**Supplemental Text 1. The Controversy over Copán’s Early Classic Population and Its Role in the Development of Methods to Assess Early Classic Population**

At Copán, a theoretical and methodological disagreement about the degree and form of political power and occupation of the polity during the Early Classic arose between two successive projects: Proyecto Arqueológico Copán II (PAC II) and Copán Acropolis Archaeological Project. The former argued for a modest regional Early Classic population, referring to subsistence and agronomy arguments (Paine et al. 1996; Webster 2018; Webster et al 1992; Webster and Freter 1990a; Wingard 2013), whereas the latter argued for an already developed state, supported by a numerous population, referring to the size of architectural remains and the wealth of funerary and epigraphic data (Fash and Sharer 1991). This debate illustrates the importance of moving away from Late Classic estimates, deeper in time, to obtain a clearer context for the Early Classic events that shaped the political and architectural landscape of the entire Classic period (Webster 2018).

This intellectual context encouraged various attempts to estimate the Early Classic population of Copán. The first, settlement-based calculation (Webster and Freter 1990a, 1990b) focused on the Late Classic and acknowledged deficiencies in the calculation methodology applied to the Early Classic period, namely that numbers were loosely inferred from the scantiness of ceramics and dated obsidian (Webster et al. 1993). Fash and Sharer (1991) rejected these figures, citing methodological flaws and sampling issues. Yet, unable to give precise numbers, they could offer no more than a “cautionary tale.” Webster et al. (1992) produced a new, more comprehensive, diachronic, settlement-based estimate. Importantly, recognizing that Early Classic residential units were both less numerous and smaller than Late Classic ones, they published even lower estimates than the previous “guess.” Later, PAC II archaeologists sought an alternative and independent method of calculation. In what remains the only study focused on the calculation of an Early Classic population, Paine and colleagues (1996) proposed a model of natural demographic growth for Copán, progressing backward from the better-known—and widely accepted—Late Classic population estimates toward the more elusive Early Classic ones. One flaw is that, in their desire to support a low Early Classic population estimate, they applied a constant growth rate to the entire curve, taken from the moment of fastest growth, during the Late Classic peak. Although this time corresponds to the best-known population estimates (arguably a legitimate anchor from which to infer a growth rate), the rate is unlikely to have remained constant during all of Copán’s history. Even the “low hypothesis” rate they simulate appears an overestimate once applied to a several-centuries-long curve. In a more flexible approach, Ortega-Muñoz et al. (2018) insist, for Xcambó, on the need to use varying rates.

Both Wingard (2013) and Ortega-Muñoz et al. (2018) offer diachronic population estimates based on simulation of natural growth and including the Early Classic period, but unlike Paine et al. (1996), they progress forward, starting from an arbitrary Preclassic number of inhabitants. Both envision varying growth rates, higher during the Late Classic than the Early Classic period. Yet this alternative method is not completely independent from residential remains–based estimates, since a growth rate must be applied to some other estimate, usually obtained through house counts.

**Supplemental Text 2. Details on the Typologies of Residential Units and Patios**

**Typology of Growth for Residential Units**

This typology comprises four classes and nine types.

Class A (*n* = 26) represents isolated structures. Type A1 (*n* = 6) represents small structures (less than 10 m² of interior space), probably short-lived, from either the Early or the Late Classic period. Because the minimal size of an isolated residential structure is usually estimated between 15 and 25 m² (Ashmore 1981:47; Becquelin 1993:358; Magnoni 2007:161; Tourtellot 1988:101), these small structures are deemed non-residential and are excluded from the population size calculations. Type A2 (*n* = 20) represents the other, larger, isolated structures of the residential area. Of the six tested units, three date to the Early Classic and persisted for centuries, with expansions resulting in larger and more complex architecture by the Late Classic period. Contrary to what has been proposed in some instances (Haviland 2014; Lemonnier 2011; Tourtellot 1988), we found that isolated structures are not always short-lived, “failed” residential units.

Class B (*n* = 49) represents single-patio residential units formed by more than one structure. Type B1 (*n* = 22) corresponds to the smallest units, which cannot have changed substantially between the Early and Late Classic periods because they are still very small during the Late Classic. Units of this type have either two structures, vaulted or not, or three to four structures, non-vaulted, and 8/9 tested have Early Classic occupation. Although it frequently also has Late Classic construction or occupation, this type sometimes has no construction after the Early Classic period. Type B2 (*n* = 27) represents single-patio residential units with more than two structures and, if it has only three or four structures, at least one vaulted structure. Most type B2 residential units have no more than six structures; a few have seven or eight structures. At least 10/11 tested units have Early Classic occupations. In contrast to Type B1, Type B2 units generally show a marked morphological change between the Early and the Late Classic period. Residential Unit 5N6 (Goudiaby 2018) comprised seven structures at its Late Classic peak but only one throughout the Early Classic period (5N-6-Sub), which was perishable and built on top of in the Late Classic period. Haviland (2014) found that at Tikal, Early Classic small residential units rarely number more than two structures and that many more structures were added during the Late Classic period.

Class C are the less developed multi-patio residential units. Type C1 (*n* = 3) comprises a few residential units, composed of two or three open and loosely tied patios, numbering one or two structures each. None have been excavated to date and none have datable looting debris, but I hypothesize that they lack Early Classic occupation. I recognize that this is the least well-supported assumption of the typology; fortunately, its weighting in the end result of the calculations is negligible. Type C2 (*n* = 11) corresponds to residential units composed of two patios that are markedly unbalanced, one well developed and the other much less developed (with one or two structures only) and more open. Of the seven tested, six were founded in the Early Classic period. Type C3 (*n* = 16) includes two-patio residential units, with both patios fully developed, though not necessarily equal in size or number of structures. Of the 10 tested, 9 were founded in the Early Classic period.

Types C2 and C3 show a very consistent difference between the Early and Late Classic periods. The test-pitting program showed that the more developed of the two patios almost always was founded in the Early Classic period, and the smaller one in the Late Classic period (excavation data are presented below). Often, the more developed patio was abandoned before the other one, where occupation may have lasted until the Terminal Classic period. Examples of this pattern are found elsewhere, including at Caracol’s Alta/Baja Vista (Chase and Chase 2011) and Blue Creek’s CBN-13 (Preston 2011) residential units, where maps show that the early patio may be bordered by two or three residential structures during the Early Classic period, as well as two or three ancillary structures and shrines. The main patio may therefore be close to its maximal number of structures at the end of the Early Classic period, although those structures may still receive later modifications. The model takes into account that, as a rule, C2 secondary patios lack an Early Classic component. For type C3, without excavation, it is often impossible to determine which of the two patios is secondary. I therefore rely on the occupation rate to distribute Early and Late Classic occupations.

Class D corresponds to the most complex multi-patio residential units. Type D1 (*n* = 3) corresponds to complex, multi-patio (at least three well-defined patios) residential units without Early Classic occupation. Because units of this type are large and complex, this model of rapid growth is pending future excavation. Two units were tested; a third was not tested but had been heavily looted. If an Early Classic occupation ever existed, it had to have been very small scale and no earlier than the Balam 3 subphase (AD 378–550). There are few efficient ways to distinguish Type D1 units from Type D2 units morphologically. The latter encompass complex, multi-patio clusters with Early Classic occupation. There are 11 D2 units. All 10 tested had Early Classic occupation, but only in some patios, the others having been founded later. Although vast open areas are difficult to date, the plazas that characterize the largest units (6L13, 6M74, and 6M22) may date to the Late Classic (Hiquet et al*.* 2023).

**Typology of Growth for Patios**

This typology has three classes, comprising eight types.

Class P1 comprises isolated structures. Type P1A (*n* = 6) comprises the supposedly non-residential small structures. P1B (*n* = 13) comprises the patios associated with middle-sized, isolated structures; they can logically have vertical but not horizontal growth. Two of three tested had Early Classic occupation. P1C (*n* = 7) comprises the large, isolated structures. In theory, they may have grown in size between the Early and the Late Classic periods, but only one of the three tested provided (scanty) Early Classic ceramics. This may be a mainly late type of structure, and some scholars (Goudiaby 2018; Tourtellot 1988) question whether its role was residential. I have nevertheless included them in the calculation of population.

Class P2 comprises single-patio residential units. Type P2A (*n* = 30) comprises the smallest of them, with only two or three structures and no significant change between the Early and the Late Classic period. P2B (*n* = 19) comprises the largest of those patios, having more than three structures. Most, but not all, experienced major changes between the Early and the Late Classic period.

Class P3 comprises multi-patio units. Type P3A (*n* = 69) are the smallest, composed of one or two structures, or three if all are small and two of them are considered non-residential. Changes between the Early and the Late Classic period are not significant. P3B (*n* = 66) comprises mid-sized patios, with from two (if very large) or three to five structures. I consider them to have had two residential structures during the Early Classic period. P3C (*n* = 16) are the largest patios in multi-patio clusters, numbering six structures or extremely large and long mounds (corresponding to an unknown number of range structures), whatever their number. I suggest each patio had three residential structures during the Early Classic period.

**Stratigraphic and Chronological Data on Double-Patio Residential Units (C2 and C3)**

One of the most significant things we found out about concerning patterns of growth in the residential area of Naachtun is the evolution of double-patio residential units (types C2 and C3 in the typology of growth of residential units). Almost all show a difference in the period of foundation between the two patios, with one (often larger or more complex) founded during the Early Classic and the other (often smaller or less complex) founded during the Late Classic. The older of the two patios generally seems to have been abandoned for residential use before the newer one (but not before a time of contemporaneous use during the Late Classic), although their direct proximity implies that residual or refuse material relating to the period of use of the latter are often scattered in the former, from the end of the Late Classic through the Terminal Classic. In the same vein, sometimes an Early Classic layer can be observed directly on top of the bedrock in the second patio, which may correspond to circulation and other activity spaces around the original patio. In some cases, construction may have been limited to one patio, yet activities were carried out all around that space. These traces of activities may have been erased in cases where construction of the new patio took place on clean bedrock.

In Figures 1 and 2, we can see that those temporal differences do not systematically translate into the respective height of the patio platforms, nor into their relative altitude; i.e., the first patio is neither always on a higher platform nor always placed higher than the second. They are systematically built at different levels, probably out of concern for water drainage, but the irregularity of the natural terrain was probably a more pressing reason for those differences than any other.

The stratigraphy, along with chronological data of each tested patio of this type, is discussed in the next paragraphs. The sequences given were obtained through test pitting and may have missed some occupations.

*Type C2*

*Residential Unit 5P10.* Only the main patio was tested. It was founded during the Late Preclassic, with construction during the Early Classic (Balam 2 fills) and the Late Classic. Terminal Classic scattered sherds were found in the upper occupation layers.

*Residential Unit 6M61*. The attribution to type C2 is uncertain. It may prove to be a one-patio residential unit. Only the main patio was tested, but in a corner of the patio, remote from the main (and arguably older) structure. The sequence of construction is short, covering only Late Classic, and fills are shallow. This seems to be an exception to the described pattern of growth of C2 units.

*Residential Unit 6M64.* Both patios were tested. The main one was founded during the Late Preclassic. A radiocarbon dating of a conserved patch of paleosol gave an age of 2250 years BP +/− 30, i.e., HPD region (95%) 392–347 BC (31%) and 317–207 BC (64%). There is a long sequence of Early Classic construction and interments, as well as a Late Classic occupation of the main patio, and a very short and late sequence of occupation and construction in the secondary patio (Late and Terminal Classic).

*Residential Unit 6M105*. Only the main patio was tested. The sequence of construction and interment spans the entire Early Classic (Balam 1 to Balam 3) and continues during the Late Classic.

*Residential Unit 6N60*. Only the main patio was tested. There is a long and deep sequence of Early Classic construction (Balam 2 and Balam 3), as well as a Late Classic occupation.

*Residential Unit 6N74.* Both patios were tested. The main one was founded at the beginning of the Early Classic (Balam 1), with a sequence of Early Classic construction. There were Late Classic sherds in the upper layers of occupation. The secondary patio has a very shallow sequence, and constructions seems to start at the end of the Late Classic (Ma’ax 3). Occupation continues during the Terminal Classic.

*Residential Unit 6N118.* Both patios were tested. The main one was founded at the beginning of the Early Classic (Balam 1), and constructions continued in Balam 2. There is early Late Classic construction (Ma’ax 1) and there are Late and Terminal Classic sherds in the upper construction layers. The secondary patio has only a very late construction (Terminal Classic).

**[Figure 1]**

*Type C3*

*Residential Unit 5L1*. Only the largest patio was tested. The fills were shallow, and no date was obtained for the lowest one. The second fill is Late Classic, and the occupation continued until the Terminal Classic.

*Residential Unit 5L15*. Both patios were tested. The larger one has Early Classic fills and layers of occupation with sepultures, starting in Balam 1 and continuing through Balam 3. Construction and occupation continues throughout the Late Classic. There are Terminal Classic sherds in the upper layers of occupation. In the other patio, the construction and occupation are wholly Late Classic.

*Residential Unit 6M53*. Both patios were tested. In the largest one, the occupation started with perishable structures built directly on bedrock. This bedrock has clearly been worked, at an unknown moment in time, but no later than Balam 2. Upon this bedrock was found a rich and complex Early Classic sequence of construction and occupation, with various platforms and ritual events (there is a strong Balam 2 component). Construction and occupation continued until the end of the Late Classic (Ma’ax 3). The other patio is not smaller and even has a little extension (with only a very shallow fill, which proved difficult to date) in its corner. In that patio, we found Balam 1 unsealed fills, above which all constructions are Late Classic, with Terminal Classic sherds in the upper occupational layer of the extension.

*Residential Unit 6M57*. Both patios were tested. No ‘main’ patio could be identified prior to excavation. The north patio has a very ancient occupation, with a possible Preclassic exploitation of *sascab*. Construction took place at least during Balam 1 and Balam 2, and then during the entire Late Classic. The south patio has a much simpler and shallower sequence, which seems to begin at the end of the Late Classic (Ma’ax 3).

*Residential Unit 6M138.* Only the largest patio was tested. The fills date back to the Early Classic (Balam 2 and possibly Balam 3). There are Late Classic sherds in the upper layers of occupation.

*Residential Unit 6N10.* Both patios were tested. The east patio has various fills and constructions dating to Balam 2 (earlier and later Early Classic occupations are possible but not proved). The occupation clearly lasted throughout the Late Classic (at least Ma’ax 1 and Ma’ax 3). The eastern shrine of this patio has a rich termination deposit dated to the end of the Late Classic, but occupation continued in the west patio—founded at some point of the Late Classic—until late in the Terminal Classic.

*Residential Unit 6N28*. Only the main patio was tested, and the sequence starts with an Early Classic Balam 2 fill. The rest of the construction in the test pit seems to date to the Terminal Classic.

*Residential Unit 6N53*. Both patios were tested. The more complex, east patio has only one fill and floor. It could be dated to the Early Classic. Scattered Terminal Classic sherds were found in the upper layers of occupation. They may be remnants of the occupation of the more recent, west patio, founded during the Late Classic, with construction and occupation during at least the entire Late Classic.

*Residential Unit 6N124*. Both patios, which were equally complex, were tested. The west patio was founded at the beginning of the Early Classic and has a deep and rich construction sequence, with fills, floors, deposits, and postholes at least in Balam 1 and Balam 2. The occupation continued during the Late Classic, at least until Ma’ax 3. Although very complex and with various very large structures and extensions, the east patio has a very shallow and simple stratigraphy, with only one fill, dating to the Late or even Terminal Classic.

*Residential Unit 7N20*. Both patios were tested. The more complex, west patio has a paleosol and a fill that could be dated to Balam 1. The rest of the occupation and construction could not be securely dated. The east patio also has an earthen layer covering bedrock, dated to Balam 1 (it is interpreted as an activity and circulation layer spatially linked to the west patio), but no construction. The only construction fill there is Late Classic.

**[Figure 2]**

**Supplemental Text 3. Corrections for Contemporaneity and Invisibility Issues**

**Adjusting for the Contemporaneity Issue**

An important issue around chronology is that of contemporaneity, *i.e.*, were the patios that were occupied during a same subphase necessarily occupied at the same moment? This issue is critical at those times when there was only one phase, for the more than three-centuries-long Early Classic (see, for example, Culbert *et al.* 1990:112 for Tikal or Viel 1983 for Copan), but employing refined sequences with 100- or 150-year subphases makes this issue less problematic. At Naachtun, the issue mainly pertains to the long, Late Preclassic Kutz’ phase. To adjust for this issue, I divided the number of occupied units by two, because I consider it possible that some residential units were temporarily abandoned during that period (to Tourtellot 1983:1062 and Turner II 1990:309, the Preclassic was also the period of more likely periodic abandonment of structures in the Maya Lowlands). However, targeted excavations should be done to better understand the dynamics of this period. Beyond the particular case of the Preclassic, I consider that in the residential area of Naachtun, periodic abandonment and reoccupation of a residential locus were rare, and I advocate for a more permanent occupation (Chase and Chase 2014; Haviland 2014). So close to the epicenter, surrounded by infield orchards, well-situated loci were rare, which probably discouraged generalized abandonment, except in the putative cases when a family moved to integrate a larger, wealthier residential unit. The complexity that characterizes many residential units at Naachtun is the best argument to support the permanence of occupations.

*Discerning Disuse*

Another methodological issue around dating is the one of disuse. Even when ceramics point toward a hiatus in the sequence of a patio, this is not visible stratigraphically (this absence of a natural layer corresponding to abandonment may also correspond to thorough cleaning at the reoccupation of the patio). Such hiatuses may also reflect the methodological flaws of test pitting as an excavation strategy.

In any human settlement, at any point in time, a proportion of the dwellings was not occupied, regardless of the duration of the occupation of residential loci. Specialists usually reduce the number of occupied ‘entities’ by between 10 and 20% to take this fact into account, but this abandonment seems to apply mostly to structures (Culbert *et al.* 1990:115; Ortega-Muñoz et al. 2018:597; Rice and Culbert 1990:17; Webster and Freter 1990b:47), not to the scale of an entire patio. Because I based my population estimates on an average number of inhabitants per type of patio, I did not deem it necessary to make that correction.

**Adjusting for the Invisibility Issue**

It is well known and widely debated (Culbert and Rice 1990) that what appears on archaeological maps seldom corresponds precisely to the reality of the ancient settlement. Some structures were built off-platform or on a minimal platform and, depending on the depth of the natural soil, may have left no mound (Johnston 2002, 2005). It is unavoidable for archaeologists to have to correct occupation rates at some point to account for this fact, and in the case of Naachtun, there are two different problems.

One problem, universally accepted, is that the archaeological remains of a residential unit never exactly match the map of mounds visible on surface. Any patio may have a certain number of unobtrusive or invisible structures associated with the more visible mounds. Archaeologists call these “proximate invisible structures.” For two reasons, I chose not to adjust the data to account for these proximate invisible structures. The first reason is that taking into account those structures would barely affect the intervals of inhabitants, whichever of the two proxies (index of inhabitants per residential structure or of square meters per inhabitant) were used. Any non-mounded proximate structure identified is probably a non-residential, small structure. Consequently, it would not be counted in an approach based on number of inhabitants per residential structure. The other proxy—roofed space per inhabitant—would probably push the lower bound of the population number range a little higher, but probably not even by one person. The second reason is that, during surveys, once a residential unit is located, archaeological surveyors are in the best position to identify the minimally mounded structures that otherwise would have remained unidentified, provided that there are larger mounds that caught their eye and provoked a more thorough observation of the landscape. This happened at various times at Naachtun.

A second problem, that of missed complete residential units composed of only non-mounded structures, is more important in this instance. By definition, such missing units are difficult to quantify, but programs of excavation in vacant terrain often (Bronson 1968; Lemonnier 2018) encounter such residential units, necessarily small sized and presumably of short duration. It seems very unlikely that a long-lived residential unit would not count at least one structure on a platform. This mitigating factor limits the extent of the problem, although it is still necessary to apply some correction. Apart from the question of how many of these units there are, the major problem lies in the temporality of these kinds of residential remains. Do they pertain preferentially to a particular period? At Itzán, in the western Petén, Johnston (2005) identified mainly late non-visible residential units. However, at Tikal, it appears that they constitute a typical Early Classic phenomenon, according to Bronson’s unpublished investigations (Culbert et al. 1990; Haviland 2003). This is also the case at El Zotz, in the same region (Garrison *et al.* 2019). The residential settlement pattern of Naachtun is certainly closer to Tikal’s than to the western Petén’s, and the temporal tendency evidenced in the Tikal area must be taken seriously. At Naachtun, the only structure of that type, which was, incidentally, found by Lemonnier (2018) in agricultural terrain devoid of a mound, could be dated to the Early Classic.

I took account of invisibility for small residential units only, and I weighted the Early Classic more heavily than the Late Classic. I doubled the figures for medium-sized isolated structures (P1B) for all periods, and I added 50% to Early Classic and 10% to Late Classic B1 residential units (one patio, two structures or more than two without any vaulted structures).

**Supplemental Text 4. Methodological Issues Around Dating**

**Earlier Sherds in Later Fills**

One methodological issue around the dating of the occupation that needs to be addressed is the presence of earlier sherds in later fills, i.e., earlier sherds not associated with any earlier construction. I chose to temporally assign each context strictly according to the latest sherd found within it. Unlike the method favored by most members of the Tikal Project, who consider the presence of ceramics of a given period as proof of in situ occupation for that period independently of stratigraphic logic (Culbert et al. 1990:105), I consider that earlier sherds in a fill may have been extracted in another patio or residential unit, along with construction material for the bulk of the fills, and therefore should not be considered as indicating in situ occupation (i.e., at the scale of a single patio).

**Placement of Test Pits**

Another methodological issue around dating is the placement of test pits (1.5 × 1.5 m for most of the Naachtun test pits, unless buried architecture has obligated the excavators to extend the pit horizontally). The unit of reference in this research is the patio (or residential subunit); in other words, the chronological information obtained from a test pit is considered valid at the patio level. This chronological information is only partially valid at the scale of the residential unit if the unit includes several patios. We frequently find that the patios forming a residential unit were founded and abandoned at different times from one another. That being said, even at the patio scale, the temporal representativeness of the test pit is limited by stratigraphic variation over very short distances. Quite often in test pit programs, excavations are located in the corner of a patio or behind a structure, with the aim of finding dumps (Culbert et al. 1990:106; De Carteret et al. 2015:456; Fry 1990:287). In the case of Naachtun, the experience accumulated over successive seasons of excavation led me to consider that a test pit placed inside the patio, at the foot of the structure, as close to the architectural remains as possible, is more likely to provide better-quality and better analyzable ceramic material than is a test pit placed between two structures. The main reason is taphonomic. The rubble of the structure tends to protect the last stucco floors, and hence the sherds included in the fills. In contrast, as soon as one moves away from the areas of architectural rubble, most of the floors are extremely eroded or even non-existent, and the ceramics are too damaged to provide accurate chronological information (see Arroyave 2010:125). It is also possible, although not yet firmly demonstrated at Naachtun, that the central area of the patios did not undergo as much repair and modification as the areas bordering the buildings, especially the thresholds, which had low platforms for easy access. It has even been hypothesized that the central area of the patios was not stuccoed (see discussion in Abrams 1994:74). In such a context, most attempts to date material from these areas are doomed to fail. An axial placement, as close as possible to the structures, quickly appeared to be more likely to provide good-quality chronological elements (this is the strategy chosen by, among others, Gámez [2011:3], at Yaxha), especially since in some cases ritual contexts (deposits, burials) exist in this type of sector. These contexts often contribute to the dating of the various constructional elements because they contain well-datable artifacts, whether ceramics or organic elements that can be dated by radiocarbon.

Furthermore, following the assumption that in every residential unit (and many patios) there is a major, older residential structure located in a specific area—typically to the north or west of the patio (Haviland 1988; Inomata 2008:167; Tourtellot 1988:112)—it makes sense that a test pit opened near this structure would yield a deeper, more complex sequence than one opened in another, possibly later, area of the patio. When seeking to reveal early occupations, it is therefore desirable, when possible, to place the test pit near the major structure, rather than in a more marginal area of the patio (Fry 1990:287–288). This was also the strategy chosen by M.-C. Arnauld (2012:6) for a survey program at La Joyanca, although it was noted that smaller structures, such as kitchens, may yield more sherds in primary contexts. The preferred location of the test pits was thus determined from both a cultural and taphonomic criteria as the program progressed.

However, while the archaeological test-pitting strategy is based on optimizing the ratio of information to the speed of execution, the placement of the test pits was also conditioned by questions of context accessibility. The presence of large trees, roots, and mounds of rubble from looting often drastically limited which sectors could potentially be excavated. Finally, in three cases, an additional test pit was placed outside the courtyard, behind the structures, mainly because a test pit inside the courtyard had failed to reveal architectural elements or ceramics, but also because sometimes it was impossible to determine from the surface remains where the preferred activity area associated with the structures was located, especially when the courtyard is not very clearly defined. There are all sorts of exceptions to the theoretical model of spatial clustering of habitation that is central to our estimate of the Early Classic population of Naachtun.

**Differences in Information Captured Due to Excavation Strategy**

Another methodological issue around dating is the limitations placed by the excavation strategy on the amount of information that can be retrieved. Can we measure the difference in quantity and quality of information caused by the use of small test pits rather than extensive excavations? An attempt was made by Culbert et al. (1990:107–108) for Tikal, where the residential area was subjected to both test pitting and stripping and extensive excavation. As one might expect, the extensive excavations yielded more complete results (shown in Table S2) than did the test pits.

[**Supplemental Table 2**]

At El Perú-Waka', Marken (2011:153) found what he described as a minor difference between the data from the test pits and that from the extensive excavation in the patios. To account for this underrepresentation of occupational remains inherent in the survey methodology, for each patio type, I add 5% to the number of occupied patios in each subperiod, except for the Early Classic in cases where the Growth Typology assumes no occupancy for that period.

**Insufficient Chronological Markers**

Another major methodological issue around dating is its accuracy. The disadvantage of having a fine-grained chronocultural sequence is that it can be difficult to date some ceramic lots when the material does not bear enough chronological markers. This problem is particularly serious in the case of test-pitting programs, since this type of small-area excavation often yields only a few sherds, with the result that some episodes of construction or occupation could not be dated at all or could only be attributed to a general period instead of a subphase. It is not the purpose of this paper to discuss in depth the strategies that can be used to address this problem (see Hiquet 2020, and for other options, see Culbert *et al.* 1990:105 and Tourtellot 1990:94), but the problem must be mentioned because, given that nearly one-third of all ceramic lots from the test pits could not be adequately dated, the number of patios occupied during a given phase is clearly going to be underestimated if nothing is done to correct the raw data. I chose a simple aoristic distribution (see Crema [2011] for a more complex implementation of this technique), using the Chronophage software developed by Desachy (2018). This enables a distribution of inadequately dated events according to the probability of their occurrence during a given time span. With this method, the longer a phase is, the more weight it is given in the distribution of events, independently of other cultural or demographic trends. This method gives more weight to the Late Preclassic, which is considerably longer than the other period. To compensate for this method’s inherent weighting, I have artificially reduced the inferred number of occupied units.

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