

# Dioramas, (re)constructions and Experimental Archaeology\*

**The author discusses the relationship of three-dimensional static depictions of the past to experimental archaeology and argues that reconstructions are not a direct product but a by-product of experimental archaeology.**

■ Lara COMIS (Italy)

## Introduction

The subject of this paper will be the connection between three-dimensional static-depictions of the past and experimental archaeology. Although some aspects might be defined easily, others are not as clear. Three-dimensional representations of the past are visible both in museums, often in the shape of dioramas, and in open-air museums or heritage centres, in the shape of building and “site” (re)constructions. Both have common problems. One problem is the partiality of the “truth” they represent and their consequent interpretation by the public. Dioramas and (re)constructions share an important history: they were born during international exhibitions at the end of the nineteenth century. Interestingly, this is also when the discipline of experimental archaeology started to grow.

Experimental archaeology has now almost reached an autonomous status as an archaeological science. Three-dimensional depictions are still being used in displacing of cultures (past and present). What sort of connection exists between the two? Is experimental archaeology the source of these three-dimensional representations? Can we picture them as process and product? Or are three-dimensional representations only a by-product of experimental archaeology? What part of experimental archaeology is involved in the creation of three-dimensional representations?

The first part of this paper will deal with dioramas and (re)constructions of buildings as used in displays from a historical perspective. A comparison will then be drawn with a specific example of experimental archaeology. The second part of the paper will broadly describe the current situation and the last part will outline a discussion in order to answer the above questions.

## Frozen in time

Both dioramas and (re)constructions are static, fixed three-dimensional depictions of their makers’ perception

of “reality”. Here only depictions of the past will be considered, but it is important to state that dioramas and (re)constructions are used also to represent natural habitats or ethnographic materials (Moser 1999: 95).

- The term “(re)constructions” here means three-dimensional structural features such as buildings, palisades, forts and similar things. These depict the humanised scenery of the past, but not human beings themselves.
- On the contrary, **dioramas** are three-dimensional artificial representations of humans involved in various activities.

At the end of the nineteenth century the western world looked at the past with a new attitude. In the *Expositions Universelles* in Paris, archaeological objects were exhibited, especially during 1867, 1878 and 1889. The past had the role of conveying the idea of “western progress” by comparison between the “primitive” (past) and the “civilised” (present) (Müller-Scheessel 2001: 391; Moser 1999: 102). To highlight the contrast between the two, the archaeological

■ **Fig. 1-2**  
L’Histoire de l’habitation during the 1889 Exposition Universelle in Paris: prehistoric buildings were exhibited beneath the Eiffel Tower (from Müller-Scheessel 2001: 394-5).

\* this paper was originally written during the MA in Experimental Archaeology at the University of Exeter (2003).

artefacts were re-inforced with the use of ethnographic materials (“modern savages”, Müller-Scheessel 2001: 393). In 1889 this contrast was made explicit by the exhibit “L’Histoire de l’habitation”: (re)constructions of ancient architecture were physically placed at the foot of the Eiffel Tower, a powerful symbol of human progress. Of the reconstructed buildings, one-fifth belonged to pre- or protohistoric times and was furnished according to their “style” (Müller-Scheessel 2001: 396) (fig. 1 and 2). An architect designed huts and houses and some of them hosted trading activities (e.g. beer was sold in the German and Gaulish houses). As far as I know this is the first exhibition of reconstructed prehistoric buildings to a large public.

Dioramas were also displayed at the exposition to describe the “History of Labour”. Seven life-size groups depicted both prehistoric and ethnographic people performing various activities (Müller-Scheessel 2001: 397) (fig. 3 and 4).

The impact was astonishing. The educational aspect and the “accuracy” that the creator used in the constructions (now highly criticisable) earned them high consideration among scholars (Müller-Scheessel 2001: 396). Their didactic power was then permanently established.

It is remarkable that these two ways of displaying the past were used together with exhibits of real archaeological materials when prehistoric archaeology was at the very beginning of its development. What was considered to be the up-to-date archaeological knowledge was illustrated on an international stage through dioramas and (re)constructions. But countries participated in a competitive way, giving strength to a nationalistic attitude in showing their culture compared to others. Since cultural differences were viewed as a justification for the superiority of western culture, the underlying assessments were somehow racist in their implications (Müller-Scheessel 2001: 400).

The same media were used in the American International Expositions at the end of the 19th century. Sociologists have defined what the

American fairs were giving to the public as the construction of a “symbolic universe”. This, being a structure of legitimating (that provides meaning for social experience), had a “hegemonic function” in that ideas were propagated according to the government’s agenda (Rydell 1984: 2-8). (re)constructions of buildings were put in the “savage villages” in which real tribes from different cultures performed dances and rituals, being therefore ethnographic (re)constructions. In the Chicago exposition of 1893 the Smithsonian Institution displayed dioramas representing the “stone age people” (Moser 1999: 103). A few years later in the Pan American Exposition of 1901 (Buffalo), the gallery called “the evolution of man” was intended to show the Darwinian theory of evolution “from the lowest savage to the polished gentlemen of today” (Rydell 1984: 150).

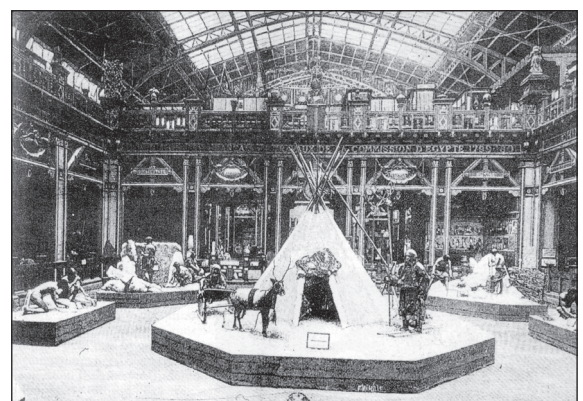
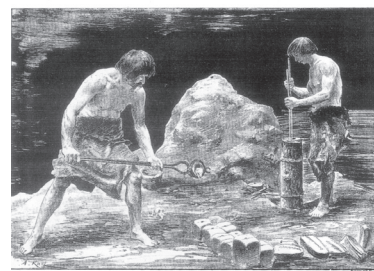
Moser (1999) analysed dioramas that were created to represent the ancestors of the human race.<sup>(1)</sup> She underlines the amount of research and the need for scientific consultations to fulfil the scientifically accepted vision of early hominids. The great success that these three-dimensional images had (they were used in textbooks) contributed to the profound rooting of many biased stereotypes. In the Neanderthal one (1933, Chicago) it is not just the interpretation of the past that emerges: the clear assumption the sad-looking figures convey is that they are headed to extinction, fulfilling the contemporary justification of the superiority of western cultures (Moser 1999: 105) (fig. 5).

### Sailing across the flowing waters of time

Experimental archaeology was coming to life in the same period through many different avenues. Interest in flint-knapping techniques started to have implications on the knowledge of the past at the end of the nineteenth century (Coles 1979: 10-11). But here one specific event will be described because of its highly symbolical value and because it is directly linked with the World’s Fairs.

During the 1893 World’s Fair in Chicago another (re)construction

was displayed. This was not a building, but a Viking boat (fig. 6). The boat was named “Viking” and had been reconstructed on the basis of the excavated Gokstad example (Christensen 1986). She sailed across the Atlantic Ocean from Norway to New York in 27 days (Coles 1979: 26). This is considered as a good example of the beginnings of experimental archaeology. Data were achieved from archaeological findings, a replica was made and the explicit aim was to test the capabilities of the boat to



■ Fig. 3-4 L’Histoire du Travail during the 1889 Exposition Universelle in Paris: dioramas about prehistoric times and about ethnographic materials (in the centre of the room) illustrated some working activities (from Müller-Scheessel 2001: 397).

(1) Unfortunately, other dioramas have not being analysed yet, as Moser (1999) points out.



■ **Fig. 5**  
Diorama featuring life of the Neanderthals at the Field Museum, 1933, Chicago (from Moser 1999: 105).

sail in deep waters. Nonetheless, the real aim of the experiment was an exercise in propaganda (Coles 1979: 78; Christensen 1986: 68-69). The experimental boat was the physical witness of what could have happened in the past: Vikings travelling to America. The way in which the (re)construction addressed the fairgoers is quite interesting. The message was expressed not explicitly as in other parts of the exposition. As Coles says, the actual object was on display “allowing those interested to draw their own conclusions” (1979: 26). The boat itself may have mingled with other “attractions” and did not convey any idea about “progress” to the fairgoers. In fact, the physical presence of a Viking boat in America implied the excellence of a technology belonging to the “primitive” past; a troublesome thought in the ideological framework of the fair.

### The frozen past and the evolving discipline

If we now move on to consider the present, we will find an impressive number of (re)constructions and dioramas around the world. In the Hong Kong Museum a 42 meter long diorama shows various activities that were carried out in the Neolithic period. On the museum web site, dioramas are said to be “life-like scenes [that] enable visitors to experience aspects of early inhabitants’ lives and graphically demonstrate the ways in which some artefacts on display were used” (Hong Kong Museum website). In the Wielkopolskie Museum in Poznan (Greater Poland) a permanent exhibition presents the prehistory of the area (from the Palaeolithic to the Iron Age). (re)constructions of dwellings are used with the addition of “figural scenes”. These are miniature dioramas in which some prehistoric activities are depicted (Poznan Museum Website).

Architectural (re)constructions have an important role for the provision of identity of both western and non-western cultures. They are important because they display ideas that are place-bound and are “actively used in identity formation” (Fyfe and Ross 1996 as quoted in Piccini 1999: 159). This is why ethnographic (re)constructions are extensively used in countries in which national identity is an issue. In Nigeria the MOTNA museum represents different parts of the country through reconstructed buildings that were recreated by the local tribes in the 1970s (Kaplan 1994: 63-5). This enables the nation itself to represent its past achievements by symbolically linking the different tribes’ specific features within the unity of the museum itself.

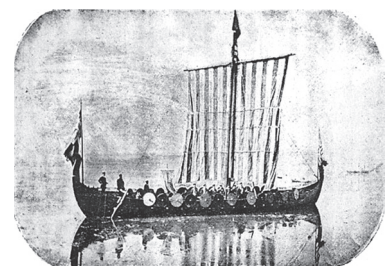
In Britain, attention is set on the past to gain national identity. “General Iron Age” (re)constructions in open-air museums and heritage centres try to convey the concept of a national identity through the presentation of the “Celtic” in those regions where Iron Age is to be considered the direct link with common ancestors (Piccini 1999: 151-7). Most of the roundhouses that were reconstructed in these “general Iron Age” sites were based on the work of Reynolds’s Butser Ancient Farm (Piccini 1999: 152). In one case, though (Castell Henllys, Wales), there is no explicit use of archaeological results in the display of the (re)constructions (Mytum 2000: 166). Butser is “an open air laboratory” in which hypotheses from archaeological data are tested (Reynolds 1999: 156), thus being an Experimental Archaeology centre that tried to communicate its results to the public. But Butser has also been defined as a “tourist attraction” in one academic publication (Wood and Cotton 1999: 28). Another representation of the past that might be seen as a tourist attraction, despite its scientificity, is the Yorvik Centre in York. It can be considered as an evolution of the diorama because moving dummies are used in an artificial setting accurately designed to enhance the senses of the visitors (Yorvik Viking Centre Website). The public is in the observer role in that cabin trains are used to experience the place. Another evolution of the diorama can be seen in the “past snapshots” at Castell Henllys in which real people repetitively perform some prehistoric “actions” in a

reconstructed setting. Rope boundaries keep them separated from visitors enforcing the theatrical component in representations of the past (Piccini 1999: 155).

### And where is experimental archaeology?

Two of the most recent definitions of experimental archaeology (Reynolds 1999a and Mathieu 2002) stress the fact that experiments are designed to test theories or interpretations about the past. Education is separated from experience and experiment in Reynolds’ view and importance is given to the fact that it is the experiment that advances our knowledge and is published (1999a: 156-7). Educational aims are felt to be a by-product because the experiment itself is the basis for both the educational and the experiential (Reynolds 1999a and 1999b). Mathieu’s definition adds that experimental archaeology can also generate hypotheses about the past (2002: 1).

Some of the centres that use three-dimensional depictions of the past, both in the shape of dwelling (re)constructions and in the “evolution” of dioramas (whose classical examples remain closed in museums), also do experimental archaeology. In Ireland, at the Irish National Heritage Park, experiments are carried out concerning the construction of buildings and the functioning of kilns. The results of these experiments are published (Culleton 1999: 85-6). In Japan three different types of (re)constructions have been defined. The first one’s primary aim is research through experimental archaeology. After that, the site is used for educational purposes (Okamura and Condon 1999). Apart from Butser, the best-known centre that has an admi-

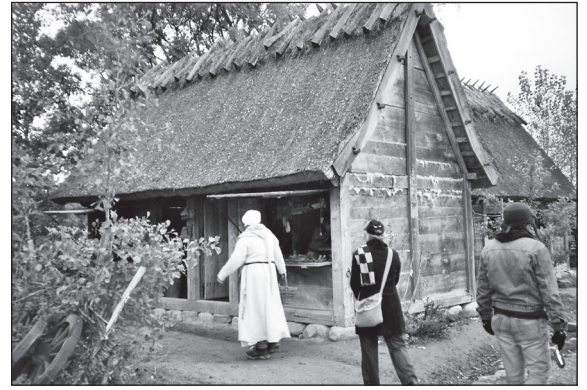
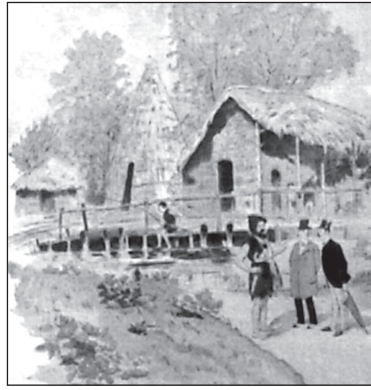


■ **Fig. 6** The ship “Viking”, replica of an archaeological example, sailed in 27 days from Oslo to New York and was exhibited at the 1893 World’s Fair in Chicago (from Christensen 1986: 72).

rable balance between science and the public is the historical-archaeological experimental centre at Lejre (Denmark) (*Rasmussen and Grønnow 1999*). In this centre the public can choose between active participation in the experiments and experiencing ancient crafts or they can have a more tourist-like tour. It is remarkable that open-air centres that provide the visitor with the opportunity to choose among these possibilities are very few. This implies a great confusion as to what experimental archaeology really is, for most of the places that can display a reconstructed roundhouse consider themselves to be “experimental archaeology centres”.

## Discussion

The birth of dioramas and reconstructed buildings is linked to the cultural background of the World's Fairs. Their more-or-less explicit purpose was the illustration of contemporary beliefs regarding the past. In dioramas in (re)constructions, ideas were displayed through three-dimensional images, fixed features that mirrored a pre-existing statement. They were created for “educational” aims and were presented to a public that was accustomed to absorbing pre-packaged ideas by taking the role of an observer. The process of making the most up-to-date scientific reality required a focus on authenticity, but the parallel exploitation of ethnographic examples was intended to convey primitiveness, not reality. Despite the depth of research in their creation, the stereotypes produced have been inculcated and seem to linger even now over a century later. Why? Because a static three-dimensional representation of the past is not easily updated and can only convey basic, simple concepts (*Tattersall 1992: 67*, as quoted in *Moser 1999: 111*). These concepts are not life of the past, frozen in time, but rather the intellectual present of those who created them. They are representations of the present view of the past, not the past itself. Yet their iconic power, due to their physical reality, persists through time. This is also true of those that are still displayed today, as the “gallery” of dioramas in the study of *Moser (1999)* shows. The problems embedded in the use of such depictions of the past overwhelm their positives. Yet the public is very keen on them and demands more real representations of the past (*Moser 1999: 112; Stone 1994: 195*).



■ **Fig. 7-8** The lake dwellings from the 1889 Exposition Universelle in Paris and a contemporary view of open-air museum in Europe. What are the similarities and the differences to the public? (from Müller-Scheessel 2001: 397; photo: courtesy of Annemarie Pothaar).

Maybe during the rethinking process whilst creating a static depiction, questions might have been raised and might have given new stimuli to the archaeological research, in a totally unexpected way. Questions regarding the past and not the display of the past were felt at the time as secondary. Perhaps it is in this context that experimental archaeology was born. Questions about the past are the justifications to run active experiments, to prove or disprove them. In the case of the Gokstad ship, it was the means used in this action that was actually on display. The message was not understood mainly because it was not expressed in the direct and simplistic ways used by the (re)constructions and dioramas that were designed primarily for this.

Today, three-dimensional depictions of the past are commonly used on a more local basis. Classic dioramas and some (re)constructions can be seen in museums while the latter are extensively used in open-air museums. The means in which they are created is very similar to the nineteenth century ones, and few of them were inspired by the results of experimental work. (re)constructions presented to the public as representative of their national identity and not explicitly linked to archaeological data follow the “hegemonic” tradition of the World's Fairs. In fact, they are not archaeological but ideological (re)constructions. Moreover, the separation between these and experimental archaeology is not made clear to the public (and academics). Experimental Archaeology's primary scope should not be the display of the past. Thus, three-dimensional static depictions of the past are not

a direct product of experimental archaeology. If an experiment has to be conducted on the building of a roundhouse, the aims of experimental archaeology are fulfilled within the action of constructing. It is because of the physical impact of the (re)construction on the public that the by-product is displayed. But the actual roundhouse will be a three-dimensional static depiction of a hypothesis about the past. Therefore it is not a statement, as dioramas and classic (re)constructions are. It illustrates a question about the past. Experimental archaeology goes beyond mere representations because those are just its tools in questioning the past. It is a pity that, as with many other things today, the means have been misunderstood for the goals. The public should be discouraged from absorbing mindlessly the message given by three-dimensional depictions by being not only informed of the “as ifs”, but being enabled to engage with the actual process of questioning the past. If the observer-role could be changed into an active interaction, some of the drawbacks could be set aside. A good way in which this can be achieved with experimental archaeology is the use of “hands on activities”, even if they represent again just an application of the discipline (*Owen 1999: 174*). They imply an active participation that might lead the visitor to create his/her own “symbolic universe”.

## Conclusion

Describing the connection between experimental archaeology and three-dimensional static depictions of the past is far from simple. A great deal of confusion arises because what is

an end product of displays is just a tool for experimental archaeology. This is particularly true regarding (re)constructions. At the beginning of their history, experimental archaeology was not the source of these representations. However, maybe the questions evoked from the attempt to produce an accurate depiction produced the basis on which experimental archaeology was born. This started to revolutionise the way in which the past was presented from a "statement" to "question", from "passive" to "active". Now (re)constructions tend to be a by-product of experimental archaeology while "live" dioramas start to be displayed in conjunction with them. Unfortunately, though, the tradition of the World Fairs continues to grow in the shape of representations of the past that are not linked to archaeological data (fig. 7-8).

## References

- Christensen A. E. 1986:* "Viking", a Gokstad Ship Replica from 1893, in O. Crumlin-Pedersen and M. Vinner (eds) *Sailing into the Past. Proceedings of the International Seminar on Replicas of Ancient and Medieval Vessels*, Roskilde 1984. Roskilde 1986. 68-77
- Coles J. M. 1979:* *Experimental Archaeology*, London: Academic Press.
- Culleton E. 1999:* The origin and role of the Irish National Park, in P.G. Stone and P.G. Planel (eds) *The Constructed Past: Experimental Archaeology, Education and the Public*. London: Routledge. 76-89.
- Hong Kong Museum Website:* <http://www.lcsd.gov.hk/CE/Museum/History/english/exhibition/standingexhibition/galleries/gallery2.html>
- James S. 1999:* *Imag(in)ing the Past: The Politics and Practicalities of (Re)constructions in the Museum Gallery*, in N. Merriman (ed.) *Making Early Histories in Museums*. London and New York: Leicester University Press. 117-35.
- Kaplan F.S.E. 1994:* *Nigerian Museums: envisaging culture as national identity in F.S.E. Kaplan (ed.) Museums and the Making of "Ourselves". The Role of Objects in National Identity*. London: Leicester University Press. 45-78.
- Mathieu J. R. 2002:* Introduction in J.R. Mathieu (ed.) *Experimental Archaeology, Replicating Past Objects, Behaviours and Processes*. BAR International Series 1035, Oxford: Archaeopress. 1-12.
- Moser S. 1999:* The Dilemma of Didactic Displays: Habitat Dioramas, Life-groups and (Re)constructions of the Past, in N. Merriman (ed.) *Making Early Histories in Museums*. London and New York: Leicester University Press. 95-116.
- Müller-Scheessel N. 2001:* Fair Prehistory: archaeological exhibits at French Expositions Universelles, *Antiquity* 75: 391-401.
- Mytum H. 2000:* Archaeology and history for Welsh primary classes. *Antiquity* 74: 165-71.
- Okamura K. and Condon R. 1999:* (Re)constructions sites and education in Japan: a case study from the Kansai region, in P.G. Stone and P.G. Planel (eds) *The Constructed Past: Experimental Archaeology, Education and the Public*. London: Routledge. 63-75.
- Owen J. 1999:* Interaction or Tokenism? The Role of "Hands-on Activities" in Museum Archaeology Displays, in N. Merriman (ed.) *Making Early Histories in Museums*. London and New York: Leicester University Press. 173-189.
- Piccini A. 1999:* Wargames and Wendy Houses: Open-air (Re)constructions of Prehistoric Life, in N. Merriman (ed.) *Making Early Histories in Museums*. London and New York: Leicester University Press. 151-172
- Poznan Museum Website:* [http://www.muzarp.poznan.pl/muzeum/muz\\_eng/wystawy.htm](http://www.muzarp.poznan.pl/muzeum/muz_eng/wystawy.htm)
- Rasmussen M. and Grønnow B. 1999:* The historical-archaeological experimental centre at Lejre, Denmark: 30 years of experimenting with the past, in P.G. Stone and P.G. Planel (eds) *The Constructed Past: Experimental Archaeology, Education and the Public*. London: Routledge. 136-45.
- Reynolds P. J. 1999a:* The nature of experiment in archaeology, in A. F. Harding (ed.) *Experiment and Design. Archaeological Studies in Honour of John Coles*. Oxford: Oxbow 156-62.
- Reynolds P. J. 1999b:* Butser Ancient Farm, Hampshire, UK, in P.G. Stone and P.G. Planel (eds) *The Constructed Past: Experimental Archaeology, Education and the Public*, London: Routledge. 124-135.
- Rydell R. W. 1984:* *All the World's a Fair. Visions of Empire at American International Expositions, 1876-1916*. Chicago and London: University of Chicago Press.
- Stone P. G. 1994:* The re-display of the Alexander Keiller Museum, Avebury, and the National Curriculum in England, in P.G. Stone and B. Molyneux (eds) *The Presented Past: Heritage, Museums and Education. One World Archaeology*, London: Routledge. 190-205.
- Wood B. and Cotton J. 1999:* The Representation of Prehistory in Museums, in N. Merriman (ed.) *Making Early Histories in Museums*. London and New York: Leicester University Press. 28-43.
- Yorvik Viking Centre Website:* <http://www.yorvik-viking-centre.co.uk/Home.htm>

und Rekonstruktionen sind statisch, fest(gelegt)e Darstellungen der Realitätswahrnehmung ihrer Erbauer; sie sind weder einfach noch schnell dem aktuellen Forschungsstand anzupassen und können lediglich grundlegende, vereinfachte Vorstellungen vermitteln.

Der hauptsächliche Arbeitsbereich der experimentellen Archäologie sollte nicht die Ausstellung der Vergangenheit sein. Es ist dabei zu betonen, dass dreidimensionale statische Darstellungen kein direktes Ergebnis der experimentellen Archäologie sind. Wenn ein Experiment zum Bau eines Hauses durchgeführt wird, dann werden die Ziele der experimentellen Archäologie vor allem durch den eigentlichen Bau erreicht. Wegen der räumlichen Wirkung der Rekonstruktion auf das Publikum wird das Nebenprodukt ausgestellt. Das sichtbare Haus ist jedoch eine Darstellung einer Hypothese; es illustriert lediglich eine Frage an die Geschichte.

## Représentations à trois dimensions et l'archéologie expérimentale. Collaboration ou conflit?

On peut rencontrer des représentations à trois dimensions illustrantes notre passé dans des musées, surtout sous la forme de dioramas, dans des musées de plein air et des centres du patrimoine culturel, ici en tant que des reconstitutions d'habitats et d'autres. Tous les deux, dioramas et reconstitutions, sont statiques, des représentations immobiles reflétant des idées de leurs auteurs sur la réalité. Ils ne permettent donc que de communiquer des idées élémentaires et simples et il n'est pas facile de les renouveler.

En effet, l'objectif principal de l'archéologie expérimentale ne devrait pas affecter la forme de seules représentations. Aussi les représentations à trois dimensions ne sont-ils pas les produits directs de l'archéologie expérimentale. Celle-ci poursuit d'autres buts, à voir la réalisation même des reconstitutions. Le produit secondaire est présenté à cause des impressions que les reconstitutions suscitent auprès du public. Or, une maison reconstituée n'est qu'une représentation d'une hypothèse, une illustration de la question qu'on a formulé par rapport au passé.

■ **Lara Comis** graduated at the University of Tuscia (Italy) in medieval archaeology with a thesis on ceramic production (2001). Having won a bursary to study abroad, she got an MA with distinction in Experimental Archaeology at the University of Exeter (UK, 2003). She collaborated with the Superintendency of Trento (Italy) with a project on primary copper smelting in LBA (2005).

## Summary

### Dreidimensionale statische Darstellungen und experimentelle Archäologie: Interaktion oder Konflikt?

Dreidimensionale Darstellungen der Vergangenheit sind sowohl in Museen, hier häufig als Dioramen, als auch in Freilichtmuseen und Besucherzentren in Form von Gebäuden und anderen Rekonstruktionen zu sehen. Dioramen