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# 18 Translation and Transformation: The Materiality of Rock Art in a World of Bytes

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**Abstract**

Rock art is fundamentally material and local in several ways: its substrate's material qualities affect how humans made it and interact with it (for instance, how visible it is), it is fixed in a specific landscape location, and it participates in local systems of knowledge ranging from what it is ontologically to what specific motifs represent. This article, working from a material culture perspective and using European rock art as an example, explores what happens when we translate rock art into other media, particularly digitised forms. The process of translation liberates rock art from its location and medium, heightens its visibility and representational clarity, passes it through filters prioritising some imagery (particularly narrative pictures) over others, and reinscribes it into new frames of reference. Thus, it often results in losing the fundamental material qualities that made it rock art, in the process refashioning it into an entirely new product that meets the needs of different people living in a different world.

**Keywords**

Neolithic · Copper age · Bronze age · Iron age · Europe · Materiality · Landscape · Translation

## 18.1 Introduction: Rock Art in Translation?

Consider two images. Figure 18.1 shows some prehistoric European rock art—in this case, a major group of imagery in Valcamonica, in the Italian Alps. This outcrop is covered with several hundred images, all pecked into the rock sometime in the Iron Age (800 BCE–100 BCE) (Anati 1961). Like much European rock art, this is open-air art, not deep cave art; it is pecked and carved rather than painted; and it dates to the last few millennia of prehistory, not the Ice Ages. It has dozens of small, poorly visible motifs; you can walk over a major site without noticing anything unless you are looking expressly for it. Many of the motifs are cryptic "abstract" iconography that make little immediate sense to a modern viewer. In contrast, Fig. 18.2 shows the top results when you type "rock art prehistoric Europe" into a Google search. It is dominated by a few images—above all, Ice Age paintings from a few sites, notably Lascaux, Chauvet and Altamira—and by a narrow range of images from these sites—large, colourful, eye-catching, self-explanatory animals.

The first image gives a sense of what European prehistoric art mostly offers. The second image shows what happens when this is digested into the Internet, the bloodstream of the modern imagination. Are these the same thing? Clearly not. It is not merely that the popular images are often highly untypical in period, style, theme, location and material qualities. Beyond this, as the Surrealist painter Magritte pointed out in "*Çeci n'est pas une pipe*", the representation is not the thing represented.

Worldwide, there are many ways of encountering rock art. Some communities encounter rock art directly, both in its original locations and contextualised in a living tradition of ontological understandings, interpretive knowledge and engagement. This is especially the case in settings such as Australia, Southern Africa, and the American Southwest, where rock art may form a spiritually, politically and economically important part of life for indigenous stakeholder communities. Here I am discussing a different form of encounter with rock art: how it is communicated to audiences distant from it in time, space, or cultural background. This is common in Europe, for example, where, except perhaps in some Arctic contexts, rock art is distanced from any living traditions by gulfs of time, and most audiences are likely to encounter it indirectly and at a distance via books, museum exhibitions or the Internet rather than directly in place. For such encounters, the necessary first step is to translate rock art into some form in which it is portable and

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**Fig. 18.1** Seradina, Valcamonica, Italy: a major rock art site. Rock surface in foreground is densely covered in petroglyphs. (Image: J. Robb)

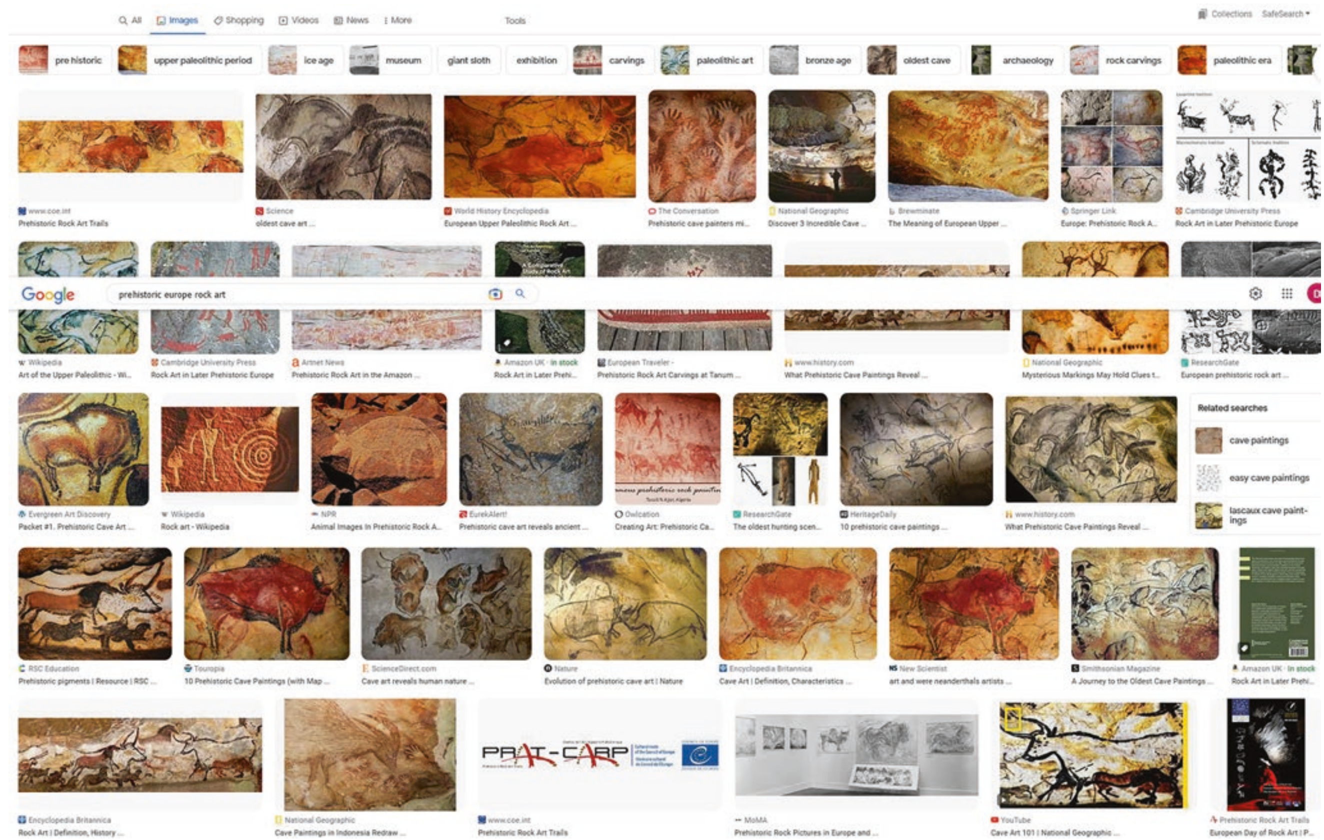


**Fig. 18.2** Results of searching “rock art prehistoric Europe” on Google. (Image: J. Robb)

consumable in novel ways. Translation does not necessarily imply commodification and globalization; for example, scholars have been translating rock art into drawings and publications for their own use for over a century. But it is a fundamental first step in the *chaîne opératoire* of commodification and globalization, as it allows rock art to be rein-

scribed in new experiential frameworks, circulated to new audiences and used in new ways.

Many of the chapters in this volume explore the commodification and globalization of rock art, particularly how it negotiates differences between groups encountering it in different ways. In this chapter, I ask a simple, more focused question. What Western audiences understand and consume is typically not rock art but representations of it. What do we accomplish in the act of producing these representations, of translating rock art into a new (im)material medium of transmission?

The simplest, most direct way to investigate this question is to trace the journey a rock art image typically follows between its millennia-long existence on a stone surface and the moment when it can be encountered by new audiences distant from it.

"Materiality" is a vague term, but all theorists agree that the material qualities of substances and objects are important, both for how we perceive and interact with things sensorially and for how they flow through history (Tilley 2004; Ingold 2007; Miller 2005). Material qualities themselves are not absolute but mediated socially by human capabilities and interests; for example, iron oxides can afford ores, colorants or other kinds of substances depending upon a group's capacities and interests. Affordances (sensu Gibson 1979) are possibilities for perception or action which make use of a thing's particular material qualities. As this implies, if you change the material nature of an object, you change its affordances; this may also shift its potential audiences, uses and historical transmission. For example, in the fifteenth century, when books moved from being hand-copied on vellum to being printed on paper, they became much more reproducible and circulatable, something reflected not only in patterns of literacy, authorship and commerce at the time but in library holdings today.

Materiality and affordances underlie why, in the contemporary world, circulation and globalization have a strong digital dimension. Things and ideas circulate and travel. For physical objects, globalization involves huge oil tankers and container ships of consumer goods. For other things, increasingly, anything which is a form of information, or can be reduced to one, is circulated digitally. More and more things are being converted to information expressly for such circulation—correspondence, music, books, games, artwork, and even objects, via circulation of blueprints for automated production or 3D printing. This poses a conceptual paradox which is ground zero for problems of rock art. Even as material culture theorists of all theoretical stripes strive to foreground the agentive materiality of objects, underlying digital circulation is the Platonic assumption that all objects can be ontologically distilled into separate components of pure material substance and the information that structures it—so that, for instance, they can be dematerialised, circulated as pure information, and then rematerialized, rematerialized in a different form, or consumed simply as information such as pixels on a computer screen.

What happens to the materiality of rock art in this process?

## 18.2 Rock Art Is about Context and Substance: Material Qualities, Placement, and Local Knowledge

Prehistoric European rock art exemplifies how rock art may be transmitted to audiences distant from it. Although the Palaeolithic cave art of France and Spain is the most famous, Holocene rock art is far more widespread. The best-known traditions are the Bronze/Iron Age rock carvings of southern Scandinavia and of the Central Alps; there are also major groups in northern Britain and northern Scandinavia, and several major traditions in Iberia, as well as important sites in France, southern Italy, Sicily, Bulgaria and Greece (Robb 2015; Sandars 1985). The great majority of sites are open-air sites rather than deep caves, and most art consists of rock carvings rather than paintings. Simple geometric or "abstract" motifs are common in all periods, and in some periods, virtually all the art consists of such motifs (Robb 2020). One feature all except perhaps some Alpine art share is a distance from modern audiences. This is not only physical distance, but conceptual distance as well; without continuous traditions of rock art practice for several thousand years or more, modern audiences use European rock art by transporting it to new interpretive frameworks. Sometimes this has to do with the meanings attached to it (for instance, using it as symbols of exclusively modern political identities), sometimes with larger narratives (about, for instance, the development of "art" from "primitive" to modern), and sometimes with ontological definition (for instance, classifying it as "art" and searching for representational meanings).

Like most rock art, European prehistoric rock art shares three fundamental qualities of substance and context: its material qualities, its placement, and its relationship to local knowledge.

### 18.2.1 Material Qualities of Rock Art

Rock art is carved into rock, or painted on it. What would be lost if it were carved into wood, Styrofoam or cheese, printed on a 3D printer, or reproduced as a two-dimensional line drawing? The materiality of rock art includes several important qualities (cf. Jones 2017; Jones and Cochrane 2018; Back Danielsson 2020).

- Hardness and grain of rock substrate. Rock art can use a wide range of rocks, but hardness and grain affect how it is made and appears (for instance, coarse-grained rock such as granite are often pecked rather than incised, and makers may prefer softer rocks to very hard stones such as basalt). The substrate has implications for the precision and clarity of the image, and the amount of time and effort producing an image takes; an incised image in soft, fine-grained stone such as slate may be the work of a few seconds and allow substantial detail, a pecked design in granite or basalt may require hours. and coarse-grained stone may allow only rough features to be shown. Indeed, workability may be part of how rock art's purpose is understood; Comanche rock carvings, made with a few incisive gestures, provided illustration to story-telling (Fowles and Arterberry 2013), while laboriously pecked Alpine designs may have been part of a pastoralist's pastime.
- Three-dimensionality. Rock art is rarely produced on a completely flat surface, a fact which often causes technical difficulties in producing a definitively accurate two-dimensional transcription. Rather than being a problem, the three-dimensionality of rock art was often recognised and used to advantage by its makers. For instance, bulges and hollows were sometimes used to define animals in Palaeolithic art, and Scandinavian Bronze Age petroglyphs are sometimes placed where water running over their surface would create special visual effects. Moreover, whether images are on a horizontal or vertical surface affects how they interact with incident light and how visible they are to users of varying postures and distances.
- Size. Whether an image is 10 cm, 100 cm or 1000 cm high affects how both the maker and viewers interact with it. Scale is one of the key qualities of rock art often lost in transcription; even including a scale in a picture such as Fig. 18.3b does not help most viewers get an intuitive sense of what it is like to actually encounter the image.
- Visibility. Rock art is often surprisingly hard to see without careful attention, the right light conditions and experience. Motifs may have stood out when freshly made, but they weather into near-invisibility. The modern eye, working from assumptions that rock art is a communicative medium intended to be viewed rather than accomplishing some other purpose, often assumes that visibility should be the norm, and invisibility or ambiguity is simply a defect due to time and erosion. Thus technologies such as painstaking photography, carefully controlled lighting and physical or digital enhancement may be dedicated to rendering rock art completely legible. But prehistoric people could certainly make things visible when they wanted to (by making them larger, framing them architecturally, or highlighting them in other ways). Rather, they often may not have been much concerned with rock art's visibility; perhaps rock art was an intervention which worked whether or not it was visible, or it was appropriate to achieve the ability to see it through accumulated experience rather than being able to see it instantly. Making rock art instantly legible is clearly necessary in translating it for modern use, but it may be a departure from its original intention; its degree of (in)visibility gives us valuable information about what people wanted it to do.

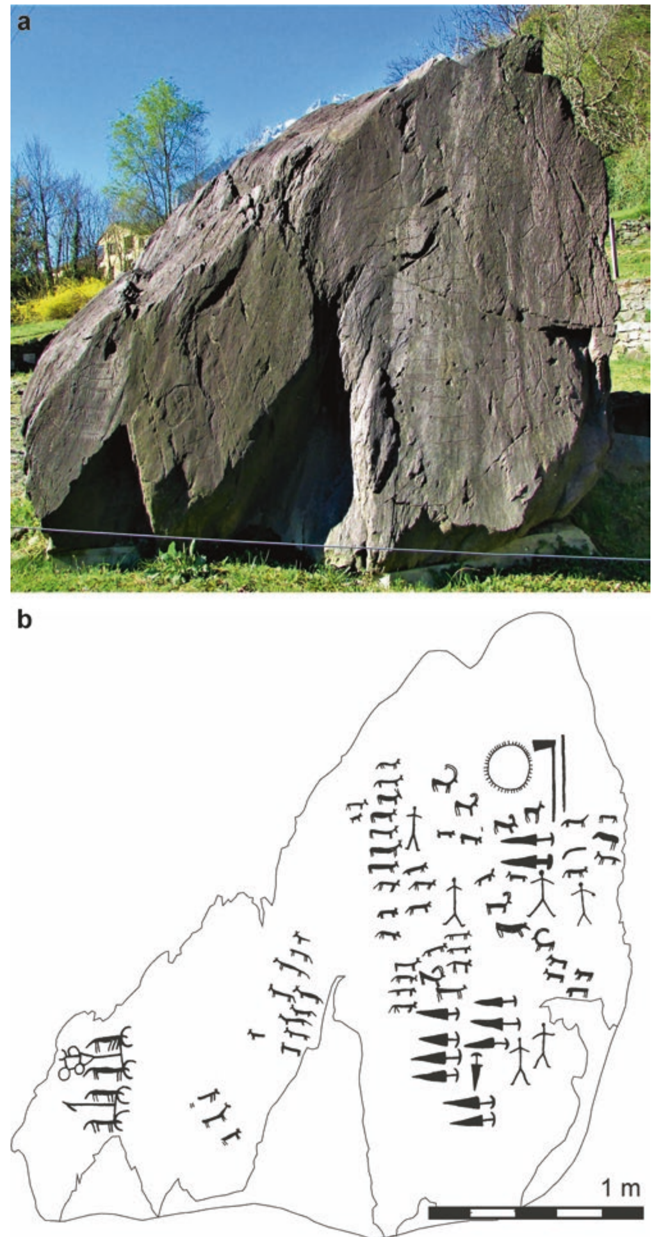


**Fig. 18.3** Cemmo, Valcamonica, Italy: Copper Age rock art. (**a**) The rock art. (Image: J. Robb); (**b**) Transcription. (Image: J. Robb, combining information from Anati (1961), Parco Archeologico Nazionale dei Massi di Cemmo: public signboard at site, and own observations)

In losing these various qualities (compare Fig. 18.3a, b), we may gain a sense of rock art as an abstract design and array of information; what we lose is a sense of it as real, working material object.

### 18.2.2 Place

Rock art is fixed in the landscape. Location is an inherent characteristic of rock art which affects it in several ways (Jones et al. 2011; Bradley 1997, 2009):

- Orientation, light, shadow, and acoustics. Rock art is normally photographed and presented to the public in good light—part of making it ideally visible. But lighting varies and the same motif may be invisible, visible, static or animated depending upon clear light, in poor or flickering light, the time of day or season, and the orientation of the sun. Similarly, it has been argued that some rock art sites were chosen for their acoustic properties (Diaz-Andreu et al. 2019; C. Chippindale, pers. comm. 2013), implying that "art" was important principally as part of performances.
- Cosmological location and views. Art may have been sited in specific locations for their cosmological importance, or for other aspects of location. Neolithic British rock art may have been located according to its viewshed (Jones et al. 2011). Scandinavian boat-themed rock art may have been located near watersides (Ling 2014; Ling and Bertilsson 2016). Indeed, art may have been used to define special places within a landscape.
- Accessibility, relationship to settlements. Some prehistoric rock is located so inaccessibly that the difficulty of accessing it must have been part of its meaning. The Neolithic cave paintings of Porto Badisco, Italy, can be reached only through tortuous galleries of a twisted, winding cave and may have contained secret knowledge (Whitehouse 1992). The Copper Age rock carvings of Mont Bego, France, are located at least a thousand metres above any contemporary settlement, in an area which would have been frequented only by herders, hunters, travellers and perhaps ritualists (de Lumley et al. 1976). In such cases, rock art may have been either intentionally sited inaccessibly (with the journey to it part of the event) or situated in areas principally frequented by selected sub-groups for special purposes. In contrast, other bodies of rock art may have been located in lowland areas relatively close to settlements (e.g. some major Valcamonica sites such as Naquane and Seradina) or transit routes (e.g. Scandinavian Bronze Age petroglyphs) and formed part of a familiar, broadly shared landscape.

Whatever its original location afforded to its original users, rock art is distant from many modern users. Modern population centres are predominantly urban and low-altitude, and translating rock art requires us to overcome distance through tactics such as moving actual rock art panels to museums in cities, circulating images, devising virtual experiences, or even building replicas (such as the reproduction of Altamira cave in the National Archaeological Museum, Madrid). But visiting a site often imparts a much more immediate and intuitive understanding, particularly of its landscape setting; the immediacy of this is lost when it is moved to the city, the page or the screen.

### 18.2.3 Local Knowledge

Rock art is fixed in systems of knowledge. These are basic understandings which may be supplied seamlessly by the system of knowledge and practices constituting a living tradition of indigenous knowledge, in places where rock art is "informed" by one (Chippindale and Taçon 1998); in regions such as Europe which lack such a tradition, they may be notable by their absence.

- The most basic local knowledge system of rock art is simply recognition of its presence and nature as rock art. For distanced audiences, this usually means putting an archaeological frame around something to be seen, establishing it as ancient rock art, not modern graffiti, the marks of tree roots, etc. For ancient people, this presumably meant recognising it as the residue of specific genres of action.
- Ontological framework. Before interpretation can occur, local knowledge systems include an underlying idea of what kind of thing an image is. This is pre-interpretation based on assumed categories; we might ask what the "meaning" of a picture on the wall of a room is, but we never ask what the "meaning" of an electrical socket in the same wall is.
- Interpretation of designs and motifs. The most obvious aspect of local knowledge systems is interpreting images. This may mean identifying the discursive meaning of a motif or asking why it was made when and where it was. For ancient people, such motifs may have had an explicit discursive meaning; but they may instead have been marks whose function did not require one, or have had meanings which were polysemic, ambiguous, or known to restricted groups of people rather than openly accessible.

To translate rock art for accessibility by people distant from it, we have to supply an informational context for it; this is often done by fitting it into our own interpretive schema and narratives embedded in our disciplinary practices.

## 18.3 Translating Rock Art: From Ancient Action to Modern Meme

Refashioning rock art for consumption by audiences not encountering it directly within its living tradition requires six steps of transformation: making it visible, transcription, identification, selection, moving it to new venues, and reproducing it in new media (see Fig. 18.11).

### 18.3.1 Making Rock Art Visible

The first step is to make rock art visible. Beyond discovery, removing soil and turf, and cleaning its surface, its visibility may be enhanced mechanically using tools such as raking light, chalk dust, charcoal or paint, which can dramatically reveal imagery, although not without conservation consequences (Fig. 18.4). Even without such physical interventions, rock art is often made visible by interpretive signboards which provide an on-the-spot finding aid. All of these visibility-enhancing interventions also create a definitive version of it: what we see is not the rock art but the painted or transcribed images. In the process, they correspondingly render invisible elements not highlighted, often misrepresenting its original visibility. They also eliminate ambiguity, promoting and authorising one interpretation of what is actually there and excluding others.

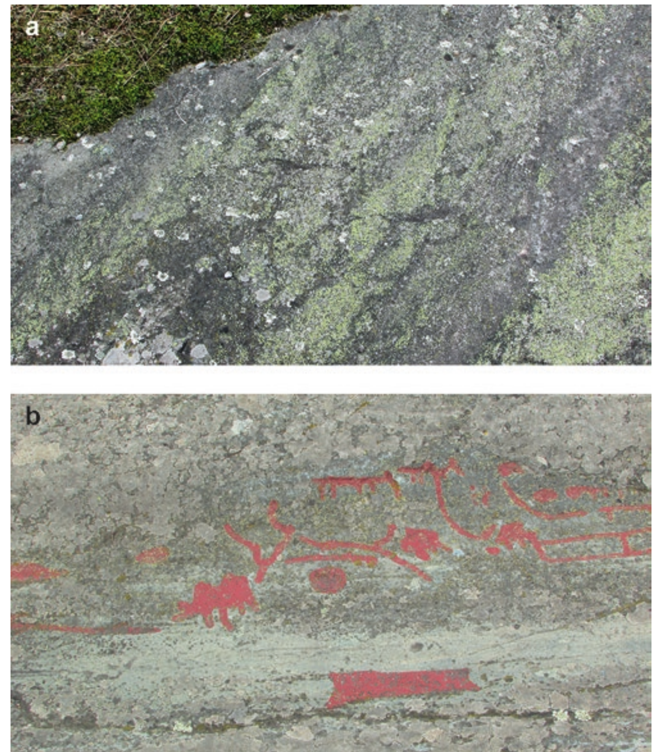

**Fig. 18.4** Scandinavian Bronze Age rock art (Himmelstalund, Norrskoping, Sweden; images: J. Robb). (**a**) Rock surface covered with unpainted images. (**b**) Rock surface with modern paint added to identify images for visitors

### 18.3.2 Transcribing Rock Art

To be studied and communicated, rock art must be transcribed in some form. Rubbing once was common, but requires can damage delicate surfaces, and the results can be difficult to interpret. Rock art is notoriously difficult to photograph effectively. Perceiving it often depends upon subtle gradations of shade and texture, and creating a photograph which shows a motif clearly often requires expertise, apparatus, and fine control of light and shadow. We are in the middle of a digital revolution in how rock art is recorded and represented, with increasing use of photogrammetry, image enhancement software such as D-Stretch, drones and aerial photography, and immersive reproductions. Such methods help convey the experience of encountering rock art, particularly in its landscape setting. However, they remain costly and labour intensive, and demand expertise beyond the resources of many rock art users, and platforms for circulating them in print media are still limited. It is unsurprising, thus, that even with such new methodological richness, the black-and-white line drawing remains the most common practice for basic rock art censuses, for exegetical interpretation and for publication. It can be carried out with simple technology and less expertise, and it creates a clear, interpretible image which looks like a "picture" to many consuming audiences, professional and otherwise (Fig. 18.5). Moreover, for most bodies of rock art, interpretation remains constrained by published corpora; often, a transcription made decades ago remains the only version available for our use.

What normally remains unappreciated is how much information such transcription discards. Drawing rock art converts the complex materiality of rock art into a simple binary decision: black or white? All other information—for instance, about colour, texture, technique, three-dimensionality and features of the underlying surface—is discarded. Moreover, drawing is not a neutral or mechanical transcription. It requires ongoing decisions (is a mark on the rock random "noise", part of a design, or an error by the maker which is informative about process but complicates the final image? Should a natural fissure in the rock be recorded? does an animal have particularly wide legs or has the rock weathered there?). It is also a classic example of "interpretation at the trowel's edge" (Hodder 1997); the recorder normally decides upon an interpretation of a motif early in the process and that guides the micro-decisions of recording in a self-fulfilling way.

**Fig. 18.5** Valcamonica, Italy: rock art in the process of transcription on transparent plastic laid over images. Note contrast between traced and untraced images in upper left of image, and decisions about what features of natural rock surface to include in tracing. Also note ambiguity, for example in the leg outline of the figure leading the plow, and a decision about how to interpret the area where the figure's staff overlaps with the leg of the (not yet transcribed) figure above it. (Image: J. Robb)

**Fig. 18.6** Presenting rock art, combining transcription, identification, contextualisation and exegesis to reframe it into modern discourses: (**a**) Valcamonica, Italy. (**b**) Tanum, Sweden. (Images: J. Robb)

### 18.3.3 Identifying Rock Art

In a textually-oriented society, it may be hard to look at an image without having been provided a verbal frame defining it. Hence, to make a rock art site visitable, it is standard to provide framing information, either physically (Fig. 18.6) or virtually. For rock art, the obligatory frame needed for a modern viewer to understand it comprehensibly includes a definition of what is being seen ("boats", "a house", "a shaman"), its place in a historical sequence ("Bronze Age", "Iron Age") and exegesis about what it meant, and why it may have been made. Here, visitors to Naquane are told that the grid-like object is a "two-storied dwelling"; visitors to Lövåsen are specially directed to notice the otherwise inexplicable figure of a "shaman".

Reframing rock art in this way looks transparent, but it is an essential part of translating rock art for modern consumption. Among other things, it defines the rock art in a new temporal relation to the viewer, as heritage or tradition associated with a particular classificatory period and way of life rather than contemporary. It also (usually implicitly) sets it within a representational framework, typically by answering the question "what does it depict" rather than questions such as "what effects did it have?"

### 18.3.4 Selecting Images

What is reproduced? Often a highly selective repertory. Holocene art from Europe shows a pattern already familiar from Palaeolithic art. The rock art itself includes many uninterpretable geometric and irregular motifs. What is reproduced is "representational" images, particularly ones with a simple, comprehensible meaning today: humans, animals, boats, weapons, "ritual" figures, handprints. This is generally true in venues in which rock art is presented to general audiences—books, websites, even signboards at sites. It is also obviously the case when images from rock art are reused as political symbols, logos, and in commercial products such as t-shirts and mugs. More surprisingly, it also happens in academic discussion. For example, at Porto Badisco Cave, Italy (Fig. 18.7) (Graziosi 1974; Graziosi 1980; Whitehouse 1992), well over 90% of motifs are "abstract" motifs; only a tiny minority are "representational". Yet what is reproduced from the cave, sourced both from Graziosi's original 1980s publications and from images by authorised visitors circu-

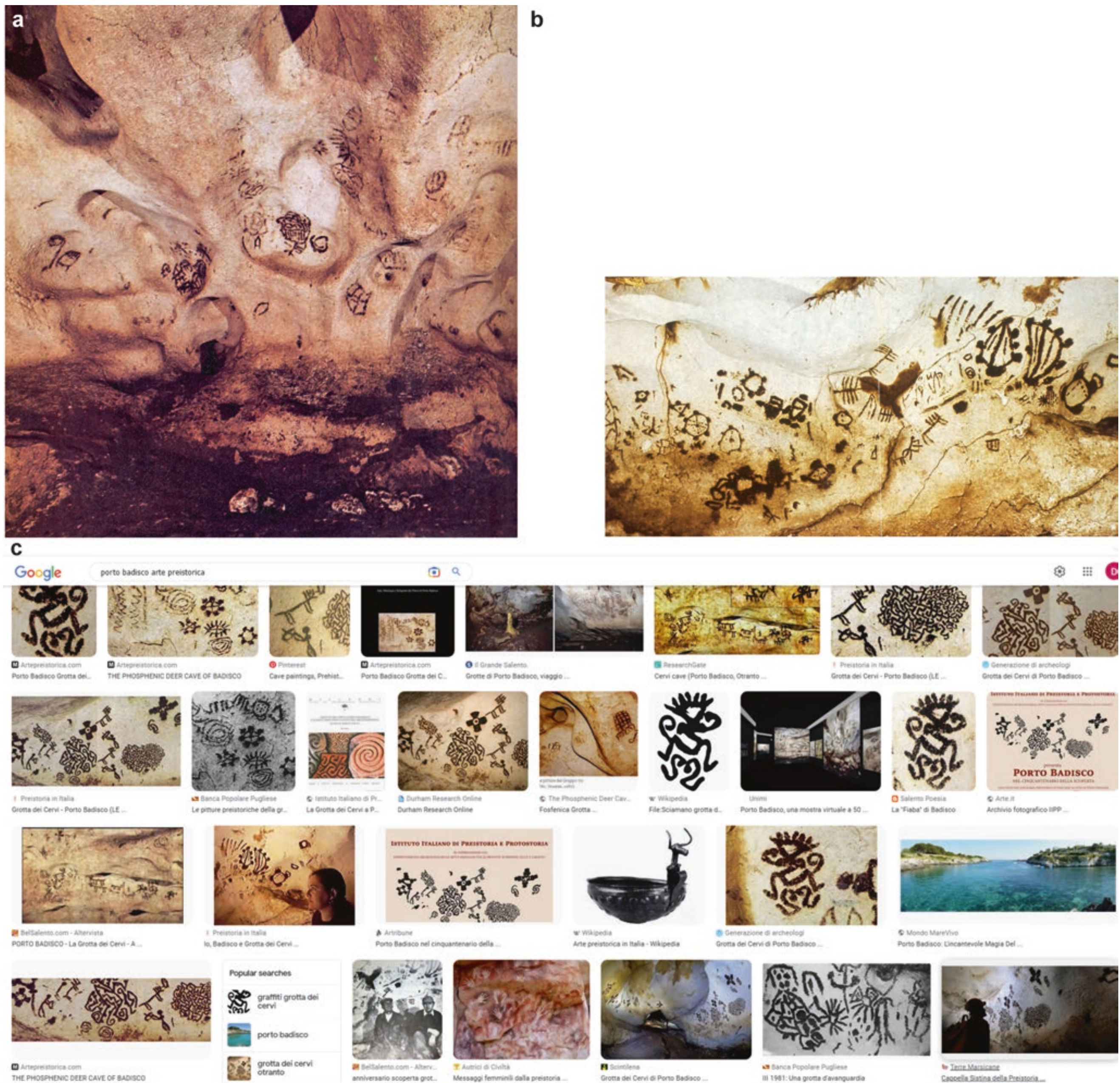


**Fig. 18.7** Porto Badisco Cave, Italy. (**a**) Some typical imagery from the cave (Graziosi 1980: Tav. 8). (**b**) A commonly-reproduced "hunting scene" panel (Graziosi 1980: Tav. 70b). (**c**) Google Image search results for "Porto Badisco arte preistorica"; note repetition of the same images

lated on websites, are one or two panels which can be read as portraying hunting scenes (indeed, the cave, "Grotta dei Cervi", is named after one of them). The next most popular image from Porto Badisco is an anthropomorphic image interpreted as a dancing shaman figure, followed perhaps by handprints. These few images—deer, hunters, anthropomorphs—turn up not only on tourist, news and local history websites aimed at the public, but also in academic venues—on monograph covers, in illustrations from scholarly publications, and as logos for professional associations and journals.

As this illustrates, there is a strong selection bias, even when professionals write for other professionals, in favour of art that has identifiable motifs and, ideally, a composition that can bear some exegesis—things that look like "pictures" to us. Indeed, many descriptions of sites have only minimal visual documentation of other kinds of rock art. This also works in the marketplace of competition between sites and, indeed, between entire traditions of rock art. For example, Levantine art is much better-studied than other Iberian Holocene rock art traditions such as schematic art, megalithic art and Atlantic rock art, precisely because it shows

interpretable scenes which are commonly used as illustrations of prehistoric hunting, warfare, pastoralism, ritual, and gender.

### 18.3.5 Moving to New Venues

Where is rock art found? On bleak rocky moors, in remote canyons, on the underside of boulders halfway up steep hillsides, deep in dark wet caves, in eroding sandstone pockets on cliffsides, above the treeline—and generally far from where modern urban, lowland populations live. Where is rock art encountered? *In situ*, for the minority of viewers who visit it in person (sometimes via adventure tourism with heritage foci). Most other people encounter rock art in books, journals, magazines, Wikipedia, websites, museum exhibitions, and as diffuse memes entering the bloodstream of culture via posters, cartoons, films, t-shirts, coffee mugs, jewelry designs and so on. If you want to encounter the Neolithic art of Northumbria (UK), you can spend several days driving around rural roads, climbing fences and examining eroding rock outcrops to find a faded set of carved concentric rings—or you can sit at a computer anywhere and within minutes consult highly visible, easily located images on websites presenting it in various scholarly and unscholarly ways. Similarly, the Alpine valley of Valcamonica (Italy) has one of Europe's largest concentrations of rock art (Anati 1961). It is located 1.5 h by car or train from the nearest sizeable city, Brescia. The two most heavily visited rock art sites, Seradina (Fig. 18.1) and Naquane just outside the central valley-bottom town of Capo di Ponte, receive a moderate number of casual tourists and school groups; sites further afield and at higher altitudes are visited only by hikers and serious enthusiasts. For other people, the rock art can be seen in casts and placards in the local archaeological museums and tourism centres, or encountered in pamphlets and books at the tourist offices, bookstores, and newsstands throughout the region. Decontextualised images and pastiches of the rock art turn up casually around town, familiarising local audiences with highly selected images and reminding them of its presence (Fig. 18.8). Increasingly, all of these pale in comparison with virtual spaces. While statistics on website hits are unavailable, more people probably encounter Valcamonica rock art through its Wikipedia page in a day than visit it in person in a year, and images of it turn up on many other websites. Such sites render the art not only more accessible, but also define what is felt to be "typical". (Indeed, as the Wikipedia webpage for any major rock art site shows, such sites are a major point at which the range of imagery is strongly narrowed and selected). Moving rock art to a venue where people can encounter it is a fundamental step in translating it for modern audiences.

### 18.3.6 New Media, New Objects

The final liberation, and the moment when it is clear that rock art has achieved true memehood, is when it leaps off the rock face on to some other material object. This can certainly involve commodification or politicisation, but it can also involve reusing patterns and images from the past in new ways to meet today's needs in ways that are not patently anachronistic, exploitative or unethical. Palaeolithic art has already achieved the status of a free-floating, cartoonable cliché—or at least images of skin-wearing "artists" painting large animals in cave "art galleries" have. Some of the things rock art can turn into include (Figs. 18.9, and 18.10):

- Photographs, drawings, calendars or posters
- Books, articles, and scholarly capital
- Websites and publicity material
- Logos or brands; whatever it originally connoted, the "rosa camuna" motif from Valcamonica rock art now represents both a brand of cheese and the Lombardia regional government.
- Mugs, key chains, jewelry, mobile phone cases, stickers, and personal accessories, even including protective face masks
- Garments such as T-shirts, scarves, and hoodies

In fact, it is the same range of items one can get any image printed commercially on. Although these are material objects, virtually all of them pass through a digital stage of life in the design phase, and the globalised digital world is probably the major way they are circulated (the images in Fig. 18.10 are mostly culled from websites such as Etsy and Redbubble). They thus are progressively dematerialised as rock art and re-materialised as something else.

Such new incarnations are not mere ephemera or epiphenomena; they transform prehistoric art by giving it a new materiality and new affordances. You cannot wear a rock surface. Putting the image on a t-shirt not only makes it wearable; it also changes its social functionality. The rock art morphs from its original social functionality into the modern role of "image one prints on figured personal paraphernalia to express one's identity", along with flowers, political symbols, puppies, photos of one's loved ones, Impressionist paintings, cartoon characters, and so on. It attaches meanings to one's personal identity in the way typical of modern social encounters. Such changes in function are partly responsible for the transformation of the image in other ways, notably the choice of images to use and the way they are reworked. They select a narrow range of clear, vivid images which resonate with modern narratives, and they simplify them, reducing three dimensions to two, texture to outline, and shadows to solid colour. This loses context and ambiguity, and it highlights above all iconography and meaning—effectively turn-

**Fig. 18.8** Moving rock art off the rocks and into new places in Capo di Ponte (Valcamonica, Italy). (Images: J. Robb)

**Fig. 18.9** Tanum (Sweden): gift shop at rock art visitor centre. (Image: J. Robb)

**Fig. 18.10** Objects available on the internet inspired by prehistoric European rock art. (Image: J. Robb, montaging images from Etsy.com and redbubble.com)

ing the prehistoric material object into a representational design identical to imagery we consume from other sources. Secondly, they harness prehistoric rock art to new narratives. Originally, it often may not have functioned principally as a signifier at all. Now, its ability to act materially is redefined semiotically: it supplies signifiers for meanings of new kinds. One is a range of narratives about history, progress, civilisation, wildness, and so on. This is evident not only in the choice of imagery but in the terms mapped on to it: "shamans", "warriors", "primitive", "pagan", "mythical", "ancient", "prehistoric", and so on. It is also evident in the meanings referenced: claims to tradition, heritage, authenticity, and attitudes and identities which often would not have existed in the art's original social context.

## 18.4 What Is Lost and What Is Gained, or the Tyranny of the Black and White Line Drawing

The examples above could be repeated around the world. They build upon standard practices in archaeology and extend them into the globalised digital world. The six steps outlined above (summarised in Fig. 18.11) essentially constitute a method or formula for enabling modern audiences not connected to rock art by living traditions to access and consume it. Each step in the chain looks obvious and trivial. What is so remarkable is their cumulative effect. Taken all together, these steps constitute anything but a neutral process of transcription. As discussed above, three fundamental aspects of rock art's materiality are its material substance, location and informational context. Rock art is integrally bound to its material substrate, which may dictate the methods used to make it, its colour and texture; it is variably visible and, often, difficult to see or ambiguous to distinguish; and it has a clearly defined scale relative to the human body. Transcribing it loses virtually all of these qualities, replacing them with a two-dimensional, flexibly scaled series of images processed to be visible and unambiguous. Spatially, rock art's location may originally have been one of its defining qualities—what kind of landscape it forms part of, who frequented it, what activities were associated with it, and other spatial qualities. Transcribing and circulating it renders it despatialised, associated with new place and contexts (the museum, the classroom, the library, the clothed body) or the no-space-every-space of digital space. In terms of local

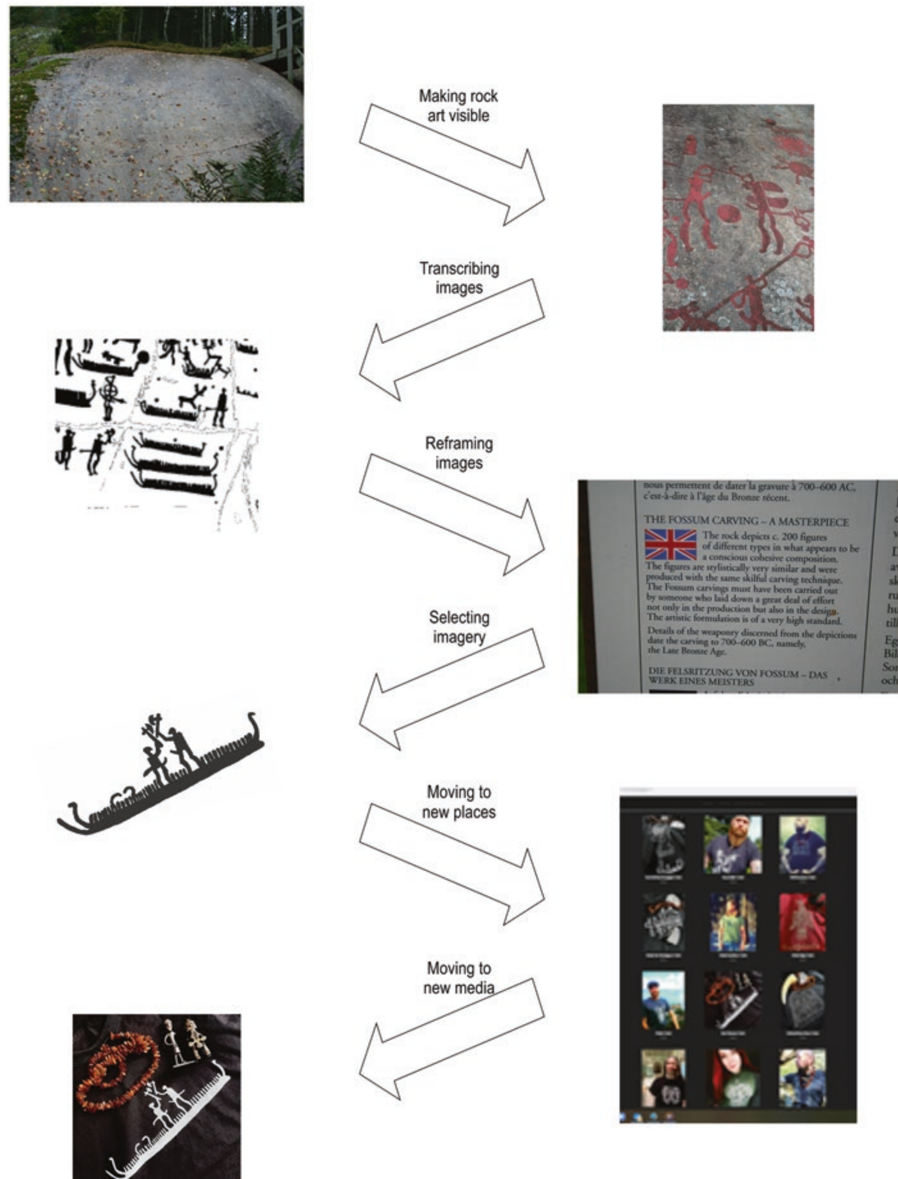


**Fig. 18.11** The translational process. (Images, from top: J. Robb, J. Robb, Ling and Bertilsson 2016: Fig. 18.3/ SFHA, J. Robb, Ling and Bertilsson 2016: Fig. 18.3/ SFHA, https://theatreofwar.bigcartel.com/category/men-s-t-shirts?page=1, https://theatreofwar.bigcartel.com/product/boat-warriors-t-shirt)

knowledge, rock art's informational context may originally have been implicit, polysemous, or differently accessible to different kinds of person; it often may not have been representational or communicational at all. In translation, this changes in several predictable ways. While all symbols are polysemous, reframing tends to prioritise a particular dimension prioritised as its discursive meaning. A narrow, highly selected range of motifs, strongly biased towards recognisable representations, stands for all; exegesis is added to make clear their meaning and inscribe it into modern frames of reference, and this is rendered flatly accessible to all viewers.

In other words, the process of translation removes most, if not all, of the qualities which actually made rock art rock art. It dematerialises rock art as one kind of thing, passes it through transformative informational filters, and reconstitutes it afresh as a different and new kind of object. The main effect is to transform our understanding of what the object actually is and how it acts. What did rock art do, originally? If we consider Gell's approach to art as a social technology (Gell 1998), some of it may have resembled the pictures on our walls or the religious icons in our places of worship. Some of it may have made spaces such as tombs appropriate for their function. Some of it may have recorded someone's presence or agreement or protest, like modern graffiti. Some of it may have supported stories being narrated, or presenced ancestors or supernatural beings, or merged past, present and future temporalities, or united a landscape with an unseen dimension. It may have been spiritual infrastructure or channels for power. Differentiating such possibilities requires understanding all aspects of its materiality, location and context. Very little of this information survives the translational process.

**Table 18.1** Rock art, before and after its transformation

| | Rock art in original context | Rock art in translation |
|---|---|---|
| Substance | Three-dimensional; images interact with material substrate; variably visible and invisible; have a clearly defined scale | Two-dimensional or digitally 3D; no inherent scale; no material substrate; images clearly visible and unambiguous |
| Location | Immovable, embedded in landscapes, associated with people, activities, contexts | Generically transportable, despatialised |
| Informational context | Wide range of motifs and images; informational context mainly implicit; diverse capabilities for acting | Highly selected range of images, chosen to fit into modern narratives, with explicit exegesis added, uniformly accessible; narrowed capabilities for acting (mostly as a representational signifier) |

The black and white line drawing is the most common way of recording and presenting rock art, and it tends to form the condensed, portable version from which most digital and globalised versions are reconstituted. However, it is strongly tied to interpreting rock art as "art" in a modern sense. It effectively strips out all information except form; it serves to answer one question only: "what is it a picture of?" This in turn serves a prelude for the other obvious question: "what does it mean?" By reducing what we know about rock art to merely its form and signification, our disciplinary practices implicitly assume that rock art formed a signifier much as modern signs do. They enforce a semiotic or communicational view of what rock art is, reducing its capability of acting to this single dimension. Because this is how we usually understand our own representations as working, we don't even usually notice that we are doing this. It merely seems the obvious interpretive pathway (Table. 18.1).

## 18.5 Rock Art: Translating Is Transforming

Can anything and everything be globalised? Can anything and everything be converted to a product that can be universally transmitted and consumed regardless of location, setting and context?

Rock art provides a fascinating counter-example which has implications for materiality theory. Rock art is inherently rooted in its location; it generally cannot be moved, and even if it is, it defines much of its social meaning from its physical context. It is shaped by its material substrate, which creates conditions of invisibility, visibility, heightened effect and scale. And many kinds of rock art are not intended for immediate interpretation by generic or universal eyes; they require layers of local informational context to be understood or used appropriately.

How does something which is fundamentally of its place and of its substance fare in a world oriented towards universal portability and consumption? One indication of the challenges posed is how variable the fortunes of different kinds of rock art are. Some kinds of rock art are inherently more translatable than others. In general, the more rock art approximates our visual sense of aesthetics—what a "picture" looks like to us—the more readily we take it up. The Lascaux horses and Altamira bison are reproduced so often in part because—unlike almost all other prehistoric European art—they fit into an art historical narrative about "naturalistic" Western art. Similarly, in spite of its frequency, European Neolithic rock art is very poorly known to non-specialists, mostly because it tends to consist of jumbles of cryptic geometric motifs. In contrast, Bronze and Iron Age art tends to be better known because it has recognisable motifs such as boats, horses, riders, and dancers, often arranged into narrative scenes.

All forms of rock art require considerable work to be translated and transmitted. To be made into something consumable, rock art has to be brought out into the open, identified and made visible. Then, it has to be identified and labelled, screened to eliminate information not relevant to modern text-oriented consumers working in a tradition of representational imagery, and given a sharp, clear outline—all aspects which explain the historical success of the preferred form of representation, the black and white line drawing. And it has to have layers of exegesis added (e.g. specifying its discursive "meaning"). All of these make rock art both transportable beyond its setting and interpretable as visual culture by any modern viewer, and ultimately able to leap off the rock and become part of a new narrative, array of images, or product.

But this process of translating rock art from its original form to something that can be encountered and consumed by modern audiences is not a neutral process. It loses most of the qualities that made rock art what it was, and it selectively focuses upon a narrow axis of form and signification. In the process, it refashions rock art from something originally capable of acting in many different modes, to something principally able to act as a signifier. What happens to materiality in the process? The technologies we use to know the world encourage or enforce their own presuppositions about the nature of the world (Introna 2011). Computers are an information technology; things pass through them by being reduced to binary (digital) information. They thus enforce the status of information as a basal ontological state separate from and opposed to the material constitution of things. If the substance of an object is a fundamental part of what it is, the object cannot be reproduced through a technology with

dematerialises it and rematerializes it in another medium; as you rematerialize it, it becomes a different object. At most, one might attach a text saying, rather self-defeatingly, "the substance of this was important," and perhaps include a photograph of the rock and of the landscape in the webpage or museum placard. With rock art, the process of translation thus creates a chain of representations, each one shifting what it can do from the previous one, and the final one addressing different needs for different people.

Does this make a difference? To revisit Magritte, one obvious difference between a pipe and a painting of a pipe is that you can't smoke a painting of a pipe. Rock art in translation becomes something different, and it can be used for different goals and projects. In a practical sense, at a fundamental philosophical level, it is futile to rail about more and less authentic ways of accessing the past. We have no unmediated access to the past; whether through texts, objects or traditions, it is a book we can only read in translation. We cannot live outside of time and make and use rock art exactly as ancient people did; the only philosophically realistic goals we can aspire to are to understand how they made and used it, and to use it in our own ways, hopefully ethically. Why would people want to access rock art if they cannot necessarily understand or experience it as it was originally understood or experienced? The most obvious answer is that they are unaware of the translation-transformation and think they are accessing an "original" version; this is probably true not only for "the public" but for many scholars as well. Secondly, even if recognising that they are not approaching an "original" or "authentic" experience of it, they may nonetheless find it engaging for past-focused projects of their own, whether academic or non-academic (e.g. developing a stylistic chronology, understanding a land use history of a region, etc.). Finally, they may disregard the question of originalism and authenticity entirely and yoke the rock art to modern projects, giving entirely new meanings to ancient images. In many situations, this may involve commodification and the appropriation of other people's heritage and intellectual property, but in others (for instance, developing tourism or local identity in a place like Europe, or simply re-using an attractive motif) it may not. But while reinterpretation can be innocuous and respectful or factually wrong or yoked to dubious political causes, the process of reinterpretation-via-translation in itself is not inherently harmful; it is merely the ongoing metabolism of the symbolic environment humans continually do.

However, if our goal is to try to understand the past we must recognise and work against what seems obvious. Translation is inescapable, but one can pursue multiple translations with different qualities. Indeed, used creatively, information technology may form part of new solutions (Guy and Wintjes 2009). In its elimination of extraneous information and reduction of ambiguity, the black and white line drawing is both helpful and limiting. Recording the whole corpus may overcome selection bias. Beyond this, finding new ways of seeing (or not seeing) rock art may be a challenge we can respond to using new methodologies creatively. Orthogonal photographs of record with uniform lighting preserve fine details, but may need complementing with images replicating ordinary conditions of vision, including visibility with light from varying directions, and they have little sense of human scale. Three-dimensional reconstructions may show imagery draped over complex contours. RTI may show details never observed by prehistoric people but cast light on manufacturing processes. Photos with humans may give a sense of scale, orientation and immobility. Landscape photos may show the hillslope and the water running down it. Excavation records may show relations with contemporary contexts and activities. Artists' reconstructions may put prehistoric people into the picture and get beyond twenty-first century landscapes. Videos may allow a sense of movement around a site. Audio recordings may show the ever-present wind, the noises of the river or forest. Animations may free our imagination from photographic verism. Videoconferencing may allow live real-time remote site visits. To communicate rock art as deeply as possible, and to open rather than close off understandings of it, we may need all of these and more.

Such practical solutions emphasise that, while translation cannot be avoided, it can be a creative and productive process, not merely a distortion or source of inauthenticity. However, in simultaneously creating something new growing out of globalised needs and concerns while foregrounding rock art's link to a past, perhaps one belonging to ancient or contemporary indigenous stakeholders distanced from modern consumers, translation also holds inherent potential for harm: the risk of cultural appropriation, the dilemmas of authenticity, and the danger of commodification.

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