

Grad seminar – March 2022 – Archaeology Context and First Peoples’ Memory

[SLIDE 1]

[ACKNOWLEDGEMENT SLIDE 2] : I’ve been involved with this research for almost 40 years, and I want to start by thanking all the people and organizations who have contributed to the research I’m going to discuss today. In particular, I want to recognize the essential roles that KF and RG have played in this work.

What I am going to do today is present you with a set of archaeological data and then explore how we might use what we have observed to illuminate the lives of people sometimes referred to as Paleoindians, although I think the term “First Peoples” is probably more accurate. The data are personally very important to me, because I excavated them and I have already published about them. But even though the most relevant publication is more than 20 years old, and has been cited dozens of times, I feel somewhat dissatisfied with what I said about the data, somewhat frustrated that reviewers and editors prevented me from saying what I really thought at the time, and annoyed with myself for missing some really obvious pieces of relevant information. So I thought it was time to take a second look at the data.

I have also been debating with myself about how to present the seminar today. In the end I decided that I would tell you upfront what I’m going to cover, and hope that as we go through the slides you will understand the complexity of what I’m trying to say about the past. So here goes.

- The site of Tse’K’wa in northeast BC provides a unique snapshot of the complex intellectual life of First Peoples

- First Peoples imbued their landscapes with meaning, those meanings persisted through time, and we can them discern faintly in the archaeological record
- Archaeological context, revealed through careful excavation, can be as important as the objects we excavate
- We can use the approach of micro-history to interpret “unique” archaeological finds
- Cross-cultural studies of people and animals are a powerful source of interpretation
- We may have archaeological evidence that a widespread “myth” is at least 12,000 years old

So let me start with the data. No theories – no hypotheses. Just what we found and how and why it got me thinking.

Most of you are familiar with the site of Tse’K’wa in the Peace River region of northeast BC. This [SLIDE 3] locates the site on the continent and here [SLIDE 4] is the site in relation to BC. Looking a little closer [SLIDE 5] we can see that the site is located just west of Fort St. John and just south of Charlie Lake. As you can see from this low-level photo [SLIDE 6], the site is conveniently close to the Alaska Highway, and sits part way down the side of a small escarpment that divides rolling uplands from lower wetlands. This topographic map [SLIDE 7] emphasizes the proximity to water, but also the fairly prominent placement of the site in relation to the local topography – it would have had excellent views and would have been visible for many kilometers. The key structural features of the site can be seen in this view [SLIDE 7]. Along the hillside we find intermittent outcropping of

sandstone bedrock that is part of a long escarpment that forms a fairly prominent feature in the area of Charlie Lake. Within this escarpment there is a cave that may have been scoured out in the bedrock by subglacial water. In front of the cave, and separated from the bedrock by a few metres is a large boulder that we called the parapet. So the space between the boulder and the cave is a short rock-walled gully that originally ran parallel to the hillside. Today this gully is filled with sediment, and we refer to it as the platform.

If we walk on to the site itself we can see the relatively small size of these features [SLIDE 8]. Most of our excavations took place on the platform, where we focused on removing the sediments from the gully between the bedrock and the parapet. [SLIDE 9] A cross-section through the hillside shows how these pieces fit together. We don't know when the boulder detached from the escarpment. But above the site the bedrock is covered by glacial till and glacial lake sediments. These represent the last glaciation in the region and the subsequent formation of a glacial lake. Those deposits are not found in the gully, so it seems likely that we had a glacial advance, followed by glacial lake, and only after the lake had drained did the boulder detach from the cliff, slide down the hillside a short distance, and come to a halt. Once the boulder had separated from the escarpment and moved, the gully would have been accessible simply by walking around the base of the boulder. As soon as the gully was formed, though, it began to fill with sediments, a process that lasted about 12500 years.

Major excavations were undertaken in the gully in 1983, 1990 and 1991 [SLIDE 10]. These views [SLIDE 11] give you an idea of the depth of the excavation, and show both the bedrock and the back side of the parapet that form the two sides of the

gully. Note that in the photo on the right you can get some idea of what the site would have looked like prior to the gully filling with sediment. The next view [SLIDE 12] gives you a composite view of the site today and the site when fully excavated.

The site preserves an archaeological and paleontological record that is contained within about four metres of sediment [SLIDE 13] and spans the late Pleistocene and entire Holocene. The view gives you a view of the last day of excavations.

Today I am concerned with two events that occurred early in the use of the site by people, when the gully had not filled very far with sediments.

Our excavations revealed that the oldest layer at the site is a mass of sandstone rubble [SLIDE 14] that probably formed as the boulder detached from the cliff and moved a short distance down the hillside. We refer to this as Zone I and it contains neither artifacts nor fauna. The succeeding Zone II dates approximately 12500 to 11000 cal BP and consists of redeposited glacial lake silts that were transported down the hillside into the gully. In some places we see up to a metre of sediment accumulating in about 1500 calendar years. You can see some unexcavated Zone II deposits in the slide. At about 11,000 years ago the rate of deposition slowed down, and we see the first soils forming in the gully. This is the start of Zone III.

In Zone II we have evidence for human presence [SLIDE 15] in the form of a projectile point, flaked chert tools, large quartzite tools, and butchered bison bone [SLIDE 16]. At the start of Zone III we have very limited artifactual evidence, with the most notable specimen being a microblade core that I'll show you later.

[SLIDE 17] During the Zone II time period the animal remains indicate a mainly grassland environment, with the DNA of these animals showing connections to the southeast. Grassland was replaced by boreal forest about 11,000 years ago. The

most distinctive artifact from Zone II is shown on the left of this slide [SLIDE 18]; this spear point suggests connections to cultures to the southeast in southern Alberta, as shown by the points in the centre and on the right.

It's not possible to determine how many times the site was visited by people between 12500 and 11000 years ago, but radiocarbon dates would suggest a number of visits that left behind a small amount of material culture items in the gully.

The two phenomena that I want to talk about were found in lower Zone II and lower Zone III, separated by about 1500 years. They are both bird burials, and both are of ravens. These are the only bird burials at the site, and as far as I know they are the only bird burials from Late Pleistocene archaeological contexts in the Americas.

The more recent of the burials [SLIDE 19] has been dated directly to about 11000 cal BP. The bird was buried in a small depression, which could be natural or humanly created, and it lies up against the southern wall of the gully – in other words it is on the north or upslope side of the large boulder. Fortunately we decided to map the first few bones that emerged from the sediment, and as the excavation proceeded we were able to map the entire feature. It is an almost complete raven, although more fragile parts of the skeleton, such as some vertebrae and much of the cranial area, are missing. We can tell that it was buried on its side. Remarkably, the microblade core that I referenced earlier was lying at its feet. So what we appear to have a raven buried with grave goods at about 11,000 years ago.

The earlier burial is a little more complicated. [SLIDE 20] Through a lucky coincidence we recovered almost all of the skeleton from within a 1 by 1 excavation unit during a season when we were being very careful about mapping specimens as they were excavated. As you can see from this diagram, the skeleton was spread over about a square metre, and it seems to have been dispersed across this area after soft tissue had decayed. This is an important observation, because we can trace the disarticulation and movement of individual skeletal elements by tracking what happened to skeletal elements that were originally articulated. The arrows on the diagram show the movement of skeletal elements from their neighbouring elements in the skeleton. Because the south part of the spread of bones is found at a lower elevation than the north part of the skeleton, we assume a downslope movement. And this would be consistent with the angle of dip of other items found in this layer. As you will see, there is great consistency in the direction of movement of the disarticulated parts of the skeleton. It appears that it was deposited in the NW corner of the unit, and that after soft tissue decayed, parts of the skeleton began to move downslope to the southeast.

We don't have clearly associated grave goods with this specimen, but it is associated generally with an assemblage of stone artifacts and bison bones, as shown in this plan of the lower Zone II deposits [SLIDE 21]

[SLIDE 22} So we have two burials of the same bird species, both associated with artifacts, and both found in the same general area of the site, although separated by a lot of time and a lot of sediment.

[SLIDE 23] Digression: archaeological context

As some of you will know, I published these data and some possible interpretations in 1999 in *American Antiquity*, in spite of a great deal of opposition from some reviewers. Since then I have been thinking a lot about the archaeological context of these specimens, so at this point I want to take a second look at the archaeological data, especially as regards the earlier specimen.

Before getting into the details of the site, let me just say a few things about archaeological context. Archaeological context can be defined simply as where we find phenomena in an archaeological site. But context is multi-dimensional and complicated. Michael Schiffer's work on context is fundamental to the idea that material culture is somehow transformed as it passes from cultural to archaeological context and Schiffer also pointed out that artifacts can move between the two contexts, as I have illustrated in this hypothetical example.. However, in the archaeological study of mobile hunter-gatherers, and especially in archaeology of First Peoples in the Americas, we tend to see the archaeological record as a by-product of rational economic behaviours, such as hunting and butchering animals or procuring stone and making artifacts. For this reason, most early sites are simply seen as the places where discard occurred [see the process indicated inside the oval on the left of the slide] Archaeologists who work with the material remains of the earliest people in the Americas rarely think about archaeological context as having cultural input because it is generally assumed that the archaeological record of those people consists of casual discards of objects that are primarily the byproducts of survival activities.

However, we have to think of archaeological context as much more than just the place where objects were discarded. As this slide [SLIDE 24] suggests, context

involves a wide range of factors, both cultural and natural. Furthermore, the ways in which we measure context can also influence our interpretations. When I return to the ravens at Tse'K'wa I'm going to focus on two aspects of archaeological context, although there is probably a lot more that I should be thinking about.

First, we need to think about association between material culture items [SLIDE 25]. For example, this is a photo of an excavation I did on a Pueblo site in New Mexico. We can see associations between structures – such as this wall, features – such as this posthole; stratigraphic interfaces – such as this floor; and artifacts – pottery, grinding stones etc. Disentangling the relationships that caused these associations is complex. Ideally we do not make assumptions, but we use those associations to develop hypotheses about how they occurred, and test those hypotheses with more data.

The second aspect of context I'm going to talk about is post-depositional disturbance. [SLIDE 26] On the right is the famous device invented by Charles Darwin and his son to measure the amount of soil displaced by earthworms. I've illustrated this to remind us that once objects are deposited in archaeological context they are still subject to both natural and cultural processes that change the objects themselves, change their position in the ground and alter their relationships to other material culture items.

Let's now return to the raven burials. The later burial [SLIDE 27] is reasonably straightforward. There is evidence for deliberate burial and it is clear that the skeleton has not moved in 11,000 years. The earlier burial [SLIDE 28] is problematic. What actually happened to create a dispersed, disarticulated skeleton whose individual skeletal elements are almost perfectly preserved. One possibility



is that the bird was butchered and then individual parts of the skeleton were buried in sediment that preserved them very well. But this cannot be the case, for two reasons. First, we would expect to find logical groups of the skeletal elements – such as lower leg or a complete wing. But the admixture of some skeletal elements suggest that skeletal elements moved relatively independent of each other, after connecting tissue had decayed. Second, as we shall see in a minute, the stratigraphy does not support this idea, because we have evidence for movement of sediments after the raven was buried.

So we have to account for a sequence of events that runs something like this. The raven was buried. Time passed and soft tissue decayed while bones were preserved. Some force disrupted the buried skeleton, such that skeletal elements were moved, but then reburied in such a way that they continued to exhibit excellent preservation. I think the clues to how this happened can be found in the stratigraphic sequence, and in the disposition of other material culture items in Zone II.

Let's look first at stratigraphy. [SLIDE 29] When we look at the cross-section through the site, we see a few striking phenomena. First, I want to draw your attention to what appears to be a vertical interface between two deposits, at roughly the N22 line. This shows up most notably HERE [lower blue line on slide]. Second, you can see a vertical pile of boulders, whose south side also corresponds approximately with the N22 line [upper blue line on slide]. Let's look in more detail at the unit in which the earlier raven was found. [SLIDE 30] This is a cross-section through the middle of the unit. On the left we see the boulder and on the right we see bedrock. Again, you can see a vertical interface between layers 105 and 106

[red line], both of which are covered by layer 98. You can see that the dispersed skeletal elements of the raven are found exclusively in layer 105 [green outline area] as well as the quite steep slope of those sediments marked by the dip of flat sandstone slabs [long blue arrow]. Finally, this slide [31] shows the large sandstone boulders whose southern edge lies along the N22 line. These boulders can be fitted back into the alcove at the base of the parapet boulder, suggesting that the boulders mark the first position of the parapet, which later moved downslope and left the boulders in place.

A plausible interpretation of these stratigraphic elements is that the movement of the parapet boulder down slope from the bedrock escarpment took place in two phases. The initial movement brought the north side of the boulder to approximately the N22 line. [SLIDES 32, 33]. Layer 106 was then deposited, followed by layer 105 in which the raven was buried. After the raven was buried and after soft tissue decayed, the boulder moved further downslope. It left behind a vertical interface where layer 106 had met the face of the boulder and it also left behind a pile of boulder [SLIDE 34]. Layer 105 then mass wasted or slumped into the space created by the boulder (blue arrow), and this resulted in the raven skeleton being redeposited downslope from its original burial place (red arrow). Finally, the second raven burial was placed against the back of the parapet boulder in its new location [SLIDE 35, blue cross]

Do we have any evidence to corroborate this? Let's look at the bison bones from the same time period [SLIDE 36]. This slide includes bison bones in black and white from two early components that pre-date the later raven skeleton. We can do two refitting exercises with bison bones. First, we can join up fragments of the same

element in the same way that archaeologists put together broken pottery, to create a single element from a number of fragments (solid black lines). Second, we can match articular surfaces of specimens and fit back together different skeletal elements from the same individual (dotted black lines). When we do this, we find that bison specimens also exhibit downslope movement after soft tissue had decayed, and downslope movement after bones had been broken. We can see this very clearly in the case of this rib, where one fragment remains in place and the other piece has moved downslope. Or consider this ulna and radius where pieces that articulate together have been separated.

So what are the implications of this? Let's assume we are correct in our interpretation. We have a sequence of events [SLIDE 37] in which the boulder moved downslope approximately 1.5 metres (original position shown by red line). Sediments accumulated in the gully that it formed, and artifacts, bison bones and a raven skeleton were deposited between 12500 and 11500 cal BP. They remained in situ long enough for soft tissue to decay. The boulder then made its second move of about a metre [shown in green line], leaving behind a pile of rock and vertical interfaces. Very quickly sediment, bones and probably artifacts as well slumped downslope (blue arrows are bison bones and red arrow is raven skeleton) and were soon buried by sediments that created excellent preservation conditions. About a thousand years later, a second raven burial was created, but that skeleton was never disturbed.

So what I want you to think about now is the relationship of that massive boulder to the raven burials at the time they were created. The earlier raven was found in 1991 in the middle of the gully. But if our reconstruction of events is correct, it was

buried roughly on the N22 grid line, which is the same line along which the back of the boulder was positioned after its first move. So the first and second raven were both buried under the shelter of this massive boulder. And if we look at the placement of both ravens they are in virtually the same position in relation to the where the boulder was standing at the time when the ravens were placed in the ground [SLIDE 38, 39]. I think we can make a case that they were deliberately placed in relation to the boulder, and possibly in relation to a specific feature on that boulder – perhaps a natural feature of the boulder itself or perhaps some artificial modification of the boulder, such as a pictograph.

Let's look at one more implication of this. We have two burials of the same species of bird at the same place. One is demonstrably associated with grave goods. The other is also associated with artifacts and butchered bone, even though some secondary disturbance of sediments has obscured the precise relationship. Given the likelihood that the boulder moved between the time of the first and second burials, it is quite plausible that the people who placed the second burial believed that they were placing it in exactly the same place in relation to the boulder as the first burial. They could not see the first burial – it was at least a metre below the ground surface. Therefore, there must have been an oral history that a raven was buried at this site, and they were replicating that event a thousand years later. The only alternative is that this is all coincidental – purely by chance the only two bird burials known from any Paleoindian site anywhere in the Americas were found less than a metre apart and involved the same species of bird.

I hope that what I have shown you so far demonstrates the importance of careful excavation and analysis of archaeological context. I want now to assume that we

are in agreement that these birds were significant to the people who buried them, and look at the tools we have for interpretation.

I want to start by talking about microhistory [SLIDE 40], a research approach to the past that emerged first in Italy in the 1970's. Microhistory was a reaction against social history that involved large data sets (typically about economic systems) and that tended to focus on dominant members of society. In contrast microhistorians focused on small events, often involving individuals who were underrepresented in accounts of the past, and then related those small events to larger trends in the society in which the individual lived. Some people have suggested that Clifford Geertz's use of "thick description" is an anthropological precursor of microhistory. Personally, my research has not been in the microhistory tradition. In fact a lot of my research has involved identification and explanation of large patterns in the past. However, in the case of the raven burials at Tse'K'wa we are faced with a data set that is very small, highly idiosyncratic, and not reproduced at other Paleoindian sites. There is no big pattern to study and explain. So I have taken a microhistorical approach, and I will try to contextualize and explain these two brief events by drawing on data from ethnography and ethology. So this leads me to two questions [SLIDE 41]:

Why were animals buried at Tse'K'wa, rather than somewhere else, and why are they buried in the same place separated by 1500 years?

Why were ravens buried and not some other species?

My answer to the first question derives largely from ethnography. I want to make the case that Tse'K'wa was a special place on the landscape, and that imbuing landscapes with meaning is a common practice for mobile hunter-gatherers. In the

past 20 years there has been an explosion of theorizing and practice concerning landscape archaeology. One of the key underpinnings of this research is the concept that place is a culturally constituted understanding of space. So while space is a measurable phenomenon of latitude, longitude and elevation, place is a culturally constructed concept about a particular space that has meaning only to the people who live on the landscape

We could probably suggest with some degree of confidence that any human community that has lived on a landscape for any length of time incorporates elements of that landscape into its culture. Imprinting the natural world with cultural meaning likely has numerous functions. At a practical level it simplifies intergroup communication about space, and it signifies rights to the land that can be communicated to outsiders. Idiosyncratic knowledge also serves to cement one's relationship to the land and to the people with whom you share the land. But it also allows one to explain the unexplained – why is that hill there? How can we explain the shape of a river? What caused these sand dunes?

There are thousands of examples of this general phenomenon in ethnography and folk lore studies. For many archaeologists the best known examples are from Australia where Indigenous people linked features in the landscape to origin stories. But there are also plenty of prominent landscape features in North America that had special meaning for Indigenous people, as this slide shows [SLIDE 42]

Tse'K'wa is the kind of location that is very likely to attract place-making activity. First, it is a fairly prominent place on the landscape [SLIDE 43]. By this I mean that it stands out as something different – it is an anomaly, and anomalies are attractive

to people, for both practical and non-practical reasons. If we look at the topography of its surroundings, we can see that it sits on a promontory of uplands that jut out over a fairly flat landscape – as a result it has a wide field of view [SLIDE 44]. In Late Pleistocene times the absence of forests would have made it even more prominent. Second, its geological features are unusual. A large rock stood vertically away from the local cliff face [SLIDE 45]. And behind that standing rock was a cave. Standing rocks routinely require human interpretation, and frequently are identified as a petrified human from the distant past who was turned to stone. Caves are widely seen as liminal places – where the world that we inhabit meets another world, often conceptualized as the underworld or a spirit world.

And why ravens? Wherever they are found, ravens have usually been of special importance to local communities, not just in North America, but throughout the world (SLIDE 46]

Let's turn now to a narrative told by a northern Dene man, George Blondin. SLIDE 47]. He tells how in the beginning the land was very cold and none of the sentient beings could find any game to hunt.[NB: I use the term “beings” because the earliest beings had both human and animal characteristics] Eventually the beings realised that Raven was able to obtain food. The beings followed Raven north to a cave in which he had penned up all the caribou. The beings released the caribou and punished Raven for keeping everything for himself.

It has been suggested that the story of Raven or Crow hiding the game animals from the hunters is likely a deep time story. It occurs widely among Athabascan speakers, but similar versions are also told in other languages. [SLIDE 47]

Let's turn now to ravens themselves [SLIDE 48]. I want to make the argument that some of the characteristics of raven behaviour are recognised universally as human behaviours, and that is why Raven has some rather similar roles regardless of cultural heritage. Again, I don't have time to undertake a comprehensive review, but here are some examples of typical raven behaviour, with peoples' incorporation of those behaviours into their world view.

In general terms ravens possess many traits of humans, not all of them welcome. Although this audience is likely familiar with the concept of Raven as a creator in Indigenous Northwest Coast cultures, Raven's position in the boreal forest is more ambiguous. Raven certainly plays the role of creator but even as creator raven was tricky, greedy and a thief. Raven's descendants perhaps share too many traits that represent the worst side of humans: a noisy, disrespectful, cunning, thieving scavenger. But raven also shares more positive traits with people. Ravens mate for life, they talk, they are intelligent, consume the meat of large mammals, cache food, and share food with others. Ravens, like crows, are capable of recognizing individual humans and it has even been documented that ravens bring gifts to people with whom they are familiar.

So now let me try to wrap up this mix of fact, interpretation and speculation. I'll move from relatively safe to conclusions to those that are more speculative and less easy to support with archaeological data. I think ravens were buried twice at the site because it remained a significant place for over a thousand years, and there was something distinctive about the site that made it easy to remember [SLIDE 49]



At the end of the last ice age the Peace River region became habitable by people and animals by at least 12,500 cal BP. Artifacts and ancient DNA of animals suggest that both animals and people came from the southeast, and from about 12500 to 11,000 years ago they were living in a fairly open grassland environment. The site of Tse'K'wa was highly visible on that open landscape, and in particular the massive boulder that forms the parapet would have been an enormous standing stone on a prominent hillside.

People visited Tse'K'wa multiple times, but we're not able to say how often this occurred. At the base of the parapet they deposited artifacts, bison bones and, on one occasion, they buried a raven there.

At some point, likely due to local geomorphological processes, the parapet moved downslope, disturbing sediments that had built up in the bottom of the gully and the associated artifacts and bones. Following that event a second raven burial was placed at the base of the parapet. This burial was accompanied by an unusual artifact. Because the burial is undisturbed, the parapet must have remained in place since that time.

Given the unusual topography of the site, and in particular the presence of a standing rock and a cave, this would have been a notable place on the landscape. It is therefore very likely that First Peoples incorporated the location into their cultural landscape, as has been done around the world by hunting societies.

In the earliest use of the site there is an association of artifacts that were used for hunting and butchering, the bones of an important prey species, the burial of a bird that is widely associated with hunting in Indigenous societies, and a cave that links the living world to the underworld from which animals originally emerged.

While it is certainly speculative, we can argue that this represents a set of offerings, rather than simply the discard of objects as refuse at a utilitarian site. And, if I can speculate further, these offerings may have specifically referenced the role that raven played in hiding the original game animals in a cave until they were liberated to feed the hunters. [SLIDE 50]

[SLIDE 51] The first peoples to enter the Americas during the Pleistocene almost certainly came through Beringia [SLIDE 52] and were cold-adapted hunters. They may well have had beliefs about ravens that were consistent with those known widely from other cultures. Raven bones and even images [SLIDE 53] turn up in large numbers at some late Palaeolithic sites. They are even found in earlier sites – such as this example [SLIDE 54] of a worked raven bone from a Neandertal site in Crimea. And we have a very famous piece of cave art from western Europe that links birds, spears, bison and people [SLIDE 55]. As these first peoples moved on to brand new landscapes created by melting ice and draining of glacial lakes they brought their old beliefs to new landscapes, and they cemented their relationships with those landscapes by making offerings.

I think those beliefs about ravens had been in place long before people came to the Americas. We know that beliefs about ravens are shared widely among Indigenous people of North America. At Tse'K'wa we also have evidence that beliefs about ravens and knowledge about the oldest burial at the site persisted for over 1000 years. I think it is quite possible that the widely known story about raven keeping the game animals in a cave has persisted for tens of thousands of years, and is part of an ancient tradition that links Eurasian and American hunting cultures.

[SLIDES 56, 57, 58] concluding remarks