Sabbatical Report
Big Data and the Social Good
Todd Myers – Fall 2023

Abstract

The following report summarizes a few of my interactions during my sabbatical studying Big Data and the Social Good over the Fall Semester of 2023. My studies involved me interacting with scholars, leaders of think tanks, and revisiting my past interactions with scholarly friends and mentors. The selection of this focus for my sabbatical was fortuitous given that developments in artificial generative intelligence are expanding our capabilities to manage large amounts of data to gain key insights into the domains of public policy.

Break throughs in machine learning and statistical techniques that enable us to manage deeper and wider sets of data than we previously could, has given us insight into what sorts of actions and conditions will be most likely to yield desired public policy outcomes. From examining the importance of the quality of elementary school teachers on future student earnings to the effectiveness of moving to opportunity hubs on the future earning potential of young children, we are identifying where limited funds can best be placed to maximize desired outcomes. Big data may even be able to help us to select policies that promote human well-being.

The promises of big data are checked by how the heavily fit models can deteriorate rapidly with the passing of time, leading to wasting scarce funds if conditions that a policy creates offset the previously beneficial effects identified by big data tools. The cost of creating data generating capabilities to make the world legible to big data tools can be substantial. Human judgement remains an important component in the search for the social good. Data can challenge both conservative and progressive biases, and the power of data tools is unlikely to eclipse the contested nature of the social good and who is to be included in the consideration of that good. If a contested domestic space was not sufficiently challenging, the complexities of a global environment make defining the social good substantially more difficult.

Despite the above caveats, big data and other quantitative tools give us the opportunity to see what has worked in the past and what may likely work in the future. By becoming an educational ambassador with the Council Foreign Relations and in my role as a teacher at Grossmont College and San Diego State University, I hope to be able to cultivate the critical skills in my students that are essential for navigating a world of complexity in a way that marginally improves that world. The time reviewing and building this material into my courses have made me poignantly aware the effort it takes to remain critically engaged with a changing world.

What Was Accomplished

1. Incorporated materials from Raj Chetty's Opportunity Insights website into my macroeconomic principles course.

2. Incorporated materials from Abhijit V. Banerjee and Esther Duflo's research into my introduction to international relations course.

3. Read widely in materials dealing with big data, the social good, and artificial intelligence.

    The bibliography for the readings is listed at the end of this document.

4. Taught courses in the History of Economic Thought, Macroeconomic Principles, and Writing for Economists.

5. Identified numerous topics that can be seamlessly incorporated into existing courses to help students understand important topics in the fields of political science and economics.

6. Joined the Council of Foreign Relations as an Educational Ambassador to act as an advocate for civic literacy and American foreign policy.

7. Reviewed a wide range of current economic research brought to SDSU by the Center for Health Economics and Policy Studies.

8. Honored the passing of one mentor and rekindled the relationship with another mentor helping me to reflect upon my earlier efforts in life working in economic development.

9. Reflected upon the complexity of today's political climate and the challenges politics pose for the search for knowledge about political things.

Implications for the Individual

1. My knowledge about big data and the social good has been expanded offering me greater choices of material to utilize in curriculum, public speaking, and research.
2. Reflective distance from ordinary teaching activities enabled me to recharge with new knowledge and recover from the administrative tasks associated with ordinary teaching.
3. Connections with others will enable me to grow intellectually and develop networks that will afford future development opportunities.
4. Intense study of big data and the social good has made me aware of a wide range of issues and information dealing with public policy that will make me a more effective educator promoting civic literacy.

Implications for the District

1. The district will have a better teacher who is more knowledgeable, rested and prepared to execute the administrative and qualitative work of a teacher. Teacher burnout is avoided.
2. The district gains the prestige of allowing its faculty to undertake work with a wide range of actors involved in executing public policy and studying the implications of various policies. Our educational institution gains the reputation for dispensing the most current and relevant knowledge.
3. The district gains publicity by having its faculty present in other venues.
4. The district improves its performance on a wide range of indicators by having faculty members better able to execute their roles as street level bureaucrats who have a more strategic vision of the college through the sabbatical process.

Contribution to the Educational Goals of the District

1. Greater knowledge about big data, the social good, artificial intelligence, and the political climate that surrounds their development will make certain that the district contributes to the awareness of an informed citizenry, a vital part of its mission.
2. Greater subject matter expertise for faculty members provides an exceptional learning environment to promote student success.
3. Scientific literacy is essential to the success of all contemporary institutions.
4. Allowing employees to take sabbaticals enables employees to pursue professional development that empowers the employee to grow in the direction the employee chooses. This sort of freedom is key to employee success.

Bibliography

Ahmari, Sohrab (2023). Tyranny, Inc.: How Private Power Crushed American Liberty – and What to Do About It. Forum Books.

Brussee, Vincent (2023) Social Credit: The Warring States of China's Emerging Data Empire. Palgrave Macmillan.

Buller, Adrienne (2022) The Value of a Whale: On the Illusions of Green Capitalism. Manchester.

Brennan, Jason and Surprenant, Chris (2020) Injustice for All: How Financial Incentives Corrupted and Can Fix the U.S. Criminal Justice System. Routledge.

Banerjee, A. V., & Cole, S., Duflo, E., & Linden, L. (2007). Remedying education: Evidence from two randomized experiments in India. The Quarterly Journal of Economics, 122(3), 1235–1264.

Banerjee, A. V., & Duflo, E. (2007). The Economic Lives of the Poor. Journal of Economic Perspectives, 21(1), 141–167.

Banerjee, A. V., & Duflo, E. (2011). Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty. Public Affairs.

Banerjee, A. V., & Duflo, E. (2012). The ABC of program evaluation: A guide for young economists. Journal of Economic Literature, 50(2), 173–204.

Banerjee, A. V., Duflo, E., & Kremer, M. (2009). The experimental approach to development economics. Annual Review of Economics, 1(1), 151–178.

Banerjee, A. V., Duflo, E., & Kremer, M. (2011). Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya. American Economic Review, 101(6), 2350–2390.

Chancel, Lucas (2020) Unsustainable Inequalities: Social Justice and the Environment. Harvard University Press.

Chetty, R., & Hendren, N. (2018). The impacts of neighborhoods on intergenerational mobility I: Childhood exposure effects. The Quarterly Journal of Economics, 133(3), 1107–1162.

Chetty, R., & Hendren, N. (2018). The impacts of neighborhoods on intergenerational mobility II: County-level estimates. The Quarterly Journal of Economics, 133(3), 1163–1228.

Chetty, R., Friedman, J. N., & Rockoff, J. E. (2011). The long-term impacts of teachers: Teacher value-added and student outcomes in adulthood. The Quarterly Journal of Economics, 126(1), 1–46.

Chetty, R., Stepner, M., Abraham, S., Lin, S., Scuderi, B., Turner, N., ... & Cutler, D. (2016). The association between income and life expectancy in the United States, 2001-2014. JAMA, 315(16), 1750–1766.

Duflo, E. (2012). Scaling Up and Evaluation. In Innovations in Poverty Action (IPA) (Ed.), Doing the Math: Short Essays on Impact Evaluation. Yale University Press.

Duflo, E. (2012). Women's empowerment and economic development. Journal of Economic Literature, 50(4), 1051–1079.

Hendren, N., & Sprung-Keyser, B. (2021). A unified welfare analysis of government policies. The Quarterly Journal of Economics, 136(1), 283–363.

McCloskey, Deirdre and Zilliak Stephen (2008) The Cult of Statistical Significance: How the Standard Error Costs Us Jobs, Justice, and Lives. University of Michigan.

O'Neil, Cathy (2017) Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy. Crown.

Scott, James (1998). Seeing Like a State. Yale University Press.

Tesón, Fernando (2017) Debating Humanitarian Intervention: Should We Try to Save Strangers. Oxford University Press.

Wiggins, Chris and Jones, Matthew (2023). How Data Happened: A History from the Age of Reason to the Age of Algorithms. W.W. Norton.

Zuboff, Shoshana (2019) The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontiers of Power, Public Affairs.