Qualia of Proximity and Materiality in Classic Maya Hieroglyphs

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ABSTRACT

Drawing on the Peircean concepts of qualia and qualisign (Munn 1986; Keane 2003; Chumley and Harkness 2013), I propose that Classic Maya hieroglyphs were associated with two fundamental sensorial experiences, materiality and proximity, which were expressed by coordinating lexical, morphological, syntactic, and pragmatic strategies. I argue that Classic Mayan terminology distributed materiality between three basic qualisigns by privileging tactile and technological experiences of scribal production above interaction with the finished text. Qualia of proximity, in turn, implied differential access to hieroglyphic writing and its recorded knowledge with qualisigns that distinguished producers from patrons or owners. A semiotic approach articulates the material, the corporal, and the social in Classic Maya ontologies of writing and reveals the relational nature of hieroglyphic production and access. It also offers a theoretical consideration of the role of morphology, syntax, and pragmatics in culturally conditioned experiences of qualities and their interpretations.

The social dimensions of writing include beliefs about what writing is and should be—how signs are formed and assembled into texts, what those texts document and for whom—that are profoundly cultural. As artifacts of these beliefs, the signs of a writing system have an inherently material

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Many thanks to two reviewers and to Asif Agha for suggestions that significantly improved the final version of this article. Claudia Brittenham, Paja Faudree, Stephen Houston, Simon Martin, Jeff Moser, and Andrew Scherer provided valuable feedback on early iterations of this work, and Stephen Houston, Danny Law, and David Stuart offered insights on morphological minutiae. All shortcomings that remain in this work are nonetheless my responsibility alone. I thank the Consejo de Arqueología of the Instituto Nacional de Antropología e Historia (INAH) of Mexico and Prisilia Janeth Lagunes at the Zona Arqueológica de Pomoná, and Daniel Aquino Lara and Victor Mendoza at the Museo Nacional de Arqueología y Etnología de Guatemala for permission to photograph their collections, and Alyson Williams at Dumbarton Oaks for securing permission to reproduce images from Justin Kerr's database. This research was conducted with generous support from a

Signs and Society, volume 10, number 1, winter 2022.

https://doi.org/10.1086/717562

dimension that communicates differently from language. Their meaning is ultimately elicited through individual, symbolic interpretation; linguistic utterances, in contrast, convey information using a set of phonetic elements with agreed-upon meaning (Dietler and Herbich 1998, 243–44). Moreover, writing possesses a "thingness" (Brown 2001), a visible, physical presence in the world as "things-in-motion" (Appadurai 1986, 5) that users experience according to culturally conditioned perspectives, not any meaning intrinsic to the graphic signs themselves. Understanding these material and social experiences is a prerequisite to an anthropological interpretation of how, what, and why people write, in the past as in the present.

This article considers epigraphic evidence for qualia of proximity and materiality in Maya hieroglyphic writing during the Classic period (250–900 CE), including the qualisigns through which qualia were interpreted and the sinsigns that embodied them. Operating across a region spanning what are now Belize, Guatemala, and portions of southeastern Mexico and western Honduras and El Salvador, Classic Maya scribes recorded historical, political, religious, and other affairs in a script that their ancestors had developed by the Late Preclassic era (400 BCE–100 CE) based on earlier, non-Maya notational systems (Saturno et al. 2006; see Marcus 1976). Although the hieroglyphs' usage and active sign inventory peaked in the Late Classic period (600–900 CE) (Grube 1990, 38–41, table 1), some Maya communities retained the script into early generations of Spanish colonialism in the sixteenth and seventeenth centuries (Houston et al. 2003, 458–67; Chuchiak 2010). Typologically, the writing system is classified as "mixed" or logosyllabic because almost all hieroglyphs function either as logographs denoting a word or morpheme or as syllabic signs representing a consonant-vowel sequence (see recent overview in Law and Stuart 2017, 128–33). Maya hieroglyphs were employed on diverse media ranging from bone to stone to wood, but their material form and contents could vary notably across media, time, or space.

My semiotic approach draws on the concepts of qualia and qualisign, introduced into linguistic analysis by Charles Peirce (*CP*, 2:134–55) and subsequently elaborated by anthropologists (Munn 1986; Keane 2003; Chumley and Harkness 2013), to interpret the hieroglyphic script's ontological and relational status. Material form and social proximity—the qualia addressed here—were fundamental to how writing was perceived and to the human-hieroglyph interactions

Presidential Fellowship from Brown University's Graduate School and, in later stages, an Interdisciplinary Opportunity Fellowship from the John Carter Brown Library and Brown University and a Junior Fellowship in Precolumbian Studies from Dumbarton Oaks.

that sustained it across the Maya lowlands for centuries (cf. Grube 1990; Lacadena 1995). I argue that each set of qualia was expressed in three primary qualisigns that, in turn, underlay hieroglyphic writing's cultural significance. For qualia of materiality, emic terminology for writing presents three basic qualisigns that privileged tactile, technological experiences of scribal production above visual or embodied interactions with the finished text. Socially defined qualia of proximity, in contrast, were encoded in different qualisigns for producers, patrons or owners, and artifacts of the script, with consequences for individual access to written records and the knowledge recorded therein.

A semiotic approach allows us to refine our interpretation of the relational nature of hieroglyphic production and access and, consequently, of the script's multifaceted position in Classic Maya society. By applying a method primarily deployed in ethnography to texts written over a millennium ago in an incompletely deciphered writing system, this case study suggests avenues for interpreting sensorial experiences in the ancient past or in other contexts where ethnographic data are inaccessible. But it also presents a theoretical challenge to lexically oriented analyses that do not account for linguistic structure's role in articulating cultural understanding of qualities. The grammatical constructions that expressed Classic Maya qualia of hieroglyphic proximity both lay bare a qualisign's potentially composite nature and raise the question of language's culturally specific capacity for expressing sensorial phenomena.

Qualia and Hieroglyphic Semiosis

In contemporary anthropology, qualia refer to "qualitative experience" or "experiences of sensuous qualities . . . and feelings" that, even as they are interpreted as abstracted properties, are anchored or instantiated in qualia (Chumley and Harkness 2013). A qualisign, in turn, is "some abstracted and conventionalized quality" that is attributed a culturally defined significance (Chumley 2017, S14). Nonetheless, a qualisign is "always encountered in material form" as what Peirce defined as a sinsign or token (2017, S14). A given sinsign incorporates a variety of qualities through semiotic "bundling," although only culturally meaningful ones are perceived as qualisigns (Keane 2003, 413; see also Chumley and Harkness 2013). In the Classic Maya case, only the sinsign—a painted ceramic vessel, a molded stucco inscription, or a specific hieroglyphic spelling, for instance—is accessible to us today, heightening the need to understand its relationship to the qualisigns and, more distantly, the qualia that it expresses.

Viewing Maya writing through a *quali*-semiotic lens allows us to center the physical experience of hieroglyphs while connecting them to their material

manifestations and social relations. The approach thus grounds interpretation in the limited archaeological and epigraphic data that historical context provides. In her seminal analysis of the "qualisign of value" on the island of Gawa in Papua New Guinea, Nancy Munn (1986) observed that physical experiences of satiation and hunger functioned as qualisigns of (negatively valued) sensorial experiences or qualia of heaviness and scarcity. As Munn's research suggests, because qualisigns are manifested in sensorial phenomena that we encounter in the world, we may relate them to each other as conventionalized icons of what we understand to be a shared experience (Chumley and Harkness 2013, 6–7). Importantly, our associations between qualisigns may cross-cut other cultural categories. Thus, based on a lifetime of engagement with feather pillows, cotton candy, and other qualisigns that we associate with qualia of "softness" or "fluffiness," we may consider cumulus clouds to be another qualisign of the same, even as we maintain a meteorological understanding of clouds as physically very different things.

Qualia and qualisigns, like the sinsigns that express them, are defined through "social lives" of circulating among people who give them a meaning that is always under negotiation: "however materially stable objects may seem, they are, let us say, different things in different scenes" (Brown 2001, 9; see Appadurai 1986). Qualisign status is not inherent to any sensorial phenomenon; it is always conventionalized or "culturally valorized" in a particular sociohistorical context (Harkness 2013, 15). Efforts to revitalize Maya hieroglyphs in contemporary Guatemala, for example, are embedded in ethnocultural qualia of Pan-Maya-ness within a larger movement to revindicate indigenous political and cultural rights.[1] Hieroglyphic writing was not considered a Pan-Maya qualisign during Guatemala's precolonial and colonial history, however, because a politically, ethnically, or culturally coherent "Maya" identity did not coalesce until the late twentieth century (Cojtí Cuxil 1991; Warren 1998; Restall 2004).

As in most preindustrial literate societies (Harris 1991; Bowman and Woolf 1994), the individuals who were socially licensed to create Classic Maya texts were fewer than those able to read their work. The latter, in turn, were outnumbered by those who would have been familiar with writing but could not interpret its message (Houston 1994). Current understanding of Classic Maya hieroglyphs' sociocultural context originates from iconographic and ethnohistorical

1. Cojtí Cuxil (1996, 29–36); Brown (1998, 168–69); England (2002, 34); Montejo (2005); see Sturm (1996); Matsumoto (2015).

research and emphasizes scribes' role in production, with less robust consideration of them as social and cultural actors more broadly.[2] In ongoing discussions about Classic Maya hieroglyphic culture, including issues of literacy or scribal production (Brown 1991; Houston and Stuart 1992; Tedlock 1992), a fundamental question that remains unanswered is how the script was experienced by those who engaged it. The hieroglyphs were an essentially elite phenomenon, but their semiotic grounding—particularly their place at the intersection of materiality, ontology, and sociality—offers an inroad into broader experiences of material culture that cannot be reconstructed for most members of Classic Maya society.

The hieroglyphic script's qualisigns, the qualia that they evoked, and the sinsigns in which they were embodied were dynamic and varied. For reasons of scope, I concentrate here on evidence for the ontological and relational status of hieroglyphs themselves. Because we are culturally and temporally removed from their original contexts and available sources include very little meta-hieroglyphic discourse, reconstructing qualitative experiences of Maya writing requires empirical and analytical creativity. Epigraphic data constitute the core of the analysis but are necessarily complemented by insights from linguistics, iconography, archaeology, ethnohistory, and ethnography. Despite their significant temporal and often spatial removal, these sources remain valuable for drawing parallels and identifying semiotic phenomena that may be all but invisible in Classic-era records.

Material Ontologies and Terminologies of Maya Hieroglyphs

For those in Classic Maya society who were familiar with the script, experience of the hieroglyphs was intrinsically material. Material qualia are evident in terminology that differentiated between three key qualisigns according to medium of expression (table 1).

The most basic Classic Mayan term for "writing" as such was *tz'ihb*, a root derived from Proto-Mayan **tz'ihb* that survives in most Mayan languages today (Kaufman 2003, 56–57). Importantly, Classic Mayan *tz'ihb* also denoted 'painting' or 'drawing' of hieroglyphs or nonlinguistic signs, suggesting the lexeme's origins with broader practices of two-dimensional visualization.[3] The inextricability of writing and painting—phenomena linked by qualia of brushing, coloring,

2. Coe (1973); Just (2012); Reents-Budet and Bishop (2012); though see Inomata (2001); Miller and Martin (2004, 121–31).

3. Tedlock and Tedlock (1985, 124); Houston and Stuart (1992, 590); cf. Barrera Vásquez (1980, 882); Laughlin (1988, 180).

Table 1. Semantic Scope of the Three Basic Qualisigns Expressing Hieroglyphic Qualia of Materiality, Which Centered on a Basic Distinction between Two- and Three-Dimensional Writing

	tz'ihb	"Bat Head" Term	*woj*
Two-dimensional writing (painted, brushed)	Yes	No	Yes (rare)
Three-dimensional writing (carved, sculpted, incised, molded)	Yes (rare)*	Yes	Yes

* See Houston (2016, 392 n. 3).

and two-dimensional surface application—is a concept that Classic Mayas shared with other Mesoamerican groups, suggesting its antiquity in the region (Houston and Stuart 1992, 590). More broadly, even (nonhieroglyphic) motifs in weaving could in some contexts be sign tokens manifesting the qualisign *tz'ihb* (Houston and Stuart 1992, 590 n. 3). Thus, an *aj-tz'ihb*, designated with agentive *aj-* as a 'writing/painting person', was not just a scribe, but an artist who created text or image in ink or thread (cf. Barrera Vásquez 1980, 882). This denotation is graphically reinforced by a rare hieroglyph that shows a right hand delicately grasping a brush and is the only known candidate for a possible logograph for *tz'ihb* (fig. 1; Stuart 1987, 2–3; see Boot 2003, 15; though cf. Closs 1992, 12, fig. 1, glyph 10). In almost all examples, however, *tz'ihb* is spelled with syllabic signs (**tz'i** + **ba** or **bi**) (see Stuart 1987, 1989; Grube 1991, 225–28; Lacadena 2004a, 181–83).[4] Not surprisingly, the root *tz'ihb* occurs most frequently on painted ceramics, typically in a phrase linking its embellishment to other sign tokens characterized as *tz'ihb* by describing the vessel's surface as "painted" or "written," as will be discussed further below.

Yet *tz'ihb* did not account for all episodes of writing. Hieroglyphs etched or molded in stone, clay, bone, or stucco had to be shaped from elements of the natural environment, giving them a three-dimensionality not present in painted signs (Stuart 1989, 154; Houston 2016, 392). The term for this manifestation of writing, perhaps read **u-xu?-lu** 'his/her/its carving', remains epigraphically problematic even though its semantic referent has been known for decades (Stuart 1986, cited in Lacadena 2004a, 186 n. 118); for this reason, forms of this term are followed by a question mark (?) whenever they are transliterated here. At the term's core is the as-yet-undeciphered "bat head" hieroglyph (dryly denoted by

4. Transliterations of Classic Mayan are **bolded**, with readings of logographs in UPPERCASE and those of syllabic signs in lowercase, and hyphens (-) separate transliterated glyphs within a sequence. Transcriptions are *italicized*, and hyphens (-) within the transcription indicate morpheme boundaries.

Figure 1. Possible logograph **TZ'IHB?**. Detail of photo by Justin Kerr, K0772, Dumbarton Oaks, Trustees for Harvard University, Washington, DC.

specialists as T0756 or, in an updated classification, T1539st; see Thompson 1962, 343; Prager and Gronemeyer 2018), for which Nikolai Grube's (1991, 228) proposed reading **xu** remains the most widely accepted interpretation. But no clear cognate has been identified in a colonial-period Mayan language, and the decipherment thus remains unconfirmed. Inconsistent spellings obscure the root's internal reading order, too: the "bat head" sign is sometimes followed and sometimes preceded by, but more often ambiguously conflated with the syllable **lu**, making it unclear which should be read first (e.g., Ceibal Panel 1, Graham 1996, 53–55; incised sherd from Piedras Negras, Houston 2016, fig. 13.23). Nonetheless, writing denoted with the "bat head" qualisign was characterized by qualia of texture and tactility that were only secondary to *tz'ihb*, which was layered atop and thus conformed to the shape of its host surface (see Houston 2016, 392). Thus, the "bat head" term clearly referred to hieroglyphs whose three-dimensional form was coaxed from a malleable, material base. The artisan responsible for such work was, on occasion, explicitly identified as a 'sculptor' or 'carver' (*aj-uxul*?) (K8017; Coe and Kerr 1997, pl. 88; see Houston 2016, table 13.2).[5]

A third, relatively infrequent term for writing was *woj* (**wo-jo**) (Stuart 1990b, 220; 2016). Although it is best attested on architectural features such as lintels and doorways (Stuart 2016), comparison with its colonial-period Yucatec cognate suggests that the semantic scope of *woj* was broad, and that the term evoked qualia that were less differentiated than the previous two expressions, at least

5. All ceramic vessels cited with a four-digit number prefixed by the letter *K* refer to photographs taken by Justin Kerr and accessible in his online Maya Vase database at http://www.mayavase.com.

with respect to materiality. *Woh* in colonial Yucatec could, like *tz'ihb*, refer to "painting" or "writing" activities typical of an *ah wo(o)h* or scribal practitioner, but also to a "character, letter, or sign; hieroglyph" in any medium (Barrera Vásquez 1980, 925). Unlike the "bat head" root and *tz'ihb*, however, the Classic Mayan lexeme *woj* is only attested in nominal form, almost always as possessed *u-wojV(V)l* 'his/her/its hieroglyph' (Stuart 2016; e.g., Xcalumkin Columns 2–3, Graham and von Euw 1992, 174–75). The term appears principally on monumental sculptures although there are rare exceptions, such as a fragmentary molded ceramic from Alta Verapaz, Guatemala, that bears the enigmatic phrase *sak woj(oom?)* 'white hieroglyph(s)' (Houston, cited in Pérez Galindo 2006, 10, fig. 22). Attestations of *woj* are generally scarcer than for the other two terms, however.

The most basic of the three qualisigns for hieroglyphic writing seems to have been *tz'ihb*, which Mayan languages have robustly maintained into the present (e.g., Rodríguez Guaján and Son Chonayj 1994; Sis Iboy 1994). It was referentially the most flexible in Classic Maya contexts, given that it appears occasionally on incised ceramic vessels and other nonpainted media as well (K3684; K8827). Both *woj* and the "bat head" qualisign, in contrast, were semantically marked as salient (see Waugh 1982), albeit for different reasons. Forms of writing designed with the "bat head" sequence were physically distinct from painted texts because of material and technological properties. *Woj*, in turn, did not clearly correspond with a particular material. Similarly, although colonial Yucatec sources note that *woj*, perhaps even more than *tz'ihb*, could also apply to nonlinguistic signs, there is no clear evidence that the "bat head" term was equally flexible outside hieroglyphic contexts. *Woj* is also the qualisign with the most restricted geographic distribution; it is attested primarily in the Yucatan peninsula and northern Campeche, Mexico (fig. 2*A*; Stuart 2016), but the latter is the only region where all three terms were deployed somewhat regularly. In fact, *woj*'s regional distribution may reflect a Yucatec-specific qualisign of hieroglyphic writing that evoked qualia of wisdom or knowledge (cf. Yucatec *wohol woh* 'very wise and prudent', *wohel* 'be familiar with, know'; Barrera Vásquez 1980, 925). Still, scattered examples from farther west at Pomona and Palenque in Tabasco and Chiapas, Mexico, respectively, prove that *woj*'s cultural relevance extended well beyond the northern Maya lowlands (fig. 2*B*).

Proximity, Grammatical Possession, and Derivational Morphology

The three Classic Mayan terms for hieroglyphic writing evoked qualia that emphasized ontology, most notably with respect to material encounters. As scribes deployed the script across diverse media, they alternated between the three

Figure 2. *A*, *u-wojil* (**u-wo-jo-li**) on an incised ceramic vessel from Xcalumkin, Campeche, where it is preceded by *k'ahlaj* 'it is raised'; *B*, *Woj* (**wo-jo**) on Element 21 from Pomona, Tabasco, where it is preceded by the undeciphered hieroglyph T1640st. Photos by (*a*) Justin Kerr, K8017, Dumbarton Oaks, Trustees for Harvard University, Washington, DC, (*b*) the author, courtesy of the Consejo de Arqueología del INAH and the Zona Arqueológica de Pomoná.

qualisigns, each with different sensorial implications. Painted writing conveyed qualia of brushing, pigments, and stroke continuity, whereas sculpted, incised, or molded writing represented the very tactile process of shaping signs from raw material, often with reductive techniques. *Woj*, in turn, could potentially refer to any writing but carried regionally delimited connotations and was, in practice, usually used for three-dimensional writing.

The grammatical distribution of these hieroglyphic references, in contrast, signals that writing further entailed context-dependent qualia of proximity or affiliation. Possessive pronouns, the abstractivizing nominal suffix *-V(V)l*, and the passivizing suffix *-(n)aj* in particular could, in different combinations, signal qualisigns of hieroglyphic patronage, creatorship, or physical contiguity (table 2).

At the same time, these morphemes' dynamic symbolic scope, as well as shifting qualia of proximity that they represented, illustrate how Classic Maya semiotic phenomena remained subject to active negotiation through hieroglyphic composition (cf. Gal 2017; Harkness 2013). Depending on the presence of nominal or passive suffixes in possessive constructions, qualia of proximity

Table 2. Role of Possessive, Nominal, and Passive Morphology in Indicating Qualia of Proximity to Maya Hieroglyphic Writing in Its Three Main Material Qualisigns

	Morphology Present					
Material Qualisign	Possessive *u-/y-*	Abstractivizing *–V(V)l*	Passive *–(n)aj*	Abstractivizing *–V(V)l*	Form	Possessor or Subject (for passive *-naj*)
tz'ihb	+	–	–	–	*u-tz'ihb* 'his/her/its painting'	person*, text artifact
	+	+	–	–	*u-tz'ihbaal* 'its painting'	text artifact
	–	–	+	–	*tz'ihbnaj* 'is painted'	text artifact
	+	–	+	+	*u-tz'ihbnajal* 'its painting, painted-ness'	text artifact
	+	+	+	+	*u-tz'ihbaalnajal* 'its painting, painted-ness'	text artifact
"bat head"	+	–	–	–	*y-uxul?* 'his/her/its carving'	person*, text artifact (rare)
	+	+	–	–	*y-uxulil?* 'his/her/its carving'	person# (rare), text artifact
	–	–	+	–	*uxulnaj?* 'is carved'	text artifact
	+	+	+	+	*y-uxulnajal, y-uxulwajal* 'its carving, carved-ness'	text artifact
woj	+	+	–	–	*u-wojel* 'his/her/its hieroglyphs'	person#, text artifact

Note.—A morpheme's presence is indicated with a plus sign (+) and its absence with a minus sign (–). Morphological sequences are cumulative along each row reading from left to right.

* Usually creator of hieroglyphs.

May be creator of hieroglyphs or patron or owner of finished text artifact.

were attributed either to objects or to individuals, with implications for hieroglyphic access (table 2); context indicates that those said to have possessed writing directly, as a bare root without derivational morphology, were usually its creators, whereas those possessing a derived form of "writing" or an object described as "written" were more likely its patrons or owners. These expressions, each of which will be explained in turn, thus grammatically encoded human-material encounters that were mediated in practice by sociopolitical context.

Possessive Morphology

In semiotic terms, qualia of proximity were indexed through specific possessive morphology linking the "bat head" term, *woj*, or *tz'ihb* to a possessor, almost always with the third-person singular possessive pronoun *u-* (preconsonantal) or *y-* (prevocalic). Syntactically, a possessed noun directly proceeded its possessor in Classic Mayan; hence, *u-tz'ihb Tuub Ajaw* denoted the 'painting' or '(painted) writing' (*tz'ihb*) as belonging to someone bearing the title "Tuub Lord": "the painting of Tuub Lord," literally "his painting, Tuub Lord" (K1463; K5418). For the "bat head" term or *tz'ihb*, the bare nominal root was often prefixed with the appropriate possessive pronoun (i.e., *y-uxul*? or *u-tz'ihb*), making the hieroglyphs the object of direct grammatical possession. In other words, when qualia of proximity were expressed with a simple possessive prefix on the "bat head" or *tz'ihb*, without additional derivational morphology, the qualisign expressed proximity to those hieroglyphs specifically rather than to the text artifact generally. Occasionally, the possessor of the "bat head" term or *tz'ihb* in this context was its text artifact, whereby the construction expressed proximity as the qualisign of contiguity. A sculptor could highlight a monument's surface with the phrase *y-uxul*? *k'an tuun*, for example, in which the "carving" (*uxul*?) was a property of the "precious/yellow stone" (*k'an tuun*) (Boot 2009, 7–8; Houston 2016, 397; e.g., Tonina Monument 95, Graham et al. 2006, 120). By denoting physical continuity between writing and surface, such formulations emphasized a source material's transformation over its carved content, hieroglyphic or otherwise.

Much more frequently, however, the possessed "bat head" root or (less commonly) *tz'ihb* was followed by the name or title of an individual who the context indicates was responsible for the writing's creation. The expression *y-uxul*? 'his/her/its carving' followed by a personal name or title made visible artisans' (often collaborative) role in producing an inscription, especially for stone monuments (Grube 1991, 228; Stuart 1986, cited in Lacadena 2004a, 186 n. 118; see Houston 2016, 397–420). The half-dozen signatures on the upright limestone monolith Stela 6 from Piedras Negras, Peten, Guatemala, typify this usage. Like almost

all known sculptor autographs, those on Stela 6 are physically and narratively removed from the main inscription, begin with *y-uxul?*, and follow with the name of the artisan whose role in production afforded him the qualisign of creatorship (fig. 3; see Stuart and Graham 2003, 36–37).

Less frequent are parallel constructions in which possessed *u-tz'ihb* was directly followed by an individual's name or title, without intervening morphology. They are likewise characteristic of signatures in which the calligrapher, through grammatical means, self-attributed creatorship of the text at hand.[6] Thus, painted *u-tz'ihb* and three-dimensional *y-uxul?*, when affixed only with possessive pronouns, consistently marked qualia of proximity attained through creatorship, itself a qualisign that entailed direct negotiation of hieroglyphs' materiality during production.

Possessive and Derivational Morphology

In some instances, the possessed form of a "writing" term was suffixed with derivational morphology that transformed its grammatical status and, consequently, the qualia of proximity that it expressed. The morpheme added most frequently in these contexts was abstractivizing *-V(V)l*, usually *-il*, *-aal*, or other, less common variants that seem to have been lexically determined (Law and Stuart 2017, 155). When co-occurring with a possessive prefix, *-V(V)l* located the possessed in "an inalienable, part-whole relationship" with its possessor (Houston et al. 2001, 9). Significantly, constructions combining possessive and derivational morphology on "writing" terms tended to reference relations between hieroglyphs and their text artifact rather than with an actor responsible for them. Yet the nature of that proximity varied meaningfully with respect to the three "writing" terms' semantic emphases and syntactic associations (table 2).

The "writing" term that most commonly bears the suffix *-V(V)l* is *woj*; almost all known instances manifest as possessed *u-wojil*, *u-wojel*, or *u-wojool* 'his/her/its hieroglyph', where differences in suffix vocalization seem to have been dialectal rather than semantic (Law and Stuart 2017, 155; see Stuart 2016). In many instances, the grammatical possessor of abstractivized *woj* is the text artifact, as in the description on Lintel 2 from Chichen Itza's Temple of the Four Lintels of an event in which the "hieroglyphs of (the) lintel" (*u-wojil u-pakab*) were "raised" (*k'ahlaj*) (Boot 2005, 342; see Krochock 1989, fig. 5). Such phrases explicitly identify writing as a feature of its host surface and thus express the

6. Houston (2016, 393–97, fig. 13.3, table 13.1); Stuart (1989, 156); e.g., Coe and Houston (2015, pl. xviii); Lacadena (2004a, 182–83; 2004b, 52, fig. 18c–d).

Figure 3. Sculptor signature on Piedras Negras Stela 6, with the possessed "bat head" phrase on the far left, followed by the sculptor's name. Photo by the author, courtesy of the Museo Nacional de Arqueología y Etnología de Guatemala.

qualisign of contiguity. In other cases, however, the grammatical possessor of *u-woj-V(V)l* may be a person, usually an elite with direct access to inscribed artifacts (fig. 4). Indeed, *woj* is the only of the three "writing" terms that always features an abstractivizing *-V(V)l* suffix when possessed. It is also the one whose *-V(V)l* form is possessed with approximately equal frequency by a human actor or by a text artifact.

Less balanced distributions are evident for the "bat head" term. Only a minority of possessed forms feature the derivational suffix *-V(V)l*, in which case the grammatical possessor is typically the text artifact (fig. 5; *y-uxu(l)il y-otoot* 'the carving of her house', Yaxchilan Lintel 25, Graham and von Euw 1977, 56), although a few are persons (*y-uxu(l)il Bamab Bahlam* 'the carving of Bamab Bahlam', Xcalumkin Cornice 1; Graham and von Euw 1992, 193–94; see Becquelin 2019, 40). On some occasions, *-V(V)l* is suffixed to the text artifact rather than to the "bat head" term that modifies it (e.g., *y-uxul? k'an tuun**il*** 'his carved precious/yellow stone', Lausanne Stela; Miller and Martin 2004, fig. 51, pl. 107). This relatively uncommon construction, which is not attested for *woj*, renders the embellished surface a property of the inscribed text artifact. That artifact, in turn, becomes the object of possession for a human owner or patron, instead of its embellished surface being possessed directly.

Such phrases are typically positioned within an artifact's main hieroglyphic text, in contrast to the sculptor and calligrapher signatures that tend to compose detached, peripheral captions outside the larger inscription. Their placement, together with narrative context, suggests that grammatical possessors of *y-uxulil?* or *u-wojil*/*u-wojel*/*u-wojool* were not necessarily their producers. Some individuals said to have possessed *woj* or the "bat head" term were probably indeed sculptors, like Bamab Bahlam at Xcalumkin, who is ascribed *y-uxulil?* in

Figure 4. Panel 5 from Xcalumkin. The column of hieroglyphs on the right reads *k'ahlaj u-wojil Kit Pa' sajal* "(it) is raised up, the hieroglyphs of Kit Pa', *sajal*;" the seated figure to the left is presumably local noble Kit Pa' himself. Photo by Hans J. Prem, CC BY-SA 3.0 (Maya Image Archive, Text Database and Dictionary of Classic Mayan Project).

multiple inscriptions and, like others designated as "scribes" at the site, also carried the title *aj-k'in* 'priest' (Becquelin 2019, 40). But in other instances, context indicates that the possessor was likely the text's patron, owner, or overseer who assumed control of the finished product. On a hieroglyphic stairway at El Palmar, Campeche, Mexico, for example, the 'carving' (*y-uxulil?*) is ascribed to Aj Pach Waal, a local official with the diplomatic title *lakam* (Tsukamoto and Esparza Olguín 2015, fig. 12; see Tsukamoto 2020). *Woj* and the "bat head" term thus seem to have been two forms of writing that a noncreator could possess directly, at least in grammatical terms, and not just through possession of the larger text artifact.

This interpretation finds support in alternations between possessive constructions with and without the inalienable suffix *-V(V)l*. The unprovenanced

Figure 5. Passage from the dedicatory text on a molded vase describing it as *y-uxulil? y-uk'ib ixiimte'el kakaw* ("his/her molded cup for maize-tree-like cacao"). Detail of photo by Justin Kerr, K9261, Dumbarton Oaks, Trustees for Harvard University, Washington, DC.

Lausanne Stela from the mid–ninth century (Miller and Martin 2004, fig. 51, pl. 107), for instance, records a "fire-entering" event as happening *ti y-uxul? k'an tuunil* 'at/for his carved precious/yellow stone', with the stone's possessor being a local noble with the *sajal* title. Yet the stela's text goes on to record the death of that *sajal*, Bahlam Chij Uy, making him a poor candidate for the monument's sculptor or at the very least indicating that his *k'an tuun* was not the Lausanne Stela. Instead, a smaller caption inset in the central image designates the stela as *y-uxul? Uchan Te'* 'the carving of Uchan Te'. The *sajal*'s inalienable possession of another, unspecified monument is thus contrasted morphologically and spatially with creatorship of the Lausanne Stela as denoted by the scribal signature without *-V(V)l*.

Derivational morphology is most frequent on forms of *tz'ihb*, especially as recorded on painted or even incised or molded ceramics. The two most common constructions are *u-tz'ihbaal* 'its writing/painting' and *(u-)tz'ihb(aal)naj* 'is written/painted' (fig. 6; K0625; K0758; see Lacadena 2004a, 181–90). The former is an abstractivized form of *tz'ihb* analogous to *y-uxulil?* and *u-wojil/u-wojel/u-wojool*, although in contrast to those forms *u-tz'ihbaal* is rarely if ever possessed by a human actor. The latter is generally interpreted as a passive verb

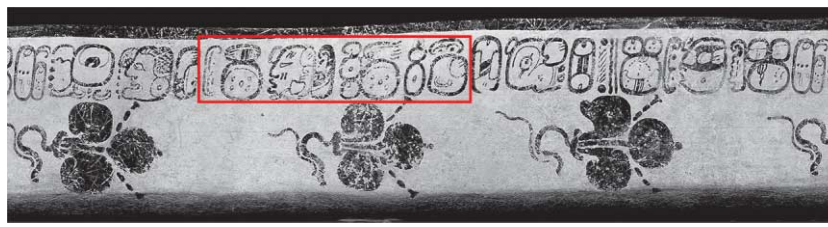

Figure 6. Ceramic bowl with a dedicatory text; the passage outlined in red describes the vessel as *u-tz'ihbnaj(al) y-uk'ib ti ul* ("his painted cup for maize gruel"). Photo by Justin Kerr, K1547, Dumbarton Oaks, Trustees for Harvard University, Washington, DC.

derived with the suffix *-naj* from either *tz'ihb* or abstractivized *tz'ihbil*/*tz'ihbaal* 'writing/painting' (Lacadena 2004a, 179–90; Law and Stuart 2017, 150). In some cases, the derived passive form is followed by (another) abstractive *-V(V)l* to derive a nominalized form that is almost always possessed, thus *u-tz'ihb(aal)naj**al*** 'his/her/its writing/painting' (Lacadena 2004a, 186–90; Law and Stuart 2017, 159). The final *-V(V)l* suffix was often written explicitly but was sometimes only implied in *u-tz'ihbnaj*; the possessive *u-* prefix suggests it is an underspelled form of *u-tz'ihbnaj**al*** that left the final syllable unwritten, following a common practice in Classic Mayan orthography (fig. 6; Lacadena 2004a, 187–88).

To my knowledge, *woj* is not attested with *-naj* or other derivational morphology besides abstractivizing *-V(V)l* (table 2). There are, however, scattered forms of the "bat head" term that describe a sculpture's transformed state in passive voice (*uxulnaj?* or *uluxnaj?* 'is carved', Uxmal Ballcourt Sculpture 2, Graham 1992, 120; K8076) or that affix a **wa** syllable of unknown sigificance to the abstractivized, possessed form (*y-uxulil?*-**wa**, K6538, K8942; cf. *u-tz'ihbaal*-**wa**, K6999). Nominalized verb forms of the "bat head" term, such as *y-uxulnajal?* 'its carving' marking a stucco bench from San José, Belize (Thompson 1939, 32, pl. 6c, e; Houston 2016, 392 n. 3), or the antipassive-based *y-uxulwajal?* 'its carving' on Altar Z at Copan, Honduras (fig. 7; Law and Stuart 2017, 159), are similarly rare.

The unusual construction *uxulaj?*, as on Step IV of the Hieroglyphic Stairway at El Palmar (Tsukamoto and Esparza Olguín 2015, fig. 11), or Panel 2 from La Corona, Peten, Guatemala (Stuart et al. 2014, fig. 5), could be a nominal

Figure 7. The phrase *y-uxulwajal*? *u-sibik-tuun-il* 'the carving of the sooty stone' on Altar Z at Copan. Photo by Karl Herbert Mayer, CC BY 4.0 (Maya Image Archive, Text Database and Dictionary of Classic Mayan Project).

'carving; sculpture' derived with an absolutive suffix *-aj* that signals quantifiable and unpossessed status (see Houston et al. 2001, 46). Yet in both cases *uxulaj?* is followed by a reference to the larger monument, for which reason it more likely represents a variant passive form 'is carved' using the *-ja* suffix usually reserved for root transitives (see Law and Stuart 2017, 149–50). Whatever their morphological interpretation, these passivized or nominalized verb forms of the "bat head" term consistently have the text artifact as their referent and thus express proximity as a qualisign of contiguity between hieroglyphs and their material basis.

Forms of *tz'ihb* and the "bat head" term featuring both possessive and derivational affixes typically have the text artifact as possessor; similar constructions are known for *woj*, too, although the artifact is less consistently its possessor (table 2). But this grammatically encoded information, which draws on a combination of syntax and morphology, has pragmatic consequences as well. By expressing qualia of proximity as they link writing to its material base, it presents hieroglyphs as the most significant feature of the artifact, which itself is often described as an object of human possession. Future research is needed to untangle whether pragmatic, dialectal, or idiosyncratic factors underlie alternations between *u-tz'ihbaal*, *(u-)tz'ihbnaj*, and *u-tz'ihb(aal)naj(al)* in the dedicatory sequences on Classic Maya artifacts, as well as between different verbal and nominalized forms of the "bat head" term to describe an object embellished with writing. Regardless of their variable morphology, however, forms combining derivational and possessive affixes describe the vessel's surface as "painted," "written," or "sculpted" and link it to other tokens characterized as *tz'ihb* or "bat head" hieroglyphs. They thus denote the graphic embellishment as a valuable component of and inseparable from the artifact hosting it.

Proximity, Materiality, and Experience of Classic Maya Hieroglyphic Writing

Epigraphic, linguistic, and iconographic evidence points to two spheres of qualia that were fundamental to Classic Maya semiotics of hieroglyphic writing and to the diverse qualisigns through which they were interpreted. Qualia of materiality were implicated in semantic distinctions between two fundamentally different modes of writing: two-dimensional brushed or penned (*tz'ihb*) versus three-dimensional carved, molded, or sculpted (*uxul*?). *Woj* could refer to either type, although in practice it was more commonly applied to the latter. Qualia of proximity, in turn, posited creatorship or sponsorship as the principal avenues for human engagement with hieroglyphs. Alternatively, with the text artifact as possessor, they highlighted the relationship to material host as significant to

writing's social presence. Table 3 summarizes the distribution of qualia of materiality and proximity among their hieroglyphic qualisigns, showcasing the overlapping yet distinct semiotic spheres that they represented.

Morphology, syntax, and pragmatics were essential for denoting qualia of proximity as they applied to distinct material forms of writing. Direct possession of *tz'ihb* or the "bat head" term, without derivative morphology, denoted creative responsibility and thus a type of proximity that appears to have been more socially restricted. Less commonly, the "bat head" term and *woj*, but apparently not *tz'ihb*, could stand as self-contained artifacts grammatically possessed by a probable noncreator and patron, in which case they usually bore the suffix *-V(V)l*. Interestingly, whereas scribal signatures with a directly possessed "bat head" term and without *-V(V)l* are better attested in the southern Maya lowlands (cf. Houston 2016), sponsorship statements seem to have been more common on carved monuments in the northern Yucatan peninsula, alluding to regional preferences for what hieroglyph-human relations were recorded in stone.

The third possibility for qualia of proximity was to designate physical contiguity between a text artifact and its writing. Many objects were described as "painted" or "written" using derived forms of *tz'ihb* and were, in turn, possessed by or other otherwise accessible to patrons or owners, not only to the artisans who made them (e.g., K6294; "Señor del Peten" Vessel in Tsukamoto 2020, fig. 15.2; see Boot 2009, 7–8). The "bat head" root and *woj* could likewise

Table 3. Morphological, Semantic, and Pragmatic Intersections between Qualisigns of Classic Maya Hieroglyphic Writing That Express Qualia of Proximity and Materiality

		Qualia of Proximity		
	Qualisigns	Creatorship (glyphs – artisan)	Patronage/ Ownership (glyphs – user)	Contiguity (glyphs – text artifact)
Qualia of materiality	*tz'ihb*	*u-tz'ihb*	(n/a ?)	*u-tz'ihb* (rare), *u-tz'ihbaal*, *tz'ihbnaj*, *u-tz'ihb(aal)najal*
	"bat head" term (*uxul?*)	*y-uxul?*	*y-uxulil?*	*y-uxul?* (rare), *y-uxulil?*, *uxulnaj?*, *y-uxulnajal?*, *y-uxulwajal?*
	woj	(n/a ?)	*u-wojel/u-wojool/ u-wojil*	*u-wojel/u-wojool/ u-wojil*

Note.—N/A followed by a question mark (?) indicates that that usage is not consistently or clearly attested on the basis of current epigraphic evidence.

designate the embellished surface as a feature of the larger artifact in a possessive construction with the suffix *-V(V)l*, or on some occasions with more complex (anti-)passivizing morphology (e.g., K8017; Xcalumkin Lintel 1; Graham and von Euw 1992, 158; see Boot 2009, 7–8). By positioning the text artifact as the grammatical possessor, these qualisigns of physical contiguity expressed writing's intimate tie to its material host.

Beyond their immediate semiotic analysis, the qualia and qualisigns posited here have consequences for understanding the hieroglyphs' role in Classic Maya society, including who could access writing and how. In the following discussion, I synthesize three interlocking Classic Maya conceptions of their writing system that are entailed in qualia of materiality and proximity and that guided production and use of the hieroglyphs. I also explore the consequences of a *quali*-semiotic analysis for understanding the (largely elite) contexts in which interactions with writing would have played out, where other qualisigns of proximity and materiality firmly tethered hieroglyphs to the social relations among those who engaged them.

Materiality and Ontology

First, writing's ontological status was conceptually rooted in its materiality, particularly in qualia of texture, volume, and malleability. That materiality, in turn, was intimately bound up with the methods and tools of hieroglyphic production. Maya hieroglyphs were more than flat, static images; they evoked qualia of corporeality and animacy that extended beyond mere graphic form. Rare images of monumental carving in action, as on the Emiliano Zapata panel (Stuart 1990a, fig. 1), represent the working surface as animate and thus intimate that coaxing hieroglyphs from stone, stucco, clay, or even paint "creates a surface that resembles the original and yet transfers a vital charge, a living spark, of that original" (Houston et al. 2006, 74; see Stuart 2010). The script's vitality was tied not only to scribal production, but also to the materials from which writing emerged. The creative process thus became an engagement with signs and their essence, not ex nihilo production from inert materials (Houston 2021).

Lexical data from colonial Yucatec suggest that *woj* was the semantically least specific "writing" term and, in contrast to the other two, was not associated with a particular material. This generalization remains tentative, however, as *woj* is only attested in a limited area of the Maya lowlands and in far fewer texts. As a result, material distinctions among manifestations of writing are most apparent in terminology for hieroglyphs that were painted versus carved, molded, or

incised. One could not speak of *tz'ihb* without evoking its brushed form, nor would a Classic Maya reader immediately have envisioned a painted codex when encountering the "bat-head" term. The dimensionality, medium, and creative origins of hieroglyphic forms—not their final appearance or the tools used to make them—were thus conventionalized in distinct lexical roots. Token hieroglyphs embodied qualisigns such as painting or carving and thus evoked different material qualia for readers. As significant as hieroglyphs were in lending meaning to an inscribed surface, they could not exist independent of their material manifestation.

Participation and Patronage

Second, qualia of hieroglyphic proximity could be achieved either directly through scribal participation or indirectly through physical reception of a finished text. Although both scenarios were socially significant, grammatical differences in identifying the possessor as scribe or as sponsor suggest a conceptual distinction between the roles. Possession of "writing" specifically or its text artifact generally was distributed in ways reflecting the nature of the text and its host object. Direct possession of the "bat head" root or *tz'ihb* indicated a creative link to writing. Possession of *woj* or the "bat head" derived with abstractivizing *-V(V)l*, in contrast, emphasized the grammatical possessor's status as intended recipient or benefactor of writing. The latter configuration additionally referred via synecdoche to the larger inscribed object, which could not be physically separated from its surface embellishment. Hieroglyphs and iconography were thus grammatically possessed as defining features of their host artifacts (e.g., Ceibal Panel 1, Graham 1996, 53–55; Coe 1978, 70–74, 124–27; cf. Kovacevich 2017), perhaps the very features that made the artifacts so desirable. Usefully, the patronage or noncreator implications of the suffix *-V(V)l* therefore provide some clarity on constructions in which an actor's relationship to writing remains narratively ambiguous (cf. Houston 2018, 125, fig. 62).

Importantly, distribution of abstractivizing *-V(V)l* alludes to the inalienability attributed to a patron or sponsor's, but not a creator's, relationship with hieroglyphic writing. The grammatical status of possessor-as-producer remained absolute, reflecting the "inalienable labor" that a creator invested into the text artifact and that shaped the artifact's identity for its entire use-life (Damon, in Feil et al. 1982, 342), even when that labor was not memorialized in a signature. For that same reason, however, a creator's relationship to hieroglyphic writing was delimited to a particular stage of writing's existence and therefore both alienable and semantically unmarked. A patron's relationship to writing,

in contrast, was a salient, self-differentiating component of the patron's social identity and thus inalienable (Weiner 1992; Kockelman 2009; Kovacevich 2017). Consequently, a patron could transfer that relationship and thus generate heritable authority through exclusive control of hieroglyphic access in a social process that Annette Weiner (1992, 40) describes as the "authentication of difference." Moreover, a text artifact's reception in sponsorship marked its introduction into circulation more broadly as a key episode in the "drama of identities" defining its sociopolitical valuation (Kopytoff 1986, 89).

Proximity and Privilege

Finally, hieroglyphic qualia of proximity were intimately tied to erudition and especially to elite learning. Classic Maya writing was above all a mode of producing and transmitting knowledge—knowledge that was as politically and socially potent as it was culturally salient. Texts and their contents were primarily the purview of male literati from the upper ranks of society, a situation that reified elite dominance of knowledge production (see Inomata 2001, 331–32). The privilege attached to qualia of hieroglyphic materiality and proximity is visible archaeologically in the elite spaces and valuable goods, including rare pigments and jade ornaments, to which Classic Maya scribes had access based on a handful of excavated scribal burials or workshops (Webster 1989; Fash 1991, 120, 135–36, 161–62; Inomata 2001). The most skilled scribes would have been highly learned, with detailed knowledge of calendrics, mathematics, history, and religion and the capacity for independent text production, not just rote copying (Reents-Budet 1994, 50–67; cf. Landa [1566] 1941, 27). Facility with the script was thus intimately associated with knowledge and wisdom, as expressed in colonial Yucatec forms of *woh* that referenced both the state of knowing and the people who are especially wise (see Barrera Vásquez 1980, 925). Similarly, Tzotzil *tz'ib 'olonton* (lit. 'letter heart' or 'letter mind') refers to someone 'clever, cunning, judicious, wise,' whereas *tz'ib 'olontonil* denotes a "wise man who discovers new inventions in books" (Laughlin 1988, 154, 180–81). Echoes of this sentiment are also expressed in colonial Kaqchikel accounts of 'writings' (*tz'ibanïk*) as one of the original 'burdens' (*riqa'n*) that the ancestors brought from their place of origin (Maxwell and Hill 2006, pt. 2, 15–16). Inherited knowledge, refined over generations of intellectual practice, not only granted facility in using hieroglyphs; it also awarded the privilege of understanding culturally conditioned, qualitative experiences that hieroglyphs expressed.

The present discussion has focused on lexical, pragmatic, and grammatical evidence for Classic Maya qualia of hieroglyphic proximity. But these qualia also

encompassed social contexts of writing, including control of access and content. Indeed, the phenomenon of access most clearly illustrates how qualia of proximity and materiality semiotically wove hieroglyphic writing into elite society, and how the relevant qualisigns were even visible to those trained to interpret them. Classic Maya inscriptions record a phrase *y-ichnal* or *y-ichVnal* that, according to Stephen Houston and colleagues (2006, 173), denoted not a neutral visual field, but "a notarial presence" that "made actions more concrete through shared experience and participation" and legitimized those actions through authoritative vision (see Hanks 1990, 91–92; Stuart 1997, 10). Because *y-ichnal* was always ascribed to the individual with superior social standing, usually a local ruler (Houston et al. 2006, 174), it connoted the privilege of others present to share that persons' exclusive space.

The qualitative experience of hieroglyphic proximity would have been conditioned by a text's viewing context and scale, of course; unlike a king's body, whose size remained more or less constant no matter where it was displayed, writing could and did vary widely in size, from almost microscopically small signs to monumental texts that could only be full comprehended at a distance (see Houston 2011, 24–26). At the same time, lexical evidence emphasizing sight as the primary mode of encountering written contents assumes physically immediate access to texts within a legible distance. In many Mayan languages, reading is inherently about "seeing" (e.g., Cholti' *ilhun* 'read,' lit. 'see paper' < *ylla* 'see'; Morán 1695, 135; Ch'orti' *iron aut* 'read' < *ir* 'see, look attention'; Wisdom 1950, 89–90; Tzotzil *'il Hun* 'read,' lit. 'see paper' < *'il* 'see'; Laughlin 1988, 147, 442), whereby "seeing instrument" could be a synonym for "book" (e.g., colonial K'iche' *ilb'al* in Christenson 2003, lines 8286–87; cf. Monaghan and Hamann 1998). Just as shared visual engagement defined access to the king's royal person, visual processing was integral to textual interpretation and transmission and necessitated direct, embodied access to hieroglyphic writing.

Conclusion

Semantically and even semiotically, Classic Maya conceptions of the hieroglyphic script emphasized readers' and writers' tactile encounters with writing, as opposed to listeners' auditory reception of a text being read aloud. At the same time, the socially conditioned qualia of materiality and proximity implied in hieroglyphic terminology distinguished visual engagement with writing physically, materially, and ontologically from tactile engagement through practice. Scribes' creative activities, combined with value intrinsic to the materials that they worked, infused prestige into inscribed objects that circulated among

elites, often as gifts or tribute.[7] Their prized productions were not only repositories of knowledge; they were also qualisigns of proximity to hieroglyphs, which was a privilege largely reserved for those with access to other forms of elite power and authority as well (cf. Kopytoff 1986; Kovacevich 2017).

Despite its antiquity, the Classic Maya hieroglyphic case also has methodological and theoretical consequences for contemporary *quali*-semiotics. How do we reconstruct qualitative experiences if the communities who experienced and signified them remain out of ethnographic reach? In the Classic Maya case we have the benefit of a (mostly) deciphered corpus of written texts, however terse and monothematic some may be. But even when we do not have historical documentation, we have archaeological context. Those qualia that leave behind visible traces—materiality, proximity and others like color, texture, visibility, taste, heat—offer a window into a world of sensorial experiences that archaeologists and historians are already exploring (see Howes 2003, 2019; Hamilakis 2014). Even in the absence of epigraphic data, we can use artifact associations and spatiotemporal relationships, in concert with knowledge of sociohistorical context, to posit informed hypotheses about qualitative experiences in the past based on the "thoroughly socialized thing[s]" or artifacts in which such experiences were expressed (Appadurai 1986, 6; cf. Gal 2017). By looking at chronological trends, perhaps we can even posit how qualities and culturally conditioned experiences thereof became "enregistered" (Silverstein 2003) and subsequently "recruited" into the "semiotic process of differentiation" that made them so socially salient (Gal 2017, S132).

Significantly, too, the Classic Maya qualisigns presented here, particularly those concerning qualia of proximity, are composite phenomena, and not simply because they express multiple qualia at once (see Chumley and Harkness 2013). They express qualia through complex morphology whose presence, along with syntactic and pragmatic context, conditions each qualisign's expressive capacity. At the same time, the possessive and derivational morphemes are themselves neither qualisigns nor sinsigns; that is the role of the hieroglyphs and text artifacts. The morphemes also fall short of the status of qualitative icons, indices, or symbols because they do not relate to the sensorial experiences in question through resemblance, causality, or convention (see Keane 2003, 415–19). They are linguistic markers whose qualitative implications only become culturally relevant with certain lexemes, in certain syntactic and pragmatic contexts, in certain material forms.

7. Helmke and Reents-Budet (2008); Just (2012); Tokovinine and Beliaev (2013); Houston (2017).

Morphology has implicitly played a role in prior *quali*-semiotic analysis, with qualia generally labeled with adjectives or their derivative nouns (e.g., Munn 1986; Harkness 2013; Chumley 2017).[8] Yet its role in marking qualia and their qualisigns remains underacknowledged. Are there cross-linguistic tendencies in how qualitative experiences are expressed and negotiated? What does the variation evident even in this single Classic Maya case suggest about the relationship between language and sensorial culture? Future research offers the opportunity to push beyond a lexically oriented approach to *quali*-semiotics into the role of linguistic structure in articulating qualitative phenomena and cultural context.

By underscoring the primacy of the creative process, Classic Maya qualia of materiality and proximity situated hieroglyphic writing within "proprioceptive experiences of body-focal practice" (Harkness 2015, 581). Each written artifact embodied a qualisign of materiality that implicated specific materials, tools, and practices in its creation and a particular relation between sign and inscribed surface in its existence. Once that artifact had been created, it assumed the status of a qualisign of proximity by circulating among social figures whose experience of writing was shaped by the nature and degree of contact with written signs and their semantic contents (cf. Kopytoff 1986; Kovacevich 2017). Ultimately, these semiotic processes positioned hieroglyphs at the nexus of material form, corporeal experience, and social encounter in elite Classic Maya society to define one's relationship not only to writing, but also to the cultural knowledge entailed therein.

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8. Many thanks to Asif Agha for pointing out this connection to me.

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