

Rock Art, Language and Cognition: Evidence from the Mongolian Altai and Beyond

Abstract. In his paper, “The sources of art”, Jakov Sher proposes using the language and art of children to understand the emergence of figurative art in prehistory. His focus is the parietal, Franco-Cantabrian Paleolithic tradition and its outflow in the Mesolithic period. This paper tests his model against the open-air, petroglyphic materials of northwestern Mongolia, the earliest examples of which date to the late Pleistocene. I argue that where Sher finds a break after the Late Paleolithic, the Mongolian tradition indicates continuity down through the Bronze Age. Nonetheless, the evolution of the Mongolian tradition does suggest analogies to Sher’s linguistic model expressed in terms of the emergence of narrative representation centered on the human figure. The article concludes with reference to a parallel but utterly different petroglyphic tradition from the Great Basin, wherein abstraction — also a form of language — lasted for thousands of years, coexisting with the development of a rich narrative tradition. The Great Basin tradition thus disrupts the analogies between language development and figurative art suggested by Sher and demonstrated by the Mongolian materials.

Keywords: Pleistocene, Paleolithic, mammoth, rhinoceros, ostrich, aurochs, Mongolia, Altai Mountains, Great Basin.

Якобсон-Тепфер Э. Наскальное искусство, язык и мышление: материалы с Монгольского Алтая и иных регионов. В своей статье Я. Шер предлагает использовать язык и изобразительное творчество детей для понимания возникновения фигуративного искусства в преистории. Он уделяет основное внимание франко-кантабрийской традиции монументальной живописи и тому, что пришло ей на смену в мезолите. В настоящей работе его модель проверяется на материалах по петроглифам северо-западной Монголии, древнейшие из которых датируются поздним плейстоценом. Я показываю, что, в то время как Шер находит разрыв традиции после палеолита, монгольские материалы свидетельствуют о сохранении преемственности вплоть до бронзового века. Вместе с тем, развитие монгольской традиции являет аналогии лингвистической модели Шера, выражающиеся в появлении повествовательных изображений, в центре которых находится человеческая фигура. Завершается статья обращением к параллельной, хотя и совершенно отличной, традиции, существовавшей в районе Большого Бассейна, где абстракция — тоже форма языка — на протяжении тысяч лет сосуществовала с богатой нарративной традицией. Таким образом, в отличие от монгольских материалов, материалы Большого Бассейна противоречат развиваемой Шером идее о параллельном развитии языка и фигуративного искусства.

Ключевые слова: плейстоцен, палеолит, мамонт, носорог, страус, зубры, Монголия, Алтайские горы, Большой Бассейн.

In his discussion of the origins and development of representational art, Professor Sher proposes to explore the cognitive developments that rather suddenly catalyzed Early Modern Humans to create representational art about 40,000 years ago. From his perspective, the earliest examples of “art” — abstract elements, linear patterns or other possibly decorative or symbolic forms — do not explain the origins of figurative representation. For now, Professor Sher argues, our inquiry should turn from investigating the prehistory of tool making and the development of manual skills to the development of human cognition and verbal communication — a process which, he appears to assume, is universal across all cultures.

Professor Sher reaffirms the observation made by many scholars that the appearance of the monumental Franco-Cantabrian parietal tradition about 60,000–40,000 years ago represented a kind of cultural “explosion” marking the beginnings of art and religion (Mithen 1996; Price 2013). In order to understand this sudden leap in human culture, Sher argues that universally the child’s development of consciousness and speech must replicate that of primitive *homo sapiens sapiens*. Thus it should be possible to understand the development of figurative art by considering the development of the linguistic and artistic skills of children. Most generally, art in the form of static, individual elements, often schematically rendered and unrelated to each other spatially or psychologically, may be analogized to a child’s primary exploitation of nouns. The gradual emergence of pictorial elements in action, embedded within a coherent spatial setting, corresponds to the appearance of verbal speech, i.e. of speech reflecting action and relationships.

It may certainly be that there are analogous structures to be found in the larger development of figurative art and in the general development of language. There are, however, several problems that arise. Simple observation indicates that the development of representation among children scarcely holds any promise of explaining the “sudden” emergence of Paleolithic art or of its subsequent development. The stubborn fact remains that neither children nor most adults ever achieve the combined level of technical skill and visual memory that underlie the great wall paintings of Chauvet, Lascaux, Altamira or any other cave. There is, moreover, a deep and developed literature on the conjectured process by which language emerged among Early Humans over a period of perhaps 100,000 years and a general consensus that by 40,000 years ago Early Modern Humans possessed the cognitive fluidity, including the use of modern components of speech, to conceive and represent an image as a means of social communication (Aiello, Dunbar 1993; Mithen 1996: 140–142). There has also been considerable evidence for arguing that art is a form of social communication and, as such, involved from its beginning the goals of communication of information, negotiation and affective expression (Gamble 1991). As will be discussed below, even in cases where a culture’s pictorial tradition is steadfastly abstract, that same culture may develop a rich oral and narrative — i.e. representational — tradition.

The challenge in addressing Professor Sher’s paper therefore lies in several insufficiently acknowledged issues. The first is the now significant scholarship on the physical and psychological development of *homo sapiens sapiens* in relationship to the possible development of language. The second lies in the highly researched understanding of the development of children’s language — a development that typically progresses far more rapidly and with great complexities than is indicated

in Sher's discussion. For example, many scholars have pointed out that the earliest words used by children are not just nouns (i.e. words of substance) but also words of relational value (Bloom 1993: 188–199; Diessel 2004). Yet another issue lies in the problematic concept of Mesolithic applied to the emergence of local cultures and the development of art.¹ Nonetheless, there are a number of analogies between what Sher identifies as stages in linguistic development and what we find most generally in prehistoric art. I would like to explore this by turning to the area I know best: several major concentrations of rock art, petroglyphic in character, found in the open air and inclusive of a significant number of images from the late Pleistocene continuing down to the Iron Age. The complexes in question are all located on the western edge of the Mongolian Altai ridge and within valleys that bare ample signs of a glaciated past.² Together the subjects and styles of their oldest imagery constitute an open-air parallel to Franco-Cantabrian parietal art; together they offer the opportunity to challenge the apparent lack of continuity from the earliest representations down into the Iron Age and to consider how that continuity reflects cognitive evolution in Early Modern Humans.

Before continuing, however, I need to qualify the manner in which I will refer to chronological periods. In this part of North Asia, there is as yet no identification of what is referred to in other parts of the world as a Mesolithic or even Neolithic period. It is true that there has been little archaeological investigation into the pre-Bronze Age of the Altai and Sayan regions; indeed, many scholars suggest that the region was thinly inhabited in earlier periods (Geel et al 2004) even though the rock art in question here clearly disputes that assumption. On the other hand, there is nothing in the archaeological or paleoenvironmental record of the preceding or succeeding periods to indicate clearly several of the classical signs of the Mesolithic: i.e. a transformation in stone tools and the gradual adaptation to a post-glacial and forested environment with greater emphasis on the hunting of small-game and fowl rather than on large animals (Zvebil 1986). Similarly, the classical signs of the Neolithic period — the emergence of cultivation as a primary economic base, the appearance of settled communities and a ceramic industry — are similarly lacking. For that reason, images that I judge to be of a pre-Bronze Age date will be referred to here by their geological time-frames, i.e. late Pleistocene, early and middle Holocene. Only with the Bronze Age are we on firmer archaeological ground.

The south-most complex in question, Aral Tolgoi, is a hill located between two rivers at the west end of the great lake, Khoton Nuur (Цэвээндорж и др. 2005; *MAHC*: Search: Aral Tolgoi). The flat outcrops over the top and east end of the hill have been scraped and deeply abraded by millennia of glacial action. Despite that erosion, the

¹ The problem is in understanding what actually happened in that period between the end of the Ice Age and the emergence of farming communities denoting the Neolithic period. An auxiliary problem is, of course, that these archaeological designations of cultural periods may have little applicability to regions outside Europe and Central Asia. See the essays included in Zvebil 1986, especially those by Rowley-Conwy, Dolukhanov and Matyushin.

² The last glacial maximum is believed to date to approximately 21.2–19.0 kya cal yrs (Serebryanny 1984) but it is most certain that between that time and the early Holocene, valley glaciers regularly advanced and retreated. In addition to the complexes on the Mongolian side of the border, one must note the small group of archaic images from the Kalgut River with Russia's Ukok Plateau (Молодин, Черемисин 1999).

surfaces are covered with images of aurochs, elk, horses, argali and ibex. The vast majority of these images are highly naturalistic and monumental in appearance if not in actual size. Most bear the distinctive aspects of archaic execution: directly pecked, rough contours with legs expressed (if at all) in terms of two tapered cones. The most archaic animals are presented in a static profile, without any psychological interaction with other images. The representation of a rhinoceros (Fig. 1) at the very top of the hill confirms the Pleistocene date of many of the images, while images of ostriches (Fig. 2) indicate a date no later than the early Holocene.

The distinctively archaic aspect of the Aral Tolgoi images appears in panels where animals have been pecked either beside each other (Fig. 3)³ or one over the other, without any interaction. It can be argued that there is a kind of proportionality in the case of overlaid animals, but that may be simply accidental. The full-bellied contours of horses and ibex⁴, the massive treatment of aurochs (Fig. 4), and an exceptionally large and graceful elk (Fig. 5) function as open-air, petroglyphic parallels to the images and styles we find in parietal art of the Magdalenian period and earlier. Of course, one must factor in significant differences in media: the production of Franco-Cantabrian painted images involved broad and fluid gestures with an instrument that had been dipped in some kind of blackening or coloring; the execution itself permitted a sense of movement and shifting light. By contrast, the imagery at Aral Tolgoi — like that of Franco-Cantabrian images executed in relief or engraved technique (e.g., Font de Gaume, Les Combarelles) — is necessarily more static.

There are several aspects of the Aral Tolgoi imagery that should be noted. As powerful and impressive as it is, the archaic imagery reflects a mental conception of the natural world in terms of individual elements viewed as if from the outside — naturalistic, static, powerful but strangely remote. Over the whole hill there are almost no examples of psychological interaction even when the images lay one over the other or juxtaposed. The artists' perceptions of the animals reveal only their physicality. There are, however, some indications of a conceptual shift within the oldest scenes — representations where we sense the beginning of interaction. In two or three compositions (AT_17, AT_21) appear crude figures with either long bows or cudgels; by comparison to the animals with which they are juxtaposed, they are puny things while the animals themselves — horses, aurochs and elk — are fully within a Pleistocene aesthetic. The small hunter with a bow, located on the upper edge of the scene in AT_21 (MAIIC: RA_PETR_AT_0045) and the dog that crosses the horse's head are executed in silhouette, suggesting either that the latter were added at a later date or that the panel itself reflects a conceptual shift. In the case of the crude hunting scene from AT_17 (Fig. 6), something more important is happening. While the combination of animal types represented together is unrealistic, the artist has imposed on his animals a sense of a realistic spatial orientation. In both instances and certainly in that from AT_17, we see a cognitive change in several dimensions. The appearance of the human figure introduces the element of action while positing a coherent spatial context and rudimentary narrative. In terms of information conveyed by the materials at Aral Tolgoi, one could argue that the hunting scenes are potentially a richer form of social communication than are the individual animals.

³ MAIIC: RA_PETR_AT_0051; RA_PETR_AT_0056; RA_PETR_AT_0037.

⁴ E.g., MAIIC: RA_PETR_AT_0021, RA_PETR_AT_0019.

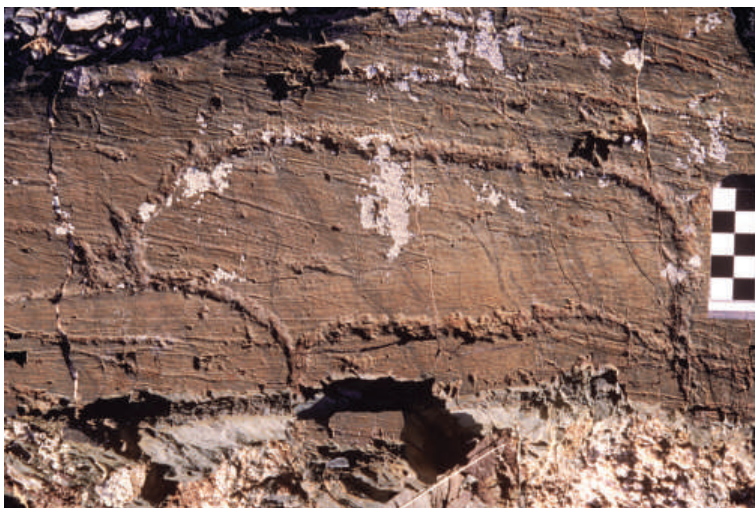


Рис. 1. Носорог. Арал Толгой, участок 22. Фото: Гари Тепфер.

Fig. 1. Rhinoceros. Aral Tolgoi, section 22. Photo: Gary Tepfer.



Рис. 2. Страусы. Арал Толгой, участок 22. Фото: Гари Тепфер.

Fig. 2. Ostriches. Aral Tolgoi, section 22. Photo: Gary Tepfer.



Рис. 3. Зубр, покрытый архалами. Арал Толгой, участок 17. Фото: Гари Тепфер.

Fig. 3. Aurochs overlaid by argali. Aral Tolgoi, section 17. Photo: Gary Tepfer.

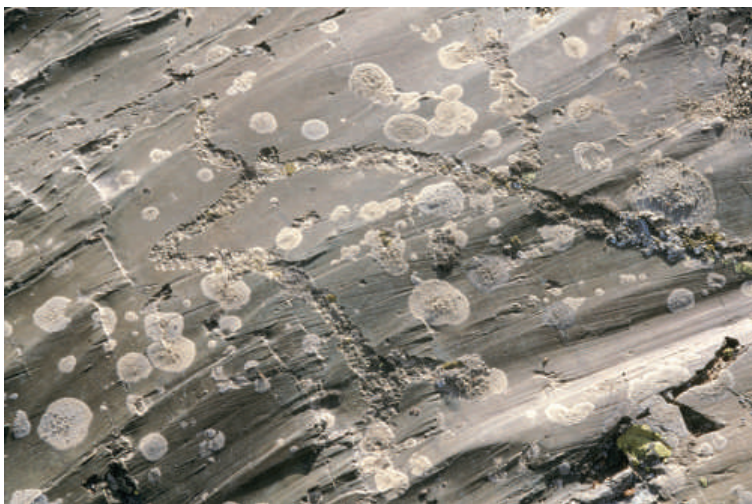


Рис. 4. Зубр, полуоконченный. Арал Толгой, участок 24. Фото: Гари Тепфер.

Fig. 4. Incomplete aurochs. Aral Tolgoi, section 24. Photo: Gary Tepfer.



Рис. 5. Олень и архал. Арал Толгой, участок 16. Фото: Гари Тепфер.

Fig. 5. Elk overlaid by argali. Aral Tolgoi, section 16. Photo: Gary Tepfer.



Рис. 6. Сцена охоты. Арал Толгой, участок 17. Фото: Гари Тепфер.

Fig. 6. Hunting scene. Aral Tolgoi, section 17. Photo: Gary Tepfer.

In recalling Professor Sher's comments on the peculiar "break" in representational art after the end of the late Pleistocene, it is curious that at Aral Tolgoi, also, there are almost no images later than the early Holocene. The only exceptions are a few yak, stylized stags and human figures from the late Bronze Age, the early Iron Age and the Turkic period. In fact, the end of rock art was almost certainly related to changes in the natural environment and by extension to profound changes in economic conditions. Paleoenvironmental studies of this region indicate that by the middle Holocene, habitation in this narrow valley at the end of the lake had probably become untenable. Lake levels were rising, heavy forests were expanding over the adjoining slopes, and glaciers were almost certainly advancing down from the high valleys on the west (Gunin et al. 1999). The resulting conditions would have been inhospitable to groups dependent on hunting. By the beginning of the late Holocene, forests began to retreat, lake levels began to fall and elsewhere in north-western Mongolia grasslands commenced the expansion they would reach by the late second millennium BCE. These changes coincided with the advent and spread of a herding economy across the Mongolian steppe; but at the far end of Khoton Nuur, the retention of heavy forest (up to the present day) must have discouraged the presence of large groups of herders. The distribution of surface monuments around and to the west of Aral Tolgoi indicates that in the early Iron Age and Turkic periods, nomadic herders moved up the valley to the high pastures and passes on the west, but they did not bother to inscribe their images on Aral Tolgoi. The end of figurative art at Aral Tolgoi may thus be more easily explained by aspects of natural history than by an unspecified "break" in human expressive culture.

The long valley of Tsagaan Gol (White River) is located about 40 km north of Aral Tolgoi. Its upper reaches include one of the two largest rock art complexes in this part of North Asia (Jacobson-Tepfer et al. 2006). The complex is rich in Bronze Age imagery, but it includes several small concentrations of archaic representations and others that reflect the transition of the early and middle Holocene. Imagery most convincingly of a Pleistocene date is found on a high outcrop (SK_J8) on the south side of the mountain called Shiveet Khaikhan. These involve a tangle of overlaid animals — elk, argali, aurochs and possibly a horse — rendered in a distinctively archaic manner: large bodies delineated by heavily pecked contours, strict profile and legs expressed by two tapered cones (MAIIC: RA_PETR_TG_0644). By contrast, several images higher in the valley (KS_A4, SK_C1⁵) and at the lowest end of the complex (TG_04225⁶), suggest by their styles a somewhat later period. In those cases, the images have been fully pecked in silhouette, albeit still with crude, direct blows, and several of the elk images have a distinctively gracile appearance. The valley floor is scattered with stone artifacts, including heavy scrapers, but one has the impression that the Upper Tsagaan Gol was inhabited only intermittently during the late Pleistocene. In fact, the proximity of the complex to the glaciated Tavan Bogd ridge and the contours of the valley floor strongly suggest periodic glacial advances until well into the Holocene. From its upper section down to the river's confluence with Khovd Gol on the east, the valley is essentially one long series of terminal moraines. As a result, pasture within the valley is even today very limited until one gets to its upper

⁵ MAIIC: RA_PETR_TG0065, RA_PETR_TG_0387.

⁶ MAIIC: RA_PETR_TG_0894.

end. Thus the combination of glacial action and the lack of pasture in the past as now suggests that natural history may account for the small number of Pleistocene images in the upper Tsagaan Gol and for the scattered aspect of images that begin to show a transition into a Bronze Age aesthetic. At the same time, this complex seems to contradict the idea of a break in artistic development with the end of the late Pleistocene. In the Upper Tsagaan Gol we see continuity in image types on the same outcrops where the older images are located, but within representations demonstrating a greater conceptual interest in individualizing detail and distinct narrative concerns.⁷ In this regard, the most striking panel occurs on a polished surface overlooking Khar Salaa (KS_C6).⁸ In the main scene on this panel, several small hunters using spears and bows and arrows surround a massive aurochs. The latter image is executed in full silhouette with dense blows. Its mythic narrative detail and particular execution indicate a date in the early Bronze Age and the emergence of a full sense of psychological interaction, proportionality and narrative intent.

The third and largest rock art complex in this region — that of the joined rivers, Tsagaan Salaa-Baga Oigor (TS-BO) — demonstrates a clear continuity from the late Pleistocene through the Bronze Age and into the early Iron Age (Jacobson et al. 2001; Jacobson-Tepfer et al. 2010: 46–49). Located about 40 km north of Tsagaan Gol, the complex includes the slopes and valley floor of the short Tsagaan Salaa (White Branch) and the broad valley of Baga Oigor Gol (the Small Oigor River). Scraped bedrock surfaces indicate that ancient glaciers must have filled the two valleys up to a level not far from the ridgeline. However, the valleys are far enough from the highest peaks on the east so that after the full glacial maximum they may have been relatively free of ice. The sheer number of decorated panels in this large complex and the extensive period they represent indicate that the valleys were inhabited by larger and more continuous human communities than would have been supported by the two valleys previously discussed. Several other conditions argue for a substantial population here in prehistory: these would include the valley's impressive size, the passage it offers between lower elevations and rich summer pastures, the ample number of protective draws and terraces, and what must have been a seasonal abundance of bird life and fish offered by the marshy character of the valley floor.⁹

Images of mammoths (Fig. 7)¹⁰ and archaic images of aurochs, horses and elk establish an initial stage in the Late Pleistocene.¹¹ Within this group of images one finds the same archaic indicators noted at Aral Tolgoi: profiles rendered with directly pecked rough contours, heavy bodies and legs expressed through two tapered bands or cones. Most of the archaic imagery can be found on terraces at the base of south-facing slopes or on terraces just above the valley floor (e.g., Fig. 8).¹² The one exception to this statement is an image of an uncertain animal, located high

⁷ E.g., *MAIIC*: RA_PETR_TG_0649.

⁸ *MAIIC*: RA_PETR_TG_0240.

⁹ Although the valley is now much drier than in earlier periods, its marshy contours are readily visible in Soviet period aerial photographs. See Jacobson-Tepfer et al. 2010: fig. 3.29.

¹⁰ *MAIIC*: Search: Mammoths.

¹¹ See, e.g., *MAIIC*: RA_PETR_OI_0068.

¹² Jacobson et al. 2001: Vol. 2, Map 5; and see Jacobson-Tepfer 2013.

on the TS II slope (*MAIIC*: RA_PETR_OI_0042). TS III, located where the Tsagaan Salaa breaks out into the Baga Oigor valley, is particularly rich in archaic imagery. More significantly, it is possible to trace conceptual changes through several series of panels. For example, on one surface, large static elk and ibex (Fig. 9), arranged without regard to spatial order, stylistically establish a benchmark as early as the late Pleistocene (*MAIIC*: RA_PETR_OI_0076). On a nearby boulder are overlaid several large images of aurochs and elk more suggestive of the kind of net of animals one sees in Magdalenian art than of a naturally occurring group of animals (*MAIIC*: RA_PETR_OI_0067). Close by, large static animal images are arranged facing to the right on a vertical stone face, indicating the appearance of an apparent concern for realistic orientation and reminiscent of the horse images at, for example, Pair-non-Pair (Gironde, France) (*MAIIC*: RA_PETR_OI_0075). A massive elk found on a partially buried boulder (*MAIIC*: RA_PETR_OI_0493) has many features of a Pleistocene image but its dense silhouetted pecking would suggest a later date in the mid Holocene. Similar transitions are indicated in the case of panels along the terrace of BO II and III, where are located both extremely archaic images (aurochs, horses, elk as well as mammoths) and panels indicative of the intrusion of a narrative content expressed through animals in action and crude hunting scenes.¹³ Here, as elsewhere, the dating of imagery is dependent on style, subject, technique and the emergence of narrative elements in conjunction with paleoenvironmental data. The results of such an integrated consideration indicate that continuity rather than disruption characterized the prehistory of art in this complex. Taken together, panels at TS-BO describe the transformation of representation from archaic, static formulations to primitive indicators of spatial order and psychological interaction and finally to the emergence of a narrative intent. Within those compositions the representation may be conventionalized but not schematic and the use of x-ray images is virtually absent. What is most clearly demonstrated here is not a visual analogue to the development of language but rather the appearance of a cognitive flexibility reflecting an exchange of information on many levels. It is perhaps significant that this valley, with a size and environment capable of having supported a relatively large population of hunters, fishers and herders, should include the richest and most continuous rock art tradition yet documented in North Asia.

We have a tendency to privilege the parietal art of Late Paleolithic France and Spain, setting it on a pedestal of artistic achievement and complexity from which, it seems, there could only be a downward trajectory for at least several thousand years (Gamble 1991: 4).¹⁴ Professor Sher is not the only scholar to maintain that the artistic achievement visible in parietal art is comparable to the art of the Renaissance. The very mystery of its location has burnished its significance in the modern imagination; and our contemporary preoccupation with ideas of shamanism and spirit-inhabited rock walls has only heightened that sense of mystery. However, almost none of that art should recall the achievements of the Renaissance, for several very important

¹³ See Jacobson et al. 2001: Vol. 2, Pls. 283–296.

¹⁴ There are other painted caves from distant places and also most certainly reflecting a late Paleolithic date. These include, most particularly, Капова in the Urals (Бадер 1965) and Khoit Tsenkir in western Mongolia (Окладников 1972), both of which have been almost totally destroyed as far as their documentary value is concerned.



Рис. 7. Мамонт, покрытый современной надписью. Бага Ойгор III. Фото: Гари Тепфер.
Fig. 7. Mammoth under modern writing. Baga Oigor III. Photo: Gary Tepfer.



Рис. 8. Медведь и лошадь на развернутом валуне. Цагаан Салаа V. Фото: Гари Тепфер.
Fig. 8. Bear and horse on inverted boulder. Tsagaan Salaa V. Photo: Gary Tepfer.



Рис. 9. Олень и козерог. Цагаан Салаа III. Фото: Гари Тепфер.

Fig. 9. Elk and ibex. Tsagaan Salaa III. Photo: Gary Tepper.

reasons. As Sher himself has noted, cave artists had to replicate the animals through their memory only — a feat that almost no artist since that period has been able to accomplish. Secondly — and with Lascaux and Altamira as notable exceptions — while that art conveys the physical reality of the animals represented, it conveys little of what we might call the animals' spirit. There is virtually no humor, no exaggeration of any part of the animal to express its speed, its strength, its grace or playfulness. What is missing, of course, is an artistic ability to empathize with the subject or — to express it differently — to anthropomorphize the animal, to make it knowable on a human level. That was a skill that emerged only later, in the Bronze Age, by which time communication and cohesion must have been supported by a great variety of traditions — expressive, social and technical. By that time, also, information sharing within a competitive social environment was paramount for survival and success.

The archaic images from Aral Tolgoi and TS-BO reflect a psychology focused on one particular subject, isolated from a larger psychological or spatial setting. But it is also possible to spy emergent elements of an individual conception that changed the animal from a static form to something with its own character: this is visible in the elegant elk from AT_16 (Fig. 5), the unfinished aurochs from AT_24 (Fig. 4), and two ruined but still discernible elk from AT_23 (*MAIIC*: RA_PETR_AT_0071, RA_PETR_AT_0072). An individual artistic gesture is apparent in a composition from TS IV, where an ibex with calligraphic horns is overlaid by a typically blocky argali (*MAIIC*: RA_PETR_OI_0113). In these few images one senses the intrusion of an artist's desire to infuse the animal with an individual being. This individuation lay at the origins of narrative; and narrative would become the most significant cultural means of disseminating information and shaping cultural adaptation (McCabe, Peterson 1991).

There are other traditions of rock art that challenge Sher's model but in different and instructive ways. Within the Great Basin region of the United States have been found several deeply gouged panels of a highly abstract nature, sometimes referred to as the Carved Abstract style (Cannon, Ricks 2007); these have been reliably dated to a period considerably earlier than 10.2 ka. (Fig. 10) (Benson et al. 2013). Despite their extreme abstraction, they impress one as intentional communicative signs that had to have been part of a cultural tradition binding a social group over a relatively large region. Even if we do not know how to "read" these marks, their repetitive character indicates that they referred to culturally understood perceptions and conceptions: that each mark referred to a known object, sensation or experience to which was attached a significance for both the social group and the individual artist or viewer. Both individually and collectively those intentional marks certainly reflected verbal communication both expressive and receptive. Moreover, their abstract elements did not represent a conceptual dead-end: they were only the beginning of what would be a long tradition of abstract markings in Great Basin rock art (Fig. 11).¹⁵ Obviously, in this case there is no objectively verifiable correlation between the development of an artistic tradition — abstract or figurative — and speech; but the antiquity and tenacity of the Great Basin tradition argues that coherent conceptualization and language had to have animated the abstract forms. Indeed, it is probable that the abstract marks formed a visual language through which individuals could communicate to their larger social groups tales of a hunt, descriptions of good hunting grounds, or any other socially binding information. Thus one of the real challenges facing historians of human expression is to understand why two cultures with equally rich oral traditions might have, in one case, a visual tradition rooted in abstract signs and, in the other, a clearly representational tradition. These differences point to the power of cultural models rather than differing language development to shape expressive forms. In many traditions, abstract elements may have carried as much conceptual weight as figurative forms.

In contrast to the Great Basin material, the art of the Mongolian complexes is resolutely realistic. As in the European arena, within the Mongolian materials powerful images of large animals seem to have appeared fully formed, without any yet-known precedents. In contrast to the European model, in Mongolia we find the slow introduction of individualized elements and the early emergence of narrative space and composition (Jacobson-Tepfer 2011). The unusually rich and continuous materials from TS—BO indicate yet another significant element to be considered in the evolution of prehistoric art. The number and quality of the decorated panels and the variety of styles represented there suggest that artistic achievement in prehistory was dependent on communities within which ideas and expression would be sharpened by cultural competition or by the need to share socially binding information (Aiello, Dunbar 1993). Perhaps a consideration of the significance of the size of communities in the shaping of expressive models would be as pertinent as language to the understanding of the evolution of prehistoric art.

¹⁵ There are, of course, occasional figurative motifs in Great Basin art. These include lizards, snakes and anthropomorphic figures, often as articulate as nearby marks are abstract.



Рис. 10. Скала с абстрактными знаками. Озеро Виннемакка, штат Невада, США. Фото: Дуглас Бошамп.

Fig. 10. Detail of deeply carved outcrop. Winnemucca Lake, Nevada, USA. Photo: Douglas Beauchamp.



Рис. 11. Скала с абстрактными знаками. Озеро Длинное, штат Орегон, США. Фото: Гари Тепфер.

Fig. 11. Panel with abstract marks. Long Lake, Oregon, USA. Photo: Gary Tepfer.

Literature

- Бадер О. Н.* 1965. Каповая пещера. М.: Наука.
- Молодин В. И., Черемисин Д. В.* 1999. Древнейшие наскальные изображения плоскогорья Укок. Новосибирск: Наука.
- Окладников А. П.* 1972. Центральноеазиатский очаг первобытного искусства. Новосибирск: Наука.
- Цэвээндорж Д., Кубарев В. Д., Якобсон Э.* 2005. Арал Толгойн Хадны Зураг. Улаанбаатар.
- Aiello L. C., Dunbar R. I. M.* 1993. Neocortex size, group size, and the evolution of language // *CAn* 34, 184–193.
- Benson L. V., Hattori E. M., Southon J., Aleck B.* 2013. Dating North American's oldest petroglyphs, Winnemucca Lake subbasin, Nevada // *JAS* 40: 4466–4476.
- Bloom L.* 1993. *The Transition from Infancy to Language*. Cambridge University Press.
- Cannon W. J., Ricks M. F.* 2007. Contexts in the analysis of rock art // *Quinlan A. R. (ed.)*. *Great Basin Rock Art*. Reno and Las Vegas: University of Nevada Press, 107–125.
- Diessel H.* 2004. *The Acquisition of Complex Sentences*. Cambridge University Press.
- Gamble Clive.* 1991. The social context for European Palaeolithic art // *PPS* 57, 3–15.
- Geel B. van, Bokovenko N. A., Burova N. D., Chugunov K. V., Dergachev V. A., Dirksen V. G., Kulkova M., Nagler A., Parzinger H., Plicht J. van der, Vasiliev S. S., Zaitseva G. I.* 2004. Climate change and the expansion of the Scythian culture after 850 B.C.: a hypothesis // *JAS* 31, 1735–1742.
- Jacobson E., Kubarev V. D., Tseevendorj D.* 2001. *Mongolie du Nord-Ouest: Tsagaan Salaa/Baga Oigor. Répertoire des Pétroglyphes d'Asie centrale*. 2 Vols. Paris: De Boccard.
- Jacobson-Tepfer E.* 2012. Rock art research in Mongolia, 2005–2009 // *Bahn P., Franklin N., Strechker M. (eds)*. *Rock Art Studies: News of the World IV*, 164–195.
- Jacobson-Tepfer E.* 2011. The elaboration of narrative in rock art of the Mongolian Altai // *Археология Южной Сибири* 25, 79–85.
- Jacobson-Tepfer E., Meacham J., Tepfer G.* 2010. *Archaeology and Landscape in the Mongolian Altai*. Redlands, CA: ESRI Press.
- Jacobson-Tepfer E., Kubarev V. D., Tseevendorj D.* 2006. *Mongolie du Nord-Ouest: Haut Tsagaan Gol. Répertoire des Pétroglyphes d'Asie centrale*. 2 Vols. Paris: De Boccard.
- McCabe A., Peterson C.* 1991. *Developing Narrative Structure*. Hillsdale, N.J.: Lawrence Erlbaum Associates, Inc.
- Mithen S.* 1996. *The Prehistory of the Mind*. London: Thames and Hudson.
- Mongolian Altai Inventory Image Collection (MAIIC)*. University of Oregon Libraries: Eugene, Oregon (<http://boundless.uoregon.edu/digcol/maic>).
- Price T. D.* 2013. *Europe Before Rome*. Oxford: Oxford University Press.
- Serebryanny L. R.* 1984. Mountain glaciation in the USSR in the Late Pleistocene and Holocene // *Velichko A. (ed.)*. *Late Quaternary Environments of the Soviet Union*. Minneapolis, MN: University of Minnesota Press, 45–54.
- Sperber D.* 1994. The modularity of thought and the epidemiology of representations // *Hirschfeld L. A., Gelman S. A. (eds.)*. *Mapping the Mind: Domain Specificity in Cognition and Culture*. Cambridge University Press, 39–67.
- Zvelebil M. (ed.)* 1986. *Hunters in Transition. Mesolithic Societies of Temperate Eurasia and their Transition to Farming*. Cambridge University Press.