Material Evidence of Immigrant Diversity within the Perry Mesa Tradition, Central Arizona

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Abstract: Poised between the Sonoran Desert and Colorado Plateau, Perry Mesa and Black Mesa constitute a rugged landform split by the Agua Fria River of central Arizona. This landscape was largely unoccupied prior to the late thirteenth century but witnessed a steady and rapid stream of immigrants beginning around A.D. 1250-1275. Today, the region is enjoying newfound archaeological attention, much of which is focused on why immigrants chose this place as a destination and how they survived after arrival. Our research and this article are more concerned with whether those who arrived did so as an homogenous population or as disparate groups. Elsewhere, we have suggested that what is referred to as the Perry Mesa Tradition began as a diverse collection of peoples from throughout the Southwest. Within a culture-history framework, we describe diversity in the local archaeological record and identify, where possible, nonlocal analogues. This effort is designed to synthesize past and current observations, illustrate opportunities for future research, and stimulate dialogue regarding demographic movement to and from Perry Mesa.

Introduction

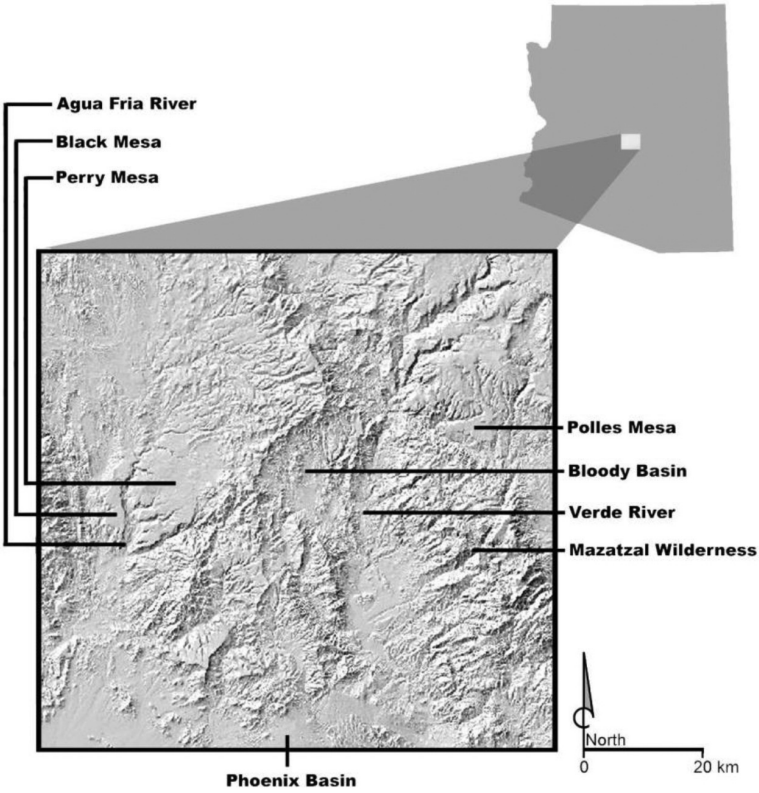
Growing interest in the archaeology of Perry Mesa (Figure 1) frequently centers on the question of *why* immigrants flocked to the rugged landscape in the late-thirteenth century (e.g., Abbott, et al. 2008; Ingram 2010; Wilcox and Holmlund 2007; Wilcox et al. 2001a, 2001b; see also Kruse 2005, 2007). Less frequently asked is the question of *who* settled there (although see Fiero et al. 1980:116-117, 120-122, 151, 154; Jacka 1980:276; Clark et al. 2008). Elsewhere and in the course of making other arguments, we have suggested that a diverse group of peoples arrived on Perry Mesa from throughout the Southwest (Russell 2007, 2008, n.d.; Russell and Freeman 2010a, 2010b; Russell and Nez n.d.a, n.d.b; Russell et al. 2008, 2011). Admittedly,

we glossed over what we believed to be evidence of this multi-identity (cf. multi-ethnic) coalescence (demographic assembly). The present paper is designed to address this shortcoming by detailing what we interpret as sufficient indicia of multiple immigrant origins in the formation of the Perry Mesa Tradition (*sensu* Stone 2000). This approach has fallen out of favor in recent years but we submit that multiple strands of complementary evidence can form relatively robust cables supporting a compelling argument.

Our earlier writings focused on the ceremonial racetracks of central Arizona and their role in what we call *reductive reorientation.* In short, we have argued that disparate immigrant groups deemphasized ritual attributes that were exclusive or that otherwise set them apart. In conjunction with this tactic, we believe they collectively focused on activities that allowed for the communal participation of various groups; activities such as what they all had in common: ceremonial racing and suprahousehold feasting (Russell 2007, 2008, n.d.; Russell and Freeman 2010a, 2010b; Russell and Nez n.d.a, n.d.b; Russell et al. 2008, 2011). This paper does not address *negative evidence* of socio-ritual reduction, such as the lack of locally-produced decorated ware (Ahlstrom and Roberts 1995:40, Table 2; David Abbott and Chris Watkins, personal communication 2008; but see Ahlstrom and Roberts 1995:63; Fiero et al. 1980:97, 103, 114; Wood 1987), the absence of certain ceremonial venues (Russell 2007, 2008, n.d.; Russell and Nez n.d.a, n.d.b; Russell et al. 2008, 2011; but see Fish and Fish 1977:16), or the dearth of origin-identifying pottery in integrative contexts (Russell 2010a; Russell and Freeman 2010a, 2010b). Instead, we point to material diversity on Perry Mesa and argue that this diversity is sufficient to suggest disparate migrant origins. As possible, we also compare specific, local materializations to similar and idiosyncratic traits elsewhere.

Several authors have mentioned prehistoric groups or regions that may have contributed to Perry Mesa immigration in the late 1200s to early 1400s. Proposed origins include the Middle Verde (Fiero et al. 1980:116-177), East Verde (Fiero et al. 1980:121), Sinagua (Clark et al. 2008; Fiero et al. 1980:121, 151, 154), Hohokam (Fiero et al. 1980:121, 154), Tonto Basin (Jacka 1980:276; see also Fiero et al. 1980:121, 122; Gumerman and Weed 1976), Western Pueblo (Fiero et al. 1980:154), and Flagstaff (Clark et al. 2008:7-8) regions.

Figure 1. *Map of study area.*



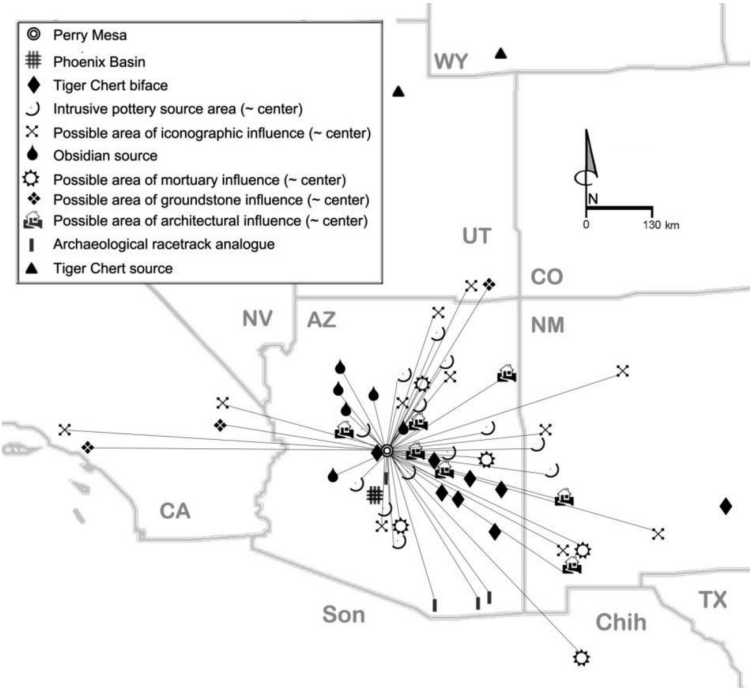
As of late, the most repeated hypothesis involves the aggregation of "northern periphery" Hohokam groups and Prescott Culture refugees (Ahlstrom and Roberts 1995:58; Fiero et al. 1980:151; Wilcox n.d.; Wilcox et al. 2001a, 2001b; Wood n.d.).

If the Perry Mesa Tradition was simply an aggregated or displaced version of another, preexisting cultural horizon, we would expect to encounter two things in the archaeological record. First, each Perry Mesa site should look much like the next. Second, Perry Mesa sites should look like those in the proposed homeland. The results of this exercise suggest that neither expectation is met.

Some authors have acknowledged the possibility that disparate social groups congregated on Perry Mesa (e.g., Ahlstrom and Roberts 1995:64-65; Fish et al. 1975:44; Wilcox et al. 2001b:82; see also Huang 2006; Mapes 2005:2) but no synthetic examination of material diversity has taken place. The area's intrusive ceramic assemblage suggests that Perry Mesa immigrants maintained wide-ranging social ties, but the question of whether these places were potential *homelands* has been largely ignored.

In this article, we examine the material culture of Perry Mesa in two ways. First, we examine the degree of material diversity in the local archaeological record. We suggest that the scale and scope of variability are inconsistent with an homogenous immigrant population. Second, we compare idiosyncratic material attributes on Perry Mesa to similar traits elsewhere in the Southwest (see Figure 2). In doing so, we identify certain places as *possible* homelands

Figure 2. *Possible areas of material influence or origin.*



(cf. Bernardini 2002, 2005a, 2005b; Clark 2001; Di Peso 1958; Gerald 1958; Haury 1958; Lyons 2003; Zedeño 1994) or otherwise important sources of influence.

Caveats

Migration and Connectivity. The present discussion is focused on migration and as such is also concerned with connectivity. Research on migration and diaspora show these to be processes in which groups establish connections with destinations prior to migration and maintain homeland connections thereafter (Anthony 1990; Burmeister 2000:544; Duff 1998; Duff and Wilshusen 2000; Erdmann 1991:128-130; Hägerstrand 1957:132; Hoffmann-Nowotny 1993:62; Lee 1966:54-55; Pugh 2003:413). These connections include kinship ties, exchange networks, support systems, and bi-directional streams of movement (Anthony 1990; Boyd 1989:641; Burmeister 2000:544; Moch 1992:81; Reikat 1997; Schluchter 1988:62). Thus, evidence of connectivity on Perry Mesa can lend insight as to earlier demographic origins (and perhaps later emigrant destinations).

Local Materializations with Nonlocal Analogues. In several cases, we argue that particular Perry Mesa attributes are *like* those elsewhere. Determining whether one thing is *like* another is highly subjective and frequently involves subconscious observations, intuition, and biases. Our assessments are based on comparisons between Perry Mesa attributes and what might be called the material *central tendencies* of other places. For example, some architecture on Perry Mesa incorporates shaped stone. We are comfortable in saying that within the ancient Southwest, *building with shaped stone is a Puebloan trait.* We are certainly not the first to use shaped stone as an indicator of migration in the Southwest (e.g., Di Peso 1958b; Lekson et al. 2002). But not all Puebloan architecture includes shaped stone and some non-Puebloan structures do. The routine association between an attribute and an area *does not* mean the trait is limited to or originated in that area. When we hear "kill holes" we think of the Mimbres tradition, but killed vessels are found as far away as Florida (Willey and Phillips 1944) and Central America (Graham et al. 1980; Healy 1974). Thus, while a kill hole may scream "Mimbres!", it should also

whisper "or maybe not".

Local Contemporaneity. The question of site contemporaneity on Perry Mesa has yet to be answered definitively. Cultures change over time, sometimes quickly. Diverse material assemblages, in one place, can indicate social diversity, but this argument is easier to make if the assemblages are contemporaneous. If they are not contemporaneous, they could represent intra-societal change over time. To better address this quandary, we need to improve our temporal resolution (cf. Russell 2010b; Russell and Nez n.d.a, n.d.b; see Russell and Freeman n.d.).

Local-Nonlocal Contemporaneity. Trans-regional similarities are no less affected by questions of contemporaneity and we must focus on *continuity* as opposed to synchronic prevalence. Returning to kill holes as an example, the closest analogue (by volume) comes from the Mimbres tradition. Most Mimbres kill holes, however, occur in Mimbres Classic period (ca. A.D. 1000-1130) bowls that predate Perry Mesa aggregation by several generations. Thus, comparing killed vessels on Perry Mesa to those in Mimbres contexts can be temporally problematic without evidence of continuity. Kill holes do appear, in limited quantities, after A.D. 1130 in the northern Mogollon and Salinas areas (e.g., Eckert 2003; Robinson and Sprague 1965), making their presence on Perry Mesa compelling.

Weighted Evidence. Because there are multiple potential explanations for intra-regional diversity and inter-regional analogy, some lines of migration evidence are more convincing than others. For example, the ceramic assemblage on Perry Mesa is incredibly diverse (see Table 1), but what does that mean? Were the pots made there, brought by immigrants, traded for, plundered, or received as gifts? What was the relationship (if any) between potter and possessor? The number of possible explanations is compounded because decorated pottery is stylistically *active*.

Active stylistic choices (e.g., emblemic, assertive; see Wiessner 1983) are designed to capture attention and convey meaning. Items employing active style are more likely to be seen, replicated, copied,

stolen, gifted, valued, exchanged, and curated. In other words, finding intrusive pottery on Perry Mesa does not, by itself, tell us much of anything about migration. Active style should not be ignored, but its potential biases deserve recognition.

Passive stylistic choices (e.g., isochrestic, technological; see Deetz 1965; Sackett 1985:157; Wiessner 1983) are better indicators of migration (Carr 1995; Clark 2001; Lechtman 1977; Lemonnier 1986; Lindsay 1987; Lyons 2003; Stark et al. 1998). Such choices include the direction in which yarn is rolled, the way fires are started, and the method of hafting projectile points. These traits are less likely to embody purposeful messages and would go largely unnoticed by the outside observer. Thus, the way a wall is built may be a better indicator of identity than the mural painted on it. In sections to follow, we examine Perry Mesa material diversity that ranges from fairly active (e.g., rock art) to highly passive (e.g., wall construction).

Intrusive Artifacts. Above, we mentioned several ways in which intrusive artifacts can enter the archaeological record. Turquoise tesserae may have been obtained directly from a source in New Mexico or through down-the-line trading. It could have arrived as a gift, commodity, inheritance, or plunder. Most of these possibilities do not involve migration but all of them indicate connectivity at some level. Some Southwestern artifacts (e.g., copper crotals, cacao) have very limited distributions in the prehispanic archaeological record. When "rare" artifacts occur in two places, their presence suggests relatively intimate connectivity. We do well to remember, however, that archaeological rarity is a reflection of sampling strategies and limitations. Another century of excavation may show that ostensibly rare artifacts are not truly as rare as once thought.

Ceramic Evidence

The use of intrusive pottery to assess connectivity and migration is widely employed and accepted in Southwest archaeology (e.g., Davis 1964; Di Peso et al. 1974; Hegmon et al. 1997; Lyons 2003; Mera 1935). Compositional analyses are now allowing researchers to test long held assumptions regarding production locales, exchange networks,

and ware-coterminous identities (e.g., Creel et al. 2010; Crown 1994). This clarifies some issues and raises others. Nonetheless, the extraordinary diversity of Perry Mesa's ceramic assemblage (see Table 1) does suggest wide-ranging connections.

Fiero and colleagues (1980:123) report substantial inter-village variability in the relative presence of disparate pottery types. To test this ourselves, we examined collections from two large sites: Pueblo la Plata (NA11,648) and Richinbar Ruin (NA5,423), found 9 km apart. These sites were selected based on their proximity, comparable size, ostensible contemporaneity, and alleged integration (see Russell 2007, 2008, n.d.; Russell and Nez n.d.a, n.d.b; Russell et al. 2008, 2011). For this analysis, we use type identifications and sherd counts from David Wilcox's recent study (Wilcox and Holmlund 2007:Appendix B, Tables 7, 9A, 10A-C). Decorated assemblages at both sites are dominated by Roosevelt Red Ware (aka Salado Polychromes) and Tusayan (Hopi area) types. Decorated types from the Mogollon Highlands are also notably present. Sherds in these categories (*Saladoan, Tusayan,* and *Mogollon*) account for close to 100 percent of both assemblages. Data in Table 2 suggest that despite their material and contextual similarities, the two sites maintained dramatically different extraregional relationships. In fact, the relative proportions of Roosevelt Red Ware and Hopi pottery are almost exactly reversed between the sites (see Figure 3). What is more, Richinbar has not only *fewer* Hopi ceramics; its collection of Hopi pottery is far less diverse, lacking nine of the Tusayan types recovered from Pueblo la Plata.

Prescott Black-on-gray (B/g), Verde Black-on-brown, and Tuzigoot White-on-red (W/r) are the only decorated types found on Perry Mesa that were produced relatively nearby (see Ahlstrom and Roberts 1995:58; Fiero et al. 1980:Table 14; Gumerman et al. 1976:Figure 4; Wilcox and Holmlund 2007:Appendices B, E) and likely represent exchange with neighboring groups. None of these appear in significant quantities, however, and none are thought to have been produced locally. Bernardini (n.d.) and Wilcox (Wilcox and Holmlund 2007:94) have demonstrated a Hopi-to-Perry Mesa ceramic corridor through Bloody Basin, Polles Mesa, Chavez Pass, and the Homol'ovi settlements. Thus, it is not surprising that a number of pottery types from Hopi (see Table 1y-jj), the Winslow area (see Table 1u-x), and elsewhere in northern Arizona (see Table

Table 1. *Intrusive, decorated pottery encountered on Perry Mesa.*

	Tradition	Direction	Pottery Ware	Pottery Type	Dates (A.D.)	
a	Hohokam	South	Middle Gila Buff Ware	Snaketown-Gila Butte R/b	700-850	a
b				Gila Butte-Santa Cruz R/b	750-950	b
c				Santa Cruz-Sacaton R/b	850-1150	c
d				Sacaton R/b	950-1150	d
e				Casa Grande R/b	1125-1450	e
f	Salado	Unknown	Roosevelt RW	Salado W/r	1150-1250	f
g				Pinto-Gila Polychrome	1280-1450	g
h				Gila Polychrome	1280-1450	h
i				Tonto Polychrome	1300-1450	i
j				Cliff Poly	1300-1450	j
k				Los Muertos Polychrome	1350-1450	k
l				Nine Mile Polychrome	1350-1380	l
m		South		Phoenix Poly	1375-1450	m
n			Maverick Mtn Series	Tucson B/r	1275-1450	n
o	Prescott	North	Prescott GW	Prescott B/g	800-1400	o
p				Verde B/b	1050-1300	p
q				Tuzigoot W/r	1300-1425	q
r	Cohonina		San Francisco Mtn GW	Deadmans B/g	700-1050	r
s			San Juan RW	Deadmans B/r	750-900	s
t				Middleton B/r	1050-1130	t
u	Hopi		Winslow OW	Tuwiuca B/o	1250-1300	u
v				Chavez Pass B/r	1260-1330	v
w				Chavez Pass Polychrome	1260-1330	w
x				Homol'ovi Polychrome	1260-1350	x
y			Jeddito YW	Kokop B/o	1250-1325	y
z				Kwaituki B/o	1250-1350	z
aa				Huckovi B/o	1250-1350	aa
bb				Jeddito B/o	1275-1400	bb
cc	Hopi	North	Jeddito YW	Awatovi B/y	1300-1375	cc
dd				Awatovi-Jeddito B/y	1300-1375	dd

Table 1 continues on next page.

Table 1. *Continued from previous page.*

	Tradition	Direction	Pottery Ware	Pottery Type	Dates (A.D.)	
ee				Jeddito Corrugated	1300-1700	**ee**
ff				Bidahochi Poly	1315-1375	**ff**
gg				Jeddito B/y	1350-1700+	**gg**
hh				Sikyatki Poly (early)	1350-1380	**hh**
ii				Paayu Poly	1350/1375-1400	**ii**
jj				Sikyatki Poly (late)	1400-1700+	**jj**
kk			Little Colorado WW	Walnut B/w	1100-1250	**kk**
ll				Leupp B/w	1200-1250/1260	**ll**
mm			Tsegi OW	Medicine B/r	800-950	**mm**
nn	**Kayenta**		Tusayan WW	Tusayan B/w	1200-1300	**nn**
oo				Kana'a B/w	725-1000	**oo**
pp				Black Mesa B/w	900-1100	**pp**
qq				Sosi B/w	1120-1150	**qq**
rr				Flagstaff B/w	1125-1200	**rr**
ss				Bidahochi B/w	1325-1400	**ss**
tt	**Cibola**	East	White Mountain RW	Fourmile Polychrome	1325-1400	**tt**
uu			Cibola WW	Snowflake B/w	1100-1275	**uu**
vv				Tularosa B/w	1180-1300	**vv**
ww			Zuni Glaze Ware	Heshotauthla Polychrome	1270-1380	**ww**
xx				Kwakina Polychrome	1325-1400	**xx**

1r-t, 1kk-ss) are found on Perry Mesa. Several pottery types from the Hohokam region to the south found their way onto Perry Mesa (see Table 1a-e), as did some from the Mogollon Highlands (see Table 1tt-vv).

Several Roosevelt Redware types occur as well (see Table 1f-m). Phoenix Polychrome likely came from the Lower Salt River Valley. Tucson Polychrome probably originated along the Santa Cruz or Lower San Pedro River. Pinto Polychrome, Gila Polychrome, Tonto Polychrome, Cliff Polychrome, and Nine Mile Polychrome are also found but their production locales have yet to be identified (cf. Wilcox and Holmlund 2007:18; see also Crown 1994; for pottery presence, see Ahlstrom et al. 1992; Ahlstrom and Roberts 1995; Fiero et al. 1980; North 2002; Russell and Freeman 2010a; Shockey and

Table 2. *Decorated ceramics from Pueblo la Plata and Richinbar Ruin.*

		Number[1]		Percentage[2]		
Group	Ceramic Type	La Plata	Richinbar	La Plata	Richinbar	P[3] [Q[4]]
Saladoan	Roosevelt Red Ware, Indet.	68	26	----	----	----
Saladoan	Gila Polychrome	25	10	----	----	----
Saladoan	Tonto Polychrome	16	10	----	----	----
Saladoan	Los Muertos Polychrome	5	4	----	----	----
Saladoan	Cliff Polychrome	8	4	----	----	----
Saladoan	Phoenix Polychrome	0	4	----	----	----
	Saladoan Totals[5]	122	58	29	68	<0.0001 [0.4]
Tusayan	Hopi Yellow Ware, Indet.[6]	131	7	----	----	----
Tusayan	Awatovi B/y	37	11	----	----	----
Tusayan	Jeddito B/o	1	0	----	----	----
Tusayan	Jeddito B/y	72	1	----	----	----
Tusayan	Jeddito Corrugated	6	1	----	----	----
Tusayan	Chavez Pass B/r	1	0	----	----	----
Tusayan	Chavez Pass Polychrome	1	0	----	----	----
Tusayan	Winslow Orange Ware, Indet.	4	0	----	----	----
Tusayan	Homolovi Polychrome	15	1	----	----	----
Tusayan	Tusayan White Ware, Indet.	1	0	----	----	----
Tusayan	Bidahochi B/w	11	0	----	----	----
Tusayan	Bidahochi Polychrome	5	2	----	----	----
Tusayan	Tuwiuca B/o	1	0	----	----	----
Tusayan	Kwaituki B/o	1	0	----	----	----
Tusayan	Kokop B/o	1	0	----	----	----
Tusayan	Sikyatki Polychrome	3	1	----	----	----
	Tusayan Totals[5]	291	24	69	28	0.001 [0.4]
Mogollon	Cibola White Ware, Indet.	0	1	----	----	----
Mogollon	White Mountain Red Ware, Indet.	3	0	----	----	----
Mogollon	Heshotauthla Polychrome	1	0	----	----	----
Mogollon	Fourmile Polychrome	4	1	----	----	----
Mogollon	Kwakina Polychrome	1	0	----	----	----
Mogollon	Tularosa B/w	0	1	----	----	----
	Mogollon Totals[5]	9	3	2	4	0.4372 [0.2]

[1]Number of sherds collected from site and included in sample

[2]Percentage of *entire* decorated assemblage (including types not represented in this analysis)

[3]Measure of statistical significance between inter-site group representation using Fisher's Exact Test; two-tailed

[4]Yule's Q (≈ Goodman and Kruskal's γ in this instance)

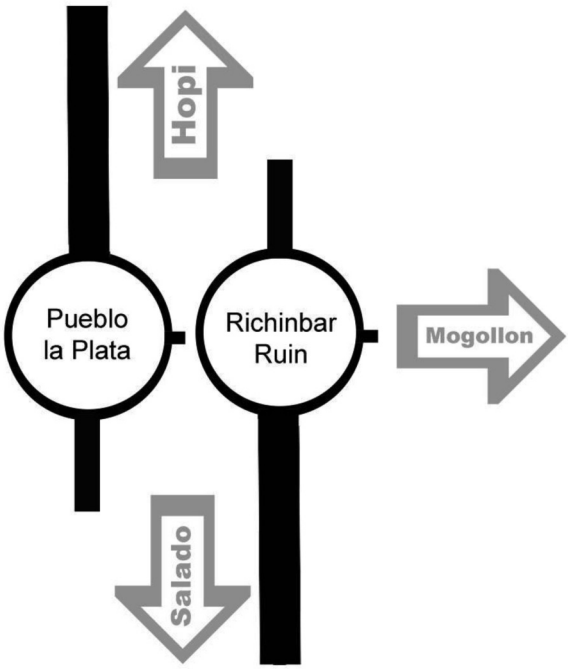
[5]Total number of sherds assigned to group

[6]Includes types identified by Wilcox (Wilcox and Holmlund 2007) as "Awatovi-Jeddito B/y", "Awatovi-Jeddito B/y (no black paint)", "Awatovi-Jeddito Yellow", "plain polished yellow", "pol. Yellow", "Pol. Yellow (Jeddito), "Jeddito y", "Jeddito Yellow", "Jeddito Yellowware", "ind. Jeddito Yellow Ware", and "Awatovi Yellow"

Watkins 2009; Wilcox and Holmlund 2007:Appendices B, E).

A not-insignificant amount of Los Muertos Polychrome (Table 1k) is also encountered, likely coming from the Phoenix Basin (see Neuzil and Lyons 2005:30-31). This Salado type is common enough that Wilcox (1987, 2007:238; Wilcox and Holmlund 2007) has referred to it as "Perry Mesa Polychrome". Crown (1994) analyzed ten Roosevelt Red Ware sherds from Pueblo la Plata. Her

Figure 3. *Zia chart showing relative ceramic intrusion at Pueblo la Plata and Richinbar Ruin. Decorated ceramic assemblages are represented by three bars per site: Tusayan (extending upward), Mogollon (extending to the right), and Saladoan (extending downward). Bar length and width is relative to assemblage compilation.*



results suggest a common, though as-yet-unidentified source with some affinity to clays in the Grasshopper area in eastern Arizona. Although no additional source analyses have been undertaken and Patrick Lyons (personal communication, 2009) has seen nothing to suggest local Roosevelt Red Ware manufacture (see also Neuzil and Lyons 2005:30-31, 33), Wilcox recently wrote that "Gila or Tonto Polychrome may have been manufactured on Perry Mesa" (Wilcox and Holmlund 2007:18; cf. Fiero et al.1980:97, 103, 114; see also Ahlstrom and Roberts 1995:63; Wood 1987). If he is correct, this would suggest the local people were participating in the burgeoning religious complex (Wilcox and Holmlund 2007:18) we know as the Salado Phenomenon (Crown 1994). At present, however, we

do not believe this to have been the case, given that there is no evidence of local Salado Polychrome production or platform mound construction.

As compositional analyses become more common, our nuanced understanding of interregional connectivity improves. For example, Bernardini (n.d.) has demonstrated that much of the intrusive Hopi Yellow Ware on Perry Mesa came from Antelope Mesa specifically. This alone does not demonstrate *migration* between Perry Mesa and Antelope Mesa, but does suggest a stronger, more direct, and more precise connection than simply a "Hopi" one.

In addition to sourcing, several ceramic clues can help to assess nonlocal connectivity and potential origins. For example, some colleagues suspect that emigrants from the collapsing "Prescott Culture" tradition contributed significantly to the population of Perry Mesa (Fish et al. 1975:42; Wilcox et al. 2001a, 2001b; Wood and Wilcox 2001:12). Although Prescott Black-on-grey (B/g) was manufactured and used nearby into the fourteenth and possibly fifteenth century (Ahlstrom and Roberts 1995:58; Caywood and Spicer 1935; Macnider and Effland 1989:88), it is rarely encountered on Perry Mesa. We do not doubt that people from the Prescott area arrived on Perry Mesa, but the paucity of gray ware suggests they were neither alone nor in majority (see Ahlstrom and Roberts 1995:58; Fiero et al. 1980:Table 14; Gumerman et al. 1976:Figure 4).

A single perforated plate sherd was recently found at Rattlesnake Mate Ruin (NA11,490). Perforated plates, thought to have been used during pottery production, are seemingly limited to Kayenta sites and Kayenta site unit intrusions (see Lyons and Lindsay 2006). Because perforated plates are thought not to have been trade items, their presence on Perry Mesa may suggest a displaced Kayenta presence. The scale of any such presence, however, is likely to have been minimal.

At present, it appears that only plain ware pottery was produced in the immediate Perry Mesa vicinity (Ahlstrom and Roberts 1995:40, Table 2; David Abbott and Christopher Watkins, personal communication 2008; but see Ahlstrom and Roberts 1995:63; Fiero et al. 1980:97, 103, 114; Wood 1987). Nearly all of the local, plain ware pottery incorporates sand temper from the canyons below (Sophia Kelly, personal communication 2010). A small percentage of local pottery was reportedly made with sherd temper (Fiero and others 1980:114), a Mogollon and Puebloan practice. Perry Mesa plain ware is generally thought of as having been smoothed with a

paddle and anvil (David Abbott and Christopher Watkins, personal communication 2008; see Wilcox and Holmlund 2007:Figures 12-13) – the standard technique for Hohokam pottery and Alameda brown ware – but future analyses may assess the universality of this. Ahlstrom and Roberts (1995:58) report that Perry Mesa plain ware ceramics are largely similar to those of the earlier "Prescott Culture" while Breternitz (1960:27) makes a similar argument for Middle Verde semblance.

There is an abundance of red-slipped pottery at almost every Perry Mesa site. Projects have recorded Salt, Salado, Sacaton, Sunset, Gila, Verde, Tuzigoot, Wingfield, smudged, and micaceous varieties of red-slipped pottery (see Wilcox and Holmland 2007:121 n. 7). Ahlstrom and Roberts (1995:40) suggest that redware effigy vessels may have been made on Perry Mesa (see also Jacka 1980:277; Jerry Jacka, personal communication 2011). Wilcox and Holmlund (2007:Figures 9-10) provide photographs of three effigy vessels recovered at Big Rosalie (NA13,477) and Pueblo Pato but their production locale is currently unknown. Two of the jars, human effigies, are similar in form and style to Preclassic Hohokam (ca. A.D. 470-1150) analogues (Wilcox and Holmlund 2007:11). The third jar is of the "submarine vessel" form, best known in the San Juan Basin and Mesa Verde areas (e.g., Bullock 1992; Till and Ortman 2007:Table 21).

Comales are stone or ceramic griddles used to prepare tortillas. Fish and others (1975:28; Ahlstrom and Roberts 1995:Table 2) have listed these as one of several core attributes of the Perry Mesa Tradition (see also Wilcox and Holmlund 2007:18, 121-122 n. 16). Comales were introduced into the Hohokam region, probably from northwestern Mexico, during the Classic (ca. A.D. 1150-1450) period (Crown and Fish 1996:805; Haury 1945). Wilcox notes that while Hohokam ceramic comales have basket impressions on one side, those found on Perry Mesa do not (Wilcox and Holmlund 2007:122 n. 16; Jerry Jacka, personal communication 2011).

Architectural Evidence

Though readily apparent, few archaeologists have explicitly discussed the architectural diversity atop Perry Mesa (although see

Fiero et al. 1980:116, 151; Jacka 1980:274; Russell 2007, 2008, n.d.; Russell et al. 2008, in press; Strawhacker 2008). Several architectural dissimilarities are discussed below.

Style, Form, Technique, and Layout

Residential sites (including so-called "field houses") on Perry Mesa are incredibly diverse in site placement, layout, construction method, level of aggregation, and degree of defensibility (Fiero et al. 1980:116, 151; Jacka 1980:274; Russell 2007, 2008; Russell et al. 2008; n.d.). Many readers will be most familiar with large villages such as Pueblo Pato (NA11,434). These are often situated along sheer cliffs that ring the mesa's western and southern edges. Some, like Pueblo de las Mujeres (NA13,470) and Fortified Garden (NA11,830) are further protected by substantial perimeter walls (see Jacka 1980:276). Construing these architectural features as defensive, Wilcox and others (2001a, 2001b; Wilcox and Holmlund 2007) came to envision a "castle defense" network, wherein Perry Mesa pueblos were strategically arranged to cooperatively report and repel enemy attacks. However, this level of defensive planning apparently did not extend to everyone on Perry Mesa (cf. Fiero et al. 1980:117). Pueblo la Plata, for example, is centered on an interfluve and has no defensive attributes.[1] Baby Canyon Pueblo (NA12,556) is perched atop a lonely knob, separated from the mesa proper. Running Deer Pueblo (NA5,856) is located at the base of Black Mesa and AZ N:16:15 (PC) sits at the riparian junction of Lousy Canyon and the Agua Fria. Such disparity in defensive attributes implies one of two things: either (1) some villages depended on others for their protection, or (2) some immigrant groups felt more threatened than others, perhaps because of differential exposure to violence in disparate homelands. There is no convincing evidence of violence atop Perry Mesa, suggesting that defensive architecture may have been driven by *perceptions* of

1 The western *tip* of the La Plata landform is protected by a combination of towering cliffs and a massive perimeter wall. Referred to as Fort Silver (NA26,090), this site has been interpreted as a castle keep for the people of Pueblo la Plata. J. Scott Wood (personal communication, 2009), however, believes this to be a nineteenth century Apache or Yavapai stronghold and we concur. There are precious few prehistoric artifacts here and the only evidence of residential architecture is consistent with *wickiup* rings (see descriptions in Wilcox and Holmlund 2007:57). Had the people of Pueblo la Plata been concerned enough to construct Fort Silver (nearly 700 m away), we suspect they would have simply built their pueblo there.

danger rather than actual peril.[2] If this was the case – and given that such concern was clearly not unilateral – it suggests that different groups had been exposed previously to differing levels of conflict in disparate places, later migrating to Perry Mesa with variable ideas concerning adequate precautions.

Ahlstrom and Roberts (1995:58) find similarity between the large pueblos of Perry Mesa and those of the Prescott area (cf. Fiero et al. 1980:151) but dismiss Prescott Culture origins based on ceramic evidence (see above). Jacka (1980:276) compared Perry Mesa architecture to Salado sites in the Tonto Basin (see also Ahlstrom and Roberts 1995:63; Fiero et al. 1980:121-122; Gumerman and Weed 1976). Fiero and colleagues (1980:116, 121, 154) seem conflicted as to whether Perry Mesa architecture resembles that of Classic period Hohokam sites (see also Ahlstrom and Roberts 1995:63; Johnson and Wasley 1966), while Clark and others (2008) are convinced that it does not. Several authors have suggested architectural similarity to the Middle (Fiero et al. 1980:116-117, 121) and Lower Verde River valleys (Deaver et al. 1994), but Fish and Fish (1977:16) correctly contrast the prevalence of oversized "community structures" on the Verde with their absence on Perry Mesa. Fiero and colleagues (1980:121, 151, 154) also suggested there was Sinaguan influence on Perry Mesa architecture.

The Perry Mesa area is home to a large number of highly formalized, ceremonial racetracks, distributed between the Bradshaw Mountains and Mazatzal Wilderness (west to east), and Cave Creek to Stoneman Lake (south to north) (Russell 2007, 2008, n.d.; Russell and Nez n.d.a, n.d.b; Russell et al. 2008, in press). Most known racetracks in the Southwest date to the protohistoric and historic periods (see Ellis 1979:Figure 13; Harrington 1916:211, 362; Nabokov 1981:51; Parsons 1929:234, 1936, 1939:206-207; F. Russell 1908:173), but a handful of prehispanic features in the Hohokam region at least resemble the Perry Mesa exemplars. Hart (2001) recorded a linear feature at the Sedentary (ca. A.D. 900-1150) period site of Cahava Springs and in fact commented on its similarity to Perry Mesa racetracks. Di Peso (1956:219-220, Plate 67, Figures 31, 83) excavated a similar feature at Palopalardo, a Preclassic site in

2 Some evidence of structural burning has been encountered (e.g., Fiero et al. 1980; Jacka 1980; Wilcox and Holmlund 2007:3) but there are numerous explanations aside from conflict (e.g., mortuary conflagration, pest control, accidental combustion, abandonment ritual).

southern Arizona.

Fiero and colleagues (1980:119) note that on Perry Mesa, small field houses often accompany fields that are relatively close to pueblos. They compared this pattern favorably with those at Hopi (Fewkes 1898:640) and Jemez Pueblo (Poore 1893:106). We have also seen this relationship at Chavez Pass, an ancestral Hopi site between Perry Mesa and Hopi.

Perry Mesa structures range in size from one room to as many as 200 or more. Most were but a single level, but some may have been two or three stories tall (Jacka 1980:274-275). Rooftop, lateral, and passage-way entrances are known (Jacka 1980:275). Some floors are compacted dirt (Fiero et al. 1980:116; Jacka 1980:275) while others are paved with flat stones (Jacka 1980:275). There are rectangular (e.g., Fiero et al. 1980:85; Jacka 1980:274), oval (e.g., Fiero et al. 1980:126, Figure 75; Jacka 1980:274; North 2009:147; Spoerl and Gumerman 1984:Figure 8.7) and round structures (e.g., Fiero et al. 1980:126; Jacka 1980:274). Some have enclosed courtyards (e.g., Ahlstrom and Roberts 1995:Figure 8:Mound A; Fiero et al. 1980:Figures 51-52; Spoerl and Gumerman 1984:Figure 8.7) and others *may* have had plazas (Fiero et al. 1980:116, 123; Mapes 2005; see also Ahlstrom and Roberts 1995:22; Jacka 1980:276).[3]

Fish and others (1975:28; Ahlstrom and Roberts 1995:Table 2) suggested that *paired pueblos* were characteristic of Perry Mesa architecture. Paired pueblos, reminiscent of Mishongnovi and Shipaulovi, are present but not ubiquitous. Other villages occur as large, contiguous pueblos and many consist of multi-roomblock clusters (Ahlstrom and Roberts 1995:Table 2).

Construction Methods

In discussing the recognition of migrants in the archaeological record, several researchers have suggested that extra weight be given to subtle, often concealed, and non-expressive efforts including construction techniques (see Carr 1995; Clark 2001; Lechtman 1977; Lemonnier 1986; Lindsay 1987; Lyons 2003; Stark et al. 1998). Below,

3 The presence or absence of large interior plazas at Perry Mesa pueblos is open to debate. Some references to interior plazas may refer to perimeter walls. Mapes (2005) suggested that Pueblo la Plata originally included an interior plaza but Wilcox and Holmlund (2007:87-88) call this "dramatic" and "misleading". Wilcox has stated that some Perry Mesa sites do have interior plazas, but that these have gone largely unnoticed.

I briefly discuss diversity in building methods and how this may relate to earlier, nonlocal areas.

Many structures on Perry Mesa had full-height walls but a good number apparently did not, suggesting brush or adobe superstructures (e.g., Fiero et al. 1980:86). *Cimientos* and rectangular rock outlines - perhaps representing jacals - are encountered, as are cleared, "sleeping circle"-like features. There is also limited evidence of semi-subterranean structures (Fiero et al. 1980:85-86; Kruse-Peeples et al. 2009:Figure 4.8; Russell 2007) and occupied rock shelters (Pilles and Katich 1967). Despite ample access to basalt clays, there is no known adobe construction, encountered frequently in Classic period Hohokam villages.

Most of the masonry walls on Perry Mesa are built of basalt cobbles but some use Pre-Cambrian stone from the valleys below (Ahlstrom and Roberts 1995:22) and one utilized caliche. Most wall rocks are unshaped (Fiero et al. 1980:85), a practice best known from the Mogollon region (cf. Rinaldo 1959:Figure 62). Some pueblos, however, include shaped stone (see Fiero et al. 1980:85; Strawhacker 2008), a technique principally limited to the Anasazi world and Anasazi unit intrusions (e.g., Di Peso 1958a, 1958b; Gerald 1958; Woodson 1999). Not infrequently, large boulders or bedrock outcrops are incorporated into walls (Fiero et al. 1980:82), much like contemporaneous pueblos to the north and northeast. Walls were at times faced with upright slabs (Fiero et al. 1980:82), another Mogollon hallmark (e.g., Martin et al. 1961:Figure 14; Martin et al. 1964:Figure 21; although see Redman and Minnis 1992:Figure 5.5).

Hearths

Intramural hearth construction has long been recognized as strongly tied to identity and contrasting hearth types have been used previously to distinguish between co-residential populations. On Perry Mesa, several hearth styles and placements have been noted during limited excavation. Common are informal concentrations of burned material (e.g., Fiero et al. 1980:84) and round or oval depressions. North (2009:Table 3.6) describes a U-shaped hearth built with three upright slabs, a form known in the Mogollon and Pueblo regions (see Breternitz 1959:Figure 6; Martin et al. 1964:Figure

8; Truell 1992:Figures 4.11, 4.13-4.14, 4.19). Fiero and colleagues (1980:Figures 61-62) depict a rectangular, slab-lined hearth with a central divider (possibly creating a hearth-ash pit complex). This style is best known from the Mogollon Highlands (e.g., Martin and Rinaldo 1960:Figures 74-75; Martin et al. 1961:Figure 25; Martin et al. 1964:Figure 16) and the Mimbres region (see Hegmon et al. 2006:Figure 4.1; Shafer 2003:Figure 5.22, 2006:Figure 2.5). Excavated hearths on Perry Mesa are often found in the center in rooms (e.g., Fiero et al. 1980:Figures 61-62), a common observation throughout the Southwest, but are occasionally located just inside a doorway, against walls (see Fiero et al. 1980:Figures 51-52) or in extramural contexts (e.g., North 2009:179).

Roasting Pits

Expansive roasting pits are well-known features atop Perry Mesa. Some of the largest occur in conjunction with ceremonial racetracks and can be in excess of 20 m in diameter (Russell 2007, 2008, 2010a, n.d.; Russell and Freeman 2010a, 2010b, n.d.; Russell et al. 2008, in press). Roasting pits on Perry Mesa occur in one of three surface forms. Most appear as low, sub-circular mounds of burned and fire-cracked rock. These are thought to represent pits that were abandoned when closed. Other roasting pits are visible as large rings of discarded fire-cracked rock surrounding ashy soil. These are interpreted as ovens that were opened and emptied prior to abandonment. In size and morphology, both of the above types are similar to thermal features common in far-west Texas (Russell and Freeman n.d.) but not terribly unlike roasting pits elsewhere in the Southwest. The third type of Perry Mesa roasting pit is encountered as a burned-rock midden centered in a round clearing, the edge of which is ringed with stone (see Ahlstrom et al. 1992:Figure 5). Some authors have commented on their similarity to analogues in the Tonto Basin (Ahlstrom et al. 1991; Ahlstrom and Roberts 1995:62), northern Chihuahua (Ahlstrom and Roberts 1995:62), and the Morenci area (Roberts and others 1995:31-32). Very little subsurface data exist for roasting pits on Perry Mesa, as only one has been excavated (Cummings and Puseman 1995).

Mortuary Evidence

Few mortuary data exist for Perry Mesa, but those that are available suggest substantial diversity in mortuary practices (Jacka 1980:282). Evidence of inhumation is periodically exposed by looting activity as well as erosion (Ahlstrom et al. 1992; see also Fiero et al. 1980:125). Inhumations are often but not always extended (Ahlstrom and Roberts 1995:37; Jerry Jacka, personal communication 2011) and occur beneath floors (Ahlstrom et al. 1992:87; Jerry Jacka, personal communication 2011), in wall niches (Jacka 1980:281), in courtyards (Fiero et al. 1980:83), beyond pueblos (Russell 2008:32; Jerry Jacka, personal communication 2011), in pole-roofed crypts (Jacka 1980:276), and in rock shelters (Ahlstrom et al. 1992:87; memorandum from author to U.S. Bureau of Land Management, November 1, 2010). Fiero and colleagues (1980:125) and Jacka (1980:282) discuss cremations in the immediate area but these may predate the Perry Mesa Tradition.

Supra-torso Burials

Fiero and others (1980:83) discuss a courtyard burial at site NA11,435 that consisted of a skull and three vertebrae, possibly suggesting decapitation. Jerry Jacka (personal communication, 2011) recalled finding a skull resting on or by the feet of a complete buried individual.

Sacrifice and decapitation are discussed in Southwestern indigenous histories and evidenced in the archaeological record (e.g. Darling 1999; James 2002; Kabotie 1982:75-76, 79; Lomatuway'ma et al. 1993:9-11, 35, 43, 409; McIntyre 2008:18; Nequatewa 1936:85; Parsons 1926:185, 1939:424, 970, 1017; Simmons 1980; Stevenson 1904:30; Twitchell 1914:430; Underhill et al. 1979:141-146; see also Bunzel 1932:479; Stevenson 1904:104). Many readers will be familiar with Mimbres B/w bowls that depict beheadings (see Brody 2004:Figures 31-43) and there are numerous rock art panels (mostly in the Four Corners region) that appear to show similar acts (see Farmer 1997). Grace Schoonover (personal communication, 2011) recalls a beheading petroglyph near the Perry Mesa site of Pueblo de las Mujeres. Archaeological deposits containing human heads

alone have been discovered at several Southwestern sites. This often appears to have been the result of armed conflict (e.g., Baker 1990; Billman et al. 2000:159; Kuckelman et al. 2002:502; Turner and Morris 1970:323, 330; Turner and Turner 1999; Wilcox and Haas 1994:227-229; see also Ogilvie and Hilton 2000:45-46) and is thus hardly analogous. Comparable, formal burials of crania alone, however, suggest ritual or ideological connections to the Mimbres and Casas Grandes areas (see Anyon and LeBlanc 1984:180-182, Appendix II; Creel and Anyon 2003:77; Di Peso 1974:2:712 n. 79; Di Peso et al. 1974:2:587, 5:769-771, 8:240, 395; Rakita 2001:62, 305-306, Table 6.1).

Parrots, Macaws, and Burials

A child burial at Baby Canyon Pueblo included a parrot (Wilcox and Holmlund 2007:12). A review of Southwestern archaeological literature has identified 22 other instances wherein human burials included parrots or macaws. One was encountered at Grasshopper Pueblo (Olsen and Olsen 1974:68), one at Kinishba (Baldwin 1939:319), six at Mimbres sites (Creel and McKusick 1994), 14 at Paquimé (Casserino 2009:44-45; Di Peso 1974:5:476; Di Peso et al. 1974:8; see also Walker 2002), and one at Site 204 in the Casas Grandes area (Whalen and Minnis 2003:323). Only three of these were child burials; two at Galaz and the one at Grasshopper. Interring parrots and macaws in human burials appears to have been a distinctly Mogollon/Chihuahuan practice. Lyons (2007:16) has suggested that the distribution of macaw burials (alone) can assist in identifying prehistoric migrations. We would argue that the far rarer practice of burying tropical birds *with people* can do the same.

Kill Holes

A human effigy vessel found at the Big Rosalie site has two holes knocked in one side (Wilcox and Holmlund 2007:Figure 9). Jerry Jacka has shown the authors a redware bowl from Perry Mesa that includes a hole through the base. These are consistent with "kill holes" common in Mimbres B/w bowls (e.g., Brody 2004) but also sparingly present in Rio Grande and Casas Grandes plain wares, Chupadero B/w, Playas Red, Gila Polychrome, Matsaki Polychrome, and Hawiku

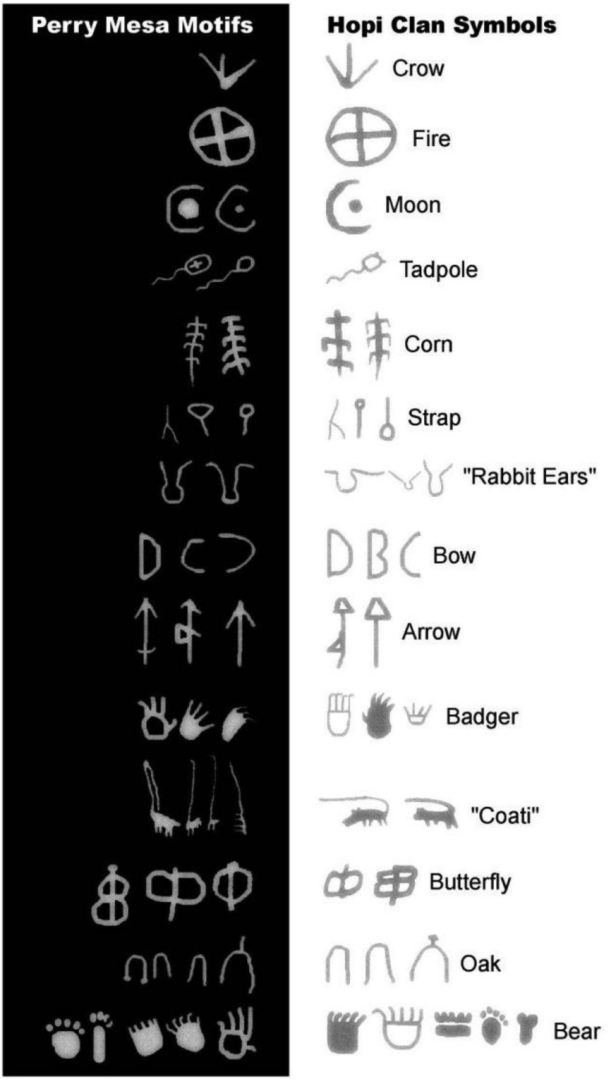
Figure 4. *Sample of artiodactyl petroglyph diversity on Perry Mesa (not to scale).*

Table 3. *Perry Mesa petroglyphs consistent with Hopi clan symbols.*

Migration Route per Clan History		**Clan Possibly Represented**		
Origin	**Ancestral Site**	**Hopi Name**	**English Gloss**	**N**[1,2,3,4]
Palatkwapi[5-9,11]	*Homol'ovi*[6]	*Honngyam*[5,6]	Bear	8
		Piqösngyam[5,6]	Strap	19
		Pavatyangyam[5,6]	Tadpole	7
	unknown	*Pikyasngyam*[9,12]	Corn[13]	5
	Kiisiw[6,8]	*Honanngyam*[5,6]	Badger	3
		Angwusngyam[5,6]	Crow	2
	unknown	*Awatngyam*[5,6]	Bow	9
Muiobi[8,9]	*Kiisiw*[8]	*Poungyam*[9]	Butterfly	26
	Suyátupovi[9]	unknown	Oak	19
Kawestima[6,7,15]	*Homol'ovi*[6]	*Kookopngyam*[5,6,9]	Fire/Firewood	18
unknown[14,16]	unknown[14,16]	unknown[14,16]	Moon	15
			Arrow	2
			"Coati"[16]	23
			"Rabbit Ears"[16]	5

[1-4]motifs identified on Perry Mesa via [1]Napton and Greathouse 1990; [2]Perry Tank Canyon Project files, Archaeological Research Institute, Arizona State University, Tempe; [3]Schoonover 2003; [4]Stone 2003
[5]Ferguson 2003
[6]Lyons 2003
[7]*contra* Fewkes 1900
[8]Fewkes 1900
[9]Michaelis 1981
[10]Titiev 1944
[11]Mindeleff 1891:39
[12]Whiteley 1985
[13]There is considerable confusion in the literature regarding the "Corn Clan"; there is a possibility that several interrelated clans existed at one time, including the *Corn, Young Corn, Young Corn Ear, Mature Corn, Wilted Corn*, and *Germination God* clans.
[14]Extinct prior to ethnographic contact
[15]*contra* Michaelis 1981
[16]see Bernardini 2002

Figure 5. Comparison of some Perry Mesa petroglyph motifs (left) and historically-used Hopi clan symbols (right; after Bernardini 2002, 2009; Colton 1960; Colton and Colton 1932; Fewkes 1897, 1903; Michaelis 1981; Nequatewa 1936; not to scale).



Polychrome (e.g., Eckert 2003; Robinson and Sprague 1965). Few whole vessels from Perry Mesa are known to archaeologists, so the extent of this treatment is unknown.[4]

Perry Mesa Rock Art

The rock art of Perry Mesa is extraordinarily diverse in both style and subject matter but, like painted pottery, it is also highly visible and stylistically active. Thus, variability could have resulted from iconographic diffusion, emulation, personal preference, visitation, or migration. Nonetheless, the diversity of rock art on Perry Mesa (see Figure 4) rivals that of most areas in the Southwest and below we draw attention to a sample of compelling observations.

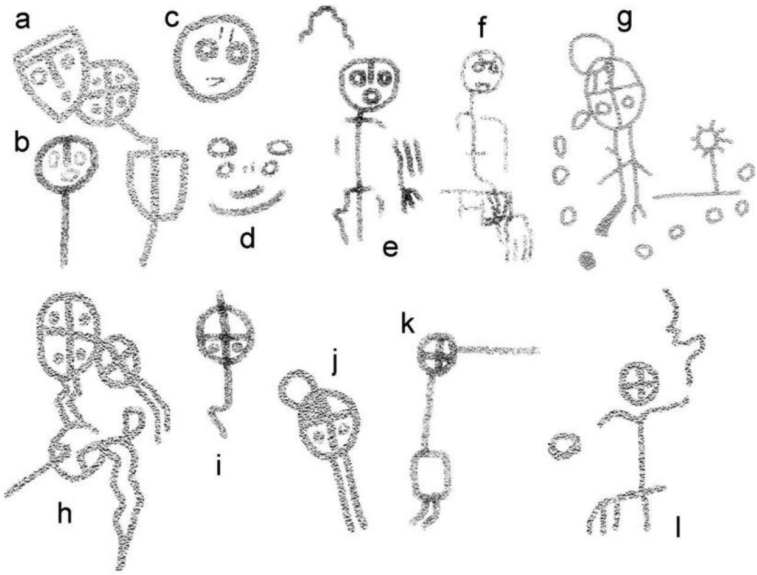
Possible Hopi Clan Symbols

Sampling only a handful of Perry Mesa sites, Arleyn Simon and Russell (n.d.) have identified 133 petroglyphs that are consistent with symbols used historically by 12 Hopi clans (Table 3, Figure 5). Our analysis was limited to nuanced and distinct motifs, excluding referents to familiar matter (e.g., snakes, deer, lizards) and ubiquitous geometric elements (e.g., spirals, circles, crosses).

What is today known as *Hopi* is in fact a collection of numerous clans, each of which has its own history prior to arriving at *Tuuwanasavi* (the Hopi Mesas). Over 150 Hopi clans, both extant and extinct, have been documented. Individual clan histories discuss migration routes, ancestral villages, and social relationships. Some Hopi clans lived for a time in *Palatkwapi,* an arid land many equate with the Phoenix Basin (Curtis 1922:13; Fewkes 1897:193, 1900:597, 1907:324; Hodge 1910:193; Nequatewa 1936:85 n. 55; Voth 1905:48; see also Ferguson 2003; Hough 1915:194). Leaving Palatkwapi, many of these clans traveled north to *Nuvakwewtaqa* (Chavez Pass), *Homol'ovi* (near Winslow), and other ancestral sites (e.g., *Kiisiw* [Shadow Springs], *Suyátupovi* [Canyon de Chelly]) before arriving at Tuuwanasavi. This pattern of serial migration and cultural syncretism

4 The holes in question could also be the result of post-depositional damage, including sub-surface probing efforts by looters. The lower of the two holes appears to have been knocked or ground *out* from the jar's interior, suggesting all the more that it is in fact a kill hole.

Figure 6. *Petroglyphs from the Arrastre Creek site, Black Mesa. Figures 6a-g and 6l may represent Kachinas. Figures 6a and 6g-l incorporate motifs consistent with the Hopi Fire Clan. (after Schoonover 2003:114-115, 119, 121, 124-126; not to scale)*



is consistent with our vision of Perry Mesa's culture history.

If the Perry Mesa petroglyphs in question *are* Hopi clan symbols, we might expect them to reference southern (i.e., Palatkwapi) clans in higher frequency than gens originating elsewhere (e.g., *Kawestima* [the Kayenta area], *Muiobi* [the Upper Rio Grande]) (cf. Russell and Wright 2009). Table 2 shows that of the 12 potentially-represented Hopi clans, seven came from Palatkwapi according to independent indigenous histories (e.g., Bernardini 2002, 2005a; Courlander 1971; Ferguson 2003; Ferguson and Lomaomvaya 1999; Hough 1915; Lomatuway'ma et al. 1993; Lyons 2003; Nequatewa 1936; Titiev 1944; Voth 1905) and the origin of two is unknown. In other words, of the potentially represented clans with known origins, 70 percent are from Palatkwapi.

Petroglyphs consistent with the Hopi Fire Clan symbol (see Figures 5-6) are especially prevalent at the Arrastre Creek site (AZ N:16:70 MNA) (Schoonover 2003). This site also contains an impressive number of petroglyphs that may depict Kachinas (see Figures 6a-g). Some share similarities with symbols used historically by the Hopi Máasaw Clan (see Fewkes 1897; Michaelis 1981).

We have also identified 28 petroglyphs that may represent two now-extinct sodalities (Simon and Russell n.d.). At Chavez Pass and surrounding sites, Bernardini (2002) noted two recurring motifs that he tentatively identified as extinct Hopi clan symbols. He refers to these as "rabbit ears" and "coati". To the south of Chavez Pass, rabbit ear and coati glyphs are now known only on Perry Mesa and in the Phoenix Basin (Simon and Russell n.d.; Russell and Wright 2009). If Bernardini (2002) is correct, this may be yet another indicator of proto-Hopi movement northward in the late Classic period (see Ferguson 2003; Ferguson and Lomaomvaya 1999).

Local Variability and Nonlocal Affinity

Rock art of the prehispanic Southwest is spatially variable with regard to manufacturing technique (see Wright and Bostwick 2009), placement (see Whitley 2005; Wright 2011), and depiction (e.g., Bostwick and Krocek 2002; Grant 1967; Schaafsma 1980, 1992; Slifer 1998). Studies have shown that the rock art of Perry Mesa is both locally heterogeneous and frequently comparable to nonlocal exemplars. Huang (2006, 2010) demonstrated inter-site variability in the execution of certain motifs in the Baby Canyon area. In conjunction with the *Perry Tank Canyon Project* (a collaboration between Arizona State University and the U.S. Bureau of Land Management), Simon and Russell (n.d.) documented rock art diversity on southern Perry Mesa, including stylistic and iconographic ties to other regions.

Many of the petroglyphs on Perry Mesa would not look out of place in Hohokam contexts (see Ferg 1979; Schaafsma 1980:81-104; Wallace 1991; Wallace and Holmlund 1986; Wright 2011). These include stick-figure life forms, waterbirds (Schoonover 2003:30) like those on Hohokam buff ware (e.g., Gladwin et al. 1937:Plate CLXXIXj-n), and simple geometric patterns. There are, however, a surprising number of motifs, themes, and techniques that may occur

periodically in the south but are far more common elsewhere.

Some colleagues have reported pictographs in the area (Ahlstrom and Roberts 1995:35; Wood and Wilcox 2001:12) and Southwestern pictographs are almost entirely relegated to Mogollon and Pueblo sites (see Schaafsma 1980, 1992). The same can be said of scratched and incised petroglyphs (Wright and Bostwick 2009) as well as depictions in relief (North 2009:Photograph 3.3). There are plenty of cupules, "D-shaped" artiodactyls, and intricate "maze" glyphs, all of which are most prevalent in the Mohave Desert, on the Lower Gila and Colorado Rivers, and along the southern Pacific Coast (e.g., Whitley 1996). There are several *pipette* petroglyphs (see Ferg 1979) on Perry Mesa and while these are present throughout the Greater Southwest, they are most concentrated in the Phoenix Basin (Russell and Wright 2008; see also Bostwick and Krocek 2002; Golio et al. 1995). In Hohokam contexts, pipette production may have been limited to the Preclassic period (Russell and Wright 2007, 2008, 2009; see also Golio et al. 1995) but those on Perry Mesa are likely to have been pecked during the Classic. Jornada-style motifs include isolated, bulbous eyes, fish, and dragonflies (cf. Schaafsma 1980:203; Slifer 1998:Figures 1k, 188, 195-196, 223, 229). A select few petroglyphs bear semblance to narrative Mimbres bowls. These include a male figure with an animated penis (cf. MimPIDD n.d.:515, 2686) and quadrupedal anthropomorphs (Ahlstrom and Roberts 1995:35; cf. Nelson and Hegmon 2010:Figure 12.5). Distinctly Puebloan motifs include ducks, humans with ducks for heads, triangular torsos, faces in profile, waterbirds eating people (or frogs), horned serpents, exaggerated hands and feet, "butterfly" hair whorls, corn stalks, "shields", rectangular artiodactyls, hero twins, mountain lions, human hand- and footprints, and bats (e.g., Ahlstrom and Roberts 1995:Figure 15; Schoonover 2003:29, 34, 78; Stone 2003:8; cf. Schaafsma 1980:Figures 5, 7, 17; Slifer 1998:Figures 67, 75, 91, 95-96, 136, 149, 261).

Stone Artifacts

Lithic Materials

Intrusive mineral artifacts are routinely encountered on Perry

Mesa, including obsidian, argillite, turquoise, quartz crystal, copper oxides, soapstone, slate, and possibly opal (Fiero et al. 1980:115; Jacka 1980:281Wilcox and Holmlund 2007:93). With the exception of obsidian, however, no sourcing analyses have been undertaken.

No local obsidian sources are known and several analyses have worked to determine where the intrusive material came from. The literature is unclear as to which samples were used by whom and the degree to which these samples overlap in various analyses. Geib (2007:Table 13) analyzed 450 samples from 15 Perry Mesa sites for Wilcox and Holmlund (2007). Two-hundred-and-two (Wilcox and Holmlund 2007:96, 104) or 205 (Shackley 2009:342) of these had been previously analyzed by Shackley (2005a). Geib's (2007) results and those of Shackley (2005a) were not in total agreement, prompting a second analysis by the latter (Shackley 2005b). The Center for Desert Archaeology also analyzed 200 (more?) obsidian samples (Clark et al. 2008:8).

Table 4 lists obsidian sources as identified by various authors. Many of these lie west of Flagstaff, but some Perry Mesa obsidian came from Topaz Basin (near Cottonwood) and Vulture (west of Phoenix). Geib (2007; Wilcox and Holmlund 2007:104) also identified some Perry Mesa samples as having come from the "southern Southwest". Thus, the people of Perry Mesa appear to have maintained access to a number of obsidian sources in central

Table 4. *Sources of obsidian recovered on Perry Mesa.*

Obsidian Source	Reference
Government Mountain	Geib 2007:Table 13; Shackley 2005a, 2009
Black Tank	Geib 2007:Table 13; Shackley 2009
Partridge Creek	Geib 2007:Table 13; Shackley 2009
Presley Wash	Geib 2007:Table 13; Shackley 2009
Vulture	Shackley 2005a, 2009; Wilcox and Holmlund 2007:104, 124
Topaz Basin	Shackley 2009
"southern Southwest"	Geib 2007; Wilcox and Holmlund 2007:104
"unknown"	Wilcox and Holmlund 2007:104
"northern"	Wilcox and Holmlund 2007:104
"Flagstaff area"	Clark et al. 2008:8

and northern Arizona (perhaps beyond), suggesting equally diverse social affiliations (Table 4). These data have been interpreted in several ways. According to Clark and colleagues (2008:8), the data suggest migration from the Flagstaff area. Wilcox feels the data may support his "Verde Confederacy" model (see Wilcox et al. 2001a, 2001b; Wilcox and Holmlund 2007) and that obsidian was being traded north within the "Hopi macroeconomy" (Wilcox and Holmlund 2007:104). According to Shackley (2009:344), the obsidian data suggest the people of Perry Mesa had amicable relations with people on the Coconino Plateau or had direct access to obsidian sources there. He adds that these data do not necessarily support the Verde Confederacy model, but more likely indicate connectivity in multiple directions (Shackley 2009:344).

A single piece of Vulture obsidian, originating west of Phoenix, was recovered on Perry Mesa and analyzed by Shackley (2005a, 2009; Wilcox and Holmlund 2007:104, 124). Wilcox thought this may "have come into Perry Mesa via a Yuman network" (Wilcox and Holmlund 2007:124 n.56) although Vulture obsidian is routinely encountered in Classic Hohokam contexts (Craig Fertelmes and Chris Loendorf, personal communication 2010; Shackley 2005a, 2009:344). Nevertheless, it is interesting to consider Wilcox's Perry Mesa-Yuman idea. He has suggested that Yuman peoples moved into the abandoned Prescott and Cohonino areas in the fourteenth century (cf. Euler 1963, 1981; Martin 1985) and began trading Flagstaff obsidian into the Phoenix Basin (Wilcox and Holmlund 2007:103). Assessing this hypothesis is beyond the scope of the present paper, but the presence of Yuman immigrants in the area would complement our own hypothesis. Regressing an historic model by Dobyns and Euler (1970), Wilcox (Wilcox and Holmlund 2007:103) has suggested that the fourteenth-century Yuman immigrants of central Arizona may have facilitated trade between the Hopi Mesas, Mohave Valley, and coastal Chumash area. As Wilcox (Wilcox and Holmlund 2007:103) points out, there are documented trails that linked the Lower Colorado and Hohokam areas, as well as a Yuman enclave at the Hohokam site of Las Colinas (see Beckwith 1988:201, 216; Shaul and Andresen 1989; Teague 1989; see also Shaul and Hill 1998). Yuman immigration into the Perry Mesa region could certainly explain the abundance of west-coast petroglyph motifs, cupules, and brush

architecture.

Chipped Stone

Fiero and colleagues (1980:97) first noted inter-site variability in knapping techniques. Jacka (1980:279) commented on the diversity of projectile point types atop Perry Mesa. Geib (2007:Table 13) likewise noted inter-site inconsistencies, such as the anomalous lack of cortical material at NA10,022 (which suggests differential access) and the atypical absence of bipolar reduction at Rattlesnake House (NA11,439).

Whittaker, Ferg, and Speth (1988) examined a large, bifacial tool recovered from Richinbar Ruin and reported several interesting findings. The biface from Richinbar was knapped from "Tiger Chert", a material occurring only in southwestern Wyoming and north-central Utah (Kelly et al. 2006; Loosle 2000; Rose-Angelo n.d.; Whittaker et al. 1988). Only seven artifacts of Tiger Chert have been reported in the Southwest and all seven (including the Richinbar biface) are remarkably similar tools. These were located at Q Ranch, Kinishba, Cutter Ruin, Gila Pueblo, Point of Pines, the Henderson Site, and the Upper Gila River Valley; sites stretching east from Perry Mesa into New Mexico. All seven specimens are oversized, shaped alike, of exceptional quality, and were manufactured using the same techniques (Whittaker et al. 1988).

Ground Stone

Portable metates are frequently encountered at residential sites across Perry Mesa and Black Mesa. Forms include highly formalized troughs with walls of varying heights, largely-unmodified slabs, and basins of different shapes and sizes (Fiero et al. 1980:97, 118; Jacka 1980:277-278). Jacka (1980:277) reports finding metates "inverted at random around sites," many of which were above inhumations (Jerry Jacka, personal communication 2011). A trough metate near the Fortified Garden site (AZ N:16:27 PC) was half-buried, vertically, near a ceremonial racetrack (Russell 2008). We are unaware of this latter practice being reported elsewhere in the Southwest, but Christopher Watkins (personal communication, 2010) has seen

manos deposited in this fashion in southern Utah. Perry Mesa manos also come in a variety of shapes, sizes, and materials, including one-handed, two-handed (Jacka 1980:278), vesicular and non-vesicular basalt, quartz (Jacka 1980:278), quartzite, and sandstone. Fiero and others (1980:118) noted groundstone diversity both within and between sites.

Bedrock grinding features occur at residential sites, in isolated clusters, and at times alone on the landscape (e.g., Jacka 1980:278; Russell and Freeman 2010a). A bedrock metate at the Gallery site is outlined with petroglyphs and one at Pueblo la Plata is traced by cupules (Wilcox and Holmlund 2007:Figure 40). Some sites, like Rattlesnake Egg Pueblo (NA11,785) and Arrastra Creek (AZ N:16:70 MNA), have over 400 such features apiece, far more than would be necessary for food preparation alone. These include deep, shallow, wide, narrow, round, oval, rectangular, trough, slab, and basin varieties. There are metates on horizontal, sloping, and vertical surfaces as well as some that cross cracks and vuggs. Some were made by repetitive use while others - abandoned during manufacture - were being pecked into shape.

Fish and colleagues (1975:28) listed three-quarter groove axe heads as a Perry Mesa hallmark, as did Ahlstrom and Roberts (1995:Table 2) two decades later (see Wilcox and Holmlund 2007:Figure 12). However, these are not the only type encountered (Jacka 1980:278; Jerry Jacka, personal communication 2011; Wilcox and Holmlund 2007:Appendix A, Table 6).

Agricultural Features

Fish and others (1975:28; Ahlstrom and Roberts 1995:Table 2) note the diversity of dry-farming strategies employed on Perry Mesa. More recently, Melissa Kruse-Peeples and colleagues have demonstrated how extraordinarily extensive these systems were (Briggs et al. 2006; Kruse 2005, 2007; Kruse-Peeples et al. 2009; Spielmann et al. 2005). Much of the mesa top is covered with agricultural features, including terraces, check dams, grid gardens, rockpiles, and floodplain modifications (Ahlstrom and Roberts 1995:33; Fish et al. 1992; Gumerman et al. 1975:59-61, 65-68; Kruse 2005, 2007). Modern cattle tanks may have destroyed prehispanic reservoirs (Ahlstrom

and Roberts 1995:38; J. Scott Wood, personal communication 2009) and anthropogenic pools have been recorded near Baby Canyon Pueblo and Pueblo Pato (Ahlstrom and Roberts 1995:37). There is not enough arable land on canyon floors to have sustained the mesa's population, but irrigated crops may well have contributed (Gumerman et al. 1975:63; although see Ahlstrom and Roberts 1995:33).

Fiero and colleagues (1980:116) suggest that some of Perry Mesa's agricultural features were quite like those of Polles Mesa, across the Verde River to the east (but see Ahlstrom and Roberts 1995:62). Agricultural strategies are rarely, if ever, proprietary (although see Bray 2005:128). Thus, similarity between agave rockpiles on Perry Mesa (Ahlstrom and Roberts 1995:33; Fish et al. 1992; Kruse 2005, 2007; see also Gumerman et al. 1975:67-68) and in the Tucson Basin (e.g., Fish et al. 1992; Fish et al. 1985) is not stand-alone evidence of migration. The same can be said of Perry Mesa grid gardens (Gumerman et al. 1975:63, 1976:49) and those in the Safford Valley (Doolittle and Neely 2004; Neely and Doolittle 2004, 2006). But we do know that successful agricultural knowledge was a valuable commodity in prehistory as immigrants negotiated their arrival upon aggregating landscapes (cf. Courlander 1971:78).

Conclusion

Late prehistory in the North American Southwest was marked by environmental stress, unprecedented movement, aggregation, increasing conflict, and social transformation. In these tumultuous times, it was not uncommon for disparate groups to come together despite glaring differences. At times this worked out, but more often than not it ended disastrously. Understanding why groups aggregated and under what circumstances this strategy was successful has important implications for both Southwest archaeology and contemporary social relations. The cultural landscape and archaeological record of Perry Mesa are largely intact and pleasantly uncluttered, providing a rare opportunity to study prehistoric arrival, occupation, and departure in one place. Archaeologists have long realized that *something different* took place here but quickly set about to define and bound that something, thus perpetuating the *culture*

area concept (see Bernardini 2005b; Hudson 1972; Steward 1955). Our observations suggest that despite any outer homogeneity, the 600-plus sites of Perry Mesa display remarkable differences. This diversity, and what it represents, is worthy of consideration.

Fiero and colleagues (1980:121-122) wrote that "the archaeological manifestations of Perry Mesa represent the result of a cultural blend". If successful, this paper has demonstrated some of the material diversity they refer to. The scale and scope of this diversity alone suggests a multiplicity of migrant origins. What is more, some material characteristics can link the Perry Mesa Tradition to nonlocal cultures, perhaps suggesting where to look for pre-settlement homelands.

The suggestion of multi-identity coalescence on Perry Mesa should not, we submit, be interpreted as entirely contradictory to the single-source hypotheses of our colleagues. We are not arguing than any particular group *did not* contribute to the area's late aggregation. What we *are* suggesting is that no single, homogenous tradition moved to or aggregated atop the mesa. Rather, we suspect that by the late fourteenth century, immigrants from throughout the Southwest (if not beyond) had come together here to collectively face a new social era on *terra incognita et vacantia*.

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