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Religion in the Virtual Age

Final Paper

Smart Cities

The evolution of technology has told the story of the evolution of how humanity has lived, marking the changes from hunter-gatherer to agrarian societies, from oral to literate cultures, and from localized to globalized communities. Smart cities stand as yet another technology with the opportunity to dramatically change how we think of ourselves and how we interact with the people and world around us. This paper will examine the new opportunities presented by smart cities and what life might be like for an individual living in one. This discussion will raise several questions of the nature and necessary consequences of such a life.

To begin our analysis of smart cities and their implications, we must first understand what a smart city is and what makes it "smart." Ever since the introduction of smartphones, more and more devices have been labeled "smart" based on their ability to communicate with other devices and use a variety of data to complete tasks. For example, a smartwatch, while looking and feeling like a watch, can do far more than tell time. It can also be used to set alarm reminders, track a user's physical activity, and display email and text messages. To complete these tasks, the smartwatch will connect to the user's smartphone, making data shared and accessible in whatever way is most convenient for the user. These wireless connections across several devices have formed a network known as the Internet of things.

The Internet of things stands as an important step in wireless communication and the history of technological evolution as it has allowed for unprecedented levels of interconnectivity

and new ways of approaching any number of tasks. As access to the Internet has become more widespread and faster, its usage has expanded beyond conventional ideas of human-to-human communication to include devices in the conversation. Appliances and devices no longer have to rely solely on human input to operate effectively, but can instead interact with one another for input or anticipate an event based on past data. As a result, smart devices can be in almost constant use whether or not the human user is conscious of this activity.

Smart homes provide good demonstrations of some of the power and possibilities of the Internet of things. By connecting lighting, heating, security, and entertainment systems to a central "assistant" device, a user can easily activate different devices and their functions with simple voice commands. The whole system can also be designed to work together, without the need for continuous commands. For example, a security system could trigger lights and music to turn on in the house if suspicious activity outside is detected while the owner is away. This type of communication between devices and streamlining of ordinary tasks shows just how smart networks of devices can be. However, connecting a relatively small number of devices in a home setting is just the beginning of what is possible with the Internet of things.

The rollout of fifth generation, or 5G, wireless networks in cities around the world has opened up countless opportunities for a much broader Internet of things. Since 5G networks can transmit massive amounts of data at speeds faster than ever before, thousands of devices can now be connected to share data with each other simultaneously. This means that a single network of smart devices can encompass much more than a single building. Rather, all the devices in a neighborhood, or even a whole city, could be in constant communication to create a new way of living in a smart city.

In a smart city, cars, lighting systems, utilities, and more could all be interconnected so that no one part of the city's life is isolated from the others. Every device in the city would be designed for efficiency and self-regulation with an end goal of better quality of life for its inhabitants. Cars, perhaps self-driving, could know the positions, speeds, and destinations of other vehicles to optimize the route they take and find the best available parking spot. Lights could be dimmed or brightened to an appropriate level based on crowd activity near them. A person could be informed of a sale on an item they want as they pass by a store and then checkout without needing to wait in line at a register. Emergency responders could know about incidents much more quickly and be given priority on their route to arrive as soon as possible. These are just some examples out of a plethora of possibilities, and when considered individually they may seem like small changes to the norm of city life today. However, when they all come together, along with countless other possibilities that will come about with further innovation, the result is a lifestyle largely managed by technology. Although the technology may not be thought of as the central aspect of any individual's life, it will permeate just about every aspect of a person's day so that being disconnected would become unviable in such a city.

The ubiquitous presence of technology in smart cities certainly raises questions about how it may affect aspects of human life that are traditionally thought of as removed from or only marginally connected to technology. Recreation is one such area, since many people today view recreation as a time "unplug and unwind" from their usual thoughts and concerns which are often reflected in their devices. However, there are already plenty of recreational activities that make use of technology, such as streaming services to watch movies and listen to music. These are effective not only because they are almost constantly accessible, but also because they interpret user data to create a smoother experience, even suggesting to the user what he or she might want

to watch or listen to next. Connecting recreational devices and services to the other devices in a person's environment could lead to recreational activities becoming even more targeted toward specific individuals at specific times based on a variety of data points drawn from various aspects of their life rather than past recreation data. In addition to making recreational technologies more predictive, recent developments in virtual reality could make a wider variety of recreational activities available to people. Rather than watching a sporting event on a television, a virtual reality headset could make a person feel as if they are in the stadium where the event is taking place. Foreign countries and historic sites could be brought to life in a person's own living room. Although these may not exactly replicate the experience of being somewhere else that many find so exciting and refreshing, it could still produce the sensation of getting away even as the user stays in the environment of the smart city.

There could also be interesting new possibilities for worship and religious practice in the context of a smart city. Many religious groups and institutions already offer online resources to facilitate prayer, and the recent coronavirus pandemic has caused many people to attend worship services in virtual spaces rather than physical buildings. These kinds of resources may be especially attractive to residents of a smart city, as it would allow them to keep some degree of religious practice in their lives without having to go too far from home, since it seems unlikely that newly developed smart neighborhoods would budget much, if any space for religious buildings. While online religious gatherings may not be able to replicate the experience of worshipping in person with a community, the shared experience of worshipping online could give rise to a new type of religious community, one that is not tied to a particular culture or geographic region. Religious institutions also have the opportunity to innovate their approach to technology and its integration into worship. If the growth of smart cities furthers the decline of

participation in religious institutions, new methods of using technology will become necessary if a religion is to survive and expand. Since religious practice and worship thrives when it helps the faithful to better understand themselves and the world around them, those who design religious experiences for technology-dependent communities must understand the kinds of people who will live in these communities.

Residents of a smart city, who we might call smart citizens, will likely have some characteristics in common. A smart citizen would have great faith in technology and its ability to improve the quality of life for its users, whether for its ability to save time on mundane tasks, to instantly communicate with others around the world, or whatever else. Additionally, a smart citizen would see the numerous possibilities opened up by the profound levels of interconnectivity offered by smart cities. Nothing would serve one single purpose for them, but rather would be part of a larger network that affects every part of their life. Similarly, a smart citizen may see their own life as a necessary part of the life of the community. Their information and habits would be recorded and potentially shared with others in order to make the city operate for the benefit of all residents. However, they may also view the community in a more utilitarian light, existing so that their own life may be more pleasant. Finally, a smart citizen would likely be interested in living with as few interruptions or variables to worry about as is possible. When little nuisances and unpredictable elements are eliminated from life, a person can devote more time and energy to the things they have a particular interest in.

With these characteristics in mind, we can now imagine how religions could best serve smart citizens and help them to ask and answer lingering questions they may have. For example, the sharing of one's personal information with a large group of people would likely give rise to questions about individual versus communal identity. Worship services could draw on

interconnectivity to emphasize the connections between individuals and God and show that an individual's life on Earth is not disconnected from the rest of time and the cosmos. In order to be effective in their ministries, however, religious practices would need to be understood as a necessary part of the smart citizens' lives so that it does not become compartmentalized as a distraction from the rest of their lives. Alternatively, a religious institution may find more success if it advertises itself as a distinct break from the normal flow of life in a smart city, emphasizing disconnection from devices, finding grace in interruptions, and valuing what can be done without the help of the latest technology. Only time will tell which strategy will be most effective for ministering to the needs of smart citizens that cannot be met by technology alone.

There are plenty of other questions and issues at stake in the development of smart cities. Many of these questions are very practical in their nature but point to larger issues of what we prioritize and value in our society today. For example, one must ask whether smart cities will be public or private ventures. As a public venture, more can be done to ensure that the city is serving the needs of all its residents, but such a venture could face much more red tape in its growth. On the other hand, a privately owned smart city could accelerate its own growth, but it could also end up neglecting the common good in its race to be the next big thing. Along similar lines, we must also ask who will get to be residents of a smart city. Although we listed characteristics of smart citizens, it is unclear whether everyone who lives in a smart city will have the same amount of agency in determining where they live. Smart cities could end up being communities of millionaires who simply buy their way in or force those who do not have the means to move to adopt a new lifestyle whether they like it or not. In the event that people of all socio-economic classes live in the same smart city, will those with more money and influence

receive certain privileges or special treatment, for example in emergency situations? How will our own biases affect the algorithms of the system, giving it biases of its own?

Whatever the makeup of the population, smart cities may present new challenges to governance. Currently, some smart cities are being developed as neighborhoods within a larger city that is not yet capable of running as a smart city. In such cases, the needs and capabilities of the smart community will differ from the rest of the city and therefore require different treatment in government. Perhaps these communities will form their own governing bodies that are ultimately subject to regulation by the city, state, or even federal government. These bodies could use the data at their disposal to make decisions in ways that depart from traditional politics, which could be promising while presenting new challenges. Even if the government of smart cities was to be more or less self-contained, there would still be interaction with and thus consequences for other cities and areas. Cities without smart capabilities may face decline. The gap between urban and rural cultures would be exacerbated even further than where it is today. Thus, the questions regarding smart cities would have to be faced not only by those in smart cities, but by everyone else as well.

Those charged with the oversight of smart cities would have other practical issues to worry about as well. With massive amounts of data in constant transmission, there would need to be many safeguards for the security of the individual's information and checks on how it is being used. A single hacker attack could lead to the entire city shutting down or huge leaks of personal data if security is not handled properly, and it is not clear yet if a high enough level of security can be ensured to make citizens comfortable with such large amounts of their data being used and shared. Additionally, with technologies to eliminate many of the mundane tasks of day-to-day life, we must also consider how smart cities will affect the job market. Many positions could

be made obsolete, and while new positions to oversee the technology might be created, those positions may require more education than most people could reasonably afford. This would also force us to examine more closely the role that work plays in our sense of identity and life in general. As more jobs move towards automation, there must be more reflection on this issue and preparation for a society with changing ideas of what work means and provides.

The development of smart cities raises several other questions for our reflection. With hundreds of devices using data to make decisions, we must consider to what extent a person's identity, needs, desires, and challenges can be quantified into data. If not given proper consideration, individual identities could be reduced to data points that simply help the system operate, rather than as unique persons whose well-being is the ultimate goal of smart city development. Conversely, we could also examine to what extent devices can process and judge qualitative data. If algorithms could be developed that better handle the nuances of individuals, how long will it be before those devices and algorithms are viewed and treated as individual intelligences themselves? Certainly they will existing alongside humans in a smart ecosystem in which both sides mutually act as agents and play crucial roles in the life of the community. One might also examine the issues that smart cities and their residents will face and ask whether they reflect human needs inherent since birth or more recently manufactured needs that come about with the proliferation of technology. For example, one might consider whether or not the right to internet access has become a basic human need and right. While not necessary for a person's survival, reliable access to the internet is becoming increasingly important for work, to acquire other basic human needs, and to connect with others. How, then, should governments approach this issue, and can they do so without neglecting other issues, such as the need for clean drinking water? Finally, as internet access penetrates more of the world and smart cities present the

opportunity for unprecedented levels of connectivity, it must be asked whether such levels will be found useful or desirable once they are enacted. As mentioned in the discussion of worship in smart cities, might it be the case that we will always desire some degree of separation from our devices or at least a few interruptions to our daily routines? It may be the case that, as has happened with other technologies, smart cities will not be all they are being promised to be, or that they were better in our imaginations than in practice.

Smart cities have the potential to be the next big step in the evolution of human life alongside the evolution of technology. By offering unprecedented levels of interconnectivity with our devices, smart cities could become areas in which the "life" of technology is considered as similar in importance to human life. Because many of the opportunities that smart cities provide will be new to everyone, careful and constant examination of their consequences and reflection on how they will affect us as individuals and as a society will be necessary as their development moves forward. No matter what the outcome of the implementation of smart cities, they certainly provide us with many avenues of thought on where our relationship with technology is leading and its implications for us.