OAKLAND: PRIVY TO THE PAST

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ABSTRACT

Already, with just 7 city blocks excavated, the Cypress Project has become California's largest urban historical archaeology project. The size of the effort—making sense of more than 550 pits, wells, and privies, with more to come—raises issues of equal magnitude: How best to dig, record, evaluate, curate, and report the findings in a world of diminishing space and other resources. Some of the answers are being implemented now. Others await the archaeology of the (perhaps near) future.

Background

Let's start far back in time. This slide is of Stonehenge, slightly and deliberately a little out of focus. Because our views of the past are usually a little vaguely unfocused. And the further back we go, the less sharp the focus. So is this some kind of ritual temple site, or a primitive astronomical observatory? I have news for you, it is neither, and it puts Nostradamus to shame. It's a predictive model of an early freeway. You don't believe me? Check it out.

Well, perhaps this slide of the elevated SF-480 freeway demonstrates that function doesn't always follow form. And that's one reason I don't like to get caught up in the murky swamps of prehistory. The other reasons are summed up by a quote from an American archaeologist I know who has worked most of his life in Australian prehistory:

> Is this my bloody life? Shot past? The culmination of decades of assiduous labor on plateaux and plain, in swamps and caves, working my ass off collecting all these little bits of rock from these wretched prehistoric sites, nearly all of which are a few square meters of sand, yielding a dozen bits of quartz, the residue of say forty seconds stone knapping on the parts of one or more utterly obscure persons who lived at undated periods in the past, in the range 200-40000 years ago, and whose motives, if any, may well have been as obscure to themselves as they are to us now [C. Dortch 1994].

I like to work closer to perceived reality. Not too far beyond living memory. The 19th century with its wide variety of documentary sources, newspapers, journals, diaries, census reports, city directories, block books, and even personal memories to go on, gives us some chance of answering specific questions. The 19th century's contribution to world archaeology may be that it is here that we get the best chance to run experimental archaeology, or what passes for experimental in archaeology. Like a journalist who won't publish a questionable article without confirmation from several sources, we have a serious set of independent, if not unbiased, reality checks to rein in our wilder fantasies about what we can do as archaeologists. The further back in time we go, the less sharp the focus and the greater the Archaeological Uncertainty Principle.

Back in the here and now, the position of Field Director on a nearly 30-block excavation sounds kind of strenuous, but the reality is something else. First of all, our highly professional crew does all the work. I get to sit in the site office and watch the rain fall on their heads. My function is to ensure that the site operates like the old "The Outer Limits" TV show: "Do not adjust your site, we will control the horizontal, we will control the vertical." Throw in a CALTRANS project manager who does all the bureaucratic dirty work, a bunch of crew members who know a damn sight more about North American history and artifacts than I do, and the job more or less runs itself.

The Project

Let's look at the area we have been working in. You can see that the environment is about as urban as you can get. We were limited in our research to areas of direct impact, generally where new freeway support columns would disturb the ground. In other areas, the freeway will sweep across entire blocks at or below current ground level. So while the area of interest on some blocks is the entire block, on others it is only one house lot. Working in an urban area we anticipated fairly substantial impacts on any historic surface remnant—particularly as demolition undertaken for the construction of the original Cypress structure was a little gung-ho. As a consequence of this, when we used a Gradall to strip the site down to the historic surface, it was quite badly trashed in some areas.

First, let me baffle you with science. I am going to throw out some numbers, it won't take long, but the numerically challenged among you should get your fingers and toes ready. We spent 28 weeks in the field with an average crew of 10 people. The primary resource types we have found have been hollow filled features. Deposits of sheet refuse have been rare. We exposed 87 house lots, in which were 518 pits, 9 wells, and 40 wood-lined privies. We excavated all of the wells, all

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but 1 of the privies, and 167 pits. Six of the wells, 37 privies, and 38 pits appear initially to be capable of answering our research questions and to possess National Register of Historic Places eligibility in that they yield, or may be likely to yield, information important in history (36 CFR 60.4). The overall picture is that 38 percent of all features found were investigated and 14 percent of all features found appeared eligible. So when the archaeologists of the future develop X-ray machines that let them see directly into pits, they should be able to dig about 7 times faster than we did, because they'll know where all the bullshit is. And as we aim at completing a city block in 25 working days, they should be able to do it in 4. OK, there's no more big numbers—you can all wake up now.

To help speed things up, we developed a site recording sheet in the form of a multiple-choice test. We tried to predict the most common types of archaeological features we would find, stuck them on the recording form, and the crew simply checks Box A, B, or C as appropriate. This is reducing the great discipline of Archaeology to an almost robotic level for morons, but most of your archaeology courses will have already trained you perfectly for that. Not at Sonoma State, of course.

AIMS

At this point I'm throwing in the sound-bite. It's called AIMS. All cut features were half-sectioned and then characterized in terms of 4 AIMS: A is Association, I is Integrity, M is Materials, S is Stratigraphy. Pits that have all 4 of these are totally cool. *Association* is the tightly dated historical information we have or are likely to be able to obtain about the lot residents. *Integrity* is simply that. Is the feature trashed by bioturbation, later intrusive pits, or modern disturbance such as pothunting? *Material* means we have enough artifacts, ecofacts, or bone present to be able to do something useful with them, and this is the most subjective category. Finally *stratigraphy*. While an undisturbed artifact-rich fill can be fine, we are also happy to see a well-defined sequence of strata representing re-use of the feature over a period of time.

If it is judged that a pit is lacking in these AIMS and will not be useful in terms of the research design, excavation stops at half section. Artifacts are returned to the pit in the fond hope that somehow the remainder of the pit may survive the new freeway construction.

I have the view that excavation by arbitrary level is but one more form of post-depositional disturbance, so all our excavation is stratigraphic. A Harris Matrix is established for all excavated contexts. This provides a time flow chart based only on site structure, on the way that layers and cut features relate to each other. The time flow chart is independent of the artifacts. The artifacts are cataloged separately and their dates are then compared with the artifact provenience represented by a specific layer in the matrix. This kind of check and balance very clearly shows you if you've messed up, or if the gophers have been busy chewing up the site and we didn't notice.

I've sort of lied here because arbitrary levels of excavation are sometimes used—reserved for a specific situation. This is where deep homogeneous fills are encountered, and we need vertical control, such as in the backfilling of a well with one huge dump of sand. Otherwise, to use that great San Francisco word: "Not!"

A Site Tour

Let's look at some specific blocks. We excavate blocks as they are released to us by CALTRANS. The CALTRANS survey crew who laid out our 1889 Sanborn maps on the ground did this with sufficient accuracy that, when we laid our trench out on one block along what we calculated to be the 1889 backyard fence line, we found on excavation that the edge of the trench split the surviving fence posts in half. We lay out our house lots with brightly colored string so we know where we are at all times, and this functions as our primary grid.

It is usually easy to see the pits because they are dark brown or grey holes cut into the yellow Merritt sand formation. And a lot easier to see them from the air after excavation. On another block, on the edge of the Oakland estuary marsh, it was more difficult to see what was happening on the ground, as once we had removed the 3 to 4 feet of landfill, we were faced with dark grey pits cut into almost black marsh sand.

Wells

Fortunately, wells are really easy to find on any block. But they had other problems. A well by any definition is a narrow confined space. And if you have to get more than 1 person into them, it's tough. CAL/OSHA says we can legally go down 5 feet. Then we have to bring in machinery and clear away a trench around the well before continuing further down into our confined space. This got old fast. So, after doing 1 well real slowly to this depth, we adopted a new approach. We turned our wells into chimneys.

Instead of trenching round a well after digging down 5 feet, we trenched around it before we started excavation. This left us with a brick-lined chimney that can be excavated from the outside. Pull away the bricks on one side, and you can see the fills. Then you can do a half section excavation real fast. And you then repeat the process down to ground water. It is safer, it is faster, and the archaeological record is more accurate because you get enough light to see what you're doing. When the well is cleaned up for photography, the result can be almost shrine-like. An unexpected bonus was that the wells dug like this turned out to be our biggest hits with site visitors who said they felt like they were actually underground on a *real* archaeological site.

Privies

Privies were easier to deal with. They were generally rectangular, redwood lined, artifact rich, and easy to spot on the ground. Primary privy fills—that's *crap* to the person in the street—were present in several, along with frequent deposits of sanitary lime and the occasional newspaper. The privies were frequently topped off with compact sterile sand fills that we couldn't get a steel probe through. These sand fills were often several feet deep, but when we kept going, there were often artifact-rich deposits at the bottom. Sometimes they'd be double seaters, and that's real togetherness for you.

Generally, the privies were no more than 4 or 5 feet deep, except on 1 block, where the Mother of all Privies went down 14 feet and stopped a few inches above the water table. We had to trench around that feature just like a well. Sewerage was introduced to a number of blocks around 1875, and we get a time marker of sewer pipes and a brick surface, being laid in several earlier privies, which makes life a bit easier for us.

Pits

Pits were many and varied. Some were totally clean sand fills. I don't know why anybody would dig a hole in their back yard and then fill it with sand. Others were well stratified and artifact rich. The contents of one were mostly faunal.

Research Questions

The questions we wanted to ask of these sites revolved around the adaptation of the people who lived there to modern conditions. These questions are broken down into a number of pragmatic subquestions that identify the types of site and data groups that we needed in order to find answers. Currently, we are still in the process of cataloging artifacts from last season and beginning to address the research questions.

A great advantage of the Cypress Project is that it is possible to read our Research Design and Treatment Plan and to understand it without having a postgraduate degree in anthropology or archaeology. Long-winded language is absent. That is, the public—who are paying for all this—will actually be able to understand what they read. A lot of archaeological articles and reports seem to be written in a techno-jargon resembling English as a Foreign Language. It has long been my conviction that simplicity of expression is a natural result of profound thought.

So I find the concept of dealing with perceived reality in models, theory, and research design rather refreshing in historical archaeology—and in any discipline. And I'm going to illustrate this with an example from the hard-boiled science of physics, which has application in archaeology.

Schroedinger

This is the sad tale of Schroedinger's cat, which has generated more speculation and controversy than almost any other problem raised by quantum physics, because it raises, among other things, the question of human consciousness and its possible role in the formation of physical reality (Zohar 1990). Now we are going to get into this, but not quite in the way imagined by Schroedinger.

> Schroedinger's cat has been placed in a laboratory cage used for animal experimentation, only in this case the walls of the cage are solid, and we can't see in. Inside the cage, Schrodinger placed a bit of radioactive material that has, to keep things simple, a 50 percent chance of shooting out a decay particle in an upwards direction and a 50 percent chance of shooting one out in a downwards direction. If the decay particle shoots upwards, it strikes a particle detector, which triggers a switch that releases lethal poison into the cat's feeding dish. The cat eats it and dies. If the decay particle shoots downwards, a switch is triggered that releases food, and the cat lives to roam the back alleys. Or to take part in another experiment.
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> Until the box is opened, the experimenter doesn't know if the cat is alive or dead and that is the point of the experiment. In fact, quantum physics makes a case for the cat being both alive and dead at the same time, which sounds a little weird to normal humans but really excites physicists, who are getting a little out there these days [Zohar 1990:38-41].

The problem here is that it is quite clear to me that Schroedinger never owned a cat. A few years ago, I had to take a friend's cat to an airport in Australia, about a 30-minute drive. It took me, a vet, and a valium shoved down the cat's throat to get it into the box supplied by Australian Airlines for shipping pets. Ten minutes from the airport, the cat had ripped the cat box to pieces and was about to do the same to me. I had to pull the car over, punch the brute's lights out, and lock it in the trunk. At the airport, when I opened the trunk, the cat sprang straight for my throat, and before I could grab it, it hit the road and, like the archetypal vice-president of the United States, it was neither seen nor heard from again.

Far too many archaeologists have never owned a cat. Consequently, they do not realistically deal with the central conundrum facing archaeology, which is "How can we make sense out of this junk?"

The reality of archaeological sites, certainly urban sites, is that they can represent an indeterminate and complex porridge of many possibilities. If we are to access some form of perceived reality from these sites, our research designs have to be workable and based on a strong familiarity with field work. The people running the Cypress Project are all cat owners.

Broader Issues

Okay, enough philosophy. A number of practical issues with broad application have risen from the field work. Janet Pape has already discussed toxic waste on some of the blocks. I'm going to deal briefly with curation and publication.

Curation. Historical archaeology on the Cypress Project, and potentially anywhere in an urban setting, can produce voluminous quantities of materials. On federally funded projects, basically—you dig it, you keep it. Federally mandated archaeo-

logical projects, such as Cypress, are subject to the Department of the Interior's Guidelines: Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines. The *Secretary of the Interior's Guidelines for Archeological Documentation* specifically addresses curation in these terms:

> Archeological specimens and records are part of the documentary record of an archeological site. They must be curated for future use in research...curation of important archeological specimens and records should be provided for in the development of any archeological program or project [48 FR 44716-42].

There's a problem with that. The cost.

Curation fees for the entire Cypress Project could reach almost half a million dollars. If we adhered to the 50-year rule, perhaps a million. You may say, If you can't curate it, don't dig it. If we don't dig that stuff, freeway construction will remove almost all of it, except possibly the bottoms of the deepest features such as wells. I have some problems with spending those kinds of sums to house what are essentially homeless artifacts in a city with so many homeless people. At $500 and up per box, the amount of money and the size of the real estate needed for storage quickly get prohibitive. Consider a can of beans. Once it's been in the ground for a century, it gets kind of fragile and you can safely store only about 6 of them in a curation box. That's 80 dollars a can.

The future curation box is a compact disk. Set up the fields you wish to study, record them on your computer, and leave it at that. By all means keep a type collection, preferably a centralized one. Otherwise, the artifacts should be permanently marked and then disposed of. Give them to schools, give them to old folks' homes, give them back to the Native American peoples. If you still have difficulty getting over your attachment to the artifacts, then convince the various state and federal archaeological groups to buy abandoned quarries, call them "Keeping Places," and shovel the junk in there.

The whole point of a university education can be summed up in an ancient Sanskrit word, *viveka*. It means discrimination in its most positive sense. So discriminate about what you keep. Because, if you want there to be an archaeology of the future, it is necessary to start reining in curation costs today. I often wonder what a Martian archaeologist visiting Earth in the future will think of the ruins of the new elevated Cypress freeway after the next earthquake. Perhaps he, she, or it, or some combination thereof, will start checking out the columns for solar alignments. Unless we rein in curation costs, we will be checking out ourselves, and the only future archaeologists will be visiting Martians.

Publication. This has had its day. It's on its way out. Archaeological reports that incorporate large and detailed tables and artifact catalogs can get real big. I've heard of a 1,000-page report from one Australian urban site; it was an old pub. We should be looking at a hard-copy report limit of a typical large book size, 300-400 pages, and a few copies of that only. The entire report with data pages should be put on disk, along with all the photos and preferably a video of the entire project, sent out on the Internet, and posted on the World Wide Web. People without personal computers should be able to surf the Internet at a public library. Make a few hard copies for the Luddites and in case electronic disaster strikes. The result is that you cut back on time, you cut back on costs, and as we're part of the environmental business, the rain forests get to breathe a little easier.

Remember, in a written report, you look at the data and it stares sublimely back at you. In the world of computers, you look at the data, and it winks back at you because you're in an interactive situation. You want to check somebody's work, you can do it real fast. This is going to make anal archaeological control freaks just a little nervous.

Experimental Archaeology

The Cypress site represents experimental archaeology, as we are working with about as much multi-sourced evidence as archaeology can ever expect to find, and we are comparing the field results with independent documentation. Our experiments, though, are not like real scientific experiments that are, for example, carried out in hard-boiled physics and in which variables are controlled and definite answers given. Let me attempt to illustrate the difference.

One thing that is sadly missing in our 30-city-block experimental zone is an orphanage. And thus we are unable to adequately compare 19th-century Victorian attitudes towards parentally challenged children with the policies of the New Victorians who are currently on the rampage in Washington. And, to be frank, our comparisons might at best be vague because orphanages will change over time and there will be a lot of variables difficult to control for. But we could still write a nice story based on the archaeological materials we found.

Now a real scientific experiment runs something like this, and it has implications for archaeology. Let's go back to physics to something called the Einstein, Podolsky, Rosen (EPR) Paradox, which deals with contradictions caused by the supposed existence of what are called nonlocal influences. Archaeologists, I am told, are always interested in nonlocal influences that help them tie their sites into a wider world view. In this instance in physics, the experimental concern is with geographically separate twins who have uncanny coincidences in their lives. How do we run an experiment to test this?

A definitive hard-boiled scientific experiment was devised by a physicist named John Bell. Bell's Theorem called for interfering with one member of a pair of twins to see what happened to the other one. Simple and brilliant, I wish we could do the same in archaeology.

Let's personalize this so that it's easier to grasp. I can scoop the *National Inquirer* here and reveal to you that Newt Gingrich, so it happens, has an identical twin who moved as far away from him as she could at an early age. She now lives in London. So, we fly to Washington, D.C., find Newt, take him out on to the Capitol Building steps, and kick him so hard (this is real science) that he falls down the steps and breaks his

leg. Don't worry about the ethics, life's a bitch. Now the essence of a scientific experiment is that it should be repeatable, so to be really and truly scientific about this, we have to grab Newt by the scruff of his neck, haul him back up the Capitol steps, boot his ass back down again and break his other leg. It's cool—he's got health insurance.

Next we phone our spy in London, and quantum physicists—who you may recall are a weird lot—would not be surprised to find that nonlocal influences have caused exactly the same thing to happen to his twin sister. *Voila,* hypothesis, experiment, and verification of results.

> At the subatomic level, such correlation experiments have been carried out many times on pairs of correlated photons, and the nonlocal influences that bind them have been proven many times over. The photons' behavior patterns are so linked across any spatial separation that it appears there is really no space between them. Similar experiments have been done to show the same eerie correlation effects across time. Two events happening at different times influence each other [Zohar 1990:35-37].

Time travel, in fact, not in theory.

This has all sorts of weird implications for the future of archaeology. In fact, the reason I shouldn't worry so much about the archaeologists of the future is that time machines will eventually be a standard part of the normal tool box, and they can go back and check their theories out in person. The suicide rate among theorists will soar.

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