A COLLECTION OF OP-ED ESSAYS FROM McDonnell Academy Scholars

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A core mission of the McDonnell International Scholars Academy is to develop future global leaders. We pursue this by recruiting outstanding graduates of partner institutions from around the world for PhD or professional degree programs at Washington University. But it is more than academic talent that we seek. We also seek McDonnell Academy Scholars who have an interest in broader social issues, and once they are here, we provide them with opportunities to develop their leadership skills. These opportunities include experiencing the cultural and political life of America, learning about other societies and meeting major figures from business, government, academia and the nonprofit sector.
GLOBAL LEADERSHIP VISIONS SERIES

In addition to fostering leaders at the individual level, the Academy seeks to create a leadership network. This requires bringing Academy Scholars together on a regular basis to participate in cultural and social events and to work in group settings. These activities lead to lifelong friendships, but they also produce deeper understanding of the perspectives of others, including those with whom one may disagree. Our hope is that Scholars’ friendships and understandings will serve them well as they pursue their individual careers and participate in the Academy network in the decades ahead.

In an effort to create this network, as well as to develop leadership and communication skills, all McDonnell Scholars participate in special activities. These include the “Global Leadership Visions” series in their second year in the Academy. This involves Scholars’ giving short public presentations on topics of their choosing. The topic might grow out of the Scholars’ own research, or it may have to do with an issue that concerns them more generally as global citizens. Each of their presentations is followed by questions from the audience made up of Scholars, Academy Ambassadors, members of the Advisory Committee and the Washington University and St. Louis communities. The Scholars then follow up by writing the op-ed pieces that appear in this booklet.

These oral and written presentations showcase the considerable talent of the Scholars and prove to be good settings for honing their communication skills. The presentations also provide a forum where some unexpected differences of opinion surface. As I listened to the presentations, I sometimes got the impression that members of the audience were surprised — if not shocked — by what the Scholars said, but that is precisely the point. It challenged us all to move, at least for a few minutes, beyond our accepted wisdom. I hope it proved to be as fascinating and as much of a learning experience for Scholars as it was for me and others.

We invite you to take a few minutes to read the following op-ed pieces that grew out of this process. You will find reflections on regional political issues, critiques of the United States, calls to action for dealing with environmental problems and a host of other fascinating thoughts. It will be interesting and inspiring for all of us to drop in again on these Scholars in a decade or two to see what they are saying and doing about the issues they raise here. Much of the world’s future will depend on how they and their generation deal with them.

James V. Wertsch, Director
McDonnell International Scholars Academy
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In recent years, the U.S. government has tried several times to address Americans’ poor financial literacy. The latest effort is the Consumer Financial Protection Bureau (CFPB), which started its operation on July 21, 2011, as part of the Dodd-Frank Wall Street Reform and Consumer Financial Protection Act. The objective of the CFPB is to address Americans’ financial illiteracy by “ensuring that consumers obtain the necessary information to make the financial decisions they believe are best for themselves and their families.”

The lack of financial literacy becomes a policy problem when individuals make major mistakes. In general, this occurs when they (1) do not understand their financial needs and, because of the complexity of financial instruments, (2) are unable to determine the right combination of financial products and services needed to attain their goals in a cost-effective manner. Consider, for example, the large number of Americans who took out mortgages they could not afford and the subsequent defaults and foreclosures. Moreover, several studies show that less financially literate Americans tend to incur higher payment and borrowing costs than necessary, accumulate less wealth and engage in less financial planning than others. In this context, the CFPB promotes financial education as a policy tool to help Americans undertake optimal financial decisions.

It makes sense to think that financial education could provide Americans with tools to assess their financial needs, but in fact this may not be the best way to address the complexity of financial markets. The key may be in recognizing that people are financially illiterate to the extent that financial products are complex. If purchasing financial products were as simple as purchasing a toaster, their complexity wouldn’t be a policy concern. An alternative, then, is to simplify and standardize financial instruments themselves. In order to do this, we could create financial contracts that are easier to understand and allow the comparison of costs and benefits in more straightforward ways. Hopefully, this could result in financial products and services that can be described in just one or two summary indicators, thereby significantly reducing the education required to empower Americans to undertake wise financial decisions.

The design and implementation of such financial instruments may be more cost-effective than financial education. Consider the fact that the last National Assessment of Adult Literacy, which measures the English literacy of Americans above 16 years of age, showed that only 55 percent of
adults have a basic level of numeracy. This means that they are only able to use easily identifiable quantitative information to solve simple, one-step problems. An example is comparing the price of two tickets. For such people, reducing financial instruments down to a few summary indicators would seem to be crucial for their optimal financial decisions. In contrast, providing them with financial education required to equip them with the skills for choosing among existing financial instruments is a much more ambitious undertaking.

While a combination of financial education and simplified forms might prove most cost-effective in the long term, simplification and standardization of financial instruments would appear to be the tool of choice for the CFPB in the short term. In reality, existing studies of the effects of financial education are scarce and inconclusive, so it would be years before the CFPB could hope to know what type of financial training works and for whom. And in fact, we don’t know the basic competencies Americans should have in order to define their financial needs and make effective use of financial markets. Only when we know this will we know the contents that should be taught in financial training programs, and this process obviously will take several years.

One possible downside in simplifying and standardizing financial instruments is a reduction in the variety of contracts Americans can choose from and thus their ability to satisfy their specific financial needs. However, in a context of widespread financial illiteracy it is not clear that Americans are getting much benefit from having flexibility in the supply of financial products and services. It simply may make more sense to intervene by simplifying the most commonly used financial instruments such as mortgages, and credit and debit cards. The bottom line is that simplifying and standardizing financial instruments may be preferable over financial education, at least in the short run, and this should not be disregarded without thorough consideration.

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THE RACE FOR ELECTRIC CARS

Today, transportation is the fastest growth area in terms of energy use. In the World Economic Outlook 2010, the International Energy Agency (IEA) estimates that transportation, in 2035, will account for 60 percent of global oil consumption, rising from 53 percent in 2009. And among all forms of transportation, private automobiles are the most significant users of energy. The number of private vehicles in the world now exceeds 531 million, growing by about 11 million annually. About one-fourth of those cars travel on U.S. roads, accounting for 40 percent of the nation’s annual oil use.

In an age of generally rising and unpredictable oil prices, the electrification of transportation is becoming crucial. Countries that power their transportation systems with electricity will have a huge cost advantage and independence from imported oil. The Electrification Coalition, a U.S. electric vehicle advocacy group, estimates that, if by 2040 Americans replace gasoline with electricity as an energy source for 75 percent of all miles driven, oil consumption will be reduced from the current level of nearly nine million barrels a day to two million.

If we can create enough market incentives for consumers to buy electric cars and the necessary infrastructure to support them, the electric car industry will flourish.

There is clearly a market for electric vehicles in the United States. Drivers have repeatedly voiced concerns about global warming, dependence on foreign oil and unpredictable gas prices, all of which stem from gasoline-powered engines. Electric cars provide solutions to these problems. Using electricity for energy is cheaper than gasoline, and it can come from renewable resources such as solar and wind power. Electric cars are more economical, require less maintenance and pollute less than fuel-powered cars.

Electric cars still face major hurdles in being widely adopted. These include steep upfront costs compared to equivalent gasoline-powered vehicles, a dearth of public charging stations, inordinately long charging times and battery range limitations. However, a combination of technology and policy is in place to make sure that the market for electric cars will expand beyond the luxury niche initially targeted. Investment in advanced battery production and faster charging technologies is rapidly expanding.

The race to put electric cars on the world’s roads is picking up speed. China is vying to be the world’s leader in electric car production, and it has undertaken multiple initiatives to turn the country...
into one of the leading producers of hybrid and electric vehicles in three years. Besides providing $15 billion in seed money for the country’s leading auto and battery companies, the government is using $5-a-gallon gasoline to move the country off oil and onto the next industrial growth engine. With all this under way, China has gained initial success in attracting global investors to its electric vehicle industry. Warren Buffet, one of the most successful investors in the world, has been investing in BYD Auto, a Chinese company specializing in green products such as electric vehicles, energy storage stations and solar power stations.

In the United States, the Obama administration set aside more than $2 billion in the 2009 economic stimulus package for advanced battery and electric car research. The president also asked for ideas to create incentives that would accelerate the sale and use of electric vehicles, including a transformation of the existing $7,500 tax credit for the purchase of an electric vehicle into a point-of-sale rebate. However, these initiatives seem to be insufficient to put the United States in the lead position in the race to commercialize electric vehicles. What remains to be accomplished is a breakthrough in battery technology, which requires more support for research and mass production. It also will be essential to develop a network of homegrown suppliers. Without them, the country could end up being as dependent on foreign-made batteries and materials as it is on oil from the Middle East.

Takanobu Ito, the chief executive of Honda has said, “There will be a market for electric vehicles.” If we can create enough market incentives for consumers to buy electric cars and the necessary infrastructure to support them, the electric car industry will flourish. This would not only address the issue of dependence on imported oil, but also provide a significant competitive advantage for manufacturing in the United States. How quickly this can be realized depends on how well policymakers build the case for electric cars. If the United States does not grab the opportunity and take leadership now, the industry will take off in other countries. Eventually, the United States will end up spending its resources not only to import oil, as it does now, but to import electric cars as well.

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In the summer of 2010, I was in the center of Bangkok at a Siam Sky Train Station looking down at the busy streets and the crowds surrounding the shopping malls. A very long line of people was at the ground floor of the biggest luxury mall in the country. This queue extended from inside the building well down the pathway outside. I learned, to my surprise, that the line was for Krispy Kreme pastries.

Krispy Kreme is one of the 15 companies that US News columnist Rick Newman predicted might not survive 2009. However, it did survive, largely with the help of rising sales in foreign locations such as Australia and Hong Kong, and new markets such as Thailand. *The Economist* predicted later that, thanks to sales in places like these, failing companies like Krispy Kreme may become economically viable once again.

Thai people have come to favor the products of this new imported doughnut chain. Indeed, they have taken on the role of saving it from business failure. But this is not the only such case. We have helped out other foreign businesses by boosting their sales in our country. In general, we have opened ourselves wide to accept Western culture.

Many things are changing in today's Thailand. High-end, luxury fashion is popular among college students and children as young as eighth graders, who often use an iPhone or a Blackberry smartphone. There are fewer weekend cartoons than American reality shows for children and family on cable TV. It would be an exaggeration to say that media is solely to blame for all these developments. Everyone should have the freedom to consume whatever they want in Thailand, given that it is a democratic country. The media also have the right to promote goods. But has Thai society prepared its people, especially the young generation, to filter information and recognize what could be the negative outcome of their patterns of consumption?

Even though Thailand has not had many trade deficits over the past decade, the growing practice of consuming expensive imports could change that and have a negative long-term impact on the economy, as well as on the society and culture of the country. A Thai newspaper article a few years ago reported that the small group of young adults who wanted luxurious, expensive items rented them from a business that offers the temporary use of brand name goods. This may be a trap that can lead to extreme consumption. Nonetheless, some young Thais will do just about anything, including going into prostitution or committing crime, to get enough money to afford the expensive items required for a luxury lifestyle.

Something that seems to be missing in the teaching of Thai families and educational institutions is King Bhumibol’s “Philosophy of Sufficient Economy.” The essence of “sufficiency” in this view is “to lead a reasonably comfortable life, without excess, or overindulgence in luxury, but enough.” This can be applied at the levels of individual, family and society. In today’s world
it is possible to harness forces of globalization and materialism in a balanced way for adequate income and consumption. This involves not consuming more than one's capacity for generating income. If done properly, it is possible for people to save and shield themselves against unexpected expenses.

Something that seems to be missing in the teaching of Thai families and educational institutions is King Bhumibol’s “Philosophy of Sufficient Economy.”

In an era of global media and technology with few boundaries and limitations, young people can take in all kinds of information that can affect spending and consumption. In the absence of societal or individual filtering, the information can be overwhelming, and excess spending and consumption can result. These inevitably come with the attendant negative consequences of crime, drug use and other social problems that will eventually have an impact on the country's development. Education needs to turn its focus to the Philosophy of Sufficient Economy, especially at the individual and family levels. This can provide the basis for the more appropriate use of information from media and technology. It is entirely possible for the young generation to learn how to balance saving and spending while also preserving Thai culture and being open-minded about other cultures.

Thailand is not the only country whose culture and products are neglected by young people. Nor is it the only country where people favor luxury goods to the extent that they may be a risk to their personal budget. Whereas information cannot simply be blocked by a society, the Philosophy of Sufficient Economy can be taught and used as a guide to intelligent balance. A good outcome of this would be that imported brands such as Krispy Kreme and Louis Vuitton are available to people who have sufficient financial resources, but local snacks and fashions will still be available and appreciated in a way that helps stabilize the country's economy.

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Monsanto: Boon or threat to the world?  Vivek Shah

What can we expect from energy research?  Xiaofei Wang
MONSANTO: BOON OR THREAT TO THE WORLD?

Today, not many people remember Agent Orange. Although it sounds like a code name for a CIA agent from a James Bond movie, it is not. Agent Orange was used by the American army in the Vietnam War as an herbicide. The chemical worked very well during the war except for the fact that it contained dioxins, which are extremely toxic to humans and have had long-lasting effects on American army veterans and the Vietnamese people. Agent Orange left people with cancer, defects at birth and many other ailments.

If you are wondering why this is important, Monsanto was the company that synthesized Agent Orange. American veterans later sued the company for making the chemical, and the U.S. Supreme Court agreed to a settlement of $80 million, which meant that each veteran received less than what the U.S. government provided in the form of retirement benefits. This shows how such measures can still result in losses to citizens who had done nothing wrong.

The 2011 nuclear disaster occurred in Fukushima, Japan, due to an earthquake. In spite of taking precautions for nuclear safety and using technologically advanced methods, the nuclear industry in that country could not avert what happened. When the CEOs of the nuclear corporations involved were asked why this occurred, they said there was no reason to expect an earthquake of that magnitude and hence to think such a disaster could occur. Like me, I suspect you do not believe corporations are justified in coming up with such explanations. We know that calamities of this scale do happen, precedent or not. Everyone is aware of the repercussions of a nuclear disaster of this sort, so it hardly qualifies as an excuse to say nothing of its kind had ever occurred.

The dream of being able to produce twice the amount of food on the same amount of land is what drives Monsanto. The exponential growth in population, shifting patterns of food consumption in the growing middle class and limited land make up a perfect set of ingredients for an impending problem. Clearly, with limited expansion of new land for cultivation, a growing population on our planet is going to increase the alarming possibilities of food shortages. There simply will be many more mouths to feed while the land used to produce food will remain much the same as today or can increase only slightly. Some very intelligent individuals see this combination of forces as a business opportunity and are already cashing in on it. The green revolution ushered by Norman Borlaug was a great success and ensured that many developing countries are self-sufficient in food supply. As a result, food production has outpaced the growth of population up to now, but this will come to an end one day and we may have to look for other options.
The exponential growth in population, shifting patterns of food consumption in the growing middle class and limited land make up a perfect set of ingredients for an impending problem.

Over the past several years Monsanto has been involved in genetically modifying seeds to increase crop yields. For example, they have devised ingenious methods for developing seeds for plants that kill any insect when it eats them. These often result in positive outcomes in the short-term, especially in a laboratory environment. However, this may not be the case when these methods are actually used in large-scale agriculture. Of late there have been reports that certain types of insects, including some butterflies, may become extinct because of genetically modified crops, resulting in the loss of biodiversity in general and may not be good even for the local ecology. The risks involved are simply not known. This suggests that, when genetically modified seeds are planted, they can affect the whole ecosystem. What is probably called for is a systems dynamic approach to understand the interaction between such new crops and the environment.

Private companies, which are driven by growth and high profits, do not necessarily focus on long-term effects. As a result, it often is not in the interest of a company to figure out the more general, longer-term risks involved. What this suggests to me is that there should be policies or regulations that force companies to take responsibility. This may not seem like a big issue to some, but consider how a concern with such risks might have helped in cases like the Japanese nuclear disaster, the BP oil disaster or the global financial crisis. It appears to me that major problems are just waiting to happen in the case of genetically modified crops. In case any calamity arises, it will be hard for the world to revert back to low-yield seeds, and this could easily result in a huge shortage of food. With all this in mind, it appears to me that it would be better to take smaller steps and be sure, rather than take a big leap and fall. The latter may be less appealing to private companies, but a better bet for humankind.

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WHAT CAN WE EXPECT FROM ENERGY RESEARCH?

Energy is an extremely hot topic nowadays. Over the past few years gasoline prices have been soaring, and climate change looms as a major global issue. Obviously, people prefer neither to pay more for gas or electricity nor lower their living standard by reducing energy consumption. At the same time, I also firmly believe that most people do not want the atmosphere to become polluted.

Is there any way to address all of these problems? In trying to answer this question, many people turn their eyes to energy research. They expect this research to discover new energy sources that are cheaper and cleaner than the ones we have today. That is why the U.S. Department of Energy and a large number of companies provide so much funding for the study of energy.

But in my view it is important not to have overly high expectations for solutions from such research. To see why, let us first review how research changes humans’ lives. Starting from the 18th century, the introduction of steam power gave rise to the first industrial revolution. Then, in the latter part of the 19th century, the invention of the internal combustion engine and electrical power promoted the second industrial revolution. A half century ago, computer and information technology also changed humans’ lives greatly.

Obviously, it is technology innovation that led to these great revolutions. But the question is: What led to these great technology innovations? Did they arise directly from the needs or desires of people? It is apparent to me that this was not the case. The needs and desires of people may create some new technologies. However, they cannot play a major role in revolutionary technological innovation, such as steam power and the Internet. Fundamental revolutions are usually driven by curiosity and imagination of human beings, and they occur quite randomly. Thus it is impossible for people to plan them.

Another interesting fact is that before the invention of a revolutionary technology, people almost never realize that they are in need of it. For instance, before the telephone was invented, no one could imagine that people could talk to each other through electrical wires. And when the telephone first became commercially available, some people still doubted its usefulness, saying that “a telephone is useless except for lovers.” The Internet provides another example of this. In the 1980s even the inventors of the Internet did not realize that it could change our society so deeply. From today’s perspective it might appear that the reason for the invention of the Internet was that scientists and engineers like playing online games and sharing their photos on Facebook, but such a view would obviously be mistaken.

In contrast to cases where a desire for something emerged only after it had been invented, people apparently do have some desires a priori, such as the possession of gold. Thus, for centuries, people devoted their lives to alchemy in an attempt to create gold out of other elements. And just as is the case today, some 200 years ago, people wanted to have access to energy. Therefore they tried to invent the perpetual motion machine. There are many examples of this sort from
history, and we cannot find a single revolutionary innovation of technology that was directly driven by the needs and desires of people.

In today’s world we obviously do need clean and renewable energy. It is a fundamental challenge for human beings. Any solution to this problem must be considered a revolution. Governments and companies want to demonstrate to people their concern for energy and environmental issues, so they provide large amounts of funding for energy research. For example, solar cell researchers receive a lot of funding because almost all studies of solar cell potential argue that solar cells are very promising and hence we need a way to store the energy they produce. However, the fact is that commercial silicon solar cells first appeared in the 1950s and solar cells on the market today are still of this type. But until now, they have been unable to provide us with the energy we need.

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Biofuels are another hot topic despite the fact that the theoretical maximum efficiency of photosynthesis is approximately 11 percent — much lower than even solar cells can achieve. Scientists have been working on biofuels for a very long time, and, if they were really promising, this promise should have yielded commercially viable products by now. Unfortunately, when scientists in these areas apply for funding or talk to the public, they typically omit such discouraging facts. From the perspective of those interested in sponsoring energy research, there are actually not many areas from which to select. As a result money still flows to these “old” energy research areas.

In conclusion, we should not have overly high expectations about current energy research. It is often not as promising as it would appear. Indeed, we need to be more attuned to false hopes and even misleading claims of those with a vested interest in the research since we do not want to waste taxpayer money. A further caution needs to be made about training too many PhD students in these areas. They may not find jobs upon graduation, because we did not recognize the fundamental point that major innovation sometimes cannot be planned in response to pre-existing demand.

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CULTURE & SOCIETY
SOME TRUTHS ABOUT THE KOREAN PENINSULA: BETWEEN IMAGE AND REALITY

I still remember with astonishment the moment that someone asked about my nationality during my first trip abroad at the age of 12. To my response, “Korean,” he replied “North?” It was not until leaving the Korean Peninsula for the first time that I heard the term “South Korean.” There existed only a single version of “Korean” for me, and this sudden addition to the name of my nationality was somewhat unpleasant and awkward. For the first time, I realized that the perspective on the North–South relationship of a South Korean living in the Korean Peninsula was considerably different from what it was for outside observers.

On November 2010, North Korea bombarded Yeonpyeong Island, located in West Sea of South Korea. The international world, not to mention the United States, was shocked by the event. Watching the Internet news in St. Louis, I truly feared the possibility of a war on the Korean Peninsula for the first time in my life. If I had been in Korea at the moment, however, I might not have taken it too seriously and reacted like my father, who told me from home, “Yes, it happened but it will go away.”

In 1996, 13 guerrillas from North Korea penetrated the defenses of a small city on the east coast where I grew up. A taxi driver discovered the submarines they used and reported this to the police. My school was closed for security reasons because the mountain in which the guerrillas allegedly were hiding was only a few miles away from my town. This may sound alarming to others, but that day my town was very peaceful, just like any other day. It seemed to us that only the news media and the special military forces involved in the operation against the guerrillas were in a state of emergency. This operation ended with 11 guerrillas killed, one captured and one missing. The next day schools opened and everything went back to normal.

However dangerous it might seem to the international world, we view North Korean provocations as part of our life and daily routine; nothing is new.

This story is about a North Korean provocation for me as an elementary school student. My parents have other stories from other times, but the take-away message seems to be the same, and this is why Koreans, including my father, reacted in such a remote way to the Yeonpyeong Island attack and why his reaction differed from that of the international world. When living our daily lives in South Korea, we are just living part of our history, living as citizens of a divided nation constantly facing and dealing with North Korean issues.

Over the years there have been numerous provocations by North Korea. Under the circumstances, we are so used to North Korea’s provocations that we do not take them nearly as seriously as the outside world does. In the eyes of South Koreans these provocations routinely...
involve three stages: a provocation occurs, a furious political dispute boils up and then all is soon forgotten. However dangerous it might seem to the international world, we view North Korean provocations as part of our life and daily routine; nothing is new.

But in following this routine, we in South Korea may be failing to recognize that the war has never ended on the Korean Peninsula. South and North Korea reached only an armistice agreement in 1953, and that agreement has been kept until now. Because the ceasefire has been maintained for nearly six decades, people in South Korea often forget that we technically are still at war. What appears to be a nonchalant stance may grow as time goes by. My grandparents’ generation actually experienced the Korean War and witnessed our nation’s division at the 38th parallel, but this generation is shrinking by the day. It was the people from this generation who defined North Korea as an enemy. This means that there are inevitable generational gaps in how North Korea is viewed. My parents’ generation, people who are now between 50 and 70 years old, does not see North Korea as an enemy that needs to be defeated. However, they have also been influenced by education grounded in an anti-communist ideology, and from this perspective they tend to have feelings of hostility toward North Korea. My own generation of Koreans in their twenties and thirties has grown up in a setting defined by a peaceful mood and a sunshine policy toward the North. We consider North Korea as a cooperative partner with which we need to communicate in order to develop a good relationship. But like those in our parents’ generation, we may need to remind ourselves from time to time that the end of the Korean War has not yet been declared.

Of course my point is not that we should create more tensions between North and South Korea. In fact it is probably true that the reality on the Korean Peninsula is not as serious or dire as the images appear from an outside worldview. Instead, my point is to call into a question just how accurate the reality of the Korean perspective on the North is. Depending on the context, image can be reality or vice versa, so we must not become complacent about this topic.

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Over the past years, many stories have appeared in the Chinese and Western media about conflicts over the demolition of old urban districts in China. These episodes involving government and homeowners have come to represent social conflict in China in general and are a major concern of the central government and many scholars. As a popular online joke notes, the English word “China” can be translated as “Chai Na” (拆哪), which means “Demolish it.”

The demolition of old sections of cities has occurred virtually everywhere in the world as societies have pursued progress and urbanization. However, it has never been so rapid and problematic as in the major cities of China over the past 10–20 years. Problems of urbanization and demolition have become a complicated social issue that relates to city planning, urban development, civil rights and urban ecology. They are very difficult to address within the confines of any single discipline, instead requiring a boundary-crossing understanding of how Chinese society works.

When trying to understand the process of urbanization and demolition in Chinese cities, Beijing provides the best example. Its old city has been the capital of several dynasties from 1115 to 1911. As described by Mr. Liang Sicheng, one of the founders of Chinese architectural education, Beijing is one of the most valuable heritages of urban planning and architectural design in the history of human civilization. Before 1949, the city and its population were largely confined by the limits of the city wall, and urbanization in a modern sense had not yet begun.

The subsequent urbanization of Beijing can be generalized into three stages. The first was from the 1950s to the 1970s. After the P.R.C. was founded, a preliminary transformation of the old city started with a debate on how the new country’s capital should be built. The two proposals were: a) to build the new city directly within the confines of the old city, with the existing center Tiananmen serving as the core; and b) as outlined by Mr. Liang Sicheng, to build the new central government as well as the city outside of the existing old city, 10 km to the west.

The debate over whether the city should be built in a mono-centric or duo-centric way was finally resolved in favor of the former. Beijing quickly expanded beyond the city wall, and the wall was torn down as road building and widening projects also took place. By 1978 the city had a population of 8.7 million.
The second general period followed the Opening-up Reforms of 1978. It was characterized by rapid urbanization and a massive transformation of Beijing. The economic growth and new lifestyle could no longer be accommodated by the old houses and urban infrastructure, and a large number of “hutongs” (old neighborhoods built around narrow streets) and courtyard houses were demolished and replaced by modern high-rises. The city expanded rapidly from the Second Ring Road to the Third and Fourth Ring Roads.

In 1948, there were 3,200 hutongs; in 1978, 2,200 remained; and in 2000, there were 1,320 — only 430 of which were well maintained. Meanwhile people were building high-rises and wide highways beyond the Second Ring Road on what had been farmland. By 1998, the population of the city had reached 12.4 million.

The third general stage of Beijing’s urbanization started in 2000 and is tied to the 2008 Olympics. It led to looking at the city in a more international way. On the one hand, the government realized the importance of conserving the old city. In 2001 the Government of Beijing enacted the Conservation Plan of 25 Historic Areas in the Old City of Beijing. Though this covered only 37 percent of the area of Beijing’s Old City, it was a great step forward. Many historic areas are now developed as tourist sites for domestic and international visitors to experience the traditional hutongs, courtyards and lifestyles of Beijing. On the other hand, demolition took place in the new city in order to make space for the large public buildings, stadiums and venues of the 2008 Beijing Olympics.

As of 2008, the population of Beijing had reached 21.9 million.

Urbanization continues to be a complex issue in a China characterized by a growing economy and an urban population in major cities, a perhaps excessive admiration of modernity, and an absence of urban planning and supervision of developers. This rapid urbanization has resulted in the destruction of some cities’ physical and cultural heritage, the transformation of social structure, the violation of many citizens’ properties rights, and the waste of social and natural resources. This gigantic experiment in urban design promises to have many exciting, as well as troubling, developments in the future. Along with other architects of the world, I look forward to watching it unfold.

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ARE WE HEADING FOR A CRASH ON THE INFORMATION SUPERHIGHWAY?

In 2008, the “How much information?” project was created to measure the world's output of data, and its findings were astonishing. The study reported that in 2008, the average American consumed an average of 12 hours worth of information per day. This figure corresponds to approximately 100,500 words or 34 gigabytes, coming from more than 20 different sources. From print media and endless television channels to the newest smartphones, we are bombarded with more information than ever before.

One of the most significant developments in the past decade is the growth of the Internet, and, just as important, the search engines created to navigate it. Never before have individuals been so directly connected to what is nearly the entire catalogue of human knowledge. Only a few years ago, looking for information meant endless hours of fruitlessly searching and poring over materials in a library. Today, the answers effortlessly and quickly reveal themselves, indexed and neatly listed.

But swift progress of this sort always has its limitations. Living in a world of instantly available information and constant mental stimulation causes problems we are only beginning to understand. In a 2011 article in The Atlantic, Nicholas Carr used Google as a metaphor for the wider Internet and asked whether it makes us “stupid.” Carr presents many examples of digressive behavior, including concentration loss, lower memory retention and an inability to analyze material in depth. “My mind now expects to take in information the way the Net distributes it: in a swiftly moving stream of particles,” he comments. “Once I was a scuba diver in the sea of words. Now I zip along the surface like a guy on a Jet Ski.”

Perhaps these “developments” should come as no surprise. Given such a context, why should we exert energy to memorize something? From laptops to smartphones to GPS navigation systems, we are constantly connected to answers. But constant connection also means that work is always at hand. Many people feel an email must be answered, regardless of whether they are in the workplace or in bed. This is the expectation today’s society has placed upon us, and we have grown to expect the same of others. Everything is urgent and must be dealt with immediately, yet the number of tasks keeps increasing, resulting in not being able to focus on any single one in depth. This phenomenon is ever-present in the news media. Headlines and tidbits from around the world constantly scroll across screens and monitors, while deep analysis and thought are all too often left out.

At the same time new skill sets have developed to meet the challenges of today’s fast-moving world. Constant change means quickly adopting different ways of learning. We must become flexible and able to multitask with various tools. We need to be able to quickly analyze and manipulate large
quantities of information effectively in order to understand the big picture. No longer can you rely on old tools and skills. As Thomas Friedman writes in *The World Is Flat*, the Internet has leveled the playing field for all competitors. Creativity and ingenuity are increasingly used to set them apart. Furthermore, as technology makes the world smaller, working relationships with people from around the world become more of a necessity, hopefully making us understand and be more empathic to other cultures.

In certain respects all this is no different than past adaptations required, for instance, by the rise of mass literacy, which also had its fair share of skeptics. Carr mentions that in Plato’s *Phaedrus*, Socrates bemoaned the development of writing. He feared that, as people came to rely on the written word as a substitute for the knowledge they used to carry inside their heads, they would “cease to exercise their memory and become forgetful.” And because they would be able to “receive a quantity of information without proper instruction,” they would “be thought very knowledgeable when they are for the most part quite ignorant.”

Never before have individuals been so directly connected to what is nearly the entire catalogue of human knowledge.

Significant advancements have always come at the price of affecting human behavior. This change, however, does not necessarily make us “stupid,” but rather allows us to shift to a different set of skills that might be required in the new context. To me this suggests that, although we can try to conserve old ways, we should not be mindless opponents of change. Although I disagree with Carr’s opinion of the Internet making us stupid, I do agree with him that, as technological advances shape society, there might be a temptation to resist their effects. This, however, may lead to a life that is “lonely and in the end futile,” as Carr puts it. If there is one safe bet, it is that technology will continue to shape society and our individual minds in the future. The point is to understand this change, and guide it and ourselves down productive and humane paths.

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WHAT THE EUROPEAN UNION AND THE UNITED STATES CAN LEARN FROM EACH OTHER

Climate change, the environment, limited energy and natural resources, poverty and the economic downturn of 2008: These are only some of the challenges that most countries face today. There is no obvious or immediate solution to any of them, making it all the more important for us to learn from each other and develop solutions together. I will focus mainly on issues related to energy production, immigration, migration and food production from the perspective of the United States and the European Union (EU).

Since its founding in 1776, the United States has made tremendous progress in uniting its states and developing a nation. Characteristic reflections of this unity are expressions such as “United we stand, divided we fall” or the traditional motto: “E pluribus unum” (“Out of Many, One”).

The parallel with the EU stems from the establishment of a trade agreement — the European Coal and Steel Community — in 1951. Coming shortly after World War II, its main goals included facilitating and promoting trade and economic growth, and establishing a federal union of the member states that would help to overcome extreme forms of nationalism. Like the United States, this organization sought to bring a continent together to facilitate the flow of work force, to maintain lasting peace and to promote economic growth. Today the European Union has 27 member countries, and its activities are aimed at living up to the motto adopted in 2000: “United in Diversity.” In the end, however, its unification efforts by no means really try to unite European nations in a manner similar to states in the United States.

Most of today’s challenges have a global impact, and there is a growing need for organizations above the level of individual nations to emerge and provide solutions. In many cases we can no longer rely on the efforts of individual countries.

In the case of the United States, member states have sought since its inception to develop a common culture based upon a common language, and they have created a vibrant economy that is supported by the free flow of the work force across the country. The citizens of the United States clearly have come together to form one country.

The European Union, by contrast, remains quite a multicultural organization with more and more ethnic groups trying to achieve autonomous governments. Such tendencies toward autonomy are reflected in the formation of the Republic of Kosovo in 2008, the election of a separatist party in Scotland in 2011, and ongoing issues of Belgium, where no formal government has been established since the elections in 2010 because a separatist party received a significant number of votes and is refusing to allow any other party to form a government without its acquiescence.

In contrast to the United States, which is largely monolingual, the European Union has no common language; currently 23 official languages are recognized. Citizens of the member states tend to think of themselves much more as citizens of each nation-state than as citizens of the European Union. This makes the free flow of the work force difficult even in 2011 despite the fact that many
countries have officially opened their job markets to other members’ workers. The free flow of the work force in the EU remains an issue even though many Europeans speak several languages.

Immigration creates significant conflicts within European countries, even though it is fairly easy to immigrate into a European country. One example is France, where a ban was issued in 2004 on wearing certain religious symbols when attending educational institutions. In general, the approach contrasts with that of the United States, where strict laws regulate the immigration into the country in the first place, but internal regulation of citizens is less pronounced.

Food production in the European Union follows considerably stricter regulation than in America. Hormone treatment of animal products and genetic modification are generally forbidden in Europe, and organic food and healthy eating habits — including the consumption of vegetable products — play a more significant role in European culture than in the United States.

Green technologies and green energy production receive considerable interest in both Europe and America. Although nuclear energy production could considerably reduce the carbon footprint of electric energy production, after the disaster at the nuclear power plant in Fukushima, it is unlikely to take on a more dominant role in the EU. In Germany, for example, there have been major protests against nuclear energy. Yet in order to avoid relying more heavily on fossil-fuel-based power, cooperative efforts such as the fusion reactor test facility (ITER) under development in Cadarache, France, will be needed. Another alternative would be to increase the role of renewable energy production technologies.

The examples I have provided demonstrate only a few areas where the EU and U.S. stand to benefit by learning from each other. In many cases they take different approaches to major social issues, but this does not preclude finding complementarities and other opportunities to learn. In particular, Europeans and Americans could work together to promote economic growth and advance technology. Most of today’s challenges have a global impact, and there is a growing need for organizations above the level of individual nations to emerge and provide solutions. In many cases we can no longer rely on the efforts of individual countries. But solving international issues will require addressing internal problems, and in some cases others may have already developed solutions. The sooner political leaders recognize that global problems can only be solved by taking global actions, the better. United we stand, divided we fall is becoming all the more important — but now at the global level.

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While walking around the campus of Washington University during my studies there, it was apparent that almost everybody, especially students, was using modern electronic devices. The most popular were the products of Apple, which is a huge industrial and marketing success. When people in the United States buy an Apple product online, it is shipped to the United States from Shenzhen, China, where its contract manufacturer Foxconn is located. The sad story of the Foxconn suicides happened there.

Foxconn has famous customers such as Apple, HP and Sony, and it makes renowned products, including notebooks, tablets and smartphones. It established a plant in Shenzhen in the 1980s, and by 2010 had hired around 430,000 workers. Most of them were young, farmer-turned-migrant-workers. In 2010, 14 employees committed suicide between January and November. They jumped off high buildings to their deaths. Their average age was 21.

Why did these young workers do this? Because they worked under terrible pressure for overly long hours and meager wages, and with no form of relief from mental stress. They worked like modern slaves and did not have real hope for their future. Foxconn administers the factory in Shenzhen in a military style. Every worker in the factory lives life strictly by the clock. They get up, go to work, eat and go to sleep at the same time every day, repeating the same monotonous routine. They must remain standing at work for eight to 14 hours at a stretch to do the highly repetitive assembly tasks on the production line, and they are not allowed to talk to each other during work time.

These young workers do not really have the option of working fewer hours, given their meager wages. Their monthly salary starts at 900 Chinese Yuan (US $130), and they feel the need to put in toilsome extra hours to supplement their monthly wages. They rarely enjoy leisure activities, spending almost all their time within the cramped, walled manufacturing plant. Although this site has been given the nickname Foxconn City, the “community” by no means provides enough facilities for all 430,000 workers to enjoy their limited, not truly leisure time.

In short, psychological pressures mount in the daily life of these workers, pressures which cannot be ignored if we want to understand their tragedies. Most of the workers at Foxconn come from remote areas of the country and go to big cities to earn a living. They arrive at Shenzhen with no money, no place to stay and no people to turn to. All they have is the workplace. They rarely have friends and have little communication with their workmates or roommates. So it should come as no surprise that many Foxconn workers feel hopeless and pessimistic about their future.

It is noteworthy that workers such as those at Foxconn receive little protection under China’s labor laws. These laws fail to tackle the problem of low pay, for instance. The Chinese government introduced a minimum wage in 2004, which is far below what is required for even a minimal
lifestyle. Many employers used this minimum as the basic figure for their production line workers. For instance, the minimum monthly wage in Shenzhen before July 2010 was 900 Yuan, which was precisely what Foxconn was paying as a basic figure before the suicides. Labor laws do set restrictions on overtime work, but employers routinely manage to evade this by letting workers sign “voluntary” overtime working agreements when they begin employment, thereby making the factory not responsible for long work hours.

Most of the workers at Foxconn ... arrive at Shenzhen with no money, no place to stay and no people to turn to.

In general the workers are in a weak position when bargaining with a company like Foxconn. The supply of migrant labor in China has been abundant. In the years leading up to 2010, around 145 million migrant workers, over one-tenth of China’s total population, had left their hometowns to work in eastern and southern cities, meaning Foxconn always has a long queue of applicants at its doors.

Foxconn is now experimenting with other ways of avoiding higher labor costs. It has decided to move its plant to the central or western regions of China, where the local minimum wages and living expenses are lower. Local governments in the central and western regions are willing to give preferential terms to Foxconn-style investors on land use, taxation and so on because it boosts local economic development.

Workers in China get little help from labor unions in all this. In the Foxconn plant in Shenzhen, like most factories in China, there is no effective labor union representing workers. The labor union that does exist is organized by the government or the employer and has the task of defusing conflicts with workers.

In cases like Foxconn, the government is going to have to step up to take part in resolving problems by balancing the bargaining power of laborers and employers. It should ensure both sides have the right to negotiate for their own interests. And a final part of the solution will involve lower government taxes, leaving more money for enterprises and labor to resolve their differences peacefully.

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