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Balancing the Pros and Cons of Automation in the 21st Century

I. Restaurants and Bars

A. Costs

Automated service is leading to more cost effectiveness for business. Restaurants such as McDonalds and Wendy's have put order kiosks into some of their restaurants and other chains such as Chilli's and Applebee's has implemented tablets on tables to allow for more efficient and cost friendly to have order go directly into the kitchen or bar.

In order to help combat the cost of hiring fast-food workers, one McDonald's in Arizona is going completely automated. The restaurant will have a small team of human employees to ensure that the robots are running correctly and that supplies are stocked but, otherwise it is all automated.

B. Staffing

One restaurant, Eatsa, located in California which serves quinoa bowls, is almost entirely run by machines. Customers have little to no interaction with actual employees. Customers place their orders through a computer, which takes the order and handles payment. Even when customer get their food, it is dropped down into a box, which is blacked out. Customers are not meant to see the kitchen staff. Keeping costs on payroll and real estate low, allow them to provide food faster and cheaper, which bowls costs \$6.95. While it may appear that the use of automation will ultimately reduce the amount of jobs available, Mr. Frieberg, the restaurant's founder believes that "Eatsa could also create new jobs . . . like building automated machines and software systems — or growing quinoa."

However, staffing cannot be completely reduced by the use of machines. The use of machines makes ordering more efficient, which will result in orders being fired into the kitchen at a faster rate. If a restaurant wants to keep up with the fast-paced ordering system, they will still need a full team in the kitchen to keep up. Automated order kiosks are a means of redistributing labor as opposed to replacing people with machines.

One place where these have been successful, without staff cuts are at airports. Company, OTG, has 1500 devices in use between JFK and LaGuardia airports. The use of these devices has lightened the responsible of wait staff allowing them to focus more on greeting customers and helping them with the ipad use. One drawback however, is human error, while the systems are designed to eliminate error, people sometimes do not get what they have ordered and the system is not always easy for people to understand or use.

C. Inventory:

Bars and restaurants can also use this new technology to better keep track of their inventory. Radio Frequency Identification technology, or **RFID**, can help employers track assets, monitor employee performance, even regulate customer payments. With a device that measures inventory, it is also easier to track customer preferences and determine what is or is not selling in a business.

The use of “RFID Systems will allow you to generate management reports that provide detailed information on each assigned asset, help monitor employee performance, and personalize the experience for your guests.” In a particularly relevant example, RFID technology can be used to cut the losses in product associated with draft beer by 20%. With sensors that measure the pour, there is less lost product. And, all of this measuring complies to form a daily report, which can be used to analyze losses.

Cite: <http://gaorfid.com/bars-and-nightclubs-rfid-systems/>

D. Control/Self-service (dram shop)

One company, “Pour my Beer” has opened several self-service bars in over 200 restaurants and bars across the country. One mechanism that they have employed to help control the rick involved with self-service is the use of automated wrist bands. According to the company’s founder, each wrist band when held up to the machine gives 32 ounces or two beers at a time to one person. If a person wants more to drink they need to reactivate their bracelet. According to Goodman, the machines have made them more efficient and they are making more money on beer sales. However, people will still need to watch out for underage drinking when the wrist band is purchased.

E. Customer Preference does not equal success

Another reason for this upward trend is the customer preference to avoid human interaction. Customers enjoy the speed, accuracy, and convince of touchscreens. However, despite the positive feedback from consumers, the type of automation does not always work. For example, restaurants that have complicated menus or menus with require “hands-on” preparation, such as making biscuits or complicated burgers may find it difficult to implement the system. And any restaurant that requires table service will still need weight staff.

One restaurant, Yo!Sushi, has experimented with drone service instead of waiters but the results have currently been unsuccessful. The drones can only deliver a few light items, and often times the food item doesn't make it to the table. The drones crash into table legs and struggle to hover. Part of this difficulty, is that the drone was operated by someone who inexperienced in operating such crafts and had difficulty maintaining control of the device once it is in the air.

II. The hospitality Industry:

A. Phone Automation with Alice

Alice, is an automated program which connects Hotel guests, to staff, and concierge. However, the system is not perfect, and some general managers feel that its use hinders their ability to do their job.

One of the pros of using this system is the integration of task management. One General manager for a Hotel in New York stated, ““This increases the productivity of the service that our front desk provides to our guests.”

Some of the cons include, the automatic settings not being adjustable to the wants and needs of guests. Once General manager stated that guests have been frustrated with automated lighting. He stated that the “technology that tells you when someone walks out is not where it's supposed to be. Sometimes a guest will be quietly working in their room and the lights will go out and piss them off.”

When it comes to actually checking into hotels, one general manager felt like it should be option for guests, but not the only option.

Much like airlines, imagine being able to walk into a hotel, scan your credit card, and be given an access code to your room without ever speaking to a person. One New York City Hotel, Citizen M, has done just this. The hotel offers “offers self-check-in at welcome kiosks in the art-filled double-height lobby staffed by friendly hosts.” But this is not a luxury hotel, almost all the rooms are identical and made to cost-friendly. But this hotel is truly dedicated to its tech-savvy image, reservation can only be made online.

B. Keyless Access to Your Hotel Room

Multiple hotel chains have begun using “keyless” access for guests, which eliminates the need for guests to keep track of plastic hotel room keycards. There are different apps available for use. One example is the Starwood Preference Guest mobile app. With the app, “[o]n the day of their stay, guests will receive an update on when the hotel room will be available along with a room number. Once the room is ready, guests can skip the front desk, head directly to the room and open the door with the phone via a Bluetooth connection.”

The Hilton Hotel chain uses another app, exclusively available through their loyalty program app, which allows guests to pick their room much like they would pick out a seat on an airplane. The app works through a Bluetooth connection with a guests mobile app. And they do not need to hold their phone up to another device but rather need to push a button on their phone that unlocks the door to their room. This feature allows hotel guests to unlock their door within 5 feet of it or from within it for room service.

This type of application also prevents several safety questions though. If it is well known that this device is used, then what is to stop people from pretending to be room service in an attempt to get into the room of another. Also, in the event that someone's phone dies, they will still need to go down to the concierge desk. Geraldine Caplin, the Vice-President of and global head of digital at Hilton Worldwide, stated that the app is safe but did suggest that guests use passwords to protect their phones for when they are not on hotel property.

C. Hacking the system

Despite the efficiency, hacking into these automated systems is something to keep in mind. One hacker, Jesus Molina, while staying at the St. Regis in Shenzhen, China, discovered that he was able to “take control of the thermostats, lights, TVs and window blinds in all of the hotel’s 250-plus rooms, as well as alter the electronic “Do Not Disturb” lights outside each door—all from the comfort of his luxurious bed.” At the hotel, every guest is given a ipad with a butler application, but guests make the mistake of thinking that they are using secure network when they are not. Mr. Molina even said that he did not have to be in the hotel, he could have done it from any location. Further he stated that it would only take him a day or so to get control over all of the rooms in the hotel.

D. Reliance on automated feedback

The industry can even now on electronic feedback, which consumers can then use to pick which hotel to stay at in the future. One such program is called “Trust You.” Trust You, works to maintain communication with guests from booking to checkout. Hotel employees can use the system to message their guests in real time. The system also allows the hotel to get feedback quickly, so that they can work on any changes that are negatively affecting a guest’s stay with the hotel. The more people who post, the more feedback and exposure a hotel gets.

However, the human element of this program cannot be ignored. The program will base its data off of what people put in, which may not always be accurate or truthful. For one guest waiting 5 minutes for a new pool towel may be fine, for another, it could be outrageous.

III. Retail industry

The retail industry has also made use of new automated technology.

A. Making Gold

Automation in the retail industry, has one main purpose, to make the business more profitable. Utilizing this new type of technology can reduce cost, improve customer experience and keep better track of inventory. The Starbucks Order & Pay App is just one example of an app used by Starbucks customers. The app allows people to pre-order their beverage and skip the hassle of waiting in long rush-hour lines. Automated emails are also used to acknowledge online orders, send discounts, and coupons to customers. 7-Eleven offers different deals and discounts based on weather and location, and it is “heavily depend[ant] on automation.”

Such devices are being used by small and big businesses alike. With customers changing and the way people are shopping changing, traditional advertisements and promotions are no longer as effective as they once were. Automation changes this and this the new way to increase sales.

B. Inventory Accuracy

Automation has also increased the accuracy of information that retailer get regarding their inventory. For example, many companies who provide utility service have turned to automation to help ensure they always have what they need to complete a job, but not too much extra inventory. Paper updates take time, and are dependent on accurate human reporting, which affects accuracy and the time efficiency. Service lists include staff, vehicles, and inventory, and if the inventory is reported correctly, it makes the difference between a speedy completed job in one trip or potentially over several trips, which increases costs.

Use of RFID technology, which uses bar codes, is easier to keep track of than handwritten inventory sheets, which can be entered incorrectly or misread. Not only does this technology make inventory easier to keep track of, but due to its speed, puts in faster orders for replacement parts and can automate bills for customers faster.

IV. Employment Issues

A. FLSA & Wages

Currently, the federal minimum wage is \$7.25 per hour. However, several states have minimum wages that exceed this amount. For example, in New York and California, the minimum is growing to be gradually raised to \$15 per hour. This could lead to a greater reduction in the work force and a heavy reliance on automation to save on labor costs. According to the California Restaurant Association, the raise in the minimum wage will create “undesirable options, including cutting staff, raising prices and adopting automation.”

Professor Graham of Duke University points to Amazon, as an example of a company that continues to add warehouses to its flock but hire less and less employees. And, this increase is not just going to affect low-income positions. A recent report put out by the White House “found that people earning between \$41,000 and \$83,000 (\$20 to \$40 an hour) face a 31% median probability of being replaced by automation.” Professor Jones, an assistant professor at the University of Cincinnati, breaks it down to basic arithmetic. If it is cheaper to hire people than switch to automation, businesses will not switch, however, if hiring real people becomes the more expensive option than companies will make the switch.

Ed Rinsi, the former President of McDonald’s stated that a raise in the minimum wage to \$15 an hour, would lead to greater automation within the company. In relation to the Fight for \$15 protest, he went so far as to say, “[w]hat they’re really demonstrating for is accelerating the date at which their job disappears to a machine.” At first glance it appears to be a harsh view but it is a reality that workers may soon face in the dawn of automation age.

Mr. Rinsi witnessed all sorts robotic technology to be implemented into the restaurant industry, at the National Restaurant Show. He also commented that the use of these machines in Europe is already the norm. In 2011, McDonalds order 7,000 kiosks to replace entry-level employees.

B. Automation Equals Better Record Keeping and Less FLSA Issues that Could Lead to Multi-million Dollar Law Suits.

McDonald’s just entered into multi-million dollar settlement, which may have been avoidable had the store utilized automation in their restaurant. The price tag for not using it, cost MdDonald’s \$3.75 million in a settlement over labor law violation by one of its California franchisees. Lawyers represented about 800 employees. \$1.75 of the total was awarded to plaintiffs as back pay and the other 2 million was in legal fees. This lawsuit comes in the midst of another lawsuit dealing with whether or not McDonald’s is a joint employer of franchise workers.

McDonald’s was accused of violating California law for “failing to pay overtime, keep accurate pay records and reimburse workers for time spent cleaning uniforms.” Another part of this settlement is requiring McDonald’s to train the Smith family, its franchisee, on how to “use [the] corporate software designed to ensure compliance with California’s uniquely strict employment laws.” Whether the franchise owners of this McDonald’s want to or not, they will be shown how to utilize this technology, and hopefully avoid such errors in the future.

C. Human Resources

Even Human Resource Departments have begun to utilize automation. Some examples of tasks that can be automated include: hiring, firing, leave requests, time sheets, and performance appraisals.

V. Privacy Concerns

One of the major concerns with automation within any industry is privacy. In a system that can be hacked or only accessed when a building has access to power, how can companies and employers ensure that the information that they have is kept safe.

With Big Data comes big risk. It has happened to everyone. You are searching for a birthday gift for a friend or family member on amazon, and the next time you log onto social media, all the ads have changed to correspond with your recent search history. Use of such information can be used to discriminate, create breach risks, eliminate anonymity, and the government will likely be exempted. For example, according to the Electronic Privacy Information Center,

[t]he use of predictive analytics by the public and private sector ... can now be used by the government and companies to make determinations about our ability to fly, to obtain a job, a clearance, or a credit card. The use of our associations in predictive analytics to make decisions that have a negative impact on individuals directly inhibits freedom of association.

Customer loyalty could also be destroyed if a company leaks all of a customer's private purchase information. This has already happened to Target, Home Depot, P.F. Chang's, and even eBay. The recent hack on Sony led to the leaking of unreleased movies and the private employee information.

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