Part 1: TrackMan

Since I was a little girl, I have loved the game of golf. My parents and older sister exposed me to the game at a young age and I have enjoyed playing it ever since. As a kid, I got excited just to see the ball fly through the air, but as I grew older, I began to realize how technical the game of golf is. Golf clubs have a very specific “sweet spot.” If the ball is hit a centimeter off of the center of the clubface, the shot can be dramatically impacted. I wanted my shots to be more accurate as I became more serious about the game. Therefore, I began to take lessons to improve my swing, so I could eventually lower my scores. These lessons were often filled with tips from my coach that I would use to practice for weeks. One way my coach helped me visualize the errors I was making was through a TrackMan device.

TrackMan is a launch monitor used in the game of golf to track statistics of golf swings and ball flight. After the first time I used this technology, I was completely enamored. Finally, there was a way for me to see, in numbers, the rights and wrongs of my swing. I no longer had to guess as to why the ball was going in the wrong direction.

The TrackMan device is an orange box that is set up directly behind a golfer and it is aimed at the golf ball. The TrackMan tracks ten numbers from every golf shot: smash factor, spin rate, launch angle, carry distance, ball speed, clubhead speed, dynamic loft, attack angle, club path, and face angle. Although this may seem like a very technical approach to looking at a golf swing, many PGA tour pros and golf coaches disagree. According to Geoff Shakelford from Golf Digest, “…in the right hands the tool simplifies the way players adjust their swings, makes practice sessions more efficient and breaks down longtime swing models by emphasizing swing path and face angle at impact.” The TrackMan was made
not to change swings, but to show real data on how the golf swing meets the golf ball. Rex Hoggard from the Golf Channel stated, “The litany of statistics the radar produces isn’t about preconceived notions of the classic swing, just hard undisputed data.” Everyone can find valuable information with the TrackMan, even though every coach has a different teaching technique. In return, this prevents players from making major swing changes just to appease a coach. According to Shakelford, “By figuring out what the ball is doing in reaction to the swing, any instructor versed in TrackMan no longer focuses on how a swing looks. Instead, the task is often about making minor adjustments to setup or ball position to maximize impact.” Instead of a player changing their entire swing, TrackMan allows people to view exactly where their swing is lacking. For example, TrackMan might show the club path is coming from the inside, allowing players to adjust and fix their swing until the club path is neutral. TrackMan is used by some of the best golfers in the world including Tiger Woods, Justin Rose, and Jordan Spieth, along with well-known swing instructor Sean Foley (Shakelford). Overall, the TrackMan is used and loved by many due to its simplification of the ever-so-complicated golf swing.

The TrackMan has impacted many people, from the average golfer to professionals on the PGA and LPGA tours. With access to a TrackMan device, anyone can analyze their golf swing, even without an abundance of knowledge for the sport. Professional golfer Charlie Wi stated, “When I got on the TrackMan it showed me my swing plane was a little too far in and out so I needed to change the plane a little. Even without a teacher if you have a TrackMan you can kind of teach yourself” (Hoggard). This means that golfers do not need to see their coaches as often, for a TrackMan device can help them detect the errors in their swings. The TrackMan does come with one setback: the cost. The machine is $25,000 for the average person, with discounts only for professional golfers (Shakelford). This limits the accessibility of the device, as the average person cannot afford it. Although many golf stores and coaches have TrackMan devices available, it still costs money to rent and use them. In the future, I believe TrackMan will find a way to lower the cost of the devices to make them more available to the
average golfer. I also believe TrackMan technology will become even more precise and will begin to track more statistics on each swing. With the technology of TrackMan, the game of golf has become less about the look of a swing and more about numbers. This will only be more prominent in the future. Despite the cost, TrackMan devices can be found at golf course around the globe because of their innovative technology.
Part Two: *The Office*: Season 6, Episode 26, “Whistleblower”

*The Office* is an NBC sitcom about a boss, Michael Scott, and his employees. Michael Scott is the manager of the Scranton branch of a paper company in Scranton, PA. In the sixth season of the show, the former Dunder Mifflin Paper Company is bought out by a company named Sabre, with southern woman Jo Bennett as the CEO. Sabre offers more than just paper, they also have printers. Towards the end of the sixth season, the company discovers that their printers have been catching on fire, causing damage to the machines and their owners. In the twenty-sixth episode of the sixth season, Jo Bennett is trying to discover which employee leaked information about the printers catching on fire, as Sabre is experiencing bad publicity from the defect. Andy Bernard, an employee of the company, is the main suspect as he was the first person to know of the defect. As the episode progresses, more and more employees (Darryl Philbin, Pam Halpert, and Kelly Kapoor) confess to Michael Scott that they may have been the “whistleblower.” Jo Bennett has an IT employee named Nick hack into everyone’s computer to see if they potentially leaked the information. Although the information Nick finds does not help with the investigation, it reminds the employees of Sabre that the information on their computers can be looked at by Sabre at any given time. The episode ends with former Dunder Mifflin CEO, David Wallace, confessing that he leaked the information to the press. This episode of the office highlights the use and dangers of printers in our world today.

Printers are a technology seen in most public settings. From schools to libraries to hotels and homes, printers are not uncommon in society today. Although some may not be able to afford their own printer, printers can be accessed for free (or little cost) at many different stores and public facilities. In *The Office*, many people have access to Sabre printers, including children at a local school. Despite the fact that purchasing a printer can cost a few hundred dollars, they are often accessible to everyone free of charge or for a low cost. Printers can be purchased through many different big-box retailers and office supply stores, making them extremely easy to find. The technology of a printer allows anyone to transfer
an online document onto paper. The printer is used for many different reasons from professional contracts to coloring books. The printer makes it easy for information to spread. For example, without a printer, books and newspapers would not be as easy to access, which would result in a decrease in public knowledge. In The Office, the printer is a product Sabre sells to increase profits, but the company also often uses the printer to print, scan, and copy documents. However, in the show, the printer brings up a bigger issue: safety. The fact that the printers are catching on fire causes troubles for Sabre. Not only is the company getting bad press, but they are also putting lives on the line. Although the concept of the printer is ethical, in the real world, the printer can be used for unethical purposes. According to Shize Shang, Nasir Memon, and Xiangwei Kong, authors of EURASIP Journal on Advances in Signal Processing, “Technological advances, however, have made the printed document easy to modify for malicious purposes.” For instance, one may use a printer to forge documents or produce counterfeit money, both of which are illegal. In the show, the printer is making the lives of the employees more difficult because they are focused on how to fix their reputation after bad press, as well as the issue of how to fix the printers so they no longer catch on fire. In real life, the printer makes life easier for many students, businesses, and employees. The easy ability to print, scan, fax, and copy documents make the printer a staple in many homes and offices. The printer has evolved so much in the past, and it is continuing to evolve to this day. From the printing press to the modern printer to 3D printing, the printer has evolved so much. However, with the increasing use of technology, the printer as we know today might begin to diminish from society. Now documents can be viewed and signed online, which itself drastically decreases the need for a printer. Also, with more environmental concerns, people are beginning to use less paper to save trees. The printer has been used widely in the past, but society now has less of a need for the product, which has decreased its use.

All in all, the printer is used both in The Office and in the real world today. Printers are widely used throughout society and have been used in the past. The printer is mostly used to print documents
from the web, but can also be used to scan, copy, and fax documents. Not only has the printer evolved in the past, but it is continuing to evolve in the future. The printer is an ethical invention that can be used for unethical purposes such as forging documents. As society makes a move to become more “paperless,” the printer will become less of a need. As seen in *The Office*, the printer is an important part of the workplace and is often used in the real world today.

