Garbology at Northwest College, Wyoming

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1. Introduction
Northwest College (NWC) is a rural community college located in the Bighorn Basin of Northwestern Wyoming. There are around 2,000 full and part-time students at NWC, the majority of which live in one of 6 residence halls or two college-owned apartment complexes. Northwest College is embedded in the city of Powell which has a population of about 6,000 people. 25 miles to the southwest is the city of Cody, which boasts nearly 10,000 residents and is the major gateway to the east entrance to Yellowstone National Park.

Given his interests in recycling and archaeology, Associate Professor of Anthropology J. Gregory Smith has developed an ongoing project that involves conducting periodic waste stream audits on campus and delineating how much recyclable material is being thrown away with the regular garbage. The project’s primary academic goal is to better understand recycling behavior on campus. Participating students have gained practical experience in using the scientific method and a heightened awareness of the life cycle of garbage.

2. Literature Review
The scientific study of modern garbage is known as garbology and was pioneered by archaeologist William Rathje in the 1970s (Humes 2012; Rathje and Murphy 2001). A central axiom of garbology is that if you really want to know what people are actually doing (as opposed to what they say they are doing), one of the most objective ways to do so is to analyze their garbage. Not surprisingly, garbology has revealed that people of all social backgrounds consistently underestimate the amount of junk food and alcohol they consume and overestimate the fruit and vegetables they eat.

More recently, some archaeologists have taken the principles of garbology and applied them to where they work. In order to better understand the behavior of college campuses, Camp (2010), Muckle (2015) and others have initiated garbology projects at their home institutions. The Northwest College Garbology Project was launched in 2012 and has been the subject of public presentations at national and local venues (Smith 2013, 2016).

3. Methods
Every fall, Smith assembles a garbology crew (mostly consisting of NWC students eager for extra credit) to analyze one day’s worth of campus garbage. Donning lab coats and rubber gloves, the garbology crew then proceed to open up each bag of garbage and pull out all of the recyclable materials (Figure 1). The quantities of recyclable items like plastic containers and aluminum cans are recorded on a standardized form. All the different categories of recyclables are weighed along with the non-recyclable garbage (Figure 2).

Garbology sessions begin at 8:00 AM and all of the campus garbage from the previous day is analyzed by around 2:00PM. The last task for the garbology session is a thorough clean up of the area and hauling all the “rescued” recyclables to the Powell Valley Recycling Center.

4. Results
A total of seven garbology sessions have been carried out and now patterns in the data can be delineated. Taking into consideration all of the reasons that may cause the composition of garbage to fluctuate, it has been documented that about one third of all the items thrown in the trash by weight are recyclable (Figure 3).

By far the most common recyclable item that is being thrown in the trash is the ubiquitous plastic bottle. The data indicates that on an average day on the NWC campus, over 400 plastic containers are thrown in the trash, destined to be hauled to the landfill.

Projected over a 206-day school year, over 82,000 plastic containers wind up in the landfill because the NWC campus community is throwing these into the trash and not into recycling containers.

5. Discussion and Conclusion
What might be some reasons why NWC students, faculty, and staff are throwing hundreds of recyclable items into the regular trash every day? There are many obstacles to recycling at a small rural community college. One is political. As one of the most conservative states, many people in Wyoming equate recycling with liberal cities like San Francisco or Seattle and might actively resist recycling for this reason.

A more practical reason has to do with high transportation costs in rural Wyoming. For example, the nearest facility to NWC that recycles glass is in the Denver area some 400 miles away. As a result, the vast majority of glass at NWC winds up in the landfill because no recycling facility in the region accepts it.

Yet another reason is very practical. Until around 2010, many buildings on campus did not have any recycling containers in them. Now there are containers in every building but not in every room. There are no recycling containers outside the campus buildings. Thus, even for those individuals who want to recycle, it requires effort to carry recyclables to a proper container.

The data from the NWC Garbology Project is being used to actively improve sustainability on campus. One planned project is to apply for funding to acquire some Bigbelly waste stations to facilitate outdoor recycling. Bigbelly waste stations feature solar-powered sensors which communicate how full they are to custodial crews in real time. These will not only improve outdoor recycling at Northwest College but also streamline waste management operations and save the college money.

6. Bibliography
Camp, Stacey Lynn
Humes, Edward
Muckle, Robert
Rathje, William and Cullen Murphy
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