchy by Charles II in 1660 opened the way for English expansion of trade routes west from the Atlantic coast and south from the James River in what is today Virginia

near its border with North Carolina. The pressure to open the Southern Frontier (Bowne 2005; Crane 1981; Worth 2000) revolved around expanding the deerskin trade (representing a shift away from northern fur trade) and obtaining Native slaves (only later would the emphasis be placed on obtaining African slaves). Slaves were needed for the tobacco and rice plantations on the continent although most importantly were sold to English colonists for work on the sugar plantation in the Caribbean, posing a threat to Spanish sovereignty. Charles Town was founded on the South Carolina coast in 1670 by businessmen from Barbados effectively challenging Spanish control over the southern half of the American continent (Sirmans 1966). The various English alliances with the Westo, Yamassee, Apalachicola culminated in Col. Moore's raids noted above (Boyd, *et al.* 1951; Covington 1972; Hahn 2004) leaving England in place for the establishment of its New World Empire. It also marks the time on ethnogenetic precursors to the rise of the Creek, Cherokee, Choctaw and Chickasaw during the 18th century (Braund 1999; Galloway 1995; Worth 2000).

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