How Do We Imagine the Past?

How Do We Imagine the Past? On Metaphorical Thought, Experientiality and Imagination in Archaeology

Edited by

Dragoş Gheorghiu and Paul Bouissac

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PREFACE

THE ANTHROPOGENIC IMAGINATION: A SYNOPTIC VIEW OF RESEARCH DESIGNS IN THE AESTHETICS OF EXPERIMENTAL ARCHAEOLOGY

THEODOR BARTH

"By definition archaeological excavations are samples of vast canvasses on which people lived out their lives […] stratigraphic sequence and spatial disposition are not the only dimensions capable of examination through excavation: formation and construction, visibility and inter-visibility, alignment and context, and landscape setting can also be explored as well as human experience, engagement, and matters such as light/darkness, space, and movement."
(Timothy Darvill, this volume)

The title of this introduction owes its existence to the idea I have, as an anthropologist, of the role of imagery in archaeology, whether instantiated by the grids used in digs, in charts and diagrams used to distil findings, 3D model-simulations, exhibits, and various steps to amplify the sensory caption of details that may seem insignificant to untrained eye. This could be with the help of enactment, ritual performance, computer enhancement, or participatory audiences. A subclass of archaeological imagery is part of the inquiry.

In the present volume, the contributing authors appear to have this in common: the archaeological imagination is not *in excess* of a rigorous scientific method, whether defined in the gross terms of natural history, statistics, the humanities, or anthropology. Rather, it extends such methods to include elements, which in the days of yore would belong to a different subclass of imagery: that of pedagogic illustration or museological

mediation. The validity of this gross assessment hinges on how images are understood.

The French philosopher Henri Bergson (1919 [1908]) argued that the human brain synchronously produces two kinds of images: the actual images and the virtual images. Since they are related to the human active state, the actual images are usually foregrounded in the present and vectored to the future. While the virtual ones are often lived in *hindsight*, a background lived in the past tense, they have a potential load of something yet to reveal itself. (cf. Ingold 1993) When they are jumbled they produce the experience of *déjà vu*.

A hypothesis deriving from Bergson's essay is that our keeping a (e.g. written) *record* of the present—as a scientific strategy—anticipates that our memory of the present (*virtual imagery*) will somehow extend our current experience of the present (*actual imagery*) in *hindsight*, and by thus proceeding we will *discover* what our memory of the present has in store. Every scientific record is, in this basic sense, a *discovery procedure*. A second hypothesis, however, is that the *mediation* between the two can *enhance* the present.

Since the first hypothesis is shared by the entire scientific community—no matter how one defines it—it is the second hypothesis that is in need of further elaboration. Arguably, the newsreel of actual and virtual images can be wired to one another with the help of machine-line contraptions, such as laboratory experiment (Latour 1993). They become locked to one another by a *deterministic intention*. However, looser ways of *coupling* actual and virtual imageries in *readable compounds* can also be envisaged.

The contributors to the present volume can be seen to propose a notion of scientific inquiry in which archaeological imagination, in one way or another, is included in a methodological proposal in which acts of mediation are generative of *qualia* (cf. Sturgeon 2000: 42 ff) that delimit the scope—or direction—of *search* in an archaeological field. It may therefore not be advantageous to see these experiments as *interpretive* ventures *adding* to an already existing research basis, but as *constraining factors* that put findings to a variety of tests.

Such testing, evidently, cannot claim the rigour—nor to be the equivalent—of laboratory experiment, but resorts to *enriched experience* as a strategy to enhance the *focus* of the inquiry. What apparently are extensions of the field, to include acts of mediation, are in fact methods of intensifying the search. Although this variety of approaches cannot falsify hypotheses in the laboratory sense, they are, procedurally, better linked to falsification than to discovery (as constraints iterating the search).

Of course, this reframing of experimental archaeology hinges on a particular *theory of the image*. While Bergson's essay is based on research in neurophysiology and psychology, the hypotheses derived from it summon a different direction of research into 'the place of human imagery in *action*' (which includes *research activities* as a subcategory). Since action includes fictitious elements—within and beyond what we can observe as *behaviour*—it brings us to the realm of the 'factitious', to which the *image* also belongs.

I am not writing of *mental images*—the psychological, neurophysiological and philosophical research to support a certain view of these—but *created images*: images that are made in physical materials, programmed, or generated by human activity (such as the manufacture and use of tools and materials, the existence of which are documented in archaeological finds; or ritual enactment). In research, such images are always *provisional* (whether the scope of research is narrower or more broadly defined).

This is a common terrain shared with the arts: in the contemporary reframing of art—in a large-scaled attempt to bridge art and research—art productions have been theorised as *propositions* (Martinez 2012). In this scheme the artwork belongs to the larger field of the artist's activity; a provisional instance of a query. In fact, this may also have been the source of the durability of images in time: indeed, Aby Warburg's notion of the image's dynamic (Didi-Huberman 2002) stems from a *release* in the act itself.

Such queries may also have a liberating impact on mediation, involving images, in scientific research. Since the image—the created image—in this reframing releases action from *both* its instrumental definitions and communicative functions: i.e., action in its potential to *open up* and query. The image here is a *signature* (Agamben 2008): it marks the liberation within the act and leaves an environmental footprint of an act that was liberated of both its obligation to be useful and to signify. It features the qualia of *openness.* (Agamben 2004)

In this theory of the image it becomes both possible and relevant to *follow the loops of inaction in action*, inasmuch as human actors seek to liberate their agency from attachments through the *release of imageries*; it also becomes relevant and possible to query the *trace* of inaction in action. Images—in their *provisional aspect*—may play a key role in the discovery, development and hatching of what we call *human intention* in the fullness of time. Images may be redeemed (Benjamin, in Buck-Morss 1991) and intentions released.

The *work* of release in scientific research is oddly under-communicated and ubiquitous at the same time. If the above argument is tenable, it means

that the centrality of imagination—and the marginality of the (created) image—is likely to constitute a single syndrome, or a complex unified causal phenomenon. If the readers deign traversing the articles in this volume with this angle, they will have allowed themselves to add a layer of discovery that affords a common focus to these contributions to excellence in archaeology.

Chapters/Authors	**Record**	**Mediation**
1. Paul Bouissac "The Grounding of Archaeological Representation: From Imagination to Simulation"	A growing body of archaeological data presents the current community of researchers with the challenge of ways to bypass the limited—and limiting—imagination of archaeologists. This corpus goes way beyond the capacity of the human brain. If we disregard the basic assumptions of the researchers, then any sample from this corpus is sure to be biased. The contract of yore between the researcher who a) collects data and b) synthesises the findings, can no longer be applied as an implementable design of the relation between the data-record and theoretical syntheses. Data is currently shared.	The article is introduced with a short review of how the narratives explaining the period when humans with an anatomy closer to modern humans took over from Neanderthals: in its examples of how archaeological data is short-circuited by narratives in which the Neanderthals are seen as less advanced and innovative than their counterparts who were closer to us, the theories are compared with post-imperialist theories of the *other*. Computer simulations have the virtue of combining data-processing capacities with the avoidance of these elliptic quirks of the human brain. Research should include computer simulation experiments.
2. Roberta Robin Dods "Seeking the Mind of the Maker"	The record can also include what is communicated between people within a culture and in relation to objects before words and concepts (Bourdieu 1972)—the idiosyncratic, the cultural and the physical at the body-level, that cannot be denied. The record includes three documents	The article expounds on how embedding oneself in another culture under the constraints of fieldwork is transposed into the understanding of the field as the researcher enters the analysis. That is, how the record that ensues from embedding oneself is transposed onto analytical

	from New Mexico: ceramic bowls with bird and feathered human shapes resembling Kachinkas; 1) from pre-Columbian times; 2) another from a Catholic agglomeration; and 3) one contemporary. Two of the bowls feature a simple interaction design, activated by hand/body motion. A feathered human can be seen emerging from the back of a bird.	terms (that may involve quantification, but not only quantification). The author uses the Möbius strip to evoke the seamless transitions between the topological spaces engaged in knowing when moving between the: a) idiosyncratic, b) cultural, and c) physical. The documents (ceramic bowls) are engaged in a demonstration of how this triangle is "bricolaged".
3. Valentina Copat "The Sensorial Experience of Food Preparation and Consumption in the Late Bronze Age Site of Oratino – La Rocca (Campobasso-Southern Italy)"	In this article the record includes entries of two different types: 1) the contemporary changes in hands-on experience with crafts, and the ensuing sensory intelligence that constitutes an obstacle or deficit in readability when working with the archaeological tracery of life-forms in the past; 2) on the extremely demanding archaeological Bronze age finds in Oratino-La Rocca and other inland and coastal areas in Southern Italy, in which the author manages to convincingly show how enskilment and sensory education are determining factors in what one is able to identify in daily living patterns and the differences between settlement/groups and life-forms.	Having pointed out the mismatch, the author works her way from 1) the contemporary record to 2) the field record to pre-empt the impacts on empirical research that has two methodological deficits, from which she draws an empirical profile of how an 'enskilment-cum-sensory education' adds a *difference that makes a difference*, if adopted as an agenda and sets the priorities for future research. Arguably, she moves from methodology to research policy matters by transforming a rather detailed account of the findings and queries from specific sites, into a scenario of what might be realistically achieved from the adoption of experimental approaches to enhance sensory intelligence.

4. Jacqui Wood "A Holistic Approach to Experimental Archaeology"	Again, this author goes one step further by including the acts of *making* in her repertoire of field-inquiries: the record contains the details of experiments in basketry, needle-making, the 'Ice-man' Ötzi's cloak, soft rush *cum* pith-lighting (shaped with shades in different sized ceramics), and a chevron-striped hood from the Orkney Islands (with variable number of warp-threads depending on the thickness of yarn). The materials used in manufacturing—both tools and items—were restricted to those available at the time of the finds: bone, flint, grass, lime-baste, wattle, daub, soft rush, pith etc.	While Wood subscribes to Copat's observations on the sensory-manual deficiencies in the present forms of human habitat, she goes beyond considering them as obstructions to our understanding of the past and includes the acquisition of crafting skills in the variety of methods available to the fieldworking archaeologist (which therefore extends to include the manufacture of replicas for museums). Her facility with experimental manufacture spares her the pitfalls of blinkered approaches and their partial/biased outlooks into past societies. What she terms a *holistic* approach allows her to experiment freely.
5. Dragoş Gheorghiu "Immersive Approaches to Built Contexts. Constructing Archaeological Images and Imaginary"	Here, the marking and coding of items is extended to include a new layer, i.e. amplifying texture in *actual experiments* to trigger haptic recall in *virtual replay*. The experimental manufacture and replay is combined using a HD HERO mobile (head-worn camera): the replay becomes a form of subjective immersion and combines the *emic* perspective of manufacture with the *etic* perspective of observation. The chapter refers to the multilayered record of the Vadastra digs (Southern Romania), which contains strata ranging from	The act of mediation, which extends the field to intensify the search, is as a result of the use of a head-worn camera, which allows 3D simulation to relate specifically to the hands-on experimentation of the archaeologist, rather than to the whims of the programmer: visual effects that are motivated by his/her interest in the technology, rather than serving the ends of archaeological research. An intelligent but simple use of *mixed reality* allows one to explore the affordances of the human body to conjoin actual and virtual imageries to see if

	the Palaeolithic, via Roman to Modern: the crowded layers of a palimpsest.	the development of a *proprioceptive imagination* can hone *empirical interception*. (Barth, T. 2001)
6. Andrea Vianello "Reliving the Past through Senses and Imagination while Researching Material Culture"	Material culture, as extensions of the human body, is the most elusive part of the archaeological record. However, the record can be usefully coded to consider the artefact and the human body it extends as a single unit. In this way, the Medieval finds that chiefly concern the author can be considered as collected *personae* without drawing pre-emptive conclusions, setting the corpus of basic data adrift and making them indistinguishable from interpretations and theories. Instead, the unified signifier and interpretation in human agency can be assumed, he argues, as a foundation for the production of experimental (meta)data.	The potential of setting human agency as a bridge between the past and present is brought to the fore when the examination of items from the past is not restricted only to viewing but subjected to handling: eye-hand communication—the interplay of vision and touch—allows an experimental query into the *focality* of objects of their past use, which vision alone does not allow. Objects have a positional value in a field of use, the make-shift saliency of symbolic practice, where the *facticity* of meanings divides into those inviting interpretation (*Verstehen*), and those that amount to the experimental design of a phenomenological map (*Auslegung*) (Ricœur 1973).
7. Timothy Darvill "Observation, Analogy, Experimentation, and Rehabitation during Archaeological Excavations"	By emphasising site-formation processes, the author alerts the readers to the importance of testing and selection in archaeological digs, with reference to the overproduction of data in commercial research, which results in an overflow, rather than a wholesome data-harvest. The process of excavation here is part of the archaeological record, where the time of the	Archaeology, as a creative science, hinges on acts of mediation that bring new thinking down to the level where the interpreter and the material meet (whether in observation, experimentation or rehabitation). The tensioned relationship between past and present can be moderated by interpreting archaeological remains in the field. The physical reality of being present with

	original events and the time of research may either not match, or somehow be brought to reflect one another. The disembodied *datum* is untimely in the sense that the original definition of *datum*—the intentional sign (Todorov 1977) is not within the conventional range of human senses.	the archaeological remains (their presence and affordance) can be extended by the means of constraints created through experimentation and inhabitation, which therefore are not in excess of—or add-ons to—conventional data, but are open to exceptional discoveries.
8. Robin Skeates "Imagining the Sensuous Cultures of Prehistoric Malta"	The author's record relates to the remains from Ħal Saflieni—a mortuary complex in Malta from between the mid-5th and mid-3rd millennia BCE—in aspects that exceed the canon of visual observation: the *capta* that precede the visual styling of what is conventionally accepted as *data*; and what is *caught*—other than what can readily be recorded—by the whole array of the senses including proprioception, balance and the 6th sense. Restricting the record to visual data will also tend to extend the researcher's cultural affinities. Beyond the experimentalists' inclusion of the tactile, he draws attention to the olfactory—*pungency*.	Sensual culture studies bring theoretical reflection on the site to constitute a special kind of agency *mediating* between sensing and making sense; between the use of the full array of the senses to a scientific end and the sensory imaginary based on remains as a mode of inquiry into the cultural fabric of the past. Creative writing, of which the author gives some of his own examples, speaks from this *gap*. Images from the past, evoked from the full array of the senses, are in turn included not as illustrations but as constraints that canalise the search in promising directions: e.g. the examination of the impact of workload on female skeletons.
9. George Nash "Imagination versus Reality: how Rock Art Creates a Perfect Picture"	The record here features a chart of associations and oppositions between characters of rock-art paintings from Norway and the Spanish Levant. In the author's archaeological account these are inseparable from the	The mediation between fact and story is the author's own writing. It is a form of creative writing in the sense that he follows the opposite trail of Lévi-Strauss in bringing structural analysis to the field (which L.-S. abandoned in favour of a

	narratives for which they were created, which are structured like the myths in Lévi-Strauss' *Mythologiques* (1964-71) and its roots in *Structural Anthropology* (1963). The actual disposition and material aesthetics of his sample of rock-art examples bring him into a similar terrain to some of Lévi-Strauss' late works, such as *Des symboles et leurs doubles* (Lévi-Strauss 1989) and *La voie des masques* (Lévi-Strauss 1974).	theoretical venture). His approach is also creative in juxtaposing the art of William Blake with the work of rock-artists to expound a theory of the rock-artist's production as one not rooted in realism but in ideal states and abstract symbolism with their didacticism of dramatising rather than explicating stories to the audiences of yore. They were set to spur the imagination rather than to chart reality.
10. Xurxo Ayan Vila **"**Imagine all the (Past) People: Experientiality and Imagination in the Iron Age Archaeology of Galicia (Spain)."	The record drawn up by this author is at the opposite end of the spectrum from Paul Bouissac's in Chapter 1: the latter delves into the deep end of data-mining and simulation, whereas Xurxo Ayan Vila presents the reader with the opencast of observations on the archaeological past of Galician iron age *castros*—or, hill forts—in public representations, with the public face of scientific research in various heritage institutions at one end and the popular imagination at the other end, and the large segment of ignorance among common citizens in the middle, in the historical period from 1875 until after the Francoist period.	The article talks of the lack of mediation between the traditions of scientific and popular imagination, alongside a culture of public ignorance in which the panoply of available media—ranging from comics to 3D recreations—has been poorly co-ordinated and yielded mediocre results. The two faces of experimental archaeology—bringing life to aseptic archaeological sites and infusing experience with insights on new directions of search—would have negotiated a tighter fit between the different strands of mediation that make up the compound of collective awareness of the iron age hill forts of North Western Spain.

The above chart is not a critical review based on a theoretically founded interpretation of the articles in the anthology, but rather an attempt at *mapping* these, which could be seen as a preparatory foundation for the interpretive ventures of an audience of professional readers. Alternatively, it could be seen as the arduous path of working with a compound of texts—i.e., a manner of reading—which is adequate in releasing an image from the compound; in this case, evoking Walter Benjamin's notion of an index (Benjamin 1996: 456):

> "The card index marks the conquest of the three-dimensional writing, and so presents an astonishing counterpoint to the three-dimensionality of script in its original form as rune or knot notation. (And today the book is already, as the present mode of scholarly production demonstrates, an outdated mediation between two different filing systems. For everything that matters is to be found in the card box of the researcher who wrote it, and the scholar studying it, assimilates it into his own card index.)"

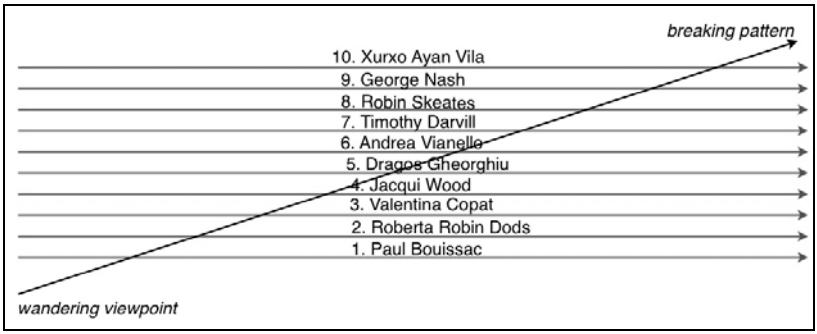
As a contraption (Marcus 2008) the above chart is of course developed in an attempt of being faithful to the authors in the anthology, whom in many ways are children of the tendency that Benjamin was early to identify. However, it is also included to materialise the layer added to the book by including the constituency of readers. The readers are faced with a particular kind of task, which Wolfgang Iser has belaboured in his book devoted to the act of reading (Iser 1974: 128-29):

> "The switch of viewpoint brings about a spot-lighting of textual perspectives, and these in turn become reciprocally influenced backgrounds which endow each new foreground with a specific shape and form. As the viewpoint changes again, this foreground merges into the background, which it has modified and which is now to exert its influence on yet another new foreground."

Or (Iser 1974: 116):

> "Every articulate reading moment entails a switch of perspective, and this constitutes an inseparable combination of differentiated perspectives, foreshortened memories, present modifications, and future expectations. Thus, in the time-flow of the reading process, past and future continually converge in the present moment, and the synthesizing operations of the wandering viewpoint enable the text to pass through the reader's mind as an ever-expanding network of connections. This also adds the dimension of space to that of time, for the accumulation of views and combinations gives us the illusion of depth and breadth, so that we have the impression that we are actually present in a real world."

With Iser's *wandering viewpoint* we therefore are in the *virtual* 3D: that is, a critical phase of reading in which we are on the verge of *actual* 3D[1], which shifts into the virtual because it is ever anticipated *and* postponed (our point of departure, of course, is that a text is essentially a flat medium). The reason why belabouring the layer of reading as a material one is because the point made by Iser with his 'wandering viewpoint' is not dissimilar from the theoretical vision of Wittgenstein's *synopsis*[2]. (Granger 1990)



The diagonal arrow of synopsis indicates the meandering path of *recognition* across intersecting constructs that are therefore moved beyond mere 'languages games' to carry the stowaways of imagination (those that cannot be said, thereof one must be silent). In studying the contributions to this anthology, the reader will be aware that the authors are not in agreement but in debate on a number of substantial issues: accordingly, the synoptic view proposed in this introduction is not consensual.

However, beyond the scholarly debates that are sure to follow in the wake of this publication, the point of view of the reader—which is necessarily different from the author's—will feature, through his/her work, a *breaking-pattern* with an interest of its own, as *one* manifestation of the archaeological field, as a *problem*, which transcends any of the authorial frames, and without ever being able to reduce the contributions to this volume as 'aspects of the same thing'. The point is that the whole is *less* than the sum of its parts.

[1] i.e., the topological realm conceptualised by the French-American artist Marcel Duchamp, in one of his notebooks, as the *infrathin* (fr. *inframince*).

[2] Graphic design adapted from Gilles Gaston Granger's synopsis-diagram (Granger 1990).

> The arguments for this bold assertion are several: in Timothy Darvill's article, for instance, the synthesis achieved through test and selection obliterates the relevance of a vast array of data (the collection of which is not a waste of time, but rather a fruitless endeavour in the absence of a research design); the epigraph to Xurxo Ayan Vila's article underscores that what lies between the patches of archaeological knowledge evokes "[…] the uncanny sense of presence found in material remains; stories of deep origin […] (M. Shanks 2004)"

If the understandings proposed by the authors in this volume are not in excess of what can be argued from strict observation—even as defined according to the canon of traditional archaeology—but that they constrain and canalise, rather than exceed and supplement these findings in ways that reveal themselves fruitful as research strategies of archaeological fieldwork, then they are open not only for the discovery and charting of exemplary finds, but also for exceptional ones (Agamben 1993).

There are a number of these in this volume: the exceptional findings are the ones that—in one way or another—have the impact of orienting the search. On the reading of this anthology, for instance, the work related by Jacqui Wood on how she proceeded and what she learned while manufacturing a reconstruction of a hood found on the Orkney Islands provides the reader with an almost inescapable *metaphor* of the relation between the variety of contributions to the present volume (in the sense of a trope/turning point).

The Orkney hood brings together a variety of threads of different thickness that were likely to have originated from different spinners and featuring a weave with a chevron-striped pattern, thereby demanding—on account of the thread thicknesses—a variable spacing of warp-threads. The authors in this volume have a very different background of enskilment deriving from the site-formation processes that have shaped them as scholars. However, this imagination of the reader has its corollary complement in the research as a *design process*.

For instance, the complex sort of empirical synthesis achieved in Darvill's example of rehabitation—in which on-site appears as a luminous disk in the dark, enhanced with light blue—is an aesthetic discovery with the potential of a similar organising impact on the search as the Orkney hood arguably has on the reading of the present anthology. The findings characterised here as exceptional are therefore the ones that connect to the theory of the image outlined in the beginning: images that release interpretation.

Over and above *whether* and *how* one should interpret (in the sense of *Verstehen*) is the question of *when*— in the process of mapping a field or a

read (*Auslegung*)—interpretation is *released*, and *has* a direct impact when used as a fieldwork method: the archaeological present, if it exists, therefore cannot *senzaltro* be subsumed as deriving from a series of wanton experiments, from which our sense of the past is constructed, but is better defined as the labour of *acquaintance* that leads to the presence of the *past*.

Thus, Robin Skeates' imaginary ritual walkabout placed in the past inside an elaborate mortuary complex of Ħal Saflieni—as a way to draw up a sensory inventory of the site—constrains the archaeological inquiries that are conducted in the present to yield a harvest of insights on life in its *exceptional*, rather than exemplary, affordances; such are likely to have been connected to historical and natural *events*[3], rather than a social life governed *only* by regularity, routines and institutions.

Of course, the enhancement proposed by Dragoş Gheorghiu—in his example of immersion through video-recording—relates poignantly to the topic of the archaeological present in the sense that video—as an abstraction that goes further than writing (Flusser 2000 [1983]) by connecting a) the kinaesthesia of eye-hand communication in experimental crafting (his *emic* perspective) with b) the proprioception of inhabiting a body that we see working on the video (his *etic* perspective).

In this mediation (or wiring) of the actual and the virtual, Gheorghiu makes a decisive step in the direction of connecting the imaginaries of the past with the phenomenology of embodiment (Merleau Ponty): in the sense of the transition from how objects are first perceived as phenomena—in the Husserlian sense—to becoming perceived as *bodies* (and hence part of world that contains its own reality (Iser 1974). Here, the 3D object comes to have a similar role in relation to the body that the image has to action.

Whether or not the potential of the image to liberate action from its instrumental definition and communicative function has always been a human dream, the corollary of this liberation in the surfacing of *intention* from the process of human life in the making can usefully be connected to acts of knowing, emerging from the manufacture of objects, in the sense that embodiment both fills the gap between the two dimensions of human intentionality [(a) and (b)], while serving them both (Barth, F. 1966: 15):

> "Human behavior is 'explained' if we show (a) the utility of its consequences in terms of values held by the actor, and (b) the awareness on the part of the actor of the connection between an act and its specific results".

[3] e.g., the introduction of horse-beans into the Maltese biotope, dietetics and ritual practices.

The search of the *focal points* (Vianello, this volume) in understanding the objects that make up a world in the archaeological query therefore has important similarities to the 'wandering viewpoint' and the emergent 'breaking pattern', once the threshold of embodiment has been passed. The liberation of the act by the image and the emergence of intentionality by 3D embodiment are issues that become unavoidably connected as the reader works through the essays relating to experimental archaeology of the present volume.

Conclusion

What is perhaps the most striking for an anthropologist are the talents and skills that experimental archaeologists are developing by bringing human life forms and historical events from our distant past into to a realm of a proximal relationship: whether this is through the exploration of materials, tools and crafts; enactment and re-habitation; or computer-simulation and a variety of augmented reality that can come about by mixing these approaches (as part of a growing level of fieldwork activity in archaeological excavation sites).

The *sequence* of acts that follow the protocol of excavation procedures in which archaeologists are trained is paralleled by a *con-sequence* of fieldwork activities with a growing methodological repertoire. Therefore, the interest amongst archaeological experimentalists in Lemonnier's notion of *chaîne opératoire* (Lemonnier 1983) could be explained by the need to re-articulate the proximity between the research and the archaeological *site* in an era when its wealth of scientific data are finding their way to digital storage.

Evidently, the approaches developed by experimental archaeologists can be claimed to be participatory in a sense that is not literal—in contrast to the participant observation of classical anthropological fieldwork—but fundamentally rooted in the idea that *simulation* is key to crossing the threshold from excavation to exploration, as forms of discovery-procedures that are site-specific, assuming that the site is indeed a field to which the archaeologist is willing to adapt and respond through a kind of *Bildungs*-journey.

The relationship between how s/he becomes educated in adapting and responding to the site—and thereby transforming it into a *field*—and what s/he finds is the crux of the matter. If data-gathering in accordance with the traditional protocol of modernist archaeology—as extended by the storage and retrieval in digital technology—means extracting them from the site and accessing them through forms of *remote viewing* then data-

gathering for experimental archaeologists summons varieties of *phenomenological* imagination.

These two meanings of *data-gathering*—one pledged to dissemination, the other to experimentation—are geo-political with regard to their implications because if knowledge is irrevocably linked to a *site*, the *screen* and the *field* summon—at least potentially—two clearly distinct constituencies. It seems that the contributors to the present volume share the positions that: a) archaeological datasets and experimental categorisation are ontologically distinct; and b) a system of 'joint rule'—or, *synarchy*—should be envisaged.

This means that essentially the *one* cannot be derived from the *other* (in the sense that, for instance, archaeological experimentation would be seen to *supplement* "real archaeology"). The disjuncture between how findings *present* themselves on site and the way they become *represented* in datasets has arguably become amplified through the alliance between science and computing, which in turn explains why sensory augmentation is *de rigueur*: not to fill the gap between the two, but to place oneself within it.

Therefore, archaeological experimentation can be seen as one mode of *critical reflection*, based on practice rather than on text-criticism. If this assertion is tenable then the development of practices of this kind can hatch new repertoires of 'database gathering' (and new notions of sets that can e.g. evolve from meta-data tagging). It is based on an idea that this sort of *criticality* (Rogoff 2003) will not emerge from the procedures relating to digital storage/retrieval, but from procedures that convey the constraints of the site.

If the wealth of data collected by the numerous small tributaries of conscientious human efforts—in the domain of archaeological research—is an information system, then it may be better conceived as a 'disordered system'[4] in the specific sense that the constraints of the site are extended by the alternate experimental practices that act on—and canalise—another set of practices. This other set of practices are the ones that make up the fact collecting of the dig (a system that acts on itself in a way that adapts to and reflects the site).

A major issue is how much of these insights can, and should, be conveyed in writing, given that the main strength of writing lies in arguing a *case*, and that other media have a tremendous advantage over writing in

[4] A simple case of a disordered system is a glacier: as it drops into a valley it is constrained by the surrounding geological mass of mountains; under the weight of the labyrinthine crevices there is a bed of completely regular ice-crystals that form the ice-bed on which the glacier slides.

exploring and *demonstrating it*. As an example, our current nuclear venture has extended the impact of our present needs 100,000 years into the future[5]. This is three times longer than back to the Paleolithic cave paintings; can we rely on the legibility of current human vernaculars to last that long?

And, can we rely on the practices that emerge from the current instrumentation of research to be similarly durable? Marcel Mauss's (1936) concept of *body technique* would hence seem to complement Lemonnier's concept of *chaîne opératoire*: in the sense that the body technique is un-tooled and without communicative function, the human ability *to learn directly from images* would seem to be located between the *chaîne opératoire* and the *technique du corps* (and to feed them both).

In an era where we are flooded with images—and 'visual culture'—the task of locating the affordances of images in human learning processes are oddly unattended. Locating the image (whether visual, haptic, olfactory, gustatory or aural) between the *chaîne opératoires* and the *technique du corps* can open a terrain where occasions for mutual learning between archaeologists and designers may be as important as between archaeologists and anthropologists. Design could well be the hyphen between our two disciplines.

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[5] Cf, the Onkelo nuclear storage-place in Finland designed to last 100.000 years, with an adequate system of warning aiming to be as durable.
http://www.youtube.com/watch?v=GmWadizC8AQ

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