**The Influence on and Response of The Church in Data and Technology**

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IDS-499-Senior Interdisciplinary Studies Project

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January 5, 2024

The Bible calls all believers to spread the Gospel. Christians are called to share the Good News for “How, then, can they call on the one they have not believed in? And how can they believe in the one of whom they have not heard? And how can they hear without someone preaching to them?And how can anyone preach unless they are sent? As it is written: “How beautiful are the feet of those who bring good news!” (New International Version, 2009, Romans 10:14 – 15). The Good News of the gospel is powerful and life changing. Believers share the gospel in many ways, by their actions, words, and life decisions. The church has a big part in the spreading of the gospel. The church is all the believers under Christ. However, we often refer to the church, as the local church, the entity of a building, pastor, and congregation. The local church is instrumental and important to the faith. The local church is a gathering place for believers to worship, hear the Gospel, and fellowship with other believers. Also, it is a place for unbelievers to hear the Gospel and see the Gospel lived out. Therefore, in this call to share the Gospel, and the local church being a foundation for such things. We can use tools and technologies to help churches prepare and be planted to fulfill their role in communities as per the Bible’s teachings. Churches play vital roles in communities for believers and non-believers. Looking further into data and data science we can see trends and patterns to best help churches, pastors, leaders, and believers effectively spread the Gospel throughout their communities.

The world has become saturated with technology whether we like it or not. In corner we look, we will see technology and its effects in our face. When we shop, we tap our debit card, when we check our bank accounts, we use a website. Joseph T. Cochran, professor of history at Wheaton College, says “The fin-de-siècle of the twentieth century ushered in the primacy of data.” (Cochran 2020 p. 18). Some would even share thoughts that technology is having serious effects on people’s theology and worldview. If one can merely turn to data and technology for most things in their life, we can easily turn from the divine truth. “Just as God revealed Scripture from the clouds above, people turn upward to where data is stored in the digital cloud. Rather than turning to divine truth, people frequently rely upon empirical data to ask complex questions about meaning and life and to handle those everyday questions.” (Cochren, 2020). “Computer scientist Allen Downey has examined the connections between Internet use and religious affiliation. Using data from the General Social Survey, Downey shows that Internet use decreases the likelihood of religious affiliation, while increases in Internet use since 1990, “account for about 20% of the observed decrease in affiliation” (2014:1).” (McClure, 2017). There is serious concern for the effects of technology in the spread of the Gospel, health of our well-being, and infiltration of our lives. Technology and data have brought new mediums of entertainment, allurement, and knowledge that are alarming and concerning.

The concern with technology is being noticed in a negative regard. However, one would seem technology was supposed to be for the betterment of society. After all, we enjoy the convenience of searching a YouTube video for how to fix our car or being able to easily apply for a car loan online. Today, data is so easily attainable and desired. As Joseph Cochren pointed out, look at how we viewed data in the midst of the COVID 19 pandemic with a quote from Dr. Deborah Birx during and interview with the Christian Broadcast Network, “What the president has asked us to do is to assemble all the data and give him our best medical recommendation based on all the data…This is consistent with our mandate to really use every piece of information that we can in order to give the president our opinion that’s backed up by data…He’s been so attentive to the scientific literature and the details and the data…I think his ability to analyze and integrate data that comes out of his long history in business has really been a real benefit during these discussions about medical issues because in the end, data is data.” (Cochren, 2020). Humanity likes data, and the clarity and certainty it gives. This isn’t wrong either; God gave humanity brains and technology to use. However humanity is also stained and tainted with sin and therefore can abuse or misuse data and technology. Data should not override the divine truth of God like overriding an old hard drive, on the contrary, data should be used to affirm the truth which is set by God.

In addition, the church can use data and technology to aid the mission and spread of the Gospel. Dr. Maxwell Kennel, Senior Research Associate of NOSM University in Ontario Canada, says this regarding how the church must address technology, “I believe that the church must critically assess the role of technology in the formation of people (young and old, within and outside the church), and then develop approaches to discipleship that are able to counter the negative influences of technology while also reinforcing the positive influences of technology.” (Kennel, 2015). There is no doubt that this new data and technology is a major part of our society. One simply cannot make it go away, even if you yourself refuse to use it. Therefore, the church must be diligent in teaching on technology and the affects of it on believers and non-believers today. As well as educate a healthy and positive use of it in this new age.

Data can be used in the mission of the spread of the Gospel. “Then Jesus came to them and said, “All authority in heaven and on earth has been given to me.Therefore go and make disciples of all nations, baptizing them in the name of the Father and of the Son and of the Holy Spirit, and teaching them to obey everything I have commanded you. And surely I am with you always, to the very end of the age.” (NIV, 2009, Matthew 28: 16 – 20). First and foremost, we must recognize God is at the center of the Gospel. He is in sole control of its spread, power, and effectiveness. Without God, the power of the Gospel would be zero. Believers, therefore, should always in all things trust the Lord in the spread of the Gospel and its power to save. Christians can never rely on the power of man but only on the power of God. The Holy Spirit changes hearts and minds, not man. Advancements in technology should only be used in ways that glorify and edify God. As well as are in line with his Word.

Church planting is one way we can use these tools and technologies to help churches spread the good news. When a church goes to plant a church, several issues including funds, personnel, location, and so on occur. A church, given data can make informed decisions to aid their process. When given the right tools and medium, this process becomes simpler to grasp. When a church understands its demographic and needs it can better serve that community and spread the Gospel. Personnel is another question in church planting. Sometimes this is already figured out, sometimes not. However, when deciding of the pastoring role of a church plant one can take data and use this data to select the best candidate. For example, if the Southern Baptist Convention is going to plant a church in southwest Florida, it would be good to know the median age is of the community and use that in considering a pastor and his gifts

Data and technology can be used in the education and guide of evangelism. A local church is a part of a community. When the local church can understand that community better the local church can better serve and share the Gospel with them. For example, understanding a community’s median age can give greater insight to the type of events, services, and teachings the local church can focus on. An average age of 45–60-year-old men and women will be in a different stage of life than an average age of 25-35 year old men and women. Also, understanding cultural differences can make a difference in our mission, and missiology. “We all know that cultural differences exist between, say, white suburban Americans and most Han Chinese living in the People’s Republic of China. If common sense is not evidence enough, there are countless studies comparing cultures that document real differences.” (Ott, 2022). As well, believers need to be careful with the balance of stereotyping and understanding cultural differences; “how do we find the right balance between acknowledging that cultural differences are real and, at least in part, definable, while at the same time avoiding the dangers of stereotyping and essentializing?” (Ott, 2022). Data and technology can be used to aid evangelism and to provide insight, but not to override the divine truth set by God’s word.

In the world there are many options for the local church. The Bible is clear that being a part of a community of believers locally is very important. “All the believers were together and had everything in common. They sold property and possessions to give to anyone who had need. Every day they continued to meet together in the temple courts. They broke bread in their homes and ate together with glad and sincere hearts, praising God and enjoying the favor of all the people. And the Lord added to their number daily those who were being saved.” (NIV 2009 Acts 2: 44 – 47). It is important for believers to be a part of a local church. Data and technology can be a helpful aid in finding a local church. When someone is new to a place it can be difficult to find a church. Data and technology can be used to aid and guide someone to a church where they believe and can trust in their teachings. Also, this can be used purely to get the word out that a local church exists. When systems are created to aid someone to find a church home it can aid the spread of the gospel, and spiritual growth.

Data and technology are all around. Everywhere we look technology is there. People are forced to use it even if they do not want to. The question to the church is how is data and technology effecting the mission field and the spread of the Gospel? Many scholars have expressed their concerns with the effects of data and technology on our minds, spirits, and physical bodies. When technology is used to defy God’s truth and lead us away from his design it becomes very harmful. Data and technology can be a tool used to spread the good news. This is to be done cautiously and under the principles of Biblical standards. However, data and technology is being used to spread news and corrupt information. The church can use technology for the spread of the best news ever told, being told, and that will be told.

**APPENDIX**

An interactive heat map of general church planting need and data was one of the goals of this capstone project. It came with several challenges and headaches, however, turned out to be a promising result, which works in its current form and that could be improved. Programming is constantly being bootstrapped and can always be improved upon. The project uses several key libraries to form an HTML document to display this map. The libraries of pandas, folium, and geopandas were crucial in the development process. Key data was used from the US census website to ensure credibility and accuracy. I believe this map can be utilized by a church in the Southern Baptist Convention to give insight into their denominations statistics and church planting needs.

Picture Examples of the Program: A map of the united states

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A map of the united states

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A map of the united states

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The research of data began by, figuring what data was available, and what data was needed to give accurate feedback on the map. The US census data was the most accurate and credible source I could find to retrieve the data needed. The US census has records of city, state, and county data of demographics, populations, religions and more. Using the data found such as, number of adherents, number of congregations, etc… I was able to us pandas to bring in each data set from its excel file. In the pandas data frame, I was able to refine, merge, and manipulate the data to create a geographical pandas data frame. This data frame has an index, all the statistical data, and geometrical data to plot. Therefore, data can be manipulated, added, and used like a pandas data frame, easy to change and update and simple to repopulate if needed.

I decided on using counties instead of cities because of the detail and accuracy of data. When researching geographical data, cities can be mismatched as some data is counted by the metropolitan area and others is not. Smaller cities tended to have less data, bigger cities had more and since I wanted to cover the entire US, if possible, counties were the most direct way to cover the entire land mass.

Folium is a Python mapping library extending from JavaScripts Leaflet library. Folium allows you to create an object which can save to an HTML file to display a geographical map. You can manipulate the type of map, color, data, markers, location, and more. Folium created the foundation of the map. Through Folium’s tool tip functionality, I was able to display data on each county as a mouse hover function. Each county would have key information to get a better grasp of the county’s adherents of the Southern Baptist Convention, and statistics about it. The choropleth was added on the original folium map like the tooltip and uses the “Adherents % based on total adherents” data column. I found this column without creating a new algorithm, giving the most accurate data to represent church planting, and church needs in the county. Furthermore, churches can see more detailed data when hovering over each county. In the end the map has several tile layers meaning the user has the functionality to remove and add back the different layers of the map, such as different map tiles and the choropleth data itself. A screen shot of a computer

Description automatically generated

Folium Map Code:

In conclusion, the folium map object is saved to an HTML and easily viewed on any modern browser. This map can be embedded in a website if desired to have easy access. This map can help give churches insight about how to spread the gospel through local church ministry. This can be used by other denominations not just the Southern Baptist Convention, given enough data is available. Places where there is 0 is likely because the US Census did not have data for the County and was a null value. The Southern Baptist Convention was chosen because of its size and amount of data compared to others, and its ability to demonstrate the program. This is one way data and technology can be used in the mission field to spread the Gospel and enable people to hear it. This program allows ministry teams to quickly see where the concentration of churches is and where there is need for a church. It is the Holy Spirit that ultimately guides us, but God has given us tools to use and if possible, under to principles of Scripture they should be used to glorify God and enjoy Him forever.

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