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Mediational techniques and conceptual frameworks in archaeology

A model in 'mapwork' at Teotihuacán, Mexico

TIMOTHY WEBMOOR
Department of Cultural and Social Anthropology, Stanford University, USA

ABSTRACT
A recent trend in archaeology has been to turn reflexive attention upon the methods employed by archaeologists in field practice. In this article, I take a step back to consider the map as a fundamental conceptual framework that archaeologists utilize in directing their methods and formulating interpretations. I explore what a map 'does' for the consideration of a site. I work around this question with the 'Millon map' of Teotihuacán, Mexico as a case study. Building upon ideas expressed by Alfred Gell and Roland Barthes, I argue that maps cannot be utilized as independent, self-contained media, as maps 'work' via an inherent mutuality of subjective and objective elements. In archaeological discourse, this is best expressed by the integration of photography and graphic representation. Finally, I offer an example of integrated 'mapwork' through a novel interpretation of space at Teotihuacán. It is reiterated that media such as maps operate as conceptual frameworks and so predispose certain interpretations. Acknowledging this recursive relationship between media and interpretation draws critical awareness to the media archaeologists

employ and encourages the innovative use of mediational techniques to engage archaeological subjects.

KEYWORDS
conceptual frameworks ● map theory ● mediation ● reflexive analysis ● space ● subjectivity-objectivity ● Teotihuacán ● visual evidence

> Personal life, expression, knowledge and history advance
> Obliquely and not directly toward ends or toward concepts.
> That which is sought too deliberately is not obtained.
>
> (Merleau-Ponty, 1962)

INTRODUCTION: MAPPING AS MEDIUM

Archaeology and the human sciences in general are increasingly reflecting upon the role of media and materiality in social processes. 'The medium is the message' has become part of familiar parlance (McLuhan, 1994) with an increasing awareness that the medium of knowledge inherently shapes how we think, what questions are asked, the strictures of evidence, and, as the outcome, how the results of research are delivered to the public (Lenoir, 1998; Taylor and Saarinen, 1994). Simultaneously, on the opposite extreme of a concern with 'virtual' matters are the attempts to dislodge the dominance of a textual-based strategy of interpretation (discourse) in (re)asserting the bedrock of materiality as the fundamental matrix of human engagement (Latour, 1993, 1999; Olsen, 2003). Within anthropology (Briggs, 1970; Clifford and Marcus, 1986; Rosaldo, 1989), and slightly later, archaeology (Hodder, 1999, 2000), a reflexive approach to the process of constituting knowledge has been forwarded at the level of fieldwork and write-up (Chadwick, 2003; Hodder, 1989; Yarrow, 2003). Such a reflexivity, critiqued in some quarters for being restricted to myopic navel-gazing (Robertson, 2002; Salzman, 2002), needs to be extended beyond the subject/interpreter to the assemblages of mediational techniques utilized to render the materiality of 'fieldwork' into useful interpretive claims. This article begins from the premise that all three foci of concern may be productively combined, and an attempt is given within the specific context of a single archaeological site. At Teotihuacán, Mexico, a particularly well-known and monumental site, I suggest that the map serves as the primary medium employed to facilitate interpretations and render the site in discourse – and as such, underscoring the active role of media, pre-determines the range of interpretations regarding site space. In reflexively

probing this methodological and representational touchstone of archaeological practice, through posing a schema of how maps work and discussing how they are utilized, I offer that mapping might be more usefully conceptualized as 'mapwork', a particular and prominent strategy of 'mediation' that foregrounds the active integration of subject and object and offers a fuller framework for constituting evidence.

MAPPING TEOTIHUACÁN

René Millon's mapping project for Teotihuacán was an ambitious undertaking, and, aside from earlier survey work at Tikal, upon which Millon modeled his project, was unprecedented in both scale and detail in Mexico (Millon, 1970, 1973: x–xi). From the earliest stages of planning, beginning in 1962, the mapping project was intended to complement a larger, regional survey in the Teotihuacán Valley and the adjacent Basin of Mexico coordinated by William Sanders (Sanders et al., 1979). Most importantly, it was to provide the first complete map of the entire urban area of the city (Millon, 1973). A few earlier, partial surveys of Teotihuacán had been undertaken, with Boturini in 1746, Almaraz in 1865 and Manuel Gamio in 1922 producing two rudimentary maps. Yet, these had covered only a fraction of the city and focused upon the ceremonial precinct or primary urban zone (Rattray, 1987). This early attention to the central district was unsurprising, as the temple compounds and the landmark couplet of pyramids lie along the Avenida de los Muertos which runs for approximately 3.2 km through this most visibly urbanized portion of the city (Sugiyama, 2004: 103–4). But Millon's project, in tandem with his earlier survey in 1959 of the north-west outlying areas, was to, first and foremost, cover the entire 20 km^2 which Millon predicted as comprising the full extent of Teotihuacán's urban area (Millon, 1973: xi). After more than 100 years of investigation, this would finally and definitively identify the boundaries of the city, and, once this precondition was completed, would permit investigation of the 'urban settlement pattern and population distribution in ancient Teotihuacán' (Millon, 1973: x). What is more, the goal of studying the process of urbanization, formulated by Mexican archaeologists and anthropologists at the time, required a detailed map that could function as a template for future investigations at the site that could then be tied-in to the comprehensive map. The mapping project would allow for subsequent comparative utilization in relation to other major pre-Hispanic urban centers (Millon, 1973: xi).

The 'Millon map' has become inextricable from the consideration of Teotihuacán in particular, and ancient urbanism more generally. The results were finally published in 1973 in a 2-volume, 4-part compendium, replete

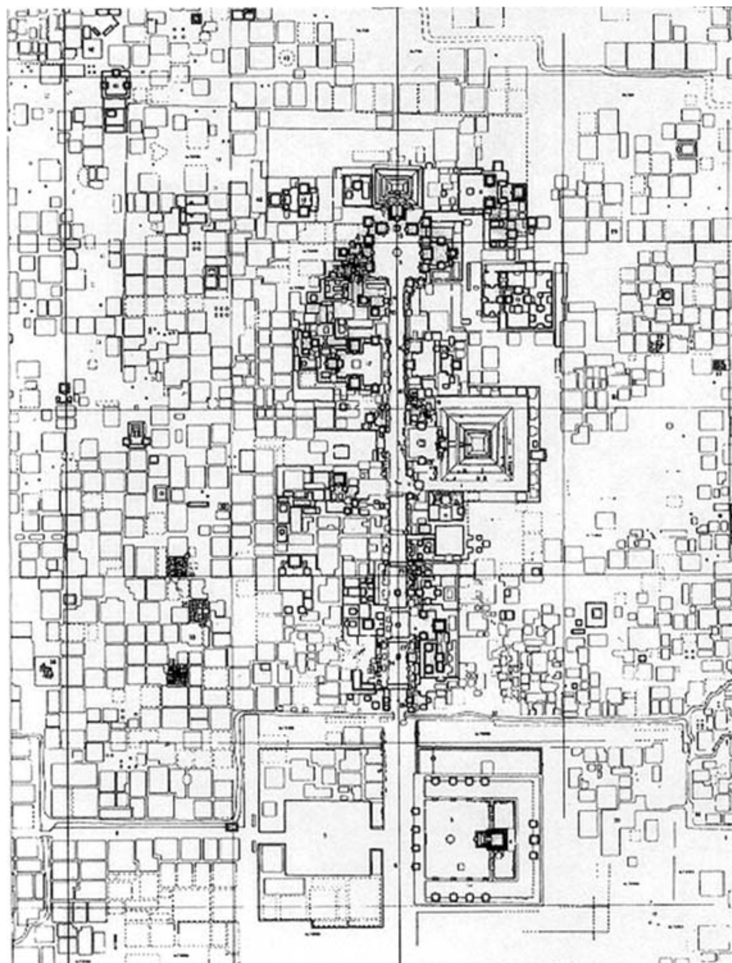

Figure 1 'Map 1' of the Teotihuacán Mapping Project (adopted from Millon, 1973)

with pockets and pull-out maps, of 147 maps at a scale of 1:2000 covering individual 0.5 km^2 units. Also included were three larger scale maps, including the most widely used 'Map 1' (Figure 1). Map 1 covers the central Avenida district at a scale of 1:10,000, with its familiar 0.5 km^2 grid system oriented along the roughly north–south baseline of 15º 25'/30' east of astronomic north – based upon the orientation of the city's buildings and the Avenida de los Muertos (Drewitt, 1987; Millon, 1964, 1970, 1973). Subsequently, the Millon map has been included in every major publication and website on Teotihuacán (Acosta, 1968; Benson, 1981; Berlo, 1992; Berrin and Pasztory, 1993; Coe, 1984; Cowgill, 1983; García, 1993; Matos Moctezuma,

1990; Pasztory, 1997; *Teotihuacán*, 1990; Townsend, 1992). Studies ranging from intra-site spatial analysis and the process of urbanization to ideological and aesthetic interpretation of artwork at the site and more 'holistic' landscape analysis, irrespective of explicit discussion of Millon's map, situate their subject matter by spatial reference to the map. Generally, this takes the form of presenting the map at the outset or introductory portion of the texts (as I have done here) with the effect of providing a spatial context for the interpretations of the specific works. As a 'type map', the Millon map provides a frame of orientation, and operates commensurately with the perfunctory geographical or environmental background prior to more focused consideration of varied topics of research. With publications internalizing this referent, the reader of the particular works is enabled to 'flip-back-and-forth' in order to place himself or herself within the material context of the interpreter. The process of moving between map and text reinforces the interpretations of the author(s) by linking it with a more universal or objective source of empirical observation – a would-be transparent two-dimensional window to the materiality of the site. This may or may not also include a range of spatial contextualizations, progressing from the scale of Mesoamerica, to the region, to the site (Teotihuacán), to finally a more detailed intra-site map or sketch. Nevertheless, Millon's map will appear as the authoritative frame of reference for Teotihuacán. More widely, referenced by introductory archaeological texts as illustrative of the development of social complexity, the Millon map has become the 'archaeological type' map for pre-Hispanic Mesoamerican urbanism (Black, 1997; Price and Feinman, 1993; Renfrew and Bahn, 1996; Willey and Sabloff, 1993).

Of course, this is routine practice in the archaeological presentation of material, and is arguably considered mandatory for proper treatment of a site or, even more strongly, for a regional/inter-site topic. Mapping practices may be historically traced back to antiquarian 'expeditions' of the nineteenth century, but such a 'holistic' methodological approach to archaeological sites was particularly emphasized with the advent of new technologies and the increasing concern with generalizing statements in the post-Second World War era (Gosden, 1999: Ch. 5; Renfrew and Bahn, 1996: Ch. 3). Urban mapping projects became interlinked with regional surveys in efforts to discern broader environmental and settlement (and inter-settlement) interaction contributing to the rise of complex society. Among other prominent examples outside of Mesoamerica, Gordon Willey's (1974) project in the Virú Valley, Gregory Johnson's (1972) work in the Diyala region of modern Iraq, the University of Minnesota Messenia Expedition in Greece (McDonald and Rapp, 1972), and David Clarke's (1972) re-interpretation of Glastonbury all correlated settlement mapping projects to changes in local environments. Through these types of projects, the role and utility of the archaeological type map as the defining frame of reference for interpretation became firmly established.

But it may be useful to ask: how does this affect the varied acts of interpretation in the studies? Or, more plainly and using Teotihuacán as an exemplary case study, beyond the obvious usefulness of the map in situating both interpreter and reader (and tourist, guide, local artisans, etc.), what does the Millon map 'do' for consideration of Teotihuacán?

MAPWORK

The detail of a cartographic map[1] can often, however, elide the very feature of a landscape – or for that matter, an urban or built architectural space – that it presumes to envisage in its visual conventions. Not simply in the sense of large scale versus small scale, photogrammetric versus 'hand-surveyed' or topographical – important decisions that nonetheless affect the acuity or style of a map's form – but rather in what a map 'says' or conveys in its graphically coded information. The graphic details employed by a map, the bold array of lines and geometrically coordinated shapes, abstract in formalism the corporeal experience of such locales. Furthermore, maps, by virtue of their 'univocal scientific strategy', flatten sensory data into the restricted medium of articulated lines and create 'gaps' and 'blank spaces' (de Certeau, 1984: 94). Even the blank spaces in between imply a positive knowledge of what is absent. The map's elision is then contradictory: what is known in a landscape is transformed in representation while what is not known is inferentially represented in the map's very form. This has long been persuasively argued by 'theorists of lived-space' (de Certeau, 1984: Part 3; Lefebvre, 1991; Tuan, 1977), but is likewise acknowledged as part of a map's explicit purpose (Monmonier, 1993). This is their usefulness. Maps categorically attempt to render such empirically sensible data, the degree of slope on a hillside, the relative heights of foundations or structural walls, the position of a west-facing platform vis-à-vis the angle of a setting sun, in an alternate, mathematically based code. It is their designed function to 'transform' such unwieldy data into a transportable medium – or 'immutable mobiles' (Latour, 1986: 7–14) – that may be brought back from the 'field' to facilitate interpretation (Latour, 1999: Ch. 2).

Yet especially as transportable mediums, removed from their context of production, maps are images themselves that the viewer/reader looks at and interprets. So that while they are tools for basing practical decisions and interpretations, this functional capacity of representing may be overemphasized at the expense of overlooking their aesthetic qualities *as* representations. This, I would argue, makes them appropriate for analysis as representational objects. Such an approach may also facilitate in answering what these organizing conceptual frameworks, so central to archaeological practice, 'do' or how they work.

The semiotician of everyday life Roland Barthes 'de-coded' the most taken-for-granted phenomena, ranging from plastic to wrestling (Barthes, 1972). His most poignant work, however, may be his analysis of photographs (Barthes, 1977, 1981) wherein he draws conscious attention to a bipartite constitution of photographs which grant them such appeal as representations. This constitution is comprised of the 'studium' and the 'punctum' (Barthes, 1981: 26–32). Briefly, the studium refers to the learned structure of techniques to render an image recognizably appropriate. This element allows the viewer to relate to the intentions of the photographer – 'this is what they were getting at' (Barthes, 1981). The punctum, on the other-hand, defies the intentions of the photographer and is more of an 'accident' which pierces the conceived order of the image and 'pricks' the viewer. This is the inexpressible element that grabs the viewer by rendering the image truly sensitive or poignant (Barthes, 1981: 26). His insight was that photographs were not mere 'imitations' of life, perfectly mimetic of reality, but had a particular 'sense' to how they were received by viewers and which transformed the reality they represented by virtue of their very medium – as framed scenes of life (compare the mimetic projects of Benjamin, 1970; Buck-Morss, 1992 and Taussig, 1993). Though the presence of Barthes' elements may be endlessly debated, they provide a useful beginning for understanding maps as representations.

Treated through the lens of Roland Barthes' insightful distinction between studium and punctum, it might be said that the 'coding' which entirely comprises a map's 'image' might exactly correspond to Barthes' idea of studium. In photography, this may include the conventions of framing an image, positioning of background and foreground, centering of subjects, or adjusting for even-exposure. The studium also includes the precise recognizable style grouped under the familiar nomenclature of 'realism', 'pastoralism', the 'picturesque', 'surrealism', etc. But in mapping this by definition includes the distanced 'view from above', re-coding the features of the landscape in a two-dimensional plane of the leanness of lines and polygons. The 'code' to sublimate and fulfill the purpose of such geometric patterns must be learnt in order that the referential intent of a map's patterns of lines fosters visualization in the mind of the map-reader as the three-dimensional, real world of slopes, foundation walls and structures and, perhaps, predicted fall of sunlight. This predictive purpose of a map, dependent upon the intelligibility of the referents, is, however, indefinitely and unpredictably deferred as the knowledge of the map-reader to correctly read a particular type of map cannot be guaranteed. It requires the conceptual tools learnt through 'practical mastery' (Bourdieu, 1977: 2) in order to reconstruct the map references. (And where this code may be idiosyncratic, a 'legend' is obligatorily supplied in order to fill this lack of prior learning.) Yet precisely what is deferred by the coding of the map as the mental construct of the referenced ostensible 'real world' represents the

integral component in the functioning of the map as a whole. Referent and reference must both be accessible to the map-reader, and both must be held in tension in order for them to enable the operation of the map.

In an assiduous article, Alfred Gell (1985) refines the idea of a studium-like coding and the inherent tension of a map by analyzing the 'practical logic of navigation'. He proposes that the nearly non-reflexive process of 'getting around' fundamentally relies upon the peculiar mechanism of the map. Gell renders explicit what he contends all navigational techniques utilizing the map involve – or again any two-dimensional representation of location as he works through systems of navigation as diverse as 'the etak' star-course maps of Micronesia and perambulating King's Cross using a London 'A–Z map'. This consists of a 'matching' of the non-sensorial, non-pictorial data encoded by the map to the image-like, perceived landscape that the map-reader is immersed within (Gell, 1985: 278, 286). This dialectic involves the movement from what is currently perceived around the map-reader, and so is a subject-centered perspective of being in the landscape, to the spatial representation of the self-same position encoded graphically on the map. This 'reading' proceeds back-and-forth in order to cross-check the homology between perceived landscape and represented landscape. And this continual movement allows for the *ersatz* placement of the map-reader 'in' the map and so locates the map-reader in relation to what is not only directly perceptible, but also, by extension of the map's graphics (depending upon scale), within a removed but 'expected landscape' lying beyond the immediate subject-position (Gell, 1985: 278). Furthermore, '. . . it is not sufficient that a landscape-image be matched to a perceived landscape, but that the landscape-image must be identified with coordinates on a mental map' (Gell, 1985: 278). Through this perpetual process, once the map-reader's subject-position 'on-the-ground' is matched-up with the coordinated position on the map, the map-reader is able to locate her/himself in relation to all of the non-perceived landscape features designated on the map, and so is able to continue to navigate based upon the presencing of sensorial features that are predicted by the map. Depending upon the familiarity of the map-reader, this continued navigation through the landscape will continue to involve, at a greater or lesser frequency, the movement back-and-forth between the myriad of 'partial views' or 'accumulated images' and the encoded features of the map (Gell, 1985).

Importantly, Gell was eager to dispute Bourdieu's (1977) notion of 'practical mastery' as a familiarity of space arising through embodied experience, as opposed to abstract Cartesian space. With this notion, Bourdieu proposed in his 'mental map theory' that navigation or place-finding was enabled through such embodied familiarity with the local environment, entailing a plethora of connected mental images that all were subject-centered in perspective. Such a practical mastery of a landscape was

'mapless' and so utilized a non-Cartesian system of subject-centered 'coordinates' in lieu of reliance upon the 'placeless', abstract coordinate system of a map (Bourdieu, 1977: 114–24; Gell, 1985: 273). Sedimented in his encompassing notion of 'habitus', Bourdieu's argument for getting-on in the world based upon subjective, embodied familiarity and routine has been picked up by anthropologists, cultural geographers and cognitive psychologists supporting the idea of way-finding as based upon stored spatial information or images in the form of cognitive, mental maps (Gell, 1985). This line of argument seems particularly appealing, especially in consideration of 'local populations' who inherently possess a more profound exposure to, and familiarity with, the surrounding environs vis-à-vis non-locals who might have greatly restricted 'mental maps' based only upon what is immediately within their perceptual experience. And this distinction may, in fact, corroborate the reliance upon, and hence complicity of, Cartesian maps in the colonizing effort that has been asserted in the literature (see below).

But Gell, wary that Bourdieu is steering towards a 'behaviourist view of spatio-temporal behaviour', suggests instead that all persons, whether local or tourist, perform the 'deliberation' of moving between embodied experience of the surroundings and the corpus of perceptually unavailable/indirect information of the 'map'. However, this 'map' may be in the form of Cartesian coordinate maps, which Gell denotes by 'artefactual maps' in that they are invariant irrespective of the subject position of the map-reader. Or it may be in the form of 'mental maps', which are not codified in permanent graphical form, but which nonetheless, as compendia of mental images, function analogously in situating the map-reader in regards to the larger, encompassing space pictured in the mind (Gell, 1985: 273, 6, 8–9). What is the unifying feature of either type of map-mechanism is the non-variant, immutable nature of the spatially contextualizing data, whether derived from an artifactual map or a store of mental images. Neither of these 'maps' depends upon the specific position of the map-reader, but identifies permanent locales necessarily in spatial relation to the position of the map-reader. Even during quotidian navigation in familiar territory, the subject positions her/himself in the landscape by estimating their location vis-à-vis known, routinized paths and locations. As Gell notes, this fixing-of-position may or may not be actively conscious, especially in everyday navigation, and may vary in complexity of the operations, but it nonetheless represents a universal technique in that it relies upon universal logical processes (Gell, 1985: 286).

Gell's theory of the integral movement between 'non-token-indexical' statements ('maps' of the mental or artifactual variety) and 'token-indexical' statements (current subject-centered perception), characteristically threads a Kantian middle-ground/neither/nor tract between the dominant theories of how maps work. And this schema may or may not

prove universal (Ingold, 2000: Ch. 13). Yet, its illumination of what seems unacknowledged yet tacitly familiar provides a useful framework for further consideration of 'map-works' at Teotihuacán. As his distinction from Bourdieu's theory demonstrates, his outline places great emphasis on a bipartite structure utilizing *both* what may be grossly termed subjective and objective elements (nomenclature used here out of familiarity). It suggests that a map works by mediating between the subjectivity of a map-reader and the objectivity of the navigated world and posited navigational principles. And in folding the importance of subjective perception of imagery within a more universal structure of navigation, it likewise resonates with Barthes' bipartite schema of punctum and studium.

THE VISUAL AS EVIDENCE

To again take up the lens of Barthes' *Camera Lucida*, where, when 'it' is capable of rupturing the rigid encoding (studium) of the map, would the punctum untowardly reside in mapping? Or, as that inexplicable element which exhausts the formal regularities of the image and 'pricks' us with a more profound sensation-intuition, might his idea of the punctum be inappropriate in the context of spatial representation – as in his work he only applied such concepts to imagery (Barthes, 1977, 1981)? To follow through with Gell's argument of the integral mutuality of map/image, perhaps we must look beyond the map to the subjective perception of the landscape which operates in this dyad. For representation and reproduction in publication and, more widely, discourse, this would necessitate a consideration of the visual imagery produced in tandem with mapping at such archaeological sites.

The representation of Teotihuacán in discourse provides an excellent example of Gell's thesis of what operates on an inherent yet unacknowledged level in terms of spatial navigation. Again looking to the major treatises of the site in publication (see Figure 1), the reader is firstly presented with one of the major versions of the Millon map. Then follows in the work a litany of typically full-color, full-page layout photographs of the site. Matos Moctezuma's recent work, *Teotihuacán: The City of Gods* (1990), is a good example of the visual representation of Teotihuacán. After presenting a redacted version of Millon's map (pp. 46–7), there immediately follow 32 pages of full-color, layout photographs (pp. 49–80). These are then 'bookended' by Millon's map (a version of Map 1) on page 81. His book, like most others, presents a panorama of photographs overlooking the pyramids, the temple-compounds, the Avenida, or some such combination thereof (comprising 75 percent of the images). The remainder involve more detailed photographs of architectural features or mural relief. This

'portfolio' comes fairly early in the book, in a section entitled 'The City' (*Teotihuacán*, 1990: 41). Representing a common pattern, the presentation of the city in the book may be taken as signaling an archetypal process of attempting to render the famously panoramic and impressive archaeological site (the most touristed in Mexico) in book form. Considering the limitations of publication, how can such an experientially awing archaeological landscape be adequately re-presented in text?

Moreover, Moctezuma's solution is not atypical for Teotihuacán. A glance at other comparable publications – ranging from Coe's (1984) inclusion and Cowgill's (1983) spatial analysis, through Berlo and Berrin and Pasztory's (1992, 1993, respectively) consideration of art and ideology to Townsend (1992) and Pasztory's (1997) discussion of landscape and art to finally archaeo-astronomy (Aveni, 1980; Dow, 1967) – confirms similar presentations of Millon's map in tandem with extensive photographs. As a matter of precedent, Millon's (1973: 'figures') own published work of the map in Volume 1, Part 1 contains an initial 64 pages of text followed by an equal proportion of figures: combining aerial views, mural and sculptural details, landscape shots and culminating in the final two pages with the presentation of the primary maps (Maps 1, 3). It might be contested that these works are exceptional in that they had the wherewithal to publish so many color photographs. And that in this aspect, they are perhaps intended for 'touristic consumption' rather than more serious scholarly engagement (compare García, 1993). However, I believe these represent 'best case scenarios' where publishing resources enable what is desired by the authors dealing with Teotihuacán in attempting to render a sense of the uniquely monumental site.

What is at work in these accompaniments of map and photograph – which of course is not delimited to reflections on Teotihuacán? Again with the assistance of Gell and Barthes' schemes emphasizing mutual operative elements, I believe such treatment represents the textual materialization of an implicit acknowledgement of the inadequacy of the map situated on its own – no matter how detailed and irrespective of scale or production method. This does not seem shocking, as the two representational techniques encode visual information in drastically different manners. But if there were to be the hardly expressible affectivity of Barthes' punctum, it would prick us from the accompanying photographs. This might not necessarily be the case with every photograph of Teotihuacán – and most likely would not, as this 'quality' is generally anathema to issues of good arrangement, even-lighting, framing method, etc. (refer to photograph captions in Barthes, 1981). But, I would argue, there is nonetheless the attempt to include this integral quality of the landscape in the various renderings. Whether or not such attempts to augment the map with the more experientially evocative work of the photographs succeed in conveying Barthes' ineffable punctum is obviously a matter for great debate and perhaps

resides more appropriately in aesthetic theory and art criticism. That the attempt is consistently and conspicuously offered-up, however, points to an implicit recognition that the map is insufficient for the treatment of archaeological sites and landscapes.

Admittedly, akin to the map, the photograph unavoidably constrains what it 'transforms' into the chemical residue on celluloid, in terms of framing method, lens distortion, filters, exposure level, etc. (Wells, 2000). All of which may render an image which differs appreciably from what is taken-in by the eyes of the observer (see below). Yet, what a photograph cannot negate or remove is the perspective of the viewing subject. The lens of the camera, of whatever specification, always 'sees' from somewhere definite in relation to the landscape. In fact, the photograph might perform what is a double-emplacement of a definite perspective: the photograph captures a framed selection of the surroundings, giving it a specific view; the completion of the photograph entails viewing what the photograph has 'viewed'. Both result in a double sedimentation of a specific perspective of subject-perception. Even if automated, the photograph is nothing unless viewed, and the viewer, then, necessarily is emplaced in the subject-position of the camera's lens (an entanglement of person/thing, see Callon and Law, 1997; Latour 1993, 1999; Woolgar, 1988 for 'actor-network theory'). There is never a subject-less photograph – this *ersatz* placement of ourselves in the visualization of the image is its very appeal.

In terms of 'mapwork', it might be more accurate to say that the 'photographs' were always already present in the work of the map. For mapwork, as Gell contends, necessitates the perpetual movement between subject-centered perception and the more immutable graphical framework of maps. To divorce the two is to undermine the very process that enables the map to operate for the map-reader. If Millon's map is to accurately represent Teotihuacán, it must be conceptualized in relation to the myriad of perceptions on-the-ground which make it usable as a map. But if, as I would argue, the inclusion of such photographs of the site is an implicit cognizance of such mutuality, what happens to the photographs or how are they utilized? And conversely, how is the Millon map employed?

In interpretation of the site, the photographs are generally not utilized. As mentioned at the beginning of the article, the Teotihuacán Mapping Project was ensconced within the overarching research directive of detailing the progression of urbanization and settlement patterns of the site through surface survey (Millon, 1973: preface, 1981, 1993; Rattray, 1987). To that end, the primary works cited above include reference to the Millon map to bolster the various arguments concerning Teotihuacán's historical development into the sixth largest city in the world at the time during its apex between 450–600 CE (Matos Moctezuma, 1990: 85–7). Beginning with both volumes of Millon's (1973) own work published with the map, once the limits of the urbanized portion of the city were delimited through

survey, efforts were made to identify the sequential building phases to assess the growth pattern of the city. In the work, this involves the identification of the various mapped residential complexes as well as the construction phases of the pyramids and their insertion into the overall developmental scheme of the city's layout. Eventually, the overall development could be visualized using the lines of the map by peeling-back the horizontal extent of the demarcated structures on the map to any configuration relative to the developmental time-line. Cowgill (1983: 322) likewise employed the demarcation of the Ciudadela complex, the immense, open rectangular 'plaza', to estimate that upwards of 100,000 individuals, or the entire population of Teotihuacán at its zenith, might have convened within its confines for purposes of socio-politically integrative spectacles. Resonant with Millon's own study, Matos Moctezuma (1990: Ch. 3) and García (1993) trace out the growth of the city by demonstrating the increasing compartmentalization of the residential compounds, registered as the continuance and elaboration upon the plaza-centered compound template. The increasing ability to define and map-in structural walls visually references this process. Additionally, García discusses the probable access routes and the movement of human traffic through the 'West Compound Palace' using the template of the Millon map and plotting direct lines through the various polygonal shapes designating the structures (1993: 231–9). The result has been to refine Millon's larger-scale map through the addition of more intricate polygons denoting more accurately defined structures.

These studies include in their publications, yet exclude from interpretive consideration, the litany of 'landscape shots' from the site (again compare García, 1993; Matos Moctezuma, 1990; Millon, 1973). Only works dealing with more integrative considerations of the Teotihuacán landscape draw explicit conclusions from subject-centered perception, as materialized in their photographs. Drawing from earlier postulations linking the layout of Teotihuacán's architecture to astronomical phenomena and symmetries with the surrounding environment (Drewitt, 1987; Millon, 1993), Pasztory (1992, 1997) draws attention to perspectival relationships between various structures and surrounding natural features. These would include, for example, the symmetry of the Pirámide de la Luna's shape with the silhouette effect produced by Cerro Gordo in the background as viewed progressing northwards along the Avenida. Pasztory, after including Millon's map as a point of introducing the site, substantiates her interpretations of architectural-natural alignment and mimicry through reference to her images (e.g. 1992: 136–8, Figs 2, 6). Similarly, Sarro (1991), in linking the routes of movement through the residential compounds to the viewing of the murals and sculpture, draws interpretation from the images, framed so as to imitate the optimal position for viewing. Yet the study conspicuously excludes both Millon's map and the tying of such presumed positions of viewing to

locations on the map. Though concerned with the movement through the architectural spaces of the city, this creates a strange ‘placelessness’, where the details of the images (murals, statuary, relief sculpture) stand-in for orientation in space.

While the former type of research predominates over more recent discussion of perception and perspective of space at the site, both reproduce an interesting ‘gap’ between the usages of the two primary sources of representation. Either the map, as a version of Millon’s map, functions as the primary source for drawing interpretation, or, in fewer cases, the perspective of the subject on-the-ground as re-presented in the attending photographs is drawn upon. Belying Gell’s integration of both as essential to successful mapwork, the two sources are held distinct as presumably incorrigibly incommensurate.

This is likely a product of larger disciplinarian practices. Following from what some have contended is an exhaustion of the linguistic focus in the human sciences, continuing through from structuralism to post-structuralism (Dews, 1987), the ‘pictorial turn’ (as Mitchell, 1996 terms it) afforded a reconsideration and valorization of the role of visual imagery as medium for understanding, and, derivatively, as ‘evidence’ in the human sciences (for the debate regarding this ‘turn’ to the visual, refer to Berger, 1984; Gombrich, 1960, 1984; Goodman, 1978; Mitchell, 1986, 1996, and the relevant discussions in anthropology of art, Danto, 1988; Faris, 1988; Gell, 1996, 1998). For anthropology and archaeology, this critical focus on imagery-work has followed along two tracks, but both have nonetheless led to a similar debased status of imagery as a form evidence. As Chaplin (1994: 201–2) outlines for the history of anthropology and sociology, photographs were early on utilized to ‘enhance’ the scientific status of works, by providing documentary ‘proof’ to accompany the textual descriptions (MacDougall, 1998: 61–70; Pinney, 1992). Thus, images were the ‘seeing is believing’ or ‘I was there’ authorizing strategy of early anthropological fieldwork and were an integral component of the museological paradigm operating at the time (Merriman, 1999). Later, after the general ‘New Criticism’ literary movement of the post-World World II period, authors, such as Geertz in anthropology, followed an impetus towards textually based forms of communicating and evoking the intended experience (Chaplin, 1994; Culler, 2001). This move was coupled with a highlighting of the blatantly constructed nature of these early ‘diorama’-style photographs, such as posing subjects in iconographic manners, portraits out of context, as well as a general clumsiness of technique and the immensely dubious quality of the images themselves (Chaplin, 1994: 204; Moser, 1998, 2001 for tactics of ‘archaeological visualization’). Finally, these detractions were coupled with ethical concerns stemming from the perceived malleability of photographs, as rhetorical devices of discourse which could be framed, composed and utilized symbiotically with argumentative text to support any

proposed interpretation (MacDougall, 1998: 70). As Chaplin concludes, the omnipresence of these subjective elements reduced photographs to a marginalized or discredited status for several decades in the discipline.

For archaeology specifically, Shanks (1997) exposes a slightly different development (Larsen et al., 1994). In lieu of an extended 'linguistic turn' in archaeology, photographs have been, and continue to be, employed as sources of supplementary or supporting evidence (Buchli, 1995; Hodder, 1992; Olsen, 2003; Shanks, 1992; Tilley, 1991, and refer to Berger, 1984; Bourdieu, 1972; Dews, 1987; Giddens, 1984; Lyotard, 1971; Mitchell, 1986, 1996 for general reconsideration of solely textual and structural analogies for interpretive endeavors). As a general inflection of the discipline's preservation ethos, photographs have always been maintained as a means in the objective recording of sites and artifacts (Shanks, 1997: 74). As such, they have rarely been actively engaged with as a form of interpretive evidence, but are rather 'after-the-fact' examples to bolster claims or serve as illustrative devices. Irrespective, such imagery is intended more for the archive than for the focus of sustained discussion.

Despite such a seemingly innocuous recordation status, Shanks (1997: 74, 78–9, 81) argues that photographs are far from 'un-constructed', self-evident 'witnesses' to site-reports/publications. On the contrary, such visual documentation universally involves technical issues of 'selection', 'framing', 'lighting', 'staging' – reflecting certain compositional styles. He contends that archaeologists have far too long assumed the 'naturalism' of photographs, or arguable one-to-one direct correspondence of image to real world, and ignored the larger debates in aesthetics and art theory problematizing this working assumption (Pearson and Shanks, 2001: 151–8). Just as attention must be called to the discursive operation of writing in establishing objectivity (Hodder, 1989; Tilley, 1989), photographs, or 'photowork' for Shanks – as the medium entails active manipulation and intervention – must be acknowledged as powerful tools of persuasion, not simply as 'photographic verisimilitude' (Shanks, 1997: 101). But separated from an association with objectivity, images might fall to the wayside in archaeology as this, similar to early on in anthropology, has been their mode-of-being in the discipline. The hope is to steer archaeologists away from this reaction by first accepting the constructed nature of photographs and, importantly, to continue to utilize them as versatile media, albeit in a more critically-reflexive and creative manner (Shanks, 1997: 101–2).

Thus, dissimilarly to anthropology, images in archaeology haven't experienced quite the tumultuous trajectory of theoretical shifts, yet have throughout remained a secondary source of evidence (Moser, 2001). This abnegation of 'visual evidence' in the form of images, or its restriction to 'supplementary status' in archaeological works, may be partially responsible for this split between the forms of representation. As already mentioned, at Teotihuacán that minority of projects explicitly foregrounding visual

perception and integrative landscape issues draw the photographic representations into active discussion within the texts. As opposed to positioning the photographs as stand-ins on the page serving as visual corroboration of what is argued in the text (again, compare Moctezuma's (1990: 46–81) pictorial layout with Pasztory's (1992: 137–8) discussion of the site's 'inevitability' as part of the landscape). Yet even still there is arguably little interpellation of the images and the textual discourse, suggesting a functioning of the images still more akin to that historically schematized above for archaeology and anthropology.

What appears in this artificial split between mapwork and imaging at the sites is a continued reliance upon, or compensation with, the map for interpretations. This seems especially evident in those examples presented above following the original dictum informing the Teotihuacán Mapping Project and which discuss issues related to spatial complexification and urbanization as instantiated through settlement patterns.

It may be that discreteness of space suggested by the graphic encoding of the map naturally lends to positing binary relationships such as outside/inside, public/private, sacred/profane (though refer below for a counter-example). On the contrary, I believe this disentangling of map/image, though not only problematic for how both work 'on-the-ground' and derive their 'sense' (Gell, 1985), also places an uncritical 'burden of proof' upon a medium that itself, analogously to the photograph, has been argued to be far from neutral. By now well rehearsed in cultural geography, literary criticism, post-colonial theory, anthropology and, increasingly, archaeology, the 'deconstruction' of the map has de-stabilized the idea of an objective medium for representing spatial relationships (from the impetus of Foucault, 1995).

The map as a peculiar, historical device has been advocated by authors (Andrews, 1999; Cosgrove and Daniels, 1988) locating its development within a larger aesthetic trajectory of a preference for disengaged, removed perspective relying upon framing devices and originating in landscape art of the Italian Renaissance (Harris, 2002, illustrates this progression from pre-Renaissance through contemporary mapping technologies). Deriving from this aesthetic tradition of distancing the human observer from the landscape, facilitating a portrayal of the 'exterior spaces' as abstracted and mathematized, Harley (1992) cites the tradition of cartography as effectively condensing this 'mental' configuration of space and traces the indexing of space in two-dimensional maps to a historical concordance and complicity with primarily militaristic and colonial pursuits. Spivak (1999: Ch. 3), in her 'worlding of the world', and Pratt (1992), describing 'imperial eyes', extol how this particular manner of engagement with the landscape allows the operation of the western assumption of 'empty', uninscribed earth in order to impose a 'cartographic transformation' of the 'native' to 'other' through demarcation and inscription in the colonial and tourist context (also Piper, 2002, among a litany of works).

Orlove's (1991) comparison of Peruvian peasants and government ministries' spatial representations of identical spaces in a contested land claim most clearly evokes such contradictions in envisioning landscape in colonial settings. And archaeologists themselves (Barret, 1994; Bender, 1993, 1998; Thomas, 1993), recognizing this history of the 'western gaze' culminating in the abstractions of the map, have noted its peculiar manner of surveying the landscape with the preponderance to 'still' and immobilize what is observed for disciplinarian purposes of inspection (Carrier, 2003, however, cautions against essentializing the dichotomy between Western and non-Western apperception).

Whether all maps operating at sites such as Teotihuacán can demonstratively be linked to colonialist agendas and 'scopic regimes of power' is dubious, at least when argued as consciously utilized in such pursuits. But the persuasive documentation by such authors in historicizing maps as particular (Western, post-Renaissance) modes of engagement with sites is compelling. Furthermore, as alluded to above, the entire premise for the inscription of a landscape/site/cityscape into graphical encoding assumes a non-local and hence unfamiliar status with the area. As Gell (1985) relates, those navigating the terrain who have a knowledge and familiarity with it operate according to 'mental maps' or stored, subject-centered images of the various locales. These subject-stored images might not be of locales in immediate propinquity, but they enable the perpetual movement and 'cross-checking' to occur in relation to what is currently experienced. This cross-checking between 'sources' ensures successful navigation. Operating with a codified and graphical representation, which is already 'perspective-less', immediately intimates 'non-local' status – and hence an operation historically bound-up in colonialist and militaristic pursuits.

This theoretical de-stabilization of both map and visual imagery might ostensibly leave the archaeologist in an unsettling quandary: with neither as a stable representational framework within which to draw interpretation, how might sites be spatially conceptualized and thought about? However, I would argue that such a de-stabilization can move beyond just a 'deconstructive' effort, already well rehearsed with respect to both maps and images, and be productive for archaeological practice. First, a letting-go of the objective recording standard with which to evaluate photographs and maps will allow for the treatment of maps as visual images in their own right. Considered in such a manner, we may think-through the analyses of Gell and Barthes as to the very operation of visual representation and highlight a shared schema employing subjective and objective elements in an indissoluble process. The formal structuring of the image and the very materiality of the photograph enables the viewer to decode the image – much like a map. Yet for Barthes, every viewer will bring a subjective sensibility to the image that enables it to 'work', to hold the viewer, by actually rupturing the formal code. Maps in Gell's navigation likewise necessitate

the concurrence of a store of subjectively based 'images' and the formal code of the map's graphics. Finally, this common operational schema encourages more than just common treatment as forms of evidence. Following Gell's argument, the two media are always already at work when thinking about space. I argue that both media have their usefulness and, critically, that this mutual constitution, irrespective of their ontological exactitude to the reality of a site, allows for a reflexive re-integration to provide a fuller framework to work within.

(UN)MAPPING BOUNDARIES: INTEGRATING MAP/IMAGE IN PRACTICE

The Millon map, oriented roughly northwards along the length of the Avenida de los Muertos, inexorably directs the attention of the map-reader to this central portion of the site. This area, darkly configured by the quantity of mapped lines of this most explored central district, contrasts with the blank, ephemerally half-completed polygons of the peripheral areas which have not been mapped in geometric detail but only drawn-in impressionistically from photogrammetric aerial shots. The outlines of the Avenida, with an average width of 46 m (Acosta, 1968: 60), conspicuously form a continuous swath of white map space through this densely inscribed portion. Irrespective of the context of viewing, whether at the site or not, the viewer's eye is draw back and forth along this 'blank' extension of the Avenida, pausing to settle on the more pronounced, large and darkly shaded shapes of the pyramids juxtaposed with the immediately adjacent 'blank' squares of the outlined plazas – the Plaza del Sol and the Plaza de la Luna.

On-the-ground, entering the site's fenced boundary at one of five primary entrances, the visitor is likewise drawn through the myriad of low structural walls by the ever-present visibility of the pyramids along the Avenida, until they exit off the raised, un-excavated areas down into the longitudinal length of the Avenida. Once here, with map in hand, the map-reader is presented with an experiential impression that mirrors that of their preliminary investigation of the map: the Avenida, bordered on the sides by half-reconstructed temple complexes with their vertical walls of *talud-tablero* style and raised 'stepped-partitions' leading into the plazas of the pyramids and the Ciudadela, presents a north-south linear swath of access. Within this space of the map, movement most effortlessly flows north-south. With the slight incline (2 percent) of the Avenida between the Ciudadela and the Pirámide de la Luna, the flow of pedestrian traffic tends to follow a first northerly direction, culminating in a possible ascent of the pyramid, then a regression back down and south along the Avenida (Acosta, 1968: 60; Matos Moctezuma, 1990: 30).

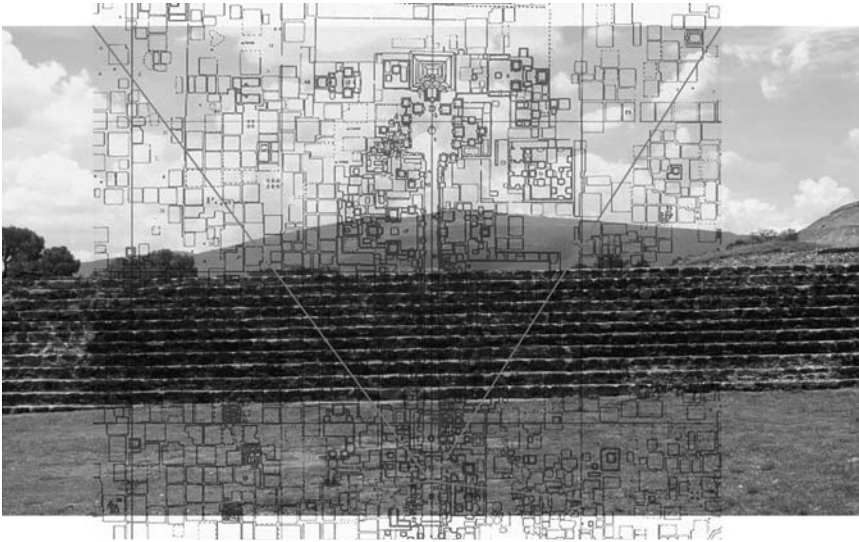

Figure 2 Mapwork: moving north along the Avenida de los Muertos

Moving northward along the Avenida de los Muertos (Figure 2) from its southern extension adjacent to the Ciudadela, a 'stepped-partition', or a raised causeway running perpendicularly across the Avenida and flanked on both sides facing the Avenida by continuous steps, comes to view just after passing the Río San Juan. Initially, the stepped-platform creates little visual interference of the view northwards towards the pyramids. But as one draws closer to the step (which can range from 2–3m in height) the view of both the pyramids and the length of the Avenida itself is completely occluded. This leaves only the more proximate view of the immediately surrounding shallow plaza area and the steps. The stepped-partition imposes the first delimitation of what is ordinarily an unimpeded grand-scale view of the site's monumentality. And this restriction is incongruous. Looking back to the Millon map in order to verify the location, two faint, parallel lines are visibly traversing the elongated open space of the Avenida's outline. Further inspection reveals another five (for a total of six) such coupled lines further north along the Avenida. These lines are situated at irregular intervals but always at least 100m apart. Resting attention on this perpendicular series of lines anticipates a series of plazas elongated north-south along the Avenida ahead of the map-reader's location. The series continues until the unbroken length of the Avenida extending further north, once past the Pirámide del Sol. Subsequently, moving up the partition's steps (Figure 3), the view north over the site opens up unobstructed. Here the shallow plazas formed along the Avenida by the stepped-partitions fall sequentially in view.

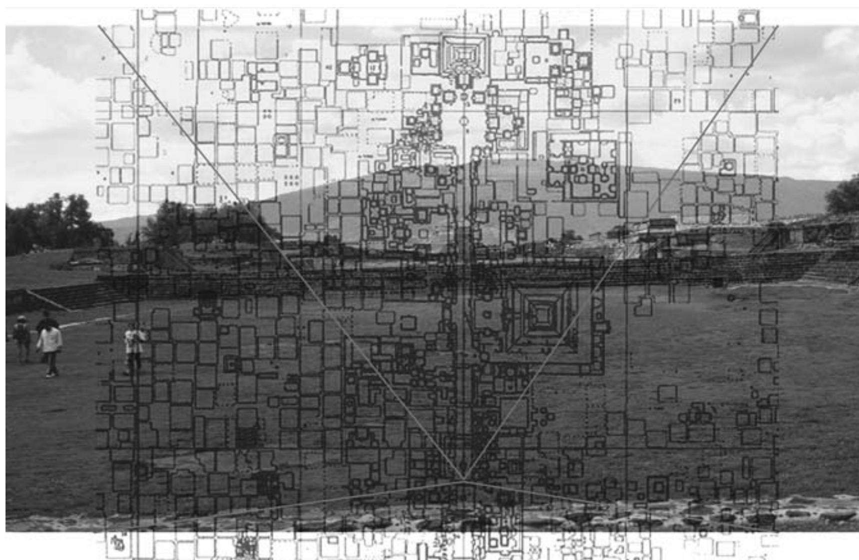

Figure 3 Mapwork: continuing north across the 'stepped-partitions' towards la Pirámide de la Luna

From this elevated perspective, wherein the map-reader's perceptual field most closely approximates the unimpeded 'view' of the Millon map, the map-reader is able to predict utilizing the lines of the map the consecutive movement through five plazas. Progressing north and stepping down the stepped-partition, this rough symmetry between subject-centered perception and the map's spatial perspective is again suspended. The view over the site is again restricted to the tops of the pyramids in the distance and the immediate confines of the shallow plaza. And continuing this movement establishes a definite rhythm alternating between moving up, out of the previous plaza, over and across the threshold of the partition, and down the steps into the next plaza. In comparison with the map, there is a two-fold incongruity: the 'clean' lines on the map did not predict the vertical movement required to advance between these plazas. Moreover, the plazas themselves, indicated by the distinct rectangular polygons of the map, are not so mutually exclusive as the map's graphic encoding suggests. Rather, the perpetual coming-in and going-out of the field of vision during progression over the stepped-partitions creates a continuity of their respective interior spaces.

All told there are at Teotihuacán eight such primary stepped-partitions located within the main ceremonial district. Six perpendicularly cross the portion of the Avenida de los Muertos that extends from just north of the Río San Juan to immediately south of the Pirámide del Sol complex. One runs longitudinally on the east side of the Avenida and forms the border

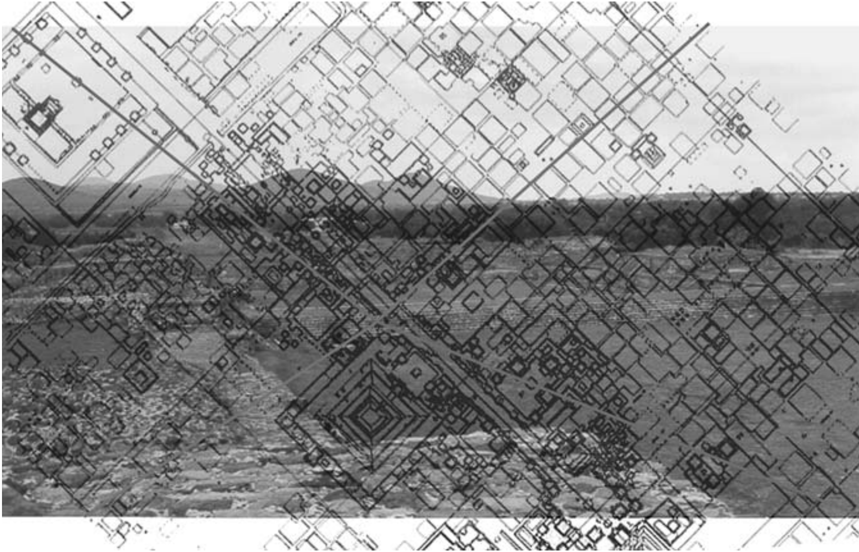

Figure 4 Mapwork: looking obliquely across the Avenida from la Plaza del Sol

between the Avenida and the Plaza del Sol. And the other similarly forms the border between the Avenida and the Ciudadela complex.

Viewed obliquely (Figure 4), the pattern of the central precincts takes on the character of a series of inter-linked levels partitioned by the presence of such steps. (And this impression is complemented in that the temple platforms and pyramids themselves reproduce this pattern of stepped slopes partitioning leveled platforms.) So to traverse even a portion of Teotihuacán along the Avenida and the adjoining Ciudadela or the Plaza del Sol would have been to repeatedly reproduce a series of vertical as well as horizontal negotiations (Millon, 1992: 393 for discussion of 'verticality' versus 'horizontality' sedimented in the site's architecture).

Analogous to other features delineated by the abstracting method of the mapping projects, the stepped-partitions are signified by a series of 'flat lines' dividing the white space defining the leveled plaza areas and appear to impose definite boundaries between what are adjoining spaces. As Millon's map of Teotihuacán exemplifies, the purpose of the mapping project revolves around the identification of boundaries, as with those between plaza, temple-platform, pyramid, and domestic structures. The ability to do so is taken as a measure of the effectiveness and acuity of the cartographic effort (see de Certeau, 1984: Ch. 7, 9; Harris, 2002; Monmonier, 1993; Rogoff, 2000: Ch. 3 for analogy to semantic exactitude). As a ready comparison, the reader might quickly surmise from the

juxtaposition of representative site maps that one with less detail is somehow inferior or lacking. An estimation might be that one is less definite, less precise in noting fewer demarcations, fewer dividing lines, than that of Teotihuacán, and therefore inferior in its discernment of space. This judgment, however, might again be a better indicator of the conventions of our spatial significatory tradition rather than of the spatial relations at the respective sites.

Contrary to such expectations produced by particular notions of discreet space, which tend to predispose us to look for the 'necessarily existent' boundaries and perceive the surroundings in terms of oppositional, mutually exclusive discreet places – part of Lefebvre's (1991) syndrome of 'commodified space' – I want to argue that these 'bounding' partitions do more than simply provide horizontal lines of demarcation on the respective maps. Approached from an integration of the Millon map/subject-centered perception, rather than the removed distance offered by the perspectiveless graphical encoding, a better conceptual metaphor for the partitions and the production of social space at Teotihuacán might be the 'intertextuality' realized in the textual approaches to productive meaning. This metaphor asserts the inexorable modulation of the significance of any single text in terms of inter-signified or 'contiguous texts', a process which possesses no 'determinable boundaries' for the act of interpretation (Culler, 2001: Part II; Dews, 1987: 12).

Their omission from extended discussion (only Acosta, 1968: 26; Pasztory, 1997: 52; Wallrath, 1966 allude to them) belies their integral effect upon the experience of articulating the spaces of Teotihuacán. The bodily practice of transitioning between the social areas of the central portions of these sites would have effected a particular configuration of entering/exiting space, one that operated along a vertical axis. Rather than a threshold conceived in horizontal extension, the vertical threshold embodied in the practice of moving across the stepped-partitions serves to demarcate space. This performed vertical movement, necessitated by the architecture of the site, resonates with the generalized pan-Mesoamerican cosmology that stresses the *quincunx*, or a dimensional system comprised of the four primary horizontal directions arranged along a vertical *axis mundi* (Ashmore, 1991; Ashmore and Knapp, 1999; Benson, 1981; Pasztory, 1997; Sugiyama, 1993; Townsend, 1992 all offer accounts relating Mesoamerican site layout to directionality/cosmology). Yet, cosmology might not be sedimented via the physicality of the architecture of the sites alone, as with the archaeo-astronomical alignments of Teotihuacán (Dow, 1967; Millon, 1993; Pasztory, 1997), but through the repeated performance of cosmological principles through 'lived-space'. In other words, if serving as material metaphors of cosmological ideas (Blier, 1987: Ch. 1), the emphasis might not simply be on a site's horizontal layout and correspondences with directionality, nor the obvious focus on temple platforms and

pyramid structures as representing the vertical axis, but would encompass the vertical dimension as physically presenced through engagement with the site's architecture. Such an ideology activated through engaging the materiality of the site suggests re-considering the Mesoamerican vertical axis as not necessarily spatially restricted to any definitive locations (temple, platform, landform, etc.), but as performatively distributed throughout engaged space.

Finally, this manner of compartmentalizing space, of creating distinct areas for social engagement, might be taken as more fluid and dynamic with the stepped-partitions operating as 'permeable' boundaries. Along the Avenida at Teotihuacán there is not such a closed system of compartmentalizing space as abstract spatial, or structuralist studies utilizing solely the graphic detail of the map might indicate. By bounding vertically with stepped-partitions, rather than horizontally with walls and passages or restricted routes (which were used in other contexts in the site), or a combination thereof, the site is demarcated into distinct social spaces. But the experiential nature of these boundaries on-the-ground lends a paradoxical quality: they divide space through distanciating and limiting one's perceptions of surrounding horizontal space while concurrently 'opening' awareness to the actuality of these contiguous spaces through directing perception vertically to removed features serving as indices of space. In this manner, while situated within any one bounded space, one has perceptual access to indexes signifying the immanence of myriad other distinct spaces. This lends the sensation of never being *in* any single space, but at least being perceptually attendant in several spaces throughout the site. There is an inter-relatedness and inter-connectedness effected through the constructed landscape, which simultaneously compartmentalizes the sites' spaces into distinctive social arenas. Inscribed into exclusive spaces by the graphics of the map, the movement and inter-linkage between such spaces can best be suggested by the images representing subjective-centered visual perception. Alone, however, the navigator's immediate visual perception of the site is not sufficient to identify their location and assist in navigating through these spaces. Both techniques of spatial awareness are partial and so necessarily mutual in accounting for the actuality of negotiating space at Teotihuacán.

CONCLUSIONS

Both the analytical lens of regional survey and that of a more integrative landscape-oriented approach underscoring environmental and built/cultural relationships elide the stepped-partitions as formative of space at Teotihuacán by the still primary reliance upon the map. In fact, these two projects of archaeological survey and mapping, as the methodological and

representational technique, form in practice what might be thought of as a closed-circuit, looping and reinforcing one another in a rather circular manner. For Latour (1999: Ch. 2) this is a consequence of the 'circular reference', or really the syntagmatic chain of references that cumulatively 'transform' a selected aspect of reality into codified signs or vice-versa. Yet, any single reference is only sensible in relation to the transformations which preceded or follow it, so that a 'break' in this 'chain' creates an isolated, 'dangling reference' (Latour, 1999: 69–73).

The map, as a most commonly utilized conceptual framework in archaeology, offers a germane example. The map comes to operate singly as the methodological touchstone and serves to conceptually anchor derived arguments within an ostensibly incontestable framework of representation. Whether or not the resulting interpretations *facilitated by* the map with its attendant features and suggested relationships are confirmed remains the domain of argumentation and rhetoric. This is generally where the 'burden of proof' resides for the would-be interpreter. Such a folding of interpretations into the spatial framework of the map is not at issue, as maps have been, are, and will continue to be incredibly useful tools for representing, organizing and displaying information. But that this conceptual framework itself, which anchors such arguments, is not itself designated as a source of interpretation remains a troubling inconsistency. Even more the case as maps play a central role in deriving *a priori* these arguments. The map is not simply epistemologically guaranteed as a true representation of experiential reality, but is, more powerfully, ontologically privileged as an empirical *source* of primary and direct observation (Patrik, 1985 on the archaeological 'record' as source). Suggesting Baudrillard's (2001: 174–85) 'hyper-reality', for interpretive purposes the map becomes 'more real' than the locales it signifies.

Unfortunately, rather than moving towards an integration of such techniques, this gap between a map's spatial representation and the inexhaustibly rich perceptual experience of a landscape has been reified in theorizing 'space' as generally a more 'neutral' concept denoting the a-cultural venue of physical features, versus 'place', denoting a more encultured layer of interpretation and significance attributed to, and overlaying, the bedrock of environmental and physical features (Ashmore and Knapp, 1999; Bachelard, 1964; Cosgrove and Daniels, 1988; de Certeau, 1984; Gregory, 1997; Hirsch and O'Hanlon, 1995; Ingold, 2000; Lefebvre, 1991; Low and Lawrence-Zuniga, 2004; Sauer, 1926; Tilley, 1994; Tuan, 1977; Ucko and Layton, 1999). 'Place' might be held to capture what escapes or slips from the more codified, neutral representation of physical reality. The connotation of the term serves as acknowledgement of the ineffable, difficult to communicate – and hence even portray graphically – affective qualities of our physical medium. A litany of parallel designations has arisen in discourse to attempt to facilitate talking around this dyad of the

real and the ineffable. Thus, for example in archaeology, which has historically relied upon spatial representation as its methodological touchstone, there persists such divisions of 'environment' versus 'landscape', 'map' versus photograph, 'profile' versus 'sketch', and so forth. Each of these sets of terms operates at a slightly varying level of inclusion of detail, but each infers a distinction between what is taken to be a more objective representation from what might be 'collected' as the excess that eludes such representations (Lucas, 2001, on archaeological recording techniques). Presumably there is an acknowledgement that whatever current objective spatial techniques 'miss' as a virtue of their selection of various elements – what is thereby tacitly known to be omitted – will be preserved for future technical prowess. This form of documentation in archaeological projects is self-consciously espoused in order that all details of a locale/site/landscape are recorded, irrespective of whether or not only a minority of the data is analyzed in the current project. Such a 'heritage ethos' informs and defines the discipline (although Deloria, 1992; Mihesuah, 2000; Moser, 1995; Nelson and Kehoe, 1990; Nicholas and Andrews, 1997; Schmidt and Patterson, 1995; Swidler et al., 1997; Watkins, 2000, 2001; Wylie, 2002; Zimmerman et al., 2003, present diverging evaluations of heritage and archaeology's role). And it is well intended as a measure to ensure that, despite not taking up the qualities that elude the graphic representations of an archaeological site, such attributes within the vaguely conceived opposite pole of the working dyad be recorded as best as possible for posterity.

Rather than resolve via delimiting through definition this tension between what we experience spatially and how we represent it, this apparently incorrigible yet integral difference continues to load the terms for discussing landscape with a degree of semantic ambiguity. This is not to suggest that more attention be directed to accurately defining what constitutes this 'ineffability', as this would delve into poetical pursuit, which thrives precisely because of the inexhaustibility of 'its' suggestion. This would be the proverbial attempt at gathering sand in the hands. Likewise, this is not to support the parallel but opposite endeavor to restrict consideration of such humanist or subjective qualities as lying outside objective measurement and thus categorically unusable.

Instead, how this tension registers in the practice – in the crafting of fieldwork projects, publications and overall discourse – of archaeology might draw attention to the altogether commensurate constitution of both types of evidences and their collective integration into the representation of archaeological knowledge. Such a bringing together of apparently insuperable concepts forms part of a larger project, borrowing from Hegel (1975: s.164, 1977: 49–54), of 'conceptual therapy'. I have attempted to do just this by working through subjectivity and objectivity as refracted through notions of evidence in archaeological mapping strategies.

Raising an eyebrow over the facticity of maps may be disturbing. But it

is this very reluctance to scrutinize maps which I would argue best instantiates the need to do so, as the 'common-sense' of map usage may really derive as much from what Bruno Latour (1987) describes as 'black boxing' in the practice of the social sciences as from their self-evidence as true representations. There are other motivations for undertaking a therapy of the map. The manner in which the map is foregrounded as the primary source of interpreting the space of sites not only geographically delimits the extent of a 'site' to what's encoded graphically on the map, but effects also a conceptual delimitation as to what data is drawn upon as evidence in interpretation. Neither the map nor the accompanying visual imagery produced at a site should be ontologically privileged as the 'source' of interpretations. Both mediums are partial as mediational techniques of representing reality. But this is not so much a call for alternate, more technologically sophisticated techniques to render the site more objectively – to expand the well-rehearsed program of documentation; instead, simply a rejoinder to utilize what, by unacknowledged functionality, is already there in the monographs, site reports and publications.

New techniques and technologies, such as video-work to better elicit visual experience, sound-recordings to approximate 'soundscapes', mobile, hand-held GPS-responsive information 'guides', and new GIS programs which inter-link images with topographical maps, offer much potential (Webmoor, 2003; Witmore, 2004). Likewise, hypermedia's inherent fluidity and multi-media possibilities offer excellent inroads in experimenting creatively with engaging landscapes (Pearson and Shanks, 2001: 131) in a manner that mitigates this binary opposition of map and image (Joyce, 2002: Ch. 4; McLuhan, 1994; for example Symmetrical Archaeology, 2004, and Metamedia, 2004, as websites espousing medium-driven practice). Yet practicing what is already implicit in mapwork at the sites, the necessary interrelation between subject-centered perception and the abstraction of the map will render more integrative spatial relationships, which will likely extend out to include the encultured landscape presented by visual imagery and yet 'off the map'. Here the concept of 'mediation' may be advanced as productively useful, as the work of mediation brings forward the networks of subjectivity and objectivity involved in the transformation of the remains of the past in the present in constituting evidence. Finally, parallel with Gell's foregrounding of a process that already operates in our mapwork, we might draw a more generalizing reflexive analogy between the techniques of mediation we employ and, offering up varying and peculiar frameworks for identifying evidence, the interpretations that are foreclosed or made imminent.

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Note

1 Throughout this discussion I employ the rubric to denote the range of spatial representation utilizing the Euclidean system of axial planes (x and y) to plot specific positions within a coordinate system. This broadens 'maps' in the familiar sense to not simply taxonomies of varying projection types – mercator, gnomonic, etc. – but to any spatial representation conveying visual information in a strictly coordinate, graphical manner, and so may include consideration of stratigraphic/profile and area drawings, sketches, artifact drawings, etc. (refer to Gell, 1985; Monmonier, 1993 for useful definitions).

References

Acosta, J. (1968) *Teotihuacán, Official Guide*. Mexico City: INAH.

Andrews, M. (1999) *Landscape and Western Art. Oxford History of Art*. Oxford: Oxford University Press.

Archaeology (2004) 'Internet Archaeology' (consulted October 2004): http://intarch.ac.uk/journal/issue15/index.html

Ashmore, W. (1991) 'Site-planning Principles and Concepts of Directionality Among the Ancient Maya', *Latin American Antiquity* 2(3): 199–226.

Ashmore, W. and A. Knapp, eds (1999) 'Introduction', in *Archaeologies of Landscape: Contemporary Perspectives*. Oxford: Blackwell Basil.

Aveni, A. (1980) *Skywatchers of Ancient Mexico*. Austin: University of Texas Press.

Bachelard, G. (1964) *The Poetics of Space*. Boston: Beacon.

Barret, J. (1994) *Fragments from Antiquity: An Archaeology of Social Life in Britain, 2900–1200 BC*. Oxford: Blackwell.

Barthes, R. (1972) *Mythologies*. New York: Hill and Wang.

Barthes, R. (1977) 'Rhetoric of the Image', in *Image-Music-Text*. London: Fontana.

Barthes, R. (1981) *Camera Lucida: Reflections of Photography*. New York: Hill and Wang.

Baudrillard, J. (2001) *Selected Writings*, 2nd edn. Stanford: Stanford University Press.

Bender, B., ed. (1993) *Landscape: Politics and Perspectives*. Oxford: Berg Publishers.

Bender, B., ed. (1998) *Stonehenge: Making Space*. Oxford: Berg.

Benjamin, W. (1970) 'The Work of Art in the Age of Mechanical Reproduction', in H. Arendt (ed.) *Illuminations*. London: Cape.

Benson, E.P., ed. (1981) *Mesoamerican Sites and World-Views*. Washington DC: Dumbarton Oaks.

Berger, J. (1984) *Ways of Seeing*. London: BBC.

Berlo, J., ed. (1992) *Art, Ideology, and the City of Teotihuacán*. Washington DC: Dumbarton Oaks.

Berrin, K. and E. Pasztory, eds (1993) *Teotihuacán: Art from the City of the Gods*. London: Thames and Hudson.

Black, J. (1997) *Maps and History: Constructing Images of the Past*. New Haven, CT: Yale University Press.

Blier, S.P. (1987) *The Anatomy of Architecture: Ontology and Metaphor in Batammaliba Architectural Expression*. Cambridge: Cambridge University Press.

Bourdieu, P. (1972) *Towards a Theory of Practice*. Cambridge: Cambridge University Press.

Bourdieu, P. (1977) *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.

Briggs, J. (1970) *Never in Anger*. Cambridge, MA: Harvard University Press.

Buchli, V. (1995) 'Interpreting Material Culture: The Trouble with Text', in I. Hodder, M. Shanks, A. Alexandri, V. Buchli, J. Carman, J. Last and G. Lucas (eds) *Interpreting Archaeology: Finding Meaning in the Past*. London: Routledge.

Buck-Morss, S. (1992) 'Aesthetics and Anaesthetics: Walter Benjamin's Artwork Essay Reconsidered', *October* 62: 3–41.

Callon, M. and J. Law (1997) 'After the Individual in Society: Lessons on Collectivity from Science, Technology and Society', *Canadian Journal of Sociology* 22: 165–82.

Carrier, J. (2003) 'Mind, Gaze and Engagement', *Journal of Material Culture* 8(1): 5–23.

Chadwick, A. (2003) 'Post-processualism, Professionalization, and Archaeological Methodologies: Towards Reflective and Radical Practice', *Archaeological Dialogues* 10(1): 97–117.

Chaplin, E. (1994) *The Sociology of Visual Representation.* London: Routledge.

Clarke, D., ed. (1972) 'A Provisional Model of an Iron Age Society and its Settlement System', in *Models in Archaeology*. London: Methuen.

Clifford, J. and G. Marcus, eds (1986) *Writing Culture: The Poetics of Ethnography*. Berkeley: University of California Press.

Coe, M. (1984) *Mexico*, 3rd edn. London: Thames and Hudson.

Cosgrove, D. and S. Daniels, eds (1988) *The Iconography of Landscapes*: *Essays on the Symbolic Representation, Design, and Use of Past Environments*. Cambridge: Cambridge University Press.

Cowgill, G. (1983) 'Rulership and the Ciudadela: Political Inferences from Teotihuacán Architecture', in R. Leventhal and A. Kolata (eds) *Civilization in the Ancient Americas: Essays in Honor of Gordon R. Willey*. Albuquerque: University of New Mexico Press.

Culler, J. (2001) *The Pursuit of Signs: Semiotics, Literature, Deconstruction*. London: Vantage.

Danto, A. (1988) 'Artifact and Art', in S. Vogel (ed.) *Art/Artifact: African Art in Anthropology Collections*. New York: Center for African Art.

de Certeau, M. (1984) *The Practice of Everyday Life*. Berkeley: University of California Press.

Deloria, Vine, Jr (1992) 'Indian, Archaeologists, and the Future', *American Antiquity* 57(4): 595–98.

Dews, P. (1987) *Logics of Disintegration: Post-structuralist Thought and the Claims of Critical Theory*. London: Verso.

Dow, J.W. (1967) 'Astronomical Orientations at Teotihuacán: A Case-study in Astro-archaeology', *American Antiquity* 32: 326–34.

Drewitt, B. (1987) 'Measurement Units and Building Axes at Teotihuacán', in E. McClung de Tapia and E. Rattray (eds) *Teotihuacán: Nuevos Datos, Nuevas Síntesis, Nuevos Problemas*. México, DF: Universidad Nacional Autónoma de México.

Faris, J. (1988) 'Art/Artifact', *Current Anthropology* 29: 775–9.

Foucault, M. (1995) *Discipline and Punish: The Birth of the Prison*, 2nd edn. New York: Vintage Books.

García, M.N. (1993) *Proceso de Producción de Espacios y Estructuras en Teotihuacán: Conjunto Plaza Oeste y Complejo Calle de los Muertos*. México, DF: Instituto Nacional de Antropología e Historia.

Gell, A. (1985) 'How to Read a Map: Remarks on the Practical Logic of Navigation', *Man* 20: 271–86.

Gell, A. (1996) 'Vogel's Net: Traps as Artworks and Artworks as Traps', *Journal of Material Culture* 1: 15–38.

Gell, A. (1998) *Art and Agency*: *An Anthropological Theory*. Oxford: Clarendon Press.

Giddens, A. (1984) *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge: Polity Press.

Gombrich, E. (1960) *Art and Illusion*. New York: Pantheon Books.

Gombrich, E. (1984) *The Sense of Order*. London: Phaidon.

Goodman, N., ed. (1978) 'When is Art', in *Ways of Worldmaking*. New York: Hackett.

Gosden, C. (1999) *Anthropology and Archaeology: A Changing Relationship*. London: Routledge.

Gregory, D. (1997) *Explorations in Critical Human Geography*. Heidelberg: University of Heidelberg.

Harley, J. (1992) 'Deconstructing the Map', in T. Barnes and J. Duncan (eds) *Writing Worlds: Discourse, Texts and Metaphor in the Representation of Landscape*. London: Routledge.

Harris, N. (2002) *Mapping the World: Maps and Their History*. San Diego: Thunder Bay Press.

Hegel, G.W.F. (1975) *Hegel's Logic: Part One of the Encyclopedia of the Philosophical Sciences*, 3rd edn. Oxford: Oxford University Press.

Hegel, G.W.F. (1977) *Phenomenology of Spirit*. Oxford: Oxford University Press.

Hirsch, E. and M. O'Hanlon, eds (1995) *The Anthropology of Landscape*. Oxford: Oxford University Press.

Hodder, I. (1989) 'Writing Site Reports in Context', *Antiquity* 62: 268–74.

Hodder, I. (1992) *Reading the Past: Current Approaches to Interpretation in Archaeology*, 2nd edn. Cambridge: Cambridge University Press.

Hodder, I. (1999) *The Archaeological Process: An Introduction.* Oxford: Blackwell.

Hodder, I., ed. (2000) *Towards a Reflexive Method in Archeology: The Example at Catalhöyük.* Cambridge: McDonald Institute for Archaeological Research.

Ingold, T. (2000) *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill.* London: Routledge.

Johnson, G.A. (1972) 'A Test of the Utility of Central Place Theory in Archaeology', in *Man, Settlement and Urbanism*. London: Duckworth.

Joyce, R. (2002) *The Languages of Archaeology: Dialogue, Narrative and Writing*. Oxford: Blackwell.
Larsen, J.E., B. Olsen, A. Hesjedal and I. Storli (1994) *Camera Archaeologica: Rapport Fra et Feltarbeid*. Tromsø: Museums Skrifter XIII.
Latour, B. (1986) 'Visualization and Cognition: Thinking with Eyes and Hands', *Knowledge and Society: Studies in the Sociology of Culture Past and Present* 6: 1–41.
Latour, B. (1987) *Science in Action: How to Follow Scientists and Engineers Through Society*. New York: Open University Press.
Latour, B. (1993) *We Have Never Been Modern*. Cambridge, MA: Harvard University Press.
Latour, B. (1999) *Pandora's Hope: Essays on the Reality of Science Studies*. Cambridge, MA: Harvard University Press.
Lefebvre, H. (1991) *The Production of Space*. New York: Vintage.
Lenoir, T., ed. (1998) *Inscribing Science: Scientific Texts and the Materiality of Communication*. Stanford, CA: Stanford University Press.
Low, S. and D. Lawrence-Zuniga, eds (2004) *The Anthropology of Space and Place: Locating Culture*. Oxford: Blackwell.
Lucas, G. (2001) *Critical Approaches to Fieldwork: Contemporary and Historical Practice*. London: Routledge.
Lyotard, J.F. (1971) *Discours, Figure*. Paris: Klincksiec.
MacDougall, D. (1998) 'Visual Anthropology and the Ways of Knowing', in L. Taylor (ed.) *Transcultural Cinema*. Princeton, NJ: Princeton University Press.
Matos Moctezuma, E. (1990) *Teotihuacán: The City of Gods*. New York: Rizzoli International Publications.
McDonald, W. and G. Rapp (1972) *The Minnesota Messenia Expedition: Reconstructing a Bronze Age Regional Environment*. Minneapolis: University of Minnesota Press.
McLuhan, M. (1994) *Understanding Media: The Extension of Man*. Cambridge, MA: MIT Press.
Merleau-Ponty, M. (1962) *Phenomenology of Perception*. London: Routledge.
Merriman, N., ed. (1999) *Making Early Histories in Museums*. Leicester: Leicester University Press.
Metamedia (2004) 'Metamedia' (consulted October 2004): http://metamedia.stanford.edu
Mihesuah, D., ed. (2000) *Repatriation Reader: Who Owns American Indian Remains?* Lincoln, NE: University of Nebraska Press.
Millon, R. (1964) 'The Teotihuacán Mapping Project', *Amant* 29: 345–52.
Millon, R. (1970) 'Teotihuacán: Completion of a Map of Giant Ancient City in the Valley of Mexico', *Science* 170(3962): 1077–82.
Millon, R. (1973) *The Teotihuacán Map*, Vol. 1. Austin: University of Texas Press.
Millon, R. (1981) 'Teotihuacán: City, State, and Civilization', in V. Bricker (ed.) *Supplement to the Handbook of Middle American Indians*, Vol. 1. Austin: University of Texas Press.
Millon, R. (1992) 'Teotihuacán Studies: From 1950 to 1990 and Beyond', in J. Berlo (ed.) *Art, Ideology, and the City of Teotihuacán*. Washington, DC: Dumbarton Oaks.
Millon, R. (1993) 'The Place Where Time Began: An Archaeologist's Interpretation

of What Happened in Teotihuacán History', in K. Berrin and E. Pasztory (eds) *Teotihuacán: Art From the City of the Gods*. London: Thames and Hudson.

Mitchell, W.J.T., ed. (1986) 'Nature and Convention: Gombrich's Illusions', in *Iconology: Image, Text, Ideology*. Chicago: University of Chicago.

Mitchell, W.J.T. (1996) 'What Do Pictures Really Want?', *October* 77: 71–82.

Monmonier, M. (1993) *Mapping It Out: Expository Cartography for the Humanities and Social Sciences*. Chicago: University of Chicago Press.

Moser, S. (1995) 'The "Aboriginalization" of Australian Archaeology: The Contribution of the Australian Institute of Aboriginal Studies to the Indigenous Transformation of the Discipline', in P. Ucko (ed.) *Theory in Archaeology: A World Perspective*. London: Routledge.

Moser, S. (1998) *Ancestral Images: The Iconography of Human Origins*. Ithaca, NY: Cornell University Press.

Moser, S. (2001) 'Archaeological Representation: The Visual Conventions for Constructing Knowledge About the Past', in I. Hodder (ed.) *Archaeological Theory Today*. Cambridge: Polity Press.

Nelson, S.M. and A.B. Kehoe, eds (1990) *Powers of Observation: Alternative Views in Archaeology*. Arlington, VA: American Anthropological Association.

Nicholas, G.P. and T. Andrews, eds (1997) *At a Crossroads: Archaeology and First Peoples in Canada*. Burnaby: Archaeology Press.

Olsen, B. (2003) 'Material Culture After Text: Re-membering Things', *Norwegian Archaeological Review* 36: 87–104.

Orlove, B. (1991) 'Mapping Reeds and Reading Maps: The Politics of Representation in Lake Titicaca', *American Ethnologist* 18(1): 3–38.

Pasztory, E. (1992) 'The Natural World as Civic Metaphor at Teotihuacán', in R. Townsend (ed.) *The Ancient Americas: Art from Sacred Landscapes*. Chicago: Art Institute of Chicago.

Pasztory, E. (1997) *Teotihuacán: An Experiment in Living*. Norman, OK: University of Oklahoma Press.

Patrik, L. (1985) 'Is There an Archaeological Record?', *Advances in Archaeological Method and Theory* 8: 27–62.

Pearson, M. and M. Shanks (2001) *Theatre/Archaeology*. London: Routledge.

Pinney, C. (1992) 'The Parallel Histories of Anthropology and Photography', in E. Edwards (ed.) *Anthropology and Photography 1860–1920*. New Haven: Yale University Press.

Piper, K. (2002) *Cartographic Fictions: Maps, Race, and Identity*. New Brunswick, NJ: Rutgers University Press.

Pratt, M.L. (1992) *Imperial Eyes: Travel Writing and Transculturation*. New York: Routledge.

Price, T.D. and G. Feinman (1993) *Images of the Past*. Mountain View, CA: Mayfield Publishing.

Rattray, E. (1987) 'Introducción', in E. McClung de Tapia and E. Rattray (eds) *Teotihuacán: Nuevos Datos, Nuevas Síntesis, Nuevos Problemas*. México, DF: Universidad Nacional Autónoma de México.

Renfrew, C. and P. Bahn (1996) *Archaeology: Theories, Methods and Practice*, 2nd edn. London: Thames and Hudson.

Robertson, J. (2002) 'Reflexivity Redux: A Pithy Polemic on "Positionality"', *Anthropological Quarterly* 75(4): 785–93.

Rogoff, I. (2000) *Terra Infirma: Geography's Visual Culture*. London: Routledge.
Rosaldo, R. (1989) *Culture and Truth: The Remaking of Social Analysis.* Boston: Beacon Press.
Salzman, P. (2002) 'On Reflexivity', *American Anthropologist* 104(3): 805–13.
Sanders, W., J. Parsons and R. Santley (1979) *The Basin of Mexico: Ecological Processes in the Evolution of a Civilization*. New York: Academic Press.
Sarro, J. (1991) 'The Role of Architectural Sculpture in Ritual Space at Teotihuacán, Mexico', *Ancient Mesoamerica* 2: 249–62.
Sauer, C. (1926) *Syllabus for an Introduction to Geography*. Ann Arbor: University of Michigan Press.
Schmidt, P.R. and T.C. Patterson, eds (1995) *Making Alternative Histories: The Practice of Archaeology and History in Non-Western Settings*. Santa Fe: School of American Research Press.
Shanks, M. (1992) *Experiencing Archaeology*. London: Routledge.
Shanks, M. (1997) 'Photography and Archaeology', in B. Molyneaux (ed.) *The Cultural Life of Images: Visual Representation in Archaeology*. London: Routledge.
Spivak, G. (1999) *A Critique of Postcolonial Reason: Toward a History of the Vanishing Present*. Cambridge, MA: Harvard University Press.
Sugiyama, S. (1993) 'Worldview Materialized in Teotihuacan, Mexico', *Latin American Antiquity* 4(2): 103–29.
Sugiyama, S. (2004) 'Governance and Polity at Classic Teotihuacán', in R. Joyce (ed.) *Mesoamerican Archaeology*. Oxford: Blackwell.
Swidler, N., K. Dongoske, R. Anyon and A. Downer, eds (1997) *Native Americans and Archaeologists: Stepping Stones to Common Ground*. London: AltaMira Press.
Symmetrical Archaeology (2004) 'Symmetrical Archaeology' (consulted October 2004): http://traumwerk.stanford.edu:3455/symmetry/Home
Taussig, M. (1993) *Mimesis and Alterity: A Particular History of the Senses*. London: Routledge.
Taylor, M.C. and E. Saarinen (1994) *Imagologies: Media Philosophy*. London: Routledge.
Teotihuacán, the City of Gods (1990) 'Introduction' (consulted October 2004): http://archaeology.asu/edu/teo/intro/
Thomas, J. (1993) 'The Politics of Vision and the Archaeologies of Landscape', in B. Bender (ed.) *Landscape: Politics and Perspectives*. Oxford: Berg Publishers.
Tilley, C. (1989) 'Discourse and Power: The Genre of the Cambridge Inaugural Lecture', in D. Miller, M. Rowlands and C. Tilley (eds) *Domination and Resistance*. London: Unwin Hyman.
Tilley, C. (1991) *Material Culture and Text: The Art of Ambiguity*. London: Routledge.
Tilley, C. (1994) *A Phenomenology of Landscape: Places, Paths, and Monuments*. Oxford: Berg.
Townsend, R., ed. (1992) *The Ancient Americas: Art From Sacred Landscapes*. Chicago: Art Institute of Chicago.
Tuan, Yi-Fu (1977) *Space and Place: The Perspective of Experience*. Minneapolis: University of Minnesota Press.
Ucko, P.J. and R. Layton, eds (1999) *The Archaeology and Anthropology of Landscape: Shaping Your Landscape*. London: Routledge.

Wallrath, M. (1966) 'The Avenida de los Muertos Complex', in Sociedad Mexicana de Antropología (ed.) *Teotihuacán: Conceava Mesa Redonda.* México, DF: Sociedad Mexicana de Antropología.

Watkins, J. (2000) *Indigenous Archaeology: American Indian Values and Scientific practice*. Walnut Creek, CA: AltaMira Press.

Watkins, J. (2001) 'Yours, Mine, or Ours? Conflicts Between Archaeologists and Ethnic Groups', in T. Bray (ed.) *The Future of the Past: Archaeologists, Native Americans and Repatriation*. New York: Garland Publishing.

Webmoor, T. (2003) 'Mediational Techniques: Re-presenting Multiple Engagements with Traditional Cultural Properties (TCP's) in North America', paper presented at the 5th World Archaeology Congress, Washington, DC.

Wells, Liz, ed. (2000) *Photography: A Critical Introduction*. London: Routledge.

Willey, G., ed. (1974) 'The Virú Valley Settlement Pattern Study', in *Archaeological Researches in Retrospect*. Cambridge: Winthrop.

Willey, G. and J. Sabloff (1993) *A History of American Archaeology,* 3rd edn. London: Thames and Hudson.

Witmore, C. (2004) 'Four Archaeological Engagements with Place: Mediating Bodily Experience Through Peripatetic Video', *Visual Anthropology Review* (in press).

Woolgar, S. (1988) *Science. The Very Idea*. Chichester: Ellis Horwood.

Wylie, A. (2002) *Thinking from Things: Essays in the Philosophy of Archaeology*. Berkeley: University of California Press.

Yarrow, T. (2003) 'Artefactual Persons: The Relational Capacities of Persons and Things in the Practice of Excavation', *Norwegian Archaeological Review* 36(1): 65–73.

Zimmerman, L., K. Vitelli and J. Hollowell-Zimmer, eds (2003) *Ethical Issues in Archaeology*. Walnut Creek: Altamira Press.

TIM WEBMOOR is a doctoral candidate at the Archaeology Center, Stanford University. He received his MA in Material Culture from University College, London. His interests include the archaeology of North America and Mesoamerica, critical media theory, and philosophy in archaeology.
[email: tim.webmoor@stanford.edu]