AVIATION IN THE ALASKAN FRONTIER

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Abstract

Flight is often cited as one of the most remarkable achievements of the 20th century. Aviation has profoundly altered the interconnectedness of the world; changing the ways in which we think about distance, time, and space. In North America, Alaska is one area in particular that has been significantly affected by aviation. There are very few places in which aviation is so tightly integrated into society. Alaska has more pilots and more aircraft per capita than any other place in the United States; but despite the importance of aviation within the state, little anthropological or archaeological research has been conducted on this topic. By examining the cultural, social, and material aspects associated with flying, planes, and pilots in this distinct area of the world, this research creates a more complete understanding of aviation within the social history of the Alaskan frontier.

Introduction

“The desire to fly,” wrote Wilbur Wright, “is an idea handed down to us by our ancestors, who, in their grueling travels across trackless lands in prehistoric times, looked enviously on the birds soaring freely through space, at full speed, above all obstacles, on the infinite highway of the air.” Having spent centuries admiring and envying birds, humans eventually took to the air in the late 18th century (Moolman 1980; Grant 2007). While not on a wing, but rather in a balloon, the desire to fly through the air persisted. In the 19th century, a wide range of scientists and inventors examined the principles of flight and experimented with a series of gliders and steam-powered flying contraptions. It was not until the early 20th century, with the determination of Orville and Wilbur Wright, that controlled, powered, and sustained flight was finally achieved (Figure 1).

Figure 1: Orville & Wilbur Wright, Kitty Hawk, 1903

Flight is often cited as one of the most remarkable achievements of the 20th century. Flying has become second nature to hundreds of millions of people and it is difficult to imagine a world without it (Grant 2007). Aviation has greatly altered the interconnectedness of the world; changing the ways in which we think about distance, time, and space. In North America, Alaska
is one area in particular that has been significantly affected by aviation. For the past few years, this project has investigated the historical development of civil aviation in Alaska by incorporating multiple lines of evidence such as material culture, historical documentation, oral traditions, and participant observation.

Alaska’s people and history have been shaped by flight (Alaska Geographic Society 1998). Statistically, Alaska contains some of the busiest airport facilities and has more pilots and more aircraft per capita than any other place in the United States (Federal Aviation Administration 2009) (Figure 2). According to humorist Warren Sitka, “God may have created Alaska, but it was the airplane that truly carved the face of the Last Frontier” (Sitka in Levi 1996:3). Few people would disagree with this statement.

The general and basic history of Alaskan aviation has been documented to some extent (Stevens 1990a, 1990b; Ruotsala 1996, 2002). While these histories are fragmentary, the objective of this project was not to re-write the history of Alaskan aviation, but rather to illustrate how Alaska has been shaped and influenced by aviation and bush pilots using anthropological methods. In order to provide a framework for formulating the theoretical and methodological foundation for this project, the anthropological and archaeological literature pertaining to aviation was examined.

The Anthropology of Aviation

The culture of aviation has been simply defined as “the remaking of human culture through flight” (Batteau 2001:202). Research on the culture of aviation has been limited to a handful of scholars who have attempted to address human behavior and systems based on traditional ethnographic observation and sensitivity to context, mainly by examining commercial aviation in contemporary society.

For instance, Batteau (2001, 2002) examined anthropological issues raised by the industrialization of commercial air travel. He suggested that a contribution from cultural anthropology, such as understanding cultural differences and similarities, context, and the dynamics of meaning, could be used to address challenges in commercial aviation such as cockpit ergonomics, flight physiology, flight crew (human) resource management, and flight safely.

Using cognitive anthropological approaches and ethnographic methods Hutchins (1995) examined the relationship between the flight crew and flight instruments. In commercial aviation, the successful completion of a flight is produced by a system that usually includes two or more pilots interacting with each other, along with a set of technological devices within the aircraft. Landing a jet involves extremely precise transformations of the aircraft as it descends. A well-planned descent will minimize the cognitive tasks of the last few minutes of a landing which are often very complex and involve a series of specific and accurate procedures. Hutchins suggested that it was not simply the flight crew that planned and executed the descent and landing, but rather it was the cockpit, with includes both the flight crew and the flight instruments, that performed the cognitive tasks.

Figure 2: Public Airports/Runways in Alaska
In another study, Perez and Psenka (2000) applied concepts of systems dynamics and contextual interpretation to analyze a 1995 American Airlines accident in Columbia. By using linguistic analysis, as well as understanding the cultural context of the situation, these researchers were able to illustrate that the accident occurred due to technological complexity, breakdowns in coordination, cultural differences, and miscommunication.

Also using linguistic analysis, Linde (1988) examined aviation communication by studying flight deck communication using simulator studies and cockpit voice recorder tapes. Linde found that mitigating phraseology, such as “would you please...” or “why don’t you...” instead of “do this”, was very sensitive to social rank with regards to distinctions between the captain, first officer, and flight engineer. Crews that tended to use more mitigated speech typically had more failed communication events since directives were not carried out due to misunderstandings.

Each of these studies has made valuable contributions in the realm of organizational behavioral research and human resource management within commercial airline companies by applying concepts such as culture, context, communication, and meaning. It is expected that future aviation-related research will continue to employ anthropological methods.

**Aviation Archaeology**

An additional area of research involving aviation is the emerging discipline of aviation archaeology. Aviation archaeology or wreck-chasing, as it is often called, involves locating and documenting aircraft crash sites (Fuller 2004). It focuses on the preservation of these sites and on the history surrounding the activities that caused them. Organizations, such as The International Group for Historic Aircraft Recovery, one of the institutions dedicated to uncovering the mysteries surrounding Amelia Earhart’s disappearance, and Aviation Archaeological Investigation and Research, seeks to find, save, and preserve rare and historic aircraft (Figure 3). Aviation archaeology has been conducted by a wide range of individuals ranging from amateur archaeologists, treasurer hunters, and aviation, history, and military enthusiasts, to more academic scholars and professional archaeologists. Anthropologist Richard Gould’s (1980, 1983) interest in World War II aircraft wrecks is often credited as one of the first archaeological investigations involving aviation archaeology. Gould examined differences in craftsmanship between aircraft engines produced in the United States and those produced in Great Britain. Since engines produced in Great Britain tended to be better preserved in the archaeological record, Gould suggested that the engines reflected national differences in wartime manufacturing standards.

**Figure 3:** Excavators attempt to locate Earhart’s crash site.

There are also a small number of researchers attempting to conduct archaeological research and heritage management in space, which is often called the “final archaeological frontier” (Capelotti 2004). For instance O’Leary (2006) has investigated legal ownership of artifacts and structures in space, suggesting that lunar...
module descent stages on the Moon, for example, could possibly be candidates for the National Register of Historic Places as National Historic Landmarks.

In general, aviation archaeology has made important contributions in terms of providing information and history to the general public regarding both military and civilian aircraft accidents. However, within peer-reviewed scholarly publications, aviation archaeological studies are quite uncommon.

This project did not involve the discovery and preservation of crash sites, but rather sought to examine the technology and people, mainly bush planes and bush pilots, within Alaska’s history to demonstrate that aviation archaeology does not necessarily need to involve aircraft wreckage, but rather should seek to incorporate the social, cultural, and material components associated with aviation and flying.

The Bush Plane

In order to provide a material culture component for this project, the evolution of the bush plane was examined (Figure 4). The bush plane has become an iconic symbol within the history of the Alaska and tracing its history and evolution provided a framework for understanding the unique relationship between pilots and aircraft. While Alaska has changed in many ways since its first flight in 1913, one feature has remained the same – bush planes are still the best way to access this vast frontier (McCaffery 2002; Rozell 2004; Szurovy 2004; Rossiter 2005). Bush planes evolved over time from unstable open-cockpit biplanes to the more sophisticated bush planes of today, complete with GPS navigational systems, Automatic Dependent Surveillance-Broadcast systems (ADS-B), and even iPod jacks. The lasting usefulness of bush planes says a lot about the people who fly them and even more about Alaska and with much of the state too rugged for the construction of new roads, bush planes will continue to be a main source of transportation for many years to come.

![Figure 4: The Piper Super Cub](image)

**Bush Pilot Phenomenon**

The second research question addressed the notion of bush pilot culture. Pilots constitute a distinct social group brought together by a shared set of experiences. Pilots are differentiated by a number of certain characteristics, such as physical abilities, background, initiation rite, language, and stylized dress (Batteau 2001). Alaska is a state that came to depend on bush pilots. This research has uncovered a wide range of works that document the individual life histories and contributions of bush pilots (Day 1957; Mills and Phillips 1960; Brown 1983; Bruder 1991; Jarman and Satterfield 1993; Conkle 1991, 2000; Tordoff 2002; Griese 2005; Lester 2007; King 2008). Historical documents and oral traditions portray a very distinctive notion of bush pilot life. Bush pilots are thought of as the heroes, pioneers, cowboys, entrepreneurs, and adventurers of the Last Frontier, flying off into dangerous and exotic locales. The mythology of the frequently romanticized version of bush pilot culture in the literature often evokes a sense of individualism and free spirit, very
much like the cowboy of the American West (Figure 5).

Due to previous notions of the frontier experience dealing with rugged individualism, particularly Turner’s frontier thesis (1920), the literature on bush pilots typically does not demonstrate the ways in which bush pilots created a large social network within the territory. Early aviation in Alaska did not involve the actions of a single pilot, but rather it was through the determination and strength of many pilots that aviation succeeded.

Aviation and Alaskan Identity
The final research component addressed how the myth and romance of early aviation transcended into the current perception of bush pilots and bush flying in modern-day Alaska. Aviation continues to be an important element of Alaskan heritage and tradition. Flying in the Alaskan bush still evokes a sense of freedom and adventure in the minds of many individuals, both pilots and non-pilots alike. Aviation is a part of daily life for many individuals and in fact, some young Alaskans even learn to fly before they learn to drive.

Aviation can be classified as a living tradition; however the tradition of flying in Alaska has evolved over the years. While it is still a viable way to make a living for many residents, flying has also become a sport. For example, Alaska hosts the largest bush pilot competition in North America, the May Day Fly-In and Air Show (Figure 6). For the past decade, hundreds of pilots and spectators have traveled to Valdez to witness the top bush pilots participate in a variety of events such as short field takeoff and landings, flour bombing competitions, and even a poker run. This competition and other flying events throughout the state not only provides an opportunity to promote economic development and tourism, but it also illustrates the significance of the aviation industry within the development of Alaska and how bush pilots and planes continue to be important elements of Alaska culture and identity.

Figure 6: May Day Fly-In Competition, Valdez, Alaska

Conclusion
The importance of aviation in Alaska has continued into the present day. In fact, this past January, the Discovery Channel aired one of its new reality shows “Flying Wild Alaska” about a family of pilots working for Era Alaska in the western part of the state. The show was the Discovery Channel’s most watched series premiere of all time, attracting 2.6 million viewers. There are very few places in which aviation is so tightly integrated into society; but despite the importance of aviation within the state, little anthropological research has been conducted on this topic. In conclusion, by examining the cultural, social, and material
aspects associated with flying, pilots, and planes in this distinct area of the world, this research demonstrates the significance of civil aviation within the social history of the Alaskan frontier.

Acknowledgments
This research is supported in part by the Virginia Space Grant Consortium, Women in Aviation, International, the Roy R. Charles Center, the Office of Graduate Studies and Research, and the Department of Anthropology at the College of William and Mary.

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