

Drew Harmon

4/22/20

“The Final Critique”

While of course us, seeing as we study forestry, would love if there could be an infinite amount of jobs to upkeep urban parks and greenspaces, this is just unrealistic, due to things such as budget restrictions in hiring or a lack of focus or care from people higher up in city governments. This means what often happens is a lack of manpower in managing the plentiful acres and plants found in an urban forest. Luckily, technology is becoming a helpful tool for assisting urban foresters in managing greenspaces. After all, it is far easier to manage huge swaths of land if you do not need to physically be in all the locations being managed, and can use helpful tools like surveillance cameras or GIS to get a view of an area from a laptop. In addition, more technology has been developed to not only map or view green assets, but also to assess the health of trees without much damage. While most of this technology seems to only net positive results, some of it, like the use of cameras, faces controversy due to perceived invasions of privacy. In this critique I will be visiting the topic of technology in urban forestry management, and more specifically an article about Canton, Ohio's use of iTree and GIS to plan their urban forest, and NPR article on the use of surveillance in managing urban greenspaces and recreation areas, and a scholarly article on assessing tree health through sonic tomography.

The first article I read, titled “Canton, Ohio Uses i-Tree Tools to Fulfill USFS Landscape Scale Restoration Grant” covers exactly what the title tells you it will. After receiving a grant from the Forest Service, the city of Canton, OH, was tasked with using a budget of roughly \$330,000 to create an urban forest, planting trees along waterways and targeting low-moderate income

areas. The article is certainly a casual read meant to inform a broad audience of those curious about how a city turned themselves around to make a successful urban forest. It was very short and to the point, which I think helps achieve the goal of keeping it interesting to people casually reading. Personally, as somebody who wants to know more about how iTree works and hear more of the specifics and technical bits, I was a little disappointed. But, they do spend a paragraph on the 2nd page going over broadly what they did do with iTree and GIS, so that was interesting to read. Basically, the city of Canton, after receiving the grant, hired their very first arborist. This arborist used iTree to get the canopy and landcover onto a GIS map, then mapped out the areas that were to be focused by the grant, as well as traffic corridors. This is the main part of the article that's relevant to the use of technology, and it seems as though a lot of time was saved by the use of iTree with GIS, and that the plantings could be planned much more successfully and streamlined, while increasing convenience. Overall, I rate the article reviewed pretty highly, due to its easiness to read and broad appeal, and, while slim, it still did include something that people looking for more technical detail would find interesting as well. In addition to the article, I also rate iTree pretty highly in terms of helping urban foresters manage a lot of land- without iTree, the poor arborist would have to have spent a lot more time running around the town and reviewing areas on site, probably for worse results too. It can be said for sure that technologies like iTree and GIS mapping are improving the world of urban greenspace management.

The second article I reviewed is one put out by NPR titled "In More Cities, A Camera On Every Corner, Park And Sidewalk". This is an interview-style article, with the author having gone and spoken with people regarding their thoughts about surveillance at parks and public spaces, and anyone from random people to experts familiar with surveillance are interviewed. This makes the article both fun and easy to read, as in for a broad audience, but also very

informative on the good and bad sides of video surveillance and how it is perceived by officials as well as ordinary people. The site also includes an option to listen to the broadcast that the typed article is based on, and the listener can hear all the actual interviews being given. The audio portion is slightly different from the typed article but they cover the same general information, but what I liked about the option to listen to the article is that somebody could learn the information here even if they're busy doing other things. The gist of the article is that across many suburbs, small towns, and villages in America, there is an increase in the number of video surveillance cameras to monitor public spaces in event of a crime. Some people may not even be aware that these cameras are present. Others aren't bothered by them, having a mentality that only people who have "something to hide" should be worried. Then, there are others, who feel uneasy at the breach of privacy and the idea that somebody could be remotely viewing them at any given moment. Morals aside, what the cameras do open up is an ability to prevent crimes in public spaces, which when applied to greenspace management helps prevent vandalism of parks or important and significant plants in an area. What the article didn't touch on and can be a useful resource in the future for greenspace management is remote surveillance of urban woods and groves to monitor wildlife or tree health visually among other things. All in all, it was a very solid and easy to understand article that keeps the reader entertained, with an added bonus of having two ways to consume.

The third and final article takes us on a visit to Indonesia for a study on tree health of 345 trees around the city of Jakarta. While this is a scholarly article, I found it surprisingly easy to understand and a very enjoyable and informative read. However, it was more than likely easier for me to read due to just Monday having gotten background on sonic tomography, a method in testing tree decay that is used and discussed in this article. This is not a source I would recommend for a casual reader, only really for anyone who is interested in either the

general health of trees in Jakarta, methods for determining tree health, or common ailments that cause trees damage, all of which are discussed in the article. Again, this has by far been my favorite scholarly article and the easiest to read and comprehend of all the ones we've had to read for critiques, even if it is meant for a more intellectual and focused audience. My one complaint with it is a part where it states that they, in their trials for determining the health of local trees, identified ten common ailments they found in the trees... then they proceed to only list nine ailments, and the mystery of the missing tenth one is never resolved. The actual meat of the article is informative and relates directly to the topic at hand- how technology helps urban foresters manage their job more conveniently or even just more thoroughly. It discusses how commonly, visual tests are done to trees to determine their health, as one can usually spot fungi, signs of termites, cankers, dead limbs, or poor architecture. But now, in addition to visual tests, foresters and arborists can use what's called "sonic tomography" to monitor a trees health, or more specifically how much decay is happening at a specific point in a branch or a mainstem of a tree. This is done by putting in two metal stakes into a tree and then measuring how fast it takes sound to travel across the wood- the healthy, dense wood sees a faster travel of sound, whereas soft, decaying, or decayed wood sees a slower speed that sound travels. This is a prime example of smart technology being used to make it easier to find which trees need to be more closely monitored, making it easier to manage and spend time on places that need it the most. For example, the study found that 14 of the trees sampled have more than 50% decay, meaning they must be closely monitored and managed to prevent damages to property or people, and that 43 trees in the study are in a moderate condition, or between 50-80% decay, and may need to be watched more closely in the future. In the end, this was a superbly written scholarly article, and I applaud the author for not making me want to fall asleep while reading it,

and the information pertains directly to how technology can help urban foresters manage their greenspaces more efficiently.

All in all, all three articles I read were very well written and informative, and have greatly opened my eyes to how technology has improved and aided the field of urban forestry. That being said, there is still one main issue that arises from one of the methods used to increase efficiency, and that is the issue of privacy and surveillance cameras. I'm not claiming to have all the answers, but I do agree with those concerned with where this surveillance technology can go in the future. While the intentions behind them now are good, that does not mean that they always will be, and I fundamentally disagree with the argument that only wrongdoers need to be worried by increased surveillance. That being said, I do think they are and can be a useful tool in urban forestry. One thing that wasn't discussed in the assigned article is the potential to use them not to monitor places that have a heavy flow of people, but how useful cameras have been and can continue to be in monitoring wildlife habitats. For example, if you log into MDNR you can watch a nanny cam footage of a bald eagle's nest. This camera not only provides a fun, informative livestream, but can also help MDNR monitor the health and wellbeing of an important and threatened species. I also think that if we are to increase or continue the use of security cams, then there should be greater public involvement- afterall, it is the public's privacy that is on the line, and there should be protocol that if there is a camera that's sole purpose is to dissuade vandals and catch them once they act, then the footage shouldn't be able to be viewed until the crime happens, and reassure the public that the footage stored auto deletes after a certain time period. In the end, the world we live in now gives many opportunities to make urban forestry more streamlined and efficient, and while not all solutions are only good, they are all helpful tools to maximize our greenspaces and their potential and maintain happy, healthy urban forests.

Works Cited

Canton, Ohio Uses i-Tree Tools to Fulfill USFS Landscape ...

www.vibrantcitieslab.com/wordpress/wp-content/uploads/2019/08/Canton-Ohio-Uses-i-Tree-Tools-for-Landscape-Scale-Restoration.pdf.

Henn, Steve. "In More Cities, A Camera On Every Corner, Park And Sidewalk." *NPR*, NPR,

20 June 2013,

www.npr.org/sections/alltechconsidered/2013/06/20/191603369/The-Business-Of-Surveillance-Cameras.

Karlinasari, L, et al. "Assessment of Urban Tree Condition Using Sonic Tomography

Technology." *IOP Conference Series: Earth and Environmental Science*, vol. 203, Oct.

2018, p. 012030., doi:10.1088/1755-1315/203/1/012030.