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DISCUSSION

Engagement: Archaeological Design and Engineering

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ABSTRACT

Practice, architectonics, the disposition of materials, instruments, people, the articulation of heterogeneous parts in an assemblage that performs transformative work: we can easily call this engineering—science in action. One of the main topics of this collection of papers is the design of archaeological knowledge. Taking a lead from these papers, let us ask how we might work with the richness of the past, creatively, respecting the qualities of materials and relationships. From these questions, I sketch a few components in the design of knowledge.

Résumé: La pratique, architectonique, la disposition des matériels, les instruments, les gens, l'articulation des parties hétérogènes dans un assemblage qui réalise du travail de transformation: nous pouvons facilement appeler cela ingénierie- science en action. L'un des sujets principaux de cette série d'articles est la conception de la connaissance archéologique. Prenant ces articles pour exemple, interrogeons-nous sur comment nous pourrions travailler avec la richesse du passé, d'une manière créative, en respectant les qualités des matières et des relations. A partir de ces questions, je schématise quelques composantes de la conception de la connaissance.

Resumen: La práctica, la arquitectónica, la disposición de los materiales, los instrumentos, las personas, la articulación de las partes heterogéneas en una colección que realiza trabajo transformador: a todo esto podemos llamarle ingeniería: ciencia en acción. Uno de los principales temas de esta colección de trabajos es el diseño del conocimiento arqueológico. Tomando la iniciativa con estos trabajos, preguntamos cómo podría trabajar con la riqueza del pasado de forma creativa, respetando la calidad de los

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materiales y de las relaciones. A partir de estas preguntas, esbozo unos cuantos componentes del diseño de conocimientos.

KEY WORDS

Design, Engineering, Engagement, The Digital, Antiquarians

Discussion

Archaeologists work on the remains of the past. It is now widely accepted that archaeology is as much about our contemporary interests and active attentions to the past as it is a passive discovery of past ways of life. The designation of engagement to such relationships implies a host of welcome associations: rendezvous, an appointment, looking to a future arrangement; a commitment or even a contract; to be engaged in something is to be immersed, absorbed, to care, to be invested in the connection. The papers in this volume explore many such aspects of the archaeological project, enhancing our appreciation of the humanity of these memory practices.

Though it is only marginally mentioned by Colleen Morgan, an exploration of archaeological engagements has its roots in the rationalism and romanticism of 17th and 18th century antiquarianism. Sara Perry's exhortation to improve our visual literacy and push forward with new reflexive practice is, for me, a contemporary echo of the long history of antiquarian experiment in architectural drawing and book illustration, reflection upon the relation between text and image in accounts of collections of antiquities and in regional chorographies from Camden, Aubrey and Stukeley to the architectural manuals of Stuart and Revett documenting the rediscovery of Greek antiquity.

Ma. Soledad Mallía and Aixa Vidal, in their sociology of the institutional socialization of archaeologists, in their attention to the influence of researchers' interpellated identity upon archaeological discourse are still practicing in the tradition of critique, the investigation of the conditions of the production of (valid) knowledge.

Colleen Morgan's sensible treatment of VR in archaeological reconstruction hinges on the old and crucial romantic distinction between naturalism and realism when she distinguishes accuracy from engagement, with realist replication of the past coming from a genuine and production relationship with the past, realizing its potency in the present and in constant reiterated encounter. The deep or thick description upheld by Michelle Charest ad Chris Witmore is a celebration of an animated world independent of

humankind, to be appropriately apprehended though detailed attention, opening up our constitutive imagination to the life of things. Echoes of Wordsworth.

Certainly the concerns we read in this journal here over the relation of text, source and document to historical reality, the concern with the motivated interpretation of scholars is very evident in the rationalization of textual interpretation in literary antiquarianism from Thomas Percy's *Reliques of Ancient British Poetry* of 1765 and its reception onwards into Scott's development of the romantic historical novel out of his own editing of medieval ballads. Scott was quite self-conscious and explicit, like many of his day, about the subtle interplay of interpretation, reconstruction and accuracy in any historical discourse. For so many antiquarians a crucial issue, with the demise of Biblical chronology, was the authenticity of our reception of the past, questions of how the past is transmitted, how much gained and lost in our interpretation of the sources, the need to respect remains in scrupulous philological attention to their transmission from antiquity and prehistory down to us. Reconstruction is always necessary, whether it be interpolation, fiction, modeling, or world building, as in the sometimes fantastic architectural reconstructions of Classical antiquity produced by the likes of Joseph Gandy and William Gell.

Memory, foregrounded by both Christina Hodge and Chris Witmore, was a touchstone of course, of Wordsworth's critical self examination of poetics, at the core of Scott's Waverley novels rescuing a past fast becoming history, and, as the haunting uncanny, was at the heart of romantic Gothic—the ruin of ages, as we struggle to hear the whispers in the deafening silence of death and decay.

I have elsewhere elaborated upon this critical romanticism; it is important, I believe, to remind ourselves that we are tackling features of a modern(ist) *and* archaeological sensibility.

Christina Hodge and Chris Witmore are the most explicit in dealing with certain themes of what can be called the archaeological imagination. The past in the present, its temporality and materiality, the percolation of times past in present, as well as what becomes of what was are two such emblems so well dealt with by Christina in her representations of the Elihu Akin house in Dartmouth. Chris's topic of mediation as metamorphosis is a variation on "what becomes of the past". Fundamental archaeological and forensic doubt that we can ever get to what has happened, that we may search in vain for evidence, that we may never cease questioning is expressed by Chris as the perpetual, and ultimately futile, task of distinguishing figure from ground, sorting out what matters from what is mere noise, to hear the voice in the noise of history. Futile, because there can be no signal without noise, because there is always more to say. Both Christina and Chris consider displacement too, how temporal and spatial shifts

constitute archaeological memory, sometimes traumatic, sometimes in the sea-change of the familiar into strangeness, as the past returns uncannily to haunt, sometimes when we simply realize that "this happened here". Displacement too in a katachrestic juxtaposition, surrealist association as what was never meant to be connected is thrown together in the garbage heap of history or in the topological folding of our movement through our environments.

A more recent and academically familiar context for the papers in this volume is that field of interdisciplinary interest that arose partly out of Marxian critical theory as the sociology of knowledge, after Schutz and Mannheim and into Kuhn, with close allies of discourse analysis, most famously associated with Foucault, and now science studies, investigating the *practice* of science. The focus is the *political economy* of archaeology—its practices, the work done on the remains of the past, its organization, contracts, transactions and exchanges. Krysta Ryzewski alerts us to the essential point here that knowledge is always situated.

Work done on the past. I have long favored the notion that archaeology is (intellectual) labor, yes, or perhaps rather aspires to craft, with its connotations of the mingling of hand, heart and mind, embodied and tacit knowledges. It is appropriate to call this archaeological craft mediation, as several of our authors do, because it necessarily involves media, and because this craft comes between past and present, and, as a project with an eye to future receptions of the past, archaeological craft mediates future prospect too.

But now, in this frame of production, we ought to be less focused on traditional notions of media. Instead, and as supported by Krysta Ryzewski, we should think of media as modes of engagement. I think it is worth expanding on this notion. Let me explain how I see it and connect it with another major theme of these papers—new emergent digital media.

Back in 1999 I got involved in a field project in Sicily that aimed to investigate a hill-top settlement in the context of the early city states of the Mediterranean, and with a view to questioning our very categorization of such sites, their material culture and landscapes. One aspect of the project was a new on-site GIS system developed by the Swedish National Heritage Board; it seemed to me to be able to offer a flexible, agile way of handling located data without over categorizing, retaining the possibility of redefinition, of returning to the site, as it were, after excavation and making entirely fresh queries of the data, generating information of a different order. Another component was a broader project called Three Landscapes. With two member of the performance company Brith Gof, Cliff McLucas and Dorian Llywelyn, I was developing a comparative study of three disconnected landscapes; Sicily and the hilltop town was one of them. With another director of the same company, Mike Pearson, I had been delving

into the performative character of archaeology: our notion of theatre/archaeology we defined as the rearticulation of fragments of the past as real-time event.

Both remained unrealized projects. Sicily fell apart for me, among other things, because of orthodox expectations, traditional discourse, and because of my over-ambitious expectations for the digital media; Three Landscapes was left in fragments with the tragic death of Cliff McLucas. But Cliff's dramaturgy and scenography, rooted in an architectural approach to the design of performance, tied to Mike Pearson's world of physical theater, got me thinking about media.

This is how Cliff and I put it.

We note some features of The Digital:

- the interchangeability and easy juxtaposition of what were previously separate material media;
- the absence of predetermined outputs;
- the generation of new creative environments;
- the generation of new associative arenas;
- the relentless de-structuring of relationships in the media industries;
- the challenging of 'hierarchical' structures by 'geodesic' ones—single linear and dendritic patterns and relationships replaced by networks;
- the proliferation of modes of 'authorship';
- the proliferation of modes of 'publishing';
- the proliferation of modes of 'reading'.

The Digital allows the gathering of moving image, still image, music, text, 3D design, database, geological survey, graphic detail, architectural plan, virtual walk-through etc., into a single environment. These may be infinitely manipulated and re-mobilized without loss in that space. The eventual output as video, photograph, CD ROM, DVD, paper based print, web page, broadcast, archival database, live event, exhibition, site specific installation etc., is in no way predetermined by any factor in the original material.

Numerous characteristics of this environment—cutting, pasting, undoing, reformatting, layering, and so on—define an entirely new and creative arena in which even the simplest of tasks becomes less predetermined and more speculative. Even while working with complex visual and sound environments, these characteristics help to create a working space that can be much more investigative and more creative. Digital networks notoriously create the possibility of new associative and collaborative arenas, new ways of moving ideas and communications around. Potentially this raises issues about differences of power and influence between center and periphery, between the urban and the rural. There is increased potential for small-

scale and locally based 'artisan' and 'non-industrial' modes of operation. The 'virtual', as an extensive and sophisticated cultural space, may move into competition with, or parallel to, the 'real world'. The Digital may imply a re-negotiation of the relationship between the global and the local.

We suggest that these features of The Digital create what we will refer to as an expanded and 'poetic' space.

The Poetic is a key concept in our endeavors. By poetic we are not referring to a kind of ephemeral and personal way of writing, one belonging with ideas of subjective inspiration and expression. By poetic we mean the combining of materials (here, as described above, in the digital realm)—materials from different sources and of different orders, in such ways that they resonate to create meanings within the spaces of their combination as much as in the elements themselves.

The choreography of previously diverse materials through the digital realm inevitably breaks down the structural properties of what have been commonly referred to as 'media'.

The term 'medium' has usually referred to an institutional agency of communication, such as TV, or the materials and methods used in the production of an artwork, such as oil on canvas. But the fluid manner in which visual material, for example, is turned into animation, photographic print, painting, digital video grab, film, photographic transparency and so on, is less and less important in defining the 'medium' of the product generated.

Instead, and in celebration of Roland Barthes notion of the "death of the author", the way a reader or viewer is engaged by those agencies which distribute cultural works is an increasingly significant factor in any attempt to mark the difference between given works. Hence we propose that the notion of *modes of engagement* might offer us a more accurate and useful way to categorize the format and placement of cultural works in the public or private arena.

Crucially, these formats are not being driven so much by subject matter or discipline (one concern of the academy), nor the material or form (one concern of the art market), but by an interface or hybridization of distributing institutions, individuals, families and social or professional groupings. We propose, therefore, to adopt four schematic working categories for the media productions in The Three Landscapes Project:

- those that we experience 'in the privacy of our own homes'—such as the website, the interactive CD-ROM or game, the sound CD, and most printed materials;
- those that are experienced 'in the company of ones family and friends'—such as television and radio;

- those that are experienced 'with colleagues at the school or in the workplace'—such as the formal lecture, demonstration or multimedia presentation;
- those that are experienced 'in the public arena'—such as the billboard, the exhibition, the public performance.

Take photography as an illustration of such thinking, as do several of the papers. I agree that there is a deep affiliation between photowork and archaeology. Calling photography photowork draws attention to the poetics—the work done. Poetics draws attention to the rhetoric of engagement, the performance of effective argument.

Chris Witmore connects photographic imagery with the photowork of the archaeological site—cleaning and preparing site as mis-en-scène, to-be-photographed. Consider an extension of this insight, that photowork is fundamentally architectural. Cameras involve an arrangement or disposition of viewer and viewed via different forms of enclosure, aperture or window, and screen; after all, cameras are basically modified boxes or rooms and have a long history predating the chemical fixing of light sensitive materials (in 1839) by at least two millennia. Such an architecture implies the means to construct and arrange its components, powers of making and assembling, requiring materials and instruments inaccessible to many until the advent of mass photography, and even then, largely controlled by corporations as well as media agencies acting as gatekeepers to the world of published photographs. In such a scenario photowork is only partially about photographic images. As an architectural arrangement, photowork is all about the design and regulation of a mode of engagement between operator, subject and audience.

Practice, architectonics, the disposition of materials, instruments, people, the articulation of heterogeneous parts in a (machinic) assemblage that performs transformative work: we can easily call this engineering—science in action.

But let us also take a lead from many of these inspiring papers and ask how we might work with the richness of the past, creatively, respecting the qualities of materials and relationships. I want to now sketch a few the components in the *design* of archaeological knowledge, because I think this is one of the main topics of this collection of papers.

There is a resurgence of use of the concept of design in relation to manufacture and engineering. I don't just mean the designation of specific designers or styles: Armani, Scandinavian/IKEA. An engineer colleague once described design to me as occurring when engineering meets emotion. The human factor in making is conspicuously now part of a design agenda. There is a new turn to arguments about design that take us back to the roots of modernity in industrialization, standardization of materials and

processes, deskilling and alienation, questions of ethics, taste, capital and class structures. Who owns and operates the means of production; whence are we to create the goods for a life worth living in a sustainable world? These questions take us to the heart of modern political economy.

And these papers offer a smartness about the way we might negotiate these questions in archaeology.

For example, the outsourcing of key manufacturing functions from western Europe and North America to Asia by multinational corporations has precipitated debate about the global distribution of skills, with propositions that the future of the first world lies in a "creative economy" of innovators, while the realization of their designs is performed in Asian economies, with cheap labor and infrastructures. While emphasis upon the manipulation of financial services and markets as a means to sustain growth has led to the patent unsustainability of the global economy with the crash of 2008, and while globalization is rooted in an export of class structures and inequalities from the old industrial west in a neoliberal capitalism as inhumane to the majority as ever, the need to encourage and coordinate the creative skills essential for addressing current matters of common and pressing human concern is deeply felt by many. "Design thinking" is a term in growing use that refers to the processes involved in any kind of creative address to a problem, whether that be the search for a new medical technology or a whole healthcare system. The engineering school at my own university of Stanford has two whole institutes and programs, the D-Institute and Center for Design Research, devoted to researching, teaching and sharing the interdisciplinary and collaborative skills in any kind of human-centered making and problem solving.

While we may be rightly cynical at slogans such as the new MBA (Master of Business Administration—the academy's accredited ticket to a business career) being an MFA (Master of Fine Arts and the terminal degree of an arts program in an American university), I would locate the papers in this volume in the context of a reflexive critique of (cultural) production, exploring the intersection of (academic) research and professional practice, the sciences, arts and humanities, with new creative angles on the old notion of the one-dimensional heritage industry. There are connections too with a growing strategic interest in the management of interdisciplinary and distributed research networks, identifying practices that encourage effective collaboration, effective research design.

In this new design agenda I propose there are three key components, again well illustrated by these papers.

First, a focus on tacit knowledges or skills. The practices of the craft of archaeology. Even the rigors of science are dependent upon unformulated skills and know-how, located in distributed articulations of individual experience, instruments, infrastructures, institutions.

Second, a realization of the importance of ambiguity. Innovation and scientific discovery are dependent upon maintaining multiplicity, as Chris Witmore so appropriately emphasizes in his recognition of the importance of, among others, Michel Serres and Geoff Bowker. Coming to definitive conclusions and standardizing practice can be efficient and effective, but can also hinder change.

Third, maintaining immersion *in medias res*, maintaining a sensitivity to complexity enabled through iterative engagement. Embodied experience and wisdom, speculative reasoning or "abduction" (after Pierce), are powerful agents of creative design.

The papers here all offer a call to action. They rightly propose that it is not enough to criticize and raise consciousness of archaeology's work today in the culture industry, but to develop new practices, to find new voices, gestures, engagements. It is true that we have heard so much in archaeology and cognate disciplines about compromised and ideological ways of representing the past, but with few alternatives that could supplant orthodox discourse. We hear the concomitant call for experiment, and are provided with examples and case studies. What is needed to have this call answered more widely?

Of course an answer that comes from these papers is that orthodox discourse acts to suppress alternatives. The reliance still of academia upon the templates of academic publication developed in the 19th century make it difficult, if not impossible for most, to build an academic career except upon accepted and paradigmatic media forms and genres—the journal paper, the monograph and so on.

But we do not have to find radically new voice and gesture in representing a rich and sensuous past. We do not have to write poetry as a more nuanced alternative to statistical social science, though we might give it a try. As I indicated at the beginning of this commentary, the history of archaeology contains many examples of experiment with genre and discourse. Antiquarians and archaeologists have always been early adopters of visual and other media, from the illustrated book to VR and GIS. The haunted medium of photography was intimate with the uncanny material presence of the past that is archaeological engagement right from its inception in the 1840s. The catalog and list, central components of traditional archaeological discourse, are, in the right hands, extremely evocative rhetorical forms, favored by the likes of Melville and Whitman. And archaeology has always been a field of collaboration. It is entirely in keeping with a long tradition in archaeology to work across radically diverse fields of knowledge and practice. The individual archaeologist doesn't have to develop skills in multiple voices and techniques alone, even with the remarkable availability now of production technologies and instruments—easy multimedia authoring on the personal desktop. Don't expect

to become a sophisticated poet as well as genetics expert. Engage with others; invite them into the conversation; find connections with the world of IT, science, the arts that offer tight integration, rather than pursue the parallel practice most usually found.

Many of the papers point to the opportunities offered by digital media. It is certainly the case that digitally enabled collaborative authoring and social software are rooted in new modes of affiliation and articulation, as well as manifestation and publication. We can indeed share the videos of a site survey far and wide, as they happen, invite comment and adapt our projects accordingly. The infrastructure costs now of setting up digital authoring and publication put them within the reach of all archaeological projects and many individuals. And the ability to digitally publish does not compromise conventional paper publication: it is not a zero-sum scenario of one or the other. Experiment can go hand in hand with orthodox discourse.

There are new value systems opening in academic discourse. Who now can so easily assert, without question, the inherent value of the academic monograph published by a prestigious and elite university press in a discrete print run of 200 against a digital and collaborative work offered online to anyone with modest information technology and network access? The resort to peer review is no longer adequate in a value preference, because the trust conferred upon a handful of remote experts in assessing academic value may be far outweighed by the open opinion and assessment of a much broader stakeholder community when the review process is continuous, when the authoring is truly iterative in the way described by Chris Witmore, and when the means of production of cultural knowledge and expression is no longer so narrowly held and controlled.

So I end with the same call to experiment and take risks, but in the savvy way that looks to complementarity innovation, rooted, as the best innovation always is, in a deep appreciation of traditional orthodoxy, and where you really can have it all ways, wiki and blog, as well as journal paper, YouTube as well as conference presentation.

For some years I have preferred digital publication over orthodox, investing much time and experiment in new content management systems, database and digital collaboration over expository academic paper. I have noticed that this work gets less *cited* than conventional academic papers, yet the ideas and findings are far more widely *discussed*. (A little experiment here is that I am not providing a bibliography. Instead I invite the reader to use a search engine and appropriate keywords and names. I am confident that this will be far more rewarding than following up numerous beautifully formatted citations mobilized by my Endnote bibliographic database. Citation and quotation are vital components of articulation and engagement, but we can be politically savvy about how we use them. Here I am not so concerned about academic authenticity).

These are early days and digital media are materially very fragile, but I am more and more confident that the viral character of networked representation lends it an ironic durability and effectivity. Managing to get your specialized book published by a major university press is a rare and valued accolade. The work's value is rooted in the hard-won prize of publication and its scarcity: perhaps a few hundred copies in libraries and a few academic collections. Even fewer books and journal papers are read and cited only a few years after publication, shunted off to the stacks disturbingly quickly. Online publication is the only future for academic publication, and academic institutions will guard the gateways well. This is appropriate. But digital engagement between ideas and people, sites and collections, landscapes past, present and future can draw in a far wider range of interests, skills and expertise. The value of information and communication is, after all, related to its ubiquity, not its scarcity. Experiment and share, build connections through inclusive networks, be iterative and agile, open to the future. Be smart about the politics of archaeological discourse and be daring—there is little to lose and everything to gain.