Maya E Groups

Calendars, Astronomy, and Urbanism in the Early Lowlands

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Foreword by David A. Freidel and Jerry Murdock

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Don Regi is a Maya leader intent on educating rising generations in his community into the successful ways of his ancestors regarding subsistence cultivation in a rainforest environment. We met with him to see if he would help us hold a ceremony to bless the enclave of wilderness around the ruins of El Perú, ancient Waka’, in northwestern Petén. He agreed to do so. In the spring of 2009 we sat in Don Regi’s small office in San Pedro Petén, Guatemala, in conversation with a piece of paper on the desk between us. Jerry Murdock was asking questions about the Feathered Serpent. The Itzá sage drew a picture, a line with feather-like lines coming off of it. He looked at Jerry, pointed to the main line, and said that this was the direct path but that we are often tempted to go down one of the side paths. Whether it is serendipity or determined persistence, or both, our path has taken us directly to this prologue to a book on the sun path and what the earliest people of southeastern Mesoamerica, the Lowland Maya among them, made of it in their first centers.

Jerry was inspired by this encounter, and his long-term engagement in conversation with the Working Group members, to write down the following:

My view of what is unique about E Group constructions is that: (1) placement is always along the path of the sun; and (2) they exemplify the Mayas’ ability to adapt the language of nature into structural forms. Nature’s language, as expressed in the path of the Sun, is itself the articulation of a generatrix as seen by the shadow cast to earth. The Sun’s path being a directrix creates new shadow shapes as it moves across the sky and through time. A famous example of this activity would be the appearance of the Feathered Serpent deity on a balustrade of El Castillo pyramid during equinox at Chichén Itzá. E Groups, like sundials, express “time-associated information,”
which was utilized by ancient peoples in many cultures. Keen observers such as the Maya understood that time is woven into the creation process and I believe they sought to replicate this within the built environment.

In this way, E Groups both capture and display time and the creation process as an “integrated whole” just as it is in nature. In nature everything is a reflection of everything else. Everything is integrated into cycles of nature and cycles of time. It is only human logic that separates and compartmentalizes time and turns entire ecosystems into individual objects. Everything we know about the Maya suggests that they accepted nature as inseparable from itself. And I think they were right. For example for me the existential idea of an individual human being separate from the bacteria in our cells is completely false. In reality we are made of about 1 billion human cells and 10 billion bacteria cells. Our individuality separate from bacteria is only possible with our resulting death. In Jerry Murdock’s words:

E Groups being not only portals and centers of ritual were also the earliest permanent gathering places that were constructed out of the landscape. They were likely places that helped shape both cultural and personal identity. E Groups may have functioned as plazas and just like milpas; both were built utilizing golden rectangles, as found throughout nature’s ubiquitous creations. It may be that for the Maya being informed of nature’s geometry led them to greater functionality in their architecture and greater integration into the world. Perhaps the feathered serpent, which we know is associated with spirals, *Spondylus* shells, and Venus, is also linked with the process of creation. Golden ratios like 8:5 and 13:8 are mathematical expressions of nature’s process of creation. These ratios are also found in the growth patterns of flowers, seeds, petals, pinecones, bones, shells, spirals, fruits, and vegetables and are reflected in Mayan structures of time such as the Haab and Tzolk’in calendars.

Back in Don Regi’s tiny office I sat thinking of the process of creation and the feathered serpent as Don Regi drew his straight line between what he said was two large pyramid groups that were representations of Orion and the Pleiades in the central core of El Mirador. Then I recalled a large mural painted on the North Wall at San Bartolo where a red serpent path emerges from a mountain in the west and flows toward the east. Two elaborate scenes of Maya life rich with creation mythology were painted above the baseline of the serpent path dotted
with footprints of the ancestors. The mural and the line between the star clusters came together in my mind at that moment, and just like the Sun and its movement along its path, time became something that was both linear and cyclical, integrated with the past and the here and now, because they were concepts that were always present together in nature. Perhaps the “Maya concept of Time,” like the golden ratio, was seen as an organizing constraint that nature and the concomitant Mayan deities utilized to unfold, transform, and ultimately create the world itself.

The collaboration among the authors of the ensuing chapters has been enabled and inspired by the wonderful hospitality of the Santa Fe Institute and its president, Jeremy A. Sabloff. Murray Gell-Mann, one of the founders, and distinguished archaeologist George Gumerman first invited David Freidel to participate in a working group at the institute, and he met Jerry Murdock in that setting in the fall of 2008. When Jerry asked that David organize a working group on Maya origins and astronomy, David suggested a session on E Groups with the goal of recruiting Tony Aveni. Flanked by Tony’s friends and collaborators Susan Milbrath and Anne Dowd, we called him. He generously agreed to come. We continued to be lucky: the two working group sessions brought together the remarkable array of archaeologists and archaeoastronomers represented in this book. It was Arlen Chase, also expert in E Groups, who first suggested that we write such a book and has been an energetic collaborator in seeing through to completion. The give and take around that table at the Santa Fe Institute was memorable for us and is reflected in the syntheses presented by the participants.

Although Maya archaeologists have been researching E Groups for generations, it turns out to be a topic on the present frontiers of our knowledge, with many recent and exciting discoveries made and reported on by the working group participants. Once E Groups manifest in the Maya Lowlands (the temporal benchmark for this is now 1000 BCE at the site of Ceibal, as described by Takeshi Inomata in chapter 7 in this volume), there are many ways to situate them in the ensuing development of Maya place-making, time-reckoning, religion, politics, and economics. These discussions are the substance of the book. But Jerry Murdock in correspondence in the fall of 2014 pressed his companions on this path once again to look back over their shoulders to its beginnings. The way back, at least in the Maya Lowlands, leads metaphorically into standing forest with few blaze marks or bent twigs to guide us. There are preceramic Archaic period (3,500–1,000 BCE)
BCE) remains in some places, but not all (for example, not at Ceibal so far), and these offer few insights into the remarkable developments that follow.

Jerry’s big questions about how spiritual leaders and close observers of nature like village shamans gave way to the earliest rulers and their ritual advisors presiding over E Group centers require us to widen our perspective in the Mesoamerican world of the time. When we do that two things become clear: the Maya were not the first to have rulers, but they were participants in a close second that brought in E Groups. The Lowland Maya were not, to our knowledge, the first people to establish monumental centers or material symbol systems that expressed precepts of power, earthly and cosmic. The Olmec center of San Lorenzo Tenochtitlán is earlier by centuries, and the society there is intimately related to other early Preclassic period (2,000–1,000 BCE) societies to the southeast in Chiapas. Determining the direction of emulation among these early Preclassic communities, and others in Highland Mexico, remains a contentious matter among archaeologists. But no one can contest the ability of the San Lorenzo Olmec to move enormous basalt monuments across swampy riverine terrain from quarries in the Tuxtla Mountains or doubt that the symbol-system expressed on those monuments, as a sophisticated cosmologically grounded one, was deeply influential in subsequent middle Preclassic period (1,000–350 BCE) regional religious practices. Furthermore, the earliest use of polished greenstone celts, a middle Preclassic signature of regional interaction, is currently dated to 1,600 BCE at Laguna Manatee near San Lorenzo in the Olmec heartland, more than half a millennium earlier than in the Maya Lowlands. What Takeshi Inomata now proposes, in his contribution to this book and elsewhere, is that in the two centuries or so between the denouement of San Lorenzo and the fluorescence of the first Olmec center to have a major pyramid, La Venta to the east, a regional interaction sphere incorporating Ceibal in southwest Petén, and centers in Chiapas emerged with the E Group as a signature expression.

This intriguing period, roughly 1,000–800 BCE, straddles the early and middle Preclassic chronological divide; we have no better nomenclature for it, but it will clearly be featured regularly in future discussions of the origins of civilization in the region. What we can say with Inomata’s breakthrough and the work of the other scholars in this book is that the E Group phenomenon began as part of an era of major social change embracing Lowland Maya and other Lowland peoples of southeastern Mesoamerica. On the other side of that temporal divide we have increasing evidence that the Middle Preclassic Lowland Maya peoples participated in the development
of formal rulership, what Freidel identified in the 1980s as Divine Kingship by the late Preclassic period (350 BCE–0 CE). It has been affirmed as likely present in the middle Preclassic, notably by William Saturno at San Bartolo and Francisco Estrada-Belli at Cival.

Whatever transpired during these eventful centuries, it involved the E Groups and their ritual uses. Returning to Don Regi and the straight path, for all of the variability that is important to understanding the origins, use, and subsequent development of E Groups, it seems likely that this kind of monumental architecture was first and foremost a means of celebrating the sun cycle, agrarian seasonality, astronomy, and eventually formal time-keeping as recorded in calendars. While it is clear in the archaeological record that domesticated plants shaped the subsistence strategies of Mesoamericans for thousands of years before the middle Preclassic, it also seems increasingly clear that significant reliance on staple maize and other crops was only established in the period of the advent of E Groups. This is a matter of empirical contestation, so naturally we always need more data. But experts like Philip Arnold (2009) and Amber VanDerwarker and Robert Kruger (VanDerwarker and Kruger 2012) are pursuing the matter in the field and the general trend in the evidence suggests such a pattern. The innovation of E Groups, and the celebration of the sun path, was seemingly part of a regional recognition by many and diverse peoples that they lived in a natural world shaped by their subsistence, which they celebrated as a covenantal relationship between themselves and the supernatural beings of their cosmos, the sun principal among them.

David A. Freidel and Jerry Murdock

References Cited

Arnold, Philip J., III

VanDerwarker, Amber M., and Robert P. Kruger