

SIYSS09 Report

By Chen Fang Yew Nicholas

3rd Dec 2009

After a torturous 13 hour flight from Singapore to Amsterdam, and another 2 hour flight to Stockholm, I immediately realized two things: I went alone on the trip, and the temperature was very cold. This is the first time I am travelling without supervision, and my parents were worried when they knew I had to do so. I stepped outside for the fun of it, and felt as if my hands were run through ice cold water within a few seconds. It was 4 degrees Celsius.

As I was one of the early arrival participants, I had to meet the committee at the Stockholm Central Station instead of the airport. This meant that I had to take the train alone, and thankfully it was simple to buy a ticket and find the train. I was rushing as I had 10 minutes to the next train, and I didn't want to wait for the one after that.

Andreas, one of the coordinators, welcomed me to Stockholm and we went by bus to the youth hostel, the *af Chapman*. This youth hostel is not one of convention: One part of it was an ordinary building, while the other part was a boat. Unlike the previous years' participants who stayed in the main building, we were staying in the boat and it was really amazing to see how the rooms were.



The af Chapman boat where we stayed in

After unpacking, the rest of the day was free and easy as the other participants will be arriving when I sleep, and mostly on the next day. I was being adventurous and explored a small part of the town. I made it an aim to find the nearest McDonalds since it is available everywhere throughout the world.

Within half an hour, I found the nearest McDonalds and tried the burgers there. Apparently they taste the same throughout the world as well! Max, the Swedish answer to McDonalds, was just opposite and I felt that I had to try that as well. My exploration was cut short when I realized it was getting dark at 3pm. I did not expect this as Singapore gets dark at around 6pm, and I rushed my way back to the hostel. One interesting thing I noted, Stockholm is a place with no Starbucks.

4th Dec 2009

Today was the 'official' first day. The first half of the day was meant for the arrival of participants, and thus there was nothing much to do other than touring the city. One of the coordinators, Sarah, offered to bring some of us around town. The most interesting amongst the things we saw was the *Vasa* in a museum. The *Vasa* was a warship which sank during her maiden voyage, and was restored with 95% of the original ship intact. It was a really huge ship and we got to see various things like the very large anchor used, and the weapons used during that point in time when the ship sank.



The majestic Vasa, restored from 95% of the original ship.

In the afternoon when most of the participants had arrived, we got together and chatted, and played a trivia quiz game where we formed groups and went around the ship to answer questions. Followed by that was the icebreaker game. We had to memorize everyone's name, country and even subjects of interest. I am glad that there are quite a few people with interest in Physics. We ended off with a dinner consisting of lasagna and vegetables, and proceeded to our own rooms. I was rooming with 3 others: Aron, from Hungary who majors in mechanical engineering, Jacob, from Denmark who is still applying to university and lastly Dongyoung, from South Korea who majors in computer science.

5th Dec 2009

The day began with a tour around Stockholm city. We were in a bus which drove around the city, while a tour guide was explaining the sights we were seeing. Some of the highlights were important locations such as the King's residence, the old town and the Nobel Museum. In the Nobel Museum we were given a talk by the chair of the Nobel foundation on the story of Alfred Nobel and why he had set up the prizes. We learnt many interesting facts during the museum trip. For example, the actual value of the Nobel Prize dipped twice, once during the First World War and another during the great depression. Some factors that increased the value of the Nobel Prize include tax exemption from the Swedish government, and the usage of the funds in investments. During the Second World War, the Nobel Prize was awarded to Germans; however Hitler did not allow the Germans to accept it. As such the awards were dissolved in strong acid, and the gold precipitated years after the war. We ate lunch in a nice restaurant, which consisted of fried potatoes and chicken.



Lunch consisting of fried potatoes and chicken.

After lunch, the guys headed off to rent their tails, the formal attire to be worn during the Nobel Dinner and celebrations. I was excited to see the tails for the first time, and I was thankful I got the chance to wear them once. Hopefully, I will be able to wear them again someday. The rental was not cheap though: It costs 1100 SEK, which is about 220 SGD just to wear nice clothes only once. Time was also given to us to prepare our presentations, which was very important as we will be giving our presentations on Monday.

We spent the rest of the day with a wonderful Swedish evening planned for us. Consisting of four activities and a dinner, the Swedish evening is a time where we do things Swedish, and eat things

Swedish. First up was learning a Swedish dance which was meant to be performed around a Swedish Christmas tree. The Swedish Christmas tree is different from the Christmas tree we know: It is made of two logs put together in the shape of a cross, and has two rings hanging from both ends of the cross. It is unfortunate we did not get to dance around an actual Swedish Christmas tree. Next was making 'exploding sweets': Despite the name, it is actually made of sweets in a toilet roll, and wrapped with paper and decorations. It is a Swedish tradition to hang these on (the regular) Christmas trees. The third activity was egg painting, a tradition of the Swedish during Easter. Last but not least was making gingerbread man, and I had a rather hard time getting the gingerbread man I made out of the table, because I didn't use enough flour. This was a rather good baking lesson for me.

Dinner consisted of a 4 course meal: The appetizer consisted of bread with a paste made of crayfish and shrimps. As I am not really a seafood fan, I had a hard time eating that. Next was eating an actual crayfish. In Sweden they have crayfish parties where Swedish would eat lots of crayfish, and the coordinators told me they normally eat twenty in one go! It is quite hard to obtain the meat from the crayfish and I had an exceptionally hard time. The delicious meat however was worth my effort. The meat portion is rather small, about the size of your index finger. The main course was a sumptuous meatloaf with potatoes. The Swedish eat it with a special jam, and I must say I love it a lot. Raspberry flavored custard-like thing was desert: Even the coordinators did not know what they call it in English, but it was sure sweet.

The final activity for the night was of importance: We learnt how to do a simple Waltz so that we would at least blend in during the Nobel Night Cap. The Night Cap is a very grand party after the Nobel Dinner, where the Nobel Laureates will dance. Initially it was rather difficult for me, but somehow talking to my partner really helps: Dancing actually became a subconscious thing for me and my partner when we talked to each other. After lots of ramming into other couples while dancing, and stepping on other's toes, we headed back to the *af Chapman*.

6th Dec 2009

Today was an exciting day. In the morning we rushed off to Karolinska Institutet, the institute in charge of the Nobel Prize in Physiology or Medicine. The first item in the schedule were lectures by professors of the institute on "The Origin of Cancer" and "History of DNA and Genome Biology of Today" to give us a premier to Biology needed to understand the work of this year's Nobel Laureates in Physiology or Medicine, as we were going to their press conference later in the afternoon. I was rather glad that this year's discovery was rather simple: I have learnt it in my school, and those taking A level Biology should know would be able to appreciate the Nobel Laureate's work.

I was fortunate to be eating lunch in the same table as the head of the Nobel Committee for Physiology or Medicine. We discussed matters such as the selection process of the Nobel Prize and how the Nobel funds were managed. After lunch, the head of the committee gave us an official lecture about the Nobel Prize, covering topics such as the Alfred Nobel's life, how the prizes began and why the Nobel Prizes became so prestigious. The most rewarding part was the Q&A session, as many burning questions were

raised, and I believe it really goes to show that the participants of SIYSS are no ordinary people- they are very inquisitive and analytical.

The inquisitive nature of the participants of SIYSS was further manifested in the multiple thought provoking questions asked during the press conference, and I must say we actually diverted control away from the press to us. There was somehow a distinction between the sophistication of our questions and those of the press. After the press conference, we went back to the *af Chapman* to prepare for our big day tomorrow- the seminar.



Nobel Laureates in Physiology or Medicine 2009 in a press conference.

7th Dec 2009

In the early hours of the morning we rushed off to the City Conference Center for the Seminar, where we each presented our projects in five minutes to an audience of 16 year old Swedish high school students. The quality of the projects presented was beyond that of Singapore Science and Engineering Fair; one notable project was done by Carl, who did the Physics behind medieval trebuchets and found that his optimal solution is twice as better than the ones used in medieval times.

“Allow me to introduce you to micromagnetics with a problem...” as I begun my presentation. I was glad that my project was highly understandable to everyone, and I managed to use a globe to aid in my presentation



The emcees introducing the participants to the seminar

After a dinner consisting of delicious Swedish meatballs, we headed towards the building which housed the Nobel Museum to attend the Nobel Lecture in Literature by Herta Müller entitled “Every word knows of a vicious cycle”. Though the lecture was in German, an English translation was handed out to all of us. The lecture was the story of her during the days of Nazi Germany, and how the simple phrase “Do you have a handkerchief” was related to human nature and paradoxes.

8th Dec 2009

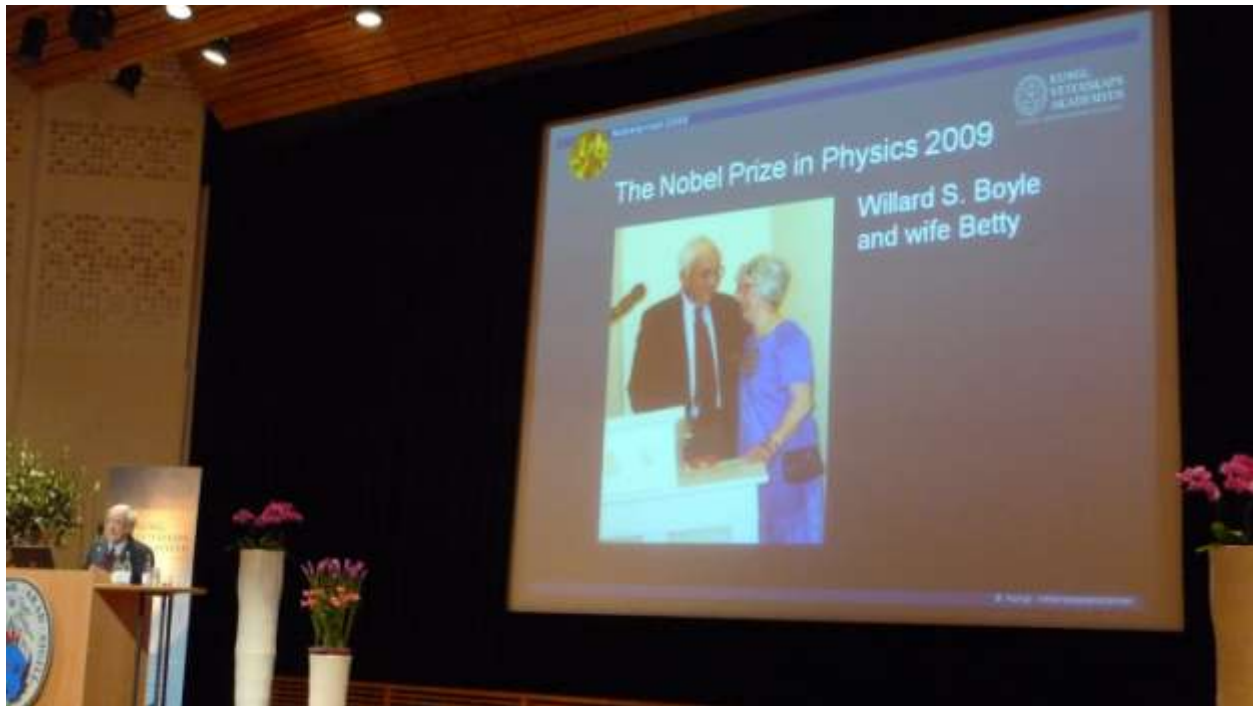
Today was a day where I had gained a deeper insight into research. Early in the morning we headed to Stockholm University to attend the Nobel Lectures in Physics, Chemistry and Economics. We were given an energy drink so that we do not fall asleep during the lectures. I was impressed when I saw that the seats after the “Reserved for relatives” were reserved for us, and it was relatively close to the stage (third and fourth row).

The first Nobel Lecture was given by Charles Kao’s wife, entitled “Sand from centuries past, send future voices fast”. His wife gave the lecture as he had Alzheimer’s, and was unable to present. Mrs. Kao recalled that when Charles Kao mentioned he had made an important discovery, she said in sarcasm “Oh, and you’re going to win the Nobel Prize?” I was really looking forward to this lecture on the story of our fiber optic network, because it is so important in my life: I shop, work and learn via the internet.

The Nobel Prize in Chemistry was awarded for the studies of the structure and function of the ribosome. The ribosome is a key element in converting data encoded in nucleic acids into actual proteins. Every student of Biology should know the function of a ribosome. The lectures were rather technical but I

understood some of them. Two out of the three Nobel Laureates prepared an animation about how the ribosome worked, and it cracked us up as funny music (such as those from Star Wars) played.

The last two Nobel Lectures were for the Prize in Economic Sciences. In my opinion they were too technical for the layman, and sometimes I felt that the powerpoint slides could be better. I tried to grasp as much as I could, and what I can say is their work dealt with lots of case studies spanning years, which I applauded their effort for.



Williard S. Boyle giving his Nobel Lecture

The night ended with a sumptuous buffet of different meats and vegetables, and I get to eat meat from different parts of an animal and even moose meat! We had the "International Evening" during the dinner, and we presented the various countries which we come from. One of the more interesting things prepared was by the USA, who taught us the steps of a very simple dance of a certain song, so that we know what to do the next time we hear that song play in a disco.

9th Dec 2009

Our morning began with an Ethics seminar, where we discussed various ethical issues like "Is it ethical to create life to save another?" and "How much privacy should we sacrifice for security". Despite the late hours we slept the previous night due to the International Evening, everyone was awake and actively participating in the seminar. Some of us felt that it was even more interesting than the Nobel lectures!

In the afternoon we went to the Nobel Foundation Reception at the Nordiska Museum. It is certainly a great honor to be invited to the reception: The reception is so private (slightly over a hundred guests as compared to around 1500 for the Nobel Banquet) that it is normally not listed as part of the Nobel Week.

Nobel Laureates, relatives of the laureates and people of high status were present, and we all had a great discussion with the laureates while eating snacks and sipping orange juice. After the reception we had a hotdogs for dinner, and collected our tails—A reminder that the exciting Nobel Banquet is tomorrow, and also a reminder that the program is coming to an end soon.

10th Dec 2009

The big day has arrived: In the morning we guys were learning how to put on a tail, which is rather difficult because of all the buttons here and there. We took a group photo, with the girls in their dresses, and left for the Stockholm Concert Hall in limousines. It was certainly an interesting opening for the grand events that are about to unfold.



Being driven in a limousine sure is a privilege!

The award ceremony was a solemn occasion. Speeches would be read out by the respective committees, and followed by that the King would hand the award to the laureates. We had to maintain silence throughout the ceremony, and rise to applaud for every Nobel Laureate.

We then took the bus to the Nobel Banquet. Unfortunately for us, this year we could not eat in the main area at the Stockholm City Hall because there were too many people in the banquet. The Nobel Foundation was kind enough to place us in a room below the actual hall, and we were served exactly the same food with the same cutlery, with a live broadcast of the happenings in the hall. It turned out to be a blessing in disguise: In the actual banquet, strictly no photography is allowed. However we are allowed to photograph in the room that we were in. Also, in the live broadcast, we were rather shocked to find out that it is like a sports programme: there were commentators commenting on how the royalty dress, and how the people eat. Sometimes the camera zooms into the people displaying non-proper behavior

such as sleeping and texting! We felt lucky we didn't have to be put under such scrutiny, and probably embarrassment if we were not eating with proper manners.

As the dinner concluded, we paired up and walked upstairs towards an area where we could dance. My partner and I started doing the Waltz, dancing to the music and having a lot of fun. Familiar songs such as "Sway" and "Dancing Queen" played, making it easy for us to dance to. However when music of different tempo played, I blended in by dancing just like how the others dance. After an hour of dancing and switching partners over seven times, most of us were exhausted and we headed towards Karolinska Institutet for the Nobel Night Cap.

We were all amazed how an institute was transformed into a party area with lots of food and disco, all managed by the students. The theme for this year is "The Body" and each room had something to do with the body. For example, there was a white room representing the bone which served white chocolate; there was a room representing the stomach with waiters dressed as butterflies ("butterflies in the stomach").

I left the night cap at around 3am, and realized everything was about to come to an end. I received name cards from some participants, and saw them off one by one. I was the second last to leave, so I was able to see most of them off. During the partings we always reminded each other to keep in touch, and wished each other success in our fields. As all good things have to come to an end, I took my luggage, loaded it on the cab, and as the cab drove off, I waved back to the coordinators to thank them once again for making SIYSS09 such a huge success.

The friendships forged, experience gained, and knowledge acquired through SIYSS09 can never be replicated. No other event allows the best few of each country to come together, and participate in exclusive events such as the Nobel Reception, Nobel Prize Ceremony and Nobel Banquet. I sincerely thank World Scientific Publishing Company, the Imperial College Alumni Association of Singapore and the Ministry of Education for making all of these possible, and giving me the opportunity to an experience of a lifetime!