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Technology Use in Outdoor Settings:

Management Problem or Not

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ABSTRACT

The use of drones has become increasingly popular with the tech-savvy people of today. Because of this, there have arisen issues with regards to that use and incidents that have occurred in the National Parks. Issues that have been reported because of drone use are: drones harassing other visitors, the noise associated with them, and wildlife being harassed in the parks. As such the National Park Service issued a policy memorandum, which banned the use of any unmanned aircraft use system wide. However, with new technologies like "selfie sticks" and Gopro videoing, there is a new aspect being introduced with regards to visitors and their activity goals. With these new technologies, managers may need to reevaluate the policies put in place. By looking at the pros and cons of this technology use, and understanding whether policies are needed, managers and visitors can find common ground for productive solutions to increase recreation enjoyment and still keep nature from harm.

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Introduction

Over the past few years, the use of new technology, such as drones, GoPros, selfie sticks, social media and other new technology has become increasingly prevalent in recreation areas. At the same time, there have been many issues that have risen from the use of these new technologies. The problems are made evident by some high profile incidents in the national parks, such as drone crashes, people being attacked by animals, and other visitor safety concerns. As a direct result of more people having access to cameras and an ever-present need to share adventures, there seem to be more and more impacts attributed to technology use. Should a manager who is charged with the protection of natural resources be concerned with influencing technology users in an outdoor recreation setting, or not? If so, what ways would be appropriate to influence visitors in outdoor settings to use their technology wisely and safely? One of the best approaches could be a mixed management strategy including a direct approaches such as regulations and indirect approaches like interpretive programs . By looking at both the positives and the negatives of technology use in a wildland settings, we can see what management actions will work better than others in the long run.

Background

In the past few years, drone technology has received increasing interest among users. Since their introduction to the market, there have been a number of issues that have occurred in the National Parks. These issues include, but are not limited to, drones harassing other visitors, and wildlife being harassed. In regard to the aircraft harassing visitors, there have been several reported cases of this in the parks. In an article titled "Drones Harassing Wildlife," a number of instances in which park visitors felt endangered by the aircraft were cited, especially on exposed

trails like Angels Landing (O'Donoghue, 2014). Another instance, at Grand Canyon National

Park, as reported by park officials, "in April [2014] visitors … gathered for a quiet sunset, which

was interrupted by a loud unmanned aircraft flying back and forth and eventually crashing in the

canyon" (National Park Service, 2014 a). And, yet, another incident in Zion National Park,

visitors reported the following, "a remote-controlled drone was flying close to the herd of

animals … The herd scattered at the approach of the device, resulting in several young animals

being separated from the adults" (O'Donoghue, 2014).

The National Parks are set aside as pieces of land which are to be protected from any

impairment of their resources. This is at the very core of where the park service comes from, ie

the Organic Act of 1916, which states that the parks are to be protected for now and future

generations (Wellman & Prospst, 2004)". On June 19th, 2014, the Park Service issued Policy

Memorandum 14-05 which implemented a system-wide ban on drone use in any National Park

(National Park Service, 2014 b). This system-wide ban was issued in large part due to the

incidents that were briefly described above, and the Organic act that allows the park to make

protect resources. This new technology is causing similar issues in the parks as the reasons that

caused the ban on drones. Take, for example, the incidents during the summer of 2015 in which

five people were attacked by bison while attempting to take selfies with the animals (Mullen,

2015). In a recent Nightline news report about extreme filming, it shows how these cameras are

contributing to individuals pushing the limits just to get an amazing video (Nightline, 2014).The

new report talks specifically about GoPro Camera System, used to shoot first-person perspective

videos. So managers have to ask themselves, are these incidents involving other technologies

similar enough to the issues that forced the NPS to ban all drone use within the parks, and if so is a ban on technology a wise decision?

The impacts to users with a management intervention

A sense of place, also known as place attachment or place bonding occurs when an emotional bond develops between visitors and an area. Attachment in the natural resource world is of great importance to users of a wildland setting. The attachment to the setting tends to lead people to action for a beloved place or landscape (William Hammit, 2015). Though the means of how this emotional attachment is formed varies from person to person, once it is formed, that individual will ultimately seek to have the same quality of experience again and again. Understanding the impact on technology users is key to a management decision, like the drone ban. With the drones, the NPS acted in response to what was deemed a resource impairment, which is well within the scope of parks to do. The ban on drones was considered a "foul" by the Park Service, according to a number of park users (Blankenbuehler, 2015). This foul can be tied back to a sense of place which drone users developed because of the use of their technology while capturing their experience. In the case of other technology use in the parks, individuals will experience a "place" through photos both during and after their experience (William Hammit, 2015). In any management decision, whether it is a ban or some other limitation placed on users, there will be users who would cry foul for the same reasons as drone use. This happens because of place attachment that was formed by a user during an experience. If a limitation was placed on GoPro's and selfie sticks in the National Parks, there would be much outcry by the people that use their technology to experience the parks.

However, management of wildland settings have another concern which could play into a decision about technology use. In the previously mentioned Nightline News report, GoPro users caught a bad situation on film. While the trio was filming extreme activities in a natural area with the hope of sharing their experience on social media, two members were badly injured and had to call in a rescue team for extraction (Nightline, 2014). This, as well as the incident with the woman being gored by a bison (Mullen, 2015), have a common factor suggesting that the technology used inspired these people to do more extreme stunts for the sake of the photos and videos they will acquire, thus putting themselves and others in harm's way. We know from the drone case that the NPS cited that one of the major reasons for banning of drones was the safety concerns related to their use and visitors' safety (National Park Service, 2014 b). With this in mind, managers of a wildland recreation site must consider if the issue is the technology, or the way this technology is being used. Could management achieve the same goals of protecting a resource and visitor safety without banning use in wildland settings? Yes, their goals could be achieved through effective interpretive programs influencing visitors' attitude and behaviors. Such programs could control negative interactions between technology users, other visitors, wildlife, and natural resources. These interpretive programs could also be combined with more direct management, such as fines or confiscation of technology, for users creating issues. This combined approach would limit the number of impacts while still allowing visitors to form place attachment through the lens of their cameras.

The people with new technology

So what are the advantages of these new technologies versus more traditional technology? The big advantage to both the selfie stick and the GoPro is that they allow an

individual to shoot photos and videos from a first-person perspective, unassisted. These new

devices have been extremely popular among users, as illustrated in an article on Forbes.com

about the technology company GoPro. The company's sales have more than doubled every year

since the camera was first introduced (Mac, 2013). The selfie stick is not far behind in its design

and innovation among users as it boasts similar advantages to a GoPro. If one were to take a trip

to a National Park, such as Yellowstone or Craters of the Moon, he or she would, more than

likely, see one of these devices in use. The devices are being used to capture people's experiences

in the natural world. When people get home, they can post the images of their journey to the

internet. The experiences with the natural world are a wonderful thing for people to reflect on

and to share. These reflections on the activity and the experience will ultimately help these

people form a sense of place with the wildland setting. When someone looks at the sheer

numbers of sales of these new devices, they can see how large of a scale it is. Then in

comparison to the amazing opportunity that parks have to play in helping people form a sense of

place through media; there are great advantages to allowing technology in wildland. The sales

numbers do not lie, as such there are many people who will want to use their new technology in

wildlands.

The headache of managing people and their new toys

One of the great reasons for the policy banning the use of drones was the dangers to

animal life in wild settings. Now that new technologies such as GoPros and selfie sticks are

causing visitors to put themselves and other visitors in danger, as well as animal and plant life,

there may need to be similar policies for these forms of technologies. One example of why this is

the case is an incident in Yellowstone involving a woman trying to take a selfie with a bison.

While trying to take the picture, the woman got too close to the animal, spooking it, and it charged and gored her (Mullen, 2015). This confrontation is actually two issues the fact that she put herself in danger is definitely a big issue, but if more people start toward repeating this same action, the animals may start leaving the areas where they can be seen, thus taking away from the natural feel and the natural life cycles within these wildlands. Looking back to the problem with the drones, occurrences like the one at Zion National Park, where the use of drones scared away herds of bighorn sheep (O'Donoghue, 2014), the actions taken by visitors because of these new technologies could have the same effect. As managers, the parks and forest services will need to look at the impact of the added dangers that visitors are putting themselves in and find ways to regulate a number of injuries due to the use of these technologies. The action will need to be more direct approach a opposed to indirect. Usually, the least invasive action necessary is the route managers would prefer to go, but the fact that it is putting wildlife in danger means that a more direct course will most likely be needed in order to deal with the threat to nature.

Conclusion

In conclusion we feel that a combined indirect and direct approach will limit the number of incidents that have occurred. Interpretive programs, such as how to use technology appropriately and fines or confiscation of people's devices that are using them improperly in wildlands would be a viable solution to this complex problem. By showing visitors how to conduct themselves around wildlife should help the most with the rising number of visitors using new technology. In reality, banning all new technologies in this ever evolving technological world would be nearly impossible. The right course of action would be to make sure that people recreating are able to make informed decisions and choose to both follow and set examples for

others as to how to treat nature with respect and awe. There are many positive benefits to the

user that come with the evolving technology. One of the biggest is the increased desire of the

public to be outdoors participating and using these new technologies. However, there are also

the consequences seen from those that use these new gadgets unwisely. These should just be the

exception, especially since, in the long run, technology will always continue to evolve, which

means managers should find ways to evolve with it.

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