

## ARTICLES

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### JOURNEYS OF THE MIND: COGNITIVE LANDSCAPES, SYMBOLIC DIALECTS, AND NETWORKED IDENTITIES IN THE EUROPEAN NEOLITHIC

#### ABSTRACT

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Although the notion that the past was populated by cultural spheres containing relatively homogenous populations is pervasive, nuanced considerations of intra-culture variability allow for the recognition of local or regional identities that were simultaneously connected to but distinct from an overarching cultural sphere. This requires the identification of multiple interrelated cultural constituents and the recognition of a kind of cultural layering in which the identity or identities salient for members of a particular group are conceptualized as consisting of variably articulating categories that interact with and depend upon each other. Our approach to cultural variability and identity construction is based on this view and posits that cultural spheres studied in archaeological contexts can be divided into distinct but related cultural subgroups or dialects based on variations in material cultural data and studied independently or comparatively.

Keywords: cognitive landscapes, symbolic dialects, Cucuteni culture, painted pottery, wave medallions, cultural dialects

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## INTRODUCTION

There is a pervasive notion that the past can be characterized in terms of cultural spheres containing relatively homogenous populations. Although local and regional variations within these spheres always exist, they are often described as either (1) geographically or temporally constrained singularities marking distinct subcategories within a broader cultural landscape or (2) subsumed within the range of variations allowable for a particular cultural theme. Discussions of these variations are thus routinely positioned within a broader – and ostensibly dominant – cultural tradition in a manner that maintains perceptions of cultural singularity and obscures the kinds of variability used to create and affirm more localized identities. Through the analysis of a sample data set containing nine medallion motifs drawn from the summary discussion in Ciuk (2008) – an admittedly small sample but one that is nonetheless representative of the diversity in the Cucuteni cultural sphere and conducive to the spatial constraints of an introductory analysis based on ongoing work – a more refined view based on the concept of cultural dialectology can be developed. Such approaches to culture are inherently pluralistic and require data-driven frameworks in which variations significant to past individuals are prioritized. Cognitive landscapes provide a new and nonphysical supplement to orthodox frameworks, and the use of a syntactic textuality for their analysis facilitates consideration of how the identities associated with them were networked.

A nuanced approach to the issue of intra-culture variability requires awareness of local or regional identities that were simultaneously connected to but distinct from the overarching cultural sphere. This entails the recognition of a kind of cultural layering in which the identity salient for the members of a particular group can be conceptualized as composed of multiple juxtaposed identities that interact with and depend upon each other. Similar kinds of cultural pluralism have been described ethnographically (see *e.g.* Leach 1959) and, more recently, archaeologically (see Hudson 2015; 2016; Hudson and Henderson 2014). The key observation of these and related studies is that identity is not a singular concept tied to a clearly demarcated – and often imposed – grouping but rather is based on the negotiation of broader cultural norms and localized variations. This negotiation, and the interpretations of culture and cultural identities associated with it, is reflected in the cognitive landscape and its markers.

## MAPPING IDENTITIES: COGNITIVE LANDSCAPES AND SYMBOLIC DIALECTS

Landscapes are traditionally defined on the basis of their connection(s) to a marker or set of markers within the physical world. These can be naturally occurring or culturally constructed; both types are tied to human conceptualizations of their environment, and

both reflect culturally specified processes of meaning attribution that are tangible to individuals unaware of these cultural semantics. In archaeological contexts, landscape studies frequently emphasize “spatial, [but] not necessarily ecological or economic, relationships... [they] model places and spaces as dynamic participants in past behavior, not merely setting (affecting human action), or artifact (affected by human action)” (Branton 2009, 51). This approach maintains an emphasis on the physicality of landscape markers but productively treats them as contextualized instantiations of the dynamic and interactive connections between landscapes and space rather than as independent singularities. These relationships are rooted in cultural associations that can be conscious or unconscious and may be situated within the cultural, social, and/or natural world. The danger, however, is that the relationships brought to bear on such analyses are etic – those of the contemporary researcher – rather than ones extant in the ancient cultural context under review.

An alternative less prone to distortion comes from cognitive landscape theory, which de-emphasizes non-cultural, topographic elements of landscapes and instead focuses analytically on emic dimensions of their markers. This framework develops the notion of cognitive landscapes – defined as culturally specific landscapes that are physically indicated by material culture markers recognizable to members of the relevant culture but separable from the natural and physical worlds – to cultivate a new dimension of landscape studies (see Hudson and Henderson in press; Hudson and Milisauskas 2015; 2018). It focuses on two interrelated processes: (i) the sociocultural mappings salient in the lives of individuals and (ii) the cognitive understandings that govern interpretation in ways that demarcate and reify identity (*ibid.*). These landscapes are “culturally learned, socially sanctioned and physically indicated but extant only in the minds of their experiencers” (Hudson and Milisauskas 2018, 214); they are accessible only through culturally-specified processes of cognitive mapping that use a particular cultural grammar – defined, briefly, as the principles and patterns that structure and underlie a system of cultural knowledge and norms – to link physical markers to significances within the internal (cognitive) world. Cognitive landscapes are thus rooted in physical (*i.e.* tangible, visible) markers – like all landscape varieties – but bound only to those markers rather than to a particular place or space. They thus differ from notions of cognitive space (Delle 1998) and ideational space (Knapp and Ashmore 1999), which function as “culturally transmitted mechanism[s] used for decoding landscape markers and navigating human-landscape interactions” (Delle 1998) but remain physically bound.

A full summary of this framework is not possible here (but see Hudson and Henderson in press; Hudson and Milisauskas 2015, 2018 for expanded discussions). However, it is necessary to consider the general features and functions of cognitive landscape markers before examining how Cucuteni iconographic elements mark cultural and semantic categories. These aspects of imagery, like most cognitive landscape markers, were intentionally produced by human activity. They are physical creations but are not physically bound to a geographic place or space; they are components of a particular *cultural* environment

accessible anywhere an individual with the necessary cultural competency/competencies encounters such a marker. This does not mean that cognitive landscape markers are idiosyncratic, however, since their existence depends on their relationship to culturally prescribed analytical frameworks (Hudson and Milisauskas 2018, 214). This is true even when the culture-specific significances that underlie them are attached to immutable natural features rather than constructed materials.

Unlike the markers of traditional (*i.e.* physical) landscapes, cognitive landscape markers are not always recognizable to those outside of the relevant sociocultural system(s). Their physical existence is perceptible to anyone, but their identity as markers of a cognitive landscape is only perceptible to individuals with knowledge of the particular cultural grammar that assigns them this role. It is, of course, possible for multiple cultural systems to assign significance to a single marker, though the semantics assigned to these markers in these cases – and the features that indicate it – are culturally variable. Individuals with knowledge of different cultural grammars recognize and respond to different things (even in cases of closely related cultural dialects, albeit potentially less so) and accordingly have different interpretations. In these and all other cases, the demarcative functions of cognitive landscape markers are rooted in a culturally defined semantics embodied in one or more of their features. The features that identify them are recognizable only to members of the cultural group or groups that imbue them with semantic significance; the identification of these markers as semantically salient is thus as important as the particularities of their physical form. This reflects the interaction between intangible cultural constructs and tangible manifestations of sociocultural ideas that characterizes cognitive landscapes (Hudson and Milisauskas 2018, 215).

These features of cognitive landscape markers suggest they function as “culturally situated enactive interfaces through which sociocultural knowledge and norms of behavior are organized, reified and transmitted” (Hudson and Milisauskas 2018, 215). The implications of this functionality are significant, since

“[e]ngagement with these markers entails a social institution...that is itself a product of collective cognitive effort, inherited by successive generations of cultural adherents as a product “constituted in mental processes already accomplished by others” and perpetuated through the ongoing engagement of individuals with this system to accomplish further cognitive work (Gallagher 2013, 7). Such institutions define the relevant semantic parameters; these definitional processes generate cognitive landscapes by conceptually animating their markers through the assignment of culturally rooted significances.” (Hudson and Milisauskas 2018, 215).

Cognitive landscapes are produced whenever and wherever their markers are encountered; they are activated through engagement with these markers in a way that extends cultural cognitive processes to variable external spaces. They are mental institutions dependent on the collective recognition of their significance(s) by a group of individuals who

agree on the relevant semantic parameters and collectively perpetuate or modify the associated cultural paradigm(s) (for an expanded discussion, see Gallagher 2013; Gallagher and Crisafi 2009; Hudson and Milisauskas 2018). They also form one part of a transient coupled system that reflects a culturally specified cognition and the kind of enactive process described by Gallagher (2013, 5); the other part is instantiated by the cognitive landscape markers connected to them. The successful interpretation of their semantics within this system requires cognitive processes that are “continuously available but selectively engaged based on available material evidence” such that “coupling occurs reliably whenever the specified external cues are encountered” (Hudson and Milisauskas 2018, 215). These cues come from aspects of material culture – the cognitive landscape markers – that function as correlated enactive interfaces that trigger culturally specific responses (interpretations, interactions, and/or behaviors) when they are encountered by individuals with the cultural knowledge necessary to recognize them. This suggests that “cultural knowledge and norms develop and are learned in combination with external indicators that couple with their cognitive counterparts” (Hudson and Milisauskas 2018, 215-216).

The cognitive processes underlying these transient couplings are embedded in a socio-cultural system that structures an individual’s environment, positions them within a culturally defined conceptual space, and constrains their engagement with – and interpretation of – cognitive landscape markers. They reflect a collective (or collectively rooted) sociocultural mind that couples external and internal dimensions of thought and conditions the resulting actions and/or interpretations (Hudson and Milisauskas 2018; see also Tollefsen 2006) and reflect Menary’s (2007; 2013) view of enculturated cognition. Their use of imagery and other physical markers constitutes a public representation system in which “the knowledge required to interpret their markers and recognize their semantic loci, like the skills required to reproduce them in interpretable ways, are transmitted by ...enculturation” (Hudson and Milisauskas 2018, 216; see also Menary 2013 and Sterelny 2012).

The textuality that structures these markers guides this interpretive process and reflects the general cultural grammar that licenses them, particularly when imagery functions as a cognitive landscape marker (for expanded discussions of textuality and its applications, see *e.g.* Bakhtin 1981; Boyarin 1993; Derrida 1977; Hanks 1989; Lavin 1990; Preucel 2006; Quilter 1997; Riles 2006; Street 1984; Whorf 1956; Winter 1981). Variations of a particular textual theme reflect symbolic dialects associated with more specific identities in the relevant cultural category and can function as markers in a cognitive landscape construction. Considerations of the morphosyntax that underlies these variations – the compositional rules and parameters that license particular textual and constituent forms – yields a syntactically or morphosyntactically rooted textuality that permits evaluation of the potentially pluralistic ways textual units are formed (see Hudson 2013a; 2013b; 2014). It also recasts textuality as a dynamic and motivated process intimately related to the sociocultural identities that create it. This reflection of socially and/or culturally defined

values causes syntactically textual units to simultaneously function as general indicators within the cognitive landscape – since the recognition and production of particular textual structures is contingent upon the existence of a shared cultural grammar that licenses them and recognizes their semantic potential – and as representations of more precise identities – marked by variations on this shared textual theme – within the broader cultural sphere responsible for a particular cognitive landscape construction.

The cognitive landscape theory therefore proposes a new approach to landscape studies that is based on the sociocultural mappings salient in the lives of individuals and reflective of the cognitive understandings that govern interaction and interpretation. Unlike the cognitive space described by Delle, which is an interpretive framework used to access the significances of landscapes in the physical plane, cognitive landscapes – like their physical counterparts – are distinct entities that require their own interpretive frame. This need for an interpretation that can ascertain the significances of the relevant markers is a feature of all landscape varieties; in the case of cognitive landscapes, the cultural grammar and its associated identities fulfills this function. More crucially, cognitive landscapes allow consideration of identities and sociocultural relationships that were salient to members of a particular population. This allows more etic access to the emic world in which ancient individuals lived and, by extension, creates the possibility for more nuanced archaeological interpretations.

This theoretical and methodological perspective facilitates consideration of how symbolic systems can be more emically approached and facilitates recognition of dialectal subsets that can be used to populate a cognitive landscape. The identification of these symbolic dialects must begin with the definition of the particular kind of textual unit to be considered, and syntactic textuality provides an ideal methodology for identifying the kinds of textual units that exist within a particular corpus. Spatially demarcated symbolic units – which can often be identified based on the presence or absence of lines that divide the constituent elements of the text and demarcate subgroups within a broader textual unit – provide one such data set. Such compositions reflect a degree of intentionality and cohesiveness different from the isolated or more random uses of the signs, and it suggests that the elements contained within such sets are intended to be interpreted as a single semantic unit. We will focus here on the medallions that occur among the imagery found on Cucuteni ceramics and on the ways in which these structures relate to and reflect the cognitive landscape(s) salient in the lives of their creators.

## CUCUTENI: A CASE STUDY

The Cucuteni culture belongs to the Ariuşd-Cucuteni-Tripilia Cultural Complex of the Copper Age or the Eneolithic period (Ellis 1984; Lazarovici *et al.* 2009). It is found in Romania, Moldova and the western parts of Ukraine, and its three major phases – A, A-B and

B – are dated roughly from 4600 to 3500 BC (Mantu 1998). The Pre-Cucuteni period is dated from 5050 BC (Lazarovici 2010). It should be noted that the Ukrainian periodization is somewhat different and can be divided into Tripilia A (Pre-Cucuteni), BI (Cucuteni A), BII (Cucuteni A-B), CI-γI (Cucuteni B) and CII- γII (Horodișteea-Erbiceni). The Transylvanian variant of this Complex is called Ariușd.

Since we concentrate here on the symbolism of artifacts, we will only discuss briefly other aspects of this Copper Age culture such as the impressive settlements. There is now quite an extensive English literature about the Cucuteni or Cucuteni-Tripilia (Ellis 1984; Lazarovici 2009; Lazarovici *et al.* 2009; Lillie 2008; Marinescu-Bîlcu and Bolomey 2000; Burdo *et al.* 2013; Ciuk 2008; Diachenko and Menotti 2012; Zbenovich 1996; Harper 2013; Menotti and Korvin-Piotrovskiy 2012). Cucuteni settlement organization, and especially the architecture of houses, has been extensively investigated by archaeologists (Lazarovici and Lazarovici 2007a; 2007b). There are more than 1800 Cucuteni sites in Romania and 500 additional sites in Moldova (Monah 1992; Popovici 2000; Lazarovici and Lazarovici 2007b, 439). While some Cucuteni houses were subterranean, surface structures were the most common variety. Some sites had a large number of houses; for example, Petreni in Moldova occupied 30 hectares and had 498 houses arranged in nine circles (Ellis 1984). Houses ranged in size from less than 20 square meters to more than 100 square meters (Lazarovici and Lazarovici 2007). Some sites such as Trușești, Hăbășești, Traian, and Cucuteni-Baiceni had defensive ditches (Florescu 1966).

The Cucuteni culture produced some of the most beautiful painted pottery and figurines of humans and animals of the European Copper Age (Dumitrescu 1979; Lazarovici *et al.* 2009). These materials have been extensively used to study ancient symbolism and ritual (Gimbutas 1995; Monah 1997; Lazarovici 2005). Marija Gimbutas (1982, 34) clearly expressed this practice when she observed that “characteristic of the Cucuteni peoples are their colourful bichrome and trichrome vases, bowls, ladles, and other pottery forms; equally distinctive are libation jugs, vessels for divination, altars and schematic anthropomorphic and zoomorphic figurines, which reveal an adherence to elaborate ritual practices.” Many of the examples used in the analysis developed here are drawn from Cherkasiv Sad, Petreny, Bernashivka, and Konivka, which can be assigned to the Western Tripilia grouping in the larger Cucuteni-Tripilia cultural sphere and which were occupied in sequence: Konivka – Cherkasiv Sad – Bernashivka II – Petreni (Ryzhov 2007). Additional samples came from sites in Moldova.

## Medallions Defined

Medallions can be concisely defined as textual units in which a central symbolic element or set of elements is demarcated by framing that separates the internal components from other iconographic elements. They represent a particular form of ceramic decoration and have the potential to encode information about symbolic dialects and how they relate

to cognitive landscapes. The frame(s) are most often circular in form, though they may also be rectangular or figural, and concentric framing is common. The internal components are variable and single elements occur as often as multi-element compositions. The most important feature of these internal elements is not their particular form, however, but rather the fact that they are demarcated by framing elements; this is the syntactic characteristic that marks them as distinct units with their own internal textuality.

Determining the boundary between the framing and central elements of medallions can be challenging. Although many medallions have clear distinctions between their internal motifs and the framing elements that surround them, some have elaborate frames surrounding relatively small internal motifs that can, at times, seem to blend into the frames that encase them. Such blurred boundaries are most common in medallions with complex frames because the embellishment or composition of the framing elements can easily seem linked with the internal motif in such compositions; this is especially true when the internal motif is partially mirrored in the embellishment of the frames.

The key to identifying where an internal element ends and the frame begins lies in the characteristics of the framing itself. Although it is possible for framing elements to be embellished with decorative motifs or composed of multiple distinct features, these are distinct from the central element. This distinction exists even when the central motif incorporates some or all of the same features that constitute or embellish the frame; the difference is that framing elements are clearly demarcated and structured – most often into circular or ovoid forms – while central elements exhibit more freedom of form and do not surround any other element (though circular components may be part of a medallion-internal composition). If elements or sets of elements are arranged sequentially in a banded form that is circular or geometric and situated around an internal area, they belong to a frame. If elements or sets of elements exhibit a more clustered arrangement and are surrounded by sets of other elements that are sequentially arranged, they belong to a central motif.

It is worth noting that the use of medallions for analyses rooted in syntactic textuality represents the establishment of an etic grid as defined by Bohnermeyer (2006). In this model, an etic grid can be viewed as “a categorization...[that is] independent and supposed to hold as a classification matrix for the domain of study” (Bohnermeyer 2006, 17). Although originally intended to describe methodologies specific to the elicitation and study of data based on natural languages, *i.e.* “language-independent conceptual classifications of stimuli in a given domain” (Bohnermeyer 2006, 32), the concept is easily appropriated for the archaeological analysis of imagery. In these contexts, the use of an etic grid as an independent classificatory frame for the analysis of a particular domain is useful for the study of complex systems in which a single target variable must be isolated in order for consideration. Although the potential for bias and circular reasoning has been leveled as a criticism of such methods, cognizance of these potential pitfalls – as pointed out by Bohnermeyer (2006) – allows them to be avoided.



## Cucuteni Medallions as Cognitive Landscape Markers

Cucuteni medallions most commonly have a circular or oval shape in which the central element(s) are surrounded by frames that themselves constitute a significant component of the vessel's imagery. The internal space of these medallions is clearly demarcated and structured by its framing, though frame(s) and the component(s) within them can intersect in a manner suggestive of a more dynamic interpretive process in which frame meanings are intimately and necessarily associated with the reading of the internal elements. Many medallions occur in linear groups that form part of the imagery of wide bands that encircle the exterior surfaces of ceramic vessels, though it is also possible for these groups to occur in nonlinear positions and be scattered throughout decorated areas. Medallions may also occur individually as stand-alone motifs and in groups whose constituents are related through their occurrence on a particular vessel and/or similarities in their form and composition rather than through intervening pieces of imagery.

Cucuteni medallions occur in a variety of forms that can be differentiated based on the structural features of the frames and the relationships that exist between the framing and internal elements. One of the most common of these, identified here as the wave medallion, contains an internal element or set of elements surrounded by a frame that appears to swirl around it in a relatively fluid manner (Fig. 1). The upper part of the frame rises from the lower left-hand side of the medallion and often appears to develop from imagery that occurs to the left of the medallion itself. The lower portion of the frame mirrors this arrangement and appears to move upwards and to the right in a manner that encloses the lower portion of the medallion before moving towards imagery occurring to the right.

Wave medallions offer an interesting point of analysis. The frequency and broad distribution of these motifs suggests that, within the Cucuteni cultural sphere, the wave medallion was recognized as a valid structure capable of licensing semantically significant interpretations. Such recognition had as a prerequisite the existence of a shared cultural grammar that united the dialects networked within the Cucuteni cultural sphere through a common adherence to a shared set of ideas about the kinds of forms and structures that were meaningful or not meaningful. It is safe to assume that motifs deemed incapable of

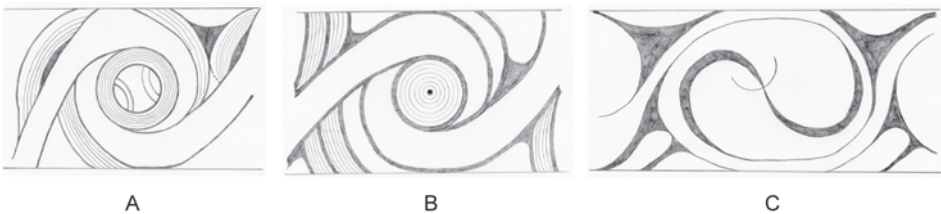


Fig. 1. Examples of Cucuteni wave medallions on ceramics from (A) Cherkasiv Sad II, (B) Petreny, and (C) Bernashivka (all illustrations by K. Hudson)

meaning generation would have occurred rarely – if at all – on the material culture that was produced, particularly since individuals other than their creator(s) would not have recognized such anomalies as semantically significant.

The cultural grammar that licensed meaningful forms and form combinations was also responsible for the existence of the cultural sphere itself, since it provided the necessary common substrate that allowed local variations (*i.e.* dialects) to interact and affiliate with each other despite their differences. Culture can thus be viewed as a set of networked cultural dialects unified by their use of a shared cultural grammar. This approach creates a situation in which shared underlying structures unify related cultural dialects and exist simultaneously with distinct local manifestations of these structures that create and reaffirm localized identities. The result of this dual-level process of identity formation is that ancient individuals could have recognized non-local groups and materials as belonging to their culture even when the particularities of cultural expression were unfamiliar.

The occurrence of medallions in multiple distinct contexts indicates that this structure was a product of the cultural grammar salient in the overarching cultural sphere of Cucuteni; by extension, therefore, the geographic distribution of this medallion form provides one criterion for determining the distribution of the Cucuteni cultural sphere. The common structure of wave medallions reflects the existence of a common underlying structural core and thus, by extension, a common cultural grammar. The boundaries of this grammar – and its associated culture – would have demarcated the cognitive landscape into which the inhabitants of the Cucuteni culture, their dialects and their associated material creations were placed. This placement, in turn, allowed individuals to determine relationships at a more refined level than that of the cultural sphere, and it is likely that interpersonal and inter-group relationships were affected in some way by these determinations.

It is important to note that a common underlying structure such as the one that unifies the wave medallion motifs does not necessitate identical or even overtly similar surface manifestations. Although it is tempting to assume that all variations on a particular compositional theme will share some degree of representational commonality – and such commonality is attested in many corpora – it is the structural substrate that indicates shared cultural affiliations rather than the particular forms superimposed onto it in particular contexts. This structure is the level at which culturally-licensed combinations are constructed, and certain kinds of pairings and associations will be allowed within the relevant cultural grammar while others will be deemed nonsensical and thus avoided. Although the particularities of localized instantiations of a culturally shared structure – *i.e.* dialectal variations in its manifestation – can differentiate cultural subgroups and indicate local identities, the shared structural core creates and reaffirms affiliation with a common cultural sphere.

Although a common structural foundation such as that found among Cucuteni wave medallions indicates affiliation with a common cultural sphere, the particularities of local manifestations indicate cultural dialects that existed within this sphere and can shed light

on how culturally related individuals and groups identified and related to each other. In this way such variations represent markers on the cognitive landscape. These and other cognitive landscape markers are rooted in and defined by the cultural grammar associated with the relevant cultural sphere, and the ability to recognize and interpret this dimension of their significance requires access to this grammatical system. Recognition of the underlying structural substrate is generated by such culturally-specific grammatical knowledge; consequently, variations in the surface manifestation of a structural norm can be simultaneously identified as culturally similar but dialectally distinct. These distinctions, which differentiate related but separate entities, mark distinct categories on the cognitive landscape and allow for consideration of the identities and sociocultural relationships that were salient.

Variations in the framing elements of wave medallions offer an obvious starting point for considering this kind of variation. Among the eight wave medallions that constitute the sample data set used here, eight distinct frames occur. These can be grouped into three categories based on the particularities of their form: simple wave frames, compound wave frames, and complex wave frames. Examples of simple wave frames are presented in Figure 2. In these frames, the underlying structure is apparent and the swirling of the wave structure appears to move in one direction from the lower left to the upper right. Although these frames may occur in banded or clustered groups, each individual frame is clearly separated from other motifs. This appears to be the most common form of framing for wave medallions, though additional data may, of course, indicate that other varieties are equally prevalent.

Within the category of simple wave frames, as in all such groupings, subdivisions are readily apparent. Although a detailed analysis of these differences is beyond the scope of

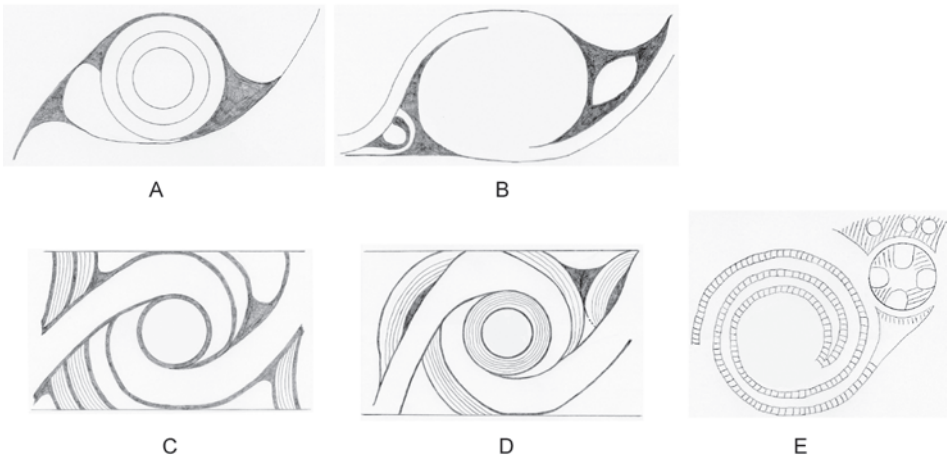


Fig. 2. Examples of simple wave frames from (A) Konivka, (B) Moldova, (C) Cherkasiv Sad II, (D) Petreny, and (E) Oleksandrivka (all illustrations by K. Hudson)

the present discussion, a brief consideration is both interesting and illustrative of the complexity found in Cucuteni imagery. In the case of the samples used here, three subcategories can be identified. The first, dubbed streamlined simple wave frames and represented by Figures 2: A and 2: B, appear to be entirely self contained and have clearly demarcated exterior edges. A second subcategory, identified as embellished simple wave frames and represented by Figures 2: C and 2: D contains frames that are busier than their streamlined counterparts and have more details in and on the framing elements. Although the detail found on some of these, such as Figure 2: D, causes them to resemble compound wave frames (see below), the dominance and features of the broad outermost framing element suggests that they represent embellished simple frames instead. The third subcategory is represented by 2: E and can be described as a split simple frame in which the framing element splits into two components, one of which moves to the lower left and one of which moves towards the upper right.

Examples of compound wave frames are presented in Figure 3. In these frames, the underlying structure is apparent but tightly intertwined with other elements and individual frames are therefore not clearly differentiated. In particular, these frames are joined with other compound wave frames and any associated imagery to produce bands or clusters of wave medallions on the surface of a vessel. Although the visibly swirling nature of the frame means that each framing unit moves from the lower left corner to the upper right, the intertwining of the frames create the sense that each interior element is in fact surrounded by elements in all four corners since the corner elements of adjacent frames are so closely positioned. This form of framing is less common than simple wave frames, though additional data may, of course, require a modification of this assessment.

A complex wave frame is presented in Figure 4. These frames are perhaps the most enigmatic variety, and their forms blur the lines between medallion and non-medallion imagery. In complex wave frame forms, the swirling nature of the frame is present but more difficult to discern, in part because its manifestation is not always as clearly presented as it is in the simple and compound varieties. These frames are commonly intertwined with other non-medallion imagery and may form part of a larger composition. In the example presented in Figure 4, the medallion itself forms the head of a humanoid figure. The swirling dimension of the medallion frame clearly moves up from the lower left hand corner; a small portion of the frame also seems to move towards the upper right hand corner, though the breakage patterns make it difficult to determine the degree of this extension.

The elements positioned below the medallion and the band that moves in from the lower left to form the outermost upper portion of the frame combine with the medallion itself to form the humanoid figure, though they are not themselves part of the primary medallion structure. The curved form of the band to the left of the figure is evocative of a medallion frame, but the curvature pattern of the band that forms the outermost upper portion of the wave medallion suggests that it is separate from the medallion that consti-

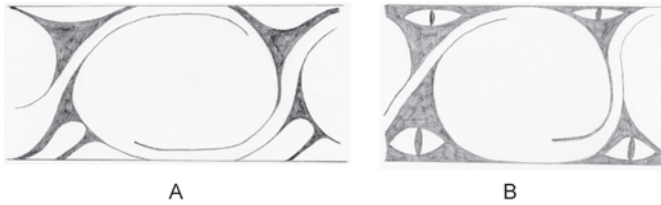


Fig. 3. Examples of compound wave frames from (A) Bernashivka II and (B) Moldova (all illustrations by K. Hudson)



Fig. 4. A complex wave frame from Konivka (illustration by K. Hudson)

tutes the figure's head. This curvature partially encircles the wave medallion and combines with the two concentric circles that constitute the rest of the frame; the curving element below them is compositionally distinct, though the proximity of these elements may suggest that the wave medallion is itself part of a larger textual unit with an internal textuality.

Although variations in the form of the frame used to construct Cucuteni wave medallions likely encoded semantic information necessary for the interpretation of the medallion as a whole, framing elements are – by definition – supplemental to the internal element(s) that form a medallion's core. Although frames form an important part of the textual whole of any medallion and are interpreted through a consideration of the textually contained within this unit, they do not by themselves appear to represent the kinds of elements likely to serve as markers on the cognitive landscape. Instead, they contribute to the interpretation of the medallion motif that is demarcated by them and also contribute to the meaning of any broader textual unit of which they are a part. This role does relate them to dialectally-specific cultural varieties and thus to the cognitive landscape in which these dialects are positions, but their position is secondary and they do not on their own serve as landscape markers.

The internal elements of Cucuteni wave medallions appear to be more significant for the cognitive landscape than the frames that encircle them. This is due, in large part, to their position at the semantic and physical core of the medallion structure; the inside-out or narrow-to-broad focus of textuality-based medallion readings reinforces this interpretation.

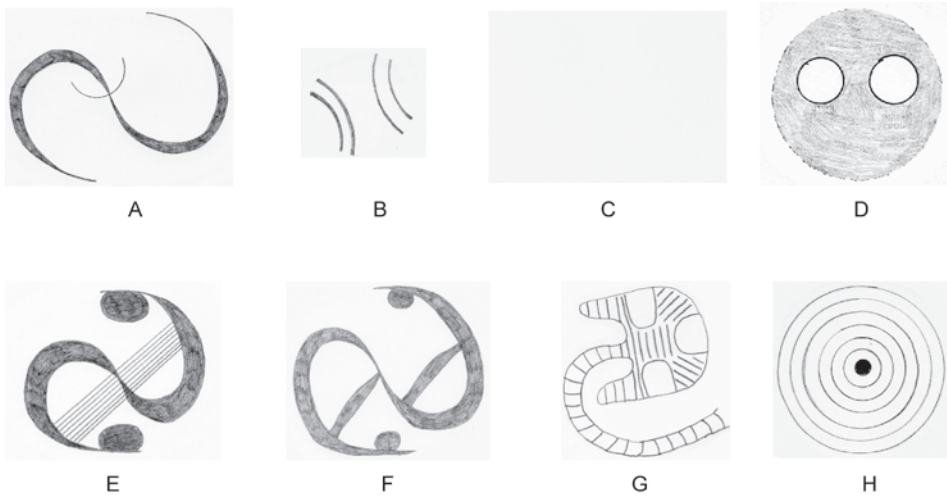


Fig. 5. The internal elements found in the eight wave medallions of the current data set. These motifs occur on vessels from (A) Bernashivka II, (B) Cherkasiv Sad II, (C) Konivka, (D) Konivka, (E) Moldova, (F) Moldova, (G) Oleksandrivka, and (H) Petreny (all illustrations by K. Hudson)

The interpretation or reading of a medallion motif would therefore be based primarily on the culturally specified significances of these internal elements; the information contributed by the frames and other associated elements is supplemental and serves to refine the meaning of the internal component. Additionally, the greater degree of commonality and uniformity among frames suggests a reduced semantic role while the greater variability found among internal elements – even in very small data sets – indicates a more specified significance that, in turn, indicates a closer association with local processes of identity formation.

The internal elements that occur in the eight wave medallions in the current data set are presented in Figure 5. These show a striking range of variability in form as well as in their degree of attachment to or independence from the frame(s) that surround them. Some, such as the s-shaped motifs from Bernashivka II (Fig. 5: A) and Moldova (Figs 5: E, 5: F) and the head motif from Oleksandrivka (Fig. 5: G), connect directly to their frames and appear to develop out them. Others, such as the pairs of arched lines from Cherkasiv Sad II (Fig. 5: B) and the facial image from Konivka (Fig. 5: D), physically articulate with their frames but do not appear to be part of them; the concentric circles from Petreny (Fig. 5: H) do not intersect with their frame in any way. Geometric forms are common (*e.g.* Figs 5: A, 5: B, 5: E, 5: F, 5: H), though anthropomorphic motifs (*e.g.* Figs 5: D, 5: G) and abstract elements such as the empty interior from Konivka (Fig. 5: C) – which suggests that lack of embellishment can be as significant as its pre-sence – also occur.

Further support for the semantic primacy of internal medallion elements and their role as markers on the cognitive landscape comes from the regional patterns suggested by their distributions. An excellent example occurs in two of the interior elements from Moldova, which are reproduced in Figures 6 and 7. Both of these elements have a general s-shape that connects directly to the end of the framing lines. Both are modified by pairs of solid dots positioned at the ends of the element, and both contain lines that cut across their interior spaces. The visual similarities are striking.

The common geographic origins of these motifs, when viewed in combination with their structural commonalities, suggests they were licensed by the same variety of the Cucuteni cultural grammar (*i.e.* they were the products of the same symbolic dialect). This observation requires recognition that the layered nature of culture that defines a cultural sphere as a network of related but distinct cultural dialects also generates a complex dialectal reality in which multiple instantiations of a particular dialect can coexist. In this model, each dialect can be viewed as a kind of miniature sphere in which related variations are connected; the entirety is analogous to the broader cultural sphere that encompasses it.

When viewed in relation to the cognitive landscape, which reflects the sociocultural relationships and distinctions salient within the relevant cultural sphere, this layering implies the existence of multiple categories of landscape markers that correspond to the varying



Fig. 6. One of the internal elements found in a wave medallion from Moldova, shown (A) in isolation and (B) in association with its frame (illustrations by K. Hudson)

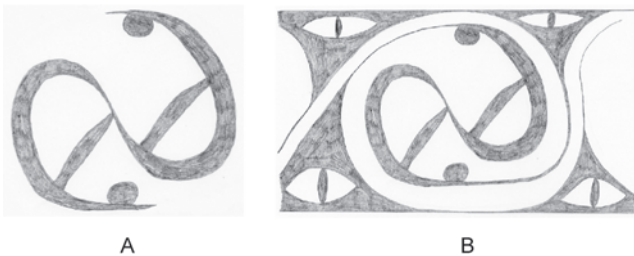


Fig. 7. Another internal element found in a wave medallion from Moldova, shown (A) in isolation and (B) in association with its frame (illustrations by K. Hudson)

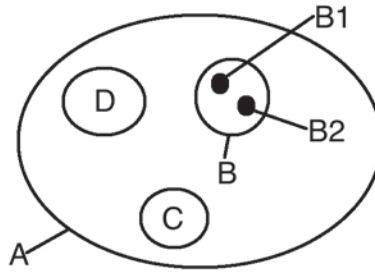


Fig. 8. A schematic representation of the varying levels of markers possible within a cognitive landscape (illustration by K. Hudson)

levels of detail. The relevance of these levels to the cognitive landscape varies based on the needs of the individual; broader markers are assumed to be more relevant for those viewing a particular dialect or set of dialects from an etic perspective, while those with a more emic knowledge of one or more dialectal varieties are likely to have focused on more specific and refined markers. Both levels of analysis represent cognitive landscape markers; the difference is in the degree of specificity.

An illustration of this concept is provided in Figure 8. In this image, the large circle marked A represents the cognitive landscape as it is defined by a particular cultural sphere. This is the space into which the networked dialects that comprise the cultural sphere are placed, and markers within it convey information about relationships and affiliations. These markers are tangible items such as imagery whose similarities relate them to a common cultural sphere and grammar; their differences indicate distinctions salient in the social and cultural lives of individuals and groups. The circles labeled B, C, and D represent markers on this cognitive landscape that correspond to symbolic dialects. These symbolic variations reflect cultural dialects (*i.e.* localized instantiations of the overarching cultural grammar); the markers therefore indicate the position of the relevant materials and their creations within the landscape defined by the cultural sphere. More refined markers indicating variations within these dialects are also possible, as indicated by the dots marked B1 and B2; these convey more nuanced information about identity.

In terms of the motifs presented in Figures 6 and 7, the basic structure – an s-shaped line modified by two dots and bisecting lines – represents a cognitive landscape marker identifying a particular symbolic dialect that is associated with Moldova and which, in turn, reflects a particular identity or position within the broader grammatical tradition of the relevant cultural sphere. More specific instantiations or variations within this cultural dialect – which may themselves be labeled as dialects or sub-dialects, though it is possible for terminological issues to obscure the overall analysis – are indicated by the particularities of individual manifestations of this more general marker. These represent more refined markers on the cognitive landscape and are capable of provided specified information.



The need for this increased level of detail is contextually conditioned; some interpretations would have focused only on general kinds of markers in order to assign individuals and items to relatively broader classifications, while others required more specific information concerning particular kinds of relationships and thus focused on different kinds of markers. A diagrammatic representation is presented in Figure 9.

Although it is tempting to classify the interior element in the medallion from Bernashivka II with the Moldovan motifs, the structural underpinnings of these elements suggest that a more refined and layered approach is once again necessary. The presence of an s-shaped line as the primary element unifies the three motifs, but these lines are modified differently in the Moldovan examples and in Bernashivka II. This suggests that use of an s-shaped line as the primary element may represent a particular symbolic/cultural dialect while the different styles of modification may indicate sub-dialects or variations; particular instantiations of these modification schemes may, in turn, represent even more localized traditions. Each of these levels contains cognitive landscape markers of varying degrees of specificity, and the markers relevant to an individual in a particular circumstance are contextual. The key observation is that the motifs that occur inside wave medallions indicate positions within the cultural sphere and thus serve as markers on the cognitive landscape. A refined diagrammatic representation is presented in Figure 10, and the potentially multi-tiered nature of these markers is once again illustrated.

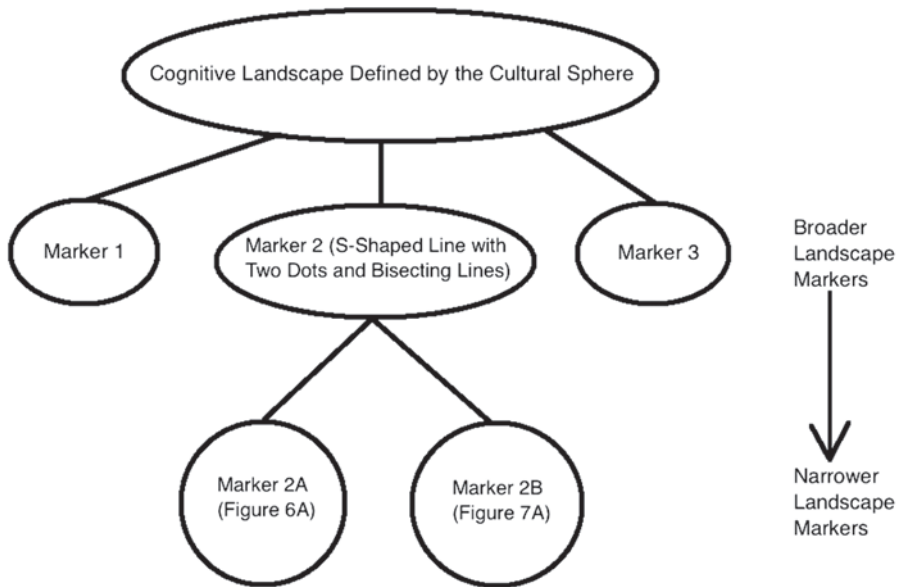


Fig. 9. A diagrammatic representation of how the Moldovan motifs relate to a multi-tiered system of cognitive landscape markers (illustration by K. Hudson)

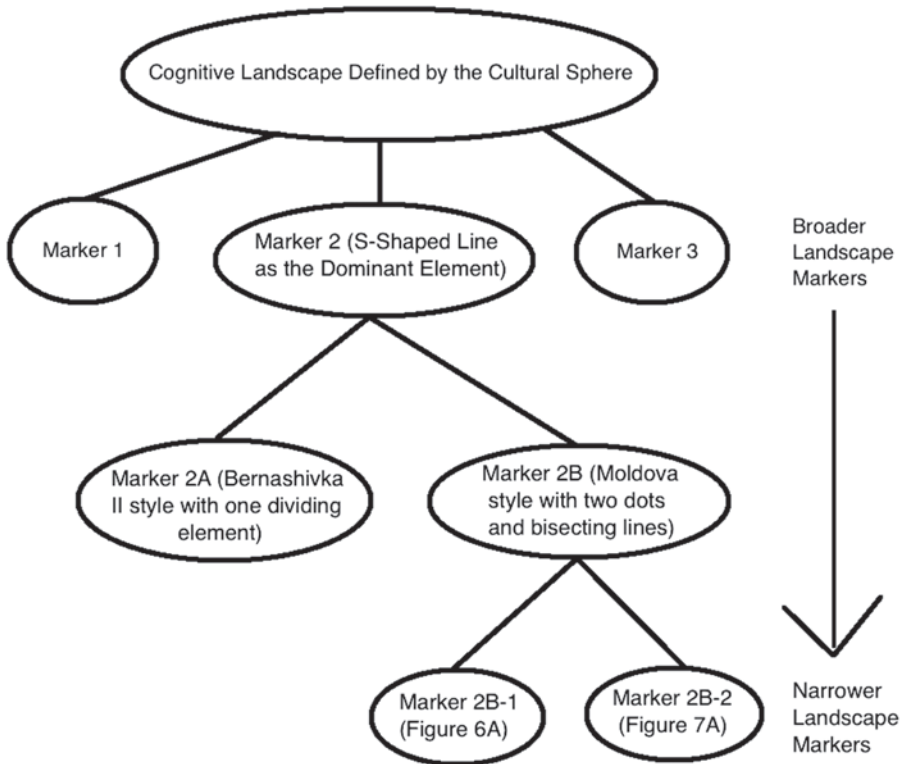


Fig. 10. A refined diagrammatic representation demonstrating how the Moldovan and Bernashivka II motifs relate to a multi-tiered system of cognitive landscape markers (illustration by K. Hudson)

An even more suggestive example comes from the wave medallion found at Cherkasiv Sad II (reproduced in Figure 11). The internal element of this medallion is distinctive and consists of two sets of mirrored parallel arcs that attach directly to the interior edges of the frame itself. A variation of this element occurs in another medallion from Cherkasiv Sad II, though this example is not another wave medallion but rather represents a more standard medallion form (Fig. 12). Its primary frame is composed of a series of concentric circles – the outer- and innermost of which are darker and thicker than those between them – that are situated within a broader composition that provides a kind of secondary frame. The interior element itself represents a variation of the form found in the wave medallion. It contains the same sets of parallel arcs that attach directing to the interior edges of the frame, but it also contains two vertical lines that demarcate an interior space that is filled with a column of dots.

The underlying structure that unifies these motifs – two sets of mirrored parallel arcs that attach to the interior edges of the frame – serves as a cognitive landscape marker

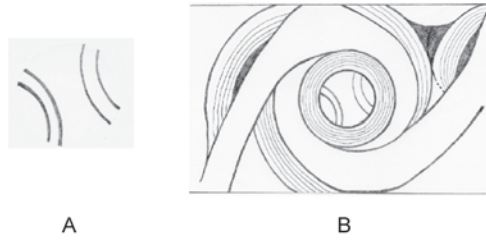


Fig. 11. The internal element found in the wave medallion from Cherkasiv Sad II, shown (A) in isolation and (B) in association with its frame (illustrations by K. Hudson)

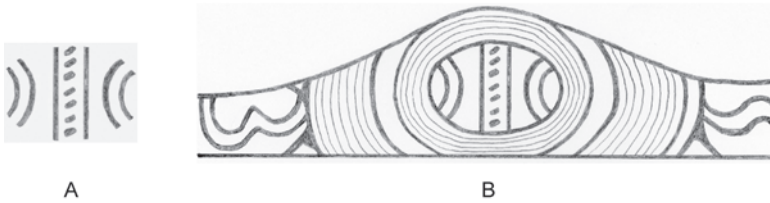


Fig. 12. The internal element found in the standard medallion from Cherkasiv Sad II, shown (A) in isolation and (B) in association with its frame (illustrations by K. Hudson)

identifying a symbolic dialect associated with Cherkasiv Sad II. The use of this dialect reflects a particular identity or position within the broader grammatical tradition of the Cucuteni cultural sphere and thus indicates a corresponding cultural dialectal tradition. Observers with access to the Cucuteni cultural grammar would have recognized this motif as valid and been able to associate it with a particular group of individuals or communities. This association formed the basis of the use of this structure as a marker on the cognitive landscape; its appearance in multiple iconographic contexts from the same site reinforces the interpretation of medallion-internal elements as related to identity and pertinent to cognitive landscape orientation.

Modifications of this structure represent dialectal variations indicating specific groups or identities within the broader cultural dialect indicated by use of the two sets of parallel arcs. These manifest on the cognitive landscape as more refined markers capable of providing specified information that assigns the associated individuals and items to more nuanced classifications; the relative importance of this kind of specificity is contextually conditioned and may only be relevant in some situations. As with the Moldovan and Bernashivka II examples, the structural underpinnings of these elements suggest that a more refined and layered approach is necessary. Cognitive landscapes are culturally conditioned and fluid entities closely connected to the situation of their users, and different kinds of markers will be assigned primacy in different situations. A diagrammatic representation involving the Cherkasiv Sad II examples is presented in Figure 13.

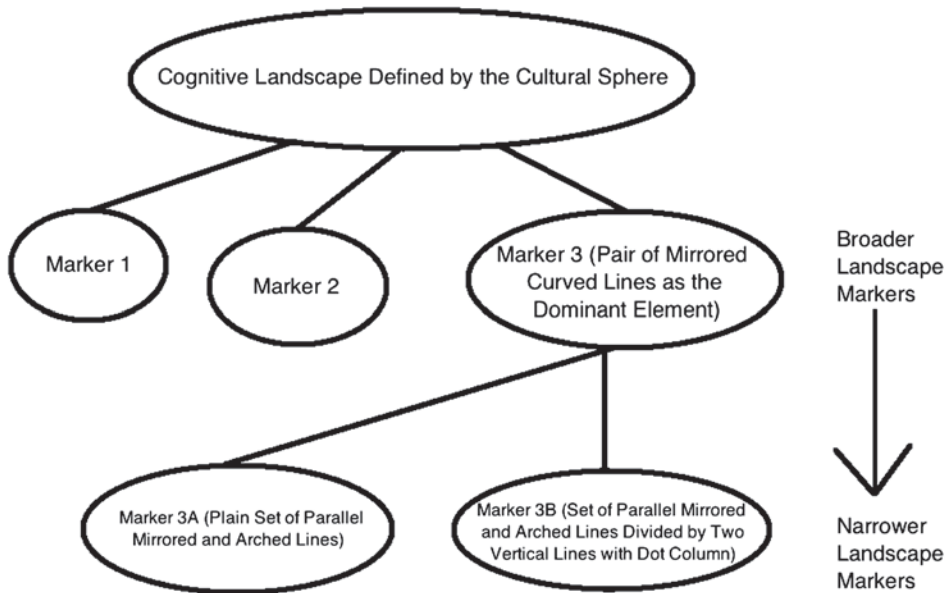


Fig. 13. A diagrammatic representation demonstrating how the Cherkasiv Sad II motifs relate to a multi-tiered system of cognitive landscape markers (illustration by K. Hudson)

## DISCUSSION

Cognitive landscapes are tangibly signified by material markers but intangibly realized in the minds of their experiencers and accessible only through processes of cognitive mapping. The validity of a cognitive landscape is dependent upon its relationship to the frameworks recognized by a particular cultural group, which provide the general semantic foundation that allows the cognitive landscape to have meaning(s) shared by all members of the relevant sociocultural group. Crucial to this analysis is the view that culture is a composite entity made up of constituent elements that are combined and recombined in different ways to form variations on a common cultural theme. The scope of these variable combinations constitutes a cultural sphere which can be defined as the range over which combinations of a defined set of cultural elements occur in distinct but mutually-intelligible and interacting patterns; the particular variations within this sphere represent cultural dialects capable of developing distinct symbolic and cultural subsystems.

### Cultural Dialects and Networked Identities

An emphasis on the negotiated nature of culture and cultural identity requires the development of a new analytical frame in which the multiple constituents of a culture can be

recognized and their relationships considered. We posit that such a methodology can be productively described as a kind of cultural dialectology in which individuals in different parts of a cultural sphere can be viewed as ‘speaking’ different cultural dialects. In the field of linguistics, dialects – along with the associated concepts of ethnolects, sociolects, and other group-based varieties – are defined as distinct but mutually intelligible language varieties spoken by particular subgroups within a broader population of speakers. Speakers are able to understand dialects other than their own, but they often view speakers of these non-native dialects as somehow different from themselves. Cultural dialectology adopts the general premises underlying its linguistic counterpart and posits that the members of a culture can be divided into dialectal subgroups whose members are more similar to each other than they are to the inhabitants of other subgroups within the broader cultural sphere. Each of these can be studied as a distinct and independent entity; alternatively, they can be comparatively approached through a framework that incorporates one or more additional varieties. As with dialects based on language, cultural dialects are generally recognizable and interpretable cross-dialectally by non-native users. However, each dialect represents a distinct approach to or variation of a broader cultural tradition. This overarching category is not a normalized or dominant standard: such hierarchical structuring is inappropriate and rooted in subjective assessments of validity and importance. Instead it is the collective set of elements, features, and patterns that define a particular cultural category and establish the parameters within which its variations (*i.e.* dialects) function.

Culture must therefore be reanalyzed as a composite entity made up of constituent elements (*i.e.* the elements that comprise religious practice, kinship, material production, *etc.*) that are combined and recombined in multiple ways to form variations on a common cultural theme. The geographic or temporal scope of these related combinations constitute a cultural sphere, which can be defined as the range over which combinations of a defined set of cultural elements occur in distinct but mutually-intelligible and interacting patterns. This intelligibility and interactivity within past cultures must be inferred from a combined consideration of material gradients of similarity and distributions, but the agency and value-systems imbued in material remains and the places they were used allows for such analyses if they are suitably rooted in the empirical data. In both past and present situations, a cultural sphere most commonly contains multiple varieties; culture is therefore a multi-layered entity in which a broader cultural level is juxtaposed onto a second level comprised of variations on the more general cultural theme.

These levels combine in the experiences of individuals to create a complex cultural identity that is both locally rooted and more broadly constrained. This layered approach to culture and localized cultural variation does not, however, mean that cultural dialects exist primarily in isolation. Cultural spheres are defined as the range over which combinations of a defined set of cultural elements (*i.e.* cultural dialects) occur in distinct but mutually-intelligible and interacting patterns; the inclusion of *interacting* as a descriptor in this definition is crucial. Cultural dialects are networked within the scope of their associated

cultural sphere, and it is this networking that produces the culture to which these dialects belong. In other words, a cultural sphere represents the interconnected dialects of a particular culture. These dialectal networks reflect interactive realities and perceived relationships and consequently shape the experiential landscape of the individuals who inhabit them.

### Towards a Pluralistic Past

This definition of culture is inherently pluralistic. The existence of cultural dialects requires that each culture be reconceptualized as a network of distinct but related dialectal groups that are networked within the associated cultural sphere; the extrapolation of this observation so that it encompasses an entire region (*e.g.* eastern Europe) reveals a complex and multilayered reality in which the imposed categories of archaeology are woefully insufficient. It is necessary to move beyond the typological frameworks that have dominated the field and transition to a more nuanced analytical frame in which variations of different forms can be used in tandem to create a picture of the past that more accurately captures the cultural realities of the individuals who inhabited it.

Archaeological attempts to develop a more emic view of the past are hindered by the lack of cultural interpreters who can explain the significances of material and spatial variations to the contemporary researcher. Humans as a species are prone to categorizing their world in an attempt to make it make sense; culture and language are both elaborate semiotic systems that use categorization to structure the world according to local convention and organize symbolic relationships through the association of various significances with particular categories and the manipulation of their constituents. The ability to 'read' the resulting constructions requires access to the relevant cultural grammar; without it, many significant emic patterns will be overlooked.

Unlike ethnographic analyses, which have access to consultants native to the culture in question, archaeological interpretations must be based on the pattern-recognition abilities of the investigator(s). These abilities are governed in large part by the cultural inheritance of the scholar, and the kinds of patterning and variations which are identified as significant will be influenced by the patterning and variations that are recognized and valued within the investigator's own cultural tradition. Archaeological frameworks are thus a reflection of the culture of the scholar as frequently as they are a reflection of the culture under study. The difficulty of accessing an extinct cultural grammar leads to the substitution of a modern one; such replacements often go unrecognized and unchallenged due to the lack of informants and the power of orthodox disciplinary assumptions about what kinds of variability are worthy of note.

A related issue comes from the nature of archaeological materials. Archaeologists are required by necessity to base their investigations solely on an incomplete set of materials that provides only a partial representation of the culture under study; issues of differential

preservation and selective sampling are additional complicating factors. This reality combines with the etic tendencies of archaeologists and the human desire to classify in a way that has produced a disciplinary emphasis on typological methodologies and a corresponding tacit acceptance of the assumptions inherent within them. Although typologies are undeniably beneficial, particularly in combination with other analytical frames, they are prone to obscuring or minimizing variations in a material dataset and creating a false sense of linear and sequential development through the suggestion of developmentally linked cultural singularities.

These issues have the potential to obscure ancient cultural plurality. Although typologies reflect differences within a particular site or region, these variations are cast as sub-units of a broader sequence – thus maintaining the sense of a single cultural tradition – and approached as isolated rather than interactive entities. The criteria used to establish typological categories are themselves based on the imposed values of the researcher(s), and the entire typological endeavor is prone to etic bias. Many cultural categories are thus imposed by the archaeologists who study them and are only partially reflective of the kinds of cultural identities that would have been salient to the individuals who lived them. The past is often constructed around the assumed accuracy of these imposed categorizations; data follow the prescribed categories when accuracy required a reversed analytical order.

Since cultural identity is bound to localized dialects that are themselves linked to a broader cultural frame and negotiated through dynamic interactions within the cultural sphere, it is necessary to move away from static typological frames and develop methodologies capable of more accurately capturing the plurality of cultures and cultural identities that existed in the past. This requires a more emically motivated framework in which variations significant to past individuals are sought and prioritized; a data-driven approach is thus necessary. Although it is not possible to access the minds of ancient individuals, it is possible to identify patterns and distributions reflective of past conceptualizations of identity. Individuals and groups produce patterns in accordance with the cultural grammar salient within their cultural dialect, and the specifics of these configurations – in combination with their distributions on the physical landscape – can provide information about how ancient populations viewed themselves *vis-à-vis* the broader culture to which they belonged. They can also shed light on how the relevant groups positioned themselves within the cultural sphere. A cognitive landscape rooted in the recognition and negotiation of identities and relationships is thus juxtaposed onto the physical world.

### The Materialization of Cultural Plurality

The cultural grammar, which represents the principles and patterns that structure and underlie cultural knowledge and norms, facilitates the recognition of semantically significant constructions capable of serving as markers with the cognitive landscape. These markers are components of the cultural environment that can be disassociated from parallel

aspects of the natural and built environments, which are universally recognizable but not necessarily imbued with significance by all cultural groups. Their distinguishing features are thus salient and perceptible only for the cultural groups that recognize them, and access to the cultural grammar is prerequisite for this recognition.

The collective assignment of cultural interpretations and significances to markers used to delimit a cognitive landscape means that the intangible nature of cognitive landscapes coexists with tangible manifestations of social and cultural ideas. The failure to recognize a particular symbolic or material construction as semantically significant is as important as the recognition and interpretation of a construct licensed by the cultural grammar of the observer, and 'unintelligible' markers can help to further define group membership and position a particular cultural sphere within its broader context. No cultural sphere exists in a vacuum, and the ability to recognize foreign constructs and place them within the cognitive landscape according to cultural knowledge and belief allows for the reification and perpetuation of a mutually agreed upon world order. This, in turn, creates a kind of cultural stability and further suggests the close relationships that exist between cognitive landscapes, their markers, and the social and cultural norms that imbue these markers with recognizable meaning.

The examples presented above indicate that the internal elements of wave medallions in particular, and arguably medallions in general, served as markers on the Cucuteni cognitive landscape. These motifs could be used to position people, groups, and material items within this landscape and determine their relationships. The restricted variability attested for the framing elements supports the view that they belonged to broader textual units and thus contributed to the meaning of a medallion's core but were nonetheless semantically secondary and served a function whose purpose was to refine rather than generate meaning. The broad range of variability found among the internal elements, in combination with the distributive patterns described above, indicates that these elements were the semantic core of their textual units and formed the starting point for the interpretive process. They were also closely associated with particular kinds of interpretations and identities and thus served as cognitive landscape markers.

It is important to consider the roles of context and perspective, since individuals belonging to a particular cultural dialect are more likely attuned to variations within it than are those viewing a dialect and its symbolic indications from the outside. This creates a situation in which cognitive landscape markers of multiple levels of specificity may exist simultaneously, though the privileging of one level over another should not be viewed as evidence that one level of specificity is dominant. As illustrated by Figure 8, multiple levels of markers exist simultaneously on the cognitive landscape. This creates a complex reality in which different degrees of specificity occur in different contexts based on the position of the interpreter within the cultural sphere and the particularities of their situation. A relatively simple graphic illustration of this potential complexity based on the examples used here is provided in Figure 14.



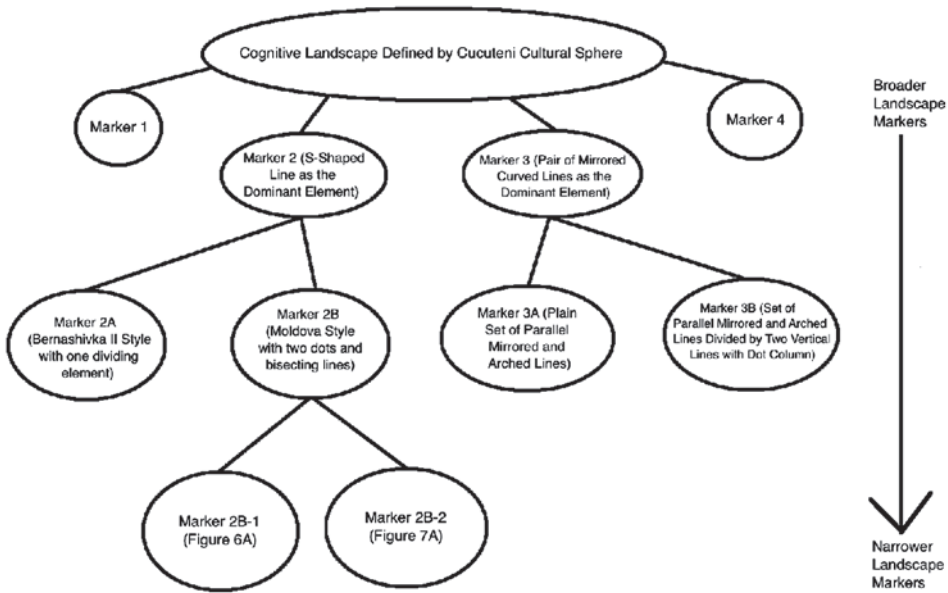


Fig. 14. An illustration of the complexity of cognitive landscape markers based on the data set used in the current discussion. Note that different degrees of specificity can be used in different contexts based on the position of the interpreter within the cultural sphere and the particularities of their situation (illustration by K. Hudson)

The variety of potential assessment processes attests to the complexity of the cultural sphere and suggests a resultant cultural plurality. A cultural sphere most commonly encompasses multiple manifestations of its cultural grammar, and culture itself can therefore be viewed as a multi-layered entity in which the broader cultural level is superimposed onto a second level comprised of variations on the broader cultural theme. These variations represent cultural dialects networked within the scope of their cultural sphere, and this networking produces the culture to which these dialects belong. In other words, a cultural sphere represents the networked dialects of a particular culture.

It is important to note that there is not a necessary correlation between geography and cultural dialect or identity, as evidenced by the examples presented above. It is possible for geographically disparate locations to share a particular instantiation of the cultural grammar due, perhaps, to histories of interaction, trade, or other commonalities. Similarly, geographically close locations should not be assumed to adhere to the same cultural dialect or symbolic repertoire; variations in the materials produced by closely situated communities should not, as a matter of default, be viewed as representative of foreign or trade goods unless significant numbers of local goods warrant such an explanation. Furthermore, cognitive landscapes can exist on broader or narrower scales than the cultural sphere-based

model that is presented here and may contain markers representing different kinds of entities (*e.g.* multiple cultural spheres, lineage groups, professions, *etc.*). Although these cognitive landscapes can be difficult to identify archaeologically, particularly at narrower scales, it is worth acknowledging their existence in studies related to potentially relevant categories.

## CONCLUDING REMARKS

Individuals and groups produce patterns in accordance with the cultural grammar salient within their cultural dialect, and the specifics of these configurations – in combination with their distributions on the physical landscape – can provide information about how ancient populations viewed themselves *vis-à-vis* the broader culture to which they belonged. They can also shed light on how the relevant groups positioned themselves within the cultural sphere. A cognitive landscape rooted in the recognition and negotiation of identities and relationships therefore allows for the classification and categorization of individuals and their material culture in a manner that reifies the sociocultural order and affirms multiple levels of group identity.

Although the data set analyzed here is small and further research is required before the Cucuteni dialects can be more completely understood, these examples demonstrate the pluralistic reality of cultural spheres as they are made manifest in the symbolic systems they produce. The internal elements of wave medallions in particular, and arguably medallions in general, served as markers on the Cucuteni cognitive landscape that could be used to position people, groups, and items within this landscape and determine their relationships. The restricted variability attested for the framing elements supports the view that they were belonged to broader textual units and thus contributed to the meaning of a medallion's core but were nonetheless semantically secondary and served a function whose purpose was to refine rather than generate meaning. Future studies focused on these and other structurally grouped textual units will further illuminate Cucuteni cognitive landscapes and provide additional information on the cultural realities salient within the Cucuteni cultural sphere.

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