Ancient Mesoamerica, **31** (2020), 99–108
Copyright © Cambridge University Press, 2020
doi:10.1017/S0956536119000117

EXPLAINING VARIABILITY IN ON-FLOOR ASSEMBLAGES: THE BEHAVIORAL-CONTEXTUAL METHOD

Maxime Lamoureux-St-Hilaire[a] and Andrew Kent Snetsinger[b]
[a]Anthropology Department, Davidson College, Box 7116, Davidson, North Carolina 28035
[b]Past Recovery Archaeological Services, 99C Dufferin Street, Unit 2, Perth Ontario, K7H 3A5, Canada

Abstract

We present a behavioral-contextual method for studying abandonment-related assemblages in order to ascribe them to a settlement abandonment scenario. Our approach examines the vertical and horizontal architectural contexts of assemblages, along with the nature of reconstructible vessels and other artifacts. This method accounts for gradual, rapid, mundane, and ceremonial abandonment scenarios, and for abandonment with anticipated return. Two advantages of this model are its replicability and its proposition of a shared taxonomy leading away from the concept of problematic deposits. The method is contextualized with two distinct case studies from the southern Maya lowlands: the palace of La Corona, Guatemala and an agricultural household group from greater Minanha, Belize. These dissimilar but contemporary (ca. A.D. 900) contexts revealed complex abandonment-related assemblages, including pre-abandonment middens, *de facto* and secondary material, and on-floor, exposed offerings. Both case studies are argued to reflect gradual, organized abandonment scenarios, although with significant temporal and behavioral distinctions.

INTRODUCTION

The Classic Maya collapse corresponds to the end of divine kingship in the Maya lowlands and is associated with the disentanglement of socioeconomic networks and the abandonment of urban centers. The collapse has traditionally been studied through epigraphy, whereas monuments bearing long-count dates stopped being erected during the Terminal Classic (A.D. 810–900), providing a *terminus post quem* date for the demise of royal courts (Bove 1981; Ebert et al. 2012; Lowe 1985; Neiman 1997; Premo 2004). More recently, interdisciplinary approaches have brought scholars to postulate increasingly complex models for framing the Classic Maya collapse (Douglas et al. 2015; Golitko et al. 2012; Iannone et al. 2014, 2016; Medina-Elizalde and Rohling 2012; Turner and Sabloff 2012).

Despite these intellectually stimulating data, studying abandonment in the field remains challenging. While most Classic Maya settlements were obviously abandoned, the question of how this process occurred is vexingly complicated to answer. A contributing factor to this issue is competing terminologies for the correlates of abandonment behaviors (Clayton et al. 2005; Stanton et al. 2008). Consequently, confusion tends to arise and, sometimes, debates revolve around terminology instead of interpretations. We believe we must endeavor to adopt a shared interpretative framework and terminology to achieve a better understanding of Classic Maya settlement abandonment. Abandoning the concept of "problematic deposit" (Aimers et al. 2020) may be a productive first step towards this goal.

E-mail correspondence to: maxlamsh@gmail.com

Major proxies for settlement abandonment behaviors are abandonment-related artifacts, predominantly consisting of on-floor assemblages. On-floor assemblages are sets of artifacts found in direct association with a preserved plaster or tamped earth floor, a step landing, or with an identified occupational layer. Interestingly, these assemblages occur in every architectural context, from palaces to humble houses, and reflect distinct, discernible abandonment behaviors (Lamoureux-St-Hilaire et al. 2015; Pagliaro et al. 2003; Stanton et al. 2008). In this paper, we study abandonment-related assemblages through the lenses of a behavioral-contextual analytical framework centered on: (1) the vertical and horizontal architectural contexts of artifacts, and (2) the nature of reconstructible vessels and associated artifacts (following Lamoureux-St-Hilaire [2011]). Through this replicable approach, we propose a systematic terminology accounting for gradual and rapid abandonment, abandonment with anticipated return, and mundane and ritual abandonment practices. We contextualize this approach with two southern Maya lowland case studies, the regal palace of La Corona (northwest Peten, Guatemala) and a peripheral agrarian household group from Minanha (west-central Belize). These case studies emphasize gradual and organized abandonment scenarios, corresponding to the predominant settlement abandonment pattern associated with the Classic Maya collapse.

BEHAVIORAL-CONTEXTUAL TERMINOLOGY

The proposed interpretative framework was refined by Lamoureux-St-Hilaire (2011, 2018) but stems from the contextual taxonomy developed by Iannone (2000) for the Social Archaeology Research Program (SARP), itself rooted in Schiffer's

https://doi.org/10.1017/S0956536119000117 Published online by Cambridge University Press

Table 1. Summarized behavioral-contextual model for abandonment-related assemblages.

Categories of Abandonment		Expected Archaeological Correlates
Gradual and organized—mundane	Definitive	Central axis and doorways of building should be devoid of artifacts. Little material, especially prestige items, left on floor. Some refuse or *de facto* material may be placed in eccentric locations within buildings.
	With anticipated return	Central axis and doorways of building should be devoid of artifacts. Considerable quantity of principally *de facto* material placed in eccentric locations, including reconstructible vessels. Refuse may be placed in eccentric locations, especially in room corners or outside buildings.
Gradual and organized—ritual	Reverential termination	Exposed offering should be found along the central axis of the building and may be vertically associated with earlier structural votive offerings, such as dedication and rededication caches and burials. The patterned artifacts should mainly be comprised of ceremonial and fine reconstructible vessels, and/or other prestige items.
	Ritual infilling or enshrining	Physical blocking of access to the structure with masonry or other features, such as intrusive burials. Large amounts of *de facto* material or refuse may be placed inside the building or onto and around its staircase along its central axis.
Rapid and unplanned—mundane	Catastrophic	Central axis and doorways of building should be relatively devoid of artifacts. Large quantity of *de facto* material and refuse in logical, systemic locations. Artifacts left behind should be varied, including commodities and prestige items.
Rapid and unplanned—ritual	Desecratory termination	Large quantity of *de facto* material, such as reconstructible serving or ceremonial vessels and other precious items. Structural destruction or burning. Presence of human remains.

(1972, 1976, 1985, 1987) behavioral approach. Beyond formation processes, we follow Inomata and Webb's (2003) two broad gradual and organized abandonment and rapid and unplanned abandonment categories. We also recognize abandonment with anticipated return as a sub-category of gradual and organized abandonment (Plunket and Uruñuela 2003; Simms et al. 2012). Beyond these temporally contingent abandonment categories, we also distinguish between mundane and ritual abandonment behaviors (Lamoureux-St-Hilaire 2011). While differentiating between sacred and mundane in the archaeological record is proverbially difficult, we use mundane to refer to behaviors apparently dictated by practicalities rather than ritual prescriptions. Finally, we recognize that once there is evidence for return to abandoned places, such as pilgrimages, abandonment scenarios become blurred, making our methodological framework harder to apply. We do not discuss this topic, which deserves more attention than can be devoted in this short paper (but see Navarro-Farr [2016] and Stanton and Magnoni [2008]).

Our behavioral-contextual terminology provides a set of specific archaeological correlates that can be used to reconstruct abandonment scenarios (Table 1). While this model will always yield the potential to be refined, we believe it is a useful heuristic tool to help with some challenges of lowland Maya archaeology.

Behavioral-Contextual Categories

We propose five behavioral-contextual categories as a middle-range framework for abandonment-related artifacts, which can be associated with six distinct abandonment scenarios. These are detailed below and summarized in Table 1.

(1) *De facto material* corresponds to artifacts left in their use-space (or systemic context; Schiffer 1972) by abandoners. *De facto* material does not apply to refuse, which, through discard, was removed from the systemic record; the term *de facto* "refuse" is thus a misnomer. Artifacts in *de facto* contexts should not be overly fragmented and, if spared by formation processes, may be fairly intact. *De facto* material is typically found, stratigraphically, in on- or above-floor contexts. The related category of secondary material refers to material left *in situ*, but that was displaced by formation processes. A good example is material left in storage, such as in wooden shelves, that fell from its original location following a building's collapse. Secondary material should be represented by reconstructible but broken artifacts, and be found in fall or above-floor stratigraphic context.

(2) Primary refuse corresponds to discarded artifacts that were left in their original discard location. Having never been relocated, primary refuse should be less fragmented than other refuse categories. Thanks to a generalized practice of maintaining clean occupational surfaces (Chase and Chase 2000; Hayden and Cannon 1983), ancient Maya primary refuse is either rare or very small (i.e., microartifacts), having avoided relocation to a midden.

(3) Secondary refuse is far more common, corresponding to discarded artifacts once-transposed from their original discard location (i.e., provisional discard; Deal 1983). Secondary refuse is found in provisional discard loci (or secondary middens), relatively close to activity areas. Secondary refuse should be fragmented, but not in the same eroded, jumbled state characterizing tertiary refuse.

(4) Tertiary refuse corresponds to discarded artifacts that were transposed more than once to an area designed as the final receptacle for trash, a tertiary midden (i.e., discrete dump; Deal 1983), and should be highly fragmented and eroded. Tertiary middens are located away from activity areas, used over a long period, intermixed with soil, and may not be cogently stratigraphically organized.

(5) An exposed offering is a type of primary deposit, referring to material that was removed from its systemic context and placed in a staged

https://doi.org/10.1017/S0956536119000117 Published online by Cambridge University Press

context. Both on-floor (exposed offerings) or structural primary deposits (caches or burials) reflect episodic ceremonial behaviors, not daily activities. Structural offerings found within fill should be fairly complete and well-preserved. Exposed offerings, however, were likely disturbed by natural or cultural formation processes, such as erosion or scavenging (Schiffer 1985), but may be protected by an architectural fall layer. Artifacts from exposed offerings typically include reconstructible serving or ritual vessels and other valuable items.

RECONSTRUCTING ABANDONMENT SCENARIOS

Gradual and Organized Abandonment—Mundane

Gradual and organized mundane abandonment occurs when abandoners planned their departure and is the most common abandonment scenario. This category may be subdivided into definitive abandonment and abandonment with anticipated return, qualifying cases where abandoners believed they would return, but never did (Plunket and Uruñuela 2003). As "organized abandoners" would have left through doorways, these subcategories share that the central axis of buildings should be mostly unobstructed, with most abandonment-related material found in eccentric locations, especially the corners of rooms or outside buildings.

Since occupants likely avoided accumulating belongings before an anticipated abandonment and carried most of their valuables away—i.e., processes defined as "draw-down" and "curate behaviors" by Schiffer (1985:26–27)—little abandonment-related material is expected. This material, deemed expendable by abandoners, should exclude valuables and consist of bulky or broken artifacts kept for recycling or never relocated in a midden. Abandonment with anticipated return, however, should create more *de facto* or secondary material (Simms et al. 2012).

Anticipation of abandonment impacted the (dis)entanglement between people, their things, and their architectural and natural landscapes (following Hodder [2016]), creating a pre-abandonment period (also see Deal [1983]). During pre-abandonment, occupants possibly used decommissioned architecture for discard, creating middens in atypical locations. These pre-abandonment middens may range from small, eccentric clusters of secondary refuse to large tertiary middens resulting from years of use.

Gradual and Organized Abandonment—Ritual

Gradual and organized ritual abandonment behaviors—i.e., reverential termination rituals—are performed by abandoners detaching from their landscape and likely reflect a broader ceremony addressing the stress resulting from abandoning ideologically salient places (Fay Brown 2008:277; Lamoureux-St-Hilaire 2011:139–140; Lamoureux-St-Hilaire et al. 2015:554; Mock 1998; Palmer and Jankowiak 1996:240–244). Reverential termination rituals have been recognized at many Maya sites (see Lamoureux-St-Hilaire [2011:34]), having been first reported by Garber [1983] and more recently by Tsukamoto [2017]). Despite variation, termination rituals follow the ceremonial principle of releasing or terminating architectural life-energy, or *ch'ulel*, an animistic force imparted to buildings during dedication ceremonies inscribed in a pan-Maya "philosophy of life regeneration" (Chase and Chase 1998:301; McAnany 1995:162; Mock 1998:9–10; Pagliaro et al. 2003:76–77; Stanton et al. 2008:237; Walker 1998:96–97). Abandonment-related termination rituals should not be confused with structural offerings terminating a previous construction phase during renovation, as defined by Coe (1958, 1965; see Newman [2019] for an example of confusion). This distinction is certainly complicated by widely variable ancient Maya religious behaviors, but the coexistence of these termination labels remains heuristically conflictive. Potential terminological solutions include rigorously differentiating structural from abandonment terminations or else using the term "rededication rituals/offerings" for the renovation category (Lamoureux-St-Hilaire 2011:13–42).

Reverential termination rituals have been associated with architectural dismantling following the placement of patterned, exposed offerings along their central axis, either inside or on their fronting platform or staircase, thus symbolically or physically hindering access to buildings (Lamoureux-St-Hilaire 2011). Considerable doubt has justifiably been raised about the ceremonial significance of exposed offerings (Stanton et al. 2008). We argue that, to be most convincing, termination rituals should be associated with structural primary deposits, tying all offerings within a localized ritual cycle (Lamoureux-St-Hilaire et al. 2015).

In addition to exposed offerings, gradual and organized abandonment may also result in ritual infilling or enshrinement. This ritual behavior has been variously interpreted, but generally follows the same principle of deactivating a building's *ch'ulel*. Enshrinement or infilling may result in the burial of entire structures under soil or white marl (Iannone 2005:34; Michelet and Arnauld 2006:76; Trachman 2010:105–109), in the closing of doorways with masonry features, the placement of intrusive burials or caches, and in the deposition of refuse inside decommissioned buildings (Lamoureux-St-Hilaire 2011:95–98; Lamoureux-St-Hilaire et al. 2020; Zehrt 2006).

Rapid and Unplanned Abandonment—Mundane

Rapid and unplanned abandonment caused fleeing abandoners to leave most of their belongings behind in their systemic context. Rapid abandonment results in a great quantity of *de facto* and secondary material within and around buildings, along with refuse in eccentric locations. Since abandoners had to use doorways for daily activities, these should be left unobstructed. While incredibly informative about the archaeological past, rapid abandonment is exceptional, typically resulting from a natural catastrophe, as for Ceren, El Salvador, which suffered a devastating volcanic eruption (Sheets 2002, 2006). It may also result from a military invasion, as for Aguateca, Peten (Inomata 2003), or Mixco-Viejo, in the Guatemala highlands, which was invaded by conquistadors in the Colonial period (Fauvet-Berthelot 1986).

Rapid and Unplanned Abandonment—Ritual

In some cases, rapid and unplanned abandonment may be followed by desecratory termination rituals resulting from antagonistic, military behaviors. This type of behavior is quite variable, and may have occurred quickly—during sacking—or be reflective of great care. Desecratory termination rituals symbolically or physically hinder access to buildings, include exposed offerings and *de facto* material (including prestige items), involve structural destruction or burning, and feature human remains in informal, near-surface contexts (Golden et al. 2016:121; Lamoureux-St-Hilaire 2011). Desecratory termination rituals likely aimed at deactivating and profaning the *ch'ulel* of enemy architecture through pillage, destruction, and death. For example, desecratory termination rituals have been documented at Aguateca (Inomata 2016;

https://doi.org/10.1017/S0956536119000117 Published online by Cambridge University Press

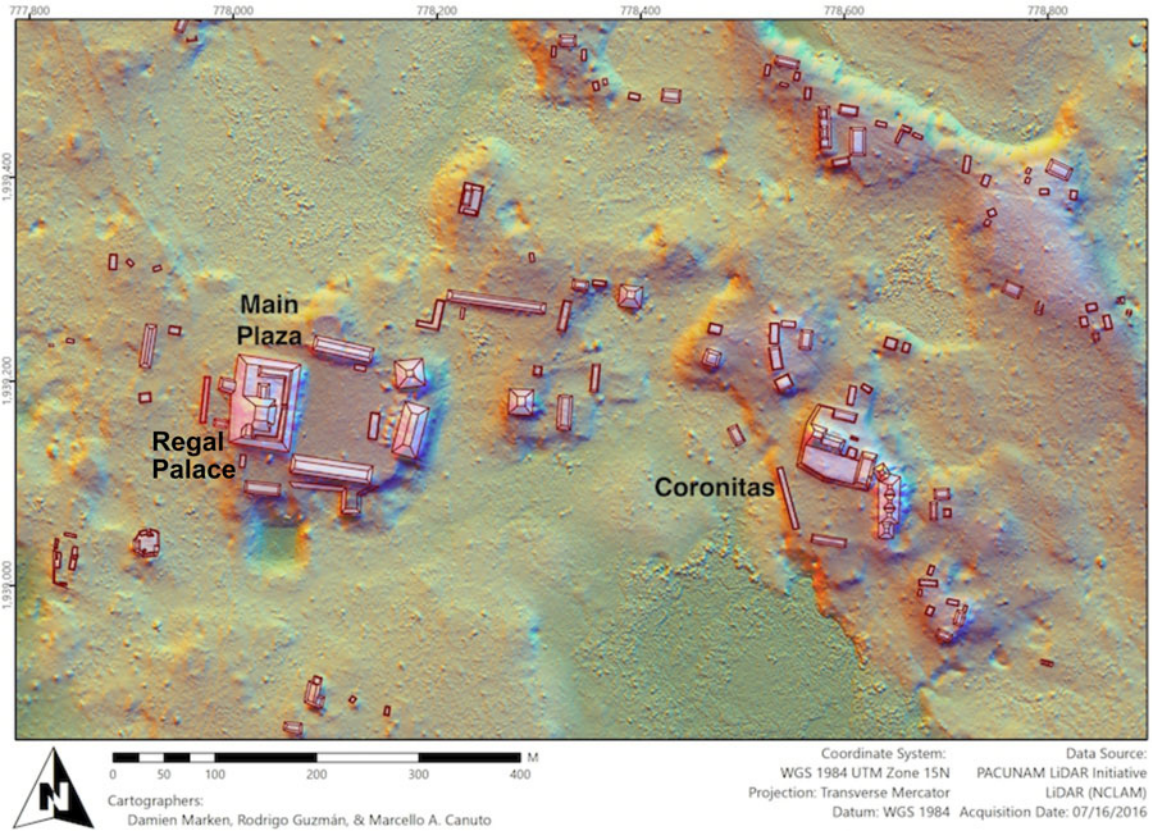


Figure 1. Map of the La Corona Site Core. Map courtesy of Proyecto Regional Arqueológico La Corona (PRALC).

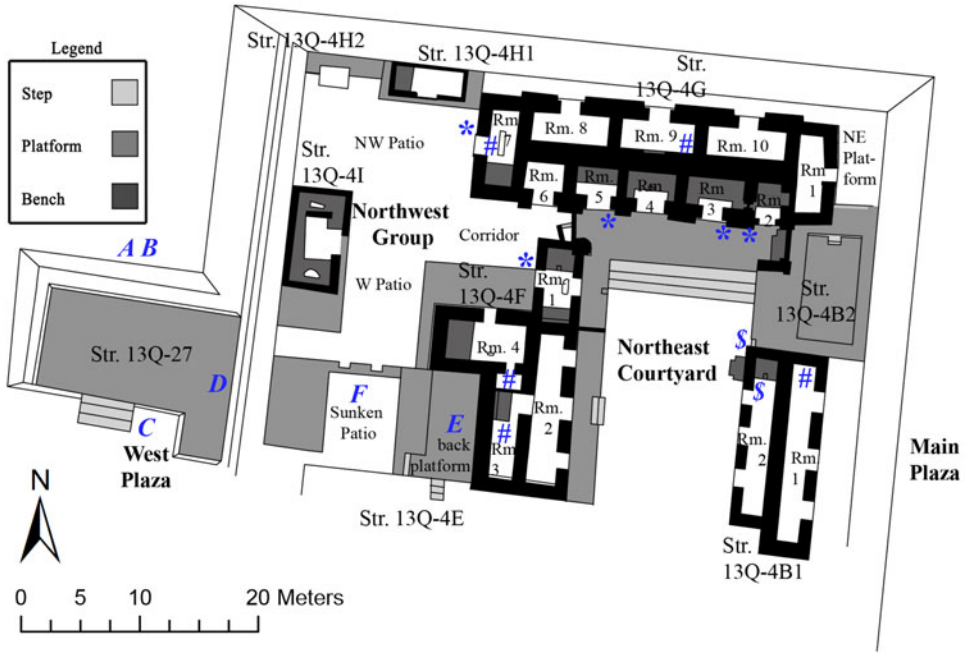


Figure 2. Map of the northern half of the Tucán-phase La Corona palace, with location of abandonment-related material indicated with distinct symbols: middens with their associated letter; *de facto* material on front platforms with asterisks; on- and above-floor assemblages in storage with pound signs; exposed offerings with dollar signs. Map by Lamoureux-St-Hilaire.

https://doi.org/10.1017/S0956536119000117 Published online by Cambridge University Press



Figure 3. A jar mouth reutilized as a pot-stand found next to the doorway of Room 5 of Structure 13Q-4G. Photograph by Lamoureux-St-Hilaire.

Inomata and Ponciano 2010), Piedras Negras (Golden et al. 2016), Yaxuna (Suhler and Freidel 2003), Xunantunich (Yaeger 2010), and Hershey (Harrison-Buck et al. 2007).

CASE STUDIES FROM LA CORONA AND MINANHA

We now contextualize our behavioral-contextual model with two distinct case studies of gradual and organized abandonment dated to ca. A.D. 900. While the regal palace of La Corona was seemingly left in a predominantly mundane fashion, the agricultural household Group MRS15 of Minanha was ritually abandoned.

Pre-abandonment and Gradual Abandonment at La Corona

La Corona (Figure 1) was a Classic Maya center of modest size located in northwest Peten, Guatemala (Canuto and Barrientos 2013). La Corona's Main Plaza is most notable for the palatial acropolis on its west flank, dwarfing all other constructions on site. This acropolis measures 80 by 55 m and seven to 12 m in height and, as the regal palace, was the political heart of La Corona (Lamoureux-St-Hilaire 2018). Late transformations in this palace, especially its north half (Figure 2), indicate the La Corona royal court reduced its political-economic activities during the ninth century (Lamoureux-St-Hilaire 2018; Lamoureux-St-Hilaire et al. 2020). This change in regime was discernible by the progressive decommissioning of pathways stemming from the Northwest Group, an area dedicated to ancillary activities such as food preparation and craftwork (Lamoureux-St-Hilaire 2018). First, the path leading to Structure 13Q-27 was obstructed, followed by the access points to the Southwest Group and Structure 13Q-4E. These decommissionings were embodied by the accumulation of large secondary and tertiary middens over activity areas. This process, suggesting a trend away from orthodox palatial practices, reflects a changing relationship between a downsized royal court and its then oversized palace (Lamoureux-St-Hilaire 2018).

Pre-abandonment Middens. A total of seven middens (Middens A–F) were found in association with the Northwest Group



Figure 4. The large on- and above-floor assemblage found in the closet of Room 4 of Structure 13Q-4F. Photomosaic by Lamoureux-St-Hilaire.

(Lamoureux-St-Hilaire 2018). While the tertiary Middens A and B were located in predictable loci, the tertiary Middens D and F were respectively accumulated over Structure 13Q-27 and the Sunken Patio, while the secondary Middens C and E obstructed activity areas.

The secondary middens contained fairly fragmented and well-patterned artifacts—sets of artifacts that were closely associated—



Figure 5. The on-floor figurine fragments assemblage (i.e., exposed offering) found next to the exterior bench of Structure 13Q-4B1. Photograph by Lamoureux-St-Hilaire.

https://doi.org/10.1017/S0956536119000117 Published online by Cambridge University Press

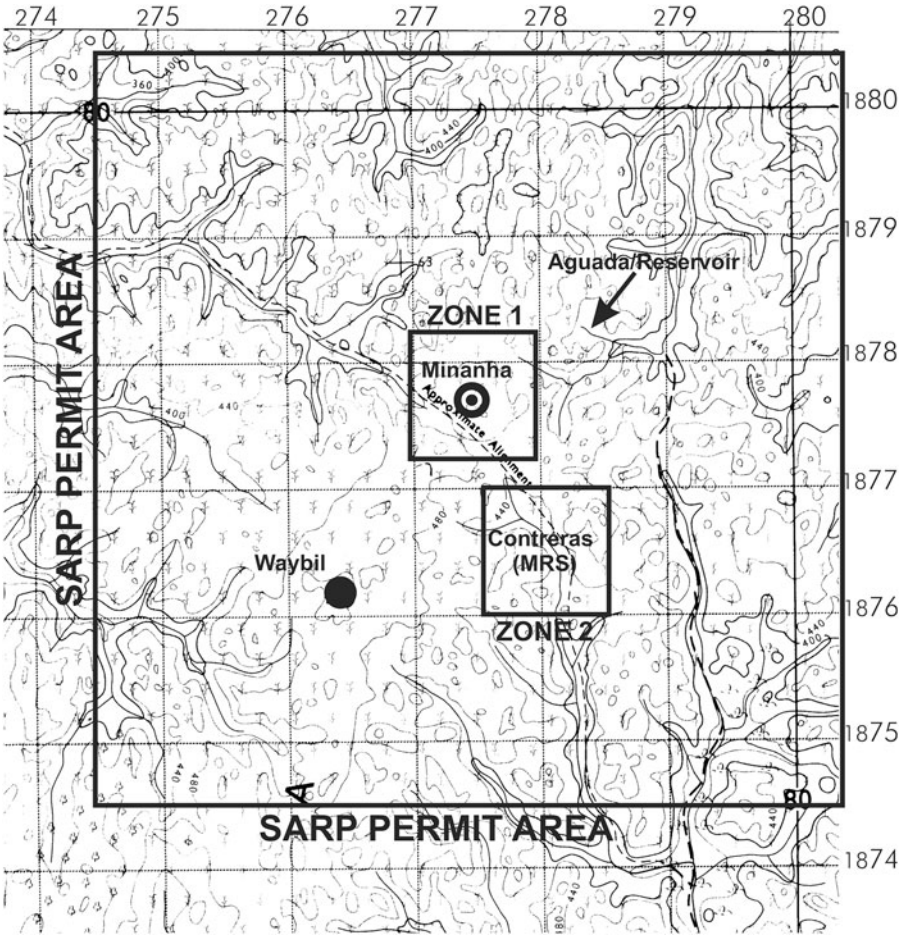


Figure 6. Map of the Social Archaeology Research Program permit area, situating the Contreras Valley in relation to the Minanha site-core. Map courtesy of the Social Archaeology Research Program.

while the tertiary middens were comprised of highly fragmented and jumbled artifacts. The impressive variability in the composition of Middens C–F corresponds to what one would expect for the principal middens of a palace, including many crafting implements and a wide range of Terminal Classic diagnostics from the Chablekal, Tres Naciones, Altar Orange, and Balancán Orange fine-gray and fine-orange ceramic groups (Lamoureux-St-Hilaire 2018:303–362).

Detailed ceramic data indicate that the pre-abandonment middens resulted from a century-long process of disentanglement and, consequently, that the La Corona royal court remained active until the abandonment of its palace (Lamoureux-St-Hilaire 2018: 323–362; Lamoureux-St-Hilaire et al. 2020). Pre-abandonment middens, reflecting gradual and organized abandonment, should not be confused with deposits from isolated ceremonial events. Unlike occupational middens, ceremonial ones should consist of well-patterned, secondary refuse reflecting ritual feasting and be located near public spaces (Awe et al. 2020).

De facto and Secondary Material and Exposed Offerings. A combination of ceramic evidence and radiocarbon dating indicates the La Corona palace was finally abandoned around A.D. 900 (Lamoureux-St-Hilaire 2018:274). This abandonment is reflected by three types of assemblages left in and around buildings in the Northeast and Northwest Groups (Figure 2): (1) bulky pot-stands on frontal platforms (Figure 3), (2) various artifacts in storage (Figure 4), and (3) two discrete exposed offerings in eccentric locations (Figure 5; Lamoureux-St-Hilaire 2018:239–362).

First, pot-stands left on the front platforms of Structures 13Q-4G and 13Q-4F were likely used for holding rounded-bottom jars for collecting rainwater running off the roofs of buildings (Figure 3; Lamoureux-St-Hilaire 2018:257). These expendable, recycled broken vessels were simply abandoned there.

Second, quantities of *de facto* and secondary materials were found in Structures 13Q-4B1, 13Q-4F (Figure 4), and 13Q-4G, in distinct storage contexts. These assemblages were mostly comprised of reconstructible Terminal Classic vessels and lithic artifacts and were found in thick above-floor layers, suggesting they were stored in wooden furniture (Lamoureux-St-Hilaire 2018). The quantity and quality of these assemblages suggest the royal abandoners likely planned to return one day.

Third, two discrete, unusual, exposed offerings were found in association with Room 2 of Structure 13Q-4B1. The first one consisted of a burned offering— including Provincia Plano-Relief fine-orange sherds, faunal, and macrobotanical remains—placed inside the niche of the room's bench. The second one consisted of 25 figurine fragments "cached" under unslipped sherds placed on the floor, next to the room's exterior bench (Figure 5). These unorthodox, seemingly reverential, exposed offerings unlikely reflect a concerted termination ritual and were perhaps created by a single individual.

https://doi.org/10.1017/S0956536119000117 Published online by Cambridge University Press

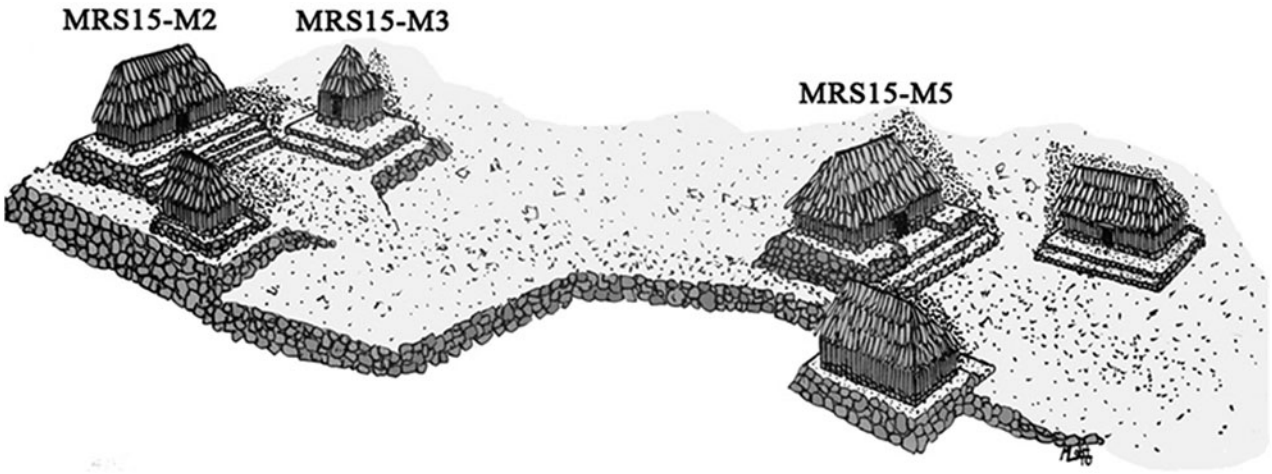


Figure 7. Artistic reconstruction of Group MRS15, looking southeast. Illustration by Lamoureux-St-Hilaire.

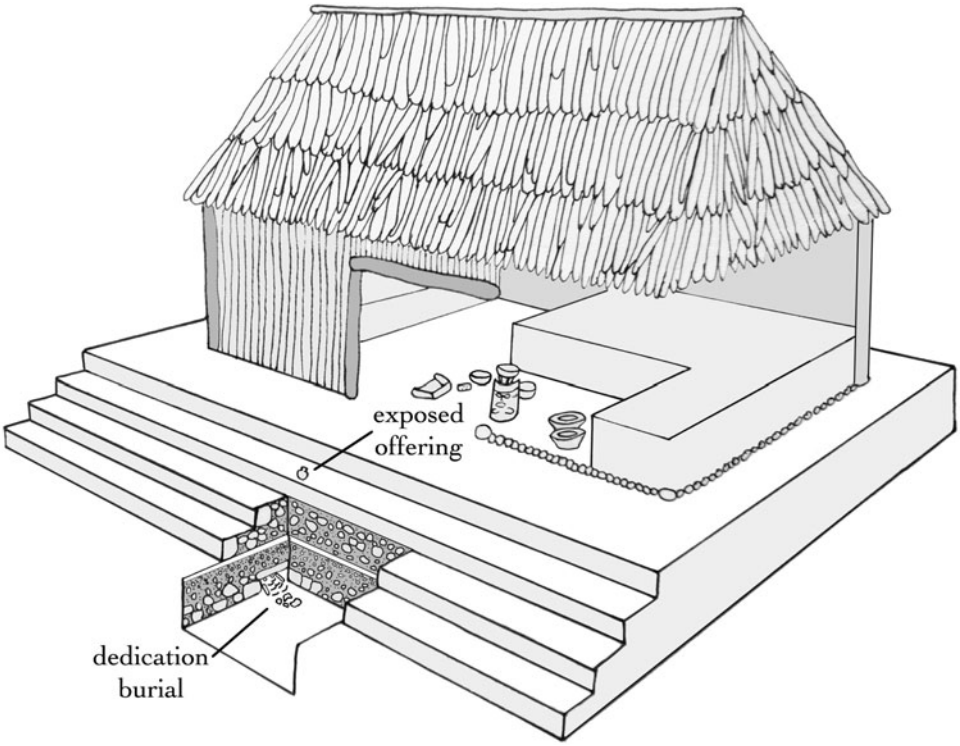


Figure 8. Artistic reconstruction of the on-floor, exposed offering found in Structure MRS15-M2. The location of the dedicatory burial is indicated to emphasize the offerings' vertical relationship. Illustration by Lamoureux-St-Hilaire

Summary. While none of the presented individual contexts reflects a general trend, the scale of the La Corona palace excavations (more than 300 m^2), codirected by Canuto and Barrientos, allowed for the reconstruction of a complex abandonment scenario. This scenario, informed by assemblages ascribed to four distinct behavioral-contextual categories, can be labelled as a gradual and organized abandonment with anticipated return.

Reverential Termination at Minanha

Minanha was a Classic Maya center of medium size situated in the Vaca Plateau, in west-central Belize (Iannone 2005; Reeder et al. 1996). The Minanha epicenter was surrounded by many sizable household groups (Iannone 2005). Of particular relevance is the Contreras Valley, a densely settled community of agriculturalists located one km southeast of the site-core, which reached its peak occupation during the heydays of the Minanha royal court (Figure 6; Macrae 2010; Macrae and Iannone 2009). The Contreras community was progressively abandoned during the Terminal Classic in a way that left exposed offerings in 20 percent of its 98 household groups (Lamoureux-St-Hilaire 2011: 66–67; Lamoureux-St-Hilaire et al. 2015).

The most explicit reverential termination occurred in Group MRS15, a household group composed of two adjoining patios

https://doi.org/10.1017/S0956536119000117 Published online by Cambridge University Press

and six structures, all of which had either residential or ancillary functions (Figure 7; McCane et al. 2009). Three buildings from Group MRS15 revealed correlated on-floor assemblages, reflecting a well-orchestrated termination ceremony for the household group dated, through ceramic chronology, to A.D. 900–950 (Lamoureux-St-Hilaire 2011:102–113). Structures MRS15-2, MRS15-3, and MRS15-5 revealed on-floor assemblages, with Structures MRS15-2 and MRS15-5, the group's two largest houses, yielding well-patterned offerings along their central axis (Lamoureux-St-Hilaire and Iannone 2012). A halved Platon Punctated-Incised serving dish was found in the center of the front staircase of Structure MRS15-M5 and five, partial, scored-incised censers were found in an above-floor context (Lamoureux-St-Hilaire 2011:74–75, 103–113; McCane et al. 2009). Meanwhile, several reconstructible vessels were found in the doorway and on the staircase of Structure MRS15-2, under which a dedication burial was unearthed (Figure 8). This ceramic assemblage comprised an elaborate portable composite brazier, a slipped bowl, a scored-incised censer, a miniature tobacco snuff bottle, and a roller-stamp (Lamoureux-St-Hilaire 2011:71–73, 103–113; Lamoureux-St-Hilaire et al. 2015; McCane et al. 2009).

Both of these assemblages, composed of fine vessels and valuables, would have symbolically obstructed doorways, and the vertical relationship between Structure MRS15-2's exposed offering and its dedication burial ties them in a localized ritual cycle (Figure 8). This termination ritual was apparently performed by a household detaching from its home, which was both ideologically rich, as expressed by the ancestral burial, and economically crucial, as represented by the surrounding agricultural landscape (Lamoureux-St-Hilaire et al. 2015).

Summary. We presented a case of gradual and organized abandonment embodied by the ritual termination of an agrarian household group. This account was made possible by careful contextual excavations of six buildings of Group MRS15 by the SARP team directed by Iannone. These excavations recovered interrelated exposed offerings, which, if taken individually, would have remained problematic. These subtle on-floor assemblages were related to a structural dedication burial and to an above-floor assemblage intermixed with a humus layer, which could both have gone unnoticed. These abandonment-related data emphasize the importance of careful contextual and stratigraphic consideration while investigating abandonment behaviors.

CONCLUSION

We have proposed a behavioral-contextual terminology for on-floor assemblages and a set of six possible settlement abandonment scenarios with the objective of increasing shared taxonomy. Given variability in both the nature of Classic Maya regimes and the sociopolitical and environmental contingencies that led so many lowland polities to collapse, a single methodology could hardly ever account for all abandonment-related correlates. Yet, we hope our case studies reflect how the proposed middle-range terminology may be useful for both local and comparative purposes. These two abandonment case studies are characterized by gradual and anticipated abandonment and both occurred at the end of the Terminal Classic period. Most likely the predominant Classic Maya settlement abandonment scenario, gradual and organized abandonment, may only leave subtle traces, lacking the exceptional finds associated with rapidly abandoned sites.

While interpretations "at the trowel's edge" may be uncertain or preliminary, the care and concern dictated by our proposed approach can help detect subtle, near-surface contexts. Thus, our behavioral-contextual terminology is not designed to be crystalized in the field; rather, it serves to illuminate problematic contexts. Once out of the field, and if provided with a good horizontal and vertical understanding of an architectural structure or group, this approach can help analyze abandonment-related assemblages. Yet, when reconstructing an abandonment scenario, we must also remember that distinct sections of a site may have been abandoned differentially (Lamoureux-St-Hilaire 2011). Finally, when reporting and publishing archaeological data, we believe it is more productive to strive to decipher ancient contexts and behaviors rather than to simply label them as problematic.

RESUMEN

En este articulo presentamos un método conductual-contextual para el estudio de conjuntos de artefactos asociados con el abandono de sitios arqueológicos mayas con el fin de reconstruir escenarios de abandono. Ese método examina los contextos verticales e horizontales de conjuntos y el carácter de vasijas reconstruibles e otros tipos de artefactos. Este método puede reconstruir cinco categorías de escenarios de abandono: gradual, rápido, mundano, ceremonial, y con anticipación de regreso. Los aventajes principales de ese modelo son su replicabilidad y su proposición de un vocabulario taxonómico compartido, cual se aleja del concepto de "depósitos problemáticos." Contextualizamos el método con la presentación de dos estudios de casos distintos de las tierras bajas mayas del sur: el acrópolis palaciego de La Corona (Petén, Guatemala) y un grupo residencial agrícola en la periferia del sitio de Minanha (Cayo, Belice).

El acrópolis palaciego de La Corona fue abandonado durante un periodo de 150 años, entre 750 y 900 d.C. Ese largo proceso dejo unos conjuntos de artefactos en distintos contextos: (1) Basureros de pre-abandono cuales cancelaron estructuras y patios; (2) Material *de facto* sobre las plataformas frontales de algunos edificios; (3) Material *de facto* y secundario y basura secundaria en contexto de almacenamiento; (4) Dos ofrendas expuestas "sobre piso" en ubicaciones excéntricas. Juntos, esos conjuntos reflejen un proceso de abandono gradual, sin orquestación ceremonial, y con el intento de regresar un día.

El valle de Contreras, una zona agrícola en la periferia de Minanha, contaba con mas de cien grupos residenciales y fue abandonado durante el clásico terminal, entre 810 y 900 d.C. El grupo residencial MRS15 contaba con seis edificios. Durante la excavación de tres de estos se encontraron conjuntos sobre pisos. Dos de estos fueren ofrendas expuesta, con vasijas de servicio y ceremoniales y otros tipos de artefactos de lujo, ubicados en el eje central de las casas abandonadas. Además, se encontró un entierro dedicatorio debajo de uno de estos conjuntos, el cual indica que se trata de un ciclo ceremonial localizado. La calidad y el contexto de estos rasgos indica que este grupo residencial fue abandonado de una manera planificada y durante una ceremonia de terminación coordinada.

Aunque distintos, ambos estudios de casos reflejen el hecho que la mayoría de las ciudades mayas fueron abandonadas de manera gradual y anticipada durante el colapso maya del clásico terminal. Estos dos casos de abandono gradual permiten demostrar el potencial de replicabilidad del método conductual-contextual y su vocabulario taxonómico representa un paso potencial para abandonar el concepto de "depósitos problemáticos."

https://doi.org/10.1017/S0956536119000117 Published online by Cambridge University Press

ACKNOWLEDGMENTS

We would like to thank Jim Aimers, Julie Hoggarth, and Jaime Awe for the opportunity to partake in their engaging electronic symposium at the 83rd annual meeting of the Society for American Archaeology and for the opportunity to contribute to this special issue. The directors of the two archaeological projects behind the presented case studies must be acknowledged for their continuous support: Marcello A. Canuto and Tomás Barrientos (Proyecto Regional Arqueológico La Corona) and Gyles Iannone (Social Archaeology Research Program). We also thank the governments of Guatemala (Instituto de Antropología e Historia) and Belize (Institute of Archaeology) for their support to these distinct projects. Excavations in the La Corona palace were funded by a National Science Foundation-Doctoral Dissertation Improvement Grant (Award ID: 1623787), Tulane University, Patrimonio Cultural y Natural Maya, the Alphawood Foundation, and the Louisiana Board of Regents. Excavations at Group MRS15 were funded by Social Sciences and Humanities Research Council and the Alphawood Foundation. The first version of this paper was written while the first author was a 2017–2018 Junior Fellow at the Dumbarton Oaks Research Library and Collections, while its final version was prepared when he was a 2018–2019 George Stuart Residential Scholar at the Boundary End Center—both institutions are acknowledged for their support and resources.

REFERENCES

Aimers, James J., Julie A. Hoggarth, and Jaime J. Awe
2020 Decoding the Archaeological Significance of Problematic Deposits in the Maya Lowlands. *Ancient Mesoamerica* 31:67–75.

Awe, Jaime J., Claire E. Ebert, Julie A. Hoggarth, James J. Aimers, John Douglas, Christophe Helmke, and W. James Stemp
2020 The Last Hurrah: Examining the Nature of Peri-Abandonment Deposits and Activities at Cahal Pech, Belize. *Ancient Mesoamerica* 31:175–187.

Bove, Frederick J.
1981 Trend Surface Analysis and the Lowland Classic Maya Collapse. *American Antiquity* 46:93–112.

Brown, Denise Fay
2008 Afterword. In *Ruins of the Past: The Use and Perception of Abandoned Structures in the Maya Lowlands*, edited by Travis W. Stanton and Aline Magnoni, pp. 275–279. University Press of Colorado, Boulder.

Canuto, Macello A., and Tomás Barrientos Q.
2013 The Importance of La Corona. *La Corona Notes* 1(1):1–5.

Chase, Diane, and Arlen Chase
1998 Architectural Context of Caches, Burials, and Other Ritual Activities for the Classic Period Maya (as Reflected at Caracol, Belize). In *Function and Meaning in Classic Maya Architecture*, edited by Stephen D. Houston, pp. 299–332. Dumbarton Oaks Research Library and Collection, Washington, DC.
2000 Inferences about Abandonment: Maya Household Archaeology and Caracol, Belize. *Mayab* 13:67–77.

Clayton, Sarah C., W. David Driver, and Laura Kosakowsky
2005 Rubbish or Ritual? Contextualizing a Terminal Classic Problematical Deposit at Blue Creek, Belize: A Response to "Public Architecture, Ritual, and Temporal Dynamics at the Maya Center of Blue Creek, Belize." *Ancient Mesoamerica* 16: 119–130.

Coe, Michael
1958 *Piedras Negras Archaeology: Artifacts, Caches, and Burials*. University of Pennsylvania Museum, Philadelphia.
1965 Caches and Offertory Practices of the Maya Lowlands. In *Handbook of the Middle-American Indians, Volume 2: Archaeology of Southern Mesoamerica, Part 1*, edited by Gordon R. Willey, pp. 462–468. University of Texas Press, Austin.

Deal, Michael
1983 *Pottery Ethnoarchaeology among the Tzeltal Maya*. Ph.D. dissertation, Department of Anthropology, Simon Fraser University, Vancouver.

Douglas, Peter M.J., Mark Pagani, Marcello A. Canuto, Mark Brenner, David A. Hodell, Timothy I. Eglinton, and Jason H. Curtis.
2015 Drought, Agricultural Adaptation, and Sociopolitical Collapse in the Maya Lowlands. *Proceedings of the National Academy of Sciences* 112:5607–5612.

Ebert, Claire E., Keith M. Prufer, and Douglas L. Kennett
2012 Maya Monuments and Spatial Statistics: A GIS-Based Examination of the Terminal Classic Period Maya Collapse. *Research Reports in Belizean Archaeology* 9:91–105.

Fauvet-Berthelot, Marie-France
1986 *Ethnopréhistoire de la Maison Maya*. Centre d'Études Mesoaméricaines et Centreaméricaines, Mexico City.

Garber, James F.
1983 Patterns of Jade Consumption and Disposal at Cerros, Northern Belize. *American Antiquity* 48:800–807.

Golden, Charles, Andrew K. Scherer, Melanie Kingsley, Stephen D. Houston, and Héctor Escobedo
2016 The Life and Afterlife of the Classic Period Piedras Negras Kingdom. In *Ritual, Violence, and the Fall of the Classic Maya Kings*, edited by Gyles Iannone, Brett A. Houk, and Sonja A. Schwake, pp. 108–133. University Press of Florida, Gainesville.

Golitko, Mark, James Meierhoff, Gary M. Feinman, and Patrick Ryan Williams
2012 Complexities of Collapse: The Evidence of Maya Obsidian as Revealed by Social Network Graphical Analysis. *Antiquity* 86:507–523.
2016 Concepts of Legitimacy and Social Dynamics: Termination Ritual and the last King of Aguateca, Guatemala. In *Ritual, Violence, and the Fall of the Classic Maya Kings*, edited by Gyles Iannone, Brett A. Houk, and Sonja A. Schwake, pp. 89–107. University Press of Florida, Gainesville.

Harrison-Buck, Eleanor, Patricia McAnany, and Rebecca Storey
2007 Empowered and Disempowered During the Late to Terminal Classic Transition: Maya Burial and Termination Rituals in the Sibun Valley, Belize. In *New Perspectives on Human Sacrifice and Ritual Body Treatments in Ancient Maya Society*, edited by Vera Tiesler and Andrea Cucina, pp. 74–98. Springer-Verglad, New York.

Hayden, Brian, and Audrey Cannon
1983 Where the Garbage Goes: Refuse Disposal in the Maya Highlands. *Journal of Anthropological Archaeology* 2:117–163.

Hodder, Ian
2016 *Studies in Human-Thing Entanglement*. Electronic book, http://www.ian-hodder.com/books/studies-human-thing-entanglement.

Iannone, Gyles
2000 SARP Recording Sheets and Classification Guides. In *Archaeological Investigations in the North Vaca Plateau, Belize: Progress Report of the Second (2000) Field Season*, edited by Gyles Iannone, Lisa McParland, Adam Menzies, and Ryan Primrose, pp. 109–125. Social Archaeology Research Program, Trent University, Peterborough.
2005 The Rise and Fall of an Ancient Maya Petty Royal Court. *Latin American Antiquity* 16:26–44.

Iannone, Gyles, Jason Yaeger, and David Hodell
2014 Assessing the Great Maya Droughts: Some Critical Issues. In *The Great Maya Droughts in Cultural Context*, edited by Gyles Iannone, pp. 51–70. University Press of Colorado, Boulder.

Inomata, Takeshi
2003 War, Destruction, and Abandonment: The Fall of the Classic Maya Center of Aguateca, Guatemala. In *The Archaeology of Settlement Abandonment in Middle America*, edited by Takeshi Inomata and Ronald W. Webb, pp. 43–60. University of Utah Press, Salt Lake City.

Inomata, Takeshi, and Erick Ponciano
2010 The Palace Group. In *Burned Palaces and Elite Residences of Aguateca: Excavations and Ceramics*, edited by Takeshi Inomata and Daniela Triadan, pp. 23–52. University of Utah Press, Salt Lake City.

Inomata, Takeshi, and Ronald W. Webb
2003 Archaeological Studies of Abandonment in Middle America. In *The Archaeology of Settlement Abandonment in Middle America*, edited by Takeshi Inomata and Ronald W. Webb, pp. 1–12. University of Utah Press, Salt Lake City.

Lamoureux-St-Hilaire, Maxime
2011 *The Last Inhabitants of Minanha, Belize: Examining the Differential Abandonment of an Ancient Maya Community*. Master's thesis, Department of Anthropology, Trent University, Peterborough.

https://doi.org/10.1017/S0956536119000117 Published online by Cambridge University Press

2018 *Palatial Politics: The Classic Maya Royal Court of La Corona, Guatemala*. Ph.D. dissertation, Department of Anthropology, Tulane University, New Orleans.

Lamoureux-St-Hilaire, Maxime, and Gyles Iannone
2012 The Last Waltz at Minanha: Exploring Gradual Abandonment in the North Vaca Plateau. *Research Reports in Belizean Archaeology* 9:207–220.

Lamoureux-St-Hilaire, Maxime, Marcello Canuto, Tomás Barrientos, and José Eduardo Bustamante
2020 Detachment from Power: Sequential Abandonment in the Classic Maya Palace of La Corona, Guatemala. In *Detachment from Place: Beyond an Archaeology of Settlement Abandonment*, edited by Maxime Lamoureux-St-Hilaire and Scott Macrae, pp. 103–119. University Press of Colorado, Louisville.

Lamoureux-St-Hilaire, Maxime, Scott Macrae, Carmen McCane, Evan Parker, and Gyles Iannone
2015 The Last Groups Standing: Living Abandonment at The Ancient Maya Center of Minanha, Belize. *Latin American Antiquity* 26:550–569.

Lowe, John W.G.
1985 *The Dynamics of Apocalypse: A Systems Simulation of the Late Classic Maya Collapse*. University of New Mexico Press, Albuquerque.

Macrae, Scott A.
2010 *A Comparative Approach to Understanding the Socio-Political and Socio-Economic Organization of the Intensive Terrace Farming at the Ancient Maya Centre of Minanha, Belize*. Master's thesis, Department of Anthropology, Trent University, Peterborough.

Macrae, Scott A., and Gyles Iannone
2009 The Investigation of the Relic Terrace Systems Surrounding the Ancient Maya Site of Minanha, Belize. In *Archaeological Investigations in the North Vaca Plateau, Belize: Progress Report of the Eleventh (2009) Field Season*, edited by Gyles Iannone, Matthew Longstaffe, and Scott Macrae, pp. 71–109. Social Archaeology Research Program, Trent University, Peterborough.

McAnany, Patricia A.
1995 *Living with the Ancestors: Kinship and Kingship in Ancient Maya Society*. University of Texas Press, Austin.

McCane, Carmen A., Kendall Hills, Andrew Snetsinger, and Matthew Longstaffe
2009 The Last Year of Trying to Figure Out "What Was Going on Over Yonder?": The 2009 Peripheral Investigations in Contreras, Minanha, Belize. In *Archaeological Investigations in the North Vaca Plateau, Belize: Progress Report of the Eleventh (2009) Field Season*, edited by Gyles Iannone, Matthew Longstaffe, and Scott Macrae, pp. 13–49. Social Archaeology Research Program, Trent University, Peterborough.

Medina-Elizalde, Martín, and Eelco J. Rohling.
2012 Collapse of Classic Maya Civilization Related to Modest Reduction in Precipitation. *Science* 335: 956–959.

Michelet, Dominique, and Charlotte Arnauld
2006 Del arraigo mediante el culto a los ancestros a la reivindicacion de un origen extranjero. In *Nuevas ciudades, nuevas patrias: Fundacion y relocalizacion de ciudades en mesoamérica y el mediterraneo antiguo*, edited by Josefa Ponce de Léon, Rogelio Valencia Rivera, and Andrés Ciudad Ruiz, pp. 65–92. Publicaciones de la Sociedad Española de Estudios Mayas, Madrid.

Mock, Shirley B. (editor)
1998 *The Sowing and the Dawning: Termination, Dedication, and Transformation in the Archaeological and Ethnographic Record of Mesoamerica*. University of New Mexico Press, Albuquerque.

Navarro-Farr, Olivia C.
2016 Dynamic Transitions at El Perú-Waka'. In *Ritual, Violence, and the Fall of the Classic Maya Kings*, edited by Gyles Iannone, Brett A. Houk, and Sonja A. Schwake, pp. 243–269. University Press of Florida, Gainesville.

Neiman, Fraser D.
1997 Conspicuous Consumption as Wasteful Advertising: a Darwinian Perspective on Spatial Patterns in Classic Maya Terminal Monument Dates. *Archeological Papers of the American Anthropological Association* 7:267–290.

Newman, Sarah E.
2019 Rubbish, Reuse, and Ritual at the Ancient Maya Site of El Zotz, Guatemala. *Journal of Archaeological Method and Theory* 26:806–843

Pagliaro, Jonathan, James Garber, and Travis Stanton
2003 Evaluating the Archaeological Signatures of Maya Ritual. In *Ancient Mesoamerican Warfare*, edited by Kathryn Brown and Travis Stanton, pp. 75–90. Altamira Press, Walnut Creek.

Palmer, Gary B., and William R. Jankowiak
1996 Performance and Imagination: Toward an Anthropology of the Spectacular and the Mundane. *Cultural Anthropology* 11:225–258.

Plunket, Patricia, and Gabriela Uruñuela
2003 From Episodic to Permanent Abandonment: Responses to Volcanic Hazards at Tetimpa, Puebla, Mexico. In *The Archaeology of Settlement Abandonment in Middle America*, edited by Takeshi Inomata and Ronald W. Webb, pp. 13–27. University of Utah Press, Salt Lake City.

Premo, Luke S.
2004 Local Spatial Autocorrelation Statistics Quantify Multi-Scale Patterns in Distributional Data: An Example from the Maya Lowlands. *Journal of Archaeological Science* 31:855–866.

Reeder, Philip, Robert Brinkmann, and Edward Alt
1996 Karstification on the Northern Vaca Plateau, Belize. *Journal of Cave and Karst Studies* 58:121–130.

Schiffer, Michael B.
1972 Archaeological Context and Systemic Context. *American Antiquity* 37:156–165.
1976 *Behavioral Archaeology*. Academic Press, New York.
1985 Is There a "Pompeii Premise" in Archaeology? *Journal of Anthropological Research* 41:18–41.
1987 *Formation Processes of the Archaeological Record*. University of New Mexico Press, Albuquerque.

Sheets, Payson
2002 *Before the Volcano Erupted: The Ancient Cerén Village in Central America*. University of Texas Press, Austin.
2006 *The Cerén Site: Ancient Village Buried by Volcanic Ash in Central America*. Thomson Wadsworth, Belmont.

Simms, Stephanie R., Evan Parker, George J. Bey III, and Tomás Gallareta Negron
2012 Evidence from Escalera al Cielo: Abandonment of a Terminal Classic Puuc Maya Hill Complex in Yucatán, Mexico. *Journal of Field Archaeology* 37: 270–288.

Stanton, Travis W., and Aline Magnoni (editors)
2008 *Ruins of the Past: The Use and Perception of Abandoned Structures in the Maya Lowland*. University Press of Colorado, Boulder.

Stanton, Travis W., M. Kathryn Brown, and Jonathan B. Pagliaro
2008 Garbage of the Gods? Squatters, Refuse Disposal, and Termination Rituals Among the Ancient Maya. *Latin American Antiquity* 19:227–248.

Suhler, Charles, and David Freidel
2003 The Tale End of Two Cities: Tikal, Yaxuna, and Abandonment Contexts in the Lowland Maya Archaeological Record. In *The Archaeology of Settlement Abandonment in Middle America*, edited by Takeshi Inomata and Ronald W. Webb, pp. 135–147. University of Utah Press, Salt Lake City.

Trachman, Rissa M.
2010 Ancient Maya Household Ritual in Northwestern Belize: Memory, Expression, and Identity. *Research Reports in Belizean Archaeology* 7: 179–192.

Tsukamoto, Kenichiro
2017 Reverential Abandonment: A Termination Ritual at the Ancient Maya Polity of El Palmar. *Antiquity* 91:1630–1646.

Turner, Billie L., and Jeremy A. Sabloff.
2012 Classic Period Collapse of the Central Maya Lowlands: Insights about Human-Environment Relationships for Sustainability. *Proceedings of the National Academy of Sciences* 109:13908–13914.

Walker, Debra S.
1998 Smashed Pots and Shattered Dreams. In *The Sowing and the Dawning: Termination, Dedication, and Transformation in the Archaeological and Ethnographic Record of Mesoamerica*, edited by Shirley B. Mock, pp. 81–99. University of New Mexico Press, Albuquerque.

Yaeger, Jason
2010 Shifting Political Dynamics as Seen from The Xunantunich Palace. In *Classic Maya Provincial Politics: Xunantunich and its Hinterlands*, edited by Lisa J. LeCount and Jason Yaeger, pp. 145–160. University of Arizona Press, Tucson.

Zehrt, Claudia
2006 Excavations in Group S, the 2006 Season. In *Archaeological Investigations in the North Vaca Plateau, Belize: Progress Report of the Eighth (2006) Field Season*, edited by Gyles Iannone, Jeffrey Seibert, and Jason Seguin, pp. 27–57. Social Archaeology Research Program, Trent University, Peterborough.

https://doi.org/10.1017/S0956536119000117 Published online by Cambridge University Press