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China Reflection

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**Part I: Preparation and Logistics**

China is a well industrialized nation so there are very few things that are *essential* to bring with you as you should be able to find everything once you are there. So the first key to packing for two weeks in China is not to worry or stress out about forgetting something. The way I approached it is to run through my daily routine and make note of all the toiletry items I would need to cover all the soap, shampoo, contact solution, etc. that I would need. After that came clothes. Pack enough underwear for a fresh pair every day for reasons that should be apparent. The weather is similar to Cincinnati so two pairs of jeans and two pairs of shorts (just in case something happened to one pair there would be a backup) were sufficient. A new t-shirt for everyday and a few long sleeve shirts with a jacket were plenty sufficient. Depending on how often you go out and how nice you want to look I would recommend a few collared shirts. Bring a tie to keep it classy during your presentation. There are ways to do laundry while in China but who wants to waste time doing that when you can go out and explore another country. Just make sure when you pack there is enough room in your luggage for souvenirs or three pairs of shoes on the way back.

Getting cash is fairly simple. There are ATMs all over the place just like in the United States. Some ATMs will work with foreign cards while others may not. The Bank of China and Construction Bank of China always seemed to do well while the Agricultural Bank didn’t seem to work. There will be some service charges and international conversion charges to withdraw so it is best to get money in larger chunks. That will be determined by your bank so you should ask them when you tell them you are travelling abroad (so they don’t cut your card off just for trying to use it in a foreign country). Think about how much you want to withdraw and add at least 50% to that. Once you get there are start going out at night you will run out of yuans faster than you thought you would. And always take the taxis that actually look like taxis and are marked as such. There are other cabs that are basically just people driving in their own car and offering the same services but they have no set rate and will always overcharge you.

Communication with America was not that difficult depending on how you wanted to do it. Most hotels have free wifi, even though it may be very slow. So email and face time and things like that will work. Facebook is blocked and finding VPNs or proxy servers can be a hassle so it is best to not worry about that. However, if you are like me you will completely forget to mention to your parents that you will be in China for two weeks and not even give a second thought to trying to contact them while there.

**Part II: Sustainability and Urban Development**

It is hard to image the challenges facing China without the firsthand experience of being there. The closest comparison I could give to Beijing would be to New York City but it is still on a whole different level. The city seems to stretch on forever, alternating between the new high rise office and residential structures spring up all over to accommodate their ever increasing urban population and ancient buildings and monuments under special protection from the government so they can never be disturbed by the rapid modernization. When there is no more room to expand upward, it expands outward adding more ring roads to try and keep the city in some semblance of connection. Everywhere also seems to be under construction. Whether it is a new set of high rise apartments offering a whopping 90m2 for what could be upwards of one million yuan, or the refurbishment of the Forbidden City, nothing in the city seemed to be finished. It looked like the city was trying to change its form and leaving a mess in the meantime.

So as expected, the country faces many challenges to developing sustainably. One of those challenges is energy consumption. China relies mostly on coal as its source of power. Even with giant, earth center of mass moving, projects like the Three Gorges Dam, China will remain a mostly coal powered nation for the foreseeable future. That is why it was good to see such an investment on trying to make as little an environmental impact as possible with the burning of coal. At Shandong University there was a substantial amount of research on new and emerging technologies in areas of electrostatic precipitators, denitrification, desulfurization, and other technologies that are already or hoped to be implemented in real world coal fired power plants in the near future. And exhaust gas scrubbers like those being researched for coal may also have applicability in other combustion areas such as cleaning the exhaust from burning trash as the landfills begin to reach capacity.

Another challenge to China’s sustainability is transportation. The country’s one billion people are constantly on the move both within the cities and between them. Although the road and highway system is continually being expanded it seems quite unsustainable to rely on personal automobiles as the main form of transportation, both for space and pollution concerns. However, there are several other options that China is utilizing. The Beijing subway system is the world’s second largest and helps relieve traffic congestion with its sprawling footprint, quick service, and low rates. Beijing also has an expansive network of buses running all throughout the city. The drawback to both of these methods of transportation, however, is overcrowding. At times it is either impossible or unnecessary to use the handrails as you are packed so closely together with the rest of the passengers that you are held up in place anyway. Another option being implemented in Jinan is the bus rapid transit system (BRT). Akin to a happy compromise between a subway and bus system, the BRT has dedicated lanes of traffic on the roads in which buses travel between stations. Buses do not have to worry about traffic and the city does not have to exert the effort to dig and build subway tunnels. Bikes and scooters were also in great supply everywhere we went. This is an even more sustainable option for transportation assuming you are brave enough to venture into oncoming traffic on your bike.

China is also making strides in reducing the energy consumption from its building sector. With the implementation of the Three Star Green Building Standards and further expansion of LEED standards, they can now offer incentives to strive for a lower carbon footprint. The SIEEB building at Tsinghua University is a good example of both how buildings in China can be green (waste heat and water recirculation, smart awnings to reflect more or less sun depending on the season, building designed with geographic location taken into account) and how international collaboration can aid in China’s future (it was built through a partnership with the Italians). A different approach to buildings was exemplified by the 798 art district in Beijing. Instead of new buildings, this area was created out of repurposed industrial buildings that had been abandoned by their former tenants.

The best part of the trip had to be the personal interactions we had with the Chinese students. Although it was good that we had time to do the typical tourist ventures with the Forbidden City, Great Wall, Temple of Heaven, etc., the time we spent outside of the schedule with the students allowed us to get a more intimate and exclusive look on how China really lives on a day to day basis. Whether it was going out for a karaoke night or just wandering the streets in Jinan and trying to take it all in, these are memories that are going to stick with me forever. And when it comes to sustainability that is where it all has to start. The government can lay out regulations and companies and universities can do research on green technologies but it comes down to the people finding ways to live more sustainably every day. In order to understand the challenges China faces as a country, you have to understand the challenges and choices people are facing every day and how we can make sustainability even easier for them.