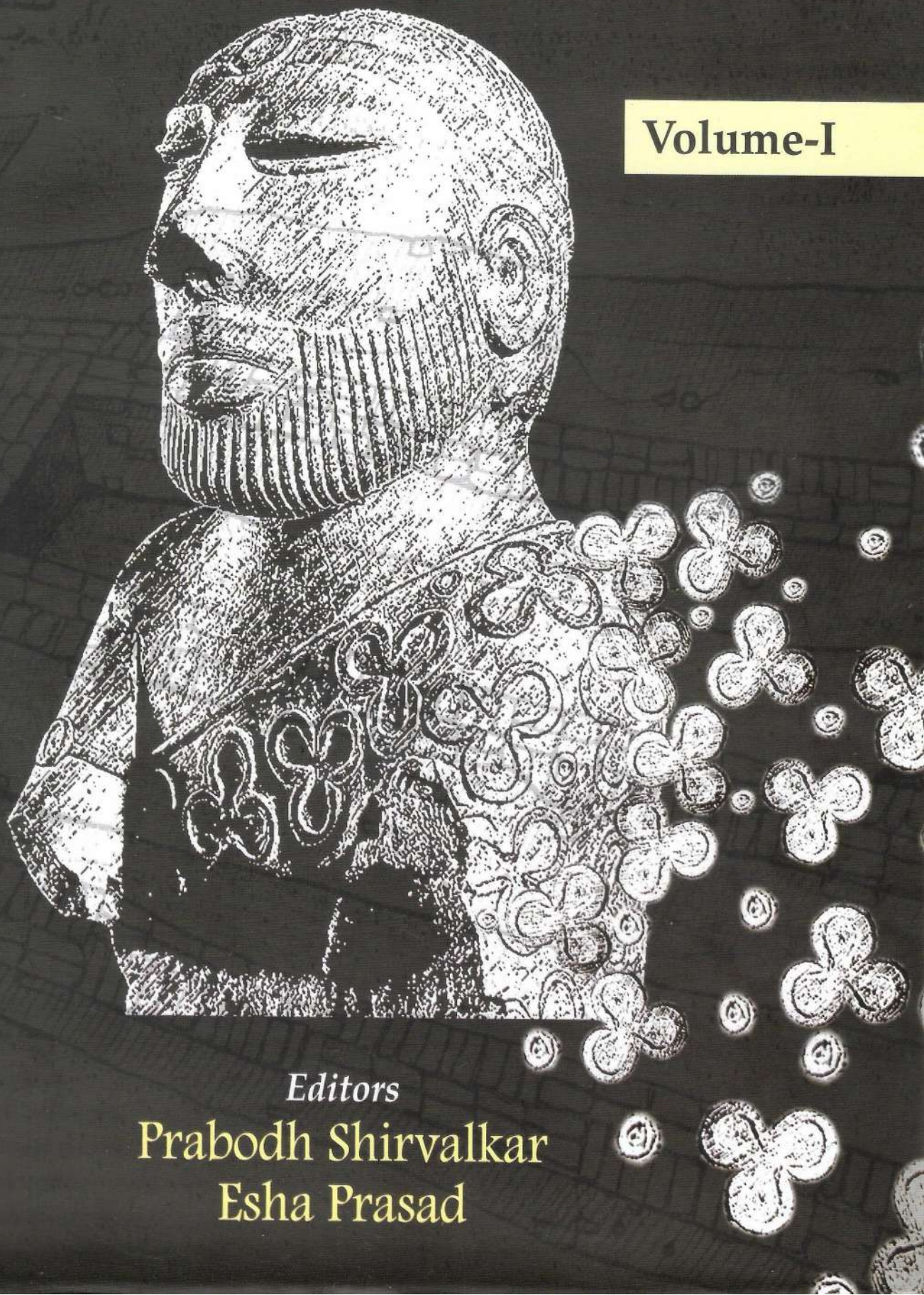


Culture, Tradition and Continuity

Disquisitions in Honour of Prof. Vasant Shinde

Volume-I



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Indus Writing and Inka Khipu Compared: Two Ancient Scripts that Depended on Scribal Intermediaries for Use and Performance

Monica L. Smith

Introduction

Writing systems evolved in many ancient cultures around the world. Some writing systems were widespread and long-lived, including Mesopotamian cuneiform, Maya glyphs, Chinese script, and Egyptian hieroglyphs. In addition to the long-lived scripts that have been translated, there were a number of other symbol systems that also conveyed information and that can be read but that had a relatively limited distribution in both space and time, correlated with greater challenges in decipherment in part because of the relatively small corpus of texts. Such scripts include Hittite in the Anatolian and Mediterranean region, and Linear B in Greece and Crete. Finally, there are some symbol systems that have yet to be deciphered at all, including Linear A (in Greece), Isthmian (in southern Mexico), Rongorongo (on Easter Island), Zapotec (in Mexico) and the Indus script (in India and Pakistan).

The presence of a number of symbol systems of varying complexity, distribution and longevity suggests that the production of script in different places included symbol systems that were intended to communicate broadly as well as special-purpose symbol systems that were not designed for widespread literacy. Moreover, the development of writing may not have been characterized by a simple transmission of information from the script-writer to the script-reader as is the case for the modern context. Because

alphabetic systems are well-developed in our own cultures, the process of literacy appears to us to be relatively straightforward, in which an established symbol system is learned by individuals with the help of someone who is already proficient in that script and language. The presumed goal of the writer is to provide information or instructions that can be understood by anyone viewing the message even if no one else is present. The goal of the reader is to be able to acquire information independently of a teacher or interpreter in the process of reading. Written documents are thus assumed to be complete entities that can communicate with any potential reader across time (e.g. wills and other legal documents that outlive the writer) and across space (a letter posted to another part of the world that arrives bearing a message in silence).

However, the inception of symbol systems and their use in ancient times may not have encompassed the complete independence of writer and reader the way that we use script today. Instead, there may have been a routine and expected role for a knowledgeable intermediary who served not only as a teacher but also as an ongoing participant in the process of declaring and absorbing a message set forth in script. As symbol systems, scripts are just one of many types of communication that involve pointing to or referring physical marks. Stretching far back into prehistory, humans have been interpreting natural symbols from our earliest ancestral days of hunting and gathering, when the physical signs left by animals and the seasonal physical characteristics of plants were subject to the interpretation offered by knowledgeable members of the clan. Natural phenomena ranging from animal tracks to eclipses could be seen by everyone, but their interpretation required the input of an intermediary who could translate and enhance the symbols of natural activity for an audience, in which each encounter elicited comments, questions and affirmations within a group.

Humans thereafter added to the natural realm of symbol-making through the development of rock art. Starting as early as 50,000 years ago, humans began to sketch out animals and abstract geometric forms on stones through the processes of incising and painting (Aubert et al., 2014). Numerous individuals participated in the production of rock art, including not only the main painter or engraver, but also the apprentices who were part of the process of making rock art as they learned the various stages of paint preparation, fashioning of engraving tools, selection and preparation of the rock surface, and application of the paint or engraving tool to create the desired symbol (Smith, 2010). The creation of rock art encompassed a specific narrative at the time of its creation that could also be recalled when others viewed the marks (Fowles & Arterberry, 2013). Yet the scribing of geometric and animal shapes was likely to have been subject to a variety of interpretations even at the time that they were being made: was an animal a spirit incarnation, or merely an instructional pointer about what was good to hunt? Was a geometric pattern the result of a hallucinatory state (Lewis-Williams & Dowson, 2003) or a motif of social identity that was also represented on basketry, tattoos and body paintings whose organic manifestations are lost to us today?

Throughout their period of creation and subsequent use, the symbols engraved or painted in rock art served as memory-assisting devices, a focal point of discussion and a visual enhancement of performance that took place in a group. Regardless of how widely a particular motif was repeated, rock art remained dependent on the presence of interpreters who could guide the subsequent viewers of the images. In the course of narration, messages might be revived, extended and modified depending on the interpreter's skill and depending on the audience's background, needs and sophistication. Images in rock art not only identified the subject in question ("this is a *nilgai*") but also encoded specific knowledge about the representations into a social framework ("*nilgais* are good to hunt and eat"). The person who led the discussion may or may not have been the original artist, and learners who were absorbing the information may or may not have been present when the designs were originally affixed to the rock; indeed, the continuing role of interpreter would have been more important to the specific retelling of a story or directive than the one-time act of creating the art. The reliance on symbolic and graphic images as a prompt for discourse resulted in symbols having a tripartite participation of maker, interpreter, and audience, in which the original maker soon ceased to play a significant role compared to the many generations of people who experienced the work afterwards.

The advent of written scripts transformed and extended the phenomenon of rock art symbol-making in multiple ways. Script and symbol systems on portable media could travel to different audiences, rather than depending on an audience to come to the script as was the necessary condition of immovable rock art. The portability of script-bearing instruments enabled people to carry receipts and directives with trade goods across large spaces, and could transport instructions, medicinal recipes and sacred texts beyond their origin points. Closely related to the phenomenon of portability is the use of scripts to make multiple copies of the same instruction, recipe or text in a way that allowed for multiple simultaneous distribution of knowledge and commands. Because stone was not portable except in very small sizes, people around the world made use of other media to distribute written texts, including bone, wood, bamboo, tortoise shell, textiles, and eventually, paper. Clay, a highly versatile medium, also was utilized to bear symbols, not only in the creation of clay tablets as was the case in Mesopotamia, but also in the use of clay vessels both before and after firing in many parts of the world.

The beginnings of script required not only the development of an agreed-upon symbol system, but also a codification of other aspects of language including grammatical elements such as subject-object-verb word order; markers of past, present and future actions; and the use of subjunctives and linking words (and, but, or) that could change the meaning of symbol strings. Throughout the development of written language, a consensus was needed to assure continuity between one scribe and the next. All of these elements of script made it challenging for a perfectly executed transition from the world of rock-art symbols to the world of abstract writing systems. Some creative configurations

of script could have easily been decoded by readers (such as the concept of “boustrophedon” meaning that the individual elements of the script were written from right to left or left to right in alternate lines). Other creative configurations of script would have been unreadable without the assistance of an intermediary to explain the intended meaning. For symbol systems that included only the basic elements of counting or identifications of peoples and places, a knowledgeable intermediary could be used not only to validate the message but also to fill in the grammatical elements, verb tense and linking words that were important parts of the communication but not physically encoded into the symbol system.

While translated scripts provide important information about the ancient world through the direct access to the intended meaning of texts, the presence of undeciphered symbol systems also can provide an important analytic function in our understanding of the development and use of writing. Two significant global examples are hereby compared: the Inka khipu system and the Indus script.

The Inka khipu

The knotted cords known as khipus (or quipus) are first recognized in the archaeological record of the Andean region of South America in the Middle Horizon period, CE 600-1000 (Salomon, 2004; Urton, 2014). The system of knotted cords was afterwards taken up by the pre-Columbian Inka state as a recording system. Khipus consist of a series of cords of different lengths, colours and types of fiber in which the individual cords have knots as mnemonic prompts (Fig. 12.1). Because they were made of fiber, khipus were subject to disintegration (one can also imagine that they were

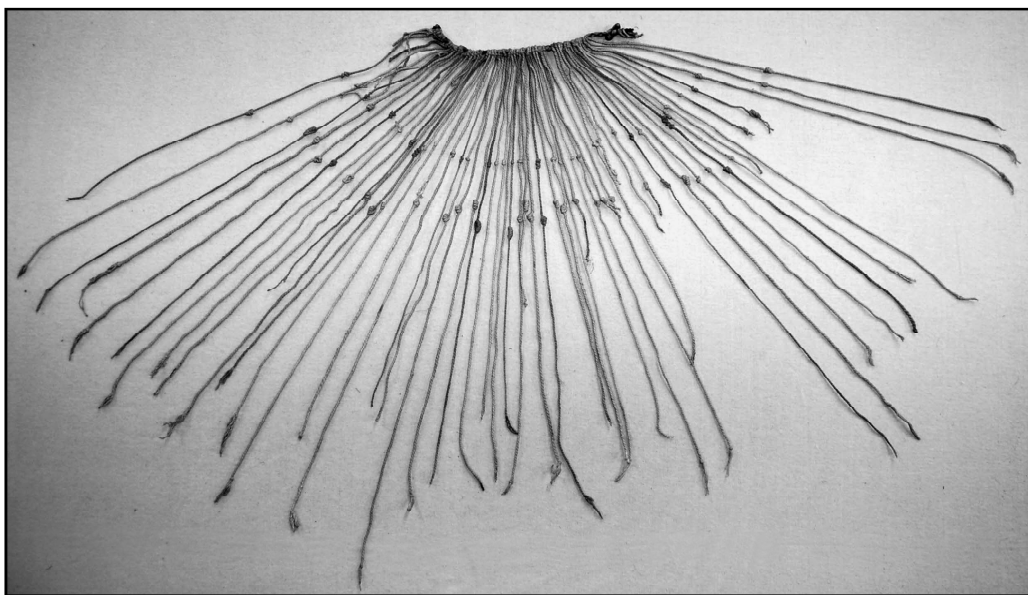


Fig. 12.1. Khipu Made of Cotton (Am.9941AN1010673001, Courtesy British Museum)

eventually repurposed as strings for ordinary use). However, due to the very dry conditions of many Andean sites, a number of khipus have been recovered; some are remarkably elaborate and contain hundreds of strings. The most recent research has documented more than 900 khipus in museum collections (Urton, 2017), many of which are also documented in the Harvard Khipu Database (<http://khipukamayuq.fas.harvard.edu>; Urton, 2014).

Although the Spanish colonial administrators who came to South America in the sixteenth century recognized that khipu were used to record administrative data, no concordance or translation exists and we cannot “read” these string configurations today. There are many known obstacles to the reading of khipus, including the fact that several languages were in simultaneous use during the Inka period (Salomon, 2004; Urton, 2014). Even the supposition that the strings were used to record numerical data contains potential contradictions, as there were both decimal and base-five numerical systems in use at the same time. As a result of the ‘disjunctions in administrative organizations and cord-keeping practices and principles’ (Urton, 2014:219), there was the need for interpretation even in the most basic components of record-keeping.

The presence of skilled intermediaries in the knotting and interpretation of the cords is clear even in the earliest time periods of use. Of the Middle Horizon khipus, Urton (2014:212) notes that ‘The contemporaneity and overlap in cord patterning of these first three examples suggest that they made up at least part of the archive of a highly skilled Wari cord keeper, or perhaps a group of cord keepers who were in contact and sharing cord-making techniques and perhaps information with each other’. By the Inka period, ‘The complex, esoteric knowledge required of a khipu kamayuq demanded a substantial period of training to master the creation and reading of the khipu’ (Kolata, 2013:91). Spanish chroniclers documented the existence of “khipu kamayuq” or “khipu-keepers” who were the administrative cadre of the Inka elite, and contemporary depictions of the khipu show them accompanied by individuals who hold the khipu out for inspection and recitation (Fig. 12.2).



Fig. 12.2. Provincial Administrator with Khipus
(Image by Guaman Poma de Ayala, 1615 A.D.)

INTERFOTO / Alamy Stock Photo

The challenges of interpreting *kipus* have led researchers to address a number of aspects beyond decipherment, such as the physical structure of the strings with their complexities of colour and fiber combinations, and the notion of use strategies and archiving (e.g. Urton & Chu, 2015). While the physical pieces of cord might have been made by textile workers who then delivered them to the *kipu*-keepers, the process of knotting and connecting strings could only have been done by a person who would be in a position to recite the meaning of those knots afterwards. Knots on individual strings could be added as a matter of continuous recording and reuse, while entire strings could be added or substituted within an extant *kipu* (G. Urton, pers. comm.). The fluidity of creation and interpretation was embedded in ongoing social relationships, in which 'the context of use was a face-to-face community where any ambiguity could be immediately resolved' (Salomon, 2004:16). In other words, there was no definitive text: a *kipu* was a living document that was physically modified according to the current state of affairs and depended on a specialized knowledgeable interpreter to be present at all times.

The Indus Script

The development of abstract graffiti, pre-firing marks and painted symbols on pottery appeared as early as 4500 BCE in the Baluchistan region of the Indian subcontinent (Kenoyer, 2009). By c. 2800 BCE, the corpus of script consisted of 300-400 different pictographic symbols found on a variety of items including seals, pottery, copper tablets and bone objects (Farmer et al., 2004; Kenoyer, 1998; Wright, 2010). Like the Indus culture itself, the script has a widespread distribution throughout the areas of northwestern India and modern-day Pakistan; however, the script appears to have been most widely used in urban settlements with the majority of the 4200 known finds coming from the sites of Harappa and Mohenjo-Daro (Kenoyer, 1998). Many individuals have studied the script and attempted decipherments but there is no agreed-upon reading of the contents. In lieu of decipherment, studies of the script have focused on script production, including the manufacture of seals (Jamison, 2012), the social contexts of seal use (Jamison, 2017), and assessments of the script's likely grammatical structure (Rao et al., 2009; Yadav et al., 2010).

The public visibility of script-bearing items was quite variable. Some instances of seal use would have been highly visible, as in the case of lumps of mud bearing seal impressions that served as tags on parcels and doors (Wright, 2010). Another very visible instance of Indus script is the "signboard" at the site of Dholavira, which bears ten symbols (Bisht, 2004). However, many instances of Indus script are on objects so small that they appear to have been designed to be hidden rather than displayed. Kenoyer (1998) suggested that script on tiny bone points and stoneware bangles may have had a secretive or protective intent. Even the seals as the most-studied category of inscribed objects are quite small, in the same size range as a human palm and thus also easy to conceal (Fig. 12.3).

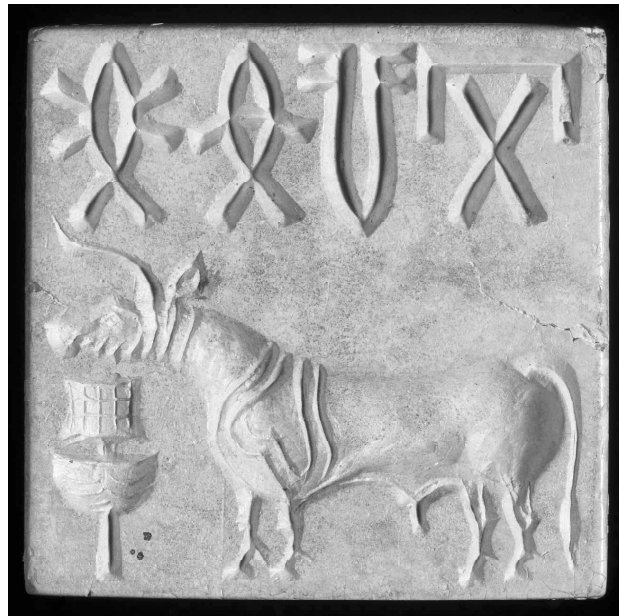


Fig. 12.3. Typical Indus Seal Made of Steatite (1947,0416.3AN345740001, Courtesy British Museum)

It is not only the size and scale of inscribed objects that suggests differential production and consumption practices of inscribed objects. Some Indus seals have considerable amounts of wear, as though they were repeatedly used to render impressions on other media such as clay; other seals have been found apparently discarded in pristine condition (Possehl, 2002). There are a number of unique symbols, suggestive of differential initial development. Among the corpus of symbols, 27% of the signs appear only once and 52% of the signs appear five times or less, an observation that spurred Farmer et al. (2004:36-37) to propose that 'at least some Indus symbols were invented 'on the fly' only to be abandoned after being used once or a handful of times'. Farmer et al. used the high incidence of singletons to argue against the concept of the Indus signs representing a true "script." However, another interpretation can be offered that reflects the use of inscribed markings as an idiosyncratic, artistic expression – like rock art – in which unique symbols were expected to be explained by the ongoing presence of an interpreter (unique symbols are also present in other early global undeciphered scripts, such as Isthmian, in which the recovery of a single object added twenty-five new signs to the corpus; see Houston & Coe, 2003).

The variability of script elements fits in with a conceptualization of the way that the Indus world was interconnected. As Kenoyer (1998:81) has suggested, 'The Indus rulers appear to have governed their cities through the control of trade and religion, rather than with military might'. Taking a comparative perspective with other global regions, it can be said that trade transactions and ritual concepts are continually subject to in-place negotiations (e.g. Schieffelin, 2007), whereas political pronouncements tend to be direct and non-negotiable (e.g. Porter, 2001). Ritual practices and economic transactions

also typically involve multiple individuals in the course of bargaining and ministrations, thus a symbol system subject to on-the-spot interpretations would have been sufficient for the affirmation of non-negotiable elements such as ownership or provenance, while negotiable aspects of the transaction such as value or destination were left to the realm of the spoken word.

Discussion

When we think of ancient writing, we primarily have the experience of the modern world in mind, along with our experiences of well-known and translated scripts of Egypt, China and Mesopotamia. Those scripts were all-purpose instruments of transmission, enabling people to record a range of genres through a proliferation of texts. Thus, Mesopotamian cuneiform which started as a system for economic recording was later utilized for recording legal texts, poetry and religious documents. Egyptian hieroglyphs and Chinese glyphs were developed for religious rituals but later were utilized for a variety of administrative and economic purposes. However, the large number of as-yet undeciphered or special-purpose scribal systems found elsewhere in the world provides an important window into the development of script as a whole.

Because of our own knowledge and use of written texts, we make assumptions about early symbol systems that may not be warranted. First, we assume that symbol systems codify information into a standardized form that “means” the same thing whenever and wherever it is found. Secondly, we assume that script constitutes a basis for discussion and absorption that is standardized across multiple audiences. Third, we assume that competent ancient readers could unambiguously decipher the meaning of texts independently in the same way that we engage today with books and newspapers. These assumptions may not be tenable for the beginnings of many ancient scripts at a time when scribes, interpreters and readers were still coming to terms with the development of a consensus about form and meaning.

We also have to remember that people in the past would have had limited literacy even after scripts and symbol systems were invented, but that fact would not have prevented them from accessing the information encoded in script. Seals and sealings (and their modern equivalent, logos and brand images) do not encapsulate an entire realm of information, but provide a point of entry and easily identifiable referent even for those who do not read as a way of signaling the presence of important content (in fact, there is an interesting ethnoarchaeological study to be done among non-literate peoples today about the way that they interpret the meaning and symbolism of the written word, and how they access the content of written documents through other people acting as intermediaries). Although our symbol systems have expanded well beyond rock art, there are still many instances in which we require a “professional vision” (Goodwin, 1994) in the interpretation of visual phenomena. Examples include the interpretation of abstract art (Schiffer & Miller, 1999), the reading of satellite images

(Huynh et al., 2013), and the decipherment of medical imagery in which doctors routinely interpret x-rays and scans to enable the patient and family to “see” the importance of the phenomenon in question.

The concept of “literacy” with regards to text is quite fluid even amongst educated people, in which familiarity with a particular script does not mean the ability to understand the contents of a message. One can be well-versed in a particular script but still unable to read the text (for example, Roman script can be used for English, Vietnamese and French, in addition to being rendered serviceable for Hindi and Russian; similarly, Arabic script can be used not only for Arabic but also for Persian, Urdu and Pashto). The use of a familiar script means that we can sound out the words, but we still cannot understand those words unless there is an intermediary to guide us on the specifics of the language for which the script has been used. Scripts can be used to create shorthand referents, such as an acronym in which the term only makes sense when one knows the entire word or phrase represented by a single letter. Scripts also can be used to encode information not available to the general reader, such as numerical information displayed on a bar code or the alphanumeric combinations on batches of packaged goods that manufacturers use to track regional production locales, workers’ shifts and the individual machines on which the items were produced. Other examples of alphanumeric special-use codes include vehicle license plates and the reference strings on official and government correspondence.

Even when the script-writer and the reader can fully understand the content of a message, there are still ways in which an intermediary serves an important social role by authenticating a message and by serving as an authoritative performer of a text. In a number of religious traditions, an officiant such as priest, rabbi or imam reads aloud the words of a holy book as part of an organized ritual of worship. Many of the congregants can and do read on their own and exercise a choice whether to follow along with the officiant while looking at the words independently or whether to take in the words simply through the act of listening. The performance of the written word also is evident in literary readings and audio books, in which the intonation of the person who is physically reading the words results in an enriched experience beyond the literal meaning of the words themselves. A different role for intermediaries is found in the realm of jurisprudence, in which lawyers function as interpreters of written documents. Lawyers do not write the law, nor do they directly punish wrong-doers. The role of lawyers is to know the laws, the prior applications of those laws, and forthcoming potential interpretations according to the facts and statements of their clients (whether the state or a private party) in any particular case under litigation.

The “writing” system of the Inka khipu and the Indus script may fall within a category of symbol-making systems in which the function of an intermediary was a necessary component of script use, and in which there was no expectation that a person

could read the script without such an intermediary. Bruce Trigger (1998) discussed the way in which some historically known scripts, such as Japanese, appear to have been made to be deliberately difficult to learn as a method of maintaining political power over the revelation of content. While a desire to obfuscate knowledge might have applied to the knots of the Inka khipu system, it seems less likely that the Indus script was deliberately esoteric and unavailable. Instead, the small-scale and continual interactions among people meant that items bearing Indus script were not a substitute for face-to-face interactions about meaning and content, but a supplement to such interactions.

The performative aspects of Indus script, and the likelihood that the script conveyed a small range of meanings that nonetheless encoded significant cultural information, serves as an example of the way in which symbol systems across the globe had different trajectories. Although an object is manufactured only once, it can be used for directed viewing and interpretation over and over again (Goodwin, 1994; see also Fowles & Arterberry, 2013; Porter, 2001). Some abstract symbol systems required ongoing, “live” intervention to be understood, while other symbol systems dropped the expectation of an intermediary and became a truly direct mode of communication between the scribe and the recipient while retaining the capacity for intermediaries to enhance or emphasize a message through narration and interpretation. The social context of script production and symbol use proceeded in tandem with historical trajectories of cultural development, which may explain why some scripts and recording systems have remained “undeciphered.” Such scripts were not created for the benefit of people removed in space or time, and functioned only in the here-and-now as a form of validation or as a physical token of expertise.

After nearly a century of frustration with the lack of a translation for the Indus script, we may be better served to compare it with other non-alphabetic systems of communication in order to ascertain how script can be an adjunct of transmission rather than a stand-alone document that could be unambiguously “read” by a recipient acting alone. The consideration of the use of intermediaries can in turn inform us about other aspects of ancient Indus life. Researchers have already reconstructed some aspects of Indus social structure on the basis of the walled neighborhoods that suggest that cities were occupied by groups of competing merchant communities (Kenoyer, 1998). The existence of social stratification also is affirmed by the presence of burials with differential quantities and qualities of goods (Shinde et al., 2011) and by the existence of artifacts that look identical but that were made from fabrics of variable cost (Kenoyer, 1998). The existence of the Indus script as the occupational domain of trained interpreters is yet another category of social differentiation, one that may even suggest the presence of a “middle class” of professionals in the Indus culture who held and disseminated specialized knowledge (cf. Smith, 2018).

Conclusions

Rock art, Inka khipu and Indus script were record-keeping systems whose physical manifestations were supplements rather than substitutions for face-to-face oral communication. In all three cases, symbols served as a memory-prompt or validation that could not be directly “read” except by intermediaries who possessed specialized knowledge. In the Inka and Indus cases, the portability of symbol-bearing artifacts further suggests that there was a social context of display that accompanied the conveyance of meaning and information. The Inka khipu system was one of physically hidden knowledge, with knotted strings that could easily be wrapped and put away. Similarly, Indus seals and other artifacts on which script was written were often small, portable items that could be easily concealed at a moment’s notice and in which both the visibility and contents of the script was continually mediated by a knowledgeable person in a way quite different from a text readable by all.

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