

Mesoamerican Literacies: Indigenous Writing Systems and Contemporary Possibilities

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ABSTRACT

This article presents the argument that consideration of non-European and nonalphabetic writing makes possible new understandings of literacy and, in addition, contemporary literacy forms and practices can be fully understood only by expanding our historical perspective. The field of literacy research remains largely unaware of the multimodal literacies developed and employed by Mesoamerican indigenous peoples. Instead, contemporary understandings of written language are built upon an ideological foundation that privileges writing traditions first developed in Africa and Asia. Responding to theorists' calls for literacy researchers to integrate historical understandings with their research designs, the authors examine the relevant primary and secondary sources on Mesoamerican literacies as represented in indigenous and colonial documents. In this historical inquiry, the authors first present applicable theoretical and methodological considerations for connecting past and contemporary literacies. They then identify the ideological and philosophical bases of the Mesoamerican literacy systems and discuss what is known about how they functioned, before attempting to reconstruct some pre-Columbian literacy practices. Finally, they examine selected contemporary Mexican uses of written language as examples of continuity with past practices. The authors' interpretation of this body of work is grounded in their disciplinary backgrounds, knowledge of the literature, and theoretical orientations, leading to an informed and evidence-based perspective.

We are heirs to a body of thinking, a set of legacies about literacy and its imputedly vast import. A source of anxiety and confusion in a changing world, this is also a historical outcome that can only be understood in historical terms.

—Harvey J. Graff, *Literacy and Social Development in the West: A Reader*

In this article, we describe and consider Mesoamerican literacies, particularly those developed and employed by Mixtec-, Zapotec-, Nahuatl-, and Maya-speaking groups. By comparing and contrasting ancient and pre-Columbian Mesoamerican literacy systems with more contemporary forms of literacy—forms that are so prevalent, they are largely taken for granted—our hope is to

move toward a deeper understanding of literacy in general. Scholars from many different fields have examined the writing systems produced by Mesoamerican peoples. As such, our presentation of these issues is inherently interdisciplinary, drawing from the fields of epigraphy, history, linguistics, anthropology, and archaeology, among others. Our interpretation of this body of work is grounded in our disciplinary backgrounds, our knowledge of the literature, and our theoretical orientations. We take what we feel is an informed and evidence-based perspective; however, we do expect and invite alternative views.

We are interested in Mesoamerican literacies because contemporary outlooks concerning written language are built almost entirely upon understandings of the two writing systems developed in Africa (Egypt–Sumeria) and Asia (China), respectively (Fischer, 2001). Recognizing the gap in the field's understanding and knowledge of pre-Columbian Mesoamerican literacies, we provide lit-

eracy researchers and educators with an introduction to this third great writing tradition.

We begin with a discussion of the theoretical motivations, including social practices and literacy practices theory, that guided our work. Methodologically, we use what is known about Mesoamerican literacies—from current scholarship and the primary accounts of 16th-century indigenous individuals and European observers—to construct a portrait of the relationships between these literacies and their respective societies. Whenever possible, we consult surviving primary textual artifacts, both pre-Columbian and those produced during the colonial period, 1521–1820.

We then present our findings, which include descriptions of the ideological basis for Mesoamerican writing systems, their distinctive natures, and how the metaphor of flower and song guided the production and interpretation of Mesoamerican texts from the high plateau of central Mexico. We also examine how the mechanics and underlying designs of these systems functioned as semiotic vehicles for the systems' users. Grounded in our understanding of primary and colonial-era documents, as well as the work of contemporary scholars, we flesh out a preliminary portrait of literacy practices as enacted prior to contact with Europeans. Central to our argument is the contested nature of Mesoamerican writing systems. More often than not, the claim that these systems constitute written language has been rejected. We address this issue and argue instead for expanded understandings of literacy that include forms of writing that are not exclusively speech based. In addition, we present examples of contemporary Mexican literacy practices that exemplify what we have interpreted as continuities with origins in Mesoamerican literacy traditions. We end with a discussion of the limitations of our work and the potential for further research.

Theoretical Framework

We situate our work in social practices theory, which embeds literacy learning in economic, political, historical, and discursive contexts and explicitly recognizes power relations encoded in and by forms of written language (Chouliaraki & Fairclough, 1999; Collins & Blott, 2003; Street, 1984). To date, work within this theoretical paradigm has focused mainly on the literacies of English-speaking contexts (Ivanič, 2004). We view our work as part of a larger and growing effort within this theoretical paradigm to understand Latin American literacies (Hernández Zamora, 2004; Jiménez, Smith, & Martínez-León, 2003; Kalman, 2001, 2003, 2005; Zavala, Niño-Murcia, & Ames, 2004). In addition, little attention has been paid to the importance of historical antecedents to contemporary practices. By calling attention to

Mesoamerican literacies, we address issues of language, geography, and time that have not been given sufficient consideration by literacy scholars. To do this, we move beyond the English-speaking world of written language to examine one of the world's great writing traditions rooted in Mesoamerica, and we think theoretically about why historical influences matter for the field of literacy today.

Like Bourdieu (1991, 1994/1998) and others, we understand literacy—or rather, literacy practices—as playing a role in structuring society and, in turn, being shaped by that society. Barton (1994) claimed that “*literacy* [is] a set of social practices associated with particular symbol systems and their related technologies. To be literate is to be active; it is to be confident within these practices” (p. 32). In addition, Barton (1994) called for an ecological approach to the study of literacy, an approach that depends upon documentation of “the ways in which *literacy* is *historically situated*” and “an understanding of the ideology, culture and traditions on which current practices are based” (Barton & Hamilton, 2000, p. 13). Indeed, some scholars have argued that the “messages of the old system” can be discerned in the “bruises and shape of the new forms” (Lo Bianco, 2000, p. 103). Moreover, as Johns (1998) pointed out, historical and cross-cultural work makes possible the consideration of alternative arrangements, of other ways of thinking about and organizing reality.

Methodological Considerations

The method that we used in this study of consulting primary sources and colonial and contemporary scholarly accounts of Mesoamerican writing was motivated by our observations of literacy forms and practices in the schools of San Andrés Cholula in the central Mexican state of Puebla and our ongoing research in the households and public spaces of that community (Jiménez et al., 2003; Smith, Murillo, & Jiménez, in press). Noted for its indigenous history and the persistence of Mesoamerican traditions, the central region of Mexico differs from other regions where individuals self-identify as nonindigenous (Farr, 2006). Elsewhere, we have described some of this region's literacy forms and practices that we believe are novel and that, perhaps, would be surprising to educators who work with Mexican-migrant and Mexican-origin students in the United States (Jiménez et al., 2003). Some of the ways that literacy is used in San Andrés Cholula and surrounding towns cannot be fully explained, we think, by the Mexican government's current or recent curriculum or its adult literacy policies or by the influences of colonial Spanish and European literacy forms and practices.

We draw on works by archeologists and anthropologists that have demonstrated *continuidades* (continu-

ities), contemporary Mexican cultural practices with pre-Hispanic origins (Salomón, 2004). Graff (1987) argued that “concepts of continuity involve comparisons over time” and that we “need to determine the relationship between elements of change and continuity simultaneously operating in any historical moment or situation” (p. 28). Recognized by literacy historians, this notion of continuity is typically uncontroversial with respect to European traditions. Indeed, within these traditions, the influence of ancient literacy forms and practices on contemporary literacies is generally taken for granted. For example, Fischer (1999, 2001) described how the letters *m* and *n* both derive from ancient Egyptian forms and yet very clearly continue to be an important component of written language for speakers of many contemporary languages. He also identified the practice of printing college diplomas on parchment and points to its medieval origins. For some, a diploma printed on paper diminishes its meaning. These examples of contemporary practices with clear connections to the past serve to illustrate that history matters; that past influences bring with them semiotic content; and that, at least for writing systems in the European traditions, the influence of past forms on contemporary practice is generally recognized and undisputed.

Graff’s (1987) notion of continuity and change has not previously been used to theorize Mesoamerican literacies. One example of such continuities in contemporary Mexico is the *graniceros* (weather readers) whose instructions on how to predict the weather were recorded by Nahuatl-speaking people in mantic (divinatory) texts that took the form of screen-fold books (codexes). Rather than turning pages, the reader of a codex unfolded a lengthy piece of *amatl* (paper) or deerskin that had been doubled in accordion-like pleats. The *graniceros*’ ability to read and predict the rapidly changing microclimates around the volcanoes and mountains is still highly valued by local farmers; however, these instructions are now transmitted orally from generation to generation in some central Mexican communities (Glockner 2001; Rockwell, 2001). Kalman’s (1999) claim that the contemporary scribes practicing in Mexico City have inherited traditions and functions developed by the official scribes of the Aztecs is a second example of continuity. Many *tlacuilos* (scribes) quickly developed alphabetic literacy in Spanish and Latin after the conquest (1521), and they used these forms to argue on behalf of themselves and their clients. Kalman (1999) described the historical development of a guild-like group of professional writers and scribes, tracing their movement to the present-day group in the Plaza de Santo Domingo in Mexico City. The writing done by these contemporary scribes consists mainly of preparing government forms and legal documents for clients who are less literate. But there are also highly literate clients who defer

to the scribes’ greater knowledge of how to obtain important documents such as passports and other clients, with varying degrees of print literacy, who dictate to the scribes. Kalman found that some clients instructed the scribes to write only what was dictated but that others engaged with the scribes to produce collaborative texts. It is this writer–client–text relationship and the (re)production of specific genres of text for economic and legal purposes that we see as an example of continuity.

In considering the possible continuation of ancient forms and practices in contemporary Mexico, we have tried to avoid what Houston (2004) termed the “synoptic fallacy,” the notion that properties of the script in one period can explain its properties in another and that the script can be seen in a condensed fashion, all periods of use conflated together” (p. 299). Similarly, we have tried to be mindful of our formation as readers and writers in the Western tradition and of the difficulties posed by interpreting pre-Columbian texts with “modern” notions of seeing or European-derived literacy practices (Hamann, 2004).

Mesoamerican Writing Systems: An Introduction

Guiding Ideologies

Perhaps most important to a discussion of Mesoamerican literacies is the recognition that these systems reflected the perspectives, needs, and ideologies of those who implemented them. Ideologies are particularly significant because these are the ways in which existing inequities are explained and legitimized. Typically, ideologies are hidden or go unrecognized by those whom they most affect; however, careful examination of literacy practices aids in their identification. In addition to supporting and facilitating economic arrangements, Mesoamerican literacies were grounded in and thus reflected the histories of the region’s many peoples. Central to this discussion of ideology and Mesoamerican literacies is the view that the technology of writing serves as the dividing line between history and prehistory. This position is reflected in Mayan specialists Stuart and Houston’s (1989) claim that “prehistory is the study of peoples without writing, whereas history is the study of people who possess written texts” (p. 82). This argument has been widely debunked with regard to European literacies, and in the case of Mesoamerican literacies, it is unnecessarily limiting—after all, such a definition of history places many contemporary indigenous peoples whose cultural repertoires do not include written language (or forms recognized as such) in the strange position of being undeniably alive and present in the world but with no history.

In the case of Mesoamerica, the power of this claim about the relationship between history and writing is evi-

dent in the dismissive representations of the region's history and in the profound effects that these pejorative views have had on interpretations of Mesoamerican literacies. Despite shared traditions and intergroup contact, there is no reason to believe that Mesoamerican writing systems were any less varied or diverse than their Asian and African counterparts (Mann, 2006). At the time of the Europeans' arrival during the 16th century, the writing systems used in Mesoamerica drew from the traditions of the Olmecs (2000–400 B.C.E.), the oldest identifiable Mesoamerican culture, often associated with the colossal head sculptures found along the Gulf Coast of Mexico in the Mexican states of Tabasco and Veracruz. Other, but by no means the only cultures that developed writing systems in the region included the Zapotecs (500 B.C.E.–900 C.E.), who built the imposing structures of Monte Albán, located in the present-day state of Oaxaca, and created one of the first phonetic representations of language in the Americas, and the Teotihuacanos (100 B.C.E.–900 C.E.), who constructed the magnificent Pyramids of the Sun and Moon near modern-day Mexico City and whose culture and civilization were consciously adopted by later Nahuatl-speaking groups such as the Aztecs.

Written language and its associated practices were by no means invariant across these Mesoamerican groups and time periods. The Nahua, a northern group of Nahuatl speakers that dominated Mexico's central plateaus (1200–1521) were known for their cartographic histories, annals, and tribute lists; the Maya (1800 B.C.E. to the present) were concerned with time and its passage; and the Mixtecs (900–1521) and Zapotecs were interested in genealogy and the lineage of ruling elites (dates here represent the apogee of each group). Although we will elaborate later on the nature of the writing systems and forms of literacy that these groups developed, we note them here simply to give a sense of the wide range of uses to which Mesoamerican literacies were put. Recently, what is now being referred to as the oldest Mesoamerican text was discovered in Tabasco. As yet, the text is undeciphered, but its existence and basic features provide evidence for the foundations of later writing systems (Wilford, 2006). There is evidence, however, that these cultures had extensive contact with one another and that at least some of these contacts had scientific and cultural goals as their purpose (Mann, 2006). For example, the murals at Xochicalco in the Mexican state of Morelos depict a gathering of seventh-century astronomers from different regions in central Mexico (Diehl & Berlo, 1989). León-Portilla (1996) also described a 16th-century meeting of philosophers and poets in Huejotzingo, a city-state neighboring Cholula and located in the state of Puebla. In addition, the Maya developed a system of syllabic-ideographic writing that was likely familiar to other groups throughout the region. This system, however, was not adopted by these other groups,

suggesting that they did not consider it superior to more pictographic systems.

Debates over the definition of writing notwithstanding, scholars generally agree that at least the elite members of all these groups were literate; that the groups' literacy systems were influenced by one another; and that the groups, perhaps, drew from a common ideological source established before any of the above-named cultures (Boone & Mignolo, 1994; Cifuentes, 1998; Fischer, 2001; López Austin, 2001).

Thus, when European invaders arrived in Mesoamerica, they clashed with groups that exhibited differences in culture, language, and forms of written language. This variegated linguistic, cultural, and ethnic blend, however, was rooted in a web of commonalities shared by the region's many groups. López Austin (2001) called this web the "núcleo duro"—the solid core of ideology that he argued predates all known civilizations. Bonfil Batalla (1987/1996) claimed that indigenous civilization, along with its distinctive traits and ways of thinking, was established between approximately 2000 B.C.E. and 1500 B.C.E., while López Austin (2001) argued for a date closer to 2500 B.C.E. Mesoamerican hieroglyphic writing has been dated back to around 500 B.C.E., with semasiographic or pictographic representations appearing much earlier (Cifuentes, 1998; Coe, 1999). All these dates, however, are continuously being revised as new texts are uncovered (Bakalar, 2006; Wilford, 2006).

Distinctive Nature of Mesoamerican Writing Systems

León-Portilla (1961/1995) pointed out that Mesoamerican writing systems are unique and possibly the only systems of writing created anywhere in the world that do not owe their existence to the concept of writing developed even earlier by the ancient Egyptians and Sumerians. Fischer (1999), on the other hand, proposed that influences from abroad, specifically from China, may have initiated Mesoamerican writing, although there is little evidence—other than similarities like directionality, logographic representation, and the syllabic nature of the Mayan and Chinese writing systems—to support this position. Either way, Fischer's (1999) claim that "only three main script traditions have effectively guided the course of written language" (p. 89)—namely, the traditions of Egypt and Sumer, China, and Mesoamerica—is reason enough to warrant deeper examination of these forms of literacy. We would further add that knowledge of this region's ancient writing systems is potentially of value in the self-determination of Mesoamerican indigenous groups who remain marginalized economically, socially, politically, and legally, de-

spite government rhetoric and advances in the scholarly interpretation of ancient texts (Jansen, 1985).

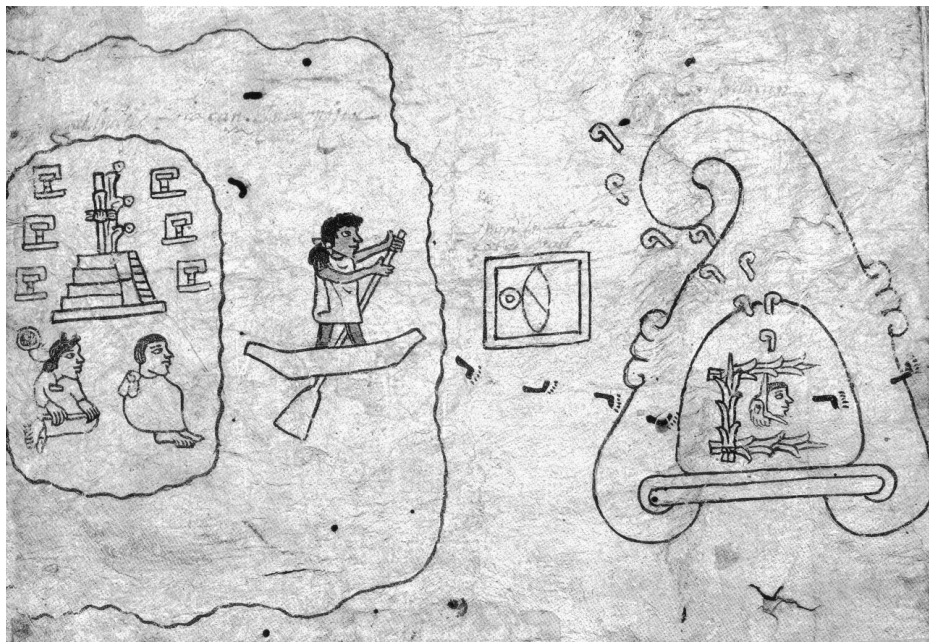
López Austin (2001) theorized that a shared *cosmovisión* (worldview) provided an important driving force for Mesoamerican cultural unity. Mesoamerican literacies served to connect these early state societies within a highly diverse ethnic and linguistically complex landscape. Like all texts, texts in Mesoamerica—a region with between 150 and 200 spoken languages (Cifuentes, 1998)—served as conduits for disseminating information and ideologies. They were devoted to legitimizing political power, to ensuring the domination of one group over another, and to establishing the significance and importance of geography and history to certain groups that were present in specific locales (Marcus, 1992). For example, one of the genres developed by Mesoamerican peoples was the cartographic history (see Boone, 2000, for multiple examples). By connecting geography with key historical events such as the migration of a particular group, this genre imbued places with ideological importance.

Figure 1 shows a fragment from a cartographic history known to scholars as the *Codex Boturini*, which is commonly referred to as the “Tira de la Peregrinación.” This codex was painted on *amatl* (paper created, in this case, from the bark of fig trees) by a Mexica (Aztec) scribe in the period just prior to or just after the Spanish inva-

sion (León-Portilla, 1996). The story told within the “Tira de la Peregrinación” is powerful because it portrays the movement of the Mexica from their mythical homeland, Aztlán, to their new capital, Tenochtitlán (Mexico City). Each retelling or performance of the story would have associated these places with sacred as well as cultural significance. Similar to the way that the movements of the biblical characters of Mary and Joseph are enacted in modern day dramatizations of the *posadas* in contemporary Mexico, the Mexica immortalized their origins and the associated geographic sites in this text.

The cartographic histories of the Nahuatl recorded their desire to commemorate how their ancestors took possession of specific places. According to Pohl (1994), these migration stories “were the records that supported the political structure” (p. 147). Leibsohn (1994) further claimed “that in representing geography and history as codependent, these images set out the parameters of an ideological position” (p. 175). In sum, these ancient written texts were created and used to legitimize the presence and right of different groups to the territory they occupied. Thus, these texts should not be confused with unbiased factual accounts but rather should be seen as visions of how the authors wanted to position their ethnic group vis-à-vis others within a shifting historical and multiethnic landscape.

Figure 1. A Fragment From the *Codex Boturini*, a Cartographic History Also Known as the “Tira de la Peregrinación”



CONACULTA.-INAH.-SINAFO.-MEX. Reproducción Autorizada por el Instituto Nacional de Antropología e Historia.

Perhaps the most common example of this connection between geography and history is the icon of the Aztec's migration story that appears in the center of the Mexican flag. Consisting of an eagle perched on a cactus and clutching a rattlesnake in its talons, this symbol was resurrected during the course of the Mexican Revolution to assist in the creation of a national identity and is now considered synonymous with the Mexican state (Coronado, 2003). The emblem, which is seen daily by most Mexican citizens, is taken directly from at least two pictographic texts or codexes (*Codex Mendoza* and *Codex Aubin*), and nearly every Mexican child today can tell the story associated with it. Figure 2 depicts a contemporary version of this story, produced by teachers as part of a national independence celebration at an elementary school in San Andrés Cholula, Puebla, Mexico.

While all cultures collectively share stories and images, the images discussed here were originally conceived as components of pictographic Mesoamerican writing. The cactus upon which the eagle is perched sits atop the glyph for stone and communicates to viewers/readers that this place is Tenochtitlán, which means *nopal* (cactus) on stone (Boone, 2000). The poisonous serpent reminds viewers/readers of the inhospitability of the space assigned to the wandering Aztecs by neighboring tribes. It also recounts the valor of the Aztecs who, instead of succumbing to the snakes' power, converted them into a food source. The eagle clutching the serpent serves to confirm the prophetic directive of the Aztecs' patron deity, Huitzilopochtli, who ordained that their future city should be built on the site where the eagle clutched the serpent in its beak, a location that turned out to be in the middle of Lake Texcoco. This semiosis continues to proclaim the centrality and power of Mexico City and its inhabitants over the rest of the nation. Other symbols and icons, like that of the eagle clutching a serpent, can be found in various places and formats throughout Mexico, such as publicly displayed murals, the images used to mark stops on the metro system in Mexico City, and on the currency used throughout the nation. Such examples continue to connect Mesoamerican ideology and literacy with contemporary life in Mexico.

Flower and Song as Metaphor for Writing

Mesoamerican values can also be detected within many Nahua and Mixtec texts. For example, while the Aztec state was known for its exaltation of the cult of the warrior, Nahua culture generally immortalized the power and fundamental importance of flower and song. León-Portilla (1961/1995) claimed that flower and song were the basis for a theory of knowledge. He based his arguments on an event that occurred in approximately 1490 C.E. in the palace of the king of Huejotzingo (near the modern-day cities of San Andrés Cholula and Puebla). At this gathering,

Figure 2. A Contemporary Representation of the Aztec Migration Story



Photograph by Patrick H. Smith. Reproduced with permission.

a group of poets and philosophers established the parameters for the use of flower and song in Nahua cosmology. According to León-Portilla (1996), this metaphor represents poetry and artistic expression or, perhaps more importantly, symbolism. For the Nahua, then, truth would have been best conveyed using flower and song, an imagery that would have given humanity a reason to exist. León-Portilla (1961/1995) argued that the Nahua poets employed the imagery of flower and song as the proper register for conversing with the creator and giver of life. Studies of Mayan and Mixtec texts suggest that Mesoamerican elites from these two groups consciously and purposefully used divine forms of language that could be read literally by nonelites and figuratively by elites wishing to communicate with one another (Jansen, 1985). To anyone who has observed a politician giving speeches to two audiences of markedly different economic backgrounds, the practice of these ancient Mesoamerican elites will not be completely unfamiliar.

Scholars also claimed that the notion of flower and song is key to understanding how some Mesoamerican groups viewed their pictographic books and other written texts and the literacy practices they involved (Boone, 2000; León-Portilla, 1961/1995). Because ancient texts were often memorized as verse in a kind of recitation literacy, it is not terribly difficult to imagine how a poem like the following might have been represented in the

pictographic script of the Mesoamerican elites and then reconstituted during a public performance for an audience that included nonelites:

With flowers you write,
Oh Giver of Life!
With songs you give color,
with songs you shade
those who must live on the earth.
Later you will destroy
eagles and tigers;
we live only in your painting
here, on earth. (Boone, 2000, p. 20)

Although recorded in alphabetic writing during the 16th century, this poem could be rewritten pictographically, even with our limited knowledge of this Mesoamerican writing system, using pictures of flowers, the symbols for writing, songs, and color. Earth could be represented by the conventional symbol of a serpent. The destruction of eagles and tigers, shorthand for the warriors of those ranks, could easily be depicted through pictographic techniques (see Berdan & Anawalt's, 1997, description of the *Codex Mendoza*). At least in terms of the number of constituent parts, a pictographic rendition of this poem would be far more efficient for communicating the intent of the author, especially if recitation, chanting, and choral production of the text were necessary accoutrements for reading it.

How These Systems Functioned

The first instances of "visible speech," or glottographic writing (written forms that attempt to represent speech), in Mesoamerica have been dated to around 500 B.C.E. (Houston, 2004). More logographically oriented systems, or semasiographic writing, had been in use for a much longer period of time. The societies that created each of these forms of record keeping responded in ways consistent with available technologies and materials and the needs of their worlds. Because of the intimate link between identifiable literacies and their respective societies, it is not surprising that many manifestations of Mesoamerican literacies are no longer in evidence. Only a very small portion of the corpus of indigenous literatures survived the conquest and the colonial period due to destruction and the re-presentation of texts by competing indigenous groups; European opposition; and the rapid uptake of alphabetic forms of literacy on the part of Mesoamerican groups, particularly elite members, and the subsequent neglect of semasiographic and pictographic forms of writing. Indeed, scholars calculate that only 15 to 20 manuscripts predate the conquest (Jansen & Pérez Jiménez, 2007; León-Portilla, 2003; Lockhart, 1992). On the other

hand, a large body of literature was created during the colonial period by indigenous individuals who retained knowledge of and familiarity with pictographic writing. In many cases, it is this literature to which we refer in this article (see León-Portilla, 1996, for a critical examination of this literature). Karttunen (1998) pointed out how difficult it would be to understand Mesoamerican writing without access to colonial-era documents:

Imagine if the Library of Congress and all the rest of our libraries, archives, and repositories were destroyed, and interstellar archaeologists were to try to piece together our history and literary tradition from a telephone directory, a tide table, a comic book, and a few Civil War monuments. In that scenario, the task would be nearly impossible. (p. 424)

Collins and Blot (2003) insightfully recognized that the performative enactment of indigenous texts, which was so often necessary to complete a communicative event involving them, meant that, despite the texts' destruction, memories of them survived through the colonial period and the early republic and even into the present. Thus, it seems plausible that contemporary Mexican oral forms now preserve some of the content and messages once conveyed by Mesoamerican literacies. Indeed, León-Portilla (2003) reported a case in which two (alphabetically illiterate) speakers of Mixtec in the state of Oaxaca told a Mixtec creation story that is highly consistent with parts of the *Codex Vindobonense* and the *Codex Selden*.

Although the indigenous literacies served purposes that are difficult for current readers to fully understand, they were similar in some ways to forms familiar to Western readers. For example, the first Europeans in the region made special note of the fact that the peoples of Mesoamerica possessed paper and books (Cifuentes, 1998; Coe, 1999). Pellicer (1999) noted Franciscan Diego López Cogolludo's interest in the Mayan codexes he encountered in what is now the Mexican state of Yucatán. As Cogolludo described them, these folding books were made of tree bark and covered with a durable white paste. Folded, they were about as wide as a person's hand. They were painted in different colors and told of the history, wars, natural disasters, famines, and other important times of the Mayan people. This tree bark paper, known as *amate* (from the Nahuatl word *amatl*), is still produced for commercial and ritual purposes in the village of San Pablito Pahuatlán in the state of Puebla (de Luna Villalón & Galván Montoto, 1990).

Coe (1999) explained that the principle of homophony was fundamental to the development of sound-based writing systems and argued that Mayan scribes, like ancient scribes throughout the world, relied on this principle when first developing their scripts and systems of writing:

What is a rebus?....Rebus or puzzle writing can be seen in such lines as “I saw Aunt Rose” expressed by pictures of an eye, a saw, an ant, and a rose-flower. What has happened is that for something that is hard to picture, such as the female sibling of one’s parent, a homonymous but easily pictured word from the “real” world has been expressed visually, in this case, an ant. *This is what the early Sumerian scribes did, and this is what all ancient scribes everywhere have done* [italics added] (p. 28).

By identifying the mechanisms employed by previous generations to develop writing systems, Coe (1999) demystified one of humanity’s greatest accomplishments. He demonstrated that the Mayan writing system is mixed, both logographic and syllabic, and that it functions in ways very similar to the Japanese writing system. The Mayan system is logographic in that it relies on pictographically derived glyphs that are often used to refer to specific persons or places, but it is also syllabic in that the Mayan scribes could have written any word in their language using only syllabic symbols. Like the Japanese, the Maya used both logographs and a syllabary to represent language in the same inscription. Coe’s (1999) use of the word *puzzle*, however, to define rebus somewhat understates the importance of the rebus as the key component within the homophonic principle (J. Urcid, personal communication, July 2005). In other words, the principle of homophony, better known as rebus writing, is what enables groups to express their languages (vs. only their ideas) in written form.

Other Franciscans’ accounts of the writing systems used by Nahuatl-speaking groups are also interesting, especially given that many scholars do not consider the systems employed by groups other than the Maya to be “true” writing (e.g., Coulmas, 1989/1994; Gelb, 1952). Shortly after the conquest, a friar named Gerónimo de Mendieta (1945/1971) described how the Cholultecans employed the rebus principle to record information in Latin. Mendieta was intrigued by the Indians’ use of drawings based on the sounds of whole words in Nahuatl rather than individual letters in Latin. He gave a detailed description of how Cholultecans learned to recite the *Pater Noster* (Lord’s Prayer) by drawing a picture of a *pantli* (flag or banner) to represent *pater*, followed by a picture of the fruit of a prickly pear, *nochtli*, for *noster*. Although Mendieta viewed this strategy as a temporary one to be abandoned once the Cholultecans memorized such prayers, it can also be regarded as an example of one of the strengths of pictographic literacies in the multilingual setting of post-conquest Cholula. See Figure 3 for an example of what the Cholultecans’ rebus writing might have looked like.

As Figure 3 illustrates, these so-called pictographic scripts operated somewhat differently from the Mayan system of writing described above. Mendieta’s description of how the Cholultecans’ pictographic scripts made use of the principle of homophony closely resembles Coe’s (1999) discussion of rebus writing. Multiple

Figure 3. An Illustration of Rebus Writing

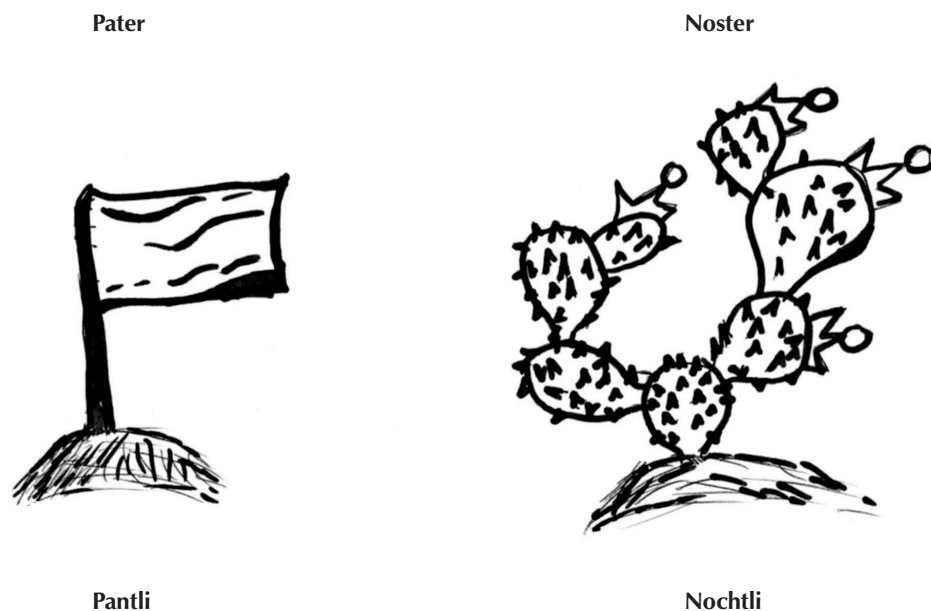


Illustration by David Acero Murillo. Reproduced with permission.

examples of this way of writing can be found in the annals of Tenochtitlán represented in the *Codex Mendoza* (see Berdan & Anawalt, 1997; see also Dibble, 1971; Nicholson, 1973). Figure 4 contains one such example, showing how an Aztec scribe wrote the name of the town Coatitlán (place of snakes). *Coatl* means snake in Nahuatl, and *tlan* can mean teeth. The scribe drew a snake over what looks like a pair of dentures to create the reading *Coatitlán*. Another example is that of the name of the town Totolapan (see Figure 5). *Totolin* is a female turkey, and *apan* refers to water. The scribe represented this name with a picture of a turkey head floating in a tub of water. Both of these examples show the mixed nature of Aztec writing: While *tlan* and *apan* are based on the homophonic principle, the snake and turkey logograms are based directly on their iconicity.

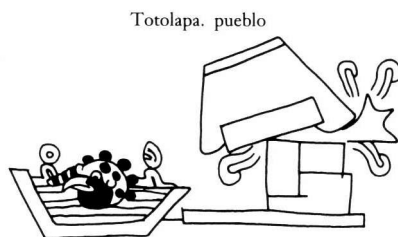
Based on examples of their pictographic writing, like those described above, it can be assumed that some Mesoamerican groups did not feel the need to use their literacy systems in exactly the same ways as the Maya.

Figure 4. Image of Coatitlán, “Place of Snakes,” From the Codex Mendoza



The Bodleian Library, University of Oxford, MS. Arch. Selden. A. 1, fol. 17r.

Figure 5. Image of Totolapan (“Female Turkey” and “Water”) From the Codex Mendoza



The Bodleian Library, University of Oxford, MS. Arch. Selden. A. 1, fol. 17 v.

Perhaps as a result, these groups did not create writing systems that were as glottographic or as fully representative of speech. It should also be pointed out that the Aztecs and other groups were aware of the Mayan system of writing because of their frequent contacts with that part of Mesoamerica. Still, some scholars claim that the pictographic forms of writing employed by Mesoamerican groups, including the Maya, were much more efficient in that the scribe would not have had to represent everything that might be spoken about a particular topic (Monaghan, 1994). In addition, even when the use of the homophonic principle committed the pictographic script to a specific language, this form of writing did not always need to be translated for those whose languages differed from that of the original author.

By enabling the Aztecs and Mixtecs to communicate with a multilingual audience, the semasiographic or logographic components of these groups' writing systems may have made the systems seem more appropriate for use than any form of visible speech. Boone (2000) refers to this feature as the script's supralinguistic (semantic) capability. She qualifies her statement by adding that “a Mixtec-speaking painter/scribe who was well educated could read an Aztec history and understand the gist of the story, although he or she might not comprehend all the details” (Boone, 2000, p. 32). Importantly, the missing details—at least for nonbilinguals—would be those that relied on the principle of homophony. However, the logographic component of the script provided more transparency, allowing readers who spoke different languages to make sense of texts that employed homophony. Thus, an Aztec glyph for *Chapultepec*, or grasshopper hill, which portrayed a grasshopper on the glyph for hill, could also be read in Mixtec as *Shinitiki*, and the meaning would be close to what the author intended. On the other hand, the portrayal of the word *Coatitlán* would present a bit more difficulty. The pictographic representation of snake teeth yields the phonetic equivalent that the word possesses in Nahuatl, rather than the semantic information contained in the town's name (because the word for teeth in Nahuatl is a homophone for the morpheme *tlan*). Even so, at least a partial understanding of the town's name, that related to the word *snake*, can be derived from the pictograph, something that an alphabetic system is not capable of achieving cross-linguistically.

Both Mendieta's (1945/1971) account of Nahuatl speakers' indigenous writing and another friar Diego de Landa's description of the writing of Mayan speakers in the Yucatán (Pagden 1975) suggest that polyvalence, or polyphony and homophony, played important roles in the actual functioning of these systems. Polyvalence refers to the fact that some symbols represent multiple sounds, as well as to the idea that one sound may be represented by multiple symbols. The terms *polyphony* and *homophony* refer to the former and latter ideas, respectively.

Polyvalence was a defining feature of several Mesoamerican writing systems. Of course, some aspects of polyvalence are also present in alphabetic writing; however, in this context, polyvalence is often considered a deficiency. For example, the letters *c*, *z*, and *s* can represent the same sound in English and Spanish, and the English words *dear* and *deer* trigger the same vocalization. Thus, polyvalence involves ways of thinking about and using writing systems; it is related to social practices, not to any particular script per se. There is evidence in the ancient texts that the Mayan scribes found this aspect of their system enjoyable as they often moved back and forth between logographs and syllabically written words. In addition, they often wrote syllabically, using different symbols to represent the same word within a single text. Moreover, this ability to play with the medium of text suggests an advanced command and understanding of literacy.

Pre-Columbian Literacy Practices

Almost half a millennium has passed since the last period of autonomous indigenous culture in Mesoamerica. With so little information available, it is difficult to reconstruct a complete picture of the ways that literacy infused the day-to-day life of the different strata of indigenous societies. Even so, it is important to attempt this type of reconstruction. As Boone (2000) points out, writing is a very loaded cultural category, and as we have seen in the definitions formulated by some linguists (Coulmas, 1989/1994) and epigraphers (Stuart & Houston, 1989), its presence and use in a society is often equated with civilization and culture.

Keeping in mind this supposed equivalence between writing and civilization (even though such constructs are arbitrary and problematic and serve as ideological tools of colonialism), we will begin our discussion of literacy practices with León-Portilla's (1961/1995) assertion that books and writing were fairly common in Mesoamerica at the time of Spanish conquistador Hernán Cortés's arrival in 1519. Of course, the mere presence of books and institutions for their production does not imply mass literacy. For example, within the homes of elite Maya, archaeologists have found personal objects such as cups and incense burners inscribed with the names of their owners. Comparable evidence within the homes of commoners is lacking. On the other hand, some forms of writing such as those found on *stellae* (stone pillars) and other large monuments were clearly intended for the general public (Romero, 2003; J. Urcid, personal communication, July 2005). Such evidence suggests that there were differences in audiences and readers and in their receptive versus their productive literacy capabilities.

Although few provenanced texts survive today, the sophisticated and elaborate detail of the remaining

codexes and other written media (sculpture, pottery, painting, and carving on bones) suggests the presence of systems of training designed to transmit the knowledge needed to produce these objects (Houston 2004; Marcus, 1992). In the Mexica empire, a two-tier system of schooling was in place. The children of commoners attended the *telpochcalli*, where they learned the skills necessary for domestic and agricultural duties, as well as for many of the crafts valued by their culture. The children of the indigenous elites attended the *calmecac*, where they learned the arts of writing, painting, and statecraft and the skills necessary to become religious and military leaders. Although some scholars have argued that only hereditary nobles would have been taught literacy in the *calmecac* (see Marcus, 1992), there are indications that on occasion the children of commoners also attended these special schools, if they and their families wanted them to do so (López Austin, 1985). As Clanchy (1981) reminded us for 11th-century Britain, "conjecture...concerning the level of education of the mass of medieval people, is impossible to prove because evidence of any sort about elementary instruction, and particularly about that of ordinary people, is rare" (p. 27).

At least one scholar (Monaghan, 1994) believed that the texts created by the Nahuatl-speaking and Mixtec peoples to teach elite children the rituals, myths, history, and genealogy of the larger society were designed to legitimize the society and to ensure that the elite could continue to predict propitious dates for and the outcomes of important events including marriage, warfare, and planting. According to Monaghan (1994), such a purpose coincided well with the pictographic and ideographic nature of these peoples' scripts. Written by a 16th-century Aztec scribe, the following poem provides some indication of how this group viewed the act of oral reading:

Yo canto las pinturas del libro (I sing the pictures of the book),
lo voy desplegando (as I unfold [its pages]),
soy cual florido papagayo (I am like the flowery parrot),
hago hablar los códices (as I make the codexes' pages speak),
en el interior de la casa de las pinturas (inside the house of the picture-writings). (León-Portilla, 1961/1995, p. 66; our English translation)

Monaghan (1994) described Western literacy as a rather disembodied activity. Some forms of Mesoamerican literacy, on the other hand, made use of the entire body "through choreography, through hand gestures, through spacing, and through the clothing worn, as well as through verbal utterances" (Monaghan, 1994, p. 91). The above poem provides a glimpse of how reading was enacted. The colorful parrot is a metaphor for vitality and spirituality. References to flowers and singing reinforce notions of the sacred and their association with writing

and books. The phrase “the house of the picture-writings” suggests that literacy is an institutionalized and localized practice. This poem fossilizes a bit of what Silverstein and Urban (1996) described as entextualization. By entextualization, they meant that some residue of past meanings, ways of thinking, and social and structural influences continue to be present in surviving textual artifacts. In a sense, a textual artifact like this 16th-century poem allows us to establish possible continuity with readers and writers of the past.

Although the use of mantic texts for the purposes of prediction likely entailed solitary acts of reading (J. Urcid, personal communication, July 2005), within the *calmecac*, reading “was not a solitary act but a communal or social activity with didactic and ritual components” (King, 1994, p. 39). Boone (1994a) added the following concerning Nahua and Mixtec literacy practices:

The pictorial histories are closer to being scripts, and their relation to their readers is closer to being that of a play’s script to its actors. The Aztec pictorial histories were read aloud to an audience, they were interpreted, and their images were expanded and embellished in the oration of the full story. The pictorial histories were painted specifically to be the rough text of a performance. (p. 71)

A European observer described the *calmecac* as “a place of prudence, a place of wisdom, a place of making good, of making righteous,” where the boys and girls were taught, evidently separately, “the gods’ songs inscribed in the books. And especially was there teaching of the count of days, the book of dreams, and the book of years” (quoted in Boone, 2000, p. 26). In other words, there was a curriculum that the children would have been compelled to commit to memory. Houston (1994) claimed that an extensive body of hymns, poems, and chronicles would have been committed to memory by the students in a “pattern of recitation literacy” (p. 36). King (1994) added that the students would have learned the verses to accompany the different books and the styles of language favored by the elites.

López Austin and López Luján (2003) reported that children of commoners seem to have begun schooling between the ages of 5 and 8, while the children of elites began their studies at a later age. The language or register associated with the elites had its own name, *tecpillatolli*, to distinguish it from the language of the commoners, or *macehuatolli*. The ability to deliver a flowery speech was highly valued by the indigenous elites, and a vestige of this can be detected in present-day Mexicans’ reference to verbose politicians and other speakers as *rollo* (scroll). This idea of the scroll as a reference to speech links modern Mexico to its indigenous past and its ancient texts. The *voluta* (speech scroll) was an icon used whenever scribes wanted to highlight that someone was speaking, typically in praise or celebration of the divine. This icon

continues to feature in contemporary texts (Pellicer & Vernon, 2004), just as flowery speeches continue to represent the paragon of public speaking in native communities today (see Hamel, 1996; Jansen, 1985).

Unzueta (2003) claimed that “coding and decoding narratives in specific ways is the key issue in writing or reading the human, social, and natural coordinates of the nation” (p. 160). In the preceding discussion, we have tried to highlight some of the important differences between Western conceptualizations of literacy and those of Mesoamerican peoples. The Aztecs and other groups emphasized the telling and performing of stories in ways that foregrounded narration and group participation. Graff (1981, 1987) and others have shown us that European ideas of literacy developed over time. At the point of Europeans’ initial contact with Mesoamericans, those ideas stressed faithful reproduction of textual information and getting the words correct (Mignolo, 1994). We argue that this understanding of reading continues to permeate the thinking of scholars whose work focuses on writing systems (Coe, 1999; Daniels & Bright, 1996; Fischer, 1999; Gelb, 1952). Indeed, it could be argued that it was precisely at their points of divergence—a specified order of presentation or grammar, punctuation, and orthography—that Mesoamerican literacies could be distinguished from the forms imposed by Europeans and required by European forms of literacy (Cifuentes, 1998). Although much remains to be said about the ways that Mesoamerican literacies persisted in the colonial period—including their influences on the alphabetic forms prized by the colonizers and the colonized alike—the differences between Mesoamerican and European forms of literacy became and continue to be focal points for teachers’ efforts in Mexican schools (Jiménez et al., 2003).

In summary, Mesoamerican literacies communicated ideology and thus were important vehicles for legitimizing and situating their societies of origin within specific geographic, political, historical, and economic contexts. These literacies contributed to their users’ sense of identity and place in their world and communicated ideas and information that helped tie the region together. Mesoamerican literacies were characterized by polyvalence, and the principle of homophony was an important tool for written communication, enabling writers to represent objects and abstracts with oral equivalents that sounded like what the writer wanted to communicate. In addition, all of the Mesoamerican scripts were mixed systems and nonevolutionary, and they adapted, borrowed from, and were influenced by earlier traditions. Written texts were often performed for an audience, but for certain purposes, they could be read in private. Performances included oral exposition and recitation and, on occasion, dancing and singing.

The Contested Nature of Mesoamerican Writing Systems

Scholarly interpretations of the Mixtec and Aztec writing systems are controversial because many do not view these systems as actual writing. A typical assessment was given by the linguist Coulmas (1989/1994): "The Aztec system is a picture-word writing system in which the initial steps toward phonetization had been accomplished, but which never developed into a full-fledged system, however. It remained at the threshold of writing proper" (p. 31). Dibble (1971) extended this idea, claiming that only contact with alphabetic writing in Spanish and Latin led the Aztecs to "the last stage of development, an alphabet" (p. 331). Fischer (1999) took a related position, arguing that the Aztec and Mixtec writing systems were minor, degenerative offshoots of (supposedly more advanced) Mayan forms of writing. The refusal to recognize Mesoamerican systems as written language may be rooted in the "dream, of an absolute transcription, of a 'fully explicit' text, in which language and meaning are fully captured, fully present, and hence requiring no sense of context or other interpretive intermediaries" (Collins & Blot, 2003, p. 12). Given that prosody, intonation, and pitch, for example, are impossible to represent precisely and fully, such a dream, of course, has not and probably never will be realized.

As Mignolo (2003) observed of post-European-contact history generally, one problem with such characterizations of Mesoamerican writing as immature or underdeveloped is that they assume an evolutionary, unilinear development of writing systems, with alphabetic systems perceived as the most advanced and thus the most desirable. Typically, this development trajectory assumes movement from the pictographic to more phonetically representative systems. Eurocentrism aside, this assumption, which underlies much scholarly writing about Mesoamerican writing systems, ignores the fact that highly phonetic systems such as that of the Maya also preserved iconic and semasiographic elements and that writing systems could move from sound-based representations (phonetic) to more semasiographic (iconic and pictographic) forms, as was apparently the case for Zapotec writing in Oaxaca.

The Zapotec writing system, which came into use sometime between 600 and 800 C.E., is just beginning to receive serious attention from epigraphers. It had its own distinct style and was clearly not a copy of Mayan written systems. Users of the Zapotec system inscribed personal objects like vases and other ceramic artifacts, as well as monuments like those found in the ceremonial compound at Monte Albán. Elements of phonetic writing appeared in these inscriptions but not in later forms of this writing system (Urcid, 2003). In other words, the sys-

tem changed over time and not in the direction presupposed by Western views of written language. The Zapotecs may have wanted to communicate more effectively with speakers of Mixtec and other languages in their immediate region, or somewhat later, they may have wanted to emulate their more powerful neighbors, the Nahuatl-speaking groups, to the north. An alternative view to that of evolutionary progress in writing systems, especially with respect to changes in Mesoamerican writing systems over time, is that mixed systems better served the communicative needs of people living in a particular context. The example of Zapotec writing enables us to better understand writing systems in which phonetic elements (sound-based representations) were not primary.

Centuries after the beginnings of Zapotec writing, Nahuatl and Mixtec speakers, like other groups in central Mexico, developed mixed systems that made use of phonetic elements but were primarily based on the homophonic principle, better known as rebus writing (see León-Portilla, 1961/1995). Coe (1999) did not argue explicitly against an understanding of these systems as writing; however, their exclusion can be inferred from his definition of the term *writing*: "Writing is speech put in visible form, in such a way that any reader instructed in its conventions can reconstruct the vocal message" (p. 13). Further, Coe (1999) claimed that "*all known writing systems are partly or wholly phonetic, and express the sounds of a particular language*" (p. 25). Here, it is important to distinguish between systems that encode the phonemes of a particular language and those that use signs to trigger specific lexemes in the mind to cue vocally enacted utterances that may be rendered in different languages depending on the linguistic capacity of the speaker. In this more general sense, semasiography is phonic rather than phonetic (J. Urcid, personal communication, July 2005; see also Boone, 2000). Lockhart (1992) compared the act of reading a pictographic text, like those developed by Nahuatl and Mixtec writers, to that of giving a presentation based on an outline or handout prepared for an audience. Indeed, he argued that pictographic texts were never meant to stand alone, that oral accompaniment was presumed and considered an integral part of a larger communication system.

Other definitions of writing depend less on the notion of visible speech and more on its permanence and visibility. For example, Boone (1994b) wrote, "We then can define writing broadly as *the communication of relatively specific ideas in a conventional manner by means of permanent, visible marks*" (p. 15). Mignolo's (1994) definition expanded on this idea:

Semiotically, a graphic sign is, then, a mark on a solid surface made for the purpose of establishing a semiotic interaction. Consequently, a human interaction is a semiotic one if there is a community and a body of common knowledge according to which: (a) a person can produce a visible sign with the

purpose of conveying a message (to somebody else or oneself); (b) a person perceives the visible sign and interprets it as a sign produced for the purpose of conveying a message; and (c) that person attributes a given meaning to the visible sign. *Notice that in this theoretical definition of writing the links between speech and writing are not necessary [italics added].* (p. 229)

Hints of *Continuidades*

To describe contemporary indigenous Mexican cultures, as well as much of modern Mexican culture in general, Bonfil Batalla (1987/1996) developed the notion of *México Profundo*, the deep and inexhaustible well of culture and civilization thought to be masked by a thin veneer of *México Imaginario*. This latter term refers to Western civilization and its imposition on Mesoamerica via colonialism and the resulting legacy of racial and ethnic stratification. Of importance for our purposes is that Bonfil Batalla (1987/1996) refers to the majority population in Mexico, the *mestizos*, as “de-Indianized Indians” (p. 17). Others have used the idea of *México Profundo* and *México Imaginario* to elaborate on the fact that *mestizos* share many cultural traits and behaviors with their indigenous forbearers, even though they now often fail to recognize the origins of their culture and sometimes go to great pains to deny them (Coronado, 2003). As already noted, caution should be used when applying Bonfil Batalla’s (1987/1996) ideas to avoid essentializing all persons of *mestizo* origin in Mexico, especially those who, while not denying *mestizaje* (the blending of indigenous and European ethnicities and cultures), locate themselves much closer to Spanish traditions and origins (Farr, 2006).

Some of the distinguishing features associated with Mesoamerican indigenous civilizations include an intimate association with the land and agriculture; the importance of time, especially as it relates to agricultural activities and auspicious events; and notions of autonomy, reciprocity, and authority. Bonfil Batalla (1987/1996) pointed to the similarities between contemporary *mestizo* and indigenous agricultural communities. For example, the 20th-century land distribution program—also known as the *ejido* reforms, which resulted from the Mexican revolution (1911–1917)—reflected the Mesoamerican indigenous view of land as a communal resource rather than a marketable commodity. Farr (2006), however, demonstrated that the portion of the Mexican population that self-identifies as *ranchero* does not share this view. *Rancheros* are not an insignificant portion of the Mexican population and may comprise as much as 20% of it. They are primarily, but not exclusively, located in the western and northern parts of the country.

The Mesoamerican notion that authority is granted to those individuals who demonstrate a capacity for service to the community over long periods of time can be observed in the ways that annual religious celebrations are

organized and funded in many contemporary rural villages, as well as certain *barrios*, or neighborhoods, in urban areas. This is especially true in central and southern Mexico. Similarly, the labor necessary to construct schools, roads, and other public facilities is often organized according to indigenous notions of reciprocity—today for you, tomorrow for me. For example, *quinceañeras* (cotillions), weddings, and other important events are often funded through collective donations or *compadrazgo* (in-law) relations, whereby an individual or group sponsors a particular element (e.g., a cake, *tamales*, or flowers) of a larger celebration. The obligation to repay these donations through gifts in kind motivates participants to be generous. These notions of reciprocity continue to influence large numbers of Mexicans, including many, but by no means all, who live in foreign countries. Although five centuries have passed since the conquest, the persistence of these notions of reciprocity and communality in the world today attests to the vitality and durability of Mesoamerican practices.

In our current research, we have collected a substantial number of publicly displayed documents celebrating the participation of multiple community members in the *cargo* system of mutual obligation. For example, in the church that sits atop the pyramid separating San Andrés Cholula from the neighboring city of San Pedro Cholula in the state of Puebla, we saw the following publicly displayed text thanking parishioners and visitors for underwriting the costs of a new floor for the church:

LOS SUSCRITOS MAYORDOMOS (The stewards noted below)

Y FAMILIA LES AGRA- (and their families tha-)

DECEN SU AMABLE COOPERACIÓN PARA (nk your kind co-operation for)

EL CAMBIO DEL PISO (helping to replace the floor)

DE LA IGLESIA (of the church).

Figure 6 shows a photograph of this text in which a Mesoamerican social structure is at least partly reflected in a current syncretic literacy practice. This example is interesting not because it demonstrates financial support on the part of the community but because it reflects a contemporary social system that draws on ancient Mesoamerican practices. The *mayordomos*, or “stewards” for lack of a better translation, are individuals selected by the community to organize a corporate project, including collection of the necessary funds. By doing so, they build social capital in terms of prestige and social standing in the community. Unlike what occurs in European or U.S. contexts, individual contributions are recognized only within the corporate structure. Thus, the names of contributors are publicly displayed on large posters but are always listed according to the nature of their contributions—for example, signs of this kind

might thank those individuals who provided flowers, food, and fireworks for celebrations of San Andrés (St. Andrew) or the Virgin. In this example, alphabetic writing is used to communicate a contemporary message in a hybridized form that combines elements of older and more recent systems, and a striking feature of these lists is the presence of Nahuatl surnames. The *cargo* system used to organize this activity has been recognized by anthropologists as a form of social organization with indigenous roots (Bonfil Batalla, 1987/1996; Lockhart, 1992; Murillo, 2005), as has the *tequio* (exchange) system of collective labor in the state of Oaxaca.

Rockwell (2001) described the enduring importance of oral presentation to legitimize and lend authority to written documents. Using data from recent fieldwork in central Mexico, she observed that “written documents never actually replace the need for oral discourse” (p. 238). Lockhart (1992) demonstrated through his analysis of 16th-century documents that “alphabetic writing in Nahuatl was cast from the first in the role of the oral component of preconquest communication genres” (p. 364). Like the region’s earlier inhabitants, contemporary individuals continue to envelope written documents within oral discourse, suggesting that both are necessary to achieve authority (Rockwell, 2001). For example, Rockwell (2001) described how an elderly man in the state of Tlaxcala (central Mexico) needed to both exhibit and read aloud petitions in his capacity as a village representative to organizers of a local peasants’ union. By themselves the written petitions had less power than when they were accompanied by oral readings and elaborations. In addition, Rockwell (2001) described how the knowledge that the *graniceros*—who are “in charge of turning away hailstorms threatening the village crops” (p. 236)—apparently derive from particular books is regarded as incomplete and ineffective without oral interpretation and comment. Her work makes clear that these individuals cannot be identified as merely oral or literate; rather, they employ a blend of communicative elements situated within a specific place and set of practices. Lockhart’s (1992) historical evidence provided examples of how 16th-century Nahuatl speakers enacted a specific literacy practice and also a little of how they thought about alphabetic literacy. It is interesting that some traces of these Mesoamerican literacy practices seem to have endured as reflected in Rockwell’s (2001) data.

To conclude, we return to Rockwell’s (2001) observation that literacy in Mexico is not simply a matter of oral versus written forms. A fairly recent example involving the Tzotzil Maya in the Mexican state of Chiapas provides more evidence of this. Haviland (1996) described the reactions of Tzotzil Maya toward the selection and later recording of two stories that they produced in the 1970s. He categorized these persons as barely literate; however, despite having had very little formal schooling, the Tzotzil Maya exhibited many behaviors associ-

Figure 6. A Sign Celebrating the Cargo System of Mutual Obligation, Located in a Church in San Andrés Cholula, Puebla, Mexico



Photograph taken by Luz Elena Hernández. Reproduced with permission.

ated with knowledge of literacy when they were presented with a written transcript of their orally produced stories. For example, they edited these texts by removing indications that the stories had been created collectively and moved toward the creation of a monologic account. They also removed features of oral speech such as turn structure and repetitions. Haviland’s (1996) work is important because it supports the notion that orality and literacy are very closely related. In addition, he accomplished this empirically rather than through conjecture. The Tzotzil Maya’s ability to edit and revise their stories in ways recognizable to literate individuals might have been due to several factors. One possibility is that their reactions were simply the human response of wanting to present themselves in the best way possible. Another possibility is that they had more contact with literacy than Haviland (1996) seemed to be aware. A third possibility is that Mayan oral traditions provide some kind of template for what a text should look like.

Our final example of *continuidades* showcases what are known as *arcos* in San Andrés Cholula and nearby towns in the state of Puebla where we conducted our fieldwork. We observed on average 18 to 20 *arcos* per year over a period of four years. In simplest terms, an *arco* is a wood-

frame, gate-like structure that hangs across a city street or a church gate (see Figure 7 for an example). *Arcos* are elaborately decorated and brightly colored combinations of images from Catholicism, as well as symbols depicting Mesoamerican plants, flowers, ears of corn, and more abstract ideas. In the past, *arcos* were constructed, at least in these communities, entirely from organic materials like flower petals, beans, kernels of corn, and pine branches. Other communities continue to create *arcos* using only natural materials. Flowers, whether organic or plastic, however, typically predominated in the *arcos* we documented in San Andrés Cholula and other towns. One of our informants, born and raised in San Andrés Cholula, described to us her family's communal obligation to provide the *arco* for her *barrio*. She explained that in the past, lay members of the community assumed responsibility for the *arco* and either constructed it themselves or provided the materials and contracted with artisans to build the *arco*. Now, however, it is more usual for community members to pay artisans to do all the work, including purchasing materials and building the *arco*.

Arcos provide a compelling example of continuity in that they clearly show European practices hybridized with elements derived from Mesoamerican literacy practices. They currently function to welcome saints or one of the many manifestations of the Virgin Mary. *Arcos* do this by presenting in gala-like fashion celebratory messages of

welcome. The semiotic content of these messages exalts and foregrounds the pride of the neighborhood. Indeed, as each *barrio* commissions artisans to create *arcos* to mark the entrances to the neighborhood, there is a spirit of competition to produce the most beautiful design. This exaltation of neighborhood and town is reminiscent of the centrality accorded to the *altepetl* (literally “water-mountain,” Fernández Christlieb & García Zambrano, 2006, and understood as “indigenous village or town”) of Nahuatl-speaking and other Mesoamerican groups in central Mexico. Lockhart (1992) explains how the concept of *altepetl* was central to political organization and how each *altepetl* required a temple or place of worship to be recognized as an independent entity. Churches now fulfill this function in present-day villages and *barrios*. What we find especially intriguing about *arcos* is how they meld elements of Mesoamerican literacy forms with alphabetic literacy. In the *arco* pictured in Figure 7, the Virgin's visit is welcomed with an alphabetic message, “BIENVENIDA VIRGEN SMA. DE LOS REMEDIOS A SN. ANDRÉS 2003” (Welcome, Holy Virgin of the Remedies, to San Andrés 2003), and symbols that are undoubtedly European in origin but also with a variety of Mesoamerican images such as the *volutas*, or speech scrolls, commonly found in codexes created by pre-Columbian writers.

Figure 7. An Arco in San Andrés Cholula, Puebla, Mexico



Photograph by Patrick H. Smith. Reproduced with permission.

Future Research and Limitations

In this article, we have used historical research methods to illuminate a particular literacy context and to develop deeper understandings of contemporary practice. In this case, we have been concerned with how pre-European-contact forms of literacy developed in Mesoamerica are useful for understanding contemporary Mexican literacies. A fundamental assumption in current literacy theory, particularly Barton and Hamilton's (2000) ecological model, is that "we need a historical approach for an understanding of the ideology, culture and traditions on which current [literacy] practices are based" (p. 13). Merriam (2001), a leading proponent of case-study methods in education, claimed that an understanding of historical events can lead to analytical interpretation if the researcher understands "the context of the [historical] event, the assumptions behind it, and perhaps the event's impact on the institution or participants" (p. 35). This gap in literacy research methods is especially important for scholars not formally trained in history methods and for those who are interested in studying historical periods and contexts that, like pre-Columbian Mesoamerica, are not well understood with respect to literacy.

Our study of Mesoamerican forms as a way of strengthening our knowledge and understanding of literacy in general is similar to the approach that Graff (1987) recommended for the study of Western literacy. He argued convincingly that scholars consistently ignore the first two thousand years of literacy's development. In contrast, he recommended a perspective that emphasizes the study of continuities and contradictions, as well as discontinuities. Our emphasis on continuities is of necessity partial and incomplete. As scholars become more familiar with contemporary Mexican literacies, more examples of continuities, discontinuities, and contradictions will emerge. This cannot be accomplished without understanding past practices. Graff (1987) called this a mode of analysis and a set of theoretical assumptions that help to better explain literacy's complex history. We agree and would extend these recommendations to include studies of non-Western literacies, as well as their contemporary manifestations. Just as consideration of non-European languages has compelled linguists to modify views of language universals, we believe that an understanding of Mesoamerican literacies has the potential to contribute to our knowledge of how written language works.

The study of Mesoamerican forms of literacy also leads us to consider new theoretical tools, including contextualization, a model for understanding how texts produced in one historical context can be understood in another. We have provided what we feel is evidence of the importance and uniqueness of Mesoamerican forms and practices of written language and have identified and historically situated traces of these ancient forms in con-

temporary practices. We hope that our historical inquiry incorporating primary and secondary sources will lead other literacy scholars to continue applying new theoretical tools to these previously unavailable traditions of written language.

Limitations

A major limitation of this work has been the lack of access to primary documents from the pre-Columbian period. Fewer than 20 original codexes or manuscripts from this period remain. This number does not include inscriptions on monuments or pottery and other portable objects; however, it does highlight the difficulties that scholars encounter in understanding Mesoamerican literacies. In addition, few, if any, contemporaneous pre-Columbian and colonial descriptions focused on Mesoamerican literacies are available. Although some scholarship has been devoted to extracting what is valuable from the colonial period and what has been irreparably damaged (León-Portilla, 1996; Lockhart, 1992), in the absence of these descriptions, contemporary scholars have been forced to speculate. Today, scholars wrestle with questions of what literacy is and who is literate, and these questions require us to consider the content and form of instruction, the nature of literacy transmission, and indeed, the whole question of access. Given present levels of knowledge, the answers to some of these questions remain frustratingly out of reach for the periods and cultural groups we examined.

We also wish to reiterate that little focused scholarship within any particular discipline was available to us as we engaged in our research on Mesoamerican literacies. Instead, we exploited our own academic backgrounds as much as possible to carry out our project. We do not, however, have scholarly backgrounds in each of the multiple fields relevant to this work. As a result, we relied on secondary sources produced by historians, epigraphers, anthropologists, linguists, and art historians to a greater extent than we are accustomed to doing as literacy researchers. We view this as a cost of doing interdisciplinary work and as a challenge that anyone doing similar work will face.

As researchers who work in the fields of literacy, bilingual education, and applied linguistics, we are accustomed to being able to speak and read the languages of the communities we study. This research project stretched us in ways that were often uncomfortable. For example, our lack of knowledge of Nahuatl, Mixtec, and Maya meant that we had to rely on others to understand how the rebus principle operated for various writing systems. We were also limited in terms of our access to the few remaining primary sources that do exist.

Finally, we should note that our scholarly efforts were intentionally limited to understanding pre-Columbian

and colonial literacy practices. More historical work remains to be done on the post-independence and revolutionary periods in Mexican history. These more completely documented periods also need to be examined for what they can tell us about contemporary literacies.

Final Thoughts

We are aware that in highlighting the influences of ancient Mesoamerican indigenous forms on contemporary literacy practices we need to avoid romanticizing or thinking acritically about these influences. We do not claim to find pre-Columbian Mesoamerican forms in their entirety in contemporary use. We also are not arguing that Mesoamerican literacy practices were ever pure and uninfluenced by other cultures. Indeed, one of the lessons we take away from a study of pre-Columbian literacies is just how much contact there was between different cultures and groups before Europeans ever arrived in the Americas. This is why pictographic forms were needed to communicate across language groups. In addition, we have tried to avoid essentializing Mexican identity by providing counterexamples from groups that do not recognize indigenous traditions. Moreover, we are aware that even those who do claim indigenous heritage may not recognize the sources of the practices in which they participate.

These limitations noted, we would simply reiterate that pictographic literacies are capable of accomplishing some tasks that are beyond the reach of alphabetic scripts. The ability to communicate with a multilingual audience is a premier advantage. A defining feature of some Mesoamerican scripts, this ability poses compelling possibilities for multilingual settings today. As new technologies have made possible the increased use of nonalphabetic forms such as icons, rebus symbols, and pictographs, some scholars have encouraged the field to theorize about literacy in new ways (Kress, 2003). We concur with this approach; however, we also want to remind our colleagues that these are not completely new ideas nor did they emerge fully formed with these new technologies. Rather, they were invented, elaborated, and used by many Mesoamerican writers across a vast region and in some cases, perhaps as early as 600 B.C.E.

There are, we would argue, specific benefits to be gained from further scholarly reflection on these Mesoamerican literacy accomplishments. Without entextualization of the sort we have attempted here, there is the risk of seeing Mesoamerican glyphs and symbols recast, perhaps in video games and other digital forms, in ways that ignore their once-intended meanings. Eisenstein (1981) described a kind of cross-cultural exchange between 15th-century European readers and ancient writers brought about by the introduction of the printing press. Because the ancient "hieroglyphs were

set in type more than three centuries before their decipherment," this exchange did not always illuminate and sometimes caused confusion as the "sacred carved letters were loaded with significant meaning by readers who could not read them" (Eisenstein, 1981, p. 55).

In addition, Mesoamerican literacy practices are appealing with respect to their inclusiveness and potential for engaging children in a more bodily manner than Western forms of writing and instruction. Mesoamerican literacies incorporated color, music, dance, and gestures and emphasized dramatic storytelling, group recitation, and embodied forms. In this sense, they were synesthetic because visual cues evoked multiple sensory responses. While potentially useful to all learners, Mesoamerican literacies might be especially valuable in decolonizing literacy instruction for indigenous and other marginalized learners of Mexican origin. These contributions should be thoughtfully considered by educators and others who wish to celebrate linguistic diversity and to increase communication across and beyond the boundaries of language.

Notes

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