

The Role of Drones in Anti-Mountaintop Removal Activism

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ABSTRACT

This research project examines the usefulness of drones in environmental activism, especially within the fight against mountaintop removal mining in Appalachia. The paper examines the tactics of Coal River Mountain Watch and the Appalachian Mountain Patrol, anti-MTR activists that use drone surveillance to enhance their fight against this destructive practice. The use of drones increases the complexity of strategies employed by Appalachian activists and challenges many of the traditionally held, but continually critiqued, stereotypes present in Appalachian research. Beyond a deeper understanding of Appalachian activism, this paper investigates the ways in which knowledge production and epistemological assumptions are challenged by less costly and more accessible technologies such as drones.

KEYWORDS

Appalachia, Drones, Geospatial Knowledge Production, Mountaintop Removal Coal Mining, Resistance, Social Movements

INTRODUCTION

The application of small unmanned drones within geospatial technologies is quickly growing. Increasing numbers of researchers are utilizing these rapidly deployed aerial platforms to collect a wide range of geospatial data without some of the limitations associated with traditional methods of data collection such as aerial photography or satellite imagery. Drones provide the option of near-instantaneous operation, on-demand imaging and quick access to data for analysis or mapping. These characteristics make the use of these platforms attractive when examining environmental change or degradation. Academic researchers and natural resource professionals have been quick to adopt these devices as an increasingly important component in their toolkit for understanding complex environmental challenges. Along with the enhanced role that drones are playing in recent research, we are witnessing a rapid increase in their use by members of various activist groups, as a new strategy in the fight against numerous forms of environmental degradation. Not only does the inclusion of drones add a new facet to these spatially and politically nuanced social movements, but it also allows for a reconceptualization of how geospatial knowledge is produced.

This research project examines these two main themes: environmental activists utilizing drones to enhance their strategic operations, and how these emerging tactics contribute to the democratization of geospatial knowledge production. The paper explores these two themes by investigating the use of drones by anti-mountaintop removal mining (MTR) activists in the Coal River Valley of southern West Virginia. I should note here that the term drone, although potentially more controversy-laden than its counterparts such as UAV, UAS, or quadcopter, is purposefully chosen for this paper as it was the only term used or referenced by the activists I interviewed for this project. The use of these technologies

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by anti-MTR activists reveals a complexity in regards to strategies and operations of Appalachian resistance that has frequently been overlooked, while simultaneously democratizing the traditionally top-down nature of geospatial knowledge production. Qualitative fieldwork with anti-MTR activist groups utilizing drones, including in-depth interviews and participant observation relating to the use of drones, was completed along the Coal River in August 2018 and forms the basis for this paper.

BACKGROUND

Coal mining has a long and complex history in the Appalachian region. Beyond employment and economic opportunity, the industry has contributed significantly to the regional cultural identity. While market forces have reduced the role that coal mining plays in the economic landscape, thousands of families across Appalachia depend on it for their livelihoods. While the mantra of Coal is King still holds true for many across the region, Harry Caudill (1962, p. x) reveals that not all residents hold the industry in such high regard as he states “coal has always cursed the land in which it lies.” Many in the region share in Caudill’s critique and work diligently to resist the social and environmental complications associated with this extractive industry. Numerous, often overlapping, activist groups operate across the region to bring attention to issues affecting the places they call home.

Historically, most of the coal mining in Appalachia has been underground mining. For more than a century, sinking shafts deep into the ground was the preferred method of accessing the region’s rich supply of bituminous coal. While coal mining was foundational in bringing migrants and economic growth to the region, the numerous social and environmental challenges associated with Appalachia’s dependence on coal has been explored in great detail (Caudill, 1962; Gaventa, 1982; Eller, 2008). Surface mining has traditionally been reserved for the less mountainous parts of the Appalachian Plateau, such as eastern Ohio, where the terrain was more conducive to the massive dragline excavators frequently used in strip mining. Mountaintop removal mining is an innovation that allows surface mining methods to be implemented in the coalfields of southern West Virginia and other more mountainous parts of Appalachia (Reece, 2006; Scott 2010).

The practice of dismantling a mountain to gain access to the coal inside is controversial and polarizing. Mountaintop removal is economically beneficial to some groups. Mining companies benefit from high profit margins as the technique requires lower labor costs than other forms of mining. Heavy equipment manufacturers and operators benefit as well. MTR brings some much-needed jobs to a depressed region. However, the proliferation of this practice has also meant the loss of thousands of more traditional mining jobs and there are few other economic opportunities in the region. It is generally safer for miners than underground mining while it is simultaneously fraught with health problems for members of the surrounding communities. MTR supplies both domestic and international energy providers with a steady and relatively cheap flow of coal for the generation of electricity while it both degrades many aspects of the Appalachian environment and contributes to increased carbon emissions, with climate change possibilities that may have global implications. Mountaintop removal has become highly debated by activists, coal company operators, legislators, and researchers at varying geographic scales. Complex issues in the debate surrounding MTR include, first, the leveling of over 500 peaks throughout Appalachia, blasting off the mountaintops with ammonium nitrate fuel oil which cracks foundations of nearby homes and creates dust that pollutes the air. Second, the soil and rock from the peak, otherwise known as overburden (Figure 1), is then pushed into the surrounding valleys, creating “valley fills” that have covered over 2000 miles of streams throughout Appalachia and contaminated another 2000 miles, creating a polluted local water supply that many regard as disgraceful in 21st century America (Burns, 2007; Reece, 2007). Many of the environmental impacts of mountaintop removal are irreversible. Third, numerous public health issues result. Researchers have linked the impacts of MTR to increased respiratory diseases and birth defects. Officials have placed the public health costs of MTR at roughly \$75 billion per year (Ahern and Hendryx, 2012; Copeland, 2013).

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