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The Bill and Melinda Gates Foundation Versus The Carnegie Foundation for the Advancement of Teaching: A Historical Comparison of Two Philanthropic Powerhouses in Education

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Keywords
foundations, grants, education, policy, technology, teaching

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Abstract

This project is a comparison of two young, powerful charitable foundations, the Carnegie Foundation for the Advancement of Teaching, and the Bill and Melinda Gates Foundation. The research examines the first two decades of these two foundations through the lens of public and secondary education in their respective American time periods, politics, economics, and cultures. Although they operate in different time periods and among different main social concerns, the early actions of both the Carnegie Foundation and the Gates Foundation have approached grant-making in fundamentally similar ways to change American education. This paper first displays a brief history of charitable foundations, the problems with American public and secondary schools, and the ways that the Carnegie and Gates Foundations have chosen to address these problems. The two foundations have similar overall structures, similar problems that they aim to solve with their grantmaking, and similar values of measurement and testing when making grants. Finally, both of the foundations have shifted the role of education of Americans from the local and specific and instead towards the foundations. This has raised questions of the interactions between foundations and the democratic rights of the populations that the foundations serve.

"In bestowing charity, the main consideration should be to help those who help themselves."

- Andrew Carnegie, *The Gospel of Wealth*

"Anyone who wants to seriously engage in giving faces two important questions: where can you make the biggest impact, and how do you structure your giving so it's effective."

- Bill Gates, *The Gates Notes*

Introduction

With a net wealth of $33.5 billion, the Bill and Melinda Gates Foundation is a powerful giant in philanthropy, attracting the attention on the public, the press, and the political elite. The Gates Foundation's wide scope of funding has supported initiatives in education in the United States with more than $6 billion since 1994.

Since its founding in 1905, the Carnegie Foundation for the Advancement of Teaching has caused as great of a stir in the trajectory of American education. Andrew Carnegie invented the way that most wealthy individuals approach philanthropy today, including Bill Gates. Although the Carnegie Foundation for the Advancement of Teaching has had a vibrant history

for more than one hundred years, this paper solely focuses on the first two decades of the Carnegie Foundation's existence. Comparing the Carnegie and Gates Foundations in their first twenty years highlights the historical perspective of foundations focused on education at the turn of the 20th century versus the beginning of the 21st century. The Carnegie Foundation for the Advancement of Teaching continues to exist today, but this paper is not a comparison of the two foundations as they currently stand. Instead, it is a comparison of the actions of young, powerful foundations in the field of education in their respective American time periods, politics, economics, and cultures. Although they operate in different time periods and among different main social concerns, the early actions of both the Carnegie Foundation and the Gates Foundation have approached grant-making in fundamentally similar ways to ignite change in American education.

Backgrounds of Andrew Carnegie and Bill Gates

Andrew Carnegie was born in 1835 in Dunfermline, Scotland, to a skilled working-class family. At age 13, his family immigrated to the United States, settling in Pennsylvania, where he worked as a bobbin boy in a cotton factory. Carnegie was largely self-educated. He taught himself by reading books borrowed from a public library. After his first job, he became a telegraph operator, and in 1853 he landed himself a position as the personal assistant to Thomas Scott, the Superintendent of Pennsylvania Railroad. When Scott moved up, Carnegie took his place as Superintendent of the Pittsburgh division. He spent twelve years working there, learning skills in management, business, and entrepreneurship.[1] Scott remained one of Carnegie's mentors, and introduced him to capital investment in 1856, which became one of Carnegie's greatest financial resources.

[1] Livesay, Harold C. *American Made: Shapers of the American Economy*, 69.

In 1873, after training in the manufacturing of railroads, railroad cars, and bridges, Carnegie set up his own steel manufacturing company in the rapidly growing industry. In the two decades between 1860 and 1880, the production of steel increased rapidly, in part because of a new, cheap way to produce it using the Bessemer converter instead of relying on expensive wrought iron. In 1860, there were 13,000 tons of steel in the United States. By 1880, there were 1.4 million tons.[2] Carnegie's business was successful because he operated his huge steel company like a small business, and he made most of the critical management decisions. All of the departments were coordinated to achieve maximum efficiency. He bought out struggling steel companies and transformed them. Carnegie was not a technical expert in steel manufacturing. Instead, he was an excellent businessman, promoter, manager, and salesman.

By age 33, Carnegie was highly successful and already began to make plans for his future philanthropy.[3] In a letter to himself, he articulated his intentions to never exceed spending $50,000 per year, and to give the rest of his salary away to charity. This was long before he would know the full scope of his wealth. In 1901, Carnegie sold his company to J.P. Morgan for more than $400 million, which would be worth nearly $10 billion in today's US dollars.[4]

As a wealthy millionaire, Carnegie was very articulate about how, when, and for what causes that he thought that he and other wealthy capitalists should spend their fortunes. He promoted the values of living a modest life and the duty of the millionaire to give away wealth to have the largest benefit for the community. Carnegie helped to define his age of philanthropy, making the late 19th century through the early 20th century into the "first golden age of giving." He published several books and articles about his philanthropic philosophies. Perhaps his most

[2] Tindall, George B. and David E. Shi. *America: A Narrative History*, 756.
[3] Kiger, Joseph C. *Philanthropists & Foundation Globalization.* (New Brunswick, NJ: Transaction Publishers, 2008), 20.
[4] Friedman, S. M. "The Inflation Calculator." *West Egg.* http://www.westegg.com/inflation/.

influential was *The Gospel of Wealth*, published in 1889. In this short essay, Carnegie revealed his great faith in capitalism to bring the strongest of the human race to the top.

At the turn of the century, the ideas of Social Darwinism were popular. This was an ideology that applied Darwinian ideas of biological evolution to explain and shape American society. This ideology allowed businessmen the excuse to attribute their financial success to innate laws of nature. Social evolution implied progress, ending in establishing greater perfection and happiness of the human race, government should not interfere, successful businessmen and corporations were the "engines of social progress."[5]

Carnegie believed that the wise millionaire had a unique opportunity to create social change by thoughtfully and carefully distributing his wealth. In *The Gospel of Wealth*, he noted, "No evil, but good, has come to the race from the accumulation of wealth by those who have the ability and energy that produces it."[6] He spoke unfavorably of giving money away as handouts, and instead preferred to give donations that allowed people to pull themselves up by their bootstraps. He wrote, "In bestowing charity, the main consideration should be to help those who will help themselves… those worthy of assistance, except in rare cases, seldom require assistance."[7] Carnegie disliked thinking of himself as a philanthropist, and instead called himself a "distributor" of his wealth.[8]

Although Carnegie was a wealthy capitalist through and through, his drive to assist the poor in helping themselves reflected a fairly progressive stance on eradicating poverty for his time. He founded the Carnegie Foundation at the start of the Progressive Era, the period of time between the turn of the 20th century and 1917 characterized by social unrest, economic hardships

[5] Tindall, George B. and David E. Shi. *America: A Narrative History*, 805.
[6] Carnegie, Andrew. *The Gospel of Wealth and Other Timely Essays* (New York: Doubleday, Doran & Company, Inc., 1933).
[7] Ibid.
[8] Tindall, George B. and David E. Shi. *America: A Narrative History*, 757.

for cities and rural areas, and a growing middle class. However, the negative aspects of the time period were polarized by extreme social optimism. Progressive activists sought to improve the social conditions with greater democracy, honest and efficient government, and increased rights for working people. During this time of social change, Carnegie played both roles: both the hated corporate millionaire, and the social optimist, spending his time and fortune working for the improvement of social conditions for those in poverty.

In *The Gospel of Wealth,* Carnegie offered his solution to the problem of how to properly administer wealth to populations after it has been collected by just a few individuals. His solution was this: wealth given away "can be made a much more potent force for the elevation of our race than if it had been distributed in small sums to the people themselves."[9] Carnegie went so far as to say that a miser millionaire who hides his money away from the public is better off than a careless millionaire who does not think through his giving to ensure that it is used productively. He continued to suggest ways that millionaires should spend their money. At the forefront of his extensive list was making a free library in any community willing to maintain and develop it. Carnegie reached back to his own roots of education, grounded in public libraries, which motivated him to build 2,057 free libraries across the United States and abroad in his lifetime, in partnership with the communities that hosted them. In *The Gospel of Wealth,* Carnegie also suggested founding medical colleges, hospitals, labs, and other institutions connected with the alleviation of human suffering, installing public parks, meeting and concert halls, swimming baths, churches and other community centers.[10] All of these community initiatives shared the benefit of helping people to lift themselves up by their bootstraps.

[9] Ibid., #.
[10] Ibid., 21-39.

More than a century later, in 1955, Bill Gates was born in Seattle, Washington, to an upper-middle class family. His father was a lawyer and his mother was a school teacher and served on the board of directors of First Interstate Bancsystem and United Way. After dropping out of Harvard to start his software company, Microsoft, Bill Gates earned his fortune from developing the Microsoft Operating System in 1976 with his business partner, Paul Allen. The program was adopted by the computer and business machine giant, IBM, which helped Microsoft rise to the top. Microsoft became a leader in the software industry and one of the most successful companies in America. The company is powerful because its products are widely used and because the company generates so much wealth. The company has made four employees into billionaires and 10,000 employees into millionaires.[11] In 1995, with $18 billion, Gates became the richest person in America, and then became the richest person in the world in 2006, with assets at approximately $56 billion. He remained in his top position as CEO of Microsoft until 2000, when he stepped down to become the Chairman of the Board and the Chief Software Architect.[12]

As Microsoft became more successful, Gates' public image was not entirely positive. Critics thought of him as a greedy capitalist. As Gates' fortune made him one of the richest people in the world, he identified the need to find a solution to the problem of what to do with all of his money. Gates' parents realized that because he possessed so much money, he had a social responsibility associate with that wealth. Gates was influenced by his mother's prominent role in philanthropy in Seattle with United Way as he was growing up. On the night before his wedding to Melinda Ann French in 1994, Mary Gates, Bill's mother, wrote Bill and Melinda a letter asking them to take their responsibility to the world seriously and to spend their wealth wisely.

[11] Solomon, Lewis D. *Tech Billionaires: Reshaping Philanthropy in a Quest for a Better World*. (New Brunswick, NJ: Transaction Publishers, 2009), 15.
[12] Ibid., 16.

She wrote, “For those whom much is given, much is expected.” Melinda Gates credits the letter as the spark that helped to start the couple in their philanthropy.[13]

By the early 1990s, Bill Gates had started to give money to local Seattle schools and charities, but his contributions were small compared to the vast amount of wealth that he was accumulating. In 1994, his father, William H. Gates Sr., retired from his job as an attorney, and Bill set up the William H. Gates Foundation for him. The Senior Mr. Gates ran the Foundation from his basement, making most of his executive decisions from home. In 1997, Gates followed in Carnegie’s footsteps by founding a foundation that worked in libraries. However, instead of building public libraries, Gates focused on wiring them. The Gates Library Foundation, to be renamed the Gates Learning Foundation, focused on making libraries internet-savvy. The foundation bought and installed computers, and supplied training and technical support for libraries in low-income areas. The foundation installed 47,000 computers in 11,000 public libraries across the United States.[14] In August of 1999, Gates announced that the two foundations would be combined to form a larger organization, the Bill and Melinda Gates Foundation.

Carnegie and Gates are similar because they are considered prominent technical innovators of their lifetimes. Both watched the American economy completely transform throughout their lifetime, and both played a significant role in bringing about that change. Carnegie’s contributions to the steel industry helped to propel the Industrial Revolution forward by impacting the growth of cities, improving the techniques of architecture, enhancing accessibility of transportation across the country, and increasing many more avenues of economic growth. Carnegie commented on this change in *The Gospel of Wealth*, “Change from the rich to the poor is more extravagant now, and that is a welcomed change. Both master and

[13] Ibid., 17.
[14] Ibid., 17.

servant are better off today and the change is inevitable so we may as well not fight it." He also noted the improvement in the general quality of life for individuals, "Manufacturing is better now. Luxuries of the past are necessities of life today."[15]

Bill Gates has played a crucial role in bringing the personal computer beyond just the hobbyist nerds and into the homes and businesses of average people, through the development of the Microsoft Operating System (MS-DOS) and his partnership with business giants such as IBM. Advances in computer science have spurred an interconnected, global economy that is inherently instantaneous.

Similar problems exist in the American economy in the time of both Carnegie and Gates. For Carnegie, the transformation of the American economy during his lifetime led to an unprecedented accumulation of wealth amongst a few people in America. The census of 1890 showed that 9% of US families held 71% wealth.[16] Similarly, in 2011, statistics show that 20% of US families hold 84% of the nation's wealth.[17] Both Carnegie and Gates have demonstrated a high level of concern with the state of the economy, and the implications for the future.

Both Carnegie and Gates have used their wealth and connections to inspire and recruit other members of the elite class to philanthropy. Carnegie was connected to John D. Rockefeller, the other powerful philanthropist in the "first golden age of giving." Carnegie used his network of influential leaders in education, government, and business to bring powerful individuals into the service of giving. He also turned to his writing to influence millionaires in the future. Similarly, Gates has used his connections to bring together the world's billionaires to discuss

[15] Carnegie, *The Gospel of Wealth.*
[16] Lagemann, Ellen C. *Private Power for the Public Good: A History of the Carnegie Foundation for the Advancement of Teaching* (Middletown, CT: Wesleyan University Press, 1983), 13.
[17] Norton, Michael I and Dan Ariely. "Building a Better America – One Quintile at a Time." *Perspectives on Psychological Science, Sage Publications, American Association for Psychological Science*. 2011. http://www.people.hbs.edu/mnorton/norton%20ariely%20in%20press.pdf.

how to strategically use their wealth for the betterment of mankind, as well being a public figure for philanthropy. A value that Carnegie absolutely promoted was the insistence that millionaires give away their wealth over the course of their own lifetimes. Carnegie gave away 90% of his fortune during his lifetime.[18] Bill and Melinda Gates work also full time in philanthropy.

Foundation Foundations

Foundations in America operate under the motto, "private action for public good," and grow out of a long history of charitable giving. Roots of the charitable "third sector" are grounded in religious, charitable impulse, and the need to take care of the common man. Philanthropic giving spans every major religion of the world. Charitable giving was incorporated into the founding of America both through the precedents from England and through religious tradition. In Colonial times, Benjamin Franklin played an important role in secularizing charity. He saw the need to create charities that were non-religious, non-governmental, and non-profitable in order to provide the services needed by the public. America's large and diverse civic sector has stemmed from the freedom of the wealthy to choose to support social initiatives that interest and inspire them, as well as the historic avoidance of government-provided social services for people in need. Fleishman, a scholar of foundations from Duke University, summarizes, "America's civic sector, then, is the natural product of a large nation made up of free people eager to pursue all kinds of interests."[19]

Modern foundations as they exist today stem from the wealthy benefactors of the gilded age, John D. Rockefeller and Andrew Carnegie. Foundations sprang up in the early 1900s because of progressive values of the super-rich. Early philanthropists such as Carnegie and

[18] Solomon, Lewis D. *Tech Billionaires: Reshaping Philanthropy in a Quest for a Better World* (New Brunswick, NJ: Transaction Publishers, 2009), 10.
[19] Fleishman, Joel L. *The Foundation* (New York: PublicAffairs, 2009), 77.

Rockefeller had an enormous amount of wealth and were optimistic about the change that they could bring if they spent their fortunes carefully. These two donors set the standards for the thousands of foundations that have sprung up since that time period. After World War II, tax laws were rewritten in 1953, establishing a federal tax break for money given away to charitable causes.

The number of foundations in the United States has grown throughout the 20th century, rising at a fairly steady rate, until it reached a boom beginning in the 1980's through the early 2000's, corresponding to the internet boom. In the United States, there is a historical and geographical divide between different types of philanthropy. Older philanthropy, such as the Carnegie and Rockefeller foundations are on the East Coast.[20] America is currently in the second gilded age of philanthropy, which arose from the Silicon Valley internet boom millionaires on the West Coast, but still includes the profitable Wall Street bankers on the East Coast. As entrepreneurs made their fortunes at a young age, they became interested in turning their strategies for financial success to solving the social problems in America today. This group generally emphasizes the need for business practices in philanthropy, instead of spending based on passion and impulse. New philanthropists are characterized by their insistence on measuring the impact and outcomes of services provided by their funding.

All donors approach philanthropy with a set of values that influence them and a worldview that they hope their money will accomplish. The actions of a foundation depend on the values and interests of the individual donor of the foundation. Foundations are controlled by board members, whose membership is usually established by the donors themselves. The legal rules surrounding foundations are sparse in the United States: foundations must give away at least 5% of their endowment annually in order to maintain their tax status as a charitable

[20]Ibid., 49.

foundation. Foundations are not taxed by the government, which is a strong incentive for wealthy individuals to create foundations: they have more autonomy in determining how to use their money for social issues. Private foundations, or foundations that are funded by private individuals, are not actually private, in the sense that the records of their funding choices are widely available to the public on the internet and through the Attorney General's public records in each state. Diane Ravitch, an influential education researcher from NYU presents a cynical view of foundations; "Foundations exist to enable extremely wealthy people to shelter a portion of their capital from taxation, and then to use the money for socially beneficial purposes."[21]

As of 2007, there were currently approximately 72,000 private foundations in the United States, which controlled $600 billion.[22] This means that today, approximately $30 billion philanthropic dollars are spent on an annual basis. 90% of the assets are held in the top 10% of the wealthiest foundations. In the United States, the charitable third sector comprises approximately $300 billion today. Of that amount, 75% originates from the collective donations of individuals, whereas only 25% of the $300 billion, $75 billion comes from foundations. Money from private foundations is generally used to accelerate ideas forward. Large donations shape the direction of nonprofits because their donations can be seed money for an organization to grow or change.

The Carnegie Foundation for the Advancement of Teaching

The Carnegie Foundation for the Advancement of Teaching was founded in 1905 as a pension fund for college professors. The charter of the foundation defines its purposes: "the first, specifically to provide retiring pensions under certain conditions; and the second, in general to

[21] Ravitch, Diane. *The Death and Life of the Great American School System* (New York: Basic Books, 2010), 197.
[22] Fleishman, Joel L. *The Foundation* (New York: PublicAffairs, 2009), 49.

do and perform all things necessary to encourage, uphold, and dignify the profession of the teacher and the cause of higher education within the United States, the Dominion of Canada, and Newfoundland."[23] In 1890, prior to starting his foundation, Carnegie became a trustee of Cornell University and was shocked at the pitiful wages that college professors earned. This influenced his desire to endow a pension fund to improve the standard of living for professors. In the original charter, the Carnegie Foundation for the Advancement of Teaching was charged with four tasks: to set up retirement allowances and pensions for those in the teaching profession, to establishing the Division of Educational Enquiry, to research and publish about issues related to education, and to serve as advisory and consultative services in higher education. Carnegie started the foundation with an initial grant of $10 million in 5% mortgage bonds; and personally selected a board of trustees from people that he knew and trusted to oversee the disbursement of funds.

The Bill and Melinda Gates Foundation

The Bill and Melinda Gates Foundation was founded in 1994 as the William H. Gates Foundation, with an initial spending sum of $94 million. In 1999, the foundation was renamed the Bill and Melinda Gates Foundation. After merging with the Gates Learning Foundation in 1999, a computer-based charity, Bill Gates gave an extra $126 million to the endowment. In the years that followed, the holdings rose to over $2 billion. In 2006, Warren Buffet made a historic move in philanthropy when he pledged approximately $30 billion in Berkshire Hathaway market shares to the Bill and Melinda Gates Foundation. Under the terms of his gift, the Gates Foundation must annually spend Buffett's entire contribution from the previous year. This will

[23] Lagemann, *Private Power for the Public Good: A History of the Carnegie Foundation for the Advancement of Teaching*, xi.

prevent Buffett's contributions from piling up within the Gates Foundation's funds. Not only did this contribution and stipulation substantially increase the power and scope of the Gates Foundation, it also created an American media sensation when the news was first announced. With his accumulation of wealth, Warren Buffett had the ability to create one of the largest and most powerful foundations in America, as well as to ensure that his name go down in history as one of the greatest philanthropists of all time. However, Buffett chose to give all of his earnings to the Gates Foundation, which possibly attracted more attention to his gift, saying, "You need to seek out people with a talent to distribute money in the same way as you do for those to accumulate it."[24] As a result of this massive gift, the Gates Foundation is very much in the public eye.

The Foundation currently has approximately $33.5 billion in market shares. In order to maintain its status as a charitable foundation, the Gates Foundation must spend at least five percent of its assets each year, which amounts to $3.5 billion each year. In 2008, Bill Gates left his position Chairman of the Board at Microsoft to work full-time for the foundation, which he and his wife Melinda co-chair.[25] The Foundation operates on the premise that "All lives have equal value" and continues that motto with another, to "help people to lead healthy and productive lives."[26] The mission of the Bill and Melinda Gates Foundation is "to increase opportunity and equity for those most in need." They distribute their wealth under a comprehensive list of fifteen guiding principles:

1. This is a family foundation driven by the interests and passions of the Gates family.
2. Philanthropy plays an important but limited role.
3. Science and technology have great potential to improve lives around the world.
4. We are funders and shapers—we rely on others to act and implement.

[24] Solomon, Lewis D. *Tech Billionaires: Reshaping Philanthropy in a Quest for a Better World* (New Brunswick, NJ: Transaction Publishers, 2009), 19.
[25] *Bill and Melinda Gates Foundation*. 2011. http://www.gatesfoundation.org/Pages/home.aspx.
[26] Ibid.

5. Our focus is clear—and limited—and prioritizes some of the most neglected issues.
6. We identify a specific point of intervention and apply our efforts against a theory of change.
7. We take risks, make big bets, and move with urgency. We are in it for the long haul.
8. We advocate—vigorously but responsibly—in our areas of focus.
9. We must be humble and mindful in our actions and words. We seek and heed the counsel of outside voices.
10. We treat our grantees as valued partners, and we treat the ultimate beneficiaries of our work with respect.
11. Delivering results with the resources we have been given is of the utmost importance—and we seek and share information about those results.
12. We demand ethical behavior of ourselves.
13. We treat each other as valued colleagues.
14. Meeting our mission—to increase opportunity and equity for those most in need—requires great stewardship of the money we have available.
15. We leave room for growth and change.[27]

The Gates foundation has thousands of global initiatives, which can be summarized under four main categories: global health in developing countries; worldwide microfinance loans; projects in the Pacific Northwest; and improvement of education across the United States. Within the last category, through their experiences working in education, the Bill and Melinda Gates Foundation has identified four areas of education that are in need of improvement in America:

1. College Ready Education
2. Post-Secondary Education
3. College and Graduate Level Scholarships
4. Early Learning Programs[28]

Each project has specific goals and an allocation of funding. For example, through the College Ready Education initiative, the Gates Foundation identified the goal of ensuring that 80% of students graduate from high school prepared for college, with a focus on low-income and minority students. According to its website, over the past eight years, the foundation has

[27] Ibid.
[28] Ibid.

invested $4 billion on increasing college readiness. These funds have reached 2,602 schools, 40 school districts, and at least 781,000 students.

Foundation Structural Comparisons

The Carnegie Foundation for the Advancement of Teaching and the Bill and Melinda Gates Foundation's United States Program have similarities and differences in their structure. First, it is important to note that for both donors, education is just one of several large scale issues that the donors chose to endow their money towards. Through his other major charitable foundation, the Carnegie Corporation of New York, Carnegie is possibly most famous for his contributions to over two thousand public libraries on an international scale. He also built universities, such as Carnegie Mellon and the Carnegie Institute of Pittsburgh, and he funded scholarships for students to pursue higher education. For the Bill and Melinda Gates Foundation, United States education is just one focus in a myriad of global issues that their one foundation supports.

Like all major foundations, both are accountable to a board. In its earliest years, the Carnegie Foundation's board was mostly comprised of university presidents. Carnegie personally invited his acquaintances to serve on the board of trustees for his soon-to-be founded foundation. The earliest organization of the Carnegie Foundation closely resembled the organization of a college, with a board of trustees and a leadership team of university administrators.[29] Henry Pritchett, the first President of the CFAT, was the President of MIT before taking his post as the leader of the foundation. Although Carnegie was closely involved with the actions of the foundation, he did not officially sit on the board or make executive

[29] Savage, Howard J. *Fruit of an Impulse: Forty-Five Years of the Carnegie Foundation 1905-1950* (New York: Harcout, Brace and Company, 1953), 32.

decisions. For the Gates Foundation, the board includes those close to the Gates family and the most successful business entrepreneurs of the time. Bill and Melinda Gates, William Gates Sr., and Warren Buffett all sit on the board of the Gates Foundation. The CEO of the Gates Foundation, Jeff Raikes, was a high-ranking Microsoft executive since the 1980s, and then he moved on to lead the foundation. Allan Golston, President of the United States Program, has corporate background in finance and healthcare.

Both Gates and Carnegie are notorious for their strong level of personal involvement in their foundations. Although he was not part of the executive board of his foundation, Andrew Carnegie worked hard to institutionalize his philosophy of grant making through his strong example for other millionaires of the time period, and through his publications, such as *Gospel of Wealth*. Carnegie especially shaped the grant making actions of the Carnegie Corporation of New York, his other foundation. However, with the CFAT, Carnegie actually left very few guidelines for the foundation. Instead, he appointed strong people to head the foundation, and let it run its course.[30] Even though Carnegie was not involved in the day-to-day aspects of grant making, he still met with his trustees on an annual basis and influenced the choices of the foundation. His personal philosophy of giving away as much of his money as possible throughout his lifetime indicates his level of commitment to the foundation. Joel Fleishman, author of *The Foundation*, reflects that Carnegie dominated the culture and history of his foundations. Even though Carnegie acknowledged that "no wise man will bind trustees forever to certain paths, causes, or institutions," he still instructed his trustees to "best conform to my wishes by using their judgment."[31] In a parallel fashion, members of the Gates Family, namely Bill and Melinda Gates and Bill's father, William H. Gates Sr., are quite personally invested in

[30] Ibid.
[31] Fleishman, *The Foundation*, 29.1

the Bill and Melinda Gates Foundation. By retiring from Microsoft in 2008 to become the Co-chair and trustee of the foundation, Bill Gates demonstrated his dedication to his own philanthropy. According to Fleishman, donor-centered philanthropy leads to more focused, effective grant making. Passionate, opinionated donors such as Carnegie and Gates bring to their foundations the same level of passion, vision, and discipline that made them successful in the corporate world.[32]

Foundations Approach Education Based on the Most Problematic Elements of the Time: Carnegie Foundation for the Advancement of Teaching

How did American schools become the complex social problems that they are today? Schooling is an important issue because it is local, personal, and affects the trajectories of both individuals and the economy as a whole. The two foundations have approached the problems in American education in very different ways, but in ways that make sense for the time period. Both of the foundations look at the state of American education and then compare externally to other countries to see how American education is progressing compared to international competition. For Carnegie, an area of concern was the state of higher education in this country.

The Carnegie Foundation for the Advancement of Teaching arrived in the middle of huge change and growth of American higher education. During the 19th century, higher education, as well as elementary and secondary education began to expand. Institutions grew to meet the country's rise in college-going population. In 1870, 67,350 men attended college, as well as a small number of women. Twenty years later, in 1890, that figure had more than doubled, with 156,756 total students of higher education. Two decades after that, the statistic reached 355,215

[32] Ibid., 293.

students.[33] This intense growth rate was attributed to standardization of colleges and universities across the country, generation of extraordinary wealth needed to finance the colleges and students attending them, and new policies regarding admission of women and minority groups. In addition to these factors was the rise of a new appreciation for the value of a university education as both a luxury and necessity for young professionals.[34]

Expansion of colleges and universities meant that locally-based liberal arts colleges sprang up, accessible to students who could not travel far from home. Towns benefitted from hosting colleges because they contributed to the economics of the town and added a sense of prestige.[35] One of the first public state universities was University of Virginia, founded by Thomas Jefferson in 1819. This university embodied the concept of a modern university today. Jefferson believed that the university would become an institution in which all branches of science would be useful to the development of America. The curriculum of the University of Virginia included ancient languages, modern languages, math, natural philosophy, natural history, anatomy and medicine, moral philosophy, and law.[36] Science education grew by the middle of the 19th century to include classes in math, natural philosophy, botany, chemistry, zoology, geology, mineralogy, but they were not as widely respected as the classical curriculum that was popular in Europe. Universities were not designed to focus on research until later in the 1800s. Johns Hopkins was founded as the first American, graduate-only, research institution in 1876.[37] Older universities moved away from their religious-based curriculum embraced scientific curricula. Emphasis on science curriculum led to the development of technical schools, such as Rensselaer Polytechnic Institute.

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[33] McCarthy, Margaret C. *History of American Higher Education, 66.*
[34] Ibid., 68.
[35] Ibid, 29.
[36] Ibid., 57.
[37] Ibid., 60.

Universities were created in several ways. Some grew from existing private colleges that added graduate programs. Traditional liberal arts colleges began to offer bachelors and masters degrees. Others were built from government support, some funded through public and private cooperation, and others still were built from private endowment from individuals.[38] This variety of ways that universities originated led to differences in their structure and focus. Political leaders of states supported creating universities that would meet the needs of their particular populations. New universities had many challenges, such as financial instability, unqualified faculty, a lack of proper equipment, and tremendous gaps in student preparation. The middle of the 19th century saw a growth in government involvement in higher education. In 1862, Congress passed The Land Grant College Act (Morrill Act), which allotted public land for states to establish colleges of agriculture, mechanics, military tactics, and liberal studies.[39]

New universities meant a great change in what it meant to be a professor or to work in a university. As the 19th century progressed, colleges became larger and less personal. As university institutions became more businesslike, the leadership structure changed. The university president transformed from being a professor who knew and taught most of the students to a spokesman for the board of trustees. This individual's job was to understand the business world to gain investments from potential wealthy benefactors.[40] The role and identity of professors also changed. Professors identified their professorship as their primary occupation, instead of identifying with the professional discipline that they studied, such as law or medicine.[41] Teaching moved away from an apprenticeship model and towards the lecture and seminar courses that are used today. The community environment of professors increased and

[38] Ibid., 59.
[39] Ibid., 61.
[40] Ibid., 64.
[41] Ibid., 65.

collaboration grew within disciplines, but across universities. Academic departments formed, such as the American Historical Association in the 1880s, providing a support base for scholarly activities.

By the turn of the 20th century, changes in every aspect of university life and structure had created a tangled mess of un-standardized, evolving higher education. Institutional diversity was both a strength of American education and a major hindrance. This diversity allowed colleges to be local and specific to better serve the needs of local students. However, diversity made it difficult to define what a college was, who was qualified to teach and attend, what it meant to earn a degree, or how to monitor for quality. Even terms such as college, school, graduate, professional program, and major were not uniformly used or defined.[42] Standards were severely lacking.

Carnegie was troubled by a number of issues of higher education, which can be extracted from the original charter of his Foundation for the Advancement of Teaching. First, he was concerned with the status of professors. He found that the current lifestyle of a professor was not appealing enough to attract talent to the profession. The Foundation decided that there was not enough objective research on the field of higher education. The CFAT pushed to make higher education accessible to the working class, instead of just the wealthy elite. It focused on helping small, local colleges that would make opportunities available to citizens trying to move up, instead of colleges that only supported scholars, such as MIT, Oxford, or Johns Hopkins.

At the same time, the country's political elite needed to decide exactly whose responsibility it was to fix problems in higher education. Under the Taft Administration in 1911, the United States government attempted to classify higher education, per request from the Association of American Universities. The government created a list of accredited colleges and

[42] Ibid., 84.

universities. However, an accidental early publication infuriated some of the allegedly "injured institutions," and President Taft cancelled the publication of the list, effectively separating higher education from government regulation. In the early 1900s, with power in higher education so widespread, there was no organization that could stand as the authority on higher education. After this the Association of American Universities took the task on instead, in partnership with CFAT. As a powerful organization with educational expertise, it had the resources and influence to bring change. Since it was not a public organization, the foundation did not need to worry about implications of the government exerting its power on the local and specific issue of education.

The lack of guidelines defining what it meant to be an institution of higher education quickly became a problem, as well as the lack of guidelines for student prerequisites necessary to be accepted into an institution of higher education. In 1905 when the Foundation was founded, more than six hundred institutions of higher education were listed with the U.S. Bureau of Education. One of the first acts, documented in the Foundation's *1st Annual Report*, was to establish requirements for one of these institutions to officially be considered a college. The standards the Foundation set were that a college needed at least six full time professors, to be nonsectarian and free of state control, to offer a four year course of study in liberal arts and sciences, and to require of its students four years of previous high school or equivalent education. These standards reduced the list of six hundred down to 52 colleges.[43] Any college could earn its place on the Foundation's list as soon as it achieved these standards, so this became an incentive for colleges to meet those expectations.

[43] Lagemann, Ellen C. *Private Power for the Public Good: A History of the Carnegie Foundation for the Advancement of Teaching*, 39.

In addition to the fact that less than ten percent of the colleges in the country met the Foundation's standards, the Carnegie Foundation determined that the focus of higher education was in dire need of reform as well. The first president of the Foundation, Henry Pritchett, suggested in his 1901 inaugural address to MIT that if the United States was to have highly trained, public-oriented leaders to guide us into the future, the country would need to undergo rigorous, patriotic education reform.[44] Pritchett argued that college had become a business organization, focused on advertizing, recruitment, and a focus on athletics. As America progressed, higher education became less "scholarly" and more social, whereas other competitive nations had not commercialized their universities.

The founding of Johns Hopkins in 1876 marked a significant step towards the combination of teaching and research in academic life, but still few professor positions adequately combined both to produce the necessary leadership in students. Johns Hopkins was America's first laboratory and research-based graduate school. As a leader of a scientific community himself, CFAT president Henry Pritchett was interested in training leaders and promoting scientific research through the university system. However, as the president of the CFAT, Pritchett saw himself as an educator, not a scientist. He directly connected the emerging economic and scientific changes of the turn of the century, such as the focus on industrialism, the continuing crowding of cities, and the progressive leaps of science and technology to the need to develop high levels of technical and professional competence through formal training at universities. Higher education could no longer be just research or just teaching, it competitively needed to be a combination of the two.[45] This focus on efficiency and the use of human capital paralleled a wide social emphasis on efficiency in management movement, in which Roosevelt

[44] Ibid., 29
[45] Ibid., 32

and Pritchett shared mindsets about the development of human resources through the systemization of higher education.

The Carnegie Foundation also compared higher education in the United States to standards set internationally, although the pool of countries to compare with was quite different that it is today. In one of its most influential reports, the Flexner Report of 1910, CFAT compared United States medical schools with the well-established universities of Europe, and determined that American students did not measure up. European medicine was decades ahead of American medicine. Professional education in the United States, particularly law and medicine, began as the apprenticeship model. However, apprenticeship led to uneven training with very little theoretical background. During the early 1800s, colleges began to offer relevant coursework to training doctors, where several master teachers combined their efforts and their student base. This allowed the master teachers to split the work and allowed students to see the practices of more than one teacher. In time, the lecturers wrote textbooks and began to teach regular courses.[46] However, the process of standardizing requirements for medical education continued through the early years of the 20th century, when the Carnegie Foundation became involved through the Flexner Report.

Abraham Flexner was commissioned by the Carnegie Foundation to write a comprehensive report on the medical schools of the United States as an outside, unbiased observer. He is credited with starting the reorganization of medical training in the United States because his report ignited a national uproar over his findings. Flexner wanted the make the qualifications and process for becoming a doctor much more rigorous. Increased interest in the field yielded a greater supply to potential doctors, but Flexner argued for higher competition, and

[46] McCarthy, Margaret C. *History of American Higher Education*, 51.

therefore also argued for a more highly qualified physician candidate.[47] He compared his ideal model for doctors with the bar association for lawyers.

Flexner independently visited and wrote reviews of 155 medical schools in the United States and Canada, and he found 120 unsatisfactory and suggested that they be closed. Several schools lacked science labs completely, while others required no clinical practice before the student graduated to become a practicing physician. Flexner commented on the ineffective methods of medical schools across the country to produce quality physicians, "We may safely conclude that our methods of carrying on medical education have resulted in enormous over-production at a low level, and that, whatever the justification in the past, the present situation in town and country alike can be more effectively met by a reduced output of well-trained men than by further inflation with an inferior product."[48] He continued the lengthy report by listing standards that all medical schools should follow: medical education should consist of at least two years of college science, should include lab medical science, two years of hospital training, and clinical practice.[49] The suggested model of medical education was the new Johns Hopkins University, designed after the competitive research schools in Europe.

National response to this survey of medical training led to rapid change in medical schools. Over the next year, 31 schools were closed, and over the next two decades, there were only 76 schools left open. Resources for labs, libraries, professors, and hospital affiliations became more abundant. The report helped cities and private foundations determine how to fund the improvement of medical schools. Between 1910 and the beginning of the Great Depression,

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[47] Lagemann, Ellen C. *Private Power for the Public Good: A History of the Carnegie Foundation for the Advancement of Teaching*, 60.

[48] Flexner, Abraham. *Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching* (Buffalo: Heritage Press, 1973), 16.

[49] Lagemann, Ellen C. *Private Power for the Public Good: A History of the Carnegie Foundation for the Advancement of Teaching*, 69.

$150 million went to medical education from a variety of philanthropic sources.[50] Ironically, Flexner's report prevented Carnegie from making his own monetary contribution to medical education. Carnegie responded to the report, stating, "You have proved that medical education is a business. I will not endow any other man's business."[51]

The Flexner Report marked a change for the Carnegie Foundation's role in American education, as well as the role of private organizations in local institutions. Through this report, a large, private organization became involved with the local and specific medical schools. Flexner tried to standardize American medical education. He saw the university as one of the new institutional hubs of United States society, important because it had the power to track people into different professions and different levels of authority.

Henry Pritchett saw the Carnegie Foundation's role in the Flexner report as a demonstration of the Carnegie Foundation's important and central role in educational administration, with the goal of promoting science in education. In the report's introduction, Pritchett commented on the CFAT's role in helping society, "The attitude of the Foundation is that all colleges and universities, whether supported by taxation or by private endowment, are in truth public service corporations, and that the public is entitled to know the facts concerning their administration and development, whether those facts pertain to the financial or to the education side. We believe, therefore, that in seeking to present an accurate and fair statement of the work and the facilities of the medical schools of this country, we are serving the best possible purpose which such an agency as the Foundation can serve; and, furthermore, that only by such publicity can the true interests of education and of the universities themselves be subserved."[52]

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[50] Ibid., 73
[51] Fleishman, *The Foundation,* 168.
[52] Flexner, Abraham. *Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching,* ix.

In addition to completing the report and promoting change and standardization in the United States and Canada, Pritchett pushed for similar studies of European medical schools. "It is the purpose of the Foundation to proceed at once with a similar study of medical education in Great Britain, Germany, and France, in order that those charged with the reconstruction of medical education in America may profit by the experience of other countries."[53] The Foundation published several articles on medical education in these countries and recognized the importance of looking internationally at medical schools to maintain America's competitive edge on medical education.

Bill and Melinda Gates Foundation

For The Bill and Melinda Gates Foundation, public education in grades K-12 is the area of highest concern, especially in under-resourced urban districts with high poverty levels, low high school graduation rates, and painfully low college graduation rates. The problem that the foundation attempts to stems from the way that public schools were designed. American public elementary and high schools were not designed to provide every child with a quality, equal education. In fact, instead of functioning as great equalizers of American society, public schools did just the opposite. Schools were designed to socialize children and to teach them basic literacy. Children were required to show up on time, respect authority, repeat monotonous tasks, and establish a consistent work ethic. A high school diploma symbolized a student's employability as an industrial worker. In this system, the top twenty percent of students rose to

[53] Ibid., x.

the top and went on to higher education.[54] This credentialing model made sense for the industrial economy the Carnegie knew.

As the United States moved out of an industrial economy and towards an information economy, tension arose between the quality of human capital produced by the public school system and the skills required for the new workforce. Twenty percent of students with advanced degrees are not enough to support the type of workforce that the United States needs in order to be an economically competitive nation. Now, in a global economy based on knowledge and skills, America is falling behind.[55] The United States has a force of public schools that are not designed to create 21st century citizens. These are the challenges that the Bill and Melinda Gates Foundation has chose to address.

In 2005, Bill Gates made a speech to the National Governors Association, criticizing American public high schools. He stated, "America's high schools are obsolete. By obsolete, I don't just mean that our high schools are broken, flawed, and under-funded – though a case could be made for every one of those points. By obsolete, I mean that our high schools – even when they're working exactly as designed – cannot teach our kids what they need to know today."[56] He commented that he is appalled at public education from the perspective as the head of a corporation that employs workers and a foundation that gives back to them. Gates declared that he is "terrified for our workforce of tomorrow." This often-quoted declaration drives the Foundation forward in supporting education.

The same problems that existed for students in the early years of the Carnegie Foundation also exist for students in the early years of the Gates Foundation, as the United States moves to a

[54] Hershberg, Theodore, Ian Rosenblum and Virginia Adams Simon. "Adequacy, Equity, and Accountability." *Education Week*. February 19, 2003. 1-4.
[55] Friedman, Thomas L. *The World is Flat: A Brief History of the Twenty-First Century*. New York: Picador, 2007.
[56] Gates, Bill. "Prepared Remarks." *National Governors Association/Achieve Summit*. February 26, 2005.

globalized, information economy. In a 2008 testimony before the Committee on Science and Technology, for the United States House of Representatives, Gates announced that he wants more foreign technical labor brought to the United States to work for companies like Microsoft. In this claim, he faulted America for not making enough competent engineers.[57]

In the United States, education is largely left to state control under the tenth amendment of the Constitution, which states, "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." Beyond the tenth amendment, the Constitution does not explicitly mention the role of federal government in education. For example, schools are run locally and governed by state laws. Therefore, laws regarding school reform have a long history of state control, and are only recently part of federal government policy. Traditionally, states have dictated guidelines for education and allotted most of the power to local school boards. Americans are deeply entrenched in the notion of education as local. The cultural mantra of local control leads to a deep paranoia of big government control of education.

Public schools are largely funded by local real estate taxes with supplementary funds from the state. Because of this local design, the amount of money per student per year varies greatly by the taxes paid in the district where the students live. The quality of public education correlates with the real estate values of districts. Students in urban environments who grow up in poverty often have access to the worst public education that America offers, because these schools do not have the funding or the resources of wealthier, suburban districts. For this and other reasons, American students are not meeting international benchmarks on standardized tests.

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[57] Kovacs, Phillip E. *The Gates Foundation and the Future of U.S. "Public" Schools*. (New York: Routledge, 2011), 31.

America is falling behind in education; and therefore the country is falling behind in human capital.

Drivers of Change

Joel Fleishman categorizes foundations into three different roles. First, a foundation may be a *driver*. Foundations that are drivers develop practical strategies to attain a specific social, cultural, or economic goal. The foundation itself makes a strategic plan and directs the efforts of that plan by making grants to organizations that will carry out the actions. The second role a foundation may play is a *partner*. In this role, foundations share the responsibility of developing a strategy with other organizations. The foundation makes grants that support the partner organization, as well as other organizations that carry out the plan. Finally, the third role that foundations play is that of a *catalyst*. As a catalyst, foundations do not have a strategy or direction to solve a problem because the strategy is premature or currently unknown. In this position, a foundation gives money to many organizations, hoping that one will find a successful route to creating change, while knowing that many others will fail to produce results.[58] The Gates Foundation has functioned as all three of these roles, although it tends to act as a driver most often in its high-impact initiatives. In its first two decades of existence, the Carnegie Foundation was also primarily a driver organization.

As a driver organization, the Carnegie Foundation for the Advancement of Teaching very clearly laid out from the beginning what exactly it wanted to accomplish and how it wanted to accomplish that goal. The CFAT had a two-part charter: "the first, specifically to provide retiring pensions under certain conditions; and the second, in general to do and perform all things necessary to encourage, uphold, and dignify the profession of the teacher and the cause of higher

[58] Fleishman, *The Foundation*, 60.

education within the United States, the Dominion of Canada, and Newfoundland."[59] In 1905, Andrew Carnegie set aside ten million dollars in five percent mortgage bonds to start this pension fund for college professors. He laid out reasons for his actions, a goal, and a strategy. He appointed a board of trustees to carry out the plan, as well as selected a president of the Foundation from the related field of education. The Carnegie Foundation created incentives for higher education to reform itself. Through establishing rigorous standards for universities to receive pension funds, the CFAT incentivized change towards a more rigorous, standardized model. When the Foundation was set up, the trustees determined what a higher education institution needed to be considered a "college." The pension plan did not work as it was intended, as trustees quickly saw the need for extending pension options to other members of the university staff besides teachers, such as deans, registrars, presidents, and trustees. Carnegie pensions helped to quicken the intellectual life of the college by making them lively, younger places with upward mobility and a sense of security for the future.[60] Eventually, Pritchett set up the Teachers Insurance and Annuity Association of America (TIAA) to continue pension plans beyond the Carnegie Foundation's capacity.

The Gates Foundation took a different route to becoming a driver organization. Since it was a combination of several smaller foundations, the Gates Foundation did not begin with a charter comparable to the CFAT. Instead, it began as a merger of two existing foundations, and defined its purpose as it progressed. However, the Gates Foundation tends to drive the initiatives that it funds. The Gates Foundation becomes very involved with its projects and will take the lead in directing them, in partnership with school districts. For example, in 2009, the organization gave a collective $290 million to four large urban districts across the country in a

[59] Savage, *Fruit of an Impulse: Forty-Five Years of the Carnegie Foundation 1905-1950*, 32.
[60] Lagemann, *Private Power for the Public Good: A History of the Carnegie Foundation for the Advancement of Teaching*, 161.

project called Intensive Partnerships for Effective Teaching. The districts include Hillsborough County Public Schools in Florida, Memphis City Schools, Pittsburgh Public Schools, and the College-Ready Promise (five charter school networks in Los Angeles: Alliance College-Ready Public Schools, Aspire Public Schools, Green Dot Public Schools, Inner City Education Foundation, and Partnerships to Uplift Communities Schools).[61] The process to receive the funding was extremely competitive, and the Bill and Melinda Gates Foundation played an active role in determining how the district should spend the funds.

To receive the money, districts had to submit a comprehensive plan for turning their schools around, based on the factors that the Gates Foundation's research currently finds most important: finding ways to measure and reward effective teaching. In an interview in 2010, Bill Gates stressed the importance of accurate measurement of successful teaching by stating, "Every profession has to have some form of measurement."[62] The grants of the Intensive Partnerships for Effective Teaching restructure the district's approach to measuring teaching. For example, Hillsborough County received $100 million for a project called Empowering Effective Teachers. This project switches to using a value-added model of measuring student growth based on standardized test scores. The value-added score annually links each individual student with his particular teacher. The statistical average of each of the students' scores is then used for fifty percent of the teacher's evaluation, which determines both the pay salary for that year as well as whether or not the teacher originally receives tenure. The other components of the teacher's evaluation are a principal evaluation and a peer evaluation. The grant also put a mentor teacher and peer evaluator system into place to support struggling teachers immediately. The Gates

[61] *Bill and Melinda Gates Foundation*.
[62] Barkan, Joanne. "Got Dough? How Billionaires Rule Our Schools." *Dissent Magazine*, Winter 2011, http://www.dissentmagazine.org/article/?article=3781.

Foundation arranged to give the $100 million to the district initiative over the course of seven years.

The Gates Foundation has a massive scale of funds to contribute to education, and therefore it can take on equally immense projects. In fact, it is difficult for a foundation as large as the Gates Foundation to fund smaller initiatives, since it is responsible for giving away so much money on an annual basis. For foundations, funding takes an incredible amount of man-power to determine whether or not the proposed initiative aligns with the foundation's mission and values. It takes even more work to monitor and evaluate the project once the foundation agrees to fund it. The Gates Foundation's staff of nearly a thousand individuals engages in extensive data collection and analysis. Other smaller foundations tend to fund organizations that apply directly to them. Small foundations take on only a few grantees to fund so that they can keep track of their results. The Gates Foundation has several thousand grantees. Since the Gates Foundation has such a wide spread of projects both in the United States and worldwide, it is simpler for the Foundation to create its own initiatives and become an expert in those, such as the programs currently implements in Hillsborough County or in other large-scale projects.

Driver organizations operate under rigorous measurement and testing. From its origin, the Carnegie Foundation applied the scientific method to grant-making. In *Gospel of Wealth,* Carnegie wrote, "There is but one right mode of using enormous fortunes – namely, that the possessors from time to time during their own lives should so administer these as to promote the permanent good of the communities from which they were gathered."[63] CFAT invested in first making observations of areas that they felt needed assistance, such as medical schools in the United States and Canada. After publishing these observations, it strategically came up with a way to change in a quantifiable way, based on the observations.

[63] Carnegie, *The Gospel of Wealth*, 13.

Precedents

An important distinction to note between the Carnegie Foundation and the Bill and Melinda Gates Foundation is regarding the idea of precedents. Andrew Carnegie formed the Carnegie Foundation for the Advancement of Teaching in 1905, in the "first golden age of giving." With this foundation and his other mega-foundation, the Carnegie Corporation of NY, Carnegie set the standard for future foundations. His extensive writing on foundations helped to establish his way of operating as *the* way to effectively run a foundation. The lack of precedent provided freedom for the Carnegie Foundation to experiment, but it also restricted the Foundation's actions because people did not know what to expect from a foundation. It kept the CFAT under watchful public and academic eyes, because every action was novel. In regards to education, the Gates Foundation has been influenced by the trajectory of the Carnegie Foundation throughout its history, as well as the successes and failures of other foundations in the past century.

The Gates Foundation's actions echo Carnegie's sentiments of establishing productive citizens with knowledge and education available to the public. However, the Bill and Melinda Gates Foundation falls into a new category of philanthropy: venture philanthropy. This idea is modeled on the venture capital and investments boom of the late 20th century. This type of philanthropy is popular with the new age, West Coast philanthropists. Donors are becoming social entrepreneurs.[64] Venture philanthropists take more risks to try out new initiatives before they are completely tested by research. The Gates Foundation fits right into the high-risk philanthropy, as their seventh guiding principle states: "We take risks, make big bets, and move

[64] Kovacs, *The Gates Foundation and the Future of U.S. "Public" Schools*, 2.

with urgency. We are in it for the long haul."[65] Risk-taking in philanthropy makes sense because often foundations have the resources to start new movements. Foundations that are drivers of their own movements or catalysts of new ideas are able to take risks that the government cannot afford to pay or that politicians cannot afford to stand behind.

While new wealthy philanthropists from the internet and investment boom are innovative, their emphasis on results parallels Carnegie's old standard. However, the Gates Foundation marks a divergence from recent philanthropy in education, particularly the $500 million donated by the Annenberg Challenge, in 1993. When Walter Annenberg donated his millions to improve education in the United States, he had excellent intentions but offered very few guidelines. After spreading grants out across districts around the country, the Challenge ended in 2001 without producing any resounding change in education. The donation is largely considered a failure.[66] In the final report of the Chicago School District's handling of Annenberg's funds, the report found that while "student achievement improved across Annenberg Challenge schools as it did across the Chicago Public School system as a whole, results suggest that among the schools it supported, the Challenge had little impact on school improvement and student outcomes, with no statistically significant differences between Annenberg and non-Annenberg schools in rates of achievement gain, classroom behavior, student self-efficacy, and social competence."[67] However, a positive aspect that emerged from the Challenge was to inspire other foundations to take on the mission of school reform, such as the Lilly Endowment, the Packard Foundation, the Walton and

[65] *Bill and Melinda Gates Foundation*.
[66] Ravitch, *The Death and Life of the Great American School System*, 197.
[67] Smylie, Mark A.; Wenzel, Stacy A.; Allensworth, Elaine; Fendt, Carol; Hallman, Sara; Luppescu, Stuart; Nagaoka, Jenny. "The Chicago Annenberg Challenge: Successes, Failures, and Lessons for the Future." Consortium on Chicago School Research. August, 2003. http://ccsr.uchicago.edu/content/publications.php?pub_id=60.

Broad Foundation, and of course, the Bill and Melinda Gates Foundation. Influenced by the $500 million failure, these foundations drive their own agendas in a much more regimented way.[68]

The Gates Foundation tries to avoid the mistakes of the Annenberg Challenge with strategic planning and measurement. However, there has been quite a growth curve for the Foundation. Through the years, the Foundation's actions have become more grounded in research. An example of an early failure for the Gates Foundation was the Small Schools Movement, based on research from Ted Sizer. The small schools movement was brief but dramatic. It officially began with research from the 1960s-1980s, when huge urban high schools with several thousand students were divided into smaller "learning communities." The movement gained support from famous educational researchers and took off in that time period but quickly died down. Despite a lack of successful research since that time period, the Gates Foundation latched onto the small schools initiative beginning in 1999.[69]

The concentration of the most rapid funding occurred in 2003, but nearly immediate negative feedback caused the movement to dwindle by 2004, and completely end by 2005. In that time, larger schools were divided into smaller ones. Although the more intimate setting provided students with a closer community, there were many problems with smaller schools. First, by dividing the schools, well-established neighborhood schools were split up, halting a long tradition of schooling in some communities. The district also divided the resources for each school. Specializing faculty now had to spread their class load and teach more varied classes, yielding less stellar results. With the smaller populations of students, schools were unable to support some of the programs that students cared about the most, such as sports teams, extracurricular clubs, advanced specialized classes, and ESL programs. The divisions caused a

[68] Ravitch, *The Death and Life of the Great American School System*, 197.
[69] Kovacs, *The Gates Foundation and the Future of U.S. "Public" Schools*, ch. 6.

number of inefficiencies in buying supplies; districts needed to buy three new sets of textbooks for classes that otherwise would have shared. Some schools spit into themed schools. For instance, one might be an arts school, one might be a technical school, while another might be a science school. Districts struggled with the social stigma of the school divisions. The well-meaning themed schools were renamed by the students as the "dumb school" or the "preppy school" and some were not popular enough to keep open. Enrollment gradually dropped in the new schools.[70] These schools differed from charter or magnet schools because they segmented resources in already existing schools, instead of building new organizations with original missions and values. The program was poorly implemented and it was not tested enough before the Gates Foundation became involved.

Eventually, several of the schools that the Foundation opened completely shut down. The $2 billion initiative disappeared quickly and quietly. To make the most of an embarrassing mistake, press releases from the Foundation claimed that the small schools movement was never really about small schools. Instead, it was about common focus, high expectations, personalization, responsibility, respect, and time to collaborate. All of these are noble goals, but the way that the Foundation quietly sidled away from association with the small schools movement illustrated that the movement failed to bring about these improvements. One critic noted that the public's association of the Gates Foundation with small schools will vastly outlive the Gates Foundation’s actual involvement with small schools.[71] However, this experience helped to shape the focus of future initiatives of the Foundation. As a result, in 2008, the Foundation announced teacher and technology-centered initiatives that are either grounded in research or researched by the Gates Foundation, which will produce a more systemic change.

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[70] Ravitch, *The Life and Death of the American School System*.
[71] Kovacs, *The Gates Foundation and the Future of U.S. "Public" Schools*, ch. 6.

Foundations Forever?

A difference between the Carnegie Foundation and the Gates Foundation is that the Carnegie Foundation is a perpetual foundation, whereas the Gates Foundation has a "sunset clause," which means that the Foundation will eventually spend all of its money. Foundations stay in existence through investments. Many old foundations are perpetual, but the recent trend in philanthropy is to design foundations that will eventually spend themselves out of existence. Carnegie did not write about the issue of perpetual foundations, but he did strongly encourage the wealthy to spend all of their money during their lifetimes. Carnegie tried to spend all of his away, but he failed. At the end of his life, he contributed the rest of his money to his two foundations. The problem of his foundations existing forever did not trouble Carnegie, because he had no precedent of other foundations to worry him.[72] As Carnegie and Rockefeller set the standard for philanthropic behavior, many foundations established just after their time period also created perpetual foundations.

The Gates Foundation has a limited life. When Warren Buffett donated $31 billion to the Foundation, he required it to annually spend every dollar that he gives to them. Lately it is popular in philanthropy to spend all of the money by the philanthropists' death, or by a set date soon afterwards. Recent philanthropists choose to spend all of their money in the present for several reasons. First, they may not trust the future trustees to run their foundations in the direction that they desired. Second, philanthropists are lately of the opinion that fixing problems of today will reduce the problems that future generations of philanthropists need to fix. Focusing more than five percent of its assets on initiatives today could eradicate the problem that a foundation attempts to attack. These two schools of thought and future trajectories for

[72] Fleishman, 313

foundations impact the way that they develop strategic plans to spend their money, and ultimately affect the programs that they support.

Changing the Profession of Teaching

The earliest years of both the Carnegie Foundation and the Gates Foundation have been invested in changing the profession of teaching, although they have gone about that goal differently. The charter of the Carnegie Foundation for the Advancement of Teaching designated it as an organization dedicated to promoting the profession of teaching. Carnegie was a firm believer in the power of education to propel hard-working people out of poverty, so he placed high importance on the university as a teaching organization. His tenure as a trustee for Cornell University opened his eyes to the meager salaries of college professors. When he chartered the CFAT as a pension fund, he stated, "I have reached the conclusion that the least rewarded of all the professions is that of the teacher in our higher educational institutions… Able men hesitate to adopt teaching as a career, and many old professors whose places should be occupied by younger men cannot be retired."[73] Carnegie did not see enough rotation of qualified people through the profession. Old professors could not retire at an appropriate age because they had not accumulated enough money to leave their position. Carnegie wanted to attract high-quality, young candidates to become college professors. By using his money to create a pension fund, Carnegie elevated the status of the college professor and made the occupation more desirable.

Beyond this indirect, yet highly intentional systemic change, the CFAT attempted to influence the profession of teaching through more traditional means; by doing research and publishing reports on their findings. Due to the title of the foundation itself, The Carnegie Foundation *for the Advancement of Teaching*, the Foundation was particularly invested in

[73] "Carnegie Millions for College Pension Fund." *New York Times*, April 28, 1905.

studying people in the teaching profession, among all of the professions studied (doctors, lawyers, engineers, and more). However, teaching organizations were quite resistant to the Foundation. The largest teaching unions in America, the National Education Association and the American Federation of Teachers, were founded in 1857 and 1916, respectively. The professional unions did not give the Foundation an invitation to investigate. Teacher's unions were suspicious of previous attempts for national standardization that they had observed when the Foundation approached other professions. However, some states did allow the Foundation to research, such as Missouri and Vermont. In an effort to professionalize teachers, the Foundation ran a survey of the normal schools of Missouri. This study resulted in *The Professional Preparation of Teachers for American Public Schools*, published in 1920. In this short, thin bulletin, special curriculum training for all teachers of all levels, K-12, was encouraged. The booklet avoided the concept of a liberal arts preparation for education, and instead pushed forward a "vocational" model for teacher training. This model stemmed from schools' frustration of how ill prepared teachers were for handling classroom management and dealing with normal students. The Carnegie Foundation recommended graduate school training for higher education. Although the curriculum for teacher training laid out general ideas that could have been replicated anyways, the recommendations did not go far beyond Missouri.[74]

In 1912, the state of Vermont invited the Carnegie Foundation to undertake the study of the entire educational system of Vermont. The resulting report, *Education in Vermont*, supported reforms of elementary and secondary school curricula in VT, promoted by a centralized, state-wide administration. The Foundation tried to free elementary and secondary education from the hands of local politics so that it could be administrated by "experts." Vermont quickly adapted a

[74] Lagemann, *Private Power for the Public Good: A History of the Carnegie Foundation for the Advancement of Teaching*, 87.

few changes that the Foundation had suggested. However, the Foundation's suggestions for higher education in the state were much more controversial. The report decided that institutions of higher education that were not fully owned by the state should not receive state subsidies. At the time, three colleges in VT received state funding: University of Vermont, Middlebury College, and Norwich University. The CFAT considered all three of these not technically state universities, and determined that they should be cut off from state funding. This angered the American Association of University Professors and raised questions of academic freedom and professorial recognition in university decisions. The AAUP saw the Foundation as a threat to the rights of professors and their independence. The recommendations for higher education from the Vermont report ended up solidifying opposition to the Carnegie Foundation by strengthening the AAUP. Although the Carnegie Foundation existed to support college professors, the AAUP saw the need for another body of power in the conversation about the rights and livelihoods of professors.[75]

Oddly enough, a century later, the United States is back to the Carnegie Foundation's recommendations. Although the trajectory of national education has politically changed over the past fifty years, America's national education plan currently leads towards standardization of curriculum, testing, and as much as possible, standardization of teaching. Recent studies have shown that the one factor that influences student achievement the most is the teacher standing in front of the classroom. Jumping on that particular piece of research, the Gates Foundation recently changed course to research, measure, and promote effective teaching as its main

[75] Ibid., 90.

initiative. The organization has funded several research projects to find the most effective teaching strategies.[76]

The Foundation has been searching for ways to measure teacher evaluations in a quantifiable manner. These measures are based on test scores, personnel evaluations, and other factors. Foundation researchers have also been experimenting with providing incentives for teachers to improve their own quality of teaching. Relying on the corporate model of receiving higher rewards for greater returns, the Foundation established several sites around the country that experiment with competitive environments and pay-for-performance, by linking student test scores to a teacher's effectiveness as a teacher. The hope is that even in the public sector, competitive market forces will bring out the best in educators.

In the fall of the 2009-2010 school year, the Gates Foundation began to fund an initiative to seek out and measure effective teaching, called MET. This project is different from previous teacher research projects because relies on technology to reach the core of what it means to be an effective teacher. MET uses research from 3,019 real teachers in their own classrooms in six urban districts across the country: Charlotte-Mecklenburg Schools, Dallas Independent School District, Denver Public Schools, Hillsborough County Public Schools, Memphis City Schools, and the New York City Department of Education. It uses a variety of data to measure teaching, such as student achievement gains on standardized test scores, classroom observations and teacher reflections, students' perceptions of classroom environment, teachers' pedagogical knowledge, and teachers' perceptions of working conditions and instructional support.[77]

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[76] Green, Elizabeth. "Building a Better Teacher." *New York Times*. March 2, 2010. http://www.nytimes.com/2010/03/07/magazine/07Teachers-t.html?pagewanted=all.

[77] "MET Project: Working with Teachers to Develop Fair and Reliable Measure of Effective Teaching." The Bill and Melinda Gates Foundation. June 2011. http://www.gatesfoundation.org/highschools/Documents/met-framing-paper.pdf.

The most innovative part of this project is the way that MET collects and uses classroom observations and teacher reflections. Since it is impossible for data analysts to sit in on 3,019 classes four times a year, MET has developed a videotaping system for teachers and their evaluators to use. According to the Gates Foundation's discussion of this project, one of the challenges was to find a way to videotape nearly 20,000 lessons at a relatively low cost. Teachscape, a company that develops technology for educational purposes, engineered a solution that involves panoramic video cameras that take minimal training for teachers to set up and do not require an extra cameraperson. Individual teachers can operate the cameras using a remote control and upload them onto an internet database. From this database, teachers provide commentary on the lesson and offer insight to what they thought or did at each part of the lesson. A group of trained raters then score the lesson.[78]

This process has now collected 13,000 videos. The MET report by the Gates Foundation is quick to point out that the most immediate priority is to use the data in the videos to help inform teachers of their own practices and guide them towards reflection. In later stages the project hopes to influence policy decisions about measuring effective teaching with results from this research. The video network may influence professional development to redesign the way that teachers plan and teach, as well as how they are measured. MET is currently designing a toolkit that instructs how to set up low-cost, high-quality video devices, storage capacity, and retrieval software for districts to implement the videotaping initiative on their own. The project has a very ambitious timeline: the final report should be published by the winter of 2011-2012.

Common Focus on Measurement and Testing

[78] Ibid.

Being a data-driven organization, the Gates Foundation has proven that it follows the current popular trend of high-stakes testing in education. Although people usually think of standardized testing as recent a recent addition to education reform, the Carnegie Foundation focused on testing and measurement of students as a way to standardize and improve education across the country. Prior to the Carnegie Foundation's involvement in education, the National Education Association, a nationwide teachers' union created two committees to study colleges and high school relationships: the Committee of Ten on Secondary School Studies in 1892, and the Committee on College Entrance Requirements in 1899. These committees worked on standardizing admission into college, and the Carnegie Foundation helped by implementing a "Carnegie Unit," which was a measure of class time. Students needed fourteen units to be admitted to college.[79] As early as 1910, the Carnegie Foundation expressed interest in finding a test to determine whether or not students were prepared for entering college. The Carnegie Foundation for the Advancement of Teaching was a contributing factor to the creation of the College Board, the Scholastic Aptitude Test (SAT), and the Educational Testing Service (ETS) at Princeton. Although the College Board was established slightly before the Carnegie Foundation came into existence, it helped the testing service to grow tremendously. By 1910, it had 29 college members and tested 4,000 students. By 1920 15,000 students took the SAT. Today, more than 2 million students take the SAT each year.[80]

In the late 1920s, the Foundation announced that it was ready to move away from state surveys of professional education to focus its efforts instead on the experience of students and their potential for "vertical progress through a school system."[81] This aligned with Andrew

[79] Lagemann, *Private Power for the Public Good: A History of the Carnegie Foundation for the Advancement of Teaching,* 95
[80] Ibid., 99
[81] Ibid., 94

Carnegie's views of education as a way to bring people out of poverty. The Foundation began the Pennsylvania Study, a survey based on extensive standardized testing of students. The study was concerned with growing enrollments in secondary schools and higher. It had a broad focus, tackling questions such as: why do students attend high school and college? What is the responsibility of high schools for directing students towards college? How does college develop students so that they can focus on their talents for individual high achievement? The study administered different types of intelligence and achievement tests to high school seniors in Pennsylvania in 1928. The results of the study led to admissions decisions based on testing instead of certifications.[82] An important part of the study was finding a way to successfully provide the college experience for a diverse applicant pool, with varying levels of academic rigor. The Foundation's vision of accessible education approved of to the development plans for people with diverse backgrounds, such as the General College at the University of Minnesota. This college was open to all high school graduates who did not score well enough on a college entrance test to be admitted to the university, but they were still eligible to continue with a modified curriculum that suited them.[83] Programs such as this one led to the development of community colleges.

The high-stakes testing culture that began to emerge in the early Carnegie era exists even more prominently in schools today. Students take exams such as the SAT and the ACT to be considered for admission into universities. Through No Child Left Behind, state and federal testing is mandated in schools on an annual basis. These tests help central authorities to measure the progress of students, teachers, and schools; as well as hold students to international benchmarks. School-based standardized testing is currently one of the most controversial issues

[82] Ibid., 103-107
[83] Ibid., 102

of education reform. Measuring student progress is challenging because it is difficult to gain a holistic picture of students from the results of a test. Scores on tests vary drastically by experience, socio-economic status, age, and subject. Recently, the published success of a school directly correlates to its test scores, so school officials mandate that teachers "teach to the test," a practice that critics argue destroys the integrity of learning. Teaching to the test is an especially common criticism of urban public schools.

The Gates Foundation promotes schools and school systems that embrace high-stakes standardized testing, or other forms of student measurement. Coming from a corporate background, the measurement and accountability movement makes sense in order to achieve the most progress. The Foundation supports testing based on its inclusion in the reforms and programs that it funds. Testing is an important part of the Measuring Effective Teaching grants, the Race to the Top reforms for president Obama, as well as individual school and district reforms. Testing is an easy way for the Foundation, the United States government, and other stakeholders to quickly and arbitrarily measure the effects of its money. It is a relation of inputs (Foundation dollars) to outputs (fluctuations in student test scores). For the Foundation to evaluate its own progress, it is important that it includes these measurements.

There are many examples of schools that use frequent data measurement to successfully help their students grow. For example, the Gates Foundation has supported a number of charter schools across the United States since 2001. Charter schools are publicly-funded schools run by organizations apart from the school district. In his speeches, writings, and other public announcements, Bill Gates praises charter schools and wants to add more charter networks to the education solution. The Gates Foundation is particularly invested in schools that have produced

positive student test results or schools that promote Foundation initiatives.[84] In his 2009 TED talk, Bill Gates pointed to the success of the KIPP charter schools, a national network of charter schools started by Teach for America alumni. In addition to their intensive testing strategies, Gates particularly complimented KIPP's team-teaching strategy and the dynamic attitude of their teacher corps.

Public Impact

Both the Carnegie Foundation and the Gates Foundation have a knack for stimulating public response. Many people have opinions on the respective organizations, because the nature of their work in education affects such a broad scope of people. However, with its lack of precedent and its abundance of publicized writings, the Carnegie Foundation aimed to educate and outrage the nation about education. When Pritchett became President of CFAT, he attempted to raise awareness about the poor state of higher education. The Gates Foundation, with a clearer line of precedents and a more solidified place in the national education debate, arrives at the scene of an already outraged nation. People are already upset about the state of public education in America. The Gates Foundation endorses that there is a problem and tries to come up with strategies about how to fix it. The Carnegie Foundation swooped in from the outside, began to evaluate schools and students, and published shocking reports, such as the Flexner Report, and the Reed Report on law schools. Andrew Carnegie himself made a national impact with his essays, such as *Gospel of Wealth.* Since the CFAT's main tools for promoting change were publishing reports, supporting causes with funding, and sitting in influential boards with the political power to implement changes, the Foundation relied on the impact of its scholarly research first.

[84] Kovacs, *The Gates Foundation and the Future of U.S. "Public" Schools*, ch. 1.

Whereas the Carnegie Foundation approached making an impact by mostly dealing with the academic community, the Gates Foundation funds initiatives that reach directly out to the public. Today, although different political parties have polarized views of the best way to approach education reforms in the United States, all parties agree that a problem exists in public education. The shift to recognizing that the nation needs education reform occurred in stages since the earliest years of the Carnegie Foundation, accelerating in light of events such as the Soviet Union launch of Sputnik in 1957 and the 1983 report on education, *A Nation at Risk*. With this acceptance of a problem, the Gates Foundation plays a very different role than the Carnegie Foundation filled. Instead of making the elite aware of a problem, the Gates Foundation tries to solve it head on with aggressive initiatives and find ways to directly involve the public.

In September 2009, the Gates Foundation partnered with Viacom to produce a five-year segment called *Get Schooled: You Have the Right*. Viacom is the parent company of MTV, VH1, Comedy Central, and Paramount Studios. The initiative aims to raise awareness about the country's educational crisis and offer resources to assist students. *Get Schooled* is a self-proclaimed partnership between students, schools, and partners to improve education by increasing engagement. "We are committed to raising awareness and, even more importantly, to converting that awareness into action," announced Philippe Dauman, President and CEO of Viacom.[85] To launch the movement, Viacom and the Gates Foundation produced a half hour video of three talented people in excellent careers and their reflections on their education. The film shadows one of President Obama's speech writers, Kelly Clarkson's music director, and Lebron James' assistant account director.[86] All three main characters attended public school,

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26 "Get Schooled Initiative Launches – Aimed At Broadening Americans' Engagement in Solving the Education Crisis." Bill and Melinda Gates Foundation. September 8, 2009. http://www.gatesfoundation.org/press-releases/Pages/get-schooled-initiative-launches-090908.aspx.

[86] *Get Schooled: You Have the Right*. Directed by Lauren Lazin. Bill and Melinda Gates Foundation. 2009.

made the most of their education, and now work in successful careers. *Get Schooled* is a campaign to get kids motivated about school. In a challenge called the "Get Motivated Challenge," twenty-five high schools from around the country compete to improve their attendance rates with the help of technology, the media, and celebrity guests.

Another Gates-funded national film phenomenon is the heart-wrenching movie, *Waiting for "Superman*." The 2010 documentary film chronicles the failures of the American public school system by following a few students through their experiences in public schools and their families' struggles as they wait for their children to be accepted into charter schools through a lottery system. Bill Gates backed the film and also plays a small role in it as himself.

A more direct approach to affecting the political aspects of education was the EDin08 campaign. EDin08 was a bipartisan project designed to make education into a major campaign issue of the 2008 presidential election. It stemmed from a collaboration of the Gates Foundation and the Broad Foundation. The $60 million project was the single most expensive campaign issue ever brought up in a presidential election.[87] Despite the grand funding, education was only one of several top issues in the presidential campaign.

The Impact of Technology

The early initiatives of the Carnegie Foundation and the Gates Foundation differ in the ways that they focus on technology to solve problems in education. As a self-made billionaire in the computer software business, Bill Gates is his own source of inspiration for the importance of bringing students up to speed technologically. The Gates Foundation is strongly in support of technological innovations for education. The third principle listed in the Foundation's Guiding Principles reads, "Science and technology have great potential to improve lives around the

[87] Ravitch, *The Life and Death of the American School System.*

world."[88] The Foundation funds inventors who develop online tools for K-12 classrooms, as well as dashboard tools for their teachers to help them use the sites. One of Gates' goals is to learn how to blend technology and learning for less motivated students. Teachers and researchers are searching for ways to make online learning more appealing to struggling students.[89]

The Carnegie Foundation for the Advancement of Teaching put an emphasis on using technology to educational problems in a different way. In its early reports, the Carnegie Foundation emphasized the importance of utilizing up-to-date technology, particularly in Flexner's report on medical education. Flexner was a strong proponent of well-equipped medical laboratories and clinical experience for training physicians. Although, the foundation did not go as far as stating the importance of technology in its guiding principles, this is not to say that in its first two decades, the Carnegie Foundation was not innovative or did not practice cutting-edge research. In fact, just the opposite is true. Judging by the Foundation's emphasis on accurate, unbiased measurement, as well as the truly shocked reaction of the country to the first research findings of Flexner, the Carnegie Foundation for the Advancement of Teaching was innovative and willing to try new initiatives and use research to back up the findings from those initiatives.

This cultural difference between the foundations reflects the change of the time period and the backgrounds of each of the donors. Bill Gates earned his fortune in the software industry. He flourished in the beginning of the internet era, where the possibilities of computer technologies seemed, and continue to appear to be, endless. In his online blog, *Gates Notes*, Bill Gates affirms his faith in technology, stating that "The greatest promise is that we can take technology, blend that with great teaching to make things more interesting and effective. It is drawing in innovators; we are starting to see a glimpse that we really can take this digitization of

[88] *The Bill and Melinda Gates Foundation.*
[89] Ibid.

education and allow for huge improvement."[90] On the other hand, it is difficult to imagine redefining the process of education by relying only on the innovations of the steel industry. However, the scientific practices of efficiency and how to effectively manage large scale organizations that Carnegie used in the corporate world came into play when he designed his Foundation. The Carnegie Foundation used this technology to help to redesign American higher education to make it more standardized and businesslike.

The nature of the internet and the flexible potential of computer technologies to adapt to educational problems are different from the rigid characteristics of steel production at the turn of the century. The Gates Foundation has funded and publicly promoted initiatives that were previously unparallel by the Carnegie Foundation, simply because it is difficult to compare the versatility of the internet to technologies the precede it. Examples of these initiatives are Khan Academy and Gaming to Learn.

Khan Academy is one of the most recent initiatives funded by the Gates Foundation. The Khan Academy is a free, online library of short videos that teach practically every subject imaginable. The non-profit organization accidentally started in 2004 when Salman Khan, a hedge-fund analyst and holder of three MIT degrees and an MBA from Harvard, offered to virtually tutor his younger cousins in math. He produced a series of Youtube videos that enabled the general public to view his videos. As his popularity as a virtual teacher spread, he quit his job and began to make more videos.[91] The videos cover a range of topics and academic levels. For example, the math section begins with Basic Addition and moves all the way through Linear Algebra and other advanced college courses. There are traditional lessons in Photosynthesis the

[90] Gates, Bill. "Bill's Take on Technology and Teaching." *The Gates Notes, LLC*. March 1, 2011. http://www.thegatesnotes.com/TED/Speakers-Topics/Sal-Khan/Bill-Gates-Innovation-Education.

[91] "Salman Khan: Let's Use Videos to Reinvent Education." *TED Conferences, LLC*. March 2011. http://www.ted.com/talks/salman_khan_let_s_use_video_to_reinvent_education.html.

French Revolution and more atypical lessons such as "The Economics of a Cupcake Factory." These videos are all approximately fifteen minutes long, broken down into small, manageable parts that can be paused and re-watched to suit the student's individual needs. Khan Academy now includes practice exercises and assessments for students to supplement the videos. The academy continues to grow and now includes more than 2,100 videos and has delivered over 53 million videos worldwide.[92]

Bill Gates first became involved with the Khan Academy in 2010. He reports that he uses the videos with his children as well as to remind himself of some things. Several education commentators have named Sal Khan, "Bill Gates' Favorite Teacher."[93] Gates spoke favorable about the virtual academy, "I see Sal Khan as a pioneer in an overall movement to use technology to let people learn things, know where they stand, it's the start of a revolution. It is a huge contribution."[94] The Bill and Melinda Gates Foundation became a financial supporter of Khan Academy in early 2011. Since then, Bill Gates and Sal Khan appeared together in the March 2011 TED Conference to explain how Khan Academy works and to promote publicity for the program. The Foundation is helping the nonprofit expand to include more staff to improve its software and to translate the lessons into the major languages of the world. Recently Khan Academy has been working on helping the video library expand for use in the classroom. Khan has added ways to test knowledge and summarize students' progress so that a teacher can look at the data that students generate on their own to quickly know where students need the most help.

In the California Los Altos School District, two fifth grade classes and two seventh grade math classes adopted the Khan Academy curriculum as their full-time math curriculum. Students

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[92] Khan Academy. 2011. http://www.khanacademy.org/.
[93] Kaplan, David. "Bill Gates' Favorite Teacher." *CNN Money*. August 24, 2010. http://money.cnn.com/2010/08/23/technology/sal_khan_academy.fortune/index.htm.
[94] Gates, Bill. "Sal Khan on the Future of Learning." *The Gates Notes, LLC*. March, 1, 2011. http://www.thegatesnotes.com/TED/Speakers-Topics/Sal-Khan/Sal-Khan-Khan-Academy.

work on Khan Academy lessons at their own pace either in class or for homework. This system frees up class time for the simulations, games, mechanics, and real life examples that teachers would otherwise assign for homework.[95] Khan explains the classroom version of his program as a reversal of regular school. Lectures are for homework and classes are for going over examples and pushing knowledge further. Teachers have an online dashboard that they can use to see how students are doing with each topic and then trouble-shoot certain areas that students struggle with. The data system breaks down the information to be question-specific so a teacher can diagnose a student's problem and know exactly how and what students have been working on. Data is comprehensive to promote self-paced learning.[96]

The Gates Foundation funds research of new techniques in learning, particularly those centered in gaming technologies. The Foundation previously helped to fund the startup of a Manhattan primary school, Quest2Learn, whose curriculum is completely centered on computer games and computer literacy. Students at Quest2Learn design their own video games and do other hands-on gaming projects based on topics in each class. Quest2Learn makes each educational experience into a highly immersive, game-like simulation. Adding to that line of research, the Gates Foundation recently announced in late April 2011 that it will fund over $20 million to educational gaming companies to develop game-based learning applications; math, English, and science curricula in digital formats; and real-time, digital assessments of student knowledge that is both engaging and challenging. The Foundation is partnering with big-name companies such as The Pearson Foundation, Educurious Partners, Florida Virtual School, and Institute of Play. The Pearson Foundation is developing 24 online math and English courses designed to help principals and teachers adapt to the Common Core Standards, another

[95] Cadwell, Courtney. "Blended Learning in Seventh Grade Math." *Edublogs.org*. March 4, 2011, http://lasdandkhanacademy.edublogs.org/.
[96] "Salman Khan: Let's Use Videos to Reinvent Education."

nationwide Gates initiative.[97] These courses will be highly focused on technology and include video, interactive software, games, social media, and print. The Foundation also funds several videogame companies to build sets of game-based teaching tools that are useful in the classroom. The Gates Foundation is very interested in exploring channels of combining gaming with classroom experiences.

Destroying Local Actions by Focusing Nationwide

Both of the foundations have moved the role of education of the American public from the local and specific and instead towards the nation as a whole. Large foundations working in the realm of education bring the question of what the relationship should be between these private giants and the public welfare. Foundations use private funds for public good, which raises questions of the interactions between foundations and the democratic rights of the populations that the foundations serve. They also represent huge concentrations of private power that is stronger than individuals or school boards. "Never forget," said Dr. George Hutcheson Denny, the President of the University of Alabama, "that the Carnegie Foundation is an American institution. It could have come into being only in America."[98] In many ways, foundations are a strong representation of what it means to be American, because of their free reign of how they choose to spend their money. In the fourth year of the Carnegie Foundation's existence, a *New York Times* article analyzed its role thus far: "It is not governmental, official, inquisitorial, and compulsory, but it has roots rather in the soil of our American liberty. It proceeds by persuasion,

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[97] "Gates Foundation Announces Portfolio of Innovative Grants to Develop New Teaching and Learning Tools that Support Teachers and Help Students." The Bill and Melinda Gates Foundation. April 11, 2011. http://www.gatesfoundation.org/press-releases/Pages/common-core-tools-110427.aspx.

[98] Savage, *Fruit of an Impulse: Forty-Five Years of the Carnegie Foundation 1905-1950*, v.

co-operation, and the conferring of large benefits. None suffer, but all gain."[99] Foundations are able to accomplish the work that they do because the choice of how to spend money is up to the donor's discretion. This freedom leads to positive potential. At the same time, the other side of this argument is that since foundation dollars are not taxed by the government, foundations are socially obligated to do the work for the public that the government would have done had it collected that revenue.

In its first two decades, the Carnegie Foundation helped to bring about national collaboration in education. Prior to the Carnegie Foundation's involvement, education was largely local and specific to the individual school or university. The Foundation established standards for higher education and tried to improve institutions of higher education that did not meet those standards. The *New York Times* article continued, "They interpreted their trust not as a charity, but as an educational institution: an institution to define, to mediate, to conciliate, to upbuild, to bring order out of the chaos in the higher education of the land,"[100] When the Foundation first gave its gift, it found higher education in "disarray." The Foundation took it upon itself as a non-governmental, interested third party to sort out the problem of unsatisfactory colleges and institutions declaring that they were colleges. It used competition to reform higher education by encouraging the most desirable teachers to move to the Carnegie-ordained colleges, which then pushed other colleges to attempt to meet the Carnegie standards, in order to attract those teachers themselves. This outside institution created a national systemic change. CFAT removed colleges from their local and specific entities and into national scale.

The Carnegie Foundation met opposition to this national standardization from pre-existing organizations designed to protect the rights of college professors, such as the AAUP, as

[99] Butler, Nicholas Murray. "The Carnegie Foundation as an Educational Factor." New York Times, September 18, 1909.
[100] Ibid.

well as the individual institutions themselves. The Foundation maintained that standardization did not mean making all schools uniform. As an organization that studied different schools and states and then drew conclusions from that data together, the Carnegie Foundation's work was inherently collaborative and broader than local.

A century later, the scale and scope of the Bill and Melinda Gates Foundation makes it another national organization. The Gates Foundation gives grants on such a large scale that it has national impact. The Foundation also possesses the ability to affect the trajectories of corporate giants, as well as the national government. As seen in examples such as Hillsborough County, the Gates Foundation pilots initiatives across entire school districts, impacting thousands of children at once. However, the Bill and Melinda Gates Foundation's work in advocacy has the potential to affect students *everywhere* in America. Over the last two decades, there has been a shift from state governments having autonomy in public education to the federal government playing a larger role. Legislation such as No Child Left Behind paved the way for national testing and intensive state standards. However, a new set of problems arose with the planned solutions suggested in NCLB, so policymakers continue to revise the structure of reforms. One difference, however, is the influence of large foundations, such as the Gates Foundation.

Under the goal of promoting college-readiness, the Gates Foundation works with the states to establish Common Core State standards to determine what students at every grade level need to know on their way to graduating from high school to be prepared to enter the work force. The Common Core State Standards Initiative is led by the Council of Chief State School Officers and the National Governors Association but funded $350 million by the Bill and Melinda Gates Foundation. According to the Foundation's website, there are several goals that this collaboration hopes to accomplish. Its slogan is "Fewer, Clearer, Higher: Moving Forward with Consistent,

Rigorous Standards for All Students." The standards are designed to promote concrete mathematics and literacy curriculum. These standards will be comparable to international benchmarks and will be "adopted and pressure-tested" by the states. The Foundation will invest in reinventing and realigning traditional courses, such as Algebra I, to be competitive with an information economy. The Foundation also stresses its dedication to investing in next-generation courses that leverage technology to "create hybrid and online learning environments."[101]

On some levels the Gates Foundation has more power than the government. Even though recent education reforms such as No Child Left Behind have given the federal government a more active role in education across the states, the power to run education still lies with the states. Therefore, the government constitutionally cannot force the states to collaborate to create national common standards. As a private foundation, however, the Gates Foundation can increase collaboration across the states and can provide funding for it that the government cannot. This puts the Gates Foundation in a very powerful position in determining national standards.

After the election of President Obama, the Bill and Melinda Gates Foundation took an even more active role in determining the course of education policy in the coming years. After taking office, Obama presented his *Blueprint for Education Reform*, which is his plan for improving education throughout his presidency. Instead of pushing for a wide-sweeping, federally mandated reform, one of the Obama Administration's main plans was to create a national competition between the states to win a share of $4 billion of government funds, Race to the Top. In order to receive the money, states individually drafted a plan to use the funding based

[101] "Fewer, Clearer, Higher: Moving Forward with Consistent, Rigorous Standards for All Students." Bill and Melinda Gates Foundation. 2010. http://www.gatesfoundation.org/highschools/Documents/fewer-clearer-higher-standards.pdf.

on the principles that the new administration finds most important for improving American public schools.

Although the Gates Foundation did not fund any of the $4 billion of RTTT, it did participate in the contest in two ways. First, states received extra points if they participated in the alliance to adopt the Common Core Standards, an initiative funded by the Gates Foundation. Therefore, if the states chose not to participate in this program, then they lost a competitive advantage. Second, Gates handpicked fifteen states and gave them each $250,000 to work on their extensive RTTT application. The list of states included ones that already had major Gates initiatives. The other 35 states were not happy about the unfair advantage and complained that Gates was trying to handpick the winners. However, officials within the Gates Foundation and the United States Department of Education insisted that they did not coordinate the competition. After this claim, the Gates Foundation offered to fund any states that agreed to sign an eight-point checklist regarding elements to include in their application. Overall, 24 states took the funding.[102] Of the twelve original winners of RTTT, nine states received funding from Gates.[103]

Connections with Influence

Both the Carnegie Foundation and the Gates Foundation were and are very connected with influential organizations and individuals that can shape national education reform. Trustees and officials of the Carnegie Foundation served on the board of many other education organizations. In addition to being the President of the CFAT, Pritchett was originally the

[102] Dillon, Sam. "After Complaints, Gates Foundation Opens Education Aid Offer to All States." *New York Times*. October 27, 2009.

[103] Cavanagh, Sean. "Race to Top: Gates Backs a Bunch of Winners." *Editorial Projects in Education*. August 27, 2010. http://blogs.edweek.org/edweek/state_edwatch/2010/08/race_to_top_gates_a_player_in_winning_applications.html.

President of the TIAA as well, but that created some grumbling about the motives of the Foundation and the insurance organization. Pritchett also served on the board of the Association of American Universities. The secretary to the president, Clyde Furst, served on the College Entrance Examination Board. There was also overlapping membership of the Association of American Colleges, the American Council on Education, and the American Association of University Professors (AAUP). Even though the last group functioned as the Foundation's system of checks and balances, the information that it provided was crucial to the CFAT's decision making processes.

The Gates Foundation has similar connections to circles of power in influencing education today. The Foundation has many connections with the United States Department of Education. Obama appointed several high-ranking officials from the Gates Foundation when he became President. The list includes Jim Shelton, the former Deputy of Education for Gates and now the Assistant Deputy Secretary at the DOE. He heads the Office of Innovation and Improvement. Margot Rogers, the former Special Assistant to the Director of Education Programs at the Bill and Melinda Gates Foundation is now chief of staff for Arne Duncan, U.S. Secretary of Education. Finally, Arne Duncan himself worked closely with the foundation when he was the CEO of Chicago Public Schools. He received $30 million for his district from the Gates Foundation since 2005.[104]

There have been occasions where it has been difficult to draw the line between public and private collaboration versus governmental corruption. For example, Brad Jupp, an advisor to Arne Duncan, declined a position to serve on the advisory committee for the Gates Foundation

[104] Holtzman, Clay. "Growing D.C. Presence for Gates Foundation." *Puget Sound Business Journal*. May 17, 2009. http://www.bizjournals.com/seattle/stories/2009/05/18/story2.html.

because of the conflict of interests behind serving both the Foundation and the government.[105] The Gates Foundation takes a positive stance on its close connections with the federal government. An official statement from the Foundation reads, "It is an honor to serve in the public sector, and we congratulate those former employees that have taken positions with the new administration." Others are more skeptical of the close-knit ties and fear that the Gates Foundation has become too powerful. Many academic eyebrows were raised by the closeness of the Obama administration's agenda for public school reform compared to the Gates Foundation's agenda. Although having a strong mix of experts leading both private and government prominent roles, some are skeptical about the concentration of power. For example, Monty Neill, deputy director at FairTest, a national center that evaluates standardized testing, calls this "intellectual cross-fertilization," and warns against letting a private organization become too powerful, both economically and politically.[106]

Money and power inevitably lead to questions of democracy for both the Carnegie and Gates Foundations. In a 1915 article entitled, "Should the Carnegie Foundation be Suppressed," critics thought that the Carnegie Foundation threatened liberty and individualism. Standardization has been a major critique of the Carnegie Foundation throughout its history. It was accused of supporting nationalism at the expense of local control, a quintessential American debate that continues to simmer today. An outspoken critic was Josiah Royce, a contemporary philosopher. Royce thought that standardizing academic institutions was fundamentally wrong, because places for education should fundamentally be free to teach whatever and however they wanted, inspired by local interests and traditions, in order to preserve an essential element of

[105] Golden, Daniel. "Bill Gates' School Crusade." *Bloomberg Businessweek*. June 15, 2010.
[106] Holtzman, Clay, "Growing D.C. Presence for Gates Foundation."

democracy.[107] The clash between private and public was also the concern. Royce posed questions of whether the foundation had the right to publish about state colleges. Other criticism arrived from organizations, such as the National Educators Association. In 1914, the NEA argued that the Carnegie Foundation was not in any way responsible to people, which "defeated the primary purpose of democracy as heretofore preserved inviolate in our common schools, Normal Schools, and Universities."[108] The NEA claimed that the public and local were inherent to the public good, instead of universal standards in education. Responding to the claim in its ninth annual report, President Pritchett wrote, "…nobody in American education is in the standardizing business, and no educational agency is seeking to control education in the United States."[109]

That theme of the school as a sacred ground for fostering democracy that was central to the debate about the Carnegie Foundation in education permeates the debate about the Gates Foundation today. Critics of the Gates Foundation are insistent that the Foundation destroys the democratic basis of the American school system. Education writer Diane Ravitch writes that it is "undemocratic to relinquish control of public schools to the richest people on the planet."[110] Local officials complain of the influence that the Gates Foundation can hold over their work in schools. For instance, after receiving several grants with specific instructions about how to execute them, Brita Butler-Wall, President of Seattle School Board stated, "I don't understand if the Gates Foundation sees itself as trying to support districts or lead districts. No one was

[107] Lagemann, *Private Power for the Public Good: A History of the Carnegie Foundation for the Advancement of Teaching,* 181.
[108] Ibid., 187
[109] Savage, *Fruit of an Impulse: Forty-Five Years of the Carnegie Foundation 1905-1950,* 100.
[110] Ravitch, *The Life and Death of the American School System,* 200.

elected by the Gates Foundation to run schools." Butler-Wall's quote is indicative of the tension between the wishes of the Gates Foundation and the power of the individual school district.[111]

The Bill and Melinda Gates Foundation has a unique amount of power over decisions regarding public education in the United States. For some, this fact is alarming. Some educational historians and critics of the Foundation describe the Foundation's authority as undemocratic. They are concerned that decisions about how to educate millions of children are in the hands those who can best fund it. Others argue that the actions of huge educational foundations show the generosity of these donating powerhouses, while more cynical scholars retort that the money that it spends would have turned into tax dollars and would have been spent on public issues anyways, and voted on in a democratic manner. Although the total amount of money donated from foundations to public education in the United States makes up only a tiny percentage of the total budget, the Gates Foundation has considerable power to influence education. Nationwide, schools, districts, and states are facing a shortage of funds. Budgets are tightening and administrators are struggling to keep their schools open and running effectively. The Gates Foundation offers an irresistible deal to schools, states, and districts. Organizations in desperate need of funding cannot turn away from their potential private funders. However, the bargaining may be lopsided because the foundation presents something that the recipients need so much: money.

[111] Ibid.

Conclusion

Even though the Carnegie Foundation for the Advancement of Teaching and the Bill and Melinda Gates Foundation operate in different time periods and respond to different social concerns, the grant making actions towards American education of the two foundations are fundamentally similar. Both foundations are “driver” organizations that lead change in their particular areas of expertise. While grant making customs are specific to their particular time period, the actions of the Gates Foundation are historically linked to the Carnegie Foundation. Although they work in different realms of education, both foundations have an interest in improving the profession of teaching. The Carnegie Foundation aimed to increase the prestige and status of college professors in higher education, while the Gates Foundation puzzles over how to produce consistently excellent teachers for K-12 public education. With their successful corporate backgrounds, both philanthropists see the value in emphasizing measurement and testing in the field of education. However, they place different levels of importance on using advancements in technology to help propel education forward. These differences are due to the resources available and the trends of the time periods.

Both the Gates Foundation and the Carnegie Foundation have had an unusual amount of power in education in the United States. Each foundation has faced controversy over the ethical question of the role of private foundations funding something as local and democratic as education. While the concentration of power that the Gates Foundation possesses is concerning for some, it may also be an excellent opportunity for public education. At some point, the United States needs to face the facts: America's schools are failing. Students are falling behind in nearly every international benchmark in nearly every grade level. Unless there is a widespread, dramatic change in the near future, the future livelihood as a nation will be in jeopardy. The

Gates Foundation is consciously looking for a solution to this problem. It offers a strong alternative to the government as a giant force to driving change in education. The Gates Foundation is run by individuals who have experienced success in other fields. It brings models of empirical measures of success, bottom-line expectations, and innovative technology-based solutions to education.

Both the Carnegie Foundation for the Advancement of Teaching and The Bill and Melinda Gates Foundation make a substantial impact on American education. Both foundations have started change by making people invested in school reform. For Carnegie, the task was motivating the academic community. For Gates, it is a balance of changing the public, while balancing politics. The foundations take on large-scale initiatives, operating on a national level instead of leaving schooling as a local and specific problem. Their powerful influence on decisions in America leads to questions of massive standardization, the role of democratic schooling, and reaches the core of what it means to be a foundation in America.

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