Welcome Back!

Welcome and welcome back to the Northwest Evolution, Ecology, and Human Behavior Symposium! The Northwest has shown itself as a strong contributor of evolutionary scholars of human behavior. Last year was a tremendous success! Over one hundred faculty and students from nine colleges and universities across six states were represented with five prestigious plenary speakers and an additional eleven oral presentations and fourteen poster presentations. Topics included cultural evolutionary modeling; dominance and deference; social networks and risk management; gossip, reputation, and sharing; socially enforced nepotism; parental investment trade-offs; human pharmacophagy; and models of foraging and reciprocity. This year we hope to continue promoting greater interaction between departments, scholars, and students in the region. Our second meeting still emphasizes a smaller, more relaxed venue where faculty and students can present their work and where participants are free to interact in a less formal, more intimate setting compared to national-level conferences. In organizing NWEEHB, students’ interests are at the forefront of our minds. We envision this conference as an event where undergraduates can learn more about graduate programs and meet potential advisors, and where graduate students can present and solicit feedback on their own research from other scholars. We hope you enjoy the conference and leave with energy and enthusiasm!
All on-campus symposium events will take place in the Lookout Room located on the 3rd floor of the Student Union Building (SUB).

Friday Evening
6:00 - 8:30pm
Poster Session
Opening remarks (7:00pm)
Meet and Greet

10:45 - 11:15 am
Erik Martin
The evaluation of costly signaling as a motivator in human subsistence behavior.

1:30 - 2:00 pm
Christopher Parker
Beyond firestick farming: The effects of aboriginal burning on economically important plant foods in Australia’s Western desert

9:00 - 9:30 am
Breakfast in Lookout Rm.

9:00 - 10:00 am (P)
Patricia Lambert
Parsing warfare causality: Bioarchaeological perspectives on war and its causes in ancient North America

10:45 - 11:15 am
Zane Beal
Darwinian approaches and the utility of diversity

11:45 - 12:15 pm
David Nolin
Household maturity, intergenerational transfers, and household composition

1:30 - 2:00 pm
Drew Gerkey
An Eco-evolutionary approach to human adaptability and resilience

10:30 - 10:45 am
Coffee Break

11:15 - 11:45 am
Joelle Rasmussen
Reciprocity, kinship, skill, and generosity explain inter-household food transfers in a Siberian hunter-gatherer community

2:00 - 2:30 pm
Jack Broughton
The behavioral ecology of Holocene hunting in Western North America

3:30 - 3:45 pm
Coffee Break

12:15 - 1:30 pm
Lunch

3:45 - 4:15 pm
Ed Hagen
Age and sex differences in substance use are explained by drug toxicity, not reward

4:15 - 5:15 pm (P)
Larry Sugiyama
Life history, market integration, and health among the Shuar of Ecuadorian Amazonia: Some implications for understanding the nature of global health problems

9:00 - 10:00 am
Breakfast in Lookout Rm.

10:30 - 10:45 am
Coffee Break

10:45 - 11:15 am
Zane Beal
Darwinian approaches and the utility of diversity

11:15 - 12:15 pm (P)
Doug Jones
Kinship, reputation, and rules

12:15 - 12:45 pm
Planning session for next year

Presentations Abstracts

Darwinian Approaches and the Utility of Diversity
Zane Beal (Idaho State University)
Darwinian perspectives on human behavior are fairly new additions to the discipline of archaeology. By situating questions of human history within the framework of Darwinian evolution, much progress has been made in developing formal models and quantitatively rigorous research methods. The diversity of approaches founded on a broadly Darwinian mold is reflective of the scope of the problem – the complexity of the subject – rather than a lack of efficacy or veracity in any one approach. Darwinian processes unfold on various scales. As a consequence, different methodologies must be tailored to meet the specific demands of different types of questions. Evolutionary archaeology, human behavioral ecology, evolutionary psychology, dual inheritance theory, and triple inheritance/niche construction theory are not competing perspectives. Rather, they offer an array of tools for a piecemeal approach to building a larger understanding of the archaeological record and human behavior in general. This paper presents these perspectives as potentially complimentary approaches for illuminating different facets of the cultural, ecological, and genetic inputs shaping human behavior. Just as there are multiple methodologies for successfully sculpting and testing hypotheses concerning the behavior of other animals in the life sciences, there are multiple approaches for solving Darwinian dilemmas in the social sciences.

The Behavioral Ecology of Holocene Hunting in Western North America
Jack Broughton (University of Utah)
Models from behavioral ecology are linked with archaeological and paleontological data to reconstruct and explain variation in hunting behavior (especially artiodactyls—deer, sheep, elk, and pronghorn) across the Holocene in western North America. In many settings, unfavorable early and middle Holocene climate (e.g., extreme seasonality, reduced summer precipitation) resulted in low population densities of artiodactyls and human foragers experienced low foraging efficiencies and had wide diet breadths. The transition to the late Holocene with generally more equable temperature, higher overall moisture, and a favorable seasonal pattern of precipitation, caused artiodactyl densities to increase and drove an ascendance of large game hunting and higher foraging efficiencies. During the late Holocene in certain settings characterized by high human population densities (especially central California), intensive hunting led to the depression of a wide range of economically attractive vertebrate prey. These patterns are theoretically linked and correlated with declining human health and stature and many other changes in human behavior. The results also have implications for historical ecology and modern conservation biology.

*(P) Plenary session
An Eco-evolutionary Approach to Human Adaptability and Resilience

Drew Gerkey (Oregon State University)

Sustainability science is a growing inter-disciplinary research program that applies scholarly research to practical problems that arise in contemporary socio-environmental systems. Two key concepts in sustainability science—adaptability and resilience—capture the ways living organisms respond to challenges posed by biotic and abiotic components of their environments. In this way, sustainability science overlaps with evolutionary science. Indeed, we might consider evolutionary theory one of the earliest sciences of sustainability, because evolutionary theory essentially describes how individuals and populations are (or are not) sustained over time. Yet, researchers addressing practical problems of sustainability primarily draw on evolutionary insights to understand non-human components of socio-environmental systems, leaving evolutionary insights on the human dimensions of these systems relatively unexplored. In this talk, I address this gap by synthesizing perspectives from human life history theory with research on eco-evolutionary dynamics. I review previous theoretical and empirical research to construct a framework, then outline several lines of inquiry that could be pursued to test the usefulness of this approach.

Age and Sex Differences in Substance Use are Explained by Drug Toxicity, not Reward

Ed Hagen (Washington State University)

According to the mainstream view, psychoactive drugs are widely used because they inadvertently activate reward-related neural circuitry. Drugs should be equally appealing to children and to adults of both sexes. Many drugs are plant defensive toxins, however, and the costs of toxin exposure vary dramatically by age and sex. We therefore argue there should be important differences in substance use across the life span and between the sexes that are explained by drug toxicity. In particular, children, and to a lesser extent adult women, probably evolved to avoid plant toxins to protect their, or their fetuses’, developing nervous systems, respectively. We test these ideas against national and cross-national datasets, and find virtually no substance use among children; a switch-like transition to substance use in adolescence; and a nearly universal male bias in substance use. We also find that, across nations, greater use of modern birth control and a lower total fertility rate, which decrease the risk that smoking mothers would expose their fetuses to nicotine and other tobacco teratogens, predicts higher female prevalence of tobacco use. We argue that around the age of 15, the fitness benefits of substance use in ancestral populations, especially defense against parasites and honest signaling to potential mates, started to outweigh diminishing costs of exposure, especially for males.

Kinship, Reputation, and Rules

Doug Jones (University of Utah)

Human beings are unusual animals in many respects. We are off the charts when it comes to the moral regulation of behavior, and to constructing communicative and interactional codes. This probably has implications for how kinship operates in our species. In this talk I argue that: (1) Insofar as behavior toward kin is regulated by norms and roles, the standard coefficient of relatedness understates the likely scope and scale of altruism toward kin. Socially enforced nepotism, trading in the currency of reputation, can “amplify” relatedness. (2) People draw on the same combinatorial, grammatical machinery that generates kin terminology to develop other conventions regarding kin, especially marriage proscriptions and prescriptions. Marriage rules may be one instance of moral judgments being influenced by a kind of “moral grammar.”
Parsing Warfare Causality: Bioarchaeological Perspectives on War and Its Causes in Ancient North America

Patricia Lambert (Utah State University)

This paper explores the bioarchaeological evidence for prehistoric war and its causes in three regions of western North America: the Santa Barbara Channel area of southern California, the Four Corners region of the American Southwest, and the northeastern Great Plains. In all of these areas escalations in serious violence, as documented through injury patterns in human skeletal remains and other archaeological evidence, appear to correlate with unpredictable, drought-prone climatic conditions. While unique histories and culture-specific practices clearly distinguish aspects of violence and war in each region, similarities in both the environmental context of war and in the demographics of its victims suggest a greater level of uniformity in some dimensions of warfare causality. The archaeological data shed light on environmental contexts that may be conducive to war, and support a multi-tiered explanatory model of warfare causation ultimately rooted in the evolutionary history of our ancestors.


Cheyenne Laue (University of Montana)

Human behavior is a complex system. Considered within the framework of the ecologies, economies, and political arrangements in which they are situated, human behavioral systems provide an incredible array of variation for social science study. Comprehending the evolution of human behavior as a process of both rapid and prolonged change is vital to formulating solutions to many contemporary problems, as well as to the construction of robust social science research projects. Unfortunately, sources of change in these systems are often difficult to apprehend as they occur, and many social transformations are understood only in retrospect. Computer simulations provide one possible solution to this problem. Artificial social worlds, populated with artificially intelligent agents, now allow researchers to magnify and accelerate evolution, and to model behavioral patterns and change under a variety of environmental, biological, and socio-cultural constraints. Through discussion of simulation system parameters, digital organisms, and the results of past studies, this paper examines the possibilities of synthetic research and its promise for anthropologists and other social scientists.

The Evaluation of Costly Signaling as a Motivator in Human Subsistence Behavior

Erik Martin (University of Utah)

The applications of optimal foraging theory to the analysis of human subsistence strategies often cite the caloric return rates of prey types relative to other alternative resources within an environment as dictating prey choice. However, a body of literature within anthropology, biology, and economics known as costly signaling theory predicts that there are social benefits to individuals who communicate their fitness to an audience through the production of honest, high quality signals. If the acquisition and distribution of difficult to acquire resources meet these criteria, the fitness benefits of costly signaling via subsistence activities may also be an important consideration in understanding prey choice. This hypothesis is utilized to construct a predictive signaling model and is evaluated through the examination of ethnographic accounts of subsistence activities.
Beyond Firestick Farming: The Effects of Aboriginal Burning on Economically Important Plant Foods in Australia’s Western Desert

Christopher Parker (University of Utah)

Human foragers frequently interact with their environment through the controlled application of fire to the landscapes in which they live. This can shape habitats, influence resource availability, and potentially transform entire ecosystems. I present results from a long-term research project among the Martu Aboriginal People of Australia’s Western Desert examining the effects of anthropogenic burning on traditional plant food populations. The immediate increases in women’s hunting return rates explain the timing and size of Martu burns, which result in vegetational mosaics at a distinctly finer scale from that produced by lightning fires. Here we report the successional consequences for plant communities and consider implications for subsequent resource use. Our data indicate that the immediate foraging returns from post-burn burrowed game hunting are unavailable until spinifex (Triodia spp.) regrowth has reached sufficient density to once again carry a fire, but that the return rates available from useful food plants increase in the intervening successional regrowth period. This inter-annual pattern provides important insights into arid zone foraging strategies, and the colonization process of Australia’s deserts.

Reciprocity, Kinship, Skill and Generosity Explain Inter-household Food Transfers in a Siberian Hunter-Gatherer Community

Joellie Rasmussen, John Ziker (Boise State University)

A food distribution network in the hunter-gatherer community of Ust’-Avam is analyzed using independent variables representing embodied, material, and relational wealth, and relative household need. As a snapshot of meat and fish distribution following procurement events documented in two field seasons in 2001 and 2003, a 177x177 matrix representing all households in the community is analyzed using the MRQAP procedure. Genealogical relatedness between households partially explains the variance in food sharing as predicted by inclusive fitness theory. Reciprocation in food occurs most often between households with highly skilled hunters (providing the potential for equal production means) as predicted by reciprocal altruism. In addition, reciprocal food transfers are found more often between highly related households, as found in a number of other recent studies of hunter-gatherer food sharing. Unreciprocated food transfers appear to facilitate movement of food based on relative household need, as predicted by generosity signaling. These unreciprocated food transfers are truly generous because we found that non-food reciprocation from recipient households did not significantly explain food sharing. This analysis supports a number of models of food sharing operating simultaneously, illustrating a synergistic effect of multiple pathways in the evolution of cooperation.

Life History, Market Integration, and Health among the Shuar of Ecuadorian Amazonia: Some Implications for Understanding the Nature of Global Health Problems

Larry Sugiyama (University of Oregon)

Mismatch between our evolved physiology and aspects of westernized/industrial diet and lifestyle are thought to underlie many so-called diseases of civilization, including cardiovascular disease, obesity, hypertension, type 2 diabetes, osteoporosis, allergy and autoimmune disease. Although quantitative data from societies undergoing the early stages of the transition from subsistence to market economy remain limited, it is clear that the links between socio-economic change and health are complex. For example, evolutionarily novel changes in infection/parasite exposure appear linked to development of many of these conditions, in part via immune function dysregulation. For example, changes in diet may affect growth directly, but growth is also affected by shifts in infectious and parasitic disease ecology via life history trade-offs between growth and immune function. Functional immune regulation may be dependent on exposure to an evolutionarily relevant range of infectious ecology, with chronic inflammation associated with cardio-vascular disease risk an evolutionarily novel effect of immune dysregulation. Psychological mechanisms designed to be calibrated by the relative costs and benefits of disease avoidance may ultimately be implicated in our evolutionarily unprecedented levels of pathogen avoidance in modern industrial society, and the recent emergence of allergy and autoimmune disease. These examples from the Shuar Health and Life History Project illustrate a few ways in which research among a small-scale natural fertility population experiencing early stages of market integration can further our understanding of global health problems.
Human Spatial Positioning and its Archaeological Significance: A Case Study Among Mongolia’s Reindeer Herders

Todd Surovell (University of Wyoming)

All human behavior occurs within a spatial context, and whether consciously or not, we make decisions concerning where to do the things we do. Such decisions in conjunction with cultural and natural formation processes result in spatial patterns in the archaeological record. That said, anthropologists and archaeologists have given little consideration to human spatial decision making, at least at the scales at which archaeological excavation typically occurs (100-102 m²). Inspired by ten years of excavation and analysis of a Folsom campsite in Middle Park, Colorado, the Dukha Ethnoarchaeological Project was designed to explore two related questions: 1) How do people choose where to do what they do, and 2) How are those decisions manifested in the archaeological record? This work differs from prior spatial ethnoarchaeology in that we have shifted the focus from the mapping of features and material refuse to the direct mapping of human behavior. In this talk, I focus primarily on the factors governing human spatial positioning within domestic spaces.

Relationship between Number of Sex Partners and Violent Behavior: The DAT1 Polymorphism

Anthony Walsh, Miguel Lopez, Danielle Swerin (Boise State University)

There are three broad biosocial approaches to the study of criminal behavior: genetic, evolutionary, and neurobiological. While they employ different theories and methods and work with different levels of analysis, their principles are conceptually consistent across all three levels. Differential K Theory, while controversial, provides an evolutionary backdrop in discussing the DAT1 polymorphism, dopamine, and violent behavior. As biosocial sciences enter the third wave, epigenetics, they will continue to provide valuable insight and promote further understanding of the phenomena of criminality.

Plenary Speakers:

Jack Broughton (University of Utah)
Doug Jones (University of Utah)
Patricia Lambert (Utah State University)
Larry Sugiyama (University of Oregon)
Todd Surovell (University of Wyoming)
Linking Learning Ability to the Evolution of Cultural Complexity
Adrian Bell (University of Utah)
Demographic effects on cultural complexity are controversial. Some view the arguments for cultural drift and similar mechanisms as over-stating the importance of difficulty in learning, socially or individually. Others stress that social learning is vital and larger social groups with active cultural transmission yield greater cultural complexity. Using ethnographic data collected among women weavers in the South Pacific, I advance the debate by estimating learning parameters directly relevant to a theoretical model of the evolution of cultural complexity. I advocate further ethnographic work to understand a key feature of human evolution.

Fuel as a Factor in the Mobility of Hunter-Gather Groups
Michael Bishop (Boise State University)
We analyze return rates of fuel as a way of assessing the extent to which exploitation of firewood in the desert west should be considered an important factor in determining the basis of seasonal use and how quickly available wood stores would be exploited by collectors. Recognizing that more mobile foragers during spring-fall may not be seriously impacted by fuel availability we focus our discussion on the potential impact of fuel depletion during the winter period. We use Julian Steward (1938: 165) and Murphy and Murphy’s (1960) locational descriptions of winter villages on the Snake River Plain to calculate fuel return rates of driftwood/deadfall and sagebrush by foraging radii. We argue that fuel depletion is a primary cause of relocation of encampments during the winter period. (Steward 1938:165).

Using XRF to assess Variance in Obsidian Source Distribution in Southern Idaho
Marielle Black, David Nolin (Boise State University)
In archaeology, obsidian distributions, as determined by X-ray fluorescence spectrometry (XRF), are utilized as proxies to infer the mobility and settlement patterns of prehistoric peoples. These studies do not address the reasons behind these decisions. This study intends to bridge the gap between inferred mobility patterns and the underlying variables thought to be theoretically important. This project will begin with analyzing obsidian artifacts with XRF, collecting site data, and plotting, in a Geographic Information System (GIS) environment, the locations of obsidian artifacts and obsidian source (XRF) locations in the Northern Great Basin. The locations of observed data in relation to the source material will be used to show resource movement to infer procurement mobility patterns of prehistoric hunter-gatherers in the northern Great Basin during the Early, Middle, and Late Archaic. Traditional lithic distribution studies in the northern Great Basin will be enhanced by this spatial modeling approach in conjunction with obsidian sourcing data. This project will result in the ability to analyze a combination of spatial and attribute variables thought relevant to prehistoric resource decisions and procurement behaviors.

Optimal Foraging and Ephemeral Group Formation of Jenu Kuruba Honey Collectors and Late 19th C. Colorado Silver Prospectors
Katie Demps, Susan Glover Klemetti (Boise State University)
Humans frequently form short-lived cooperative groups to accomplish subsistence and economic tasks. We explore the ecological and cultural factors behind ephemeral work-group formation in two disparate cultural contexts: groups foraging for wild honey in present day South India and groups prospecting for silver ore in the Elk Mountain Mining District of Colorado in the late 19th Century. Contrary to traditional economic foraging predictions, we find little evidence that per capita yields are the most important factor in determining size and composition of ephemeral work groups. We explore factors in each of these cultures that may be of importance in group formation such as kinship, reputation, and pleasure. Models that only incorporate economic parameters will make poor predictions of how humans interact with their environments.

Is Closeness Enough? Kin and Mate Premiums in U.S. and India
Joseph Hackman (Arizona State University)
Close relationship researchers have proposed that sharing, helping, and sacrifice among close social partners of all kinds—friends, spouses, biological kin—are mediated by the same generalized suite of internal mechanisms. However, given the unique demands and challenges of engaging in these diverse relationships, people may rely on relationship-specific mechanisms when making decisions to help others. Here we test whether giving decisions can best be explained solely through generalized close relationship mechanisms, or whether relationship type exerts a unique effect on giving over and above generalized closeness. Using a social discounting paradigm across samples from India and the U.S., we find that social closeness uniformly mediates some of the increased sharing with mates and biological kin; there is still a substantial effect of these relationships over and above closeness. This suggests that a relationship premium model, in which dedicated kin and mate detection systems operated independently from social closeness mechanisms, may best explain helping behavior among close others. Moreover, the effect of the more phylogenetically ancient relationship is mediated least by subjective feelings of closeness.

Using Formal Models to Explore Economic Aspects of Hunter-Gatherer Milling Tool Design
Tammy Buonasera (Boise State University)
Consideration of active decision making in the manufacture of ground stone technology has historically been overlooked. This poster presents two distinct optimality models, applicable to ground stone technology in two different contexts. The first is an adaptation of a of recently proposed model of technological intensification, and is used to predict threshold use-times governing optimal milling tool form and lithic material choices under conditions of high to moderate mobility. The second model considers differential efficiencies of two distinct tool forms as a function of the relative importance of two or more types of seed resources. This model is applicable to more sedentary situations where ground stone tools are expected to have been retained and used over long periods of time.
Sharing and Receiving among Aka foragers: Effects of social network variables and personal attributes
Nicolle Hess
(Washington State University)
We collected social network and kinship data from a sample of forty adult Aka foragers in the Central African Republic. Informants identified their same-sexed friends and same-sexed rivals in various competitive domains (e.g., rivals in mating, singing, working, etc.). Informants also identified and rated the extent to which other members of the sample [i.e., "targets"] shared with, and received benefits from, others. Using a peer-rating technique, we assessed how hard individuals worked; how well they parented; how angry they were; the extent to which they sought to acquire additional mates; how well they behaved; and whether other members of the camp said positive or negative things about them. Controlling for kinship, close friendship, and rivalry, we tested the hypotheses that those who were held in high opinion by the informants, who had positive things said about them, worked harder, parented well, exhibited little anger, and shared more would receive more benefits from others. Finally, we explored the relationship between these variables and mating effort.

Spoiling for a Fight: A Cross Species Comparison of Deliberate Coalitional Aggression
Earl Keefe
(University of Utah)
While aggression between individuals is a common phenomenon in many if not most species, coalitional aggression, involving cooperating bands of combatants, is less commonly observed. Even rarer are cases of deliberate attempts by cooperative bands to infiltrate the territories of neighboring groups with the apparent intent of locating and attacking, even killing isolated members of those communities. Only a few species have been identified as practitioners of such deliberate coalitional aggression; among them humans and our closest primate relatives, chimpanzees. In order to clarify the nature of this behavior in evolutionary terms I compare species where deliberate coalitional aggression has been observed in conjunction with various social and behavioral traits to determine which characteristics are shared between these species. In addition I compared each deliberately coalitional species with its closest taxonomic relatives to illustrate which traits might best explain the presence of deliberate coalitional aggression.

Racial Disparities In Juvenile Delinquency: An Epigenetic Perspective
J. Miguel Lopez
(Boise State University)
Over the last several decades, the comparative historical description of slavery has expanded at a rapid rate. However, in the midst of this empirical wealth, explanations for why slavery should recur so frequently in human societies, and repeatedly exhibit a syndrome of features, are few. Indeed, explanations have altered little in the century since Nieboer's classic work, with two exceptions. Orlando Patterson has popularized the theme that slavery represents the antithesis of kinship, even as Igor Kopytoff has argued persuasively that slavery represents a mechanism for assimilating strangers. Clearly, slavery has immediate significance to evolutionary analyses of the relationship between kin and non-kin sociality, and the balance between cooperative and exploitative sociality. Just as clearly, evolutionary analyses promise more powerful explanations and more rigorous paths of inquiry into the persistence and recurrence of slavery. This paper presents a small piece of a larger project. In it I explore two key theoretical questions. First, why is slavery so frequently represented as the antithesis of kinship? Secondly, how can slavery provide a vehicle for incorporating non-kin into a kin-based society? A biosocial approach is obviously objectionable to many anthropologists. In closing, I will address how 'symbolic' accounts of kinship can easily be integrated into an evolutionary explanation based on a genetic understanding of kinship once non-kin sociality and exploitative relations are taken into account.

Firewood Collecting and Diet Breadth
Kate Magargal
(University of Utah)
By focusing on the objects of human decision-making that are necessary for the maintenance of life, archaeologists may identify the parameters which serve as useful focal points for the study of subsistence activities. Food serves as the most obvious focal point since energy derived from consuming food is one of the most basic human needs. Many foods, however, are not consumed as foragers find them, but they are instead cooked prior to consumption, requiring the use of fuels. Discourse about utilizing cooking as part of subsistence strategies, however, rarely includes how the investment in gathering fuel for cooking fires factors in to the tradeoffs involved in deciding what to cook, or how much to cook, in the first place. If access to fuel is limited, then we should expect foragers to make different choices about which food resources to seek out. In an effort to address these issues, a model is developed here that incorporates the tradeoffs of firewood foraging into the diet breadth model. Evolutionary and archaeological implications of this model are then explored using examples from ethnographic and experimental data.

A Preliminary Test of Ideal Free Distribution to Anglo-American Settlement of Utah
Peter Yaworsky
(University of Utah)
The application of models from behavioral ecology to human societies tends to be limited to that of prehistoric and contemporary foragers. It is surprisingly rare that models from behavioral ecology are used to investigate historic avenues of research. Historic research tends to have an abundance of data from which to build assumptions for behavioral ecology models, and records to further investigate possible deviations from the models' predictions. Perhaps the aversion of historic research to behavioral ecology stems from the difficulty of quantifying cultural and social influences that may be seen by some as the driving factors influencing historic peoples' decisions. The purpose of this paper is to address these critiques with a case study investigating early Anglo-American settlements of Utah. It can be argued that early Anglo-American settlements were largely a result of the Mormon belief system. Historic records show that the Church of Latter-day Saints was a powerful force in the settlement of Utah, but it is hypothesized that economic factors with the greatest benefit to individuals at the lowest cost are a much stronger predictor for the settlement of Utah. To test this, a number of variables pertaining to climate were investigated in order to gauge the suitability of a settlement. It was predicted that the most suitable habitats will be occupied first and will have the highest population densities. The preliminary findings presented in the paper lend support to the claim that the application of behavioral ecology models to historic research questions is a fruitful endeavor, creating testable hypotheses in which to explore historic events.
Directions from Residence Inn to Lookout Room
Cross Capitol Blvd (main road) at the light and continue down University Dr. until you reach the Student Union Building at the corner of Lincoln and University. Take the stairs to the 2nd floor. If you do not emerge into a small art gallery, turn right and continue walking until you see the art. There is a stairwell in the East wall painted red. Go up the stairs into the Lookout Room on the third floor. Help yourself to some coffee.

Directions from Residence Inn to Boise Art Museum
Go down Lusk St toward the river and take a right at University Dr. Cross Capitol Blvd, then turn left and walk along Capitol over the bridge. The art museum is the first building you will see on your right.

Driving from Points West to Residence Inn
Take I-84E to I-184. Continue on I-184 until it ends downtown and becomes Myrtle St. Go two blocks and turn right on 9th St. After crossing the bridge, turn right on W. Yale Ln (one block past Ann Morrison Park Dr.).

Driving from Points East to Residence Inn (1401 Lusk Drive)
Take I-84 W to Exit 53, S. Vista Ave. At the top of the exit ramp turn right onto Vista Ave. Follow Vista for about 2.5 miles, at which point it will merge with Federal Dr. and become S. Capital Blvd. Turn left onto W. Ann Morrison Park Dr. Take the first left onto Lois Dr. then turn right onto W. Yale Ln.

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