After looking at—and marveling at—the spectacular visuals, you may not think it, but this session—one might say— is about the most basic, the most fundamental, the most foundational, and the most earthly thing on Earth. Here we are practically touching the essential experiences of every living thing, and every deceased, lifeless, inert, or extinct thing on earth.

And yet, this thing-element-experience-object has not been given the attention it is due—and more importantly, has not been given the consideration that would help the sciences, social sciences, and humanities to interpret our world as fully as they might.

Yes, it is space, and particularly, spatial relationships—where living things are and where those living things’ constructs and habitats are or have been, and how they connect with one another, and how they connect with the land, the water, and the air in Earth’s atmosphere: this is what we’re talking about here. Indeed, here we are considering—in more concrete form than has been previously examined, case studies concerning California’s spatial history, focused on land use and environmental change factors, as you have just observed and heard through the fascinating presentations made by Steve, Nat, and Jeanette from the ECCA (the Early California Cultural Atlas Project), and from Jon, Bill, and Carrie from the Spatial History Project at the Bill
Lane Center for the Study of the American West at Stanford, where significant and sometimes surprising new discoveries are being launched from the spatial history platform.

These case studies deal with subjects that scholars already knew something about, but from another direction, and in another way. These new approaches utilize new technologies, yes – but more fundamentally, their distinction is more in their foundation – observing spatial relationships in historical context, than in the methodology they employ.

The animations, visualizations, GIS applications, quantitative plug-ins, and generally, the impressive data manipulations that we have seen here today, are astonishing and inspiring. As they are intended to do, they present information in new ways; tease out meanings about the past, present, and future that we had not previously contemplated; and importantly, they challenge us and our disciplines to both employ and explore these new approaches to our research interests.

All the same, I must admit, I see the possibility of a bit of an Intimidation Issue relative to visualizations and animations. Right: just when you thought you had hammered the Power Point Challenge, along comes this stuff. A few words in this direction:

- Clearly, digging right into these methodologies is probably not for the faint of heart, the impatient, the under-funded, or the loner: The most obvious and perhaps most important feature of these case studies is that all of them are collaborative and all are cross-disciplinary. This is a word to the wise.
- Our presenters today have been careful to explain that they are crossing new frontiers – new space, as it were—concerning these spatial studies of our world, and that there are necessary limits to their results, barriers to absolute certainty in some conclusions, and
sometimes problems with datasets and their visualizations. They say they are not perfect.

- All that being said, we are willing to accept these people’s self-effacing caution and modest prudence, but – and this is a Big But-- at the same time we cannot help but feel a good measure of “shock and awe” (in the best sense) about their truly impressive work.

These four case studies about land use and environmental change in California during the last 250 years have at their heart and soul ideas about space, place, and identities, all of which are investigative tropes familiar and increasingly adopted by many disciplines.\textsuperscript{1} Think about the difference between knowing where certain people lived—you might envision the Native Americans around San Juan Bautista, or the post World War II population infill of Silicon Valley communities—at a particular point in the past versus their environment.

Generally, we are all aware of the importance of taking into account climate, surroundings, a broad outline of nature; that is, location on a plain, in a desert, on an island, etcetera. But the point of spatial historical studies is to enumerate and elucidate the relationships between and among people, and between and among the spaces they inhabit in the broad sense, including their landscapes and the things they build—homes of course, but also infrastructure—and then, oh-so-importantly: what those relationships mean: These intersections—these intersections are where new light illuminates the historical record—and where the historical record is morphed into something larger and more detailed than it

\textsuperscript{1} Thomas Rohkramer and Felix Robin Schulz, “Space, Place and Identities,” History Compass 7/5 (2009): 1338-1349, 10.1111/j.1478-0542.2009.00627.x [the string following page numbers is the Digital Object Identifier, DOI]
has been. Spatial history studies provide more data – more information than we had before, allowing new and/or revised interpretations of the past.

That, of course, is what we always want: new information about the old, about the past; and new interpretations, new points of view on what has come before. These are the introductions and innovations to the discipline of history that make it better, for they make it deeper, wider, richer, and smarter.

And lest you hesitate just for a moment and perhaps ponder that the same may not be true for Jon Christensen’s adventure with the Bay checkerspot butterfly, or with Bill Anderegg’s virtual hikes to the length and breadth of the Sierra’s elevations to see the plants (via herbaria records), you would be wrong. Both of these ecological studies are of course not only about butterflies or plants: They are much deeper and wider than that: They are about the relationships between butterflies, their environments, and human beings’ well-intentioned trifling with their habitat in order to preserve them; and they are about human actions in the departments of climate change, land use, and fire regimes. As Jon said: “the way the history of the butterfly was told actually contributed to its demise (and that) by conceiving of places such as Jasper Ridge as spaces where time stopped” which of course it never does, brought “protection (that) has been the final nail in the coffin for important populations of this threatened species.” Relationships between butterflies and people: something to think about, and something to stimulate our thinking.

And thanks to the precision of botanists across the past century who recorded meticulously the necessary points of collecting data: location, date, habitat, classification—and who preserved them in herbaria, Bill’s team knows a great deal about many plants in the Sierra Nevada. His group, composed of fellow biologists, an anthropologist, and a
historian, has formulated clear but incomplete conclusions that the historical evidence of species migration can help scientists understand how plants are likely to move in the next century. This biologist—from his spatial historical-ecological study—has concluded something that many a historian might choke on: that “The past may be our best guide to the future.” Relationships between plants and people: something to think about, and something to stimulate our thinking.

I would conclude, then, by quoting a few concluding sentences from a recent essay entitled “Space, Place and Identities” by Thomas Rohkramer and Felix Robin Schulz that surveys theory and practice of spatial history. They write:

[In conclusion,] First, that space is not a neutral box in which historical action takes place. Human understandings of and relationships to space are to a large degree socially constructed, but natural and humanly constructed places also have power over humans (without, of course, determining their actions). It is thus important to explore the complex relationship of humans to their environment . . . [And] Second [in conclusion], throughout history, space and place have played a key role in shaping human identities, at the local, regional, national and transnational level as well as through the less well studied qualitative features of [sacred and other] landscape(,) such as mountains or plains, rich or sparse vegetation, or the question of access to rivers, lakes, and the sea.”

In other words, there is a great deal of space and spatial history yet to conquer. Please join me in acknowledging and thanking all of our presenters today for helping to lead the way into deeper, wider, richer, and smarter history.

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2 Ibid, p. 1345.