ÑAWPA PACHA: Journal of Andean Archaeology

PROTO-NASCA ART AND ANTARAS

Patrick H. Carmichael





TO CITE THIS ARTICLE:

Carmichael, Patrick H.

2015 Proto-Nasca Art and Antaras. *Ñawpa Pacha: Journal of Andean Archaeology,* Volume 35, Issue 2, pp. 117-172. DOI: 10.1080/00776297.2015.1108122



PROTO-NASCA ART AND ANTARAS

Patrick H. Carmichael

The Dawson Nasca pottery seriation has not been updated since 1970, and it was never published in its entirety. An elusive "master sequence" based primarily on whole pots, which bore limited relevance to field situations, dissuaded recent generations of south-coast researchers from the study of ceramic chronology and iconography. As a contribution to archaeology and art history, this article re-invigorates the approach by demonstrating methods and results not available by other means. A nomenclature for studying antaras (panpipes) is introduced, and Paracas and Nasca antaras are compared. The markers Dawson used to define Nasca phases 1 and 2 are re-evaluated and adjusted, thereby unblocking log jams in south-coast studies. Several little-known Proto-Nasca antaras with elaborate iconography in European collections are authenticated and positioned in the American narrative. A previously unrecognized decorative technique called white on resin post-fire outlining, and an artistic convention termed Truco del Ojo, are documented for ceramics of the Necrópolis Era. This study demonstrates regional variation in Proto-Nasca pottery, and identifies the Nazca Valley (Cahuachi) as the origin of a radically new art style representing the emergence of a fertility cult associated with head taking.

La seriación de cerámica Nasca Dawson no se ha actualizado desde 1970 y nunca ha sido publicada en su totalidad. Una casi olvidada "secuencia principal" basada principalmente en ánforas completas, que tuvo poca relevancia durante las situaciones de campo, sin embargo, ésta acaba de disuadir a nuevas generaciones de investigadores de la costa sur a estudiar la cronología y la iconografía de dicha cerámica. Este artículo enfatiza tal enfoque mediante la demostración de métodos y resultados no disponibles por otros medios. Los estilos contemporáneos de cerámica de la época de Necrópolis, compuestos durante la última fase de Paracas (Ocucaje 10), Topará y Proto-Nasca (Fase Nasca 1), muestran tener técnicas similares de fabricación y decoración con resultados visualmente disímiles, lo que ayuda a identificar tanto los orígenes como las características únicas de la cerámica Nasca. La época de Necrópolis se refiere al momento en el que la Necrópolis de Wari Kayan estaba en uso. La palabra Paracas (como en "Paracas Necrópolis") no se adjunta porque confunde la cultura y la ubicación con el uso de la Necrópolis para denotar un marco de tiempo relativo a lo largo de la costa sur desde Pisco a Nazca, abarcando cronologías locales (Figuras 1–3). En referencia a un sitio o componente de la época de Necrópolis no se requiere evidencia directa de una conexión entre los resultados locales y la Necrópolis de Wari Kayan, o cualquier similitud, sino que simplemente indica la contemporaneidad dentro de

Patrick H. Carmichael, Department of Sociology and Anthropology, Mount Royal University, Calgary, Alberta (pcarmichael@mtroyal.ca)

Nawpa Pacha, Journal of Andean Archaeology, Volume 35, Number 2, pp. 117–172. Copyright © 2016 Institute of Andean Studies. All rights reserved.

una banda de tiempo. Otros temas importantes abordados aquí son las definiciones de la cerámica Nasca de las fases 1 y 2, las cuales nunca fueron publicadas como fases de cerámicas completas (Figuras 4–5). La investigación central de este estudio aborda la iconografía en la cerámica de antaras (flautas de pan), un instrumento producido tanto en las tradiciones de Paracas como en las de Nasca. Se incluye una terminología para el estudio de las antaras (Figura 6) y se hacen comparaciones entre ambas tradiciones Paracas-Nasca (Figuras 6– 10). La famosa antara del Sr. Haeberli, en la que Lawrence Dawson basó la definición de la fase 2 de Nasca se adjunta completamente ilustrada (Figura 11). Su historia en la seriación de Berkeley está documentada y los rasgos que Dawson utilizó como marcadores de fase son revisados (Figuras 12– 19). Las antaras se presentan entonces desde las colecciones europeas (Figuras 17, 19, 20) con iconografía desconocida hasta Dawson (Figura 21), la cual requiere ajustes en la seriación original (Figura 22). Una antara con diferentes versiones a cada lado en torno al tema de Ser Enmascarado (Figura 17) tiene implicaciones causalísticas para la metodología de la seriación por parecido. Esta misma antara se presta a pensar en la hipótesis de Mary Frame de transformación de ancestros, la cual propone que las diferencias en la iconografía textil de Nasca entre los fardos de Necrópolis de Wari Kayan no marcan el paso del tiempo en las fases estilísticas. Más bien representan secuenciados de "instantáneas" en una narrativa de transformación mítica involucrando ancestros humanos que poco a poco toman los rasgos de animales y, de alguna manera, llegar a concluir que tienen un aspecto natural de pájaros, peces y animales. La variación regional en la cerámica de Proto-Nasca se demuestra con al menos tres subestilos identificados (Figuras 23–25), y el área de Cahuachi es reconocida como el origen de un estilo de arte radicalmente nuevo asociado con un culto a la fertilidad y a la decapitación humana. Además, se documenta una técnica decorativa de cerámica no reconocida previamente llamada "blanco sobre esbozo de resina" en la que las incisiones de diseño en las ánforas de Ocucaje 10 y Nasca 1 se llenaron de resina (probablemente del árbol de huarango) como la base para una tiza blanca transitoria (probablemente caolín o dolomita), que habría requerido una renovación periódica (Figura 26). Artistas del Proto-Nasca podían producir un engobe de crema, pero el color blanco brillante (como una pintura de engobe) les eludió hasta la fase 2. También se identifica un conjunto de convenciones artísticas denominadas colectivamente "Truco del Ojo" que, como su nombre indica, engaña al ojo por el cambio de forma y significado dependiendo de la perspectiva del espectador. Así incluyen imágenes que, por ejemplo, al estar invertidas, todavía presentan una imagen con significado de otra criatura ("anatropismo" o reversible) (Figura 27b); también se añaden composiciones múltiples en el que un motivo más grande se compone de muchas imágenes más pequeñas (Figura 11); o por ejemplo un diseño emergente que utiliza las líneas existentes para sugerir una silueta en el espacio "vacío" entre los principales elementos de diseño (Figura 27a); y el diseño de oportunismo en el que partes de las imágenes más pequeñas son definidas por elementos preexistentes del motivo principal (Figura 13, pelo en la cabeza de trofeo). Truco del Ojo es una antigua costumbre andina central utilizada en la iconografía de cerámica, de textil y de metal que las culturas han difundido a través del tiempo, y aquí se documenta en el arte de cerámica durante la época de Necrópolis en la costa sur.

In every field of archaeological inquiry fresh data periodically surface to challenge orthodoxy and send investigators in new directions. In other cases, revisions stem from the accumulation of contrary examples over time, which simmer until finally collected and presented in one place. The current work contains elements of both routes with the same destination. In this article, I examine little-known Proto-Nasca ceramic art to update the traditional Dawson seriation of the Nasca pottery sequence (south coast of Peru, circa 100 B.C.–A.D. 600). Recently authenticated specimens in European museums provide

a "tipping point" for previously bothersome incongruities. At issue are the definitions of Nasca pottery phases 1 and 2 (hereafter N1 and N2), which remain a conundrum because neither was published as a complete ceramic phase, but rather, was alluded to by reference to photographs scattered in art books and museum catalogues of the last century. This sketchy record has left a tangled skein favoring retreat to established doctrine. In the current study, I proceed cautiously and fully illustrate results, aware that these findings require senior scholars to rethink long-held assumptions.

The following pages provide the geographic and temporal contexts, and comment on pottery wares of immediate relevance. At the center of this study is iconography on ceramic antaras, an instrument produced in both Paracas and Nasca traditions. A terminology for studying antaras is introduced and general comparisons are made. The famous Haeberli Antara, on which Lawrence Dawson based the definition of N2, is fully illustrated. Its history in the Berkeley seriation is documented and the traits Dawson used as phase markers are reviewed. Finally, antaras with iconography unknown to Dawson are presented, which require adjustments to the original seriation. The conclusions establish that, first, there is regional heterogeneity in the Proto-Nasca style and, second, the Nazca Valley was the origin of many innovations which came to dominate the entire south coast in the following Early Nasca Epoch.

Information on the artifacts and line art illustrating this study is given in Table 1 (proveniences, measurements, and permissions). While acknowledging the historically correct spelling of Nasca is with an "s" (Menzel et al. 1964: 8), in this article I adopt the convention of spelling Nasca with an "s" when referring to the archaeological culture and art style, and with a "z" when referencing the river valley, modern city, and geographical region of Nazca.

The Setting

The geographical focus of this study is the south coast of Peru, from the Paracas Peninsula southward through the Ica Valley and the Río Grande de Nazca Drainage Basin (hereafter Nazca Basin) (Figure 1). The Ica-Nazca region was the heartland

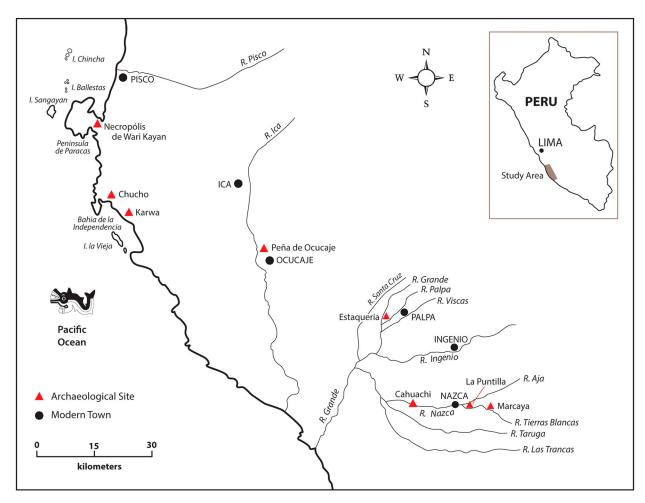


Figure 1. Peruvian south coast, showing the regions and sites mentioned in the text.

of the Nasca culture, where seasonally watered river valleys are separated by expanses of hyper-arid desert. The yearly flow drops as one moves from Ica to Palpa to Nazca, while the occurrence of droughts increases. Even so, periodic mega floods could rip out entire valley systems. Such considerations, combined with the fact that, at the best of times, these regions experience the most extreme sun and wind regimes on the entire Peruvian coast, made this an unpredictable environment for ancient farmers (Beresford-Jones 2011: 9–28; Schreiber and Lancho Rojas 2003: 24–30). However, it was a more inviting landscape 2,000 years ago, before deforestation stripped the valleys and modern hydraulic pumping lowered the water table.

Chronology

In the traditional Andean chronology defined by John Rowe (1962), the Early Horizon (EH) on the south coast corresponds to the time of the Paracas culture (Figure 2). The Paracas pottery of the Ica Valley is referred to as the Ocucaje style (Ocucaje Phases 1–10, hereafter Oc. 1–10) (Menzel et al. 1964: 1–2). Nasca occupies the Early Intermediate Period (EIP), represented by eight ceramic phases (N1–8). The style phases of the EH and EIP in turn define epochs (units of time) within periods. The revised chronology in Figure 3 shows the time span of interest to this study. Here, I treat phases as style units with direction through

8 7 6 5 4 3 2	Early Intermediate Period
10 9 8 7 6 5 4 3 2	Early Horizon

Figure 2. Traditional chronology of the Ica Valley master sequence after Rowe and Menzel (1973).

time, but allow two or more distinct units to partially overlap. This system was first proposed for the Nasca sequence (Carmichael 2013). I follow DeLeonardis in grouping Oc. 8–10 into Late Paracas (2005: 29), noting her proviso that, in the Ica Valley, settlement patterns and ceramic iconography in Oc. 8 are distinct from Oc. 9, and Oc. 10 is best considered transitional with N1 (DeLeonardis and Glascock 2013: 187). Far to the south of Ica in the Nazca region, Oc. 8 represents the first permanent occupation. With little evidence found at habitation sites of Oc. 9 and 10 beyond plain wares (Van Gijseghem 2006: 436), Oc. 8 seems to merge directly with N1. (There is a definite Oc. 10 presence, but it is not as marked by fine wares as in Ica.) More evidence of Late Paracas in Nazca has been found at Cahuachi (Figure 1), an Andean ceremonial site with a residential occupation that served as a religious and political center (Bachir Bacha 2007; Llanos Jacinto 2010; Orefici 2012).

After decades of research it has been established that Oc. 10 ceramics (including Topará-derived wares) are always found mixed with N1 pottery, but pure N1 sites are also present (Schreiber and Lancho Rojas 2003: 14; Silverman 1994: 371). The pattern is so pervasive that researchers in each region have developed local terms for this time of overlap. In the lower Ica Valley, Anita Cook includes Oc. 9-N1 in her La Peña Phase (1999: 69, 74). In Palpa, Oc. 10 and N1 are placed together and referred to as the Transition Period (Unkel and Kromer 2009: 243). Further south in Nazca, Schreiber and Lancho Rojas use the term Montana Period for sites with mixed Oc. 10-N1 ceramics (2003: 13-14). In order to facilitate pan-regional comparisons in the current work, I refer to this overlap as the Necrópolis Era, a band of time between the EH and EIP (Figure 3).

The Proto-Nasca Epoch (c. 100 B.C.–A.D. 100) corresponds to the first phase of temple construction at Cahuachi (Bachir Bacha and Llanos Jacinto 2006; Orefici 1989, 2012: 383–397), when the Necrópolis of Wari Kayan on the Paracas Peninsula was in use (Dwyer and Dwyer 1975; Paul 1991), burial patterns in the inland valleys changed (DeLeonardis 2012: 201), and populations expanded on the south coast, as shown by the increased number of sites throughout

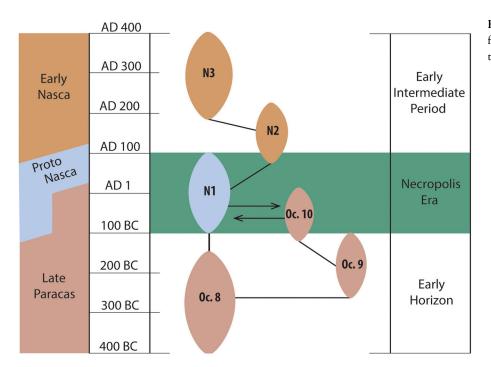


Figure 3. Revised chronology for the Ica-Nazca region used in the current study.

the regions of Ica (Cook 1999: 83), Palpa (Reindel 2009: 450), Ingenio (Silverman 2002a: 58), and Nazca (Schreiber and Lancho Rojas 2003: 14). At many settlements, N1 pottery co-existed for a time with Oc. 10, and then replaced it. At the beginning of N2, site location and domestic architecture changed dramatically (Van Gijseghem and Vaughn 2008), several ceramic wares vanished, and Cahuachi experienced rapid growth. A new, or reinvigorated, religious cult accompanied these changes, which likely facilitated social integration during times of population growth in this desert region of unpredictable resources. Van Gijseghem provides the best overview of these processes (2006: 438-439, 2013: 176–183). Evidence presented here suggests this cult solidified at Cahuachi during the Proto-Nasca Epoch. It appears the widespread acceptance of the cult outside of Nazca correlates with the termination of the Paracas ceramic tradition.

Necrópolis Era Pottery Traditions

Researchers have used the term Necrópolis to refer to a culture, period, or phase during which the great Necrópolis of Wari Kayan was in use at Cerro

Colorado on the Paracas Peninsula (e.g., Carmichael et al. 2014: 10; García Soto and Pinilla Blenke 1995: 58; Sawyer 1997; Tello 1959; Tello and Mejia Xesspe 1979). Over the years, confusion has resulted from applying the term "Paracas" to a widespread cultural tradition, a ceramic style, a textile style, a geographic location, and site names (Paul 1991: 26-27). This is not the place to untangle the threads (see efforts by Peters 1991, Silverman 1991, 1996, etc.), but to note only what is salient to the current study. In the years 1925–1927 at Cerro Colorado on the Paracas Peninsula, Julio C. Tello and his colleague, Toribio Mejia Xesspe, excavated several habitation and burial sites, which produced spectacular textiles dating to the time of Late Paracas and Proto-Nasca. Tello's Paracas Cavernas site contained textiles and incised, post-fire resin painted ceramics correlating to Oc. 9 (Menzel et al. 1964: 176), while his Necrópolis of Wari Kayan contained 429 mummy bundles with textile iconography pertaining to Oc. 10, N1, and N2, associated exclusively with Topará pottery (see Daggett 1991 on the history of discovery, and descriptions of cemetery contents in Paul 1990, Tello Archive 2002, Tello 1959, and Tello and Mejia Xesspe 1979). While it seems odd that Proto-Nasca textile iconography should occur only with Topará ceramics, and not with N1 pottery as might be anticipated, the most likely explanation is Mary Frame's theory that the Necrópolis of Wari Kayan deposits represent tributes and offerings from several ethnic groups participating in a regional cult (Frame 1995: 15). However, the important point here is that, in the Rubini grave lots from the Ocucaje Basin, Topará ceramics are associated with both Oc. 10 and N1 pottery (Dawson 1960), establishing the contemporaneity of all three styles (also see Peters 1997: 308–309).

In this article, Necrópolis Era refers to a band of time when the Necrópolis of Wari Kayan was in use, and Paracas, Topará, and Nasca ceramic traditions mingled along the south coast. I explicitly refrain from attaching the word Paracas (as in "Paracas Necrópolis") because it confuses the culture and location with my use of Necrópolis as a relative timeframe along a swath of the south coast (Pisco-Nazca), overarching local chronologies. The term is meant to be diffuse, and its use does not require direct evidence of a connection between local findings and the Necrópolis of Wari Kayan or any similarity, but merely indicates contemporaneity within a band of time. Thus, Necrópolis Era sites include: Peña de Ocucaje in Ica (Cook 1999); Estaqueria in Palpa (Reindel 2009); La Puntilla in Nazca (Castro-Martínez et al. 2009, Van Gijseghem 2006); and Cahuachi in Nazca (Bachir Bacha and Llanos Jacinto 2006; Llanos Jacinto 2010; Orefici 1996, 2012); along with components at Chucho and Karwas in the Bahía de la Independencia (Engel 1981: 28–29; García Soto and Pinilla Blenke 1995: 58) (Figure 1). I strongly favor maintaining nomenclature in regional chronologies (Carmichael 2013: 219), but see a concurrent need for inclusive terms as general references to broad patterns.

The fine wares of the Paracas, Topará, and Nasca ceramic traditions are now briefly presented. Coarse ware, or utilitarian ware, is not included here as the focus is on iconography, which is characteristic of fine ware. Fine ware also includes carefully crafted, thin-walled, elegant vessels with smooth surfaces, which are either monochrome or without

embellishment beyond the natural surface color fired in an oxidized or reduced atmosphere. Because Oc. 10 and N1 are contemporary, it is essential to identify characteristics which are either common or unique to each ceramic tradition, in order to assess when and where diagnostic features pertinent to this study first emerged.

Paracas. There are several fine wares in the Paracas ceramic tradition. The most famous is the incised, post-fire resin painted ware in which the design was incised into the moist clay and, after firing, organic pigments were scorched onto the design areas (Figure 4a). Vessel surfaces are either an oxidized light tan ranging to brown, or black (smoked black being common). The organic pigments have a tendency to flake off, exposing natural surface color beneath (Figure 4c). Both fine plain ware and fine blackware, without decoration beyond surface color and texture, were produced in the final phases (Figure 4b). Other Paracas wares include resist painting and pattern burnishing. The Paracas ceramic tradition is found from Cañete in the north down through the basin of the Rio Grande de Nazca. Although the Paracas pottery of Ica has been published in most detail, it seems likely there were several interacting spheres of influence during the EH, including the Bahía de la Independencia littoral zone, the Paracas Peninsula, and the valleys of Pisco, Chincha, and Cañete. At this juncture, Paracas origins cannot be definitively attributed to a particular locale. In the current work I am concerned with Paracas manifestations from Ica southward where Late Paracas pottery (Oc. 10) ceased to be made before the end of N1. On Paracas in the valleys north of Ica see Canziani (1992); Hill et al. (2012); Stanish et al. (2014); and Wallace (1984).

Topará. Topará pottery co-occurs with both Oc. 10 and N1, demonstrating the contemporaneity of these three ceramic traditions. Topará is the only pottery at the great Necrópolis of Wari Kayan where much of the textile iconography is pure Nasca. Topará ceramics are justly famous for their thin walls, smooth, monochrome surfaces, and elegant effigy



Figure 4. Paracas pottery, Oc. 10: (a) bowl with post-fire resin polychrome; (b) plain blackware vessels; (c) bowl showing flaking of resin paint.

bottles of plants and animals (see Lapiner 1976: Figures 218–220; Sawyer 1966: Figures 135, 136, 139, 140; Tello 1959: Plate 27). Technologically, they represent a new high point in firing consistency, which infers the introduction of draft channels if not true kilns (Wallace 1986: 44). Monochrome vessels may show the natural, light-colored surfaces of even, oxidized firing, or be painted with a cream or red slip. The Topará ceramic tradition contains other wares and decorative techniques, including blackware and pattern burnishing (Wallace 1986: 37). Paracas and Topará utilitarian wares are considered to be almost indistinguishable (Peters 1991: 241).

The earliest expressions of the Topará ceramic tradition are in the Cañete, Topará, and Chincha valleys, far to the north of the Ica-Nazca region, where it cross-dates to the early phases of the Ica Paracas sequence (Peters 1991; Wallace 1986). Of interest here is its appearance in the Ica Valley, where Wallace (1984: 92, 1986: 35) and Peters (1991:

243, 1997: 173) have it present from Oc. 9 into N2, and Menzel et al. (1964: 261) place it in Oc. 10 and N1. Away from the Paracas Peninsula, in the Ica Valley and southward, Topará vessels were likely manufactured locally, but using the aesthetics and technology from its northern homelands (Cook 1999: 78). Here, I refer to it as "Topará-derived" ware. I do not see evidence that it continued into N2 outside of the Peninsula sites (also see Silverman 2002b: 78–79). In Nazca, it is confined to N1 associations.

Nasca. There are several fine wares in N1. Fancy incised and slip-painted ware is used to define the phase, although it accounts for a minor percentage of the ceramic output at this time. Traditionally, the replacement of Paracas post-fire, polychrome resin paint by Nasca pre-fire, polychrome slip paint marked the boundary between the EH (Paracas) and the EIP (Nasca) (Menzel et al. 1964: 251). Fine plain ware is common, either undecorated



Figure 5. N1 wares: (a) orange fired, plain ware bowl; (b) tan fired, plain ware incised plate; (c) plain blackware bowl (smoked); (d) blackware incised sherds; (e) blackware patterned burnished bowl; (f) blackware antara fragment (reduced); (g) slip polychrome incised sherds from Cahuachi found in direct association with blackwares comparable to (c)–(f).

(Figure 5a), incised but unpainted (Figure 5b), or with a few vertical or diagonal lines of white or red slip. Resist and false-resist painting were used. Blackware is widespread and, like Paracas, it is either plain (Figure 5c), incised (Figure 5d), or pattern burnished (Figure 5e). A fragment of an antara from Cahuachi (Figure 5f) demonstrates that, in addition to smoked blackware, the Nasca potters were capable of producing reduced blackware. Previously, white was thought to be the only pigment used on N1 blackware because blackware is unsuited to slip painting (Menzel et al. 1964: 252). In the current article, I present a rare example of an N1 blackware piece with post-fire resin paint.

The incised and slip-painted sherds shown in Figure 5g were excavated at Cahuachi by the Columbia University team (1952) in direct association with blackwares comparable to those shown in Figure 5c-f. These sherds are of the type Duncan Strong called "Cahuachi Polychrome Incised Thick" (11-12 mm thick), but his Cahuachi Polychrome Incised and Modeled Thin type was more common. Both were found with blackwares (Strong 1957: 21-23). The contemporaneity of blackware and incised slip polychrome during N1 is also demonstrated in the Rubini graves from Ocucaje, where three of Rubini's N1 graves contained both incised polychrome and blackware vessels (Dawson 1960: Rubini Graves B, 7, 30). The effigy vessel in Figure 25 was found with a pattern burnished, blackware bowl similar to Figure 5e.

The distribution of N1 incised and slip-painted ware is limited. In terms of archaeological documentation, it is most frequently found at the great site of Cahuachi, and rarely elsewhere in Nazca (Van Gijseghem 2006: 427). Silverman records it in small amounts at several Ingenio Valley sites (2002a: 84), but Hecht (2013: 168) states it is absent in the Palpa region. Outside of Cahuachi, the greatest concentration of documented N1 polychrome incised vessels comes from the Ocucaje Basin of Ica. The most famous N1 effigy bottles, published many times, came out of the Truel, Soldi, and Rubini collections from Ocucaje (e.g., Larco Hoyle 1966: Figures 111, 115; Lavalle and

Lang 1983: 162–163, 167, 172–173; Sawyer 1968: 55). Menzel et al. (1964: 251) comment that N1 remains are abundant in the Ica Valley.

Ceramic Musical Instruments

The central focus of this study is the chronological placement of iconography appearing on early ceramic antaras (panpipes). It is therefore essential to view these specimens in the context of earlier, contemporary, and later forms to determine the chronologically diagnostic features, which distinguish them from surrounding cognates. Drums, trumpets, whistles, and antaras made of fired clay are present throughout the Nasca sequence. They occur in abundance during the Necrópolis Era (Oc. 10-N1), and are associated with the fluorescence of a religious cult involving the taking and curation of human heads (so-called "trophy heads"). The first ceramic musical instruments appear in Oc. 9, although relatively few specimens from this phase are known (Menzel et al. 1964: 187, 211). Oc. 9 drums are described as plain and cylindrical, while Oc. 10 specimens have a bulging middle, a long, cylindrical neck with slightly everted rim (to facilitate fastening the skin cover), and a tube-like projection from the bottom which serves as the stand.² This basic drum form, with some modifications, is the same for N1 and all succeeding Nasca phases (Menzel et al. 1964: 187, 226, Figure 23k). Examples of N1 drums are shown in Figure 23a-b.

Antaras

The classic works on ceramic antara construction and acoustics are by Dawson (1964), Haeberli (1979), Bolaños (1988), and Gruszczyńska-Ziółkowska (2000, 2002, 2009). All studies conclude that they are extremely sophisticated instruments with pipes separately constructed by slip casting before binding in a casing. They can produce impressive tonal ranges. The current work is limited to chronological considerations. General features are identified first along with a descriptive terminology, after which

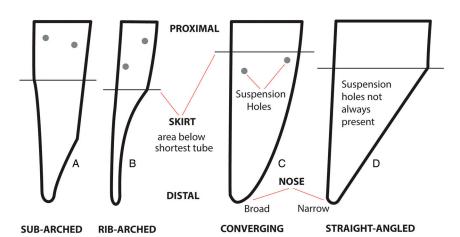
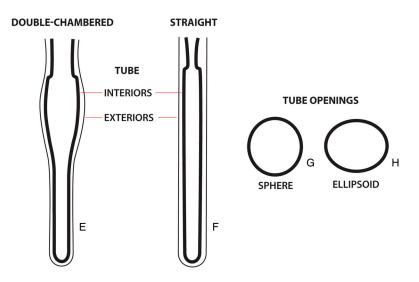


Figure 6. Antara shapes and tube forms.



the characteristics of Paracas and Nasca instruments are presented. (For examples of EH ceramic antaras outside the south coast see Helmer et al. 2012: 106–107.) Figure 6 shows the basic antara silhouettes and tube forms for Oc. 10 and Nasca. The four basic shapes (sub-arched, rib-arched, converging, and straight-angled) refer to the area below the shortest tube, here designated the "skirt" of the antara. Generally, degrees of arching typify Paracas antaras (Figures 7–8), while the converging and straight-sided skirts characterize Nasca (Figures 9–10). There are long and short skirt varieties of the straight-angled and rib-arched shapes.

Antara tubes are either straight or double-chambered (Figure 6e–f). In the double-chambered variety, each tube has three diameters—a)

mouthpiece above chamber; b) swollen chamber; c) lower chamber—which represent three separately constructed pieces carefully joined (Menzel et al. 1964: 226; and see here Figures 11e and 17d). Straight tubes have a narrow, specially crafted mouthpiece at the top before opening to a uniform diameter throughout the remaining length (see Gruszczyńska-Ziółkowska 2009: 168, Figure 10). Antara tube openings (mouthpieces) are either spherical or ellipsoid (Figure 6g-h). Spherical openings are found on double-chambered tubes, while straight tubes have ellipsoids (which can trend towards lenticular). The number of tubes on Late Paracas antaras varies from two to six, but four or five are typical (Menzel et al. 1964: 227, and see Figure 8). Nasca antaras have from five to 15 tubes and, while five to nine are

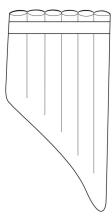


Figure 7. Oc. 9 antara from Ocucaje, Ica: the earliest form of ceramic antara on the south coast, with six straight tubes, ellipsoid tube openings, and a horizontal band of clay resembling the lashings on cane pipes. Length c. 15 cm.

common, antaras with 12 or more tubes are not rare (Figure 9). The precise number of tubes per antara does not appear to be a chronological indicator, although Paracas antaras seldom, if ever, have multiples beyond six, while Nasca antaras usually have six or more. The common range in Paracas antara length is 12–20 cm, but specimens up to 41 cm long are known (Figure 8c). For Nasca, 15–25 cm is the usual range, however specimens up to 90 cm have been documented (Gruszczyńska-Ziółkowska 2009: 147).

Antaras of the Necrópolis Era (both Paracas and Nasca) usually have a pair of perforations set diagonally a few centimeters below the mouthpiece through which a cord presumably passed for suspension around the player's neck (Figures 6a–c and 8c) (Menzel et al. 1964: 227). Suspension holes are less common thereafter, but they are known to occur into Late Nasca. The presence or absence of suspension holes is not a chronologically sensitive trait, although it is most common in the early part of the sequence.

Paracas. The earliest ceramic antaras in the Ica Valley date to Oc. 9, although only a few specimens are known. They are described as having small, delicate, straight tubes, with oval openings at the proximal end, and a band of clay below the mouthpiece resembling the lashings on cane pipes (Menzel et al.

1964: 187). A sketch of a complete specimen from the Truel Collection (Ocucaje) is shown in Figure 7 (and see photograph in Dawson 1964: 112, Figure 2). The shape is rib-arched short. It is noted that the earliest ceramic antaras had straight tubes with oval (ellipsoid) openings. Examples of Late Paracas (Oc. 10) antaras from the Ocucaje Basin are shown in Figure 8. All have double-chambered tubes with spherical openings, arched skirts, and suspension perforations. Bolaños (1988: 36) shows two antaras (sub-arched and rib-arched) from the Paracas Peninsula sites of Cabeza Larga and Wari Kayan, which are almost identical to these Ocucaje specimens. However, the sketch of another antara from the Necrópolis of Wari Kayan shows a grayfired instrument with five straight tubes (Tello and Mejia Xesspe 1979: 308). The straight tube variety may have continued outside of the Ocucaje Basin during Oc. 10.

The Paracas antaras shown in Figure 8a (four tubes) and 8c (five tubes) are from Rubini graves (shapes are rib-arched long). Dawson (1960) described them as "spotty gray-fired" (here shown in black and white). On Figure 8a he detected seven bands of thread wrapping on the lower three-quarters, with an X binding over the tube swellings. Figure 8c has an original piece of cotton string through the suspension holes, which presumably allowed it to be hung around the owner's neck. In two places on the skirt, it was broken and repaired in ancient times with a "hard, insoluble resin." The antaras in Figure 8b, d, and e illustrate the range in subarched skirt shapes, compared with the more dramatic rib-arch forms of Figure 8a and c. Figure 8b has five tubes, while 8d and e have four each. These examples illustrate the manner in which Paracas tube ends project above their casings, and their characteristic spotty blackware finishes.

In the Ocucaje Basin, antaras were found in seven out of 39 Oc. 10 Rubini burials (18 percent) (Menzel et al. 1964: 226; see here Figure 8a and c). Most had a single antara, but burial 46 contained four (each with four tubes). Burial 58 held one fragmentary and six complete specimens (two with four tubes, three with five tubes, and one with six tubes),

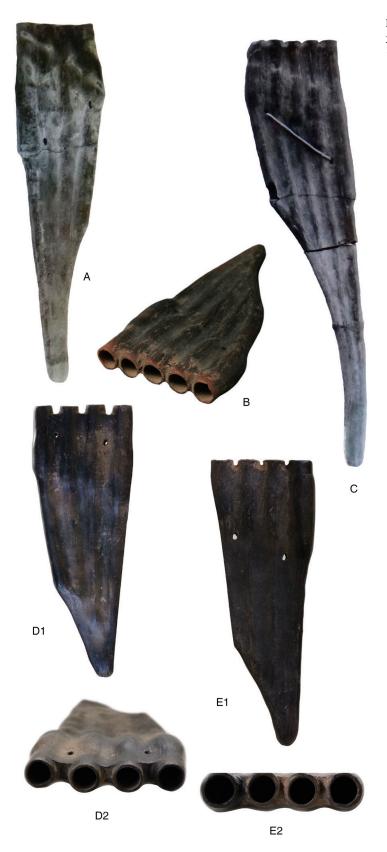


Figure 8. Oc. 10 antaras from Ocucaje, Ica: (a) length 27 cm; (b) length 13 cm; (c) length 41 cm; (d) length 17 cm; (e) length 13.9 cm.



Figure 9. Proto and Early Nasca antaras: (a) N1, length 19.3 cm; (b) N2, length 23.8 cm; (c) N3/4, length 21 cm; (d) N3/4, length 19.7 cm.

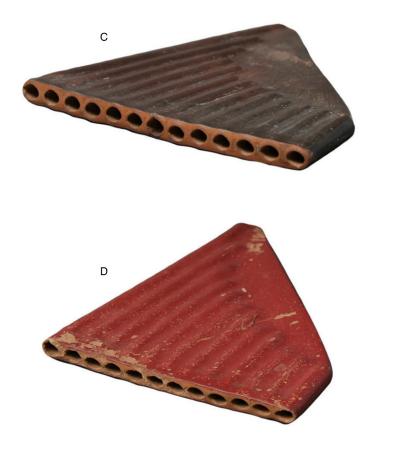




Figure 10. N1 incised polychrome antaras, two from a set of four instruments. Length c. 25 cm.

demonstrating that the number of tubes is not chronologically significant. These burials with multiple antaras had pole roofs with adobes on top, and each also contained four plain or negative painted bowls, but they were not elaborate or exceptional in any way (Dawson 1960). There are four Soldi grave lots from Ocucaje with ceramic antaras (G40, G42, G47, and G72: two specimens are shown in Figure 8d and e). Burial G40 reportedly contained six examples (AMNH 1959-1961; King 1965: 555). In the Ica Valley, fragments of antaras are relatively common at Oc. 10 sites (Menzel et al. 1964: 226). Available evidence from burial and habitation contexts indicates that Late Paracas antara production (although limited to uneven smoked blackware) was common, and distribution socially unrestricted.

Nasca. Figure 9 shows a selection of Nasca antaras illustrating the features pertinent to the current study. All are slip painted. From their first

appearance, Nasca antaras can have either straight or double-chambered tubes, although the double-chambered variety on a converging shape is most common in N1–2, and straight pipes on straight-angled shapes are typically N3–4. However, both tube forms (straight or chambered) and all shapes can occur from N1–7. It is important to note that, for Nasca antaras, skirt shape and tube form are not strictly chronological, particularly in the early phases.

While painted designs on the sides of antaras occur from N1–7 (fancy fine ware), most are monochromatic red or black, often with an additional color, usually tan or red, at the mouthpiece. The N1 instrument in Figure 9a is red with a tan mouthpiece. It has five double-chambered tubes with spherical openings, two suspension holes, and a converging skirt. In construction and shape it matches Figure 17. The black antara with red mouthpiece in Figure 9b is an example of N2. It has ten double-chambered tubes

(although not as swollen) with spherical openings (of smaller diameter), and a pair of suspension holes. While the skirt is still classified as converging, note that the lines are straighter and the nose is narrower. The use of monochromatic black slip may continue the idea of blackware, which is no longer produced in N2.

Figure 9c and d show antaras with straight pipes and straight-angle shapes. Either would be comfortable in N3 or N4. The tube openings on 9c are ellipsoid (but just) while the openings on 9d are more lenticular. Neither specimen has suspension holes. Antaras without piercings may have been tied with string webbing to facilitate carrying.

Although most Nasca antaras are monochrome, fancy polychrome examples are present from N1 onwards. Figure 10a and b are from a set of four N1 antaras, each with nine straight tubes, ellipsoid openings (1×1.5 cm in diameter), suspension holes, and an average length of 25 cm (see grouping in Didrichsen et al. 2010: 240–241; INKA PERU 1992: 238, Figure 241; Los Incas 1991: 140, Figure 182; Purin 1990: 110, Figure 137). They were almost certainly produced as a set by one master craftsman. The two featured here show the range of skirt shapes and decorative details present at one point in time.

Figure 10a has a rib-arched skirt, which places it closer to Paracas; however, the broad nose is pure Nasca. The long incisions are deep and originally filled with a fugitive white. Slip colors include black, orange, red, and tan. Along the comb edge, some incisions have a black organic substance caught between the teeth. In three instances, this material bridges adjoining teeth. This may indicate that feathers or other dangles adorned the comb. This antara also has a hidden rattle: an internal chamber with pellets that roll up and down, and sound when the instrument is shaken from side to side. Such rattles also occur in the base of some Oc. 10 bowls from the Ocucaje Basin, although Sawyer identifies hidden rattles as a Rio Grande trait (1966: 92, Figure 122; and see color photograph of this bowl in Rowe 2012: 46, Figure 28). Figure 10a is one of the most highly burnished ceramic pieces I

have ever encountered, velvet to the touch, and so lustrous that all light is instantly reflected. It would have had great effect in direct sun or fire light.

Figure 10b exhibits more of a straight-angle skirt, but with the broad nose of Figure 10a. The same four colors (black, orange, red, and tan) were applied. The limited pallet is characteristic of N1, although by no means confined to it (ceramics with only two or three colors are found in all phases). Again, the fugitive white is used on incisions, but in this case with particularly dramatic effect to highlight the chevron pattern. The white chalk is a post-fire application, which is discussed below. In Figure 10b, a line of punctates situated along a skirt edge adds decorative detail, and parallels the comb-edge on Figure 10a. The circular hole on the lower skirt was intentionally made and opens into a tube chamber. Presumably, this allowed the player to alter its sound. It is the only such example in this four-piece set of antaras.

Figure 10a and b are exceptional examples of the technological proficiency N1 potters were capable of achieving. Slip colors are clear and even, and the firing process masterfully controlled. They are outstanding examples of the antara-makers' craft with slip-cast, straight pipes expertly encased, and demonstrate an entirely new level of technical and artistic sophistication well beyond anything attempted by Paracas craftsmen. That such attention should be lavished on these pieces suggests a new status for antaras in Nasca ceremony tied to the fertility/head-taking cult. The distribution of Nasca antaras (described below) also indicates new patterns of use.

Nasca antaras are occasionally found in burials where they can occur in multiples (Bolaños 1988: 53–70; Proulx 1970: 57, Plate 9E), but are not common grave goods. In a sample that included 213 burials, only one is reported to have contained an antara (Carmichael 1988: 212). Antara fragments are also present in habitation refuse. At La Puntilla in the Nazca region, Van Gijseghem describes Necrópolis Era (SNR Montana Period) antara fragments as being finely made with highly burnished, dark red slips (2004: 264, 494). Nearby at the N3–4 village of Marcaya, Vaughn's antara recoveries

appear to correlate with higher-status residences (2009: 127, 159). Antaras are also encountered in broken heaps as ceremonial offerings (Reindel and Isla Cuadrado 2001: 254). At the great ceremonial site of Cahuachi, antara fragments litter the surface (Silverman 1993: 241). Guiseppe Orefici's ongoing excavations there have documented numerous examples, including miniature and unfired specimens (2012: 204–205, Figure 21). The most spectacular antara find is an offering of 27 smashed instruments, one of which is 90 cm long (Gruszczyńska-Ziółkowska 2000, 2009; Orefici 2012: 219, 365, 471–472).

N2 and the Haeberli Antara

Having provided background on the spatial and temporal contexts, and classification of antaras, attention is again focused on the central questions of N1 and N2 phase markers. Although it appears to be placing the cart before the horse, the Haeberli Antara (Figure 11), upon which Dawson based the definition of N2, must be presented first and placed in historical context. Only then are we in a position to appreciate the implications of the new Proto-Nasca material. The creature depicted on the Haeberli Antara (Figure 11a and b) is the same deity shown in Figures 12, 13, 16, 17, 19, and 20. Roark referred to this motif as the Masked Mythical Being (1965: 17), while Proulx dubs it the Anthropomorphic Mythical Being (1968: 32, 2006: 62), and identifies 16 subtypes (2006: 63-79). I refer to it as the Masked Being. It is the most complex and ubiquitous figure in Nasca iconography, and is present throughout the sequence (N1-7). Its defining features are a mouth mask, diadem, bangles, shell collar, and frequent association with trophy heads (Figure 21). I believe the appearance of this motif in the Proto-Nasca Epoch marks the formal inception or crystallization of the Nasca cult.³ Many researchers have concluded the cult emerged in Proto-Nasca times,4 but here I trace it to the earliest occurrence of its leitmotif: the Masked Being. The processes that brought this cult into being, along with interpretations of the Masked Being motif, diverge from the main purpose of this article, but will be addressed in a separate study. Here, I focus on hand, foot, and trophy head features, which were used as chronological markers in the Dawson seriation.

In order to understand why Dawson chose the Haeberli Antara as the phase marker for N2, we must consider both his methods and the antara in historical context. As a marker for the beginning of a new style phase, Dawson often used a single pot on which distinct design features occurred together for the first time, and against which all other specimens were compared. (Later, he also used grave lots as markers for some phases. On the history of Dawson's approach see Proulx 2006: 26-29). Of course, a single pot cannot have all of the features that occur within an entire phase (given the variety of pot shapes and motifs), but at least it can be stated that the features present on a pot all occur at one point in time (Dawson 1986). Joerg Haeberli relates that, after he acquired his now famous antara in 1969, he sent a photograph of it to Dawson through Dorothy Menzel (personal communication, 19 March 2004). A response from Menzel dated 27 July 1970 included the following verbatim comments from Dawson.

> A pottery panpipe of Nasca 2 phase. A unique and important piece for the rare depiction of a mythical being recognizably related to the designs of certain Paracas embroideries. It helps greatly in solving the problems of linking style sequences in textiles and pottery at this time. The drawing is quite different in many ways from comparable textile designs of Nasca 2, but does have in common with them the mythical being with thumbed feet, fan in hand, cat skin headdress, and depiction of beans and other vegetables. The profile form of trophy head adjacent to his right hand has just been invented. The small figures of birds and men are not known from other examples. (Would like to

see color slides of both sides!) Time: Early Intermediate Period. South coast.

The arrival of Haeberli's antara photograph in 1970 was providential. This was precisely the time when Jane Dwyer, under John Rowe's guidance, was researching her dissertation entitled "Chronology

and iconography of Late Paracas and Early Nasca textile designs" (completed in September 1971). In this work, Dwyer seriated the available mummy bundles from the Necrópolis of Wari Kayan largely on the basis of the iconography woven into these astonishingly well-preserved textiles. Her seriation of the textile iconography was, in turn, based on

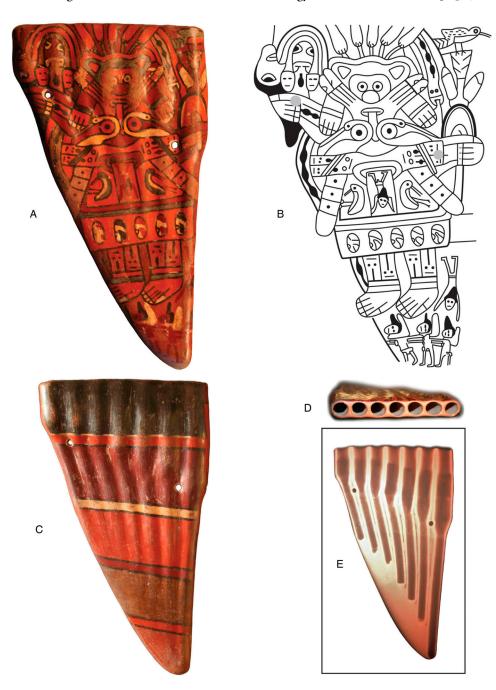


Figure 11. Haeberli Antara, N2, polychrome slip paint. Length 20.6 cm.



Figure 12. N2 double-spout bottle with Masked Being and polychrome slip paint. Note shallow grooves providing surface texture. Height 15.8 cm.

Dawson's ceramic seriation. Following the Ica master sequence in which pottery style phases correspond to units of time called epochs, Dwyer was able to identify bundles as belonging to EH 10a, EH 10b, EIP 1a, EIP 1b, or EIP 2. She worked closely with Dawson who receives profound thanks in her acknowledgments. Referring back to Dawson's methodology for defining the beginning of style phases, it is evident that the picture of the Haeberli Antara (arriving just when it was needed), offered the "one pot solution" for defining N2 iconography. It appeared to bridge the gap between ceramics and textiles, and thereby provided one end of the Necrópolis bundle seriation. In her dissertation, Dwyer's definition of N2 seems to be a description of the Haeberli Antara (1971: 184, 209).

With her dissertation completed in 1971, Dwyer summarized and extended aspects of her work in two major publications (Dwyer 1979; Dwyer and Dwyer 1975). Both were long in press, as they were originally conference papers delivered in 1973. After

Dwyer, art historian Anne Paul devoted most of her career to the Necrópolis textiles and continued to apply Dwyer's chronology. Paul was a prolific writer with dozens of publications appearing in the 1980s and 1990s (see bibliography in Niles 2007). The Necrópolis bundle seriation developed by Dwyer and promoted by Paul—ultimately based on Dawson's ceramic seriation—became embedded in the literature. So too did the Haeberli Antara as the standard marker for N2.

Haeberli Antara. Figure 11 shows this classic piece. Side 11a has been previously published in black and white (Silverman 2002b: 75, Figure 3.1; Silverman and Proulx 2002: 26, Figure 2.4; Willey 1985: Plate 365), but here it makes its first appearance with both sides in color, accompanied by an x-ray and line art (all courtesy of Joerg Haeberli). In outline, the skirt shows a converging form with a narrow nose. There are seven double-chambered



Figure 13. N2 Masked Being effigy bottle with polychrome slip paint. Height 26 cm.

tubes with both spherical and ellipsoid openings (ranging from 11-13 mm in diameter, see Haeberli 1979: 58, Table 1), and two suspension holes. The maximum length is 20.6 cm and width across the mouthpiece is 11.5 cm. The reverse (Figure 11c) has wide bands separated by narrow, outlined bands. There are a few small areas of discoloration on this piece due to differential firing, but seven distinct slip colors are evident: orange, maroon (dark red), black, yellow, gray, brown, and white. The features which Dawson believed appeared for the first time on the Haeberli Antara are the "fully grasping hand," "closed thumbed foot," and "profile trophy head" illustrated in Figure 11b, and eye loops on the mouth mask (better illustrated in Figure 13a). These were considered to be the principal diagnostic traits of N2 iconography.

Before reviewing the Necrópolis Era diagnostics of hands, feet, and trophy heads, some general comments on N2 characteristics are warranted. In his initial seriations of the early 1950s, Dawson did not recognize N2 because there were no examples in the Uhle collections at the Phoebe A. Hearst Museum of Anthropology, University of California, Berkeley, where he worked (previously Lowie Museum). He came to recognize N2 after seeing Duncan Strong's collections from Cahuachi at Columbia University in New York, although Strong's N2 material was mainly vessel fragments (Dawson 1982). A few examples of N2 pots arrived at Berkeley when the museum acquired another large south-coast collection in 1964, and Dawson also collected published pictures of pots. But in 1970 when he chose the Haeberli Antara as the definitive N2 piece, his sample of N2 was limited. With the passage of time



Figure 14. N2 wide-mouth jar with warriors and polychrome slip paint. Height 16 cm.

more examples have become available. It is now possible to compare the Haeberli Antara with other N2 pieces. In the following discussion, features which distinguish this piece from N1 antaras are noted, but it is also shown that the Haeberli Antara represents a substyle within N2. In retrospect it was not the best choice to represent the entire phase.

Two traits set the Haeberli Antara apart from its N1 predecessors. First, the nose of the skirt is comparatively narrow and, while this is a relative trait, it becomes progressively marked over time. Second, the design is entirely painted, not incised and painted as in N1. In N2, incisions appear only on fancy pieces, where they are limited to a few lines. They do not outline any major portions of the motif. Incisions are sometimes used for small features, such as the face on a diadem where they appear as shallow, scratch lines (Larco Hoyle 1966: Figure 108). In other cases, on early N2 fancy ware, they are not so much incisions as shallow grooves providing a trace of relief to the surface as opposed to defining design areas. This is

the case with the Haeberli antara, for, although not visible in Figure 11a, there are a few shallow grooves on the surface which partially, although never entirely, trace elements of the design (Joerg Haeberli personal communication). The effect is shown on Figure 12a and b, where shallow grooves are only detectable with lighting, yet lend attractive surface texture. We must admire the skill required to groove the moist exterior of a thin-walled, hollow clay ball. Such detailed work survives briefly in N2 as a nod to the past, but vanishes from the ceramic tradition before the end of this phase. Another diagnostic N2 trait exhibited by Figure 12a and b is the bottle chamber. Dawson described it as "gum-drop" shaped after a popular candy. It is one of several N2 bottle shapes (compare with Figure 13a and b). In N3, bottle chambers are more rounded.

The Figure 12 double-spout bottle is very early N2 and, unlike the Haeberli version, the Masked Being is instantly recognizable (Figure 12c). The classic features of mouth mask, diadem, serrated appendages,

and trophy head association can be read at a glance. The Haeberli antara requires us to peer into the image to discern, and admire, the artful way in which tiny images (seemingly disparate) are combined to form a Masked Being. For example, the eye loops of the mouth mask are represented as long-necked water birds, and the diadem is a feline with its own mouth mask (see Figure 11b). The usual N2 portrayal of a diadem and mouth mask with eye loops is shown in Figure 13a, although not all N2 mouth masks have eye loops (Figure 12).

Relief modeling of features such as mouth masks and diadems, a technique that begins in N1, is found on many (but not all) N2 effigy bottles (Figure 13). With rare exceptions, relief modeling does not continue into N3. On Figure 13b the spout emerges from the back of the head, a feature highly diagnostic of N2. Not all N2 effigy vessel spouts protrude from the head, some are attached to the figure's back, but when they are positioned on the head it is a definite N2 indicator. A few examples are known from late N1, but these are incised and

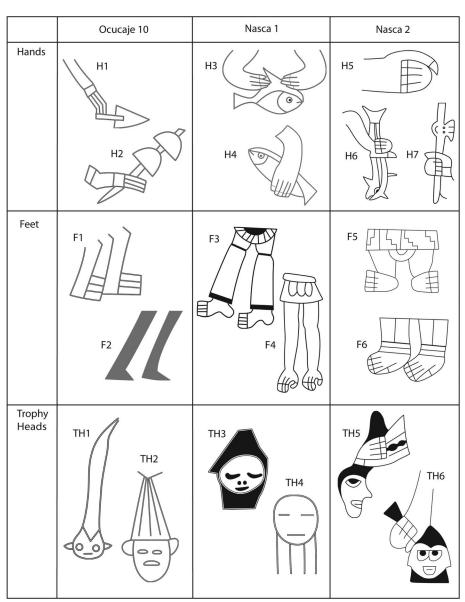


Figure 15. 1970 seriation: Oc. 10 and N1-2 hands, feet, and trophy heads.

easily separated from N2 specimens. I am not aware of this trait continuing into N3.

Figure 14 shows an N2 wide-mouth jar without any form of incising, grooving, or relief modeling. The warrior design is flat-painted. This is the most common method of pottery decoration in N2. Surface grooves (Figure 13a and b) occur only on some early N2 fancy vessels, although relief modeling appears occasionally throughout the phase.

The vessels in Figures 12–14 exhibit two additional N2 characteristics. First, the images are large and cover the height of each vessel. In Figures 12 and 13, a single creature wraps the vessel, while Figure 14 has three warriors around its exterior, each in full-frontal position and occupying the design field from base to rim. N2 is the beginning of Early Nasca, referred to as the "Monumental Style" in earlier literature due to the size of images in relation to the design field (Rowe 2010 [1960]: 232). Second, the background is open. The figures occupy their space without crowding and secondary motifs are absent. The artists are comfortable with open space, which focuses attention. The message is clear at a glance. The Haeberli antara does not follow the same cannons. Referring again to Figure 11a and b, a busy design field is crowded with adjectives and metaphors, such as the long-necked birds in place of mouth mask eye loops. The message is complex and full of modifiers requiring contemplation. I am aware of a half-dozen similar compositions, but, within the corpus of N2 vessels, this is a limited substyle. Regardless, the Haeberli Antara remains a classic N2 piece.

Phase Diagnostics in 1970

The shape of the hands and feet and profile trophy head on the Haeberli Antara were considered to be definitive N2 phase markers in 1970 when Jane Dwyer was preparing her dissertation. At the same time, these features were also traced through Oc. 10 and N1. Figure 15 illustrates the seriation as it was understood in 1970. The Oc. 10 examples are incised and resin painted, N1 are incised and slip painted, and N2 are slip painted.

Hands. As shown in Figure 15, the hands on Late Paracas figures are the same width as the arm, and, while fingers are indicated, a thumb is lacking. Paracas hands have a "touching grasp" in which the lines representing the fingers simply run into the object (H1) or an "overlapping grasp" where the finger lines cross over the object being held (H2). N1 hands have more shape and a thumb is shown. The "touching grasp" continues (H3) as does the "overlapping grasp" (H4). There are rare instances where the fingers actually curl around the held object, but, when this happens, a thumb is not shown. The "fully grasping hand," in which the fingers and thumb curl around the held object, appears for the first time in N2 (H5-7), and is therefore an N2 diagnostic (Dawson 1986; Dwyer 1971: 208, 1979: 114).

Feet. Late Paracas feet are rectangular with a few lines indicating toes, or pointed without toes (F1–2). In N1, as with the hands, there is an attempt to show a more depictive (or naturalistic) outline for the foot with heel and arch indicated (F3). The "arched foot" is highly diagnostic of N1, as it is limited to this phase (Dwyer 1971: 182, 1979: 112). On supernatural creatures, a claw-like foot can appear, which resembles a hand with the thumb arched outward (F4). This may be referred to as an "open thumbed foot" to distinguish it from the "closed thumbed foot," which does not appear until the next phase. For the purposes of illustration, F3-4 are details from painted leather (Lapiner 1976: 469, Figure 467), but ceramic examples are known. In N2, anthropomorphic representations have a "wedge foot" shape (F5), but Masked Beings are given a "closed thumbed foot" (F6). While the "open thumbed foot" appears in N1, the "closed thumbed foot" occurs for the first time in N2, and is considered highly diagnostic of N2 creatures (Dawson 1986; Dwyer 1971: 208, 1979: 115).

Trophy Heads. In Oc. 10 and N1, trophy heads are always full-faced or "frontal" (TH 1–4), while in N2 they may be shown frontal or in profile (TH 5–6).

The profile trophy head appears for the first time in N2 (Dawson 1986; Dwyer 1971: 209).

With this background on the diagnostics of hand, foot, and trophy head depictions in N1 and N2—as they were understood in the 1970s—a comparison can now be made with new specimens from European museums. These artifacts will be individually illustrated and described first, and then compared with the 1970 seriation in Figure 15.

Proto-Nasca Antaras and Authenticity

The antaras shown in Figures 17, 19, and 20 have appeared in European exhibition catalogues published in Spanish, French, and German. However, only a handful of North and South American Nasca specialists were aware of them. In 2010, I featured them in a presentation at the Institute for Andean Studies



Figure 16. Jahnckee Antara, N1, incised plain ware, with Masked Being motif (for line art see Figure 21). Length 18 cm.

Annual Conference in Berkeley, California, entitled: "Nasca 1 and 2 phase markers: adjustments to the original seriation." At that time, I had not personally examined these artifacts and knew them only from photographs. As these pieces do not conform to the traditional Dawson seriation, participants suggested they could be forgeries. I concede one cannot determine authenticity from a photograph. In 2012 I travelled to Finland, Switzerland, and Germany to conduct empirical examinations of each artifact, and can now state unequivocally that these specimens are indeed authentic. I proceed now with the chronological placement of each antara determined by its ware type and techniques of decoration, and not by iconography. Following these descriptions, the implications of the iconography for the Dawson seriation are presented.

Jahnckee Antara. Figure 16 is known only from a limited edition book published in Paris in 1925. The black-and-white image reproduced here is described as a yellow-brown clay antara, 18 cm in length, with five tubes, engraved with an idol (D'Harcourt and Béclard D'Harcourt 1925: 8, Plate XVII-4). The line drawing is shown in Figure 21c. While the authenticity of this piece cannot be determined from a photograph, the senior author Raoul D'Harcourt, a noted art historian of his day, observed it in the Jahnckee Collection in Lima. In current terms, this antara was fired in an oxidizing atmosphere. In outline, it has a converging shape with a relatively broad nose and five doublechambered tubes. It is fine plain ware incised, one of several ware types typical of N1 ceramics, but limited to this phase (it does not continue into N2). Examples of fine plain ware (sometimes incised) are shown in Figure 5a and b. Those less familiar with Proto-Nasca wares sometimes remark that the potter simply forgot to paint these pieces, or that the paint has worn away. Detailed examination of surfaces under magnification shows not a fleck of paint. When considered within the entire corpus of N1 pottery, fine plain ware is revealed as an aesthetic choice, as is the use of design incision without paint.



Figure 17. Allerheiligen Blackware Antara, N1, incised and resin painted, with Masked Being motifs (for line art see Figure 21). Length 14.5 cm.

Allerheiligen Blackware Antara. Figure 17 is a blackware antara with the design completely incised and resin painted. The skirt of this piece is the typical N1 converging shape with broad nose (Figure 17a and b). As previously noted, blackware is common in Late Paracas (Figure 4b) and in N1 (Figure 5c–g), but does not continue beyond N1.

Figure 17 is 14.5 cm in length and has four double-chambered tubes with spherical openings (Figures 17c and d). Fragments of blackware antaras have been documented at Cahuachi by Duncan Strong (Figure 5f), and by Guiseppe Orefici (2012: 205, Figure 20, 283, Figure 9). It is unusual for Nasca antaras to have only four pipes and to be so



Figure 18. Textile impressions on resin paint, Oc. 10 (a) and (b) and N1 (c) (detail of Figure 17).

small (Figure 17e). Both traits are closer to Paracas blackware specimens (Figure 8). However, the skirt shape and iconography are decidedly Nasca. Incised designs filled white are typical of both Paracas and N1 blackware. Because it is not possible to decorate a blackware vessel with slip paint, Paracas potters used organic resin paints (e.g., Figure 4a). These were applied after the pot was fired and had cooled. The resin paint was then scorched onto the surface. While the colors are often clear, the paint is thick and prone to flake off over time, exposing the black surface beneath (compare with Figure 4c).

The exact method for applying resin paint is unknown and in need of study, including experimental archaeology. However, it appears to have involved the use of a cloth to daub on the paint as shown by woven fabric markings visible on some Paracas specimens (Figure 18a and b). The Figure 17 antara has Nasca Masked Beings incised on both sides (Figure 21a and b). The implications of these two different renditions appearing on the same piece will be discussed presently. Here the reader's attention is drawn to the method and technology of decoration. Post-fire resin painting is a Paracas technique, as is the method of applying it by daubing with a textured cloth. Surface examination of Figure 17 shows the same type of fabric markings visible on Paracas specimens (Figure 18c).

The shape of this blackware antara and its iconography are pure Nasca, but its size, four-tube configuration, resin paint, and paint application method are Paracas. Keeping in mind that post-fire resin paint is the only means of color-decorating blackware, and that blackware is confined to N1, it must be concluded that this antara was made during the Proto-Nasca Epoch while resin painting technology was still known, further illustrating the Paracas-Nasca overlap. What is most surprising about this piece is the Masked Being iconography fully developed and in a form that remains recognizable throughout the following six centuries, the implications of which are discussed below. The line art for these Masked Beings is shown in Figure 21a and b. The Allerheiligen Blackware Antara has also been published in (1999: 243) Ebnöther and Ebnöther Rickenbach (1999: 225, Figure 34).

Didrichsen Antara. Figure 19 has the converging skirt with broad nose typical of N1 antara shapes, seven double-chambered tubes with spherical openings 1 cm in diameter (Figure 19c), and a total length of 19 centimeters (Figure 19d). Typical of N1 fine wares, the design on side 19a is completely incised. There are no incisions on the reverse

(Figure 19b), which has diagonal bands in gray, red, and natural buff. The ground color of this piece is the natural buff surface of the clay after firing in an oxidizing atmosphere. In this way, the natural fired clay surface is incorporated into the aesthetics. In the Nasca ceramic tradition, use of a buff surface as a ground against which to set the motif is restricted

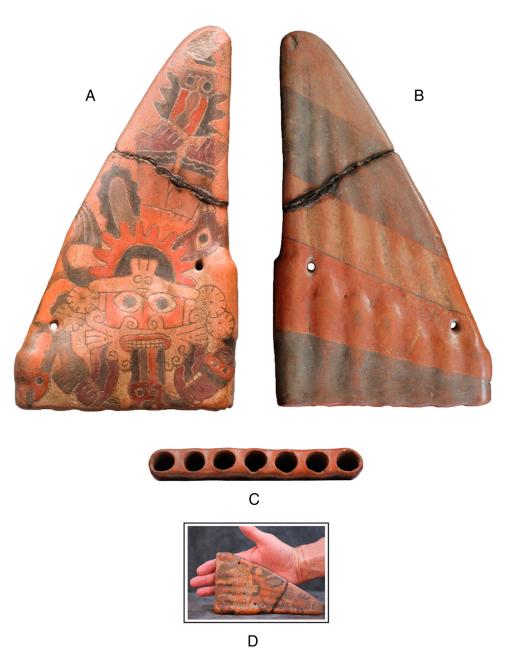


Figure 19. Didrichsen Antara, N1, incised and polychrome slip painted on natural buff ground, with Masked Being motif (for line art see Figure 21). Length 19 cm.

to N1. On side 19b, the buff ground forms two of the diagonals. The central, buff diagonal is separated from its neighbors by a thin black line (close to the suspension holes) and a thin red line on the other side, but the remaining two diagonals do not have extra paint lines separating them from their neighbors (compare with Figure 11c). Line art is

shown in Figure 21e. The Didrichsen Antara is also illustrated in Didrichsen et al. (2010: 238), INKA PERU (1992: 239, Figure 242), Los Incas (1991: 141, Figure 183), Purin (1990: 111, Figure 138), and Silverman (2002b: 81–82, Figure 3.3).

The Didrichsen Antara was broken and repaired prehistorically. It has been noted that Dawson



Figure 20. Reiss-Englehorn Antara, N1, incised and polychrome slip painted, with Masked Being motif (see line art in Figure 21). Length 18.5 cm.

described an Oc. 10 antara which was fractured and mended in two places with "hard, insoluble resin" (Figure 8c). In my own studies, I have observed Nasca and Loro vessels with a chip missing from the chamber leaving a small hole, which was subsequently plugged with a black resinous substance. In these cases, and with Figure 19, it is likely that the substance used on ceramics for both glue and plugs is the black resin of the *Prosopis* tree, called "huarango" on the south coast and "algarroba" elsewhere in Peru (Beresford-Jones 2011:119).

Breakage patterns on antaras may be intentional or accidental. In Early Nasca, antaras were sometimes smashed as offerings (Orefici 2012: 219, 365, 471–472; Reindel and Isla Cuadrado 2001: 254). The break on Figure 19 was clearly accidental, as the owner restored it. While whole specimens are common in collections, repaired examples showing a crack across the skirt are not uncommon. In these cases, I speculate the breaks may have resulted when the instrument was suspended from the neck and the musician was involved in energetic dancing.

Reiss-Engelhorn Antara. The shape of Figure 20 presents a classic converging skirt with broad nose typical of N1. Like Figure 19, this antara also has seven double-chambered tubes with spherical openings 1 cm in diameter, and its maximum length is 18.5 cm. Figures 19 and 20 are within .5 cm of each other in all dimensions. Line art is shown in Figure 21d. This piece is also featured in Wieczorek and Tellenbach (2002: 67, Figure 2.2). Figure 20 is completely covered in thick slip paints. There are seven distinct colors (tan, orange, maroon, gray, cream, brown, and black), making this one of the most colorful N1 pieces known (most have three to a maximum of six colors, see Proulx 2006: 31-32). The cream paint is exceptionally thick and shows both crazing and flaking (on Nasca slip paints see Carmichael 1998a: 217). On side 20a the paint is so thick it often covers incised lines. Nonetheless, close examination reveals that, while the outline of the Masked Being and most of his major elements are incised, details such as fingers and the diadem face are painted without incision. There are no incisions on side 20b. Like Figure 19b, it shows diagonal bands, but here they are separated by cream bars outlined in black (compare with Figure 11c). A curious feature of the iconography on this artifact is that the eyes lack pupils. This is deliberate and not a result of exfoliation. The reason for the absence of pupils is a matter of speculation, but it seems the piece was not "brought alive" with this final detail. This also suggests that eye pupils were the last addition to a composition which, if true, should find support in detailed studies on the sequence of paint applications. As yet such a study has not been conducted.

Review of N1 and N2 Phase Markers

It has been established that the four antaras in Figures 16, 17, 19 and 20 are all N1 specimens, quite aside from iconography. Here we consider the implications of the iconography in terms of the traditional N2 phase markers. The reader is referred to the line art in Figure 21. In the traditional seriation, N2 was defined by the Haeberli Antara because, at the time, it was thought to display several style features appearing in the sequence for the first time. As shown in Figure 15, key among these features were the "fully grasping hand," the "closed thumbed foot," and the "profile trophy head." In Figure 21, we see that all of the N1 Masked Beings have the fully grasping hand and closed thumbed foot. Profile trophy heads are evident on the signifer of Figure 21b and d. These features are all present in N1 and therefore cannot act as definitive markers of N2. In media other than ceramics, where incisions cannot be used to distinguish between phases, these traits could indicate either N1 or N2. In addition, based on the corpus available to Dawson at the time, other diagnostic N2 traits were the spondylus shell collar and pendants (Dawson 1986). Spondylus collars are present on Figures 21b and c, and shell pendants on the signifer of Figure 21b. These traits must now be moved back to N1.

Dawson also considered the mouth mask with eye loops to be an N2 diagnostic marker (1986), which

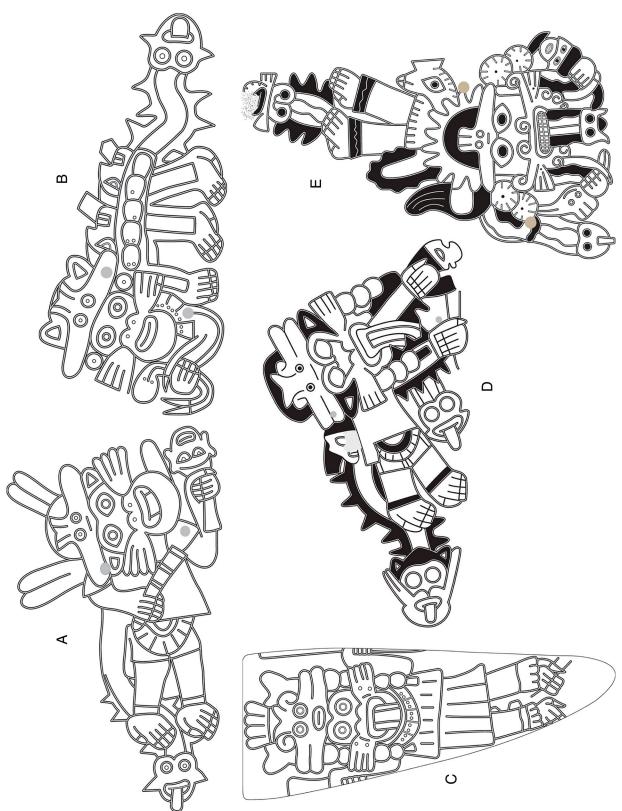


Figure 21. Proto-Nasca masked beings: (a) and (b) Allerheiligen Blackware Antara (Figure 17); (c) Jahnckee Antara (Figure 16); (d) Reiss-Engelhorn Antara (Figure 20); (e) Didrichsen Antara (Figure 19).

continued into N3, then vanished from the sequence, and emerged again in N6 as a different idea. Figure 21d shows the mouth mask with eye loops present in N1, and other N1 examples are shown in Paul (1990: 89, Figure 7.20) and Sawyer (1997: 40, Figure 16). The mouth mask with eye loops can no longer be considered a unique N2 phase marker. The Haeberli Antara remains a classic example of a substyle within N2 art. However, its use as a definitive phase marker for all of N2 (although logical in 1970) now requires reconsideration, and some adjustments to the original seriation. Put simply, *all* of the features listed above continue to characterize N2, but they are also present in N1, and alone cannot be used to distinguish between phases.

Similary Seriation and the Allerheiligen Blackware Antara

Before continuing with a re-evaluation of N1 traits, comment is required on the iconography of the Allerheiligen Blackware Antara and its implications for the method of similary seriation. Figure 17a and b exhibit two variations of the Masked Being on the same antara (for drawings see Figure 21a and b). This is extremely rare, if not unique. Early vessels usually show only one Masked Being (Figures 12, 13, 19, and 20), and when two appear (on either side of a bottle or jar), they are the same. Figure 17a shows a Masked Being with extended body, signifer, and closed thumbed feet, but it has an anthropomorphic appearance because of the loin cloth, shirt, human-like arms, and hands holding recognizable objects. The Masked Being on side 17b appears like a four-legged feline with tail. On closer inspection, we see it is standing on two legs (with thumbed feet) and bent forward with arms in front (downturned posture). I do not know what it holds in its right hand, perhaps an allusion to a severed head. The creature is bent under its signifer, which carries spondylus shell plaques and severed heads. It wears a spondylus shell collar. The absence of a loin cloth and shirt contributes to its animal appearance. To say that side 17a appears more anthropomorphic than side 17b does not mean it is less "supernatural." The seriated signifers terminating in feline heads and closed thumbed feet clearly identify both as creatures not of this world. These two designs were almost certainly incised by the same person within moments of one another, so the variations in depictions are not temporal. For example, on side 17a the ends of the mouth mask laterals are rounded, while on side 17b they are straight. Side 17a indicates an extended tongue behind the mouth mask (as shown on Figures 21c, d, and e), but side 17b lacks this detail. Side 17a has clothing, side 17b does not. The side 17a figure holds recognizable artifacts, the side 17b creature does not. Side 17b has spondylus ornaments, side 17a does not. Side 17a is in extended posture, side 17b is downturned. Clearly, two separate but related creatures are being shown. While the differences are not temporal, they may reflect actors in a "sequential narrative," as discussed below under "The Transforming Ancestors Hypothesis."

This piece has significant implications for the method of similary seriation, which assumes feature variation to be the result of stylistic drift over time. Other factors can account for style differences, such as regional variations (Carmichael 2013) or what Michael Moseley refers to as the "social axis of style variation," which seeks social correlates (Moseley 2013 provides a thoughtful critique of seriation and style change). Such factors require reconsideration of the Dawson seriation. It has proven useful for defining style phases in the Nazca Valley, but phases (style units) do not necessarily represent chronological change. The seven principal phases of the Nasca sequence show direction through time, but two or more distinct phases can co-exist (Carmichael 2013: 223). Therefore, these style units (phases) are not strictly sequential, and we must seek their stimuli in social dimensions. In this pursuit, the role of agency must figure prominently, for it was the Nasca potter who visually defined the supernatural world—the very essence of Nasca culture (Carmichael 1998a: 227)—and this ability was surely a source of social power. Fine ware may have been directly produced by chiefly families and/or talented leaders, whose

authority derived in part from the creation and gifting of embellished crafts and ritual paraphernalia (Vaughn 2005: 125). The stimulants of stylistic variation also can include idiosyncratic or actor-directed changes in rendition, as well as sheer artistic virtuosity.

What then of similiary seriation? We must not let some qualifiers negate all benefits. Similiary seriation is a valid method for ordering collections and identifying stylistic units, but in the stages of analyses it is a beginning, not an end, descriptive not interpretive. Units thus defined may or may not reflect chronological, social, or geographical differences, either alone or in combination. The Allerheiligen Blackware Antara also leads us to consider sequential narrative in accounting for motif variability. While the principal of similiary seriation (like goes with like) is sound, interpretation of resulting classifications should be informed by additional sources of evidence.

The Transforming Ancestors Hypothesis

In the original Dwyer/Paul seriation of Necrópolis burials (Dwyer 1971: 233a; Paul 1990: 60), mummy bundles were assigned to various time units (EH 10a, EH 10b, EIP 1a, EIP 1b, and EIP 2) largely on the basis of textile iconography. Not all researchers were comfortable with this arrangement (Peters 1997: 896–897; Sawyer 1997: 42), and anomalies in which bundles assigned to different epochs contained similar iconography were noted (Frame 2001: 92, endnotes 23–24; Silverman 2002b: 82). Textile specialists were unable to resolve these dating discrepancies because the seriation was based on the ceramic sequence (as it was known in 1970). In a bold move one researcher, Mary Frame, having grappled with the contradictions in the Dwyer/Paul seriation for years, simply abandoned the chronology. Unencumbered by the traditional seriation she was then free to look for a different logic underlying the imagery, and courageously offered an entirely original idea, here called the Transforming Ancestors Hypothesis. She proposed that the differences between images on the

Necrópolis textiles were not due to the passage of time, but rather represented sequenced "snapshots" in a mythical narrative of ancestor transformation (Frame 1995: 11–14, 2001: 55–92, 2004: 136–137). The transformation cycle progressed from young to mature human ancestors, which gradually took on the traits of animal counterparts, and eventually concluded as natural-looking birds, fish, and animals (sequential narrative). The argument is much more detailed and nuanced in a series of well-illustrated publications (also see Frame 2006: 214–216 [219–220], 2007: 65-66 [republished 2011: 81-82], 2009a: 202-205, 2009b: 46–49), but here it is noted that Frame's Transformation Hypothesis slices the Gordian knot. It will be difficult to test, but this form of interpretation fits comfortably within the contextual approach which, by constructing an indigenous context within which to view the subject matter, yields perspectives consistent with the Central Andean Tradition rather than answers to specific questions (Carmichael et al. 2014: 8–9).

The current article offers the first substantive support outside of the textile data for Frame's hypothesis by adjusting the N1–2 ceramic seriation. Traits originally used to define N2 are now shown to be present in N1, collapsing earlier categories. The Masked Beings on the Allerheiligen Blackware Antara (Figure 17) can be interpreted as sequential stages in an ancestor's transformation.

Regional Variation in N1 Pottery

Figure 22 illustrates the reorganization of N1 hand, foot, and trophy head features. The only major change from the 1970 seriation (Figure 15) is that the fully grasping hand, closed thumbed foot, and a version of the profile trophy head are not confined to N2. However, there is some evidence to suggest that, during N1, these traits originated in and were exclusive to Nazca. By N2, throughout the south coast, Nasca iconography was relatively uniform in the portrayal of hands, feet, and trophy heads. In Figure 22, N2 hands are all of the fully grasping variety, whether on anthropomorphic (H7) or

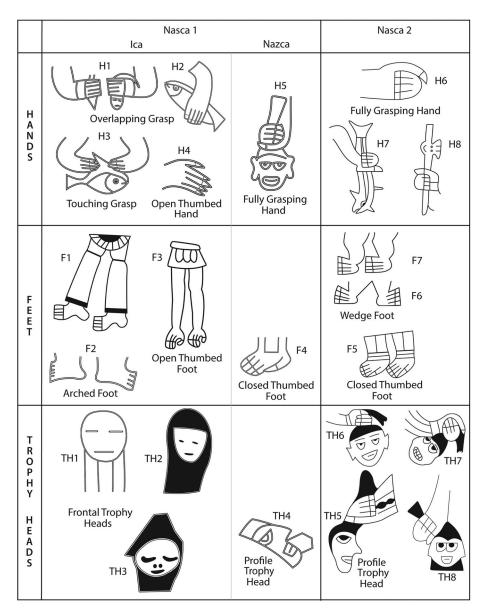


Figure 22. 2015 seriation of N1 and N2 hands, feet, and trophy heads, showing Ica and Nazca regional variation in N1.

supernatural (H8) depictions (also see Figures 12 and 14). But, in N1, there is greater variety. Like their Oc. 10 counterparts (Figure 15), N1 hands usually show touching or overlapping grasps. However, a development is evident, from the simple squared hand with overlapping grasp of H1 on which the thumb and fingernails are not differentiated (and see Figure 24), to H2 where the thumb and fingernails are indicated and the hand is contoured (pictured in Bird 1962: 186, Figure 37). The touching grasp in H3 may be intermediary in that tapered digits with nails are shown, but there is no distinct thumb, and the

hand is the same width as the arm (see Figure 25a1). The most advanced N1 form is the open thumbed hand in H4 on which individual fingers with nails and a separate thumb appear on a contoured hand. What all of these hands have in common (H1–4) is a lack of perspective regarding appendage size. Hands and arms are too large in relation to the body. Most specimens lack provenience, but H2 and H3 are from Ocucaje.

What then to make of the fully grasping hand in H5? This is from the incised blackware antara shown in Figures 17a and 21a. It is unquestionably

N1, but how does it fit in? The depiction shows proper perspective in relation to: a) the wrapping of the hand around the hair of the trophy head and, b) hand size in relation to the main figure. All of the digits and nails are shown and the hand is contoured. It is as fully sophisticated as any hand in N2 and is clearly their forerunner. In Figure 21, N1 hands are all of the fully grasping variety. It seems improbable that, once having hit upon the fully grasping hand in N1, the same artists would continue using the touching or overlapping grasp. They certainly did not in N2. The more likely explanation is that the fully grasping hand, along with the closed thumbed foot, profile trophy head, spondylus jewelry, and mouth mask with eye loops, was developed in Nazca, probably by artists at the cult center of Cahuachi. These traits are part of an artistic revolution during which depiction and perspective were mastered. Once begun, this revolution happened rapidly, perhaps within a single generation which, in archaeological terms, is the blink of an eye. The evidence for this scenario is the paucity of experimental examples. The Masked Beings in Figure 21 are complete with all of the diagnostic elements present that identify their kind for the next six centuries (mouth mask, diadem, bangles, and signifer). The appearance of the Masked Being marks the beginning of the Nasca cult which, in turn, is the essence of Nasca identity. However, while Nazca artisans generated the new art style, their Ica relatives continued with conservative depictions (e.g., touching and overlapping hand grasps). It was not until the Nasca cult was adopted in Ica and elsewhere that elements of the accompanying art style were accepted. It appears likely that the termination of Oc. 10 marks the point of radiation.

A qualification to the preceding scenario is required. To be clear, N1 incised and polychrome slip-painted ware probably appeared almost simultaneously in Ocucaje and Nazca. At the outset, all of the hand, foot, and trophy head types identified for Ica (Figure 22) may have been produced in Nazca also, or vessels with these features originating in Ica may have ended up in Nazca. However, at some point after slip polychrome incised ware was introduced, the Nasca

cult with its distinctive iconography and new artistic cannons emerged in Nazca. This means that, if we are using ceramic wares to mark the beginning of the Proto-Nasca Epoch, the Masked Being and the Nasca cult were not present at the inception, but appear sometime later. The emergence of N1 coincided with Oc. 10 in space and time. The Ocucaje Basin in Ica was certainly a center of development for both traditions, as was the Cahuachi sphere in Nazca, but other areas also participated.

The Denver Drum in Figure 23a is an excellent example of early N1 (also shown in Young-Sánchez 2003: 63, Figure 30). The design fields leave much open space. Hands show the squared, overlapping grasp of Figure 22h1 (and see Figure 24). They hold wands similar to those seen on textiles from the Necrópolis of Wari Kayan. By comparison, the drum in Figure 23b is an advanced N1 piece. The design fields are busy with small objects, mostly trophy heads, while the left hand clutches a miniature diadem, and what appear to be a net bag and sling. The hand is contoured, showing four fingers and a thumb with nails, but the grasp is overlapping. The figure has the classic N1 arched feet. It wears a diadem, but is not a Masked Being, as it lacks the mouth mask, bangles, and collar. The diadem has a strong association with Ocucaje, and I suspect this drum was produced there during the Necrópolis Era but prior to the establishment of the Nasca cult in Ica (represented by the Masked Being with its Nazca stylistic cannons).

Figure 24 is an early N1 effigy bottle. It presents relatively open design fields uncluttered with details. Hands are squared and show an overlapping grasp. The figure holds a hafted, triangular obsidian knife, and a trophy head. Of special note is the shape of the long spout rising from the back. It is curved, and the bridge from the back of the head follows the spout to its base forming ridges on either side. This distinctive spout form is known from only a few N1 bottles; it does not continue into N2. Paul (1990: 89) shows an advanced N1 effigy bottle with the same spout type (for a color photograph see Lapiner 1976: 200). The Didrichsen specimen in Figure 24 is very early N1, so the presence of an



Figure 23. Proto-Nasca drums: (a) early N1, height 42.5 cm; (b) advanced N1, height 33.5 cm. Style differences are regional as well as temporal. Polychrome slip paint, incised.

advanced N1 piece with identical spout demonstrates this trait continued throughout N1. But it is not common, and vessels that can be provenienced to Ocucaje do not have it. For example, Figure 25 shows a famous N1 piece excavated by Aldo Rubini in 1955 at Pampa de Pinella, Ocucaje (Rubini Grave 7: Dawson 1960; Rubini Drago 1989). Stylistically, I would place it between Figure 23b and Figure 24. But the vessel chamber and spout are very different from Figure 24. This indicates Figure 24 is not from Ocucaje and represents regional variation, perhaps a substyle from the upper or lower Ica Valley.

The two drums provide further evidence of regional differences in N1, even though they represent early and advanced forms. As previously noted, Figure 23b is likely from Ocucaje because it wears a diadem (the

Ocucaje-diadem connection will be explored in a separate article). The Denver Drum (Figure 23a) does not have a diadem, but features a disk on the forehead, from which a hafted, triangular obsidian knife rises vertically. The face is instantly comparable to the Didrichsen effigy bottle (Figure 24), especially the mouth, nose, face paint, and head covering (Figures 23b and 25 have black hair on the heads). There are differences between Figures 23a and 24 in the shape of the eyes and arms, but they share enough traits, including the lack of feet or indication of a lower body, to be considered in the same stylistic stream. The Denver Drum likely originated in the same region as the Didrichsen effigy bottle.

As more evidence becomes available, it may be possible to define regional styles with greater precision and to attribute many vessels now in museum



Figure 24. Proto-Nasca effigy bottle: figure with knife and trophy head, early N1, compare with Figure 23a. Polychrome slip paint, incised. Height 21.6 cm.

collections. Here, as a beginning, it is shown that regional variation does exist in N1 pottery with clues hidden in iconographic details (hands, feet, and trophy heads) and spout shapes. The Ocucaje Basin (middle Ica Valley) and the Nazca Valley were two centers of ceramic interaction and innovation during the Necrópolis Era, but other regions such as the upper and lower Ica Valley and the Pacific littoral may have participated more than is currently recognized. Curiously, while Oc. 10 and N1 plain wares are present in the Palpa region, incised and slip-painted polychrome has not been found despite extensive survey and excavation (Hecht 2013: 168).

White on Resin Post-Fire Outlining (Figure 26)

The technological distinction between Paracas and Nasca centers on fancy polychrome pieces. The

Paracas potters used post-fire resin paint while Nasca potters produced polychromes from pre-fire mineral paints. Both Oc. 10 and N1 traditions often used incisions to outline design themes before painting; however, resin paint and slip paint were sometimes applied directly without incisions. The operative word is "polychrome," because Paracas potters were long familiar with the concept of mineral slip paint, but used it as a single color. A red slip was employed as early as Oc. 3, which can be traced back to the Initial Period on the south coast (Menzel et al. 1964: 21–22). Cream slip was introduced for monochromes with Topará influence in Oc. 10. However, in spite of knowledge of the principles of mineral slip painting, Paracas potters preferred post-fire resin paints for polychrome vessels. The hallmark of Nasca is not the simple appearance of slip paint, but rather the use of several slip colors on a single vessel. It was the Nasca who mastered slip painting, ultimately capable of



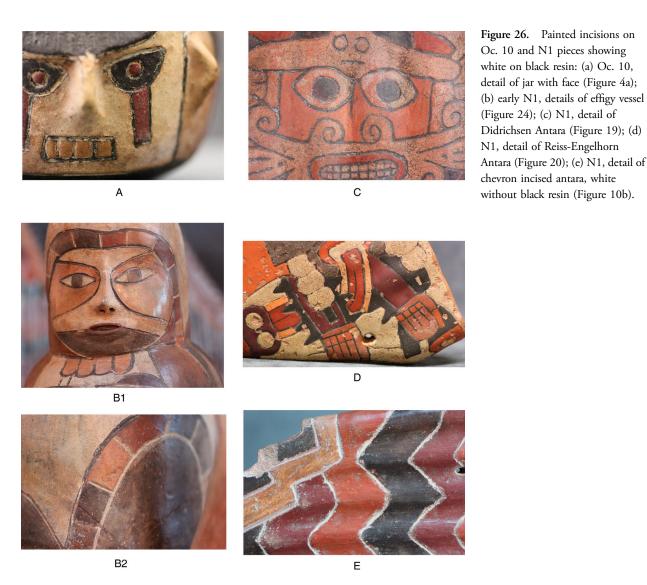
Figure 25. Proto-Nasca effigy bottle: fisherman, N1, Ocucaje, Ica. Polychrome slip paint, incised. Height 23.5 cm.

lavishing a dozen distinct colors on a single vessel (Proulx 2008: 572). But, at first, the pallet was limited with overly thin or thick slips and crazing attesting to a period of experimentation (Carmichael 1998a: 217; Menzel et al. 1964: 252). Uneven slips characterize N1 and early N2, but, before the end of N2, potters began producing uniform, bright colors.

The Oc. 10 and N1 potters produced cream slips, but a bright, chalk white eluded them. They knew the color, but as yet could not fix it in paint. In order to outline design areas, a post-fire process was used in which incisions were filled with black resin to act as a binder, and then coated with white chalk. The effect is illustrated by the Oc. 10 bowl in Figure 26a (another view is shown in Figure 4a). We cannot be certain of the elements employed without analysis, but it appears likely that the black substance is huarango resin and the white is kaolin or dolomite chalk. ⁷

This study documents the same method of post-fire outlining for N1 polychrome ceramics. Figures 26b1 and b2 show close-ups of the early N1 piece from

Figure 24. On some incised sections, an uneven application of thick resin fills the incision and floods the margins while the fugitive white chalk is completely worn away (top of Figure 26b1 and b2). On nearby incisions, the white chalk remains intact and contrasts well with the cream ground. In other areas, sometimes further along the same incision, both chalk and resin have exfoliated out, leaving the oxidized natural surface of the incision exposed (Figure 26b2). A close-up of the Masked Being on the Didrichsen Antara (Figure 26c) shows the interior of the incisions are coated black but with superimposed flecks of white remaining, which is a distinct color from the cream of the mouth mask, eyes, and diadem. The incisions on the Allerheiligen Blackware Antara were also coated with black resin and dusted white, although in places both are worn away (Figure 17). Traces of this process also remain on the Reiss-Engelhorn Antara, although here the slip paint is so thick it is difficult to recognize. Looking closely at the incisions on the arms (Figure 26d), they appear to be a light gray color compared with the solid black edging. This is



the remains of what I am calling the fugitive white chalk application. Here, as on the Didrichsen Antara, it is almost entirely exfoliated, but the resin exposed beneath is also a lighter color than the jet black slip. The Reiss-Engelhorn Antara shows advanced traits such as painting elements without incision (digits of the hands and feet), and slip experimentation (the thick cream, which did not work out). But iconographic features such as the overlapping bangles, and technical traits like the continued use of white on resin post-fire outlining, place it in N1.

David Beresford-Jones (2011: 120) translates a telling passage from the 1653 writings of Father Bernabé Cobo on coastal huarango trees as follows:

This tree [Prosopis] exudes a certain black resin from its branches, which as it runs to the ground congeals, sometimes in great quantities and in the valleys they use this to decorate ceramics, because heated with water it makes a very black ink, which after being left to cool cannot be erased or rubbed off with water or anything else (Beresford-Jones 2011:120).

The antara detail in Figure 26e exhibits a slightly different process (and see Figure 10b). Here there is no evidence of black resin providing a base for the white chalk; rather, the chalk was applied directly into the incisions. This is another post-fire technique

which, presumably, would have required periodic freshening. Examining Figure 26e, note how the white accentuates the raggedness of the incisions, indicating that the incisions were executed when the clay was already leather-hard. When the pre-fire slip paints were applied, the incision edges would have appeared sharp and even to the eye. After firing, the final touch was to add the white chalk, and even though this highlighted ragged edges once again, its effect is startling (Figure 10b).

Oc. 10 and N1 potters could not produce solid white slip paint, but by the end of N2 artisans

managed to perfect it. Determining the difference between cream and white is often a matter of subtle shades; however, in general terms it can be said that the ground on N2 vessels often trends towards a light cream, while the coloring of eyes, mouths, fingers, and toes is a true white (Figures 12a and 14).

Truco del Ojo (Figure 27)

In Necrópolis Era iconography, there are several artistic conventions which may be grouped under the term

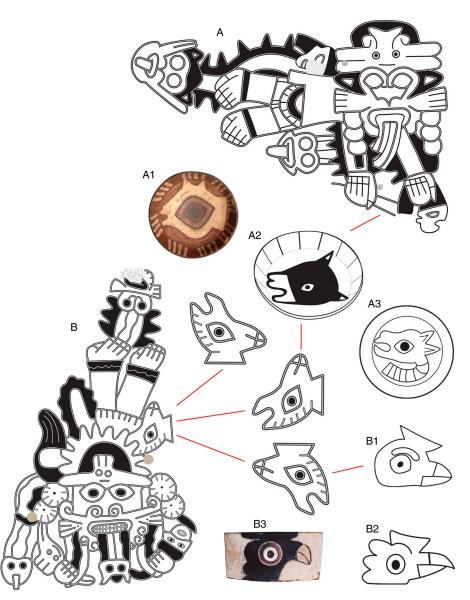


Figure 27. Truco del Ojo: (a) emergent design, camelid head hidden in the Reiss-Engelhorn Antara (compare Figure 20); (b) anatropism, camelid or condor head hidden in the Didrichsen Antara (compare Figure 19).

Truco del Ojo ("Trick of the Eye"). These involve images that change form (and meaning) depending on the perspective of the viewer. It is an ancient Central Andean technique used on ceramic, textile, and metal iconography by widespread cultures. One form of Truco del Ojo is called anatropism (reversible) by George Kubler (1990: 369) for images that, when inverted, still present a visually meaningful, right-side-up image. It is common in Chavin art (Burger 1995: 147) with the Raimondi Monolith being the classic example (Burger 1995: 175; Kubler 1990: 373). Anatropism may appear on the south coast with Chavin influence centuries earlier, but it was still employed on textile iconography of the Necrópolis Era (Frame 2001: 77–78; Kubler 1990: 433). Anatropism was also an element of Proto-Nasca art. The Masked Being on the Didrichsen Antara (see Figure 27b) has several attachments (modifiers or adjectives), one of which appears to be a guanaco head—or is it a condor head?—as the antara surface is turned, meaning changes with the viewer's perspective. Camelid heads are common on the interior of Early Nasca bowls and may represent male guanacos in aggressive posture (Figure 27a1-3). Condors, the largest raptors on the coast, are also common Early Nasca motifs (Figure 27b1-3). The male condor is always shown, identifiable by the fleshy caruncle crowning his head, which is absent on females of the species.

Another form of Truco del Ojo is composition by multiples in which a larger motif is composed of numerous smaller images. Each is separately identifiable, but, in combination, the viewer becomes aware of a larger picture. This can be a factor in anatropic presentations (e.g., Frame 2001: 78), but also appears on single-view pieces. The Haeberli Antara (Figure 11) is a good example of a single-view motif (it can only be read in one position) composed of multiple smaller images. The viewer's eye sees beans and birds before it realizes these decorate the front of the Masked Being's tunic, and long-necked water birds before realizing these are eye loops on the mouth mask. Compositions by multiples, which may include substitutions (e.g., long-necked birds for eye loops) are complex statements that compel contemplation.

A third form of Truco del Ojo is emergent design. It is the subtle use of existing lines to suggest a silhouette, which the eye only discovers after studying the larger motif. The Reiss-Engelhorn Antara provides an excellent example (see Figure 27a) in which a guanaco head emerges between the hands of the Masked Being (compare with Figure 20a and 26d). On close inspection, we see that the spike-fringes on the left arm are rounded and carefully placed to edge the guanaco's snout and open mouth, while the spikes on the right arm are pointed and more widely spaced. A suspension hole conveniently marks the eye. The guanaco head is hidden in the design and suddenly emerges as if by magic.

Design opportunism is another category of Truco del Ojo. In this form, part of a smaller image is defined by pre-existing elements of the primary motif. This is seen on Figure 27b where the open mouth of the guanaco is actually the serrated edge of the Masked Being's headdress. Another example is seen on Figure 13. It appears, at a glance, that the trophy head hanging from the Masked Being's elbow has the usual black hair locks on either side of the face, but these are actually spikes on the serrated appendage. With opportunism, the artist is taking advantage of the primary motif's morphology to create secondary images.

Truco del Ojo is a composite of several artistic conventions which, in one way or another, fool the eye. The forms discussed above may occur alone or in combination. They are an inherent part of the entire Central Andean artistic tradition, and here are documented for the Necrópolis Era on the south coast. Examples are less common after N2.

Discussion and Conclusions

Comparison of selected Oc. 10 and N1 wares demonstrates that these contemporaries shared certain aesthetics and ceramic technologies, but expressed them differently in vessel shapes and decoration (Figures 4 and 5). The descriptive terminology for antaras introduced in Figure 6 facilitates comparison of Paracas and Nasca instruments, while showing

similarities in production methods with visually different outcomes. Antaras were widely employed in Oc. 10, but they are relatively plain and common artifacts. In Proto and Early Nasca, they continued to be widely produced and often in monochromes, but were used primarily in communal ritual settings where they became appropriate objects for breakage in mass offerings. As shown in this article, some Proto-Nasca antaras were lavished with color and complex iconography. These are labor-intensive pieces demonstrating levels of creativity and craftsmanship unequaled by their south-coast contemporaries and predecessors. These antaras reveal a fresh importance for music inextricably bound with the new cult revealed in their elaborate iconography.

The Haeberli Antara, upon which Dawson based the definition of N2 in 1970, has been placed in context. Using it as the phase marker for N2 was logical in terms of Dawson's methodology, and timely for Jane Dwyer's Ph.D. dissertation. But cast against the ever-expanding corpus of Nasca pottery known today, the Haeberli Antara, while still a classic N2 piece, is best seen as representative of a substyle rather than the entire phase. The features Dawson used as N2 phase markers (portrayal of hands, feet, trophy heads, and mouth mask with eye loops on the Haeberli Antara) are not unique to N2, but also occur in N1. When these features appear on pottery, the presence or absence of incisions distinguishes N1 from N2, but, in other media, these traits no longer serve to separate the phases. This finding requires some adjustments to early phase markers in the traditional Dawson seriation (Figure 22).

New evidence from European collections has made these adjustments possible. The antaras featured here are "new" in the sense that only a handful of North and South American specialists were previously aware of them, and they had not yet been incorporated into the American narrative. When first presented in photographs, their authenticity was questioned. Europeans were familiar with these specimens (Didrichsen et al. 2010: 239; Purin 1990: 110, Figure 137; Rickenbach 1999: 225, Figure 34; Wieczorek and Tellenbach 2002: 67, Figure 2.2), but not with the unpublished Dawson seriation. Aside from minor repairs and

touch-ups, these specimens are herein authenticated and positioned in the academic literature.

This study also documents previously unrecognized regional variation in N1 pottery. Variation in the depiction of hands and feet is important for sorting out Nasca cultural history, but the differences are regional, not chronological. The Masked Being iconography on the European specimens is mature Nasca (Figure 21). This motif's diagnostic features remained unchanged for the following six centuries. The Masked Being appears suddenly in the sequence, heralding the advent of the Nasca cult. But during the Proto-Nasca Epoch, this cult (or at least its art style) remained in Nazca. Although N1 pottery was produced in the Ocucaje Basin, the style remained conservative, employing the touching or overlapping hand grasp (Figure 22). In addition to what can be identified for Nazca and Ocucaje, there is a third substyle represented here by the Denver Drum and Didrichsen effigy bottle (Figures 23a and 24), but for now its geographical affiliation remains unknown (upper or lower Ica are best guesses). Similar diagonal patterns appear on the reverse sides of the Didrichsen, Reiss-Engelhorn, and Haeberli antaras. This demonstrates stylistic continuity from early N1 (Figure 19b) to advanced N1 (Figure 20b), and early N2 (Figure 11c). It also suggests the same regional affiliation, which for these pieces is certainly Nazca, and most likely the ceremonial center of Cahuachi.

The technique of white on resin post-fire outlining is herein documented as an Oc. 10 and N1 method of highlighting incisions (Figure 24). The black resin is likely from the huarango tree, and the white may be kaolin or dolomite chalk. The method was shared by Oc. 10 and N1 potters, and therefore is among the characteristics of Necrópolis Era pottery. (It may yet be documented on earlier ceramics.) The greater energy expenditure invested in decoration was required because, although the artists could produce cream slip paint, they did not know how to fix pure white in slip paint. Evidently, pure white was deemed preferable for outlining designs, even if it required additional post-fire treatments, and the fugitive white chalk necessitated periodic renewal. The purpose of incisions was essentially to act as channels

to hold resin, over which the chalk was applied. When the manufacture of pure white, pre-fire slip paint was perfected there was no need for resin-filled channels. The tradition of incising designs in moist clay came to an end after being employed on the south coast for a thousand years.

N2 marks the introduction of pure white slip paint, which remained prominent in the Nasca pallet for the next five centuries (Figures 12–14). It was sometimes employed to outline color blocks, especially black sections of design (Figure 12b), but also for elements such as eyes, mouth, and fingernails (Figure 14), and for the motif ground. But cream continued to be used and, on N2 pieces in particular, it is common to find both cream and pure white (Figures 12a and 14).

In terms of the disappearance of incising, the discovery of pure white slip paint was more of a co-variable than a cause. Although white outlining was still occasionally used, from N2 onwards, black became the most common color for outlining. The loss of incision is regarded as one of numerous changes at this time. A series of social factors were at work during the Necrópolis Era which, by N2, ultimately resulted in the termination of many ceramic traits that had previously enjoyed longevity and wide popularity on the south coast. The social analysis of these trends in material cultural will continue to be explored. Here, it is noted that changes in the ceramic tradition correlate with changes in settlement and burial patterns (DeLeonardis 2012: 201; Van Gijseghem and Vaughn 2008), and the emergence of Cahuachi as a pan-regional ceremonial center (Kanter and Vaughn 2012; Llanos Jacinto 2010; Orefici 2012). The beginning of the Early Nasca Epoch is marked by the abandonment of old ways and the adoption of new. I aver it was the appearance and spread of the Nasca cult, represented by the Masked Being motif, that precipitated and facilitated these changes.

Truco del Ojo ("Trick of the Eye") is a general term for a set of widespread artistic conventions with great time depth in the Andes, but here it is documented in Proto-Nasca art (Figure 27). In N1–2 examples of anatropism (reversible image), composition by multiples (small figures combined), emergent design (contrived

silhouette), and design opportunism (incorporating pre-existing lines) have been found. The attractive qualities of Truco del Ojo were surely the same for the ancients as they are for us. Humans admire cleverness and delight in trickery. However, while the conjurer's art is viewed as entertainment in contemporary Western traditions, in other cultures magic is real and images are infused with sacred essence. For its Proto-Nasca audience, Truco del Ojo may have conveyed deep messages of spirituality, mythology, and identity. We know that the Nasca used hallucinogens (Orefici 2012: 250; Valdez 1994: 677). Perhaps at certain times, such as during indoctrination when the sacred narrative was recited and the mysteries revealed, the sudden realization of one hidden figure emerging from another had a profound effect.

The Didrichsen Antara (Figure 19) may be a contemporary of the Allerheiligen blackware instrument (Figure 17) with differences attributable to the backgrounds of the artisans who produced them. Of the antaras presented in this article, the Didrichsen piece is unequivocally the earliest pure Nasca creation. In shape, tube numbers, incision with polychrome slip paint, white on resin outlining, and the iconography of the Masked Being, it is the classic Nazca-Nasca 1 antara. The strongest feature, which establishes its temporal priority, is the lack of a ground color on side 19a (decoration appears against the natural buff, oxidized surface), and on the reverse side the buff surface is again used as a color for two bands. Another notable early trait on side 19b (Figure 19b) is the absence of separation lines between the diagonals. This piece exhibits a set of style associations fundamental to the definition of N1.

The Allerheiligen Blackware Antara (Figure 17) provides critical information on chronology and the appearance of the Nasca cult. This small, four-pipe instrument, incised and resin painted, shows strong Paracas influence, but the antara shape and its iconography are decidedly Nasca. This piece comes as close as the ceramic evidence can ever take us to the moment when the Nasca cult materialized its ideology in a new art style, and the iconic Masked Being first appeared. That it arrived fully formed, with all of the diagnostic traits that identify it for the following half millennium,

demonstrates the suddenness of the cult genesis, perhaps within a single generation (20 years). In terms of the art style, this is the sort of genius breakthrough and florescence associated with European schools of recent centuries and other such movements in the history of art. The presentation of two different-looking Masked Beings on either side of the Allerheiligen Blackware Antara is of particular importance to Dawson's methodology of similiary seriation. The traditional basis of similiary seriation—that variation of features composing themes is due to stylistic drift over time—requires modification. The principle that objects or motifs which look similar are closer in time remains valid; however, the reverse idea that objects dissimilar in appearance are further apart in time does not necessarily follow. Variability may, in fact, reflect temporal separation, but it may be due also to contemporary regional or social differences. Another viable possibility, advanced by Mary Frame (1995), is that we are looking at "snapshots" in a narrative sequence involving a sacred mythology of ancestor transformation. The current research demonstrates regional variation in N1 pottery. It also opens the way for Frame's transformation hypothesis by untangling N1 and N2 phase markers, and providing a ceramic example of contemporary but distinct versions of the same creature.

The observations offered here do not constitute complete phase definitions for N1 and N2, but a start has been made in that direction. In this regard, future work should increase the sample size, and document the full range of vessel shapes and motifs. The traditional Dawson seriation, while certainly valid for the Nazca region (Carmichael 2013: 217), requires adjustments to some phase markers, and allowances for regional and social variation. The current work unblocks some log jams and, hopefully, will inspire other south-coast researchers to re-examine the potential of iconographic evidence. To field archaeologists, N1 pottery, usually encountered as handfuls of monochrome sherds, appears uniform over much of the south coast. Only by studying whole vessels are we able to document regional styles and the initial appearance of the Nasca cult. Research should always proceed along multiple avenues of inquiry.

Great strides are being made in applying the techniques of archaeometry to Nasca environmental and material culture studies. Also, excavations at a variety of sites and osteological analyses are making critical contributions each year. As an adjunct to these approaches, the study of ceramic chronology and iconography provides additional information not readily available by other means. Of late, it has been left fallow for two very good reasons: 1) lack of published phase definitions, which renders it a mysterious and uncertain pursuit and; 2) the results are not immediately applicable to field situations, for the chances of encountering a sherd exhibiting specific foot or hand features are miniscule. The current work will not aid field researchers directly, but it does offer perspectives not available by other means. Existing collections, even without provenience, still contain a wealth of information when adroitly questioned.

Acknowledgments

All of the graphic art in this article was prepared by my spouse, Elizabeth A. Carmichael. She redrafted all of the previously published line art-often correcting details from photographs—produced original illustrations for Figures 14, 21, 22, and 27, and prepared and arranged all photographs for the figures. This article would not have been possible without her dedication. Translation of the Spanish language abstract was generously provided by Enrique Avila Lopez, Department of Languages and Cultures, Mount Royal University. I am also indebted to my colleagues Lisa DeLeonardis and Hendrik Van Gijseghem for long conversations on Paracas and Nasca, and Larry Dawson, Christopher Donnan, Joerg Haeberli, Donald Proulx, and Alan Sawyer for sharing their photographic archives. For access to former private collections and photographs I am thankful to Brigitta Ebnöther in Zurich and Carol Sawyer in Vancouver. In alphabetical order by country, I gratefully acknowledge the following institutions and individuals: Finland: Didrichsen Art Museum, Helsinki-Maria and Peter Didrichsen; France: Editions Geuthner, Paris-Myra Prince; Germany: Reiss-Engelhorn Museen, Mannheim—Michael Tellenbach

and Martin Schultz; Peru: Museo Regional de Ica-Alejandro Pezzia; Sweden: Museum of World Culture, Gothenburg—Jan Amnehall and Adriana Switzerland: Museum zu Allerheiligen, Muñoz; Schaffhausen—Werner Rutishauser and Ursula Sattler; the United States of America: American Museum of Natural History, Division of Anthropology, New York—Charles Spencer, Sumru Aricanli, and Barry Landua; The Bancroft Library, University of California, Berkeley—Susan Snyder; Denver Art Museum— Margaret Young-Sánchez; Fowler Museum at UCLA, Los Angeles-David Blair; Phoebe Hearst Museum of Anthropology, University of California, Berkeley—Alicja Egbert; Strong Museum of Anthropology, Columbia University, New York—Terence D'Altroy; and The Textile Museum, Washington—Ann Rowe.

Notes

- A summary of N1 wares and decorative traits was published at the conclusion of Menzel et al. (1964: 251–256) as a bookend to their Paracas pottery study. Proulx (2006: 30–34) provides a good general overview of N1 and N2. However, the only iconographic details of N1–2 are found in the work of Jane Dwyer (1971, 1979).
- Lawrence Dawson was the first to realize these oddly shaped ceramics were drums (Lapiner 1976: 445, Note 466).
- 3. In anthropological terms, a cult is focused on a particular object, place, and/or entity (living or supernatural), and may or may not be embedded in a larger religious system. It is expressed through ritual behaviors and symbolism. The Nasca cult had, as its central icon, the Masked Being. Its fetish was the trophy head, and its sacred place Cahuachi, scene of regional pilgrimage, feasting, ceremonies, interment, and sociopolitical negotiations. The cult provided a web of commonality throughout the region, which facilitated social mediation and regulation. As a way of ordering and maintaining the cosmos it provided a world view which was the very essence of Nasca identity. In recent literature, the role of

- Cahuachi and the cult (sometimes called the Cahuachi cult) are discussed in Bachir Bacha (2007); Kanter and Vaughn (2012); Llanos Jacinto (2010); Orefici (2006, 2012); Silverman and Proulx (2002); Van Gijseghem (2006, 2013), Vaughn (2005); and Vaughn and Van Gijseghem (2007).
- Recent examples include Bachir Bacha (2007);
 Kanter and Vaughn (2012); Llanos Jacinto (2010);
 Orefici (2012); Van Gijseghem (2006); Van Gijseghem and Vaughn (2008); Vaughn and Van Gijseghem (2007).
- 5. Museum Statement: "Thanks to the generous sponsoring of the 'Fördererkreis für die Reiss-Engelhorn-Museen,' this panpipe and 72 other important pieces from ancient Peru have been acquired for the Museum after having been items on loan since 1968. These artifacts are now accessible for public exhibition, education, and professional research, instead of disappearing into private collections."
- 6. The fisherman bottle in Figure 25 also has a hafted, triangular obsidian knife tucked into his headband. This type of knife is archaeologically documented and, in the current context, is a point of commonality between Figures 23a and 25. The effigy pot in Figure 24 also holds one. These artifacts are associated with head taking. They appear to have been a widespread trait on the south coast at this time.
- 7. Previously, it was thought the incisions were filled with black or white slip paint (Menzel et al. 1964: 253).
- 8. Silverman and Proulx (2002: 25) referred to the Didrichsen Museum antaras (here Figures 10 and 19) shown in Purin (1990: 110–111) and they were mentioned again by Proulx (2006: 32). Silverman also illustrated and described the "Helsinki panpipe" (here Figure 19), and compared it to textile iconography from the Necropolis of Wari Kayan (2002b: 81–82, Figure 3.3). "American narrative" refers to the mainstream versions of North, Central, and South American prehistory accepted by professional archaeologists from all parts of the Americas
- 9. Using black to outline parts of a figure first began on Proto-Nasca textiles (Dwyer 1979: 112).

Table 1. Figure Proveniences, Measurements, and Permissions.

Figure	Title	Collection/Museum	Measurements Height/Diameter	ments iameter	Image Copyright and Permissions	Publications, Sources and References
Fig. 4a	Paracas pottery, Oc. 10, polychrome resin paint, bowl with faces	Museum zu Allerheiligen, Eb 15763	5.5 cm	7.2 cm	Photo by P. Carmichael, courtesy of Museum zu Allerheiligen, Schaffhausen	
Fig. 4b, left	Fig. 4b, left Paracas pottery, Oc. 10, blackware pitcher	American Museum of Natural History, 41.2/6183, Cerro Uhle, Ocucaje, Ica	15 cm	,	Photo by P. Carmichael, courtesy of Division of Anthropology, American Museum of Natural History, New York	
Fig. 4b, right	Paracas pottery, Oc. 10, blackware flask	American Museum of Natural History, 41.2/6060 Cerro Uhle, Ocucaje, Ica	19.8 cm		Photo by P. Carmichael, courtesy of Division of Anthropology, American Museum of Natural History, New York	
Fig. 4c	Paracas pottery, Oc. 10, bowl showing resin paint chipping	The Fowler Museum at UCLA, FMCH.X88-856		14.4 cm	14.4 cm © The Fowler Museum at UCLA, courtesy of The Fowler at UCLA, Los Angeles	Donnan 1992: 38, Fig. 60
Fig. 5a	N1 orange fired plain ware bowl, Rubini Grave 72, Pampa de Pinella, Ocucaje	B/W photo by L. Dawson, reproduced by P. Carmichael, from the Lawrence E. Dawson Archive (Banc. Mss. 95/21c), The Bancroft Library, University of California, Berkeley		15 cm	Courtesy of The Bancroft Library, University of California, Berkeley	
Fig. 5b	N1 plain ware incised plate section	Surface find, Monte Grande del Rio Grande, Ica-Nazca Littoral Survey, directed by P. Carmichael		24 cm	Photo by P. Carmichael	Carmichael 1998b: 152, Fig. 43
Fig. 5c	N1 blackware bowl	Strong Museum of Anthropology, Columbia University, Cahuachi #221, Cut 4	6 cm	19.5 cm	19.5 cm Photo by P. Carmichael, courtesy of Strong Museum of Anthropology, Columbia University, New York	
Fig. 5d	N1 incised blackware sherds	Strong Museum of Anthropology, Columbia University, Cahuachi #152, Cut 5	L: 5 cm R: 4 cm	6 cm 5.5 cm	Photo by P. Carmichael, courtesy of Strong Museum of Anthropology, Columbia University, New York	Strong 1957: 22, Figs. 9B-C
Fig. 5e	N1 blackware bowl with pattern burnishing	Hearst Museum of Anthropology, University of California, Berkeley, 16- 10100, Ocucaje, Ica	5 cm	14 cm	Photo by P. Carmichael, courtesy of Phoebe A. Hearst Museum of Anthropology, University of California, Berkeley	
						Continued

Continued

Publications, Sources and References		rong 1957: 21		Dawson 1964: 122, Plate X-4, also see Menzel et al. 1964: 187				
Image Copyright and Permissions	Photo by P. Carmichael, courtesy of Strong Museum, Columbia University, New York	Photo by P. Carmichael, courtesy of Strong 1957: 21 Strong Museum, Columbia University, New York	Illustrations by Elizabeth A. Carmichael	Courtesy of The Bancroft Library, D University of California, Berkeley al	Courtesy of The Bancroft Library University of California, Berkeley	© Carol Sawyer, courtesy of Carol Sawyer	Courtesy of The Bancroft Library University of California, Berkeley.	Photo by P. Carmichael, courtesy of Division of Anthropology, American Museum of Natural History, New York
Measurements Height/Diameter	4 cm 2.5 cm	L: 8 cm 6 cm C: 19 cm 12 cm 6 cm R: 9 cm		Approx. 15 cm	27 cm	13 cm	41 cm	17 cm
Collection/Museum	Strong Museum of Anthropology, Columbia University, Cahuachi #219, Cut 4	Strong Museum of Anthropology, I Columbia University, Cahuachi #189, Cut 1	Designed by P. Carmichael	Redrafted from a drawing by L. Dawson of A an Oc. 9 antara in the Truel Collection, 1 Ocucaje, Ica, in the L. Dawson Field Notes (1959–1960), Box 6, File 1 of the Lawrence E. Dawson Archive (Banc. Mss. 95/21c), The Bancroft Library, University of California, Berkeley	B/W photo by L. Dawson, reproduced by P. Carmichael, from the Lawrence E. Dawson Archive (Banc. Mss. 95/21c), The Bancroft Library University of California, Berkeley	The Alan Sawyer Collection, AS 604, from 1 Ocucaje. Artifact now in the collection of the Museum of Anthropology, University of British Columbia, Vancouver	B/W photo by L. Dawson, reproduced by P. Carmichael, from the Lawrence E. Dawson Archive (Banc. Mss. 95/21c), The Bancroft Library, University of California, Berkeley	American Museum of Natural History, 41.2/6035
Title	N1 blackware antara fragment	N1 slip paint, "Polychrome Incised Thick" (11–12 mm)	Antara shapes	Oc. 9 antara	Oc. 10 antara, Rubini Grave 27, La Peńa, Ocucaje	Oc. 10 antara	Oc. 10 antara, Rubini Grave 62, Huaca L. Aparcana, Ocucaje	Oc. 10 antara, Soldi Grave 40, Ocucaje
Figure	Fig. 5f	Fig. 5g	Fig. 6	Fig. 7	Fig. 8a	Fig. 8b	Fig. 8c	Fig. 8d

Continued	
-:	
Table	

Figure	Title	Collection/Museum	Measurements Height/Diameter	Publications, Sources and er Image Copyright and Permissions	ources and
Fig. 8e	Oc. 10 antara, Soldi Grave 47, Ocucaje	American Museum of Natural History, 41.2/6217	13.9 cm	Photo by P. Carmichael, courtesy of Division of Anthropology, American Museum of Natural History, New York	
Fig. 9a	N1 antara, red slip with tan mouthpiece	Museum zu Allerheiligen, Eb 15662	19.3 cm 8.4 cm	m Photo by P. Carmichael, courtesy of Museum zu Allerheiligen, Schaffhausen	
Fig. 9b	N2 antara, black slip (crazing) with red mouthpiece	Museum zu Allerheiligen, Eb 15286	23.8 cm 15.5	15.5 cm Photo by P. Carmichael, courtesy of Museum zu Allerheiligen, Schaffhausen	
Fig. 9c	N3-4 antara, dark brown slip with tan mouthpiece	N3–4 antara, dark brown The Alan Sawyer Collection, AS 744. slip with tan mouthpiece Arrifact now in the Museum of Anthropology, University of British Columbia, Vancouver	21 cm 16 cm	n © Carol Sawyer, courtesy of Carol Sawyer	
Fig. 9d	N3-4 antara, red slip with tan mouthpiece	The Alan Sawyer Collection, AS 743. Artifact now in the collection of the Museum of Anthropology, University of British Columbia, Vancouver	19.7 cm 13.5	13.5 cm © Carol Sawyer, courtesy of Carol Sawyer	
Fig. 10a	N1 incised, polychrome slip painted antara with toothed edge	Didrichsen Art Museum, DAM 911b	24.7 cm 11.7	11.7 cm Photo by P. Carmichael, courtesy of Didrichsen Art Museum, Helsinki	
Fig. 10b	N1 incised, polychrome antara with chevron design	Didrichsen Art Museum, DAM 911d	24.5 cm 12 cm	n Photo by P. Carmichael, courtesy of Didrichsen Art Museum, Helsinki	
Fig. 11a–e	N2, the Haeberli Antara	Jorge Haeberli Collection	20.6 cm 11.5	11.5 cm © Joerg Haeberli all images, courtesy Silverman and Proulx 2002: 26, of Joerg Haeberli, 11b redrafted from Fig. 2.4; Willey 1985: Plate 365 original	ulx 2002: 26, 185: Plate 365
Fig. 12a–c	N2 double-spout and bridge bottle with Masked Being	The Textile Museum, TM 1960.15.2, Gift 15.8 cm of Alan R. Sawyer	15.8 cm 14 cm	n Photo by Ann Pollard Rowe, Sawyer 1960: Fig. 2 courtesy of Ann Pollard Rowe and The Textile Museum, Washington, D.C., 12c redrafted from Sawyer 1960	2

Continued

	C	
	ď	
	Ξ	
		7
	Ę	
	`	
	_	١
	_	
		•
,		•
•		•
	<u> </u>	
	۰	
	٠	
	٥	
	٩	

į	į		Measurements	-	Publications, Sources and
Figure	Title	Collection/Museum	Height/Diameter	Image Copyright and Permissions	References
Fig. 13a-b	N2 effigy bottle of Masked Being	National Museums of World Culture, Gothenburg, 32.16.37	26 cm 15 cm	Photo by P. Carmichael, courtesy of National Museums of World Culture, Gothenburg	Purin 1990: 118, Fig. 147; Los Incas 1991: 118, Fig. 151; INKA PERU 1992: 244, Fig. 249
Fig. 14a–c	N2 jar with warriors	National Museums of World Culture, Gothenburg, 32.2.32	16 cm 15.9 cm	15.9 cm Photo by P. Carmichael, courtesy of National Museums of World Culture, Gothenburg, drawing by Elizabeth A. Carmichael	
Fig. 15	1970 seriation: hands, feet, and trophy heads	Details of drawings from numerous sources		Illustrations by Elizabeth A. Carmichael	H1: Sawyer 1997: 48, Fig. 19
					H2: Menzel et al. 1964: 378, Fig. 60d
					H3: Fig. 25-A1
				Courtesy of Division of Anthropology, American Museum of Natural History, New York	H4: AMNH, 41.2/6212, from photo by P. Carmichael
				Courtesy of The Bancroft Library, University of California, Berkeley	H5: L. Dawson Archive, Carton 6, File 38, (Banc. Mss. 95/21c)
					H6: Lapiner 1976: 214, Fig. 512
				Courtesy of Division of Anthropology, American Museum of Natural History, New York	H7: AMNH 41.2/7094, pyroengraved needle case
					F1: Sawyer 1997: 48, Fig. 19
					F2: Dawson 1960, Rubini Grave 71, bowl 71-5
					F3 and F4: Lapiner 1976: 198, Fig. 467
					F5: Seler 1961: 184, Fig. 26
					F6: Fig. 11b
					TH1: Sawyer 1997: 48, Fig. 19
					TH2: Donnan 1992: 38, Fig. 60

163

Figure	Title	Collection/Museum	Measurements Height/Diameter	Image Copyrighs and Permissions	Publications, Sources and References
					TH3: Linden Museum vessel M32-316L, from photo in the Donald Proulx Nasca Archive
				Courtesy of Division of Anthropology, American Museum of Natural History, New York	TH4: AMNH 41.2/8592, from photo by P. Carmichael
					TH5: Fig. 11b
					TH6: Seler 1961: 184, Fig. 26
Fig. 16	N1 incised, plain ware antara with Masked Being	Jahnckee Collection, Lima	18 cm	© Editions Geuthner, Paris, courtesy of Editions Geuthner, Paris	D'Harcourt and Béclard D'Harcourt 1925: 8, Plate XVII- 4
Fig. 17a–d	N1 blackware incised antara with Masked Beings	Museum zu Allerheiligen, Eb 15404	14.5 cm 7.3 cm	Photos by P. Carmichael, courtesy of Ebnöther and Ebnöther 1999: Museum zu Allerheiligen, 243; Rickenbach 1999: 225, F Schaffhausen, X-ray in 17d 34 © Museum zu Allerheiligen, Schaffhausen	Ebnöther and Ebnöther 1999: 243; Rickenbach 1999: 225, Fig. 34
Fig. 18a	Oc. 10 figurine detail, textile marks on resin paint	Museum zu Allerheiligen, Eb 15976	5 cm	Photo by P. Carmichael, courtesy of Museum zu Allerheiligen, Schaffhausen	Ebnöther and Ebnöther 1999: 39; Rickenbach 1999: 215, Fig. 23
Fig. 18b	Oc. 10 mask detail, textile marks on resin paint	Didrichsen Art Museum, DAM 7635	c. 6 cm	Photo by P. Carmichael, courtesy of Didrichsen Art Museum, Helsinki	Didrichsen et al. 2010: 383; Lapiner 1976: 83, Fig. 154
Fig. 18c	N1 antara detail (Fig. 17), textile marks on resin paint	Museum zu Allerheiligen, Eb 15404		Photo by P. Carmichael, courtesy of Museum zu Allerheiligen, Schaffhausen	Ebnöther and Ebnöther 1999: 243; Rickenbach 1999: 225, Fig. 34
Fig. 19	N1 antara, incised, polychrome slip paint, Masked Being motif	Didrichsen Art Museum, DAM 911a	19 cm 9.3 cm	Photos by P. Carmichael, courtesy of Didrichsen et al. 2010: 238; Didrichsen Art Museum, Helsinki INKA PERU 1992: 239, Fig 242; Los Incas 1991: 141, Fig. 183; Purin 1990: 111, Fig. 1	Didrichsen et al. 2010: 238; INKA PERU 1992: 239, Fig. 242; Los Incas 1991: 141, Fig. 183; Purin 1990: 111, Fig. 138
Fig. 20	NI antara, incised, polychrome slip paint, Masked Being motif	Reiss-Engelhorn Museum, Mannheim, 19710	18.5 cm 9.8 cm	Photos by P. Carmichael, courtesy of Wieczorek and Tellenbach 2002: Reiss-Engelhorn Museum, 67, Fig. 2.2 Mannheim	Wieczorek and Tellenbach 2002: 67, Fig. 2.2

bounitur

Continued	
-:	
Table	

			;		
Figure	Title	Collection/Museum	Measurements Height/Diameter	Image Copyright and Permissions	Publications, Sources and References
Fig. 21	N1 Masked Beings illustrations	21a-b see Fig. 17; 21c see Fig. 16; 21d see Fig. 20; 21e see Fig. 19		Illustrations by Elizabeth A. Carmichael	
Fig. 22	2015 seriation of N1–2 hands, feet, and trophy heads	Details of drawings from numerous sources		Illustrations by Elizabeth A. Carmichael	H1: detail of Fig. 24
				Courtesy of Division of H2: AMNH, 41.2/621; Anthropology, American Museum of photo by P. Carmichael Natural History, New York	H2: AMNH, 41.2/6212, from f photo by P. Carmichael
					H3: Fig. 25a1
					H4: Paul 1990: 89, Fig. 7.20
					H5: Fig. 17a
				Courtesy of The Bancroft Library, University of California, Berkeley	H6: Dawson Archive, Carton 6, File 38, (Banc. Mss. 95/21c)
					H7: Lapiner 1976: 214, Fig. 512
				Courtesy of Division of H8: AMNH 41.2/7094, Anthropology, American Museum of pyroengraved needle case Natural History, New York	H8: AMNH 41.2/7094, f pyroengraved needle case
					F1 and F3: Lapiner 1976: 198, Fig. 467
					F2: Fig. 23b
					F4: Fig. 17b
					F5: Fig. 11b
					F6: Seler 1961: 184, Fig. 26
					F7: Fig. 14
				Courtesy of Division of TH1: AMNH 41.2/855 Anthropology, American Museum of photo by P. Carmichael Natural History, New York	TH1: AMNH 41.2/8592, from f photo by P. Carmichael
					TH2: opposite side of pot shown in Sawyer 1997: 40, Fig. 16

Continued

Title

Figure

Table 1. Continued

M32-316L, from photo in

TH3: Linden Museum vessel

Publications, Sources and

TH4: Fig. 17b TH5: Fig. 11b

TH6: Lapiner 1976: 207, Fig. 491

TH7: Fig. 12

TH8: Seler 1961: 184, Fig. 26

Young-Sánchez 2003: 63, Fig. 30 © Denver Art Museum, courtesy of

Denver Art Museum, Denver

23.5

42.5 cm

Denver Art Museum, DAM 1972.189,

head cloth holding wands Marion Hendrie Fund

N1 drum, figure with

Fig. 23a

Private Collection

N1 drum, figure wearing

Fig. 23b

and holding diadems

22.8

33.5 cm

 $21.6 \, \mathrm{cm}$

Didrichsen Art Museum, DAM 909

Lapiner 1976: 197, Fig. 466 Photos by P. Carmichael, courtesy of Didrichsen et al. 2010: 283; courtesy of Christopher Donnan Photo by Christopher Donnan,

INKA PERU 1992: 231, Fig. 234; Los Incas 1991: 112, Fig. Didrichsen Art Museum, Helsinki

1992: 231, Fig. 235; Los Incas Photos by P. Carmichael, courtesy of Dawson 1960; INKA PERU 1991: 112, Fig. 143; Rubini

1989 Museo Regional de Ica, Ica

23.5 cm

Ocucaje, ARD-107, Museo Regional de

Ica, 000419

Rubini Grave 7, Pampa de Pinella,

N1 effigy bottle of fisherman

Fig. 25

Photo by P. Carmichael, courtesy of

Museum zu Allerheiligen, Schaffhausen

Photos by P. Carmichael, courtesy of Didrichsen Art Museum, Helsinki

Photo by P. Carmichael, courtesy of Didrichsen Art Museum, Helsinki

Didrichsen Art Museum, DAM 911a (see

Fig. 19)

showing incisions with

Fig. 26c

white on black resin Detail of N1 antara

Reiss-Engelhorn Museum, Mannheim,

19710 (see Fig. 20)

showing incisions with

Fig. 26d

white on black resin

Didrichsen Art Museum, DAM 909 (see

Detail of N1 effigy pot

Fig. 26b1-2

showing incisions with

white on black resin Detail of N1 antara

showing incisions with

white on black resin

Detail of Oc. 10 pot

Fig. 26a

Fig. 24)

Museum zu Allerheiligen, Eb 15763 (another side of the vessel in Fig. 4a) Photo by P. Carmichael, courtesy of Reiss-Engelhorn Museum,

Mannheim

Continued

with head cloth holding N1 effigy vessel, figure

Fig. 24

knife and trophy head

•	ç	
	310	
•	:	
	5	
(
,		
•	•	
1	è	Ċ

Figure	Title	Collection/Museum	Measurements Height/Diameter	Image Copyright and Permissions	Publications, Sources and References
Fig. 26e	Detail of N1 antara showing incisions with fugitive white	Didrichsen Art Museum, DAM 911d (see Fig. 10b)		Photo by P. Carmichael, courtesy of Didrichsen Art Museum, Helsinki	
Fig. 27a	Illustration of an N1 Masked Being with camelid head formed by emergent design	Reiss-Engelhorn Museum, Mannheim, 19710 (see Fig. 20)		Illustration by Elizabeth A. Carmichael	
Fig. 27a1	N3 bowl with camelid head	The Alan Sawyer Collection, AS 646. Artifact now in the Museum of Anthropology, University of British Columbia, Vancouver	3.7 cm 10 cm	Photo by P. Carmichael, courtesy of Erika Sawyer	
Fig. 27a2	N3 bowl with camelid head	American Museum of Natural History 41.2/7992		Illustration by Elizabeth A. Carmichael from a photo in Donald Proulx Nasca Archive	
Fig. 27a3	N3 bowl with camelid head	Art Institute of Chicago, AIC 55.1173		Illustration by Elizabeth A. Carmichael from a photo in Donald Proulx Nasca Archive	
Fig. 27b	Illustration of an N1 Masked Being with anatropic camelid or condor head	Didrichsen Art Museum, DAM 911a (see Fig. 19)		Illustration by Elizabeth A. Carmichael	
Fig. 27b1	N3 painted condor head, Private Collection detail from a bowl interior	Private Collection		Illustration by Elizabeth A. Carmichael, from a photo by Alan Sawyer given to P. Carmichael	
Fig. 27b2	N3 painted condor head, detail from a bowl interior	N3 painted condor head, Museo Nacional de Antropología y detail from a bowl Arqueología, Lima interior		Illustration by Elizabeth A. Carmichael from Sawyer 1979: 133, Fig. 5	
Fig. 27b3	N2 small ceramic plaque Aldo Rubini with painted condor head Regional de	Aldo Rubini Collection, Ocucaje. Museo Regional de Ica, Ica		Copy of photo by Alan Sawyer, given to P. Carmichael	

References Cited

American Museum of Natural History (AMNH)

1959–1961 AMNH Catalogue of the Pablo Soldi Material from Ocucaje, Gift of Mr. and Mrs. George Myers, AMNH accession numbers 41.2/5955–6276.

Bachir Bacha, Aïcha

2007 Dinámica y dessarollo de un centro ceremonial andino. *El caso de Cahuachi. Arqueología Sociedad* 18: 69–94.

Bachir Bacha, Aïcha, and Óscar D. Llanos Jacinto

2006 El gran templo del centro ceremonial de Cahuachi (Nazca, Perú). *Dimensión Antropológica* 38: 49–86.

Beresford-Jones, David

2011 *The lost woodlands of ancient Nasca*. The British Academy, Oxford University Press.

Bird, Junius B.

1962 Art and life in old Peru: an exhibition. *Curator* 2: 147–210.

Bolaños, César

1988 Las antaras Nasca. Programa de Arqueomusicología del Instituto Andino de Estudios Arqueológicos, Lima.

Burger, Richard L.

1995 *Chavin and the origins of Andean civilization*, second ed. Thames and Hudson, New York.

Canziani, José A.

1992 Arquitectura y urbanismo del período Paracas en el Valle de Chincha. *Gaceta Arqueológica Andina* 6(22): 87–117.

Carmichael, Patrick H.

1988 Nasca mortuary customs: death and ancient society on the south coast of Peru. Ph.D. dissertation, Department of Archaeology, University of Calgary. University Microfilms International, No. 8918465, Ann Arbor, Michigan.

1998a Nasca ceramics: production and social context. In Andean ceramics: technology organization, and approaches, edited by Izumi Shimada, pp. 213–231. University of Pennsylvania Museum of Archaeology and Anthropology.

1998b Prehistory of the Inca-Nazca littoral, Peru. Unpublished monograph.

2010 Nasca 1 and 2 phase markers: adjustments to the original seriation. Poster presented at the Institute of Andean Studies Annual Conference, University of California, Berkeley.

2013 Regionalism in Nasca style history. *Andean Past* 11: 215–231.

Carmichael, Patrick H., Brenda V. Kennedy, and Lauren Cadwallader

2014 Coastal but not littoral: marine resources in Nasca diet. *Nawpa Pacha: Journal of Andean Archaeology* 34(1): 3–26.

Castro-Martínez, Pedro V., J. Carlos de la Torre, Trinidad Escoriza-Mateu, M. Concepción Godoy, Bárbara Lapi, Ireal Narvarro, and César Zavala

2009 Trabajo, producción y cerámica. Sociología de la Alfarería Paracas: ocucaje y tajo (Costa Sur de Perú). Estudios Atacameños: Arqueología y Antropología Surandinas 37: 139–155.

Cook, Anita

1999 Asentamientos Paracas en el Valle Bajo de Ica, Perú. *Gaceta Arqueológica Andina* 25: 61–90.

Daggett, Richard E.

1991 Paracas: discovery and controversy. In *Paracas art and architecture*, edited by Anne Paul, pp. 35–60. University of Iowa Press, Iowa City.

Dawson, Lawrence E.

1960 Field notes on the Rubini gravelots from Ocucaje. Hand-written manuscript.

1964 Slip casting: a ceramic technique invented in ancient Peru. *Nawpa Pacha: Journal of Andean Archaeology* 2: 107–122.

1982 Lawrence E. Dawson on the Nasca seriation.
Taped interview with Steven Wegner, April.
Hearst (Lowie) Museum of Anthropology,
University of California, Berkeley.

1986 Tutorial on the Nasca seriation. Hearst (Lowie) Museum of Anthropology, University of California, Berkeley. Notes taken by Patrick Carmichael, 8–21 January.

D'Harcourt, Raoul, and Marguerite Béclard D'Harcourt

1925 *La musique des Incas*, Vol. 2. Librairie orientaliste Paul Geuthner, Paris.

DeLeonardis, Lisa

2005 Early Paracas cultural contexts: new evidence from Callango. *Andean Past* 7: 27–55.

2012 Interpreting the Paracas body and its value in ancient Peru. In *The construction of value in the ancient world*, edited by John K. Papadopoulos and Gary Urton, pp. 197–217. Cotsen Institute of Archaeology, University of California, Los Angeles.

DeLeonardis, Lisa, and Michael D. Glascock

2013 From Queshqa to Callango: a Paracas obsidian assemblage from the lower Ica Valley, Peru. *Ńawpa Pacha: Journal of Andean Archaeology* 33(2): 163–191.

Didrichsen, Ann Marie, Peter Didrichsen, Kati Huovinmaa, and Jarno Pelonen (editors)

2010 Didrichsen Art Museum. Didrichsen Art Museum, Helsinki.

Donnan, Christopher B.

1992 *Ceramics of ancient Peru*. Fowler Museum of Cultural History, University of California, Los Angeles.

Dwyer, Jane P.

- 1971 Chronology and iconography of late Paracas and early Nasca textile designs. Ph.D. dissertation, University of California, Berkeley.
- 1979 The chronology and iconography of Paracas-style textiles. In *The Junius B. Bird pre-Columbian textile conference*, edited by A.P. Rowe, E.P. Benson, and A. Schaffer, pp. 105–128. The Textile Museum, Dumbarton Oaks, Washington, D.C.

Dwyer, Jane, and Edward Dwyer

1975 The Paracas cemeteries: mortuary patterns in a Peruvian south coastal tradition. In *Death and the afterlife in pre-Columbian America: a conference at Dumbarton Oaks*, 27 October 1973, edited by Elizabeth P. Benson. Dumbarton Oaks, Washington, D.C.

Ebnöther, Marcel, and Elisabeth Ebnöther

1999 *Vom toten meer zum stillen ozean.* Sammlung Ebnöther, Museum zu Allerheiligen Schaffhausen. Verlag Gerd Hatje, Schaffausen.

Engel, Fréderic-André

1981 Prehistoric Andean ecology, Vol. II: the deep south.

Humanities Press and the Department of
Anthropology, Hunter College, City University
of New York.

Frame, Mary

- 1995 Ancient Peruvian mantles: 300 B.C.-A.D. 300. Metropolitan Museum of Art, New York.
- 2001 Blood, fertility, and transformation: interwoven themes in the Paracas Necropolis embroideries. In *Ritual sacrifice in ancient Peru*, edited by Elizabeth P. Benson and Anita G. Cook, pp. 55–92. University of Texas Press, Austin.
- 2004 Motion pictures: symmetry as animator, classifier, and syntax in the Nasca embroideries of Peru. In Symmetry comes of age: the role of pattern in culture, edited by Dorothy Washburn and Donald Crowe, pp. 133–176. University of Texas Press, Austin.
- 2006 The art and the craft of Nasca textiles. In *Nasca, wonder of the world: messages etched on the desert floor*, edited by I. Shimada, H. Baba, K. Shinoda, and M. Ono, pp. 210–220. Tokyo Broadcasting System, Tokyo.

- 2007 Las prendas bordadas de la Necrópolis de Wari Kayan. In *Hilos del pasado: el aporte frances al legado textil Paracas*, pp. 65–73. Instituto Nacional de Cultura, Lima.
- 2009a The textiles of Cahuachi. In *Nazca, the desert of the Cahauachi divinities*, pp. 188–211. Graph Ediciones, Lima.
- 2009b Desenvolviendo las dimensiones de significado de los bordados de Paracas Necrópolis. In *Mantos para la eternidad: textiles Paracas del Antiguo Peru*, pp. 45–58. Museo de América, Madrid.
- 2011 Las prendas bordadas de la necropólis de Wari Kayan. In *Hilos para la eternidad: textiles funerarios del antiguo Perú*, pp. 79–95. Museo Nacional de Colombia, Bogotá.

García Soto, Rubén, and José Pinilla Blenke

1995 Aproximación a una secuencia de fases con cerámic temprana de la región de Paracas. *Journal of the Steward Anthropological Society* 23(1–2): 43–81.

Gruszczyńska-Ziółkowska, Anna

- 2000 Tocando los números. Las antaras nasquenses desde una perspective acústica. *Estudios Latinamericanos* 20: 99–110.
- Raum-Klang-Erfahrungen in der Musik der Nascakultur. In An die mächte der natur: mythen der altperuanischen Nasca-Indianer, Vol. 5, edited by Alfried Wieczorek and Michael Tellenbach, pp. 66–74. Publikationen der Reiss-Engelhorn-Museen Mannheim und Verlag Philipp von Zabern, Mainz.
- 2009 Variedad sonora de las antaras Nasca: un caos o el sistema? *Revista Española de Antropología Americana* 39(1): 145–168.

Haeberli, Joerg

1979 Twelve Nasca panpipes: a study. *Ethnomusicology* 23(1): 57–74.

Hecht, Niels

2013 A relative sequence of Nasca style pottery from Palpa, Peru, 2 vol. Doctoral dissertation, Rheinische Friedrich-Wilhelms-Universität, Bonn.

Helmer, Matthew, David Chicone, and Hugo Ikehara

- 2012 Plaza life and public performance at the Early Horizon Center of Caylán, Nepeña Valley, Perú. *Nawpa Pacha: Journal of Andean Archaeology* 32(1): 85–114.
- Hill, Kevin, Ben Nigra, Henry Tataleán, and Terrah Jones 2012 Cerro del Gentil: a Paracas mound site in the Chincha Valley, Peru. In *Backdirt*, edited by Gregory E. Areshian, pp. 93–103. Annual

Review of the Cotsen Institute of Archaeology at UCLA, Report from the Field.

INKA PERU

1992 *INKA PERU: 3000 Jahre Indianische Hochkulturen*. Verlag Ernst Wasmuth, Tübingen.

Kanter, John, and Kevin J. Vaughn

2012 Pilgrimage as costly signal: religiously motivated cooperation in Chaco and Nasca. *Journal of Anthropological Archaeology* 31: 66–82.

King, Mary E.

1965 Textiles and basketry of the Paracas period, Ica valley, Peru. Ph.D. dissertation, University of Arizona.

Kubler, George

1990 The art and architecture of ancient America, 3rd ed. with updates. Penguin Books, London.

Lapiner, Alan

1976 Pre-Columbian art of South America. Abrams, New York.

Larco Hoyle, Rafael

1966 Peru. Nagel Publishers, Geneva.

Lavalle, José Antonio de, and Werner Lang

1983 *Paracas: arte y tesores del Peru*. Banco de Credito del Peru, Lima.

Llanos Jacinto, Óscar Daniel

2010 Cahuachi: residencia y paisaje sacralizado de un centro política Nazca. *Revista Española de Antropología Americana* 40(1): 27–51.

Los Incas

1991 Los Incas y el antiguo Perú: 3000 años de historia, Vol. 2. Centro Cultural de la Villa de Madrid, Sociedad Estatal Quinto Centenario, Madrid.

Menzel, Dorothy, and J.H. Rowe, with Lawrence E. Dawson

1964 The Paracas pottery of Ica: a study in style and time. *University of California Publications in American Archaeology and Ethnology* 50, pp. 1–399.

Moseley, Michael E.

2013 Stylistic variation and seriation. In Visions of Tiwanaku, edited by Alexei Vranich and Charles Stanish, Monograph 78. Cotsen Institute of Archaeology Press, Los Angeles.

Niles, Susan A.

2007 Anne Cheryl Paul. Andean Past 8: 61-67.

Orefici, Giuseppe

1989 Una expresión de arquitectura monumental Paracas-Nasca: El Templo del Escalonado, en Atti del Convegno Internazionale "Archeologia, Scienza e Società nell'America Precolombiana," Brescia 1988, pp. 191–201. CISRAP, Brescia.

1996 Nuevos enfoques sobre la transición Paracas-Nasca en Cahuachi (Perú). *Andes: Boletín de la Misión Arqueológica Andina*, Universidad de Varsovia 1: 173–197.

2006 Reconstructing Nasca domestic and ceremonial life: a view from Cahuachi and Pueblo Viejo. In Nasca, wonder of the world, messages etched on the desert floor, edited by I. Shimada, H. Baba, K. Shinoda, and O. Mashio, pp. 176–184. Tokyo Broadcasting System, Tokyo.

2012 *Cahuachi: capital teocrática Nasca*. Universidad de San Martin de Porres.

Paul, Anne

1990 Paracas ritual attire. University of Oklahoma Press, Norman.

1991 Paracas: an ancient cultural tradition on the south coast of Peru. In *Paracas art and architecture*, edited by Anne Paul, pp. 1–34. University of Iowa Press, Iowa City.

Peters, Ann H.

1991 Ecology and society in embroidered images from the Paracas necropolis. In *Paracas art and architecture*, edited by Anne Paul, pp. 240–314. University of Iowa Press, Iowa City.

1997 Paracas, Topará and Early Nasca: ethnicity and society on the south central Andean coast. Ph.D. dissertation, Cornell University.

Proulx, Donald

1968 Local differences and time differences in Nasca pottery. In *Anthropology* 5, pp. 1–180. University of California Publications in Anthropology, Berkeley.

Nasca gravelots in the Uhle collection from the Ica Valley, Peru. In Research Reports 5.
 Department of Anthropology, pp. 1–103.
 University of Massachusetts, Amherst.

2006 A sourcebook of Nasca ceramic iconography. University of Iowa Press, Iowa City.

2008 Paracas and Nasca: regional cultures on the south coast of Peru. In *Handbook of South American* archaeology, edited by Helaine Silverman and William H. Isbell, pp. 563–585. Springer, New York.

Purin, Sergio (editor)

1990 *Inca-Peru: 3000 ans d'histoire*, Vol. 2. Imschoot Uitgevers, Ghent, Belgium.

Reindel, Markus

2009 Life at the edge of the desert—archaeological reconstruction of the settlement history in the valleys of Palpa, Peru. In *New technologies for archaeology: multidisciplinary investigations in*

Palpa and Nasca, Peru, edited by M. Reindel and G.A. Wagner, pp. 439–461. Springer, Berlin.

Reindel, Markus, and Johny Isla Cuadrado

2001 Los Molinos und La Muña. Zwei Siedlungszentren der Nasca-Kultur in Palpa, Südperu. *Beiträge zur Allgemeinenund Vergleichenden Archäologie* 21, pp. 207–239.

Rickenbach, Judith (editor)

1999 Nasca: Geheimnisvolle Zeichen im Alten Peru. Museum Rietberg, Zürich.

Roark, Richard P.

1965 From monumental to proliferous in Nasca pottery. *Nawpa Pacha: Journal of Andean Archaeology* 3: 1–92.

Rowe, Ann Pollard

2012 Early featherwork from Ocucaje. In *Peruvian featherworks*, edited by Heidi King, pp. 45–53. The Metropolitan Museum of Art, New York.

Rowe, John H.

- 1956 Archaeological explorations in southern Peru, 1954–1955. *American Antiquity* 22(2): 135–151.
- 1962 Stages and periods in archaeological interpretation. Southwestern Journal of Anthropology 18(1): 40–54.
- 2010 [1960] On the history of the Nasca sequence. *Nawpa Pacha: Journal of Andean Archaeology* 30(2): 231–241.

Rowe, John H., and Dorothy Menzel (editors)

1973 [1967] Peruvian archaeology: selected readings, fifth ed. Peek Publications, Palo Alto.

Rubini Drago, Aldo

1989 Coleccion arqueologica de Aldo Rubini Drago. Manuscript. Copy on file with the Museo Regional de Ica, pp. 1–116. Prepared by Aldo Rubini throughout the 1980s, but the most recent entry is 1989, taken as the completion date. It is a typed inventory based on his handwritten field notes of 1955–1956.

Sawyer, Alan R.

- 1960 Paracas Necropolis headdress and face ornaments. In *Workshop Notes, Paper No. 21*. The Textile Museum, Washington, D.C, pp. 1–4.
- 1966 Ancient Peruvian ceramics: the Nathan Cummings collection. Metropolitan Museum of Art, New York.
- 1968 Mastercraftsmen of ancient Peru. Solomon R. Guggenheim Foundation, New York.
- 1979 Painted Nasca textiles. In *The Junius B. Bird pre-Columbian textile conference*, 19–20 May 1973, edited by Ann Pollard Rowe, Elizabeth P. Benson, and Anne-Louise Schaffer, pp. 129–150. The Textile Museum, Dumbarton Oaks, Trustees for Harvard University, Washington, D.C.

1997 Early Nasca needlework. Laurence King Publishing, London.

Schreiber, Katharina, and Josué Lancho Rojas

2003 Irrigation and society in the Peruvian desert: the Puquios of Nasca. Lexington Books, New York.

Seler, Eduard

1961 [1923] Die buntbemalten Gefässe von Nasca im südlichen Perú und die Hauptelemente ihrer Verzierung. In *Gesammelte Abhandlungen zur Amerikanischen Sprach und Altertumakundo* (Band IV), pp. 169–338. Akademische Druck und Verlagsanstalt, Graz, Austria.

Silverman, Helaine

- 1991 The Paracas problem: archaeological perspectives. In *Paracas art and architecture*, edited by Anne Paul, pp. 349–415. University of Iowa Press, Iowa City.
- 1993 Cahuachi in the ancient Nasca world. University of Iowa Press, Iowa City.
- 1994 Paracas in Nazca: new data on the Early Horizon occupation of the Rio Grande de Nazca Drainage, Peru. *Latin American Antiquity* 5(4): 359–382.
- 1996 The Formative Period on the south coast of Peru: a critical review. *Journal of World Prehistory* 10(2): 95–146.
- 2002a Ancient Nasca settlement and society. University of Iowa Press, Iowa City.
- 2002b Differentiating Paracas Necropolis and Early Nasca textiles. In *Andean archaeology II: art, land-scape and society*, edited by Helaine Silverman and William H. Isbell, pp. 71–106. Kluwer Academic/Plenum Publishers, New York.

Silverman, Helaine, and Donald A. Proulx

2002 *The Nasca*. Blackwell Publishers, Oxford. Stanish, Charles, Henry Tantaleán, Benjamin T. Nigra, and Laura Griffin

2014 A 2,300-year-old architectural and astronomical complex in the Chincha Valley, Peru. Proceedings of the National Academy of Sciences. www.pnas.org/cgi/doi10.1073/pnas. 1406501111

Strong, William D.

1957 Paracas, Nazca, and Tiahuanacoid cultural relationships in south coastal Peru. Memoirs of the Society for American Archaeology 13. Society for American Archaeology, Salt Lake City.

Tello Archive

2002 Arqueología de la Cuenca del Río Grande de Nasca. In *Cuadernos de investigación del archivo* tello 3. Museo de Arqueología y Antropología and Universidad Nacional Mayor de San Marcos. Tello, Julio C.

1959 Paracas: primera parte. Empressa Gráfica T. Scheuch S.A., Lima.

Tello, Julio C., and Toribio Mejia Xesspe

1979 Paracas: segunda parte, Cavernas y Necropolis. Universidad Nacional, Lima.

Unkel, Ingmar, and Bernd Kromer

2009 The clock in the corn cob: on the development of a chronology of the Paracas and Nasca period based on radiocarbon dating. In *New technologies for archaeology: multidisciplinary investigations in Palpa and Nasca, Peru*, edited by M. Reindel and G. Wagner. Springer, Berlin.

Valdez, Lidio

1994 Cahuachi: new evidence for an early Nasca ceremonial role. *Current Anthropology* 35(5): 675–679.

Van Gijseghem, Hendrik

2004 Migration, agency, and social change on a prehistoric frontier: the Paracas-Nasca transition in the southern Nasca drainage, Peru. Ph.D. dissertation, University of California, Santa Barbara.

2006 A frontier perspective on Paracas society and Nasca ethnogenesis. *Latin American Antiquity*, 17(4): 419–444.

2013 Our children might be strangers: frontier migration and the meeting of cultures across generations. In *Archaeology and cultural mixture*, edited by W.P. Van Pelt. *Archaeological Review from Cambridge*, 28(1): 169–189.

Van Gijseghem, Hendrik, and Kevin J. Vaughn

2008 Regional integration and the built environment in middle-range societies: Paracas and Early Nasca houses and communities. *Journal of Anthropological Archaeology*, 27(1): 111–130.

Vaughn, Kevin J.

2005 Crafts and the materialization of chiefly power in Nasca. In *The foundations of power in the Prehispanic Andes*, edited by K.J. Vaughn, D.E.

Ogburn, and C.A. Conlee. *Archaeological papers* of the American Anthropological Association 14: 113–130. American Anthropological Association, Washington, D.C.

2009 The ancient Andean village: Marcaya in Prehispanic Nasca. University of Arizona Press, Tucson.

Vaughn, Kevin J., and Hendrik Van Gijseghem

2007 A compositional perspective on the origins of the "Nasca cult" at Cahuachi. *Journal of Archaeological Science* 34: 814–822.

Wallace, Dwight T.

1984 Paracas in Chincha and Pisco: a reappraisal of the Ocucaje sequence. In *Recent studies in Andean prehistory and protohistory: papers from the Second Annual Northeast Conference on Andean archaeology and ethnohistory*, edited by D. Peter Kvietok and Daniel H. Sandweiss, pp. 67–94. Latin American Studies Program, Cornell University.

1986 The Topara tradition: an overview. In *Perspectives* on Andean prehistory and protohistory: papers from the Third Annual Northeast Conference on Andean archaeology and ethnohistory, edited by Daniel H. Sandweiss and D. Peter Kvietok, pp. 35–47. Latin American Studies Program, Cornell University.

Wieczorek, Alfried, and Michael Tellenbach (editors)

2002 An die mächte der natur: mythen der altperuanischen Nasca-Indianer, Vol. 5, with contributions by Anne Paul and Anna Gruszczyńska-Ziółkowska. Publikationen der Reiss-Engelhorn-Museen Mannheim und Verlag Philipp von Zabern, Mainz.

Willey, G. (editor)

1985 *Das alte Amerika*. Propyläen Kunstgeschicte 18, Propyläen Verlag, Berlin.

Young-Sánchez, Margaret

2003 Pre-Columbian art in the Denver Art Museum collection. Denver Art Museum, Denver.