

When we think about archaeology, many of us envision archaeologists toiling away in extreme heat, carefully peeling soil layer upon soil layer back to expose formerly hidden artifacts or architecture. The last thing that likely comes to mind is an archaeologist documenting and counting the trash left behind by astronauts in space. It is only in recent years that the field of “space archaeology” (Capelotti 2010) has emerged. This field was started by the pioneer of contemporary archaeology and garbage studies, Dr. William Rathje (O’Leary 2015; Muckle 2016), who noted that space debris, such as defunct satellites, poses a threat to future space missions.

What do today’s space archaeologists do?

Space archaeologists highlight the material stories of the “space race.” The space race began after World War II, when the USSR and USA started to develop space and weapons technologies. It has left a lasting material legacy on our planet and beyond. Evidence of this space race includes human-made objects in space, which totaled over 10,000 in 2009. These artifacts include flags, rovers, landers, and abandoned and currently-in-use satellites. Astronauts have left behind bootprints on the moon and robotic explorers have left their marks on asteroids, Titan, the moon, Venus, and Mars.

The space race hasn’t stopped, though in recent times some nations have not been able to afford as expensive space exploration as in past years. The space race has expanded to include citizens and private corporations competing for their place in the history of space exploration. Space archaeologists want to understand how cultural values shape our desire to explore beyond our planet (Walsh 2012). They remind us that our care for the past and for the heritage of former space explorations must not be forgotten in our quest to voyage beyond Earth and be the first person, company, or nation to reach formerly unreachable places.

Space archaeologists study how humans interact with their environments and habitats in space. Dr. Justin St. P. Walsh and Dr. Alice Gorman have recently received funding to study the culture and materiality of the International Space Station (ISS),

which has been occupied by astronauts since 2000 (www.issarchaeology.org). The ISS is a unique collaboration that involves a global team of astronauts representing 25 countries, numerous space agencies, and several private corporations.

As archaeologists who are naturally curious about what happens to trash, Walsh and Gorman have examined how trash and supplies move from Earth to the ISS. From what they have learned thus far, cargo and trash is transported between the ISS and Earth by SpaceX, a company owned by Elon Musk, the founder of the electric car company Tesla. SpaceX’s Dragon capsule is a spacecraft that brings astronaut trash, scientific specimens, and even the astronauts’ dirty laundry (which coincidentally acts as padding to protect the aforementioned specimens!) back to Earth to be picked up by the proper space agency. By studying these materials as well as footage from the ISS, Gorman and Walsh hope to learn how life on a space station is different from that on Earth.

Gorman has not only studied the ISS with Walsh, but has also worked independently to identify the materiality of the space race in space and to investigate how the push to innovate has permanently altered Earth and affected human relationships. Launch and testing sites for shuttles and missiles, and buildings and infrastructure for laborers, have left lasting traces on Earth’s surfaces. She argues that the placement of space infrastructure has relied on the exploitation of formerly colonized landscapes and places.

For instance, the UK built the Woomera rocket range in Australia after working with the Australian government. This rocket range featured “nine launch areas, workshops, instrumentation buildings, hangars, tracking and meteorological stations, and roads where none had existed before” (Gorman 2009, 137). Woomera, while described by the British government as a remote desert landscape void of people, was historically and contemporaneously occupied by Aboriginal Peoples. Aboriginals worked as domestic staff at Woomera rocket range and were warned of missile launches in the event they landed near their campsites or housing.

Thousands of historic and prehistoric Aboriginal artifacts canvas Woomera’s landscape despite its