Deciphering the Vinča Script

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In archaeological investigations, researchers often come across markings on artefacts. Such markings could simply be scratches produced either when the artefact was in use or when it became subject to wear through natural causes; or they could be designs of various types, including artistic, ritual, or random; or they could be evidence of written language. In this presentation, we shall examine the case of such markings in a culture virtually isolated in time and location from other cultures with known written languages, and we shall see how we can go from apparent designs to proof of writing to the decipherment of some of those designs that we know as the "Vinča signs."[1]

Old Europe [figure 1][2] was an area in and around the Balkans that was the site of a rather advanced civilization in the pre-Indo-European neolithic period.[3] The culture of Old Europe is often referred to as the Vinča culture, taking its name from one of the oldest archaeological sites. These sites have been subject to major excavation from 1908 [figure 2][4] and 1912 [figure 3][5] up to the present [figure 4],[6] and some of the latest digital technology has been utilized in these on-going investigations [figure 5].[7] Reconstructions of Old European structures have been attempted [figure 6],[8] and archaeologists are gradually gaining some understanding for life in this early period.

Figure 1: Old Europe

Figure 2: Excavations in 1908

Figure 3: Excavations in 1912

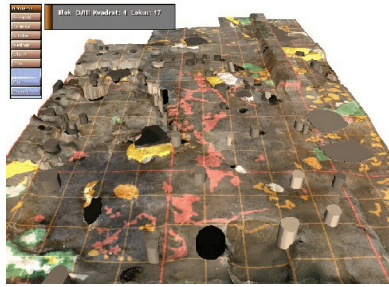Figure 4: Present Excavations

Figure 5: Digital Representation

Figure 6: Reconstructed House

These sites have also yielded many clay artefacts that had been sufficiently fired to have survived from the fifth millennium BCE. On these artefacts we often find curious inscriptions in Vinča signs [figure 7],[9] as we see here on part of a spindle whorl and on an unclassified object.[10]
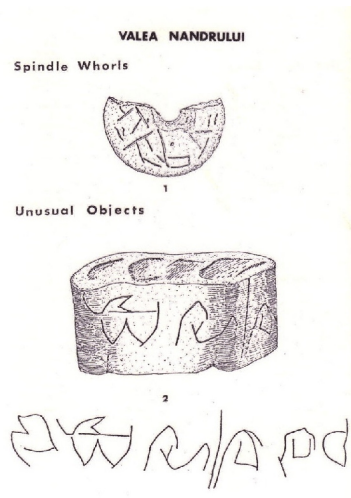

Figure 7: Vinča Signs

The archaeologist looking at these signs immediately assumes them to be designs; while the linguist, on the other hand, immediately assumes them to be written language. As Aesop tells us, we rarely look beyond our own noses. The problem for the linguist is that while the archaeologist is quite right – these signs are in fact designs of some sort (which could possibly have been used in written language) – the

linguist is out on a limb. To go beyond design and to say that these signs are writing demands some rather convincing proof.

Nonetheless, many of the linguists working on the assumption that the Vinča signs are writing have made some important determinations. Given the number, type, and arrangement of the signs, *if they are writing*, then they would form some sort of logographic script. A logogram is a sign that is taken as a word rather than as a representation of sound. For example, the ampersand is a logogram. Whenever we see it we say the word *and*. When German-speakers see it they say the word *und*, and when Welsh-speakers see it they say the word *ac*. In each language, the sign simply stands for a word.

Whatever kind of writing we may wish to claim that the Vinča script be, however, we must first prove that the script is in fact writing. To prove this, we shall have to find discernible patterns in specific design motifs – particular types of design that recur in the corpus. What we especially need to look for is a repetition of signs in set combinations.

This brings us to the spindle whorls designated as Jela 1 and 2 in the catalogue of Vinča signs published by Shan Winn in 1981 [figure 8].[11] This catalogue is entitled *Pre-Writing in Southeastern Europe*, because Winn – being a careful and cautious linguist – did not feel that there was enough evidence on hand to claim that this was writing *per se*. In the current examination, subsequent artefacts with Vinča signs will also be from the same catalogue. The initial name in the designation of an artefact is the name of the site at which the artefact was found, and the number is simply the catalogue number of the artefact from that site.
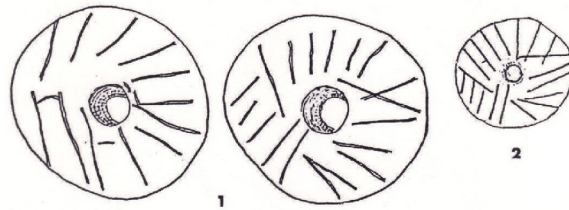

Figure 8: Jela 1 and 2

It is important to note that spindle whorls from Old Europe maintained some religious charge. Indeed, we know from myths and stories surviving throughout Europe and rising to the surface from the neolithic culture base that such objects had always been of religious significance.[12] So we should expect that inscriptions on them would tend to be religious in nature.

If we rotate Jela 2 one eighth turn clockwise, we can see that the inscriptions on it and on the side of Jela 1 adjacent are almost identical, with the only difference being three parallel lines at the top of Jela 1 and four at the top of Jela 2. Before going into the intricacies of these inscriptions, we might first stop to ask why this similarity had not been noted before, especially since these two inscriptions lay side-by-side on the same page of the catalogue for over twenty years.

The fact is that linguists are trained to analyze things in the Aristotelian tradition. As we see in the Greek-derived word *analysis*, this is the practice of splitting things up in order to examine the individual parts. Too often though, linguists tend to overanalyze – to break up such constructions as sentences, words, and syllables too much and to lose sight of the whole of which each part is an integral member.

When we examine sign 1 [figure 9] from the outside edges and proceeding counterclockwise, we see on both spindle whorls a horizontal line with three "parallel" (by which we mean nonintersecting) lines coming off of it. The reason why the basic similarity between these two renditions of this sign had never been seen before is simply overanalysis. This was particularly the case in Winn's classification of the signs, which was aided by computer. Computers may be programmed to take things apart very well, but they lack the human insight that allows us to compare the parts with the whole and to come to appropriate conclusions.
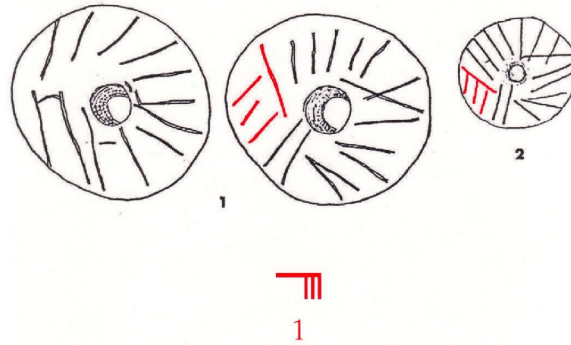

Figure 9: Jela 1 and 2, First Sign

To illustrate this problem, let us consider what we may call the "*THE* exercise." Take a disk of clay or wood, inscribe the word *THE* in capital letters around the edge, and then put it aside. On another day, repeat the process with another disk, perhaps more quickly or more slowly – or have someone else inscribe this disk. Now compare the two inscriptions. On one the vertical and horizontal lines of the *T* may touch and on the other they may not, and the lines of one *T* may be at very different angles from

those of the other. In the *H*, perhaps the vertical lines are parallel in one and almost touching in the other; and perhaps the horizontal line touches only the left vertical line in the one and only the right vertical line in the other. As for the *E*, there are so many different possible variables that we need not go into them here. In spite of all these differences though, we recognize both inscriptions as the word *THE* because of the expected latitude in writing. This is the issue of penmanship; and when we examine Jela 1 and 2, we are struck by the fact that Jela 2 was quite obviously inscribed much more carefully – with more attention to proper penmanship – than was Jela 1.

Moving on to sign 2 [figure 10], we find two very carefully drawn parallel lines. These are even neat and clear on Jela 1. Recalling that we are dealing with what is in all probability a religious inscription, we may surmise that this sign could represent a word of some importance to the religion.
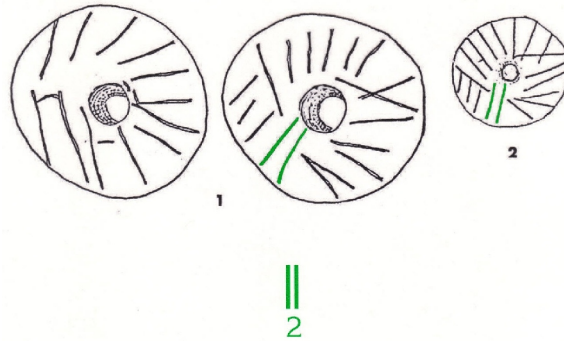

Figure 10: Jela 1 and 2, Second Sign

The situation is far different in sign 3 [figure 11]. The three parallel lines here are, if anything, rather sloppily drawn, even on the otherwise neat and clear Jela 2. This will also prove to be significant, as we find that this sign represents a word that had lost some of its religious prestige. As for the variation in the form of the sign between Jela 1 and Jela 2, this is precisely what the linguist looks for as an expected degree of latitude in writing – the effects of penmanship. We should recall the "*THE* exercise," in which the horizontal line on the *H* may well touch only the left-hand vertical line in one rendition and only the right-hand vertical line in the other. This difference also helps distinguish these lines as the components of their own sign, rather than as parts of the adjacent signs.
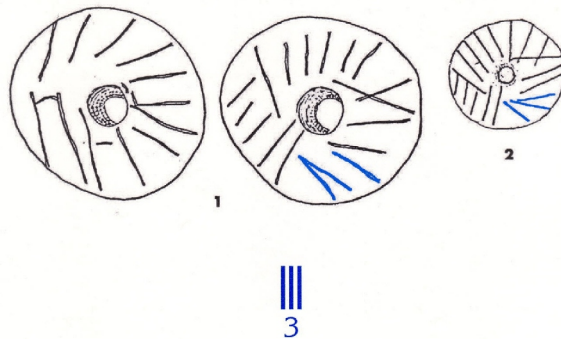
Figure 11: Jela 1 and 2, Third Sign

Sign 4 [figure 12] provides us with a repetition of sign 2 – two vertical parallel lines. Once again, both are written neatly and clearly, quite in contrast with sign 3.
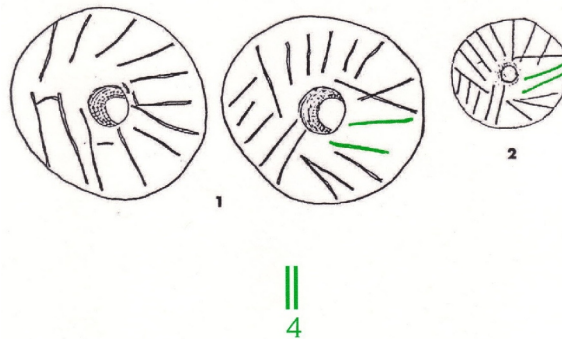

Figure 12: Jela 1 and 2, Fourth Sign

Sign 5 [figure 13] is also a repetition, this time of sign 1 – a horizontal line with three parallel lines descending perpendicularly.

The only significant variation (beyond simple differences in penmanship) is found in sign 6 [figure 14], with three vertical parallel lines on Jela 1 and four on Jela 2. We can thus describe this sign using the linguist's penchant for identification through generalization as a number of parallel lines greater than two. It is significant that these lines are neatly and clearly executed, even on Jela 1, on which the other three parallel lines in sign 3 are so sloppy. The implications of this relative neatness will be treated
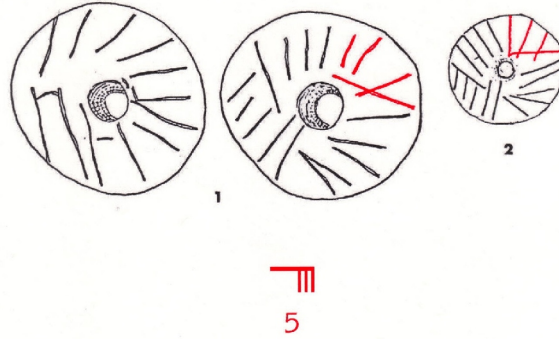
further on.

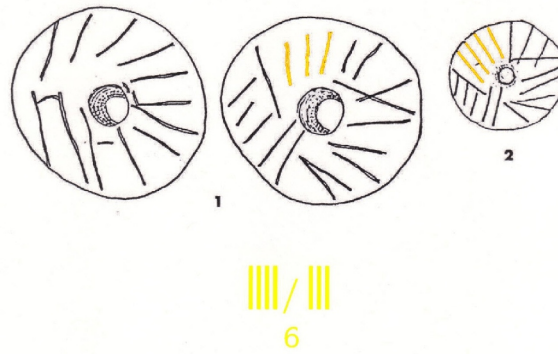Figure 13: Jela 1 and 2, Fifth Sign

Figure 14: Jela 1 and 2, Sixth Sign

Summarizing what we have so far [figure 15], we see here (reinforced by the color coding) that sign 1 is the same as sign 5, that sign 2 is the same as sign 4, and that sign 3 is unique (leaving sign 6 for further discussion below).
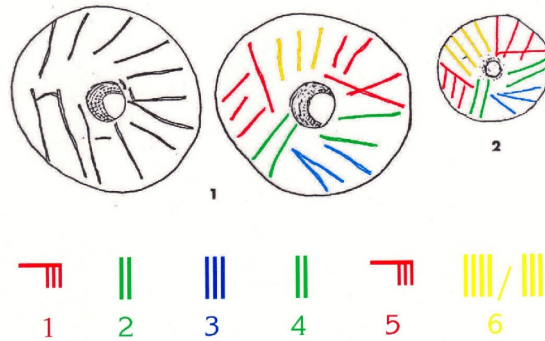
Figure 15: Signs on Jela 1 and 2
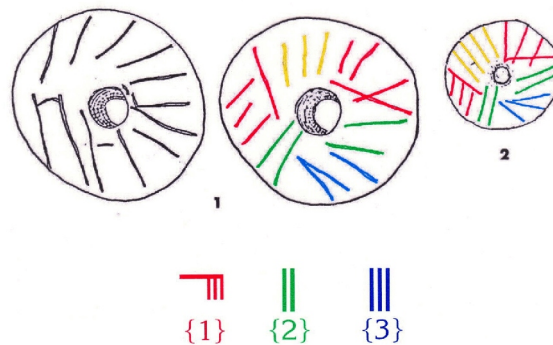
Figure 16: Distinctive Signs on Jela 1 and 2

Again appealing to the linguist's identification through generalization [figure 16], we can establish three "distinctive" signs – sign {1}, sign {2}, and sign {3}. These three in their combinations provide us with proof that we are in fact dealing with written language, not merely with design. We can summarize the proof by five criteria, as follows:

1. Design: The inscriptions are composed of design motifs, not of random line patterns. These motifs recur throughout the corpus.
2. Penmanship: The two inscriptions are identical enough to indicate that the differences in execution of signs between and within the inscriptions are consistent with the reasonable latitude expected in

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writing.

3. Repetition: Since the inscriptions are so identical, either the one is copied from the other or both reproduce an established sequence. Such a sequence is too complicated for a simple repetitive decoration and too simple and regular for a random line decoration.

4. Variation: Whether or not sign 6 was intended to vary in form or in content between the two inscriptions, both alternatives would suggest written language. Both involve the same ordering of elements in the same linear fashion and with the variation in the same location and within the same general class of design motif.

5. Grammar: Most importantly, all of these signs recur frequently on spindle whorls and also on other artifacts. That they should be placed in a particular order that is repeated in an identical context indicates the workings of a grammar.

This is the first of our two determinations: The Vinča script is indeed written language.[13] Moreover, we have here the repetition of the same basic message with the same signs in identical combinations. Whatever these inscriptions on Jela 1 and Jela 2 are saying, they are saying the same thing or very close to the same thing. But what are they saying? To answer this, we shall have to move on to our second determination – the decipherment of Jela 1 and 2.[14]

In order to decipher unknown scripts, linguists look for a Rosetta Stone [figure 17].[15] The Rosetta Stone was found in Egypt by Napoleon's troops in 1799. In the top portion we see the hieroglyphic script – signs that appeared to be characteristic of religious inscriptions but that were until then totally incomprehensible. In the middle portion is the corresponding demotic script – an undeciphered writing system used by the Egyptians for more mundane communications. Thankfully, in the lower portion is a repetition of the message in Greek – a language we know very well indeed.

With the Greek and through deciphering the demotic script, researchers were able to decipher the hieroglyphs, which surprisingly had a phonic nature. Of central importance in the decipherment was the cartouche – a long oval enclosure used for the isolation and emphasis of a row of hieroglyphs. Within the cartouche is always found a proper name. By comparing the signs in the cartouche with the Greek and demotic renditions, scholars could determine the phonic value of each hieroglyph and could then "spell out" the name.

All of this is very well and good. However, we have absolutely no hope of finding a Rosetta Stone for the Vinča script. This is because the next writing – or at least the next known writing – was not going to come into the region for millennia. Thus, we

must look for some process of deciphering the Vinča script that is similar to the Rosetta Stone, but one that follows a different principle.
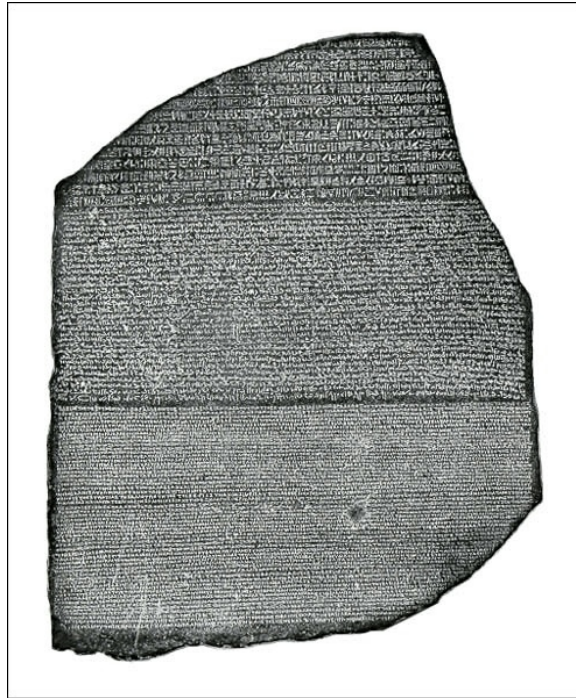

Figure 17: Rosetta Stone

This different principle involves the diagram [figure 18],[16] which (as we shall see) is very well suited to the decipherment of logographic signs. Here we have a diagram with Chinese characters in the various sections of what we can readily recognize as a color chart. To decipher the Chinese characters, we first pose two questions: (1) What is common to all parts of the diagram; and (2) what is the difference between those parts that are otherwise held in common? Then we look for the corresponding similarities and differences in the written characters. Quite clearly, each of these sections is made up of a color – the characteristic in common is color. As we examine the inscriptions, we note that each inscription is made up of two characters; and in each and every case the second character is the same. This second character we can thus decipher as the sign for the word 'color'.

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Figure 18: Chinese Color Diagram

Looking again at the diagram and with the knowledge that the second character is the word 'color', we note that in each and every case the first character is different. There is one character followed by 'color' in the section with the red color, another character followed by 'color' in the section with the blue color, yet another character followed by 'color' in the section with the green color, and so forth. Obviously, these different characters represent the words for 'red', 'blue', 'green', etc.

Of course, we shall not find such diagrams among the residue of the Vinča civilization. What we will find, though, is a host of artefacts of a religious nature. Certainly, the spindle whorls are in this group, as they come up throughout the Old European region in myths and folk tales. Moreover, we also find a great many figurines representing the Vinča theriomorphic pantheon – deities with animal characteristics and represented in animal form, in hybrid animal/human form, and in human form with animal masks. If we take all of the figurines of theriomorphic deities as a group, we shall have the analogous equivalent of the concept of color in the Chinese diagram. If we find on these figurines a common sign, then we can surmise that the sign represents the concept of deity. And if we find in conjunction with the sign for deity different signs – say, one sign on figurines of bears, another on figurines of birds, and so on – then we can surmise that these represent the different divine animals in the pantheon.

While the strategy is certainly sound, the problem is finding figurines with

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identifiable Vinča signs – in particular, signs {1}, {2}, and {3}. There are, as it turns out, many figurines with recognizable religious signs, but few with writing as such. The religious signs have been catalogued by Marija Gimbutas in several corpora, particularly in her book *The Language of the Goddess*.[17] The "language" she identifies, however, is not our written language of the Vinča signs, but rather a system of artistic design that serves to identify the figurines.

In order to understand the difference between the religious signs and the written signs, let us imagine a statue of a Greek god with wings on his ankles and cap and a caduceus in his hand. This is obviously the god Hermes (or in Rome, the god Mercury). We do not need to write *Hermes* on the statue, for the religious ornaments are quite sufficient to tell us who he is. Likewise, the Vinča figurines have their religious signs that make written signs redundant. Fortunately, however, there are some instances of this written redundancy.

For example, we have Pločnik 2 [figure 19].[18] This is quite clearly the head or mask of a bear – it has the ears of a bear, the face of a bear, and the eyes of a bear. Radiating down from each of these eyes, we find three lines – a religious symbol for a deity found on a great many different heads, including human. Between the shape of the head and the radiating lines from the eyes, we know that this is an image of the Bear Goddess, and no writing is necessary. Happily for us though, the person who made this figurine added a redundancy in the position of the "eyebrows." On the right-hand side we see a clear indication of our sign {1}, and on the left-hand side we have another, backwards sign {1}. The fact that it is backwards ought not to bother us, since primitive writing tends to go from left-to-right or from right-to-left with no apparent consistence, or indeed to proceed "boustrophedon" (back and forth) down a plaque, with the signs themselves sometimes reversing and sometimes not. These renditions of sign {1} are calligraphic – they are artistically executed to follow the contours of the figurine. The back-to-back positioning of them may be artistic, or it may have some religious significance. To determine if there is such a significance, we should look to see if they occur this way on other artefacts of a religious nature. Indeed, we find them on spindle whorl Fafos 1 [figure 20].[19] Here the horizontal lines are overlapping rather than touching, but the relative positioning appears to be deliberate and not shared by other signs.

Since sign {1} is the only sign on a figurine that is clearly a representation of the Bear Goddess, it is quite legitimate to suggest that this may be the sign for 'bear'. In addition, if we look back at Jela 1 and 2, we note that sign {1} is in both instances on both spindle whorls adjacent to sign {2}. This raises the possibility that sign {2} may be the sign for 'goddess'. Of course, we need much more evidence than this one figurine.
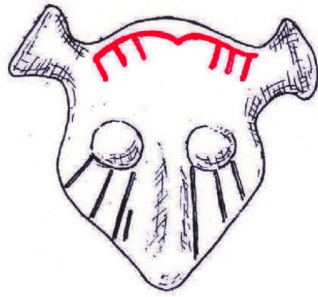
Figure 19: Pločnik 2
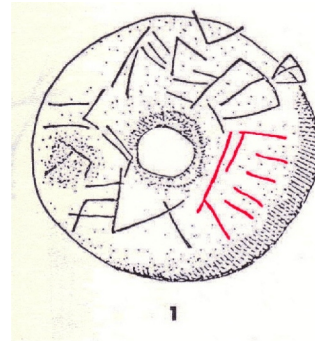
Figure 20: Fafos 1

Recalling that the order and indeed the orientation of the signs need not adhere to modern requirements for consistency, we should consider the figurine Priština 1 [figure 21].[20] Here we find a feminine body with a mask face that is certainly consistent with that of a bear. Centered on the body is sign {1} adjacent to sign {2}.
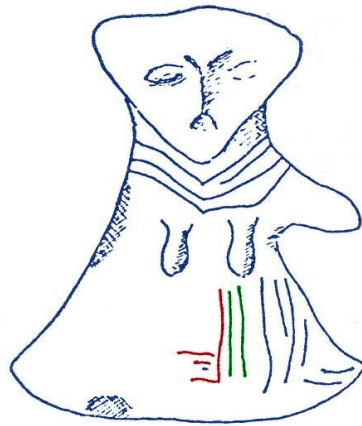

Figure 21: Priština 1

Thus far, we have sign {1} with sign {2} on the spindle whorls, sign {1} on a bear

figurine, and sign {1} and sign {2} on a theriomorphic figurine. This lends some support to the interpretation of sign {2} as 'goddess', but to prove that hypothesis we need to find sign {2} in another context. For this to be language and for us to propose some decipherment of that language, we need instances in which sign {2} similarly interacts with other logograms (of which we have to date established just one – sign {3}).

Such evidence is forthcoming on Gomolava 1 [figure 22].[21] This is obviously the head or mask of a bird, as we can tell by the shape of the beak and head. Of far more importance for the identification of this figurine is the rendition, once again, of the "eyebrows." This is a chevron – an extended chevron in this particular case – and the chevron is one of the best known, most definitely established signs in the religious symbolism of the Vinča culture. Throughout the figurines, it represents the Bird Goddess, and we really need nothing else besides this chevron to know that this is a figurine of the Bird Goddess.
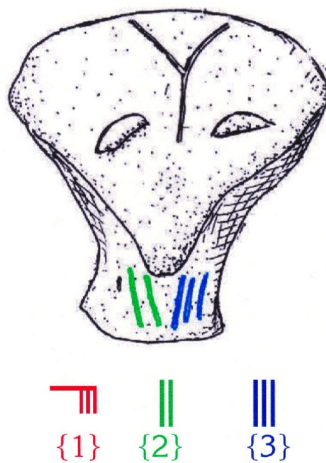
Figure 22: Gomolava 1

Once again, though, we are fortunate to have a written redundancy. On the neck, we find in juxtaposition sign {2} and sign {3}. If sign {2} is indeed the sign for 'goddess', then it would represent the common feature (like the concept of color in the Chinese diagram). The other sign would then appear to represent the difference – while sign {1} would be the 'bear' part of written inscriptions relating to the Bear Goddess, sign {3} would be the 'bird' part of written inscriptions relating to the Bird Goddess. To validate these relationships in our rather far-flung diagram, we need to verify one of these differences – we need to show, for example, that sign {3} is indeed

'bird'.

This verification is found on the Jablanica 1 [figure 23],[22] a theriomorphic figurine rife with inscriptions. First of all, we see the chevron being displayed as a "necklace." This particular use of the chevron is by far the clearest indication we can have of the Bird Goddess. Furthermore, on the abdomen we find a beak-shaped chevron with eyes or nostrils – an obvious iconic representation of at least the concept of a bird. The fact that the torso is human affirms that this is not a bird, but a goddess.
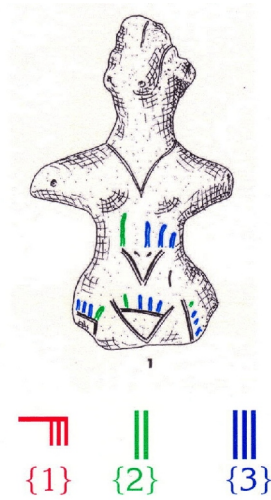

Figure 23: Jablanica 1

In between our two Bird Goddess chevrons, we find clear Vinča signs, including the three parallel lines of sign {3} with another line placed at a greater interval from the three and hence separate. To make this more transparent, we have sign {3} along with this other single, separated sign repeated three more times around the triangular pubic region. This is a crucial aspect of our figurine, since the Bird Goddess is above all a fertility goddess, and the pubic region is certainly a major focus in neolithic religious art.

As for the single line, this is most likely a variant of our sign {2}. In the religious iconography of the Vinča culture, both the single line and the two parallel lines were representations of the vulva. Once again, we are dealing with a neolithic fertility religion, in which the vulva is of utmost significance as the source of life.

Examining Jablanica 1, we find two religious signs for the Bird Goddess and four very strategically placed written inscriptions for the Bird Goddess. This figurine has the Bird Goddess written all over it; and fortunately for us, it is inscribed both in the

religious signs that we know and in the linguistic signs that we are attempting to decipher. While this is an extremely fortunate break, it would still help us if we could find an incidence in which sign {2} – as the sign in common – represents 'goddess' in isolation.

This we find on Matejsky Brod 1 [figure 24].[23] Here we see our two parallel lines of sign {2} within a rectangle. Now, this rectangle is not a representation of the pubic region, for it is both in the wrong place and in the wrong shape – in all other representations this region is a triangle (as on Jablanica 1). Nor is it a case of linguistic embedding, in which one sign is placed within another to create a phrase, for in all other instances the Vinča script is strictly linear.

Figure 24: Matejsky Brod 1

What we have here, then, is a rectangle being used to isolate and emphasize the sign within it. This is highly reminiscent of the Egyptian cartouche, which was also used to isolate and emphasize a name. Of course, it would be the wildest of speculations to suggest that the Old European practice may have influenced the Egyptian; and such a speculation would not be necessary anyway, for the use of an oblong or rectangle to isolate and emphasize an important name should hardly require the invocation of intercultural influence. To be sure, we often do the very same thing today in taking notes – underlining important words, but then boxing in very important names.

Matejsky Brod 1 is thus a female figurine with sign {2} isolated and emphasized

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on the front. Since there is no other particular identification, this sign {2} would appear to be our word 'goddess' in the generic. But is it found elsewhere in an appropriate religious context?

Indeed, we find this particular type of rendition of sign {2} on spindle whorls, such as Tordos 12 [figure 25].[24] Here we see three isolated and emphasized instances very clearly inscribed (along with some other possible renditions as well, and one with the variant).

Figure 25: Tordos 12

Thus, we can tentatively provide decipherments for three Vinča signs [figure 26] – sign {1} as the word for 'bear', sign {2} as the word for 'goddess', and sign {3} as the word for 'bird'. But is there any corroboration for these interpretations that we can eek out of the signs themselves?

{1}	⊤Ⅲ	bear
{2}	‖	goddess
{3}	⦀	bird

Figure 26: Vinča Signs

Quite often, logographic signs develop from iconic, pictographic representations; hence, the Chinese character for 'person' has two legs, the character for 'moon' is a representation of a sickle moon, etc. It has been the vogue in recent years to dismiss the idea that logograms develop from pictograms, because sometimes they clearly do not (as in our Chinese color signs). Nonetheless, if we can identify a reasonable iconic origin for a logogram (as in the case of Chinese 'person' and 'moon'), this identification will certainly strengthen the meaning we have attached to the sign.

Examining our signs, we note that sign {1} appears to be an iconic representation of the side view of a bear's arm and claw – an appropriate representation for 'bear'. This is particularly interesting since both on the bear's head/mask of Pločnik 2 and on spindle whorl Fafos 1, the signs are placed in such a way as to call to mind the outstretched arms of a bear in the posture of embrace.

Of course, sign {2} is well established in the art, both in its form with two parallel lines and in its variant with one line. This sign for 'goddess' is the iconic representation of the vulva, so central to a fertility religion. Moreover, we should note once again that the two parallel lines on Jela 1 and 2 are always inscribed clearly and neatly, with the reverence that one would associate with the designation of 'goddess'.

Not so clearly and neatly inscribed is sign {3} with its three parallel lines. As we shall see below, the Bird Goddess had already lost a considerable degree of prestige in the neolithic religion of the Vinča culture. As for the iconic nature of this sign, however, we may well wonder how three parallel lines come to be associated with the Bird Goddess in the first place.

When we look at this figurine from Gimbutas' corpus [figure 27],[25] we see the

Bird Goddess in her customary epiphany position – with her arms/wings raised up parallel to her head in a gesture forming three vertical parallel lines. For corroboration, let us turn our attention to her chevron "necklace," where we find the same calligraphic technique that we found in the bear's "eyebrows" on Pločnik 2. Here the three parallel lines are fitting to the contours of her body to reinforce the connection between the religious sign of the chevron and the three parallel lines of sign {3} in the writing.

Figure 27: Bird Goddess
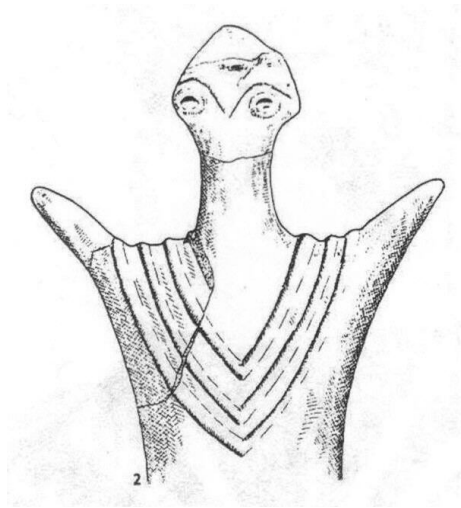
Thus, we have our six characters on the spindle whorls Jela 1 and 2 [figure 28]. The first and fifth are the same and are accounted for as sign {1} 'bear', the second and fourth are also the same and are accounted for as sign {2} 'goddess', and the third is accounted for as sign {3} 'bird'. This leaves the sixth sign, which in our color coding I now render in green – the same as sign {2}.
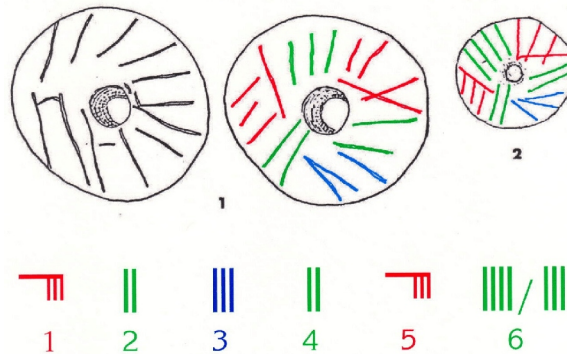
Figure 28: Jela 1 and 2

Let us recall that before the Vinča sign system had been proved to be written language, there had been many hypotheses and speculations developed on the assumption that it was indeed written language. In one of these, it was shown that four parallel lines, such as we find on Jela 2, were most likely used to represent a reduplication of two parallel lines.[26] Such reduplication is a very common practice in language and is usually used to express emphasis and/or completion.[27] What we find on Jela 2, then, is the reduplication of sign {2} 'goddess'.

This interpretation makes a great deal of sense in the inscription as a whole, for it allows a pairing of the word for 'goddess' with both instances of 'bear' and with the instance of 'bird'. Moreover, the fact that the parallel lines are executed with such care supports the interpretation that this is the all-important designation of 'goddess'.

Likewise in the usually less careful inscription of Jela 1, these parallel lines certainly do contrast with sign {3} 'bird'. One could argue that this is a rendition of sign {3}, which would yield an utterance that would fit naturally with the decipherment below, in effect combining the 'bear' and 'bird' signs by juxtaposition. More likely, however, we have here a partial reduplication, an haplology, a reduplication with the variant, or simply a division that could go on either side of sign {2}. This would yield exactly the same meaning as the sequence on Jela 2, with the only difference being one of orthographic variation – the solution by far preferred by the linguist in the absence of a standard.

The decipherment itself is at this point rather straightforward [figure 29]. We have in the Vinča signs {1}-{2}-{3}-{2}-{1}-{2+2} – 'bear'-'goddess'-'bird'-'goddess'-'bear'-'goddess goddess', or 'goddess indeed' with the emphasis and closure. Quite fitting for a religious mantra on a spindle whorl, the inscription can be read in either direction with the same meaning. This oldest known sentence in human language states: "The Bear Goddess and the Bird Goddess are the Bear Goddess indeed."
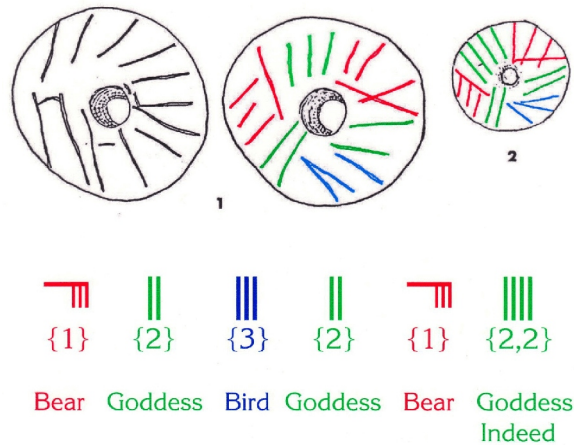
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Figure 29: Jela 1 and 2 Deciphered

Now, this reading may not make much sense to those without a background in the development of religion in the region. But once we take into consideration issues of comparative, neolithic, and Greek religion, the sentence is clear and theologically astute. Originally, the Bear Goddess and the Bird Goddess had been separate deities. However, sometime before the Old European goddesses were incorporated into the Greek pantheon, they had merged into a single deity.

This Greek deity was the goddess Artemis, about whom Anne Baring and Jules Cashford have the following to say in their book *The Myth of the Goddess:*

> In the passage of the centuries many traditions of experience converged on her, and the figure whom the Greeks knew as Artemis carried memories from Neolithic Old Europe, Anatolia and Minoan Crete. The Old European Bear Goddess, Bird Goddess and the Weaving Goddess of the spindlewhorls can be rediscovered in the stories and images that surround her, and in the kind of festivals that were held in her honour. Spindles and loom weights were found in many of her shrines, and on Corinthian vases she holds the spindle of destiny as the weaver of the interlocking web of animal and human life.[28]

Here we find all three important attributes of the inscription on Jela 1 and 2 – the Bear Goddess, the Bird Goddess, and the spindle whorl itself. As we see in the development of the goddess Artemis, the Bear Goddess and the Bird Goddess had

been coalesced into a single goddess in her. The most important aspect of this coalescence, though, is the manner in which the two goddesses merged.

The very name of Artemis betrays her primary identification as the Bear Goddess [figure 30]. The proto-Indo-European reconstruction for 'bear' is *ŕ̥ḱÞo-s.[29] In Greek, this is realized as ἄρκτος. In the Greek religion, when young girls came of marriageable age, they went to the main temple of Artemis at Brauron, where they donned saffron robes and danced in a ceremony in which they were called Artemis' ἄρκτοι 'bears'. The connection between Artemis and the bear had always been very strong and comes out in such religious contexts.

Artemis: Bear Goddess

Indo-European	***ŕ̥ḱÞo-s 'bear'**
Greek	ἄρκτος
Middle Irish	**art**
Welsh	**arth**
Gaulish	**Artio 'Bear Goddess'**

Figure 30: Artemis as Bear Goddess

For linguistic reasons, the consonant cluster in Indo-European *ŕ̥ḱÞo-s and in Greek ἄρκτος is inherently weak. Given any complication such as compounding, apocope, or a shift of stress, we could expect the loss of a consonant. Greek could not lose the [k] because that would have created an ambiguity with ἄρτος 'bread', but in Modern Greek some forms do lose the [t] – such as αρκούδα. In Late Latin the Greek loanword in the name of the constellation Arcturus, the Great Bear, did indeed lose the [k] to become Arturus.[30]

Moving on to Celtic, we find that the [k] of the Indo-European had long since disappeared in Middle Irish *art* and in Welsh *arth* (from the Brythonic root *art-*). Most telling, however, is the Gaulish name Artio, for this is the Celtic name of the Bear Goddess herself.

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Especially since Artemis [figure 31][31] is not a native Greek deity, such forms support the connection between the root *art-* in her name and 'bear'. Returning to our decipherment, we find that the Jela spindle whorls were in fact proclaiming what was ultimately going to be enshrined in the Greek pantheon: "The Bear Goddess and the Bird Goddess are the Bear Goddess – Artemis – indeed."

Figure 31: The Goddess Artemis

At this point in our investigation then, we have been able to determine that the Vinča signs inscribed on objects from Old Europe do indeed represent written language. Moreover, from there we can decipher three signs that are found in juxtaposition to express a coherent concept in an appropriate context. Finally, we can corroborate this concept in the later, historically attested cultural systems of the region.

Whatever future determinations may be made from this rather modest beginning, the most important thing for us at this stage is the process that has been used. The approach first of making connections among artefacts with a common characteristic and sharing a common sign and then of finding the differentiating characteristics with corresponding differentiating signs provides us with a testable working hypothesis in future research – not only with respect to the Vinča script, but in many different areas of archaeological investigation as well.

ADDENDUM I: An Earlier Date

On Jablanica 1 [figure 23], we noted a "necklace" – a single chevron that appears to be dangling from the neck of the Goddess. As Marija Gimbutas documents quite extensively and convincingly in *The Language of the Goddess*,[32] this chevron is an artistic motif representing the Bird Goddess on figurines throughout the Vinča region.

When logographic sign {3} appears in isolation, it could be taken either for a linguistic label or for an artistic motif. But in her extensive examination of the evidence, Gimbutas does not make this connection in the art. The sign does, however, occur repeatedly in combination with sign {2} to render the Bird Goddess, as in Gomolava 1 [figure 22].

An apparent case of the blurring of the line between linguistic sign and artistic motif occurs in Gimbutas' corpus as the Bird Goddess [figure 27] and also in Priština 1 [figure 21] (the latter tellingly an image of the Bear Goddess now taking on the accouterments of the Bird Goddess). What is significant about these figures is the triple chevron "necklace." On the one hand, the triple rendition of the chevron could have shown a heightened degree of reverence, or perhaps simply an artistic flourish. On the other hand, however, the triple form of the chevron could well have been seen as reminiscent of the triple vertical line of logographic sign {3} – a "pun," as it were, on the artistic/linguistic "name" of the Goddess.

However, in spite of the fact that the chevron is found extensively as an artistic motif to evoke the name of the Bird Goddess, and in spite of the fact that this simple motif could certainly have been used linguistically, the chevron never occurs in a written string in any way that could support an interpretation as an equivalent to logogram sign {3}.

To be sure, the chevron does occur on a considerable number of artifacts alongside sign {3} and even, more tellingly, alongside the combination of sign {2} and sign {3}. A particularly good example can be found on the spindle whorl Tordos 16 [figure 32].[33] However, the chevron never occurs in sequence with other inscriptions that might be taken as logograms, such as we find on Jela 1 and 2. If anything – now that we are aware of the linguistic status of these signs – such inscriptions as that in Tordos 16 appear to emphasize the connection between two different kinds of rendition. We might even speculate that they may have been comparable to a picture labeled by a word – something particularly important in the development of reading skills and certainly attested on later Greek vases.
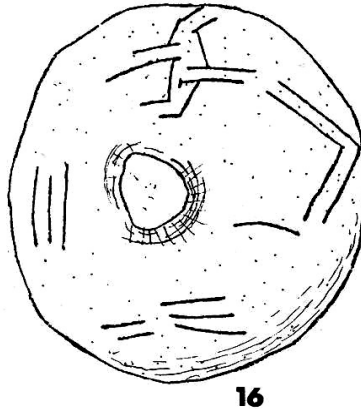
Figure 32: Tordos 16

Indeed, Tordos 16 may well combine writing, motif, and stylized artistic depiction all at once. If we rotate the whorl one quarter turn either clockwise or counterclockwise, the figure on the right or left respectively can be interpreted artistically as the side view of a bird (wings and tail up, legs and head down). Such a symmetrical arrangement would parallel Jela 1 and 2, in which the inscription could be read either clockwise or counterclockwise, a property highly appropriate to a spindle whorl.

Thus, the system of artistic motifs and the system of linguistic signs in the Vinča inscriptions appear to have been completely separate in the minds of those making them. While we have certainly barely scratched the surface in the decipherment of the Vinča script, and counterexamples may well await us, at this point we have yet a further working hypothesis that the two systems were viewed in the minds of the Vinčans as being as separate as an illustration of a caduceous and the inscription Ἑρμῆς 'Hermes' would have been in the minds of the Greeks.

This compartmentalization of artistic motifs and linguistic signs is particularly significant for the logograms themselves. As noted above, the impetus for these signs certainly appeared to be iconic – the side view of a bear's front claw, the vulva, and the epiphany position associated with the Bird Goddess. But by the time the surviving artifacts were inscribed and apparently fired by accent or happenstance, the writing system had been far enough along that the signs had lost their artistic significance altogether.

The implication for the dating of the Vinča script is quite profound. The artifacts we so serendipidously possess must have been manufactured at a time after the artistic motifs and the linguistic signs had firmly gone their separate ways. To have extended

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throughout the region in which the Vinča inscriptions are found – whether this distinction had been established before the spread of writing or after it – the script must have been in use considerably earlier than the artifacts we have.

ADDENDUM II: Research Methods

Thus far, we have a working vocabulary of only three signs. These signs have been isolated and deciphered because they could be found on identifiable figurines. The question now is: How do we proceed from here?

The research method for finding more signs is linguistically straightforward. We have to find combinations and configurations of signs that will allow us to connect the known with the unknown. The known elements consist of the three signs we have, peculiar configurations in which we find these signs, and artistic motifs that may be "labeled" by a word or name.

Of course, since the only knowledge we possess of those making these inscriptions is that they venerated the Bird Goddess and the Bear Goddess and were prone to inscribing religious messages on spindle whorls, we must start from this knowledge base.

Sign {2}, consisting of two parallel lines, is the logogram for 'goddess'. Thus, one method we can employ is to identify signs that consistently occur with sign {2}. The cooccurring sign will thus be the name of the goddess being evoked. One of the more promising candidates is one we can tentatively call sign {E} – three parallel lines coming off of a single line. This sign is found throughout the corpus and does in fact occur in connection with sign {2}, as on the spindle whorl Tordos 17 [figure 33].[34]
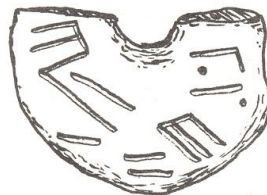
Figure 33: Tordos 17

Unfortunately, sign {E}, while prolific, has thus far not been unearthed on an unambiguously identifiable figurine (as far as this researcher is aware). It is likely, however, that once such a figurine is found, we shall be in a position to recognize the Goddess and thereby to decipher yet another name.

Another kind of situation is that of tentative sign {S}, as found on the figurine Crnokalačka Bara 1 [figure 34].[35]
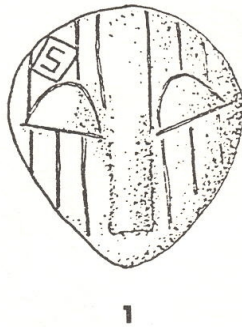

Figure 34: Crnokalačka Bara 1

Just above the eye, we see the same kind of rectangular enclosure as that on Matejsky Brod 1 [figure 24, above], which we have likened to an Egyptian cartouche. While the meander is a common artistic motif found throughout the Vinča region, this simplest of renditions within the rectangle appears to be a logogram, both from its unornamented simplicity and from its similarity to Matejsky Brod 1 (among others).

The problem with deciphering sign {S} is its absence from identifiable contexts within the corpus. To be sure, it appears compelling in Crnokalačka Bara 1, but there are no other exemplars, and the figurine itself is not identifiable at this point. It is therefore not ready to be deciphered.

An even more intriguing possibility is proffered by Medvednjak 6 [figure 35].[36]

Figure 35: Medvednjak 6

Here, the sign {2} for 'goddess' comes between two inscriptions that both suggest interpretations as logograms – tentatively sign {D} and sign {f}. While the spacing of the signs appears to favor a combination with the latter, spacing can sometimes be deceiving. In addition, all we have here is a two-dimensional drawing, and the context could shed more light on the appropriate combination.

As for the labeling of figurines with identifiable artistic motifs, this method is probably best applied along with other, more linguistically based analyses.

ENDNOTES

1. The main work, including the catalogue of Vinča signs, is Shan Winn, *Pre-Writing in Southeastern Europe: The Sign System of the Vinča Culture ca. 4000 B.C.* (Calgary: Western Publishers, 1981). See also Harald Haarmann, "Hieroglyphen- und Linearschriften: Anmerkungen zu alteuropäischen Schriftkonvergenzen," *Kadmos* 28 (1989), 1-6; "Writing from Old Europe to Ancient Crete – A Case of Cultural Continuity," *The Journal of Indo-European Studies* 17 (1989), 251-75; and *Early Civilization and Literacy in Europe: An Inquiry into Cultural Continuity in the Mediterranean World* (Berlin: Mouton de Gruyter, 1996). And also Emilia Masson, "L'écriture dans les civilizations danubiennes néolithiques," *Kadmos* 23 (1984), 89-123. Information on the internet varies greatly in quality, but see issues of *Dava*, such as Marco Merlini, "Inscriptions and Messages of the Balkan-Danube Script," *Dava* 6, http:www.iatp.md/dava/Dava6/ Merlini__6_/merlini__6_.html (2002). On the invention of writing in Sumer, see Denise Schmandt-Besserat, *Before Writing: From Counting to Cuneiform* (Austin: University of Texas Press, 1992).

2. After Marija Gimbutas, *The Language of the Goddess* (San Francisco: HarperCollins, 1991), p. 341.

3. See for example Marija Gimbutas, *The Kurgan Culture and the Indo-Europeanization of Europe*, ed. by Miriam Robbins Dexter and Karlene Jones-Bley. *Journal of Indo-European Studies* Monograph No. 18.

4. After *Digital Archaeology,* on the internet at http://www.online-archaeology.com/HouseReconstruction.htm.

5. After *Digital Archaeology*, ibid.

6. After *Digital Archaeology*, ibid.

7. After *Digital Archaeology,* at http://www.online-archaeology.com/Digital Vinca.htm.

8. After *Digital Archaeology*, op. cit.

9. After Winn, *Pre-Writing in Southeastern Europe: The Sign System of the Vinča Culture ca. 4000 B.C.* (Calgary: Western Publishers, 1981), p. 356.

10. The main work, including the catalogue of Vinča signs, is Shan Winn, *Pre-Writing in Southeastern Europe*. See also Harald Haarmann, "Hieroglyphen- und Linearschriften: Anmerkungen zu alteuropäischen Schriftkonvergenzen," *Kadmos* 28 (1989), 1-6; "Writing from Old Europe to Ancient Crete – A Case of Cultural Continuity," *The Journal of Indo-European Studies* 17 (1989), 251-75; and *Early Civilization and Literacy in Europe: An Inquiry into Cultural Continuity in the Mediterranean World* (Berlin: Mouton de Gruyter, 1996). And also Emilia Masson, "L'écriture dans les civilizations danubiennes néolithiques," *Kadmos* 23 (1984), 89-123. Information on the internet varies greatly in quality, but see issues of *Dava*, such as Marco Merlini, "Inscriptions and Messages of the Balkan-Danube Script," *Dava* 6, http:www.iatp.md/dava/Dava6/Merlini__6_/merlini__6_.html (2002).

11. After Winn, *Pre-Writing in Southeastern Europe*, p. 329.

12. Michael Everson, "Tenacity in Religion, Myth, and Folklore: The Neolithic Goddess of Old Europe Preserved in a Non-Indo-European Setting," *The Journal of Indo-European Studies* 17 (1989), 277-95.

13. For the linguistic details, see Toby D. Griffen, "The Inscriptions on Jela 1 and 2," *The Journal of Indo-European Studies* 31 (2003), 87-93.

14. The linguistic details of this second determination can be found in Toby D. Griffen, "Deciphering the Inscriptions on Jela 1 and 2," *The Journal of Indo-European Studies* 32 (2004), 11-23. See also "Toward a Decipherment of Jela 1 and 2," *LACUS Forum* 30 (2004) 97-104.

15. On the Rosetta Stone and on the history of decipherment in general, see especially Maurice Pope, *The Story of Decipherment: From Egyptian Heiroglyphs to Mayan Script*, rev. ed. (London: Thames & Hudson, 1999).

16. After "Brown University NSF MRSEC Outreach," http://display.engin.brown. edu/Engin_Main/Colors/colors_chinese.htm.

17. Marija Gimbutas, *The Language of the Goddess*. See also her *The Goddesses and Gods of Old Europe: Myths and Cult Images*, 2nd ed. (Berkeley: University of California Press, 1982).

18. After Winn, *Pre-Writing in Southeastern Europe*, p. 360.

19. After Winn, *Pre-Writing in Southeastern Europe*, p. 320.

20. After Winn, *Pre-Writing in Southeastern Europe*, p. 365.

21. After Winn, *Pre-Writing in Southeastern Europe*, p. 321.

22. After Winn, *Pre-Writing in Southeastern Europe*, p. 328.

23. After Winn, *Pre-Writing in Southeastern Europe*, p. 348.

24. After Winn, *Pre-Writing in Southeastern Europe*, p. 269.

25. Gimbutas, *The Language of the Goddess*, p. 8.

26. John Newberry, *Vinča Culture Sign-System of Southeastern Europe. Catalogue of Indus-Style Seals, The Ganeshwar Graffiti & Earliest Known Signs of the Vinča Culture*: Indus Script Monograph 39, 1988, p. 14.

27. For a cross-linguistic examination of reduplication, see Edith A. Moravcsik, "Reduplicative Constructions," in: *Universals of Human Language*, vol. 3: Word Structure, ed. by Joseph H. Greenberg, 297-334 (Stanford: Stanford University Press, 1978).

28. Baring & Cashford, *The Myth of the Goddess: Evolution of an Image* (London: Penguin, 1993), p. 323.

29. For details, see Julius Pokorny, *Indogermanisches etymologisches Wörterbuch*, vol. 1 (Bern: Francke Verlag, 1959), p. 875.

30. This, along with the Brythonic form, provides an Arthurian connection addressed in Toby D. Griffen, *Names from the Dawn of British Legend: Taliesin, Aneirin, Myrddin/Merlin, Arthur* (Felinfach, Lampeter: Llanerch Publications, 1994).

31. After "Venusville," http://www2.comco.ne.jp/~euxenite/gallery.html.

32. 1991, chapter 1.

33. After Winn, *Pre-Writing in Southeastern Europe*, p. 269.

34. After Winn, *Pre-Writing in Southeastern Europe*, p. 269.

35. After Winn, *Pre-Writing in Southeastern Europe*, p. 313.

36. After Winn, *Pre-Writing in Southeastern Europe*, p. 349.