TWO ANCIENT ROCK INSCRIPTIONS INDICATE AN ARCHAIC CHINESE PRESENCE IN THE AMERICAN SOUTHWEST

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Abstract. This paper documents and offers translations for two sets of ancient, highly complex inscriptions readable as Chinese that were pecked into the rocks of Arizona and New Mexico an estimated 2,500 years ago. Here is what appears to be conclusive epigraphic evidence that Chinese explorers not only reached the Americas in pre-Columbian times but also interacted positively with Native populations, sharing both intellectual and cultural information.

THE WRITTEN RECORD OF A CHINESE OFFERING

In the roadless Rinconada Canyon area of Albuquerque, NM’s, Petroglyph National Monument, high above a sandy trail frequented daily by hikers, joggers, and dog-walkers, is a set of very old petroglyphs, readable as ancient Chinese script (Figures 1 and 2). Here, in public view yet remaining unrecognized and miscategorized, are the ancient written Chinese symbols: xiàn ‘to offer sacrifice in worship to deceased ancestors’, quán ‘dog’, dà ‘great’, jié ‘to kneel down in reverence’, Dà Jiă (the name of the third (or fourth) king of the Shāng dynasty), and gēng (the seventh Chinese Heavenly Stem).
Independently, the late David N. Keightley—considered by many to have been “the foremost analyst of oracle texts in the West” (Eno 2010: 2)—confirmed that these petroglyphs have the form of Chinese characters. In fact, Keightley was the first to recognize the name of the Shang king Dà Jiă upon this boulder, and communicated his insight with the following message: “John… You might perhaps, see the term Dà Jiă, A Shang ancestor!” (personal communication, 11 May 2013).

Additionally, Michael F. Medrano, Chief of the Division of Resource Management for Petroglyph National Monument, personally evaluated the petroglyphs upon this boulder on 13 November 2013. Dr. Medrano has over 25 years’ experience working at the Monument with represen-
tatives of local Native cultures; upon viewing these figures, he commented, “These images do not readily appear to be associated with local tribal entities,” and “based on repatination appear to have antiquity to them.”

THE RECORDED MESSAGE OF THE PICTOGRAM-GlyphS

Centrally located on this boulder, in the middle of a collection of interpretable Chinese characters, is the serpentine Bronze-era-script figure jié, meaning ‘to kneel down in reverence toward a greater authority’. The illustrative message of this symbol—an individual bowing toward a superior while holding aloft his half of an imperial seal (Wieger 1965: 147)—may be understood as follows (Figure 3).

Figure 3. A man kneeling before his superior, holding his seal in his hand.

The short vertical section atop this curvilinear drawing represents half of an imperial seal given to the man previously, as he displays it to his superior. From the bottom of this section, the line abruptly bends to the right, depicting the arm of this respectful individual. It then reverses direction and curves to the left, forming the outline of the man’s body, before subsequently bending back to the right as the man’s leg. Finally, this single line terminates with a small downward section, representing the toes of the kneeling man as they touch the ground (Fazzioli 1987: 67).

Pecked upon this boulder immediately in front of the kneeling figure jié is a stickman embellished with puffy pants and a shirt. While stickmen are common in North American rock art, this particular figure exhibits an unusual amount of detail (reflecting the energy expended for
its creation). It communicates to the observer that this man is, indeed, a very important person, someone worthy of deference. As a sign, it is an enlarged form of the oracle-bone character alties, meaning ‘great’; and, appearing as it does upon this boulder, it affirms the interpretation provided above for the logograph jié.

To the left of alties is the figurative Chinese Seal-era pictogram representing a dog, quán. To the left of this canine logograph, near the edge of the boulder’s west face, this singular row of four ancient Chinese signs terminates with the boldly inscribed and highly complex Bronze-era version of xiàn, meaning ‘to offer in worship to the deceased ancestors’ (Wieger 1965: 304). Xiàn is a multifaceted figure, composed of three distinct parts: a schematic depiction of the head of a tiger resting upon a cauldron, with a dog strategically positioned alongside. Keightley (personal communication, 11 May 2013) also verified the collective presence of these three graphic components of xiàn upon this boulder.

Reading the sequence of these four pictogram-glyphs in the traditional Chinese manner from right to left, beginning with the symbol jié, we learn about a respectful man honoring a superior with the sacrificial offering of a dog. “[T]hat dog sacrifices were very popular in the second part of the second millennium B.C. in China is supported by evidence in oracle-bone inscriptions . . .” (Bulling 1977: 9).

In addition to these four readable pictogram-glyphs, immediately above the character jié, pecked into the west face of this boulder, are the two additional signs of which the posthumous name of China’s third (or fourth) Shāng emperor (1535–1523 B.C.), Dà Jiă, is composed. Furthermore, at the lower right side of this panel is the oracle-bone symbol for gēng, the seventh Heavenly Stem of the ten-stem Chinese calendrical counting system.

In spite of the recognizable forms of these two supplementary signs, determining a date for the creation of the chronologically seemingly incongruous styles of Chinese writing on this boulder is no easy task. Nevertheless, all of these scripts exhibit the same level of repatination, indicating that they were created contemporaneously and that they are not recent fabrications (i.e., created after the rediscovery of oracle-bone script in A.D. 1899).

Keightley has informed us, in Sources of Shāng History, that an emerging Shāng practice toward the end of the dynasty was to add the preface alties ‘great’ to the names of their kings, examples being alties Jiă, alties Gēng, and alties Wù (Keightley 1978: 207). Following the era of the Shāng (ca. 1600–ca. 1046 B.C.), a different form of appellation gradually supplanted this custom. Therefore, the intentional placement upon this boulder of the title
dà as a simplistic stickman alongside of the name Jiă, suggests that these logographic petroglyphs were inscribed not far from the end of the Shāng dynasty in 1046 B.C.

Mutually, the Seal-era quǎn pictogram written upon this boulder, plus the adjoining Bronze-era-script form of xiàn located beside it, support the above estimate for the age of these pictogram-glyphs. Informatively, the commingling of these multiple styles of Chinese script indicates that these writings were produced during a transitional period in Chinese calligraphy, likely after 1046 B.C. and certainly not much later than 475 B.C., for we are reminded that “the different scripts did not follow one after the other in orderly fashion, each growing from the previous one in a linear progression. They evolved over several centuries and often overlapped” (Wilkinson 2000: 409).

AN ACCOUNT OF AN ANCIENT TRANSPACIFIC JOURNEY

In the Upper Little Colorado River drainage of east-central Arizona, approximately 250 miles to the southwest of Albuquerque, NM, there exist three ancient and uniquely subdivided petroglyph cartouches, each filled with readable combinations of what clearly appear to be ancient Chinese logograms (Figure 4).

![Figure 4. Ancient Chinese-script-like cartouches of Arizona.](image)

Instructively, these cartouches were numbered by their ancient author, for written beside one of them is the Chinese character yī, meaning
'one', and similarly inscribed beside the adjoining cartouche is the symbol \( y\ddot{i} \), meaning ‘second’. Together, the equivalent positioning of these numeric designations, one beneath what is meant to be the bottom of each cartouche, provides a visual clue for the intended alignment as well as the reading order of these writings.

These cartouches are all modest in size, measuring from 15 to 20 cm. (6 to 7 7/8 in.) in length and width. Consequently, when they are viewed from even a short distance they are inconspicuous upon this embellished rock outcropping. Evidently, the message preserved by these pictogram glyphs was not intended to be a public announcement. Rather, as Keightley noted in a 2006 article concerning oracle-bone inscriptions, “the incising mattered more than the writing,” as they were “inscribed to leave a record rather than a document”; for “the importance of the inscriptions was that they were there, that they existed, not that they were read” (Keightley 2006: 189–91).

Notably, the author of this inscription oriented the numbered cartouches 90 degrees counterclockwise from the vertical, while the third, unnumbered cartouche was oriented 90 degrees clockwise from the vertical. The deliberate rotation of these writings, both to the left and right of vertical by an equal number of degrees, supports their authenticity, for the rotation of individual logographs by Chinese calligraphers is well-documented (Wilkinson 2000; Keightley 1978).

CARTOUCHE 1: “A JOURNEY OF TEN YEARS”

The ancient author of this, the first cluster of ancient signs at this site, intentionally labeled it as Cartouche 1 by placing below its intended bottom a single horizontal dash, Chinese \( y\ddot{i} \) ‘one’ (Figure 5). Notably, the manner in which this numerical designation is inscribed beneath these enclosed signs informs observers a) to rotate the characters 90 degrees to the right for reading, and b) to “Start here.”

Significantly, Cartouche 1 is subdivided into two equal and parallel sections, each of which is filled by a pair of vertically oriented ancient Chinese characters. Of considerable importance for understanding these two sets of aligned logographs is the fact that they have uniquely opposite mirror-like orientations, reminiscent of a reflective-script oracle-bone pattern (Keightley 1978) and suggestive of folio pagination. The intentional separation of these two pairs of vertically aligned signs informs the reader that each duo is to be interpreted independently.\(^1\)
Within the top-right segment of Cartouche 1 is the ancient Chinese script symbol \( \text{yīn} \), meaning ‘secluded’ (Chalfant 1906: Pl. 31), or alternatively ‘secretly, hidden’ (Morrison 1819: 1029). Below it, the author wrote the Chinese character \( \text{jiū} \), thereby adding to the meaning of \( \text{yīn} \) the concept ‘togetherness’. Collectively, these two signs imply a group of individuals ascetically ‘set apart together’.

Similarly, the left half of Cartouche 1 also contains a pair of vertically aligned ancient Chinese signs. Within this outline, there are mirror-image oracle-bone figures: \( \text{xūn} \) ‘10 years’, inscribed above \( \text{jiū} \), which appears in normal form within the right half of Cartouche 1. In spite of the author’s reversal of these two script symbols, together they convey the idea of having been ‘10 years, together’. Collectively, the two sets of paired scripts identified within Cartouche 1 appear to describe a team of individuals who have been with one another during a decade.

**CARTOUCHE 2: THE JOURNEY DESCRIBED**

In the same manner that Cartouche 1 is numbered by the symbol \( \text{yī} \), Cartouche 2 is identified as the second set of characters at this location, by the purposeful placement of the Chinese sign \( \text{yī} \) ‘second’, beneath it (Figure 6). Instructively, Cartouche 2 was pecked immediately to the left of Cartouche 1, thus confirming the intended reading sequence of these scripts (i.e., from right to left, as in a conventional Chinese document).
Consistent with the orientation of Cartouche 1, Cartouche 2 exhibits the same rotation, 90 degrees counterclockwise. However, unlike the author’s bilateral division of the interior space of Cartouche 1, Cartouche 2 was subdivided into four unequal areas, each filled by a solitary symbol.

From top to bottom and right to left, the individual characters of Cartouche 2 appear in the following order: chí ‘speech’, huí ‘to return’, huí ‘completed journey’, and the compound symbol rì ‘Sun’ placed within wéi ‘a wall’. Read in this manner, these four ancient Chinese pictogram-glyphs preserve the core message documented by the three cartouches (i.e., ‘declaring to return, the journey completed, to the house of the Sun’).

Interestingly, in the ancient Chinese text of the Shan Hai Jing, known since at least the fourth century B.C. (Bagrow and Skelton 2009: 204), there is the somewhat fanciful account of an ancient expedition that journeyed to a land far beyond the East Sea (Pacific Ocean). Among other things, this early document asserts that this distant region is where the Sun and Moon rise and that it contains an abyss called the “Big Chasm” (Birrell 1999: 159; also, Mertz 1953; Rees 2013).
In the same manner as Cartouche 1, the interior space of Cartouche 3 is bilaterally divided (Figure 7). However, Cartouche 3 was not labeled with a number, and its orientation is 90 degrees clockwise from the vertical, the opposite of the positioning of Cartouches 1 and 2.

Written within the left section of Cartouche 3 are the ancient Chinese script figures hui ‘completed journey’ and jiū ‘together’. Read from top to bottom, these characters reiterate the messages of Cartouche 1, stressing the unity of this accomplishment, that it was a jointly finished trip.

However, unlike the identifiable characters within the left side of Cartouche 3, in the adjoining right-hand portion of Cartouche 3, there is what, to date, remains an unidentified symbol. With a form unlike any known Chinese sign, it resembles drawings placed upon early Chinese manufactured items, which, as emblems, are understood to be identifiers of ownership, or trademarks. Consequently, if this unique depiction is a representative figure, it may be the author’s testimonial mark (signature). Nevertheless, for now the meaning of the symbol remains undetermined.

THE BASIC MESSAGE OF THE ARIZONA CARTOUCHES

The author of the three Arizona cartouches described above doc-
umented his story in a unique fashion. By enclosing sets of connected
logographs within numbered and subdivided outlines, he grouped his
thoughts into sections, as if they were paragraphs written upon succe-
sive pages, thereby indicating the reading order to be followed for com-
prehending his message. And, as William Boltz has reminded us: “The
interpretation of what any Chinese character depicts is always subjec-
tive and never the same thing as understanding what word the character
writes, but if the interpretation is arrived at thoughtfully, and without
recourse to unwarranted a priori assumptions, it can sometimes be le-
gitimately suggestive all the same of specific aspects of material culture”
(Boltz 2009: 107).

Consequently, by deciphering these ancient signs in the prescribed
sequence, from right to left and top to bottom, as Chinese is read, one
possible translation of the entirety of the message recorded at this loca-
tion is as follows:

Cartouche 1: ‘Set apart (for) 10 years, together’.
Cartouche 2: ‘Declaring, (to) return, (the) journey completed, (to the) house of the Sun’.
Cartouche 3: ‘(The) journey completed, together’, [affixed emblematic signature].

AN INFORMED AND POETIC ALTERNATIVE READING OF THE
CARTOUCHES

When Chen Lung-Chuan of Taiwan, a professional translator, first
read the symbols contained within the Arizona pictogram-glyph car-
touches, he immediately noted that the alignment of the ancient Chinese
words contained by these figures corresponds with the style of Chinese
poetic writings found in the Chinese book of poems called the Shī Jīng,
dated to between the eleventh and seventh centuries B.C.

Subsequently, Chen concluded that the reading order of the four
sets of symbols he has identified within each of these cartouches produc-
es a rhyming pattern characteristic of the ancient Chinese poems pre-
served in the Shī Jīng. This interpretation led David N. Keightley to sug-
gest that these Arizona cartouches may have been created in the same
era as the Shī Jīng poems, that is, during the early or middle part of the
Zhōu dynasty (ca. 1046–221 B.C.; personal correspondence, 19 July 2015.)

The following is the alternative analysis of the Arizona cartouche
pictogram-glyphs that Chen provided:

For the Cartouche 1 containing the Chinese pictograms of 隱 纾 旬
and 纾 I now know that there is an error in your research. The first “糾”
is WRONG (i.e. It is not a LEFT-RIGHT reversion.) It is another word “
互” which with its paired pictogram of “隠” corresponds in pronunciation with “寅虎” in Cartouche 3.

Consequently, Cartouche 1 contains the symbols of 隠 互 旬 糾, which are pronounced respectively as Yĭn Hù Xún Jiū and may be translated as “Together left, 10 years together.”

(Note: the words Hù and Jiū found within Cartouche 1 rhyme with sounds much like the English words of “who” and “Jew.”)

Cartouche 2 contains the symbols of 齿 歌 回 朝, which are pronounced as Chĭ Gē Huí Cháo and may be understood as “Talking about the City of Song, Returning to the City of the Sun.” Cartouche 3 contains the symbols of 寅 虎 回 糾, which are pronounced as Yín Hŭ Huí Jiū and may be translated as “In Year of Tiger, return together.” Believe me; this (find) is not simply about Archaeology, but also LITERATURE. It is a fantastic poem (or lyrics, if people can find the music scores of it), just like those you read in “詩 經” (the Shī Jīng).

The two “糾” in Cartouche 1 are DIFFERENT words; in fact, they should be in this way. Cartouche 1 - 隠 糾 旬 互 Cartouche 2 - 齿 歌 回 朝 Cartouche 3 - 寅 虎 回 糾.

Therefore;
A. This poem is integrally in rhythm by means of “朝” (in Cartouche 2) and “糾” (in Cartouche 3), according to ancient Chinese pronunciations.
B. The author was also playing the GAME OF PRONUNCIATIONS between the Cartouche 1 and Cartouche 3!

For Cartouches 1 and 3:
隱 pronounces like 寅; 糾 pronounces like 糾; 旬 pronounces like 回; 互 pronounces like 虎.

(If you look at the Cartouche 1, then make a big cross mark \“X\” thereon to get the Cartouche 3.)

—CHEN Lung-Chung 2015-08-12 Taipei

SHARED NORTH AMERICAN AND ASIATIC SYMBOLISM

More than once, the ancient author of the cartouches described above recorded his message with graphic images that were, and still are, understood in the same manner by both Native American and Asiatic populations. The first of these mutually symbolic figures portrays the interlocking fingers of two hands. Persisting into modern times, the Hopi people of Northern Arizona refer to this figure as Nakwách, their symbol for ‘brotherhood, friendship’ (Figure 8). Chinese calligraphers, both ancient and modern, use an identical figure, jiū (Figure 9), which for them represents the twisting of multiple items into one (Wieger 1965: 145). For the Chinese, the figure jiū conveys the idea of ‘togetherness’, in much the same manner as the Nakwách symbol is now, and has been in the past, understood by the Hopi (cf. Zhang 1996).
A second prominent example of the parallel symbolism employed by North American and Asiatic authors, evident in the study cartouches, is their joint use of a rectilinear spiral to convey the concept of a ‘round-trip journey’ (Figure 10). This symbol, which the Chinese pronounce huí, appears frequently in North American rock art, both as a single object and in repetitive patterns. Historically, the Hopi have used this symbol to portray the four complete migrations that their legendary god Massau instructed them to make, once to each of the four cardinal directions and finally to “Center Place” (Figure 11). Significantly, “among all Pueblo Indians the cardinal directions, the zenith, and the nadir are associated with specific colors, and color and directional symbolism are important” (Cordell 1997: 17). The fact that among the Chinese and equally important for them, specific colors are associated with the four cardinal directions and center, has also been noted (Nowotny 1969; Jett 1983: 379; Davis 2001: xxx; Zeilik 1986: S8).

A BRIEF HISTORY OF ARCHAIC CHINESE WRITING

The history of writing is a multifarious topic. From humankind’s earliest use of signs and symbols through the development of proto-writing to the emergence of formal script systems, there is considerable debate about just what constitutes true writing. Still, most scholars agree
that “Writing arose, as far as we know, ex nihilo only three times in old-world antiquity: in Egypt, in Mesopotamia, and in China, and once in the new world, viz., the Mayan script of Mesoamerica” (Boltz 2003: 10).³

Throughout its evolution, Chinese script has remained a highly pictographic form of writing, relying upon imagery (graphemes) to convey meanings rather than employing symbols for the individual speech sounds (phonemes) of the language.

The earliest known fully developed form of Chinese writing, oracle-bone script, appeared initially in the historical record around 1700 B.C. From that early date, and for approximately the next 600 years, oracle-bone script was carved primarily into animal bones.

Of singular importance for dating the pictogram-glyphs of this study, knowledge of oracle-bone script was totally lost to humanity for over two millennia following the collapse of the Shāng dynasty about 1046 B.C. Once lost, it was not known about until A.D. 1899, when ancient bones inscribed with the script were recovered from an archaeological site near Ānyáng, China. However, although more than 100 years have passed since its rediscovery, the task of fully deciphering oracle-bone script is not complete; to date, the meanings of approximately 50 percent of the circa 5,000 recorded figures remain unknown (Wilkinson 2000: 397).

Following the demise of the Shāng, newer styles of writing appeared, which eventually supplanted oracle-bone calligraphy (Figure 12). However, prior to the standardization of writing in China around 200 B.C., scribes were free independently to modify, personalize, and embellish their scripts as they desired. Accordingly, there evolved a plethora of new symbols, which, unfortunately, were seldom widely understood. This unregulated profusion of script characters became such a problem for the average Chinese reader that, in approximately 500 B.C., even the learned Confucius complained “of scribes who were dishonest and instead of leaving blanks when they forgot characters, made new ones” (Wilder and Ingram 1922: iv).

With time, the invention and widespread adoption of new and improved writing technologies (such as use of ink and brush) required that stylistic changes be made in Chinese characters, rewarding their conformity. Each major style of Chinese writing is now associated with a particular historical period. Therefore, although Chinese writing was generally unregulated early on, its major calligraphic styles are very datable and are especially useful for determining the approximate age of written records. The styles relevant here are oracle-bone-era, bronze-era, and seal-era.
DISCUSSION

As Bruce Trigger (2006: 531) has reminded us, the ultimate goal of the field of archaeology “must be to recover knowledge of what has been forgotten”. Demonstrably, and, I believe, with manifold robust proofs, the present study fulfills that quest; it has recovered previously overlooked intellectual information preserved in the form of ancient Chinese writings embedded within the North American rock-art record.

The authorship of North American rock writing is a highly controversial and politically charged topic. While ancient stone glyphs evoke curiosity in many observers, by their very nature most of them are extraordinarily difficult to date by any established scientific methodology (Donald Graczyk, Chemist, Inorganic Analysis Technical Lead, Argonne National Laboratory, personal communication, 17 May 2013; Patterson 1992: 4).
Although a few knowledgeable rock-art researchers have put forth plausible explanations for particular symbols, most prudent investigators avoid assigning meaning or authorship to these images. This inclination is due largely to the characteristic uncertainty of rock art imagery (Patterson 1992) and to the sometimes-wild speculations which have been—and, unfortunately, still are—found in some rock-art research reports (Ruskamp 2013).

Similar to controversies involving rock art/writing, the notion of pre-Columbian transpacific voyages to the Americas has also been a hotly debated topic for over 250 years (see, e.g., Jett 1971, 1983, 2017; Fingerhut 1994). Whereas facts referenced by various reputable scholars support early transpacific interaction (see Sorenson and Raish 1996), most professional archaeologists have dogmatically rejected the idea. This reluctance is largely because there has been a dearth of primary supporting evidence such as the discovery of an undisturbed early Asiatic relic or village in the Americas. However, as Henriette Mertz (1953: 16–17) suggested in Pale Ink, “It would be a relatively simple matter if the Chinese Buddhists had been as thoughtful as ‘Kilroy’ and had taken time out to have carved their names in Chinese characters on solid rock, together with a date. . . . If they did, perhaps we have not yet recognized it.”

Concerning the elucidation of rock art, the late-nineteenth-century researcher Garrick Mallery cautioned that “no attempt should be made at symbolic interpretation unless the symbolic nature of the particular characters under examination is known or can be logically inferred from independent facts” (Mallery 1893: 767). Quantifiably, the line strokes and inter-stroke touch relationships comprising each of this study’s Chinese-like pictogram-glyphs in Arizona/New Mexico have been statistically correlated with an attested ancient Chinese character, each at or above the 95-percent probability level, symbol, by application of the Jaccard Similarity Coefficient formula (Table 1). Collectively, these analyses attest that the Chinese-like script petroglyphs evaluated in this study were not created, each for a second time, apart from Chinese influence.

Furthermore, independent evaluations of the study’s pictogram-glyphs performed by multiple epigraphic authorities confirm their readability as ancient Chinese. Significantly, too, the sequence in which the ancient Chinese signs gěng, jié, dà, quán, and xiàn were pecked into the patina of the Rinconada Canyon talus boulder conform with a known syntax employed for chronicling traditional oracle-bone-era sacrificial writings.
For recording sacrificial rites during the Shāng and Zhōu dynasties, Chinese scribes would characteristically begin by documenting the date of the divination followed in order by the sequential pattern of symbols for: the subject of the testing, the King, the object of veneration, and the sacrificial action taken (Liú Yuán 2009). Reading the Rinconada boulder pictogram-glyphs from right to left beginning with the oracle-bone era symbol ㄍㄥ (meaning ‘seventh’), the syntax of the symbols ㄐㄜ (the subject), ㄉㄚ (the King present), ㄑㄢ (the venerated object), and ㄒㄧㄢ (the sacrificial rite), are consistent with this style of ancient writing. Consequently, not only are these long-overlooked New Mexican petroglyphs readable as ancient Chinese symbols, their reading order conforms to a known format for writing that was frequently employed during the Shāng and Zhōu dynasties for recording sacrificial events such as the one that I conclude is commemorated by the inscription at this site.

Table 1. Chinese pictogram/petroglyph correlation values generated by application of the Jaccard Similarity Coefficient.

<table>
<thead>
<tr>
<th>Chinese Pictogram</th>
<th>Location of Petroglyph</th>
<th>$J$</th>
<th>$P$</th>
<th>$N$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronze era Xiàn</td>
<td>Petroglyph National Monument</td>
<td>1.000</td>
<td>0.001</td>
<td>7</td>
</tr>
<tr>
<td>Seal era Quàn</td>
<td>Petroglyph National Monument</td>
<td>0.667</td>
<td>0.01</td>
<td>15</td>
</tr>
<tr>
<td>Bronze era Jié</td>
<td>Petroglyph National Monument</td>
<td>0.692</td>
<td>0.01</td>
<td>13</td>
</tr>
<tr>
<td>Oracle-bone Dà Jiā</td>
<td>Petroglyph National Monument</td>
<td>1.000</td>
<td>0.01</td>
<td>5</td>
</tr>
<tr>
<td>Oracle-bone Gēng</td>
<td>Petroglyph National Monument</td>
<td>0.667</td>
<td>0.01</td>
<td>15</td>
</tr>
<tr>
<td>Oracle-bone Chǐ</td>
<td>Arizona Ranch</td>
<td>0.864</td>
<td>&lt; 0.001</td>
<td>22</td>
</tr>
<tr>
<td>Oracle-bone Xún</td>
<td>Arizona Ranch</td>
<td>1.000</td>
<td>0.01</td>
<td>5</td>
</tr>
<tr>
<td>Oracle-bone Yī</td>
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<td>0.01</td>
<td>5</td>
</tr>
<tr>
<td>Oracle-bone Ri</td>
<td>Arizona Ranch</td>
<td>0.846</td>
<td>&lt; 0.001</td>
<td>13</td>
</tr>
<tr>
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<td>0.001</td>
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<tr>
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<td>&lt; 0.001</td>
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<td>&lt; 0.001</td>
<td>16</td>
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<td>Oracle-bone Jiū</td>
<td>Arizona Ranch</td>
<td>0.615</td>
<td>0.05</td>
<td>13</td>
</tr>
</tbody>
</table>

Key

$J =$ Calculated value of the Jaccard Similarity Coefficient

$P =$ Probability for the calculated value of $J$ occurring by chance

$N =$ Total number of line stroke and inter-stroke touch relation attributes

Note: Three of the petroglyphs evaluated in this report are not included in the above data set. Both the Yin and Yi symbols lack the minimum number of attributes necessary for making a comparative statistical analysis with the formula of the Jaccard Similarity Coefficient. In addition, while readable, the large Rinconada Canyon stickman petroglyph is an embellished drawing, not a pictographic symbol.
The literary attributes of this study’s pictogram-glyphs provide what I feel is compelling and conclusive evidence that, before oracle-bone characters were fully supplanted by newer forms of Chinese script, “literate Chinese were present in the Americas” (Ruskamp 2013: 89). However, there are no known eyewitness accounts detailing the authorship of these ancient rock writings. Moreover—although some progress has been made—so far, the physical dating of the majority of petroglyphs remains inherently unreliable and technically elusive. Still, we are reminded that: “In the absence of sufficiently precise absolute dates, arrived at by carbon-14 dating or some other method, and in the absence of sufficiently precise relative dates, arrived at by analogical or stratigraphic criteria, the inscriptions themselves provide our most reliable evidence for relative dating” (Keightley 1978: 94).

Importantly, both the complexity and quantity of the readable combinations of Chinese characters found at the study’s sites in Arizona and New Mexico reveal that the ancient author(s) of these pictogram-glyphs had an extensive and literate Chinese vocabulary and knowledge of Chinese literary styles (Ruskamp 2013). Although, as part of their historical calligraphic development, the Korean, Japanese, and Vietnamese peoples each adopted forms of Chinese script, these appropriations occurred following China’s Han dynasty (221 B.C.–A.D. 206) domination of Vietnam; the introduction of Buddhism to Korea around 500 B.C. and to Japan circa A.D. 700—in all three cases, long after knowledge of oracle-bone script had been extinguished from human memory. Consequently, the ancient oracle-bone style pictogram-glyphs identified by this research cannot be credited to a population originating outside China.

Frequently, Native Americans attribute the production of ancient rock art to their ancestors. However, thus far, little if any conclusive proof for the authorship of older North American rock art has been offered (Cole 1990: 4). Generally, the greater the age of a rock depiction, the less is known about it. Consequently, the best answer for the authorship of these enigmatic illustrations is that they are “messages from the ancestors, which, though no longer decipherable, remain signs from the past” (Young 1985: 3).

In spite of this vagueness, the extensive Chinese vocabulary evidenced at each of the two locations described argues against crediting authorship of the figures evaluated in this study to American Indians. None of the more complex Chinese figures identified in this report is known to be characteristic of any Native American people (Medrano, personal communication, 2013); and if these inscriptions were Native accomplishments, one would expect additional examples nearby. To date,
after review of more than a hundred regional rock art locations, containing hundreds of thousands of individual figures, no further examples of these uniquely complex patterns of Chinese pictogram-glyphs have been identified—although numbers of individual glyphs in the American West have been identified that conform to Chinese signs such as those for ‘boat’, ‘tree’, and so forth (Ruskamp 2013).

CONCLUSION

Accordingly, what does seem certain is that the origin of the significantly repatinated and uniquely styled Asiatic script symbols identified in this report must be assigned to China, for “The Chinese script is obviously an original system of signs created to record an ancestral form of the Chinese language” (Houston 2008: 258). Never in the history of humanity has such a uniquely complex and readable set of characters been invented more than once.

The comparative evidence presented in this report, which is supported by both analytical evaluation and expert opinion, documenting the presence of readable sequences of Archaic Chinese scripts located upon the rocks of North America, indicates the creation of these images prior to the extinction of memory of oracle-bone script. Therefore, in contrast to any previous historical uncertainty, we may conclude that trans-Pacific exchanges of epigraphic intellectual property took place between Chinese and North American populations approximately 2,500 years ago.

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NOTES

1 Unlike the vertical orientation of the two sets of sign pairings located within Cartouche 1, when two Chinese characters are written horizontally as side-by-side “pho-
no-semantic compounds” they have a single meaning apart from that of their component scripts. In such cases, one symbol is a symbolic figure communicating an overall meaning, and the other character functions as a phonetic item providing the reader with a clue for the proper pronunciation of the word.

2 Although two of these symbols are pronounced as huí, they are written with very different line-stroke patterns and have different meanings.

3 One may also consider Minoan Linear A, Indus Valley script, and Easter Island rongorongo.

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NOTES AND QUERIES

COMMENTS ON RUSKAMP’S
“TWO ANCIENT ROCK INSCRIPTIONS INDICATE
AN ARCHAIC CHINESE PRESENCE
IN THE AMERICAN SOUTHWEST”

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In these pages, I do not ordinarily comment in extenso on articles appearing in Pre-Columbiana. However, I feel that John Ruskamp’s (2015-2017) important piece in this issue deserves some extra attention.

When I was first exposed to John’s work on certain U.S. Southwest rock-art motifs’ being readable as Chinese (e.g., Ruskamp 2011), I was skeptical. In most cases, the forms would not strike the average viewer as being recognizable Chinese. As in the case of the New Mexican ones, some are simple and others are pictographic, as are many American Indian petrographic images (with which I am very familiar). Others—like John’s Arizona cartouches—could, on casual perusal, be classed with geometric “blanket” petroglyphs, which are well-known in the Southwest. Too, some of the images do not correspond exactly to archaic Chinese characters as illustrated in the textbooks. It is amazing that Dr. Ruskamp—an educator but not a Sinologist—recognized the resemblances in the first place.

Despite the aforementioned issues regarding individual images, close study led me to reconsider. It is important to look at these inscriptions as wholes. First, the forms of the glyphs seem to fall within the known ranges of alternative forms of variable ancient Chinese characters (for examples of such variation, see Shao 1998). Although the styles involved include those with resemblances to Chinese signs of three different scripts—oracle-bone, bronze-era, and seal-era—all are Archaic (Bronze Age), and there was in China a time of transition—the Zhōu Dynasty (ca. 1046–221 B.C.)—in which these scripts overlapped. The fact that the name of an earlier, Shāng king is readable on the Rinconada boulder does not mean that the inscription was carved during that ruler’s reign; the dà ‘great’ prefix to his name implies that he was deceased and, therefore, a revered ancestral figure rather than a contemporaneous monarch.

The reality that each of the two inscriptions discussed carries a complex, coherent, and meaningful-in-context message in Chinese goes a long way toward dispelling disbelief of Ruskamp’s thesis; so does the fact that the messages are expressed in ways consistent with known Chinese formulas and other usages. Mr. Chen’s finding the Arizona inscription to be interpretable as sophisticated rhyming poetry consonant in form with poems in Shī Jīn, a collection from the period, I find particularly compelling.

Repatination shows that the petroglyphs in question have substantial age; more work should be done in comparing the degree of that patination with that of adjacent, much younger but still old (circa A.D. 1300–1700) Puebloan rock art.¹
Ruskamp’s comparison of certain Archaic Chinese signs with some similar Hopi symbols as well as Chinese and Hopi color-directional symbolism is intriguing and probably significant. However, the Hopi did not exist as such in the time of Bronze Age China, so this is certainly not a question of direct exchange between Hopis and Chinamen. There is, on the other hand, considerable indication of early Chinese influence in Mesoamerica, probably beginning with the Neolithic/Formative and continuing during the Bronze Age and later, and putatively Chinese inscriptions have been reported from the region (e.g., Wei 1970; Jett 1983; Xu 1996; Fahey 2004). Much later in time, Mesoamerican influence was felt in the American Southwest—the region is, in reality, culturally a peripheral part of Mesoamerica (e.g., Riley 2005)—and much of Hopi culture (see Zhang 1996) undoubtedly reflects this. A search for comparable Mesoamerican symbols would seem to be in order.

NOTE

1In October 2017, I visited the Rinconada site and verified the inscription. I also talked with the Arizonan on whose ranch the cartouche site lies; however, other duties prevented her from showing me the inscription at that time.

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