Facing Fear

A Guide to Risks and Remedies in the Near-Future Economy

This paper investigates ways in which the general economic environment, workforce, and education systems are changing, as well as where those changes might lead, and whether they will be positive or negative. An overview of these areas seems to suggest that an approach of cautious optimism is best, as while there are many uncertainties and fears to be faced with regards to future economies, the overall move is towards a world of tomorrow that embraces an unprecedented degree of creativity, open systems, and democratization.

Facing Fear:
A Guide to Risks and Remedies in the Near-Future Economy

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INTRODUCTION

The oldest and strongest emotion of mankind is fear, and the oldest and strongest kind of fear is fear of the unknown.
– H.P. Lovecraft, *Supernatural Horror in Literature* (1927)

There is a reason that horror movies take place at night, and ghost stories only frighten us after dark: what we cannot see and do not know scares us. It always has. Ever since our ancestors walked the paths of the ancient world they have known that monsters lurk in the unseen, and that beyond the glow of our fires danger waits. Even today, every generation of children has to be taught to not see hungry, leering beasts in the dark corners of the closet, no matter how well that lesson was taught to their parents. The fear of the dark is simply etched into the deepest parts of our minds and culture.

Why is this? Why do we still fear the dark after all our parents' reassurances, and still set horror stories in shady woods? The answer is really rather simple: we are powerless in the dark. All of our technological advances, all of our tricks, training, and strength mean nothing if we cannot see where to use them. After all, you cannot hit a target you cannot see, or do not know is there. We are utterly dependent on knowledge to survive, for without it we will always stumble and fall, and will always lose to some threat we could not sense.

What you see before you is an attempt to shed light on one of the greatest areas of mystery that a man or woman may face: the future. In these economic times, the need for success and survival is perhaps clearer than it has ever been, and without some knowledge of the directions that future markets, workplaces, and classrooms will take, achieving that success will not be easy.

That is why we have collected a number of essays and insights from undergraduate scholars, members of the first generation to live entirely in the information age, on topics pertaining to these future economies. In this report you will find descriptions of current trends and problems that are already present, as well as hints recommendations about what solutions might be used to combat them as they evolve with the coming technologies and social structures. You will also find many cautionary predictions, warnings of the less desirable aspects of the coming age. Together, however, the insights in these pages will help to illuminate an otherwise dim prospect, and to help us fight off the dangers of the unknown.

So, dear reader, I urge you to keep calm, carry on, and remember that the only true thing to fear is fear itself.

ECONOMY

Digital Maoism and Online Collectivism

Digital Maoism sounds like a complex philosophical theory. It is actually quite elegant. Digital Maoism refers to the singular idea that we collectively have come together to put our ideas into the online realm. As Lanier puts it, the future seems to be moving towards the idea that "the collective is all-wise, that it is desirable to have influence concentrated in a bottleneck that can channel the collective with the most variety and force."[1]

This move towards collectivism -- bringing together ideas, facts, and other related themes -- is prominently displayed by the continuing popularity of sites like Wikipedia. Basically, Wikipedia is a large and growing collection of articles that vary on topics from cars to language to history. Obviously, in order to gain such a vast amount of information, the website has relied on the collective to bring together that fund of knowledge. Without this collection, this collective, it seems like the availability of information would be severely limited or even nonexistent to the public at large.

Although without the collective efforts of many individuals information may not be available, Lanier cautions against heavy reliance on other minds. He discusses throughout his article how easy it is for information to be taken out of context, and, as a result, lose its value and meaning. As a specific example, he uses his own wiki page. Although he is not truly a film director, he is credited as one on Wikipedia because of one short film, of which he is self-proclaimed ashamed. Taken out of context, the information about his film is lost in the overwhelming mass of information and facts.

In addition, the question also arises as to the accuracy of the facts that are presented by the collective. Again, Wikipedia is a great example. Incorrect information used to be very prominent on the open website. Looking at the example of the internet as a whole, one can see that the collective mind does not always provide accurate, or even complete, information. Lanier argues that this is a damaging fact of Digital Maoism and should not go unnoticed or unchallenged. He concedes that Wikipedia has taken many steps to ensure the validity of its thousands of articles; however, he remains unconvinced that the problem of misinformation will ever truly disappear in the online collective.

Digital Maoism is a very real part of the future. Technology has created a collective that is empowered. Thus, Digital Maoism, despite its flaws, can play a part in allaying the fears of the many unknown parts of the future. In a chapter of his book, *Out of Control*,

Kevin Kelly discusses the idea of the hive mind. His particular example refers to ants, but the value of his argument is not lost.[2] The collective can come together to be something greater and stronger than its singular parts. Better information is being made available and reliable because the collective exists and is thriving today.

In order to better the idea of Digital Maoism and the hive mind, it would be beneficial to eliminate the ambiguity of information that was previously discussed. Because the unknown of the future is what is feared, hazy information and facts are obstacles to one of the objectives of Digital Maoism: transparency. Comprehensible and readily-available information are something that is needed if the fear of future is to be denied. Digital Maoism can provide this, but only if the collective is ready. When is the collective ready? Perhaps when the collective is educated it will be ready.

If ambiguity and the unknown are the problem, then a seemingly apparent answer would be to educate. An educated hive mind would be able to root out the misinformation and provide more reliable facts or ideas in its stead. This can be seen in the example of Wikipedia. As its creators have become more knowledgeable, they have been able to refine the system, and thus provide a better platform for the public use. With the refined system, corrections for ensuring the most accurate information have been easier to implement.

Digital Maoism is providing a wide variety of information to the masses. However, in order for that availability of information to be effective, it must be accurate and consistent. Incorrect information or information out of context can cause problems and the entire system would become flawed and useless. Education becomes extremely important to the growth of the hive mind, and therefore to Digital Maoism in this Digital Age.

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- Kevin Kelly, "The New Socialism: Global Collectivist Society is Coming Online," *Wired* http://www.wired.com/culture/culturereviews/magazine/17-06/nep_newsocialism

Crowdfunding

In the same way that ideas, skills, and resources are crowdsourced and compiled in the digital world, financial support can easily be accumulated by reaching out to the masses online. In

years past, independent creative individuals were doomed to either raise funds themselves, try their luck with the corporate system, or just be flat out of luck. Now, the enterprise of independent creativity and ingenuity is completely transformed by crowdfunding; a system in which an individual can post their potential ideas and research in a public domain for regular people like you and me to view and potentially become part of their financial backing. This type of exposure can be the difference of a project achieving unfathomable success literally overnight, and a project that never hits the ground. There are many benefits to crowdfunding. First and foremost, it is easy. What makes crowdfunding so attractive is how easy it is to reach out and cast vision in hopes of others seeing and sharing that vision. Crowdfunding seems too good to be true, but it is not a flawless system.

The most prominent type of crowdfunding is creative crowdfunding. In this type of crowdfunding, the masses help to fund creative projects like inventions, films, and technology. Kickstarter.com was one of the first online databases for crowdfunding creative projects. Posting a project onto that network almost ensures that many people will stumble across it. And if the project is as interesting or groundbreaking as the creator thinks, it will be passed around and ultimately have more and more people commit to giving small amounts that eventually add up to make quite a bit of money. A system like this is taking some pretty big steps to free enterprise, which is an economic system where private

business operates in competition and largely free of state control. Everyone can share their ideas in hopes of attracting interest from the masses online. Once people are interested, they are willing to financially support, especially if there are perks in place. Websites like Kickstarter usually offer rewards for donations; the larger the donation, the larger the reward. For instance, if someone is trying to fund a film project, they might offer you a credit in the film for a certain amount, and maybe a T-shirt, or a poster for another amount. Someone who is funding an invention might actually offer the product as a reward. There is a lot of guaranteed benefits for financial backers in this type of crowdfunding. So all around, this type of financial support is beneficial for those who are receiving the funds, and those who are giving them.

There are other kinds of crowdfunding. Academic and equity crowdfunding are also attractive options. Academic crowdfunding operates almost the same as creative crowdfunding, except for the fact that there usually are no defined rewards for the people who financially back these projects, and the projects, themselves, are purely academic in nature. In not having defined perks for funding the project, people who help finance it are most likely not looking to receive benefits, but instead are genuinely interested in the value of the academic research or experiments, which could limit the amount of people who would be willing to part with their dollars. Funders for academic projects only receive the reward of fulfillment;

knowing that they have helped someone grow closer to an academic project that could actually better mankind, or be implemented in society on some level. Academic crowdfunding could potentially be so beneficial for society. One of the main obstacles in conducting research or experiments is money. A person cannot devote the necessary time, gather the necessary materials, or repay those who have donated their time to help. If money was no object, we might have a cure for cancer. We might have a cure for AIDS. We potentially could develop so many useful tools, drugs, or technological advancements!

Academic crowdfunding is something that needs to become more popular. Because this is problem. People do not get perks from funding academic projects like they receive from creative projects, so nine times out of ten, a person is more likely to help fund a creative project rather than an academic one. People are selfish for the most-part. They like perks, treats, and rewards. This is something that needs to be addressed in the academic community, whether that be in evaluating whether perks should be offered, or to simply figure out a better way to market themselves.

Equity crowdfunding is a whole other animal. Equity crowdfunding takes place in the realm of the corporate world where stock is sold to the masses who, in turn, expect some kind of return on their investment. But unlike creative and academic crowdfunding, there is only the small possibility of receiving dividends from a successful investment. Most of the time, that does not happen.

So this type of crowdfunding is much more risky than the previous two. This type of investing is also highly complex. It involves a lot of research and understanding of how the corporate system really works, and most of the time, the projects are in the extreme early stages where success is not even a dot on the horizon. Everything is guesswork. This system abuses the crowd that finances the project, especially those who are uneducated with the risks they are actually taking. It used to be restricted to investors who understood the system, but now it is open for the public. There is a concept called "pluralistic ignorance" that explains how crowds are foolish. Most of the time, people in crowds conform to the social norms that are established. So essentially, if the crowd begins to fund a useless or harmful project, people that are easily swayed will also fund it. This leads to the production and distribution of products that we can truly live without.

Overall, the concept of crowdfunding is one that could shape our economy in a very productive way. Allowing ordinary people the opportunity to reach out to the masses for financial aid makes for a well-rounded economy that does not pick favorites. In this system, people are persuading people to help make an idea become a reality. It really is a great way for people to work together. Although there are a few downsides to it, crowdfunding is a system that hopefully will grow, improve, and continue to thrive.

Suggestions for Further Reading

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- Erik Sofge, "The Good, the Bad and the Crowdfunded" http://online.wsj.com/article/SB10000872396390443991704577579190431157610.html

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Persuasive Technology and Ambient Intelligence

Politicians use speeches to attract the public for support, business people design advertising to lure the consumer to purchase their products, scientists implement experiences to prove their theories, and philosophers come out with reasoning and logic to convey their views. Persuasive techniques are not at all a new concept to us. These techniques, believe it or not, are everywhere in our daily interactions.

We constantly deliver our ideas and thoughts. In the process of this information exchange, we are unconsciously persuading others and being persuaded by them. As the internet becomes more accessible in our lives, the communication among people from all over the world becomes effortless. We are now exposed to many different ideas and thoughts that others intend to form in our minds.

All these methods for persuasion are relatively subtle and hidden. We are normally convinced of an idea without even realizing it. As the technology advances even further, however, many innovations not only are facilitators of persuasion. Persuasion is no longer limited among people, but between technologies and people. These types of technologies are referred as persuasive technology and ambient intelligence. The persuasive technology is designed to lead us to make certain decisions. For example, your car suggests that you to drive in an energy-efficient style. Ambient intelligence is another type of "smart" technology. It can "intelligently" respond to the environment to help us to live happy and effective lives. For instance, your coffee-maker automatically prepares coffee for you in the morning when you wake up. Persuasive technology and ambient intelligence have become more and more visible as their influences grow stronger. They no longer serve as mere instruments to us. They can now interact with us.

These developing technologies have offered many life-changing advantages. Hospital robots can offer an

easy diagnosis for the patient, iPhone applications can remind the user to eat healthily by providing detailed information for the food, your refrigerator can make grocery lists for you, and your room lights can properly adjust the brightness based on the time of the day. With the assistance of these "smart" technologies, we have gained a firmer control of our lives. It seems much easier for us to make correct decisions. When your internet is not working, for example, you do not have to seek help from your friends. You do not even have to search for solutions online. The computer will step by step direct you to troubleshoot the problem. In the swimming pool, an automated robot can detect anyone who is drowning. The robot can then swim over to save the person out of the water. An iPhone program can motivate you to exercise by rewarding you based on the distance you run every week. You do not have to worry about the security of your house, because a camera can notify you if any strange behavior is detected. Having these "intelligent" machines to take care of us, our lives have become significantly more convenient and secure.

The public are increasingly welcoming and encouraging the further development of these technologies. These intelligent designs, therefore, are rampantly entering into our lives. The direct influences of these technologies in our daily lives have blurred the boundaries between humans and technology. They are no longer simply "dumb" tools, but they have become "smart" technological beings that can actively interact with us. Our attitudes, decisions and behavior are unconsciously being affected by these innovations. They actively react to the circumstances, and make the "right" decisions for us. As the influences of revolutionary technologies become more and more visible, many people are concerned. Will the technologies influence our moral thoughts? Will they completely manipulate our lives? Will we lose the experiences of making mistakes? Will we still know how to make decisions if they become not available? There are many questions worth our attentions while science advancing forward.

As students, we are very concerned. We are concerned not only because we want to make positive impacts in the future, but also because we will live in that future. All of us should be aware and worried.

The main question is not whether we should completely rule out the implementation of "smart" technology. The question, in fact, lies in how we can fully take the advantage of these "smart" systems while avoiding potential dangers. The greatest threat is not the technology itself, but our unawareness. If we simply employ the new technology without critically analyzing the potential dangers hidden in it, we will unconsciously become slaves to it. We need to be equipped with knowledge and responsibility while enjoying the benefits of modern technology. If we are aware while striving for a better future, our future will surely be better. There is no need to fear.

Suggestions for Further Reading

- Peter-Paul Verbeek, "Ambient Intelligence and Persuasive Technology: The Blurring Boundaries Between Human and Technology" http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2837215/

Nanotechnology

Recent generations have witnessed the tremendous growth of science and innovative development of new technologies. From laptops that weigh almost nothing to breakthrough advancements in medicine, the last one hundred years have been majorly significant in the way of technological growth. Nowadays, though, we are studying the world from totally a different perspective — the molecular level. In the 1980s, a scientist named K. Eric Drexler introduced the scientific community to the term "Nanotechnology". Drexler dreamed of technology that could be created on a molecular scale — machines smaller than a cell. The engineering of functional systems on a molecular scale, building mechanisms from the bottom up with atomic precision qualifies as work in the realm of nanotechnology At the time such technology seemed like science fiction to many, but just 10 years later, a group from William Morrow and Company, Inc. saw it as reality: "Nanotechnology. The science is good, the engineering is feasible, the paths of approach are many, the consequences are revolutionary-times-revolutionary, and the schedule is: in our lifetimes[1]."

The current practice of distributed manufacturing requires many specific types of materials and machines, as well as a highly trained labor force. In impoverished areas, developing an adequate technology base is a very difficult and slow process. Molecular manufacturing, a branch of nanotechnology that proposes using nanoscale tools to build devices at the molecular level, can be implemented into the same impoverished area without any need for skilled labor. Imagine the ability to clean an entire water source for an area by releasing tiny devices that filter out pollutants and dangerous microorganisms. Later, similar mechanisms can be implemented in a neighboring landfill, eliminating waste that has been accumulating for years, using only a modest power supply to do so. The potential for waste management is a very important foreseeable benefit that will come from future nanotechnology.

The field of medicine has seemingly endless ways to improve through the use of molecular scale technology. Scientists already develop vaccines and antibiotics at the molecular level, a form of nanotechnology in itself. One step further would be molecular mechanisms that are specifically designed to pick up slack where the body's immune system has fallen short. Whether one is affected by cancerous cells or the common cold, in a future with highly advanced nanotechnology, the potential for decreasing the impact of particular ailments on the population

is not only feasible, but very likely. "Medicine is highly complex, so it will take some time for the full benefits to be achieved, but many benefits will occur almost immediately. The tools of medicine will become cheaper and more powerful. Research and diagnosis will be far more efficient, allowing rapid response to new diseases, including engineered diseases (CRN, 2008)."

The global-scale improvements that can be achieved using nanotechnology seem almost too good to be true, but by applying the technology correctly and responsibly many great works can be done. The key to this future is the responsibility of those who have the knowledge to facilitate developments in these technologies. As the reality of nanotechnology becomes clearer, so do the obvious dangers associated with it. The downsides range from a wide-spread availability in morally ambiguous products, such as machines specifically designed for routine body or genetic modification, to use in terrorist and military action. Nanotechnology has clear abilities to be used for terrorist and wartime actions. It is the responsibility of our generation to ensure that developing technologies do not go beyond our control and continue to be used for the benefit of mankind.

There are many new technologies being developed nowadays, but arguably nanotechnology is the most exciting and potentially threatening. As students, it is our duty to know as much as we can about where the future is headed and what potential risks our advancements now might make on that future. We will always push forward and will always strive to know more about our world. This push is driven by a desire to increase the quality of life of everyone that we can. Nanotechnology has the ability to help even those who have nothing live a better, fuller, and more satisfying life.

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- Margaret Rouse, "Molecular Manufacturing" http://whatis.techtarget.com/definition/molecular-manufacturing

The Post-Scarcity Economy

The aim for most humanitarian societies is to ensure that everyone has a chance to have an equal chance at a good quality of life. We develop technology and discuss ideas that might possibly help us to achieve these goals. One possible end to those means is a post-scarcity economy. A post-scarcity

economy is an economy in which all resources, including knowledge, are shared. In this type of economy everyone has the opportunity to have their basic needs met. With developing technology and the advent of the 3-D printer resource will be virtually easier to access and labor costs will be relatively low. With more automated systems, including nanotechnology and 3-D printing we will be able to reduce the labor force making the amount of resources expended minimal. These resources include raw material, energy, time, money and physical labor.

It is arguable that we are already in a post-scarcity world. We technically already have the capacity to meet everyone's needs, but human nature prevents us from meeting them. There is no scarcity of food, clothing, everyday items and materials. Not simply for North America or First world countries, but the world as a whole. We can feed and clothe the entire world and have plenty of resources left over for private pursuits. We as a culture do not care strongly enough to share these resources, making them artificially scarce. We have also created a great deal of artificial scarcity in the form of copyrights and patents. The internet and computers make it easier to replicate movies, songs, books and anything else that exists in a digital form.

The idea of a completely post-scarce economy does have some potential advantages. Some physical objects may lose their value but we will still be able to retain the idea of value in society. Just because physical resources become cheaper does not mean all want

will be satisfied. We may begin to shift more value to service based commodities. Personal relationships with other humans will become more important to us. Another advantage would be the ability to acquire knowledge for the sake of knowledge. When our basic needs are met, it will give us the opportunity to focus on pursuing our interest. We are free to try new things and improve ourselves. The third advantage would be less pressure to pursue jobs strictly for economic reasons. Pursuing jobs that fit our interests, level of knowledge of a subject and skills could potentially become the new aim of selecting a career. When people can do exactly what they want to do and what they are best at, they are, theoretically, able to have fulfilling careers.

If developing nanotechnology and 3-D printing were to elevate our society even further into a truly post-scarcity society there will still be some issues to workout. One potential issue is a potential lack of a willing workforce. Some of the jobs that we have now will eventually be done by robots, but new jobs will arise that we need someone to do. Who will do these jobs? If we all have the opportunity to have more leisure time we may have to force some to do the jobs that we need done. How do we as a society wield this power over them? There is also the issue of dealing with individuals who do not contribute to society. We would have to assume that those who choose to do nothing will somehow be motivated by social pressures to contribute. A major roadblock in the path to post- scarcity is taking control of resources from those

who control them. As we move toward the equal distribution of resources, we will have to deal with opposition from the 1%. Taking away power from the super-rich will be a struggle. They will not be willing to give it up that easily. We have to consider if the super-rich will create new monopolies or barriers to maintain their power. How would we overcome these new barriers? A final negative aspect to consider is the potential for resources to be mismanaged.

In order for a post-scarcity society to work there are at least three fundamental ideas that have to be considered. The first is that there has to be a change in the way that emphasis is placed on getting ahead in the endless cycle of competition. Western societies encourage constant competition. Until we are able to overcome this constant cycle we will always strive to selfishly gather resources for ourselves. The second thing to consider is the idea of a utopian society must not be taken to the extreme. Conflicts over resources should decline, in theory, in a post-scarcity economy. However, conflicts will shift more towards social issues. Scarcity, on some level, will still exist. For, example social status has the potential of being the new scarce resource that we compete for. The third idea to consider is that we would still need a system of laws and a governing body to make

sure that the values of society are not being undermined. Not everyone will be willing to work toward the idea of a better society. We have to make sure that we clearly define what our society will value (education, creativity, fulfillment) and ensure that we protect those values.

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- Post-Scarcity Princeton http://www.pdfernhout.net/post-scarcity-princeton.html

- The Venus Project http://www.thevenusproject.com/

WORK

Workaholism

Americans have become indoctrinated with the belief that if we work more hours, we will be more productive, and if we are more productive, we will be happier. Existing research seems to contradict both of these claims. A law of diminishing returns is in effect: a drastic increase in work hours does not increase productivity; it often *decreases* it. Our constant attempts to work harder keep us from working smarter, and we become less efficient. Working fewer hours would promote economic sustainability as well as personal sustainability. Leisure time is crucial for mental health. In spite of this substantial research, "workaholism" has become a pervasive problem in modern American society. Workaholism can be defined as an obsession with and compulsive need to work; workaholics often compromise aspects of their personal, family, and social lives in order to spend more time working. There are four characteristic types of workaholism:

·   Bulimic workaholism — procrastinate, then work to the point of exhaustion.
·   Relentless workaholism — take on too many tasks at one time.
·   Attention-deficit workaholism — work furiously on a project, but fail to complete it.
·   Savoring workaholism — work slowly and methodically, often missing deadlines.

Displaced Meaning

The theory of "displaced meaning" is of great relevance to the problem of workaholism. Grant McCracken makes five main points in his explanation of displaced meaning: We project our dreams into time or space in order to avoid acknowledging that money cannot make us happy. We constantly compare our value to others'. We work so that we can buy things to prove that our dreams are, in fact, attainable. Displaced meaning fuels workaholism cyclically; as soon as one desired object is obtained, we must immediately set our sights on something even greater. Finally, McCracken asserts that even though money does not make us happy, and inaccessible goals only confound our frustration, displaced meaning gives us, as a society and as individuals, a sense of hope and motivation.

Workaholism is an indicator of our displaced meaning in the concepts of "wealth" and "success." If we are not happy enough with our 40-hour workweeks, we earnestly believe that we will be happy with 50. The problem is not that we are not making enough money; it is simply that we are not happy.

Responsibility

Workaholism is caused by many different factors, so there are many different parties that can be held responsible for its prevalence in our work culture. We place some degree of blame on ourselves, on our employers, on capitalism, and on our society as a whole. To address the problems that workaholism has created, we must address each one of these aspects. In many cases, the worker willingly chooses to take on a heavier workload. We choose to work more hours because we crave instant gratification. We want the satisfaction of being busy and thinking that we are being productive. We want the gratification that our salaries provide for us and the objects that we can purchase with them. The desire for higher wages is not necessarily a greedy one. In a lot of jobs, workers choose to work the hours they do because they need the wages. Many workers would be reluctant to sacrifice work hours, especially if those workers living from paycheck to paycheck. Even those with sufficient immediate income want to start saving money for retirement. Working hard now ensures that we will be able to live comfortably in the future.

In some situations, workaholism is not a choice of the worker but rather a product of overbearing employers. Bosses want to get more and more profits out of their employers, and they think that requiring them to work more hours will increase productivity. Unfortunately, overwork does not necessarily increase productivity; in many cases, it leads to burnout and drastic decreases in productivity.

One reason so many employers encourage this back-breaking work ethic lies in our economic system. Capitalism encourages profit above all else. It is what drives employers to overwork their employees. The market sector is left on its own without much interference from the government. Participants in the market need to increase revenue, and cut cost as much as they can to stay in business. Low efficiency is abhorrent to business owners because they understand the importance of gaining competitive edges through cheap labor, cheap materials, motivating management, and advanced processes. Business owners are concerned about their revenue; salaried managers are concerned with whether the owners think they are working hard enough. Everyone is looking out for oneself.

Our society as a whole may also be to blame for the dominance of workaholism. We try very hard to instill in our children and teenagers a healthy, strong sense of work ethic. As a result, many enter the workforce under the impression that the more hours one works, the greater his or her worth or value. It is culturally drilled into us that we are supposed to work hard to provide for our families. We become perfectionists, and anyone who carries a mandate for perfection is susceptible to workaholism. It creates a situation in which a person never crosses the finish line, never reaches "good enough." Good is not good enough: you have to be the best, and the only way to be the best is to work harder than the next guy.

A Need for Change

"Man spends his entire life trying to make a living all the while forgetting to live." — Mark Twain

We fear unemployment and unproductivity because we define ourselves by the work that we do. Work is the means by which we find security, organization, and positive reinforcement. It is too often where we find our sense of identity and purpose. This drives people into cycles of workaholism. Overwork causes mental and emotional burnout. It increases anxiety, thereby suppressing the immune system. Workaholics get sick more and increase their risk of cardiovascular attacks. The Japanese refer to this phenomenon as *karoshi*, and attribute 1,000 deaths per year to overwork. We spend so much time working — trying to provide for our families or our preferred lifestyles — that we do not have enough time left over to enjoy doing the things we want to do with the people we love.

In addition to the damage workaholism does to the individual, it actually decreases rather than increases productivity. Excessive work hours diminish the quality of the work being done. Exhausted workers are less likely to identify and prevent problems. They have shorter attention spans and poorer coworker interactions. The unhappiness and unhealthiness of employees significantly influences the productivity of the workplace.

Solutions

It has become clear that some shift in our approach towards efficiency in the workplace is imperative. We have identified the problem of workaholism in our society, proposed causative factors, and identified guilty parties. We acknowledge that a change must be made, but we have yet to provide viable solutions. One possibility would be to lessen our obsession with productivity. The most pressing dilemmas in our economy are not matters of output, but of employment and resource management. Instead of focusing on churning out more information, products, and services, we should focus on improving the quality of our work and conserving resources wisely. Working fewer hours would promote economic sustainability as well as personal sustainability.

If it is unfeasible to discourage productivity — if that mindset is too far driven into our consciousness — perhaps we could instead redefine "productivity." Productivity does not have to be measured by the amount of tasks crossed off a to-do list. If one spent more time outside the office and less time in it, one would be able to build relationships and strengthen the community. Through these social interactions, eyes would be opened to new realities and experiences that could give life a new and deeper meaning.

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The Creative Class

Money is a huge motivator for employees. The quality of our life can greatly depend on our income, but what sacrifices must we make as individuals to make a decent salary? The workplace has long been a place of traditional, professional appearances. As we move into the ever-changing future, we see these traditions being challenged by new types of employees that are making their presence known in the workplace. These employees are members of what some refer to as the creative class.

We can better understand the impact that this creative class has on society by knowing who they are, what they do, and the values that they embrace. As a whole, they embrace values like creativity, individuality, difference, and merit. Members of the creative class want to have the freedom to be themselves. They do not want to sacrifice their sense of individuality and conform to the traditional image deemed acceptable as a professional. It makes sense that they want to express their uniqueness because they value diversity. For them, experiences are what make a life more meaningful. A person's occupation is no longer just a job, it is an opportunity to make a difference and create lives that they are proud of.

Members of the creative class believe that it is important to experience life in every way. They do not want to go through the motions of life and fear losing their personal identity by conforming. It is important to people of the creative class to pursue careers that value their individuality, challenge their abilities, and appreciate the fruits of their labors. Creative people choose their paths carefully so that their values and interests are promoted. In the workplace, they can use their creativity to solve problems and make decisions. When a job gives its creative employee the freedom to do their job in their unique way, the creative person will succeed and be satisfied with their job.

Job satisfaction increases when an employee is passionate about their work. Creating job opportunities for creative people opens them up to pursue careers on their own terms. Promoting the creative class presents people with an opportunity to be free agents. Nothing is more freeing than

letting creative people create a business that thrives off of their strengths and skills. They can now share their passions and services with others in a way that is very meaningful to them simply because it is their own creation. They can interact with others and promote their own business personally while developing a working relationship with those who need the services offered. Free agents are all creative because they are hired out specifically for the unique services that they are providing for others.

Working as a free agent is every creative person's dream. They have the ultimate freedom to create a business that attracts and promotes particular values while they pursue work that partially defines who they are. Free agents have control over the work they do and how they do it. They network with others so that they can promote their market and build their business. After creating a market for themselves, free agents then will be sought out for the specific service that is unique to them. Creative class members who become free agents reach a level of self-actualization and satisfaction by engaging in work, relationships, and practices that promote them as individuals while contributing to society as a whole.

Growing numbers of creative class citizens and free agents make changes in the workforce inevitable. It is necessary to accommodate the wants and needs of these individuals because they providing the services that bring change and progression. Doing the same thing that has always been done will

always produce the same results. Creative people will take businesses to the next level of achievement. Attracting these types of employees is vital for the success of a business in the future.

Businesses should consider how the creative class considers the different elements of a job and what makes them desirable. Long-term job security and stability are big factors for choosing a career path. The creative class also wants to have some control over their actions. If businesses want to make a job appealing to someone of the creative class, they must give them the freedom to make decisions and accomplish tasks without micromanagement. This new class of person is stepping further away from the traditional structure of a job because they do not just want an employer to bark orders and expect them to follow set procedures for mundane tasks. While procedures are important, they must be applied with creative and innovative techniques so that the tasks can be done in new and different ways. The creative have a way of changing tradition and in doing so they can create new ways to do their expected job in a more efficient way that might be more successful. If we keep them from embracing their creativity, we will never know the how much of an asset that they could really be to a company.

In the past, we have seen workers completely consumed by their jobs. It often contributes to our sense of identity and gives us purpose for our lives. For the creative class, life is not just defined by the career path we choose. They want to experience life in and out of the

office. As a group that values experience, they have a desire to make every experience full of meaning and fulfillment. Creative class members tend to get away from institutionalized forms of entertainment and explore other recreational options. There is a growing desire to try new and different things that broaden their view of the world. Creative people surround themselves with others who are different than themselves. While they want to be around people who embrace the same values, they have a desire to meet people and experience the differences first-hand. You will find them in art galleries, bistros, hiking trails, and in the streets mingling with networks of people who make up the community. They have traded in their overdone Starbucks Mocha Latte for more personalized interaction with people at the local café down the street. The authentic conversations with other people that occur spontaneously and unscripted in these environments give meaning and valued experiences to creative class citizens.

The growing class of creative must be recognized. Business need to accommodate them if they want to succeed in the future. Those creative individuals will be the successful decision makers and think tanks of tomorrow that drive our economy. If we want our businesses to be successful, we have to provide the creative with a working environment that inspires their creativity, appeals to their interests, and values them as people and employees. At the same time, our cities need to provide opportunities for interaction and community growth within the

creative class. The state of our economy depends on the creative class.

By providing these individuals with flexible jobs and diverse forms of entertainment, we can attract them to cities and stimulate economic growth. They are the consumers who endlessly seek forms of entertainment that bring joy to their lives. The fear of having their individuality suppressed will keep the creative class from cities that do not welcome their differences. Cities that provide opportunities for the creative to express their individuality, work freely, and engage in meaningful interactions with others, they will see growth in the class that holds the future.

One of the biggest differences between members of the creative class and traditionalists is the motivation that drives them. Traditional employees want job security and will conform to any set of rules to make money. The money made is then used to buy material possessions that improve their status. Their motivation is extrinsic, based on the things that they want or need to own. The creative class is driven by more intrinsically motivating factors. They want jobs that encourage their creative and unique ways of working. They need the freedom to be innovative in their work so that they can be proud of the outcome that they created. People of the creative class are attracted by personal experiences and not just material goods. Happiness improves their quality of life, and their happiness depends on the amount of opportunities that they have to express themselves

and learn from those people around them.

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Leadership Skills from MMOs: From Guild Master to General Manager

What used to be known as a way for video gamers to get completely absorbed into a game, often stigmatized as an addiction, is now being acknowledged as a useful set of skills that business professionals seek out. These virtual worlds combine a person's real life with the one they fabricate with their character, opening up a whole new world of possibilities. Guilds slowly become one of the most key features of massively multiplayer online role-playing games (MMORPGs), used to enhance the fact that World of Warcraft (WoW) is not generally a game that is played alone. The structure of these guilds can vary tremendously based on the intentions and goals that the guild master has. Some guilds that are raiding-focused have application processes and requirements that need to be fulfilled to maintain membership, such as a minimum number of hours that the player must be online or a commitment to the raid schedule. Your guildmates easily fit into the role that a coworker might play in your life; someone you raid with when it is time to "work," but can also easily develop a relationship with in the "work area."

The most successful guild masters earn the reputations of great leaders due to their responsibility to keep the guild structurally safe and the members satisfied. WoW can be seen as representing the various ways that the future of "real time collaborative teams" and leadership can be executed in a real-time environment. It becomes more than just a game when you take into account the difficulty behind all that is being attempted and the satisfactory feeling when you are in a raid with forty other level-capped players and you down the final boss and roll on who gets the loot. It is unquestionably a struggle. Much like a workplace, you have to work hard to be rewarded, make sacrifices, and have the people skills to work with others in order to achieve a common goal. Whether that goal is meeting a

company-wide quota on sales or getting the epic Warcraft dagger from Hyjal, without the skills to work with others both goals are unachievable.

Raid leaders must work hard like any general manager. They serve to stabilize forces during raids, support the class leaders, nudge the conversation, and keep raid parties moving as fast as possible without moving too fast (Ito, 2006). They moderate the interactions of individuals in the raid and serve as a buffer in case of conflict, and their makeshift authority must be respected. Raid leaders must facilitate coordination, a balanced distribution of classes, training, leadership, mediate conflicts, and provide stability. The game itself does present real challenges that need to be solved in the form of quests. The real challenge is collective action and being able to work together. Some quests require a group of others with special skills. For instance, a warrior serving as a tank -- a character with heavy armor that can endure more damage than other class roles -- cannot accomplish a difficult quest without a healer to restore him. Likewise, a healer cannot accomplish the same quest without a tank to keep the "aggro" off him, since healers wear cloth armor over heavy armor. The atmosphere of WoW calls for players to experience acting together in order to overcome obstacles. More important that the pre-written plot of the game is the community that makes it massively multiplayer. Without this community, it lacks the important interactions that allows players to create the own world they live in and goes from being a social phenomenon of basic human habits to just being a game that you play, beat, and then toss aside. The significance lies in the players acting both inside the game and outside the game, and this combination is what provides the basis for a "networked imagination" (Brown & Thomas, 2009: p. 4).

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Gamification

Gamification is the concept of applying game-design thinking to non-game applications to make them more

fun and engaging.[1] An example of gamification is the act parents giving their children money for good grades—it's a material motivator, not an internal one. Companies like Groupon (a coupon-sharing website), Zynga (the creator of Farmville), and LinkedIn (a professional networking website) use gamification to their advantage, earning money off of people's desires to compete with each other and be rewarded.[2]

We assert that while gamification can be a useful tool, it should not be used in the classroom.

Extrinsic Motivation

Extrinsic motivation is motivation that comes from an outside source, such as money, points, or other rewards. It is effective when providing rewards for boring, repetitive work (in other words, work that there is no desire to do anyway). However, as we consider tho anyway.itive work, from an outside source, such as money, points, or other rewards. e future of work — possibly including robots and other technology — we believe that it is important to keep in mind that extrinsic motivation will only be needed as long as *humans* are doing the work. Humans need motivation; robots and other machinery do not.

Extrinsic motivation can be dangerous in large amounts. Jiang comments that "…there can only be so much addiction one can take before he decides the reward is not worth it."[3] In other words, if there are not enough rewards provided as a worker advances in a specific activity, the worker will lose interest in the activity.

When observing extrinsic motivation in terms of gamification, we are careful to remember that gamification is typically used as entertainment or an escape. If this is implemented everywhere, the feeling might become commonplace and lose its value. Also, an important question was raised in our discussion over gamification: if a person is only thinking about how an action will reward him or her, will he or she even consider any negative consequences?

Because of these issues, we believe that gamification is not ideal for education. If gamification were to be used in the school system, students would work for rewards rather than knowledge. There would be no reason to memorize information, to experiment, or to think outside the box. Students could get by with performing lots of tasks of lesser worth rather than a few very important tasks of great worth. While this could allow students to work at their own paces, it could also result in little effort being put into schoolwork.

Intrinsic Motivation

Intrinsic motivation is motivation that you feel yourself. It means that you want to work at something just because you want to, not because you want a reward. Intrinsic motivation should be the motivation in schools. Implementing extrinsic motivation could reduce the intrinsic desire to learn. However, if gamification were to be used in small

amounts, small exercises with extrinsic motivation could spark intrinsic desire. For example, if students applied what they learned through extrinsic motivation in the real world, they could possibly jump-start their intrinsic value of what they have learned. In other words, extrinsic motivation could be valuable as an inspiration, but not as the means to an end. clear that gamification is not ideal for education. even be considered?

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<u>EDUCATION</u>

<u>Common Core State Standard Initiative: Is the US Ready for Future Global Competition?</u>

In response to fierce global competition, the Common Core State Standards Initiative was announced by the Obama administration in June 2009. Adopted by over 80% of the states in the U.S., the initiative intends to raise standards of high school education and to better prepare high school graduates for the work force. The initiative certainly brings some promising benefits as perceived by many supporters, but the question remains to be answered: is it going to sufficiently raise America's competitiveness in the global economy since other countries have long heavily invested in high school education?

To begin with, there are quite a few self-explanatory silver linings of the initiative that cannot and should not be overlooked. No matter how questionably designed, the initiative serves as a big step forward toward bettering high school education qualities. Schools that have traditionally had a lack of resources need this opportunity to enhance their students' performance. The government promises funding for states that adopt the standards, which is essential for schools to bring changes to their education system and to attract good teachers.

Another potential benefit lies in the ease of regulation and evaluation of school performance. In the past, there had been no same standards for schools to measure their educational accomplishment against. Schools adopting different standards found it hard to compare the quality of education received by their students with that of other schools, which then made it hard for the government to determine fund eligibility and ways to cost-effectively help schools that were struggling. This difficulty might have even translated to education inequality among students from different schools. Students who are given an education that better prepares them for college and careers have an edge against those whose education failed to provide them with the necessary knowledge for college. The latter group was further deprived of the opportunity for high-quality college education, and consequently, the opportunity for good careers in the job market.

Opponents of Common Core State Standard Initiative are in fear of rushing into a program that sounds promising on the surface. One of the concerns is that this system ignores the differences among individuals in ways of learning. Common sense dictates that each individual fares better in his/her own way. Common Core standard ignores the fact this fact and attempts to force upon every student a one-size-fits-all high school curriculum. The process may hurt underachievers who need additional attention in certain subjects;

overachievers would also be hurt, as they are not being sufficiently challenged.

Another concern involves little to no involvement of the educational community in the mandating of educational standards. It is said that actual teachers were not very much involved in the process of designing the curriculum. The fact is almost terrifying because students might be taught something completely beyond their ability and as a result be punished for not living up to expectations. If the common core standards were to be more effective, opinions would need to be gathered from actual high school teachers who possess experience about the subjects to be taught.

Some also fear that using common standards would devalue the meaning of education. The initiative equates education to one's future prospects as it tightly connects school performance with chances of landing a job. It discourages diversity among high schools across the nation, denies differences that may help students better understand of the world, and makes freshmen entering college the same, which essentially comprises the integrity of education.

Regardless of all the drawbacks and improvements that can be made to amend the situation, Common Core Standard Initiative is still a good effort on the part of the U.S. government as it seeks to increase the nation's global competitiveness. Research has been conducted to testify the effectiveness of the initiative, but the result did not show that students' performance

increases in states adopting these standards. It might be helpful to include more high school teachers in the process of standards setting just so they are more suitable for high school students to follow. Also, allowing flexibility when measuring performance across schools can be a good motivation to increase diversity, which should by no means be compromised in any way. The government should also come up with a new system to determine state funding eligibility. The current system punishes those states that do not adopt the standards even if they might be doing a better job at preparing students for college.

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No College Student Left Behind

Citizens pay a lot of money in taxes for public colleges. When reports are published saying that as many as 70% of colleges graduates are not functionally literate, people start to get worried about what the money they are paying for goes to. This leads to a need for an *accountability system* to regulate the good use of tax dollars in public institutions. it is easy to reach to the public schools to find such a system. Here, testing is used to regulate what students learn and how schools are teaching. While this may be an example for higher education to base off, we have seen several problems which lead us to fear introducing it into higher education. We believe that there is a possibility for accountability while keeping the things we value in our institutions.

Growing up in the era of beginning of testing, we have seen the effects that testing can have on a school system. First, testing can limit curriculum. We have personally seen how testing can cause such stress on teachers and schools that curriculum becomes centered on testing. This has gotten to the point where whole classes are taught on "how" to take the test, rather than teaching the things the test aims to measure. This is an injustice in the school system. We do not want our higher education to be centered on learning how to pass random tests. We do not want our professors punished for teaching "outside" the box.

If curriculum is limited to what is easily testable, we will lose things we value in the higher education system. These things are cultural experiences, travel, and other enriching qualities of our education. This also includes learning critical thinking, philosophy, and acceptance of those different from us — valued experiences that come with higher education. We fear losing them to too much focus on testing. On this note, there are currently no tests that are able to fully and correctly measure what college students learn. Some argue that there are tests that are approaching this ability, but beginning an unready test will only lead to a waste of money and false conclusions.

This is coupled by the fact that testing results do not accurately reflect what is taught by a professor — it only reflects what the students remember. We feel that it is a great responsibility of the student to participate in their education. Students are greatly responsible for what they learn. Testing tends to put undue pressure on the professor to "force" students to learn the material they are presented. This takes out the intrinsic motivation required for college students to succeed.

As near future leaders and citizens of this society, we propose a solution to this problem. There is a possibility for accountability without these restrictions. Testing that is mandatory and done yearly places too much emphasis on testing. We propose that testing done only intermediately.

This type of testing provides a more laid back feel, and is more to access what is actually being taught, rather than teaching for the test.

We also suggest that testing should be regulated by states and local institutions, rather than by federal authorities. These tests should not be used to compare schools against each other, but should only be used to evaluate gaps in the school's curriculum. Testing that is used to rank schools becomes "high stakes" for the institution, which should be avoided. When testing is fostered at the local level, it preserves the school's individual flavor. For example, a school that has a major focus on its business program should be able to keep that focus, even with lower math scores. The school can use the scores to help improve the program in the future.

This may seem like it will not keep schools any more accountable than they are currently. However, if schools are able to report to taxpayers what they are doing to address gaps in their system rather than just numbers, they will be held accountable without the large focus on improving test scores. It is better for a school to report that they are investing into improving its writing program, rather than reporting its tests scores rose by three arbitrary points.

In order to preserve things about higher education that we value, schools should also be able to report what sort of "extra" things they offer. The cultural immersion, opportunities for travel, and life experiences that make college a place where students transition into adulthood is something that must be considered when thinking about "value added."

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Death of the Campus

What if the concept of of a physical college campus were a thing of the past? What if we no longer went to class, but instead, took online courses exclusively? What all face to face communication between teachers and students was all but removed from the college experience? According to a 2012 press release by The Pew Research Center's Internet & American Life Project, this very well may be the future of higher education. The Pew Center surveyed over one thousand internet experts, researchers, observers, and users. Fully 60% agreed that, "[T]here will be mass adoption of teleconferencing and distance learning to leverage expert resources … a transition to 'hybrid' classes that combine online learning components with less-frequent on-campus, in-person class meetings." While this is not a huge majority, it raises questions about changes in higher education that may or may not be for the better.

The survey results suggest that by 2020 a split will occur between teaching and research faculty. Teaching faculty will be generally poorly paid, part-time, and not required to do any research. And research faculty will not teach much, and instead focus on publishing scholarship. "Distance learning will be nominative" and online courses will be the standard rather than the exception. The number of actual college campuses will have decreased significantly and the few that still stand will "emphasize: face-to-face experiences; campus grounds (beauty,

history, charm); charismatic teachers; a sense of tradition." A great many students, myself included, are concerned that the use of primarily online classes and "technology-mediated approaches" will severely limit the personal interactions that are part of what makes higher education effective. While technology certainly has its advantages, there exists a certain level of fear of the unknown. This "fear of the unknown," combined with a love of tradition, will cause students to divide into two camps: those who embrace a technology-based educational experience and those who do not.

As students, we are leery of this unfamiliar technology because our educations are so important and expensive. What if the technology fails and we miss valuable "class time" because of it? Will we be able to receive the same amount of individual assistance that we would in a classroom where we literally, physically meet with my instructor on a regular basis? While this online class is less expensive than a traditional class, are we really getting as good of an education as we would have otherwise? If technology-mediated education becomes the norm, will only those of higher socioeconomic status will be able to afford face to face personal interaction with professors? Will the lower cost of education degrade its value? Unfortunately, many of these questions cannot be answered until new technology has been implemented. In short, we are just going to have to wait and see.

For all of it is shortcomings, technology also has its many

advantages. First and foremost, integrating more technology into education will drastically lower the cost of education to everyone. If fact some have argued, like an anonymous respondent to the aforementioned survey, that ""The age of brick-and-mortar dinosaur schools is about to burst — another bubble ready to pop. The price is too high; it is grossly inflated and the return on investment is not there."In addition, technology allows universities access to a wider range of courses through massive open online courses (MOOCs) that are broadcast all over the world for little to no cost to the student. This is revolutionary and will make higher education available to so many more people.

   To us, the best way to handle the discrepancies and conflict between technology and tradition is simple. Take it slow. By slowly integrating new technologies into universities, as we believe we have been for some time, student and instructors alike will be able to adjust and adapt more readily to the changing educational environment. This way, hopefully we can work out any problems with these changes as they arise. Instead of fearing change, we adapt to it as need be. As we have said, technology has its merits, but so does traditional education. By blending the two we can take the best of both worlds. We can create a hybrid that is more efficient, more cost effective, and more widely available than the traditional university experience, while still maintaining some of classic college experiences like face to face teacher-student communication that we have

come to appreciate. Alex Halavais, an academic and vice president of the Association of Internet Researchers, comments that: "The universities that survive will do so mainly by becoming highly adaptive. … The most interesting shifts in post-secondary education may happen outside of universities, or at least on the periphery of traditional universities. There may be universities that remain focused on the traditional lecture and test, but there will be less demand for them." In short, adapt or die. Change is a good thing, but in this case, provided it happens gradually. There is nothing inherently wrong with education as it is now, we have done fine without an incredible amount of technology. The purpose of technology in education is not to change what we learn so much as it is to make the way we learn better. In order to do that, everyone must be on the same page, so to speak. We believe this can and will happen in time.

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Open Course Ware and MOOCs

Everyone can agree that a quality education is a priority for the future, but how exactly we hope to accomplish that task remains a challenge. Currently the cost of a college degree is rising faster than healthcare costs. This, combined with the questionable quality and value of the college education, has led individuals to investigate alternative means of delivering higher education to the masses.

There are currently several avenues by which people and organizations are capitalizing on new technological possibilities for delivering education. The Bill and Melinda Gates Foundation is one of these organizations. In an interview with the Chronicle of Higher Education, Bill Gates discussed how he believed the solution to affordable, effective education lied in a flipped classroom model. This system does not simply dump technology on the students and hope that access to technology fixes the problem. Rather, in this system, students would watch lectures recorded from "superstar professors" at home, then use class time to apply and work through problems with the local professor. This is a sort of a hybrid educational system which hopes to utilize the convenience and accessibility of technology as well as the personal attention and guidance a local professor can offer. The Bill and Melinda Gates Foundation is committed "to learn, make mistakes, try new things out, find new partners to do things." That is to say they believe the best way to move forward is to embrace novel ideas, to refine concepts, and to keep trying for a brighter future for education.

Another example of a grand educational experiment happening right now is the massive open online courses (MOOCS) that a company called Coursera is offering. Coursera hopes to utilize the internet to bring college level classes to the masses worldwide. With a global audience, professors are able to have a larger impact with their lectures, reaching potentially thousands of interested students. Another advantage of MOOCS is that grading and content questions can be crowd-sourced to the very students taking the class. The goal is to provide not just information, but also an educational framework for receiving certificates of completion and credentials similar to a traditional university. Coursera currently offers 208 courses for free with the help of several prestigious institutions such as Stanford, Duke, Johns Hopkins, Vanderbilt, and many others.

These institutions are jumping on board with Coursera not simply for educational proliferation but also for potential future financial profit. These schools clearly recognize the potential massive online classes have to impact the future of higher education. Each individual school produces their own content and Coursera provides access to the content. The content is currently being offered for free, but eventually this massive experiment will begin to draw revenue through one avenue or another.

Even with all the potential massive online classes offer, there are

still several challenges that must be overcome. One such challenge is quality of curriculum. Developing an engaging curriculum that effectively utilizes the digital medium of the internet is imperative. Simply having a webcam record a professor scribble on a chalkboard will not cut it. Another challenge faced by these coarse programs is that of cheating. If these programs want to be taken seriously and have their certificates and credentials respected, they must be sure the students are actually learning not cheating. One proposal suggested to combat cheating would be for students to take a final exam at a testing center. By utilizing the testing center, professors could be sure students were not cheating. However, it does add a degree of cost and inconvenience if a testing center is not nearby.

As the world becomes increasingly interconnected, the internet continues to provide new ways for us to communicate thoughts and ideas with one another. MOOCs have the potential to inexpensively give access to any subject matter to anyone in the world, but perhaps not without unforeseen consequences. Professors might find themselves being completely replaced if education moves completely to an electronic format. If advanced artificial intelligence can answer specific content-related questions and excellent recorded lectures can effectively teach the material, would professors be out of jobs? There is also the question of who would control the content. If hundreds of thousands of people are going to see and learn the exact same thing, it seems to suggest that if it is not in the class, no

one on earth will have learned it. This type of education might also limit unique perspectives and insight if everyone has access to the exact same information.

The proliferation of information could also be viewed as dangerous. What information are we comfortable having accessible by everyone on earth? Take, for instance, a biology class on virology. Would we be comfortable allowing MOOCs to teach anyone with an internet connection how the H1N1 virus mutates and how it could be synthetically engineered into a weapon? What about teaching physics classes that could provide information about nuclear engineering? It appears that there should be some regulation of such education, but the question remains: who defines dangerous?

In spite of the challenges faced by MOOCs, we believe that they will solve many more problems than they create. MOOCs could provide humanity with universal access to education and bring millions of people into the human conversation. We advise future leaders to take some advice from Bill Gates "to learn, make mistakes, try new things out, find new partners to do things."

Suggestions for Further Reading

- A Conversation With Bill Gates http://chronicle.com/article/A-Conversation-With-Bill-Gates/132591/

- Come the Revolution http://www.nytimes.com/2012/05/16/opinion/friedman-come-the-revolution.html

- Dropping Out of MOOCs: Is it Really Okay? http://www.insidehighered.com/blogs/hack-higher-education/dropping-out-moocs-it-rea lly-okay Coursera https://www.coursera.org

- A Consortium of Colleges Takes Online Education to a New Level

http://www.nytimes.com/2012/07/17/education/consortium-of-colleges-takes-online-education-to-new-level.html

__Conclusions__

To conquer fear is the beginning of wisdom. – Bertrand Russell

Philosophers, from Plato to the present, have often debated what the exact nature of courage, and very few have ever been able to agree on a definition that could make it into *Webster's Dictionary*. Despite being par for the course in Philosophy, this is hardly an encouraging observation; how can we ever expect to defeat fear if we cannot even agree what we need to do to beat it?

The fact of the matter is, however, that even though we may still have doubts and uncertainty about the solution to fear, we do still have some insights into solutions. We know that the problems we face are rooted in the conditions we face now, and that innovative answers can be found anywhere. We also know that a solution may not be as perfect as it seems at first glance, and that we should never become lazy or too satisfied with the answers in front of us.

We have seen similar points be made about one of the greatest uncertainties we as a society can face: the future. We have seen observations and descriptions of difficulties rooted in the trends of today's broad economy and work culture, and seen how these trends might grow into powerful new technologies and environments to which we will have to adjust. We have also seen how innovations and revolutions in the corporate culture and workforce might offer some promise of unparalleled creativity, and a work-life balance that is radically different from any that has come before. Lastly, we have seen how some of these elements might be expressed and developed in the world of education, which will in turn set up the world of tomorrow's tomorrow. In each case, there have been concrete solutions to real, concrete problems we face today, all of which suggest ways a savvy executive or leader might look to embrace their ideas of increased creativity, open systems, and non-centralized hierarchies where every part is semi-autonomous and free through the wonders of digital technology. However, we have also seen some of the problems these solutions might carry with them, and how cautious we should still remain in our implementation of technologies and methods we may not yet fully understand, especially with regards to how they will affect our well-being as individuals and a society.

We may conclude, then, that the way to approach the future, the way to be courageous and face our fears is a way of cautious optimism in which we carry forth a lamp into the dark unknown, but always look to ensure that we do not burn ourselves in the process. After all, fear of the unknown is no virtue, but neither is over-confidence. Instead, we must seek to learn more where we can about ourselves and where we are going, keep calm, and always carry on.