

Mesolore: Learning to Think Critically

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ABSTRACTS

Abstracto: Los autores son los creadores de *Mesolore*, un programa educacional multidisciplinario e interactivo diseñado para instruir a los estudiantes sobre las culturas de Mesoamérica, en el pasado y presente. Ellos describen la estructura e intento de su proyecto multidisciplinario y multivocal con la arqueología.

Résumé: Les auteurs sont les créateurs de *Mesolore*, un programme éducatif, multidisciplinaire et interactif, conçu pour enseigner aux étudiants les cultures Mésoaméricaines, anciennes et présentes. Ils décrivent la structure et l'intention de leur engagement pluridisciplinaire et non univoque dans l'archéologie.

The oppressors . . . react almost instinctively to any experiment in education which stimulates the critical faculties and is not content with a partial view of reality but which always seeks out the ties which link one point to another and one problem to another. (Freire, 1970 [1968]:60)

Ten years ago, 3,000 miles from the epicentre of the dot-com boom, in an era when CD-ROM drives were just becoming common (*and* when 650 MB was a lot of space), we asked how digital media might offer new ways to think about, and pursue, both teaching and scholarship. Using 8500 PowerMacs, Photoshop 3.0, and Director 4.0 (among other now quaint technologies and numeration schemes), we spent the summers of 1995 and 1996 in the cool basement of the Anthropology Department at Brown University, developing the prototype for a multimedia resource on Mesoamerica's past and present. After several more years of development, classroom testing, redesign, expansion, and moving our office to Brown's Center for Latin American Studies (which at the time was in the vault of a bankrupt credit union), we released *Mesolore: Exploring Mesoamerican Culture* in 2001. As part of this issue of *Archaeologies*, we have been asked to write about this Mac/Windows CD-ROM Internet project: what it contains, how it is organised,

and how we think this content and organisation contributes to undergraduate pedagogy.

The best way to give you a sense of *Mesolore* is by a brief illustrated tour. But before delving into details, we want to note some of the goals that formed the foundation of our creation and production process. From the beginning we wanted to create a resource that exploited the differences separating digital media from paper-print technology: inexpensive colour illustrations, automated text searching, and the ability to present material in a number of parallel formats (sound, video, text) and interchangeable language settings (Spanish and English). These possibilities, we believed, would support students with different learning styles and backgrounds than those of the so-called mainstream, as well as enhance the learning experiences of the latter. In addition to these epistemological concerns, we wanted to conjoin a number of primary sources (from Indigenous historical texts to newly recorded scholarly interviews) with which students could conduct original research. And finally, combining our interests in digital formats and primary sources, we wanted to draw on the expertise of scholars from a variety of backgrounds (geographic, linguistic, ethnic, disciplinary, gender, generational) in order to convey to students the many perspectives and techniques from which new knowledges—and new disagreements—are produced.

Mesolore was not developed specifically for archaeology classes. In fact it was not developed for *any* single discipline or classroom. Instead we wanted to develop content that included several disciplinary perspectives, therefore enabling *Mesolore's* application in different disciplinary contexts and classrooms. *Mesolore* is multidisciplinary rather than interdisciplinary. Although it has interdisciplinary moments, we left the integration of the various approaches to the professors and students. As Julie Thompson Klein and William Newall have argued, no single discipline can offer all the perspectives needed to make sense of the issues that concern any one of us today (Klein and Newall 1997:393–415). But this does not mean that “interdisciplinarity” is best pursued by ignoring or dissolving boundaries among different disciplines. Interdisciplinary solutions are strongest when there are multiple disciplines working together and when their perspectives are clearly articulated by insiders and respected by outsiders. With *Mesolore*, therefore, we hoped to offer a teaching-and-learning tool for a variety of disciplines and classrooms, rather than a “core text” for any one classroom or discipline.

In sum, one of our primary goals was to gather a set of materials (from ancient documents to newly recorded scholarly interviews) that illustrated differences in the ways disciplines create and explore their (often overlapping) objects of study. We hoped to convey to students the differences in disciplinary approaches—their particular types of inquiry and content domains—as well as the advantages of drawing upon multiple disciplines to solve complex problems. Archaeology was one of the disciplines we wanted to incorporate from

the beginning, as were history, linguistics, and cultural anthropology. In the section that follows, we will discuss some of the features of *Mesolore's* content that relate to archaeology.

***Mesolore's* Content: Material Translation and Pedagogic Design**

It is not information in itself that is meaningful in [the computer] age, but how it is connected to other pieces of information. (Odin 1997)

Since the mid-1990s a common complaint by authors of multimedia projects is the continual need to translate these projects into paper-friendly forms (Dennis 1994:7; Joyce 2002:152; Lopiparo 2002:80). We face the same task of material translation here. But the oft-commented difficulty of such a material translation raises a more general issue of pedagogy. In the late 1960s the Brazilian educator and activist Paolo Freire critiqued what he saw as a pervasive “banking” model of teaching, in which an all-knowing teacher existed to deposit knowledge into the supposedly empty brains of passive students (Freire 1970 [1968]:58–59). He argued that most of this knowledge deposition was relayed through teacherly “narration,” whose monologue he contrasted with what he saw as a more productive, more transformative, model of mutually beneficial dialogue between teacher and students, in which students were invited to question and challenge what they were taught. Similarly, one of the ideals of multimedia authoring as it developed in the 1990s (drawing on the literary theories of Umberto Eco’s (2005) “open text,” Roland Barthes’s (1974) “writerly texts,” and Julia Kristeva’s (1980) “intertextuality”) was to create “texts” that broke up linear “reading” patterns and encouraged “readers” to more consciously intervene in the production of the work, even adding their own reading pathways to the text (Dennis 1994:9, 16–17, 39–40; Joyce 2002:110–111; Lopiparo 2002:87–88).

We would like to make two points in regard to Freire’s dialogue and the new “texts” of the 1990s. First, when we were designing *Mesolore*, we were interested in encouraging a coauthorship with our “readers” as well as with our participants. To promote this, we not only invited numerous scholars and experts to weigh in on the issues at hand, but also arranged materials asequentially, not hierarchised into a single linear reading order. “Readers,” we hoped, would create their own pathways through the material. Second, we wanted to move beyond the application of literary and linguistic terms, such as *reader* and *text*. Text metaphors are both enlightening *and* controlling. In contrast to privileging “the [alphabetic] text,” we hoped to engage nonalphabetic communicative means both through our choice of the Mixtec codices as central documents and in our uses of multimedia “packaging” of information—drawing on



Figure 1. *Mesolore* Home Screen

the materials (Küchler 2002:57), rather than a narrow reading of them, and to produce multimedia participants—users or players—rather than simply readers. *Mesolore* has listeners, scrollers, seers, investigators, mouse clickers, and readers. The virtual world of *Mesolore*, and one's interaction with it, is more a metaphorical stage than a text.

Unfortunately, this failure of *Mesolore* to conform to familiar techniques of paper reading is one of the main obstacles to getting potential users interested. Although the “Contents” are printed on the jewel-case pamphlet, this is little more than a list of topics and participants. There is no single “Table of Contents” which potential users can take in at a single glance. Instead, users have to open the jewel-case, install the CD on their computer, and spend some time exploring the components that branch off from the home screen (see Figure 1). Several times, when giving presentations of *Mesolore* at academic meetings, we encountered folks who had already purchased *Mesolore*, but had never sat down to look at it—and it is surprising how animated they became after we gave them a brief personal tour. Thus while we think that the multimedia and nonlinear organisation of *Mesolore* are two of its strengths, we have also found them to be a liability in initial encounters with this object.



Figure 2. *Codex Nuttall* Lab: Full-Page Layout

sound, still imagery, and video. While *Mesolore* is full of inter-alphabetic textualities, it also stresses intervisualities (Bakewell 1998). *Mesolore*'s development was more a process of composing and conducting than writing, and what we created was more composed and conducted than written and texted. Our goal was to encourage a multivocal, multivisual, postlinguistic engagement of

All of *Mesolore*'s content is accessible from the home screen. At the centre of the screen is a compass, with links to the three Indigenous primary sources around which *Mesolore*'s content has been developed. The three documents were created in what is now Oaxaca, Mexico, in the decades before and after the sixteenth-century arrivals of Europeans. The first, the *Codex Nuttall*, is a Mixtec screenfold book created before

European arrivals. The second, the *Codex Selden*, is a Mixtec screenfold book painted circa 1560. The third, the *Vocabulario*, is a 1593 Spanish-to-Mixtec vocabulary created by Dominican friar Francisco de Alvarado and Mixtec collaborators. We chose these documents because the surviving Mixtec corpus is unique in the New World, in that surviving histories were painted both before *and* after European contact. In contrast, all surviving Mexica screenfolds are precontact. The Mixtec provide a unique corpus with which its uses changed through colonisation.

Clicking on either the *Nuttall* or *Selden* links allows users to enter and interact with these documents. Users can scroll through the images, jump from page to page, and bring up a numeric reading order as well as a series of balloons alphabetically explaining the painted narrative (see Figure 2). Teachers can thus assign students readings in Indigenous histories in which the original material and an English alphabetic gloss are viewed side by side. A comparison of the two forms of communication makes clear how the original painted images cannot easily be reduced to an English gloss, and so by clicking on any of the images, users are brought to a “micronavigational” level of reading, in which close-ups of codex images are combined with additional alphabetic glosses—biographical information and itemised lists of material culture (hairstyles, jewellery, pottery) (see Figure 3). Finally, a third level of engagement is provided by a search engine, which allows users to search the aforementioned lists and produce a series of links to image details featuring the searched item. These lists can then be searched in turn: our goal was to enable users to navigate the world of material culture and codices, and to suggest one venue for conducting original research.

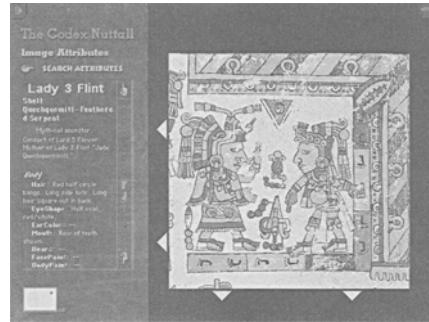


Figure 3. *Codex Nuttall* Lab: Detail-Page Layout

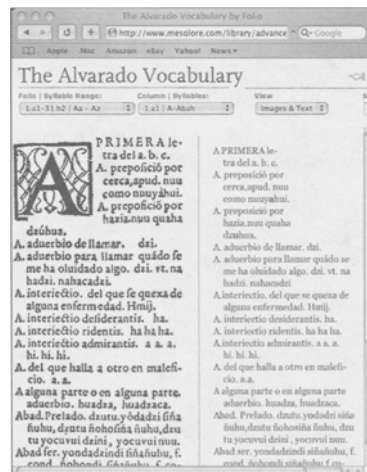


Figure 4. Alvarado Vocabulario Lab



Figure 5. Tutorials Section: Sample Tutorial Page Subscreen

three documents in a broad range of temporal, spatial, and theoretical issues. These additional materials are accessed by the links at the bottom of the home screen. The Tutorials (see Figure 5) are introductory texts on Mixtec writing specifically, and Mesoamerican written traditions generally. The Tutorials are illustrated, footnoted, and—as with all of *Mesolore*—they feature highlighted words that link to a bilingual glossary. In addition, Mixtec terms are linked to sound pronunciations provided by three Mixtec speakers (a feature requested by our high school student evaluation team, and which reminds users that Mixtec is still spoken today in Mexico, the United States, and Canada).

Next to the Tutorials is an Atlas link (to interactive maps of Mesoamerica and the Mixteca), followed by the Lectures (three 20-minute videos) that bridge ancient Mesoamerican texts to contemporary contexts (see Figure 6). David Carrasco (a Latino historian) lectures on Aztec religion; Anthony Aveni (an Italian-American ethnoastronomer) lectures on Maya mathematics; Gabina Aurora Pérez Jiménez (a Mixtec activist and scholar) and Maarten Jansen (a Dutch anthropologist) lecture on the Mixtec past and present. Lec-

The third primary source, the *Vocabulario*, presents pages from the printed work alongside searchable text transcripts (see Figure 4). In sum, at the centre of *Mesolore* are these three primary sources, and while we hope their user-friendly design will encourage inquiry and curiosity, they do not provide ready-made answers or fixed programs for research.

The rest of *Mesolore's* content is designed to conceptualise these lectures were recorded in English, Spanish, and Mixtec; are available dubbed in English or Spanish; and can be read as alphabetic transcriptions in both English and Spanish.

Engagement with issues of disciplinarity and diversity continues in Mentors. These ten portraits of scholars are intended to provide a type of electronic mentoring: an introduction to scholarly lives, their fields, how they chose them, and the questions



Figure 6. Lectures Section: "Introduction to the Mixteca" Subscreen

they ask. Audio interviews in Spanish or English are subtitled in the other language, transcribed in both, and illustrated with a slide show (see Figure 7). Five mentors are women and five are men; five are from Mexico and five from the United States; together they represent perspectives from biology to archaeology to historical linguistics.

The four topics in the Debates are presented in 35 audio interviews (in Spanish or English, with transcripts in both) with scholars, curators, lawyers, entrepreneurs, and activists from Germany, Canada, the United States, and Mexico—including Mixtec, Cree-Waskaganish, Sioux, Lumbee, Cheyenne, and Mixtec participants (see Figure 8). As a brief summary, focussing on only one of the disciplines represented in each of the four debates, art historians Elizabeth Boone and Linda Schele discuss history and propaganda; archaeologists Elizabeth Brumfiel and Rosemary Joyce discuss engendered pasts (see Figure 8); lawyers Magdalena Gómez and Arlinda Locklear discuss Indigenous rights; and curators Christian Feest and Dan Monroe discuss cultural property and the repatriation of archaeological materials.

The library has two sections: an introductory library of ten articles and an advanced library of 80 articles. Finally, controls in the upper right-hand corner of the screen allow users to return to the home page; retrace to the previous screen; bookmark a trail through *Mesolore*; access a glossary, index, or help feature; and take notes and save them to an external file.

Although our presentation of data here is still linear and compartmentalised, a series of links within subsections of *Mesolore* allows users to navigate without always returning to the home screen. Links to articles in the library are provided next to the appropriate scholar-authors in Lectures, Mentors, and Debates. For example, after hearing Rosemary Joyce talk about engendered archaeology, users can link to one



Figure 7. Mentors Section: Subscreen for Portrait of Linda Manzanilla



Figure 8. Debates Section: “Analyzing Gender: Politically Correct?” Subscreen for Discussion by Rosemary Joyce

of her articles (see Figure 8). Links to the atlas and to sections of the tutorials are provided in the *Nuttall* and *Selden* labs.

***Mesolore* and Archaeology**

A few months ago, after we ran through an overview of *Mesolore* quite similar to the one you just read, we were asked, “This project seems very focussed on texts and their interpretations. How might this be useful in an archaeology class?” We were surprised by the question, because archaeology and archaeologists had been part of *Mesolore* from its beginnings, in iced-coffee-cooled conversations with Geoff McCafferty in the Providence summer of 1995.

We responded first by pointing out that *Mesolore* incorporates interviews with a number of archaeologists. In *Mentors*, Linda Manzanilla talks of her excavations at Teotihuacán and Geoffrey McCafferty talks of his archaeological work at Cholula. In *Debates*, Joyce Marcus, John Pohl, and William Sanders discuss Mesoamerican archaeology; Elizabeth Brumfiel, Meg Conkey, and Rosemary Joyce discuss archaeology and gender theory, and Eduardo Matos Moctezuma speaks of his excavations in Mexico City. The tutorials also engage directly with archaeological research, using the settlement pattern survey data of Bruce Byland and John Pohl to talk about the representations of places in the codices, and using Michael Lind’s published excavations (see Figure 5) to address the aspects of pre-Hispanic Mixtec life that are ignored in the elite-centred codices—the nature of commoner dwellings, the contrasts in the types of ceramics used by commoners versus elites.

Mesolore also engages with issues of cultural property and the role of power inequalities in its curation and interpretation—questions of central importance to twenty-first-century archaeologies concerned with the social and ethical embeddedness of archaeological data. In the “Whose cultural property?” debate, an ethnographer, two museum curators, an archaeologist, an art historian, and an art critic discuss cultural property. The topic is also raised in Jansen and Pérez Jiménez’s lecture, where they argue for the importance of collaboration between academics and their “informants.” As they note in a new book, which also highlights dialogue:

Dialogue has to be intersubjective, in this case between subjects from different cultures. It is not just between “Western” scholars, who share the same mental frames, nor is it just between them and exotic authors of an imagined past or a folkloristic present, who both may be to a large extent constructions of the “West.” In order to avoid being a monologue, the dialogue has to engage the living descendants of the investigated past, the inheritors of that cultural tradition, not in an imposed passivity as “informants,” but as protagonists with their own ideas, aims and agency. (Jansen and Pérez Jiménez forthcoming)

Indeed, the participation of a number of Native American academics, lawyers, and entrepreneurs in *Mesolore* should remind archaeology students that interactions of archaeologists with “the public” and with “descendant populations” are not simply the interactions of academics with nonacademics.

Finally, *Mesolore*’s primary sources encourage students to develop arguments using procedures that, although not unique to archaeological analysis, are central to it. At a basic level, the boundaries between “text” and “artefact” have been discussed in archaeology circles (the textual analogies to interpretation developed by postprocessualists in the 1980s, the basic premise of “historical archaeology”), and in many parts of the world writing in the narrow sense is part of what excavations and surveys uncover (Houston 2000; Morrison and Lycett 1997). In addition, as pictorial texts, the *Nuttall* and *Selden* provide rich representations of Mixtec material culture before and after the arrival of the Europeans. This material splendour can be used to ask students a host of questions germane to diachronic and material culture. How do representations of Mixtec material culture (dress, temples, jewellery) change before and after the arrival of the Europeans? What remains unchanged? What Mixtec words for material things are included in the 1593 *Vocabulario*? Why might the *Selden* fail to depict any items of European manufacture if, at the time this document was painted, Mixtecs had already learned to write alphabetic script with quill pens?

“Narration Sickness” and the Difficulty of Dialogue

Interpretation is not to be seen as the act of a “supreme erudite subject” (the interpreter) who unveils and dissects a mysterious and sometimes hiding object (the work and/or its author) but as an encounter between subjects. (Jansen and Pérez Jiménez forthcoming)

If Paolo Freire’s diagnosis of the banking model of pedagogy as “suffering from narration sickness” (1970 [1968]:57) remains accurate today, the dialogic tonic for this sickness remains difficult to achieve. In *The Languages of Archaeology* Rosemary Joyce draws on Bakhtin to consider how archaeological reporting might better reflect the process of discussion and debate out of which archaeological knowledge is produced. One of the common pitfalls in attempting to create dialogues in texts is that attempts at polyphony may collapse into monologue:

Polyphonic narratives are marked by the autonomy and strength of the voices, which are represented as engaged in open-ended dialogue where ultimate values are in play but necessarily cannot be finalized. If the multiple voices in a polyphonic text are not at least potentially capable of achieving a degree of autonomy

that engages their difference in dialogue, then in place of polyphony the text offers only an image of repeated monologues. (Joyce 2002:11)

As one illustration of these difficulties, Joyce considers Barbara Bender's (1998) *Stonehenge: Making Space*, which incorporated transcripts of dialogues into its archaeological analysis. Bender was herself aware of how complex her task was, observing that "while I structure the dialogues and ask the questions, I cannot control the answers. So, although there are closures, things go off in unpredicted directions" (Joyce 2002:60–61). In turn, Joyce points out that Bender still controls these voices through editing and contextualisation. Similar processes and problematics are at work in *Mesolore's* interviews. We provided a general framework for requesting commentaries from scholars; they provided us with responses; and we edited their recorded voices and images into packaged units. Finally, we provided participants with copies of our editings, to make sure we had not misedited their statements. Seeking feedback, as well as the nonlinear format in which these statements were integrated, was an attempt to preserve the individuality of participant voices. In the end, however, *Mesolore* is still structured as a series of parallel monologues (though, as an aside, our early plans for the Debates involved a second round of recordings, in which scholars would react to the position statements of their colleagues, thus creating a network of responses—a much more dialogic presentation, but also a much more expensive process. The National Science Foundation and the Ford Foundation were willing funders, but, alas, not ad infinitum).

At present, then, the main dialogic potential of *Mesolore* lies in its classroom applications: using its various monologues to trigger student dialogues, as much with the scholars and documents presented on *Mesolore* as with other students. If the challenge of multiculturalism is "to produce narratives that enable the expression of diverse human experience, the location of oneself in history, and the creation of social forms that expand upon a democratic public life" (Giroux 1993:31), *Mesolore's* content (with its range of variations in geography, gender, generation, discipline, and ethnicity) aims to address—in the sense of *speak to*—a range of student interlocutors. Despite the growing population of Spanish-speaking students in U.S. colleges and the neglected Native American population, there are few educational resources that reach out to these populations as *Mesolore* does. *Mesolore* is 80 percent bilingual in Spanish and English (soon fully bilingual, pending funding). Utopically, we also hope that *Mesolore's* diversity of address might attract women and minorities to the sciences, via our politics of inclusion: Latin, Mexican, and Native American lawyers, professors, biologists, and archaeologists all offer their perspectives. When gender studies, cultural studies, Latin studies, Native American studies, and language studies (as well as multiple languages) are included in "truly" multidisciplinary environments, they have a greater opportunity to attract students otherwise excluded from scientific thinking—and statistically many of

those excluded are women and minorities. *Mesolore* provides a model for a bilingual, multidisciplinary, and multicultural education that goes beyond the “add culture, women, Natives, and stir” approach.

But for any of these utopian transformations to take place, *Mesolore*’s monologues of multiple address need to be responded to in classroom dialogue. As we mentioned, one of the main liabilities of *Mesolore* is that it is not as physically accessible as books. We are currently developing a teacher’s manual to facilitate the use of *Mesolore* in classrooms. Professors from a variety of disciplines (archaeology, art history, Spanish, Latin American history) have been asked to develop syllabi that incorporate *Mesolore* into different courses, and are also being asked to develop detailed lesson plans for assignments that draw on *Mesolore*. As one example, an assignment in an “Anthropology of Writing: Local Scripts, Colonial Contexts” course asks students to listen to the position statements in the “History versus Propaganda” debate, and then write their own dialogue between two of the participants. What, for example, would Linda Schele and Joyce Marcus say to each other about the relationships of elites, commoners, and the writing of history? And how might the student enter into this conversation?

Near the end of *Languages of Archaeology*, Rosemary Joyce offers a fascinating discussion of the hypertextual nature of museum exhibits, and on the findings of ethnographic research on public engagement:

Museum exhibits are a major genre in which nonspecialists actively experience themselves as authors providing the coherence to the stories being told. And part of what nonspecialist visitors want from scholars is, paradoxically, authoritative statements: not to close off their role as coauthors, but to incorporate along with their own experience of the material things, into their own storytelling. (Joyce 2002:131)

Mesolore aims to provide a plural series of authoritative statements (from sacred Mixtec elite accounts of their own history to Latin American archaeologists to Lumbee lawyers) with which teacher-student and students-teachers (in Freire’s terms) can create dialogues.

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