

## The World of Albert: Shocked

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Last week I went to an annual conference which I like a lot. I have started to attend this conference each year after my first year as a Ph.D. student. From the beginning I liked it a lot. At first I had to get used to the amount of attendees. The number of participants is usually much higher than the number of inhabitants in the village I was raised in. The reason why I like this conference is not only grounded on the fact that there are many interesting and valuable oral and poster presentations, but also because one can make new contacts. A couple of times I came home from this conference with having made a couple of new friends with whom I stay in contact since then. We do not only talk about our research, but often also about private issues. This was also the case last year.

At lunch when I was waiting for my burger at a fast food place I started to talk to two guys who turned out to be also Ph.D. students as I. I immediately liked these two fellows. They were easy to talk to. They came from the same research group and had been working together for quite some time. They have been good friends since their early days of their studies. We did not work in the same area of research, but we immediately decided that we should go out for dinner the same evening. As decided we did. It was a pleasant evening and we enjoyed our company while having delicious food and refreshing drinks. The other days we often met for breakfast since it turned out that we stayed in the same hotel. Sometimes we also had lunch or dinner together. After the conference we departed from each other, but we used to write emails to each other from time to time.

After a few months we agreed on that we should meet again at the same conference. We arranged to stay in the same hotel. I was supposed to arrive earlier than my two friends. We had decided to go out for dinner and having some drinks in a bar after that in our last emails. After I had settled in my room and had taken a shower I went into the lobby to wait for my two friends since they were scheduled to arrive only a few minutes later after I had finished my shower. I waited reading in a novel of a young and talented author I had just recently discovered. I got totally absorbed by the story. At some point I was interrupted by someone asking: "Hello, how are you doing, Albert?". I immediately recognized the voice of Michael one of my two friends, moved my eyes away from the letters in the book and stood up. We hugged and welcomed each other warmly. It was so nice to meet and to chat with him again. After we had talked a bit I asked when I can meet, Tom, my other friend. I was surprised about my friends answer.

He said that I will not be able to exchange thoughts with him since he is not here and that he will not come and attend the conference. I was very surprised and of course I immediately asked why it was like this. He had not mentioned anything like this in any of his emails. From his emails it was obvious that he will come. Ok, we had not written to each other for two weeks, but still. Michael explained me that he will tell about the situation later. I started to be worried that he might be sick, that he might have had an accident or that something bad happened in his family. I became nervous and wanted to know what happened. Michael, however, insisted on telling me later during dinner. I had to wait, no way around this even though in the insight I was burning to know what happened. Later while we were eating our dinner together Michael let me know about everything. I expected to hear another story, but in the end I was shocked.

I have never thought that somebody I personally know does something like this. There have been cases like this before, which have been worse, but still. One has probably heard about a former German researcher at the Bell Labs, Jan Hendrik Schön, or of the Korean stem cell researcher Hwang Woo-Suk. Both became famous first of their research results and later because it turned out that they faked major parts of their data. The latter one was already a re-known professor

at the University of Seoul. Prior to the finding of their incorrect behavior both were able to convince the scientific community about the quality of their work by publishing in the prestigious journals Nature and Science over years. Jan Hendrik Schön was even thought to receive the Nobel Prize in the near future. All this before it was found out that they cheated on the science community and therewith on our society. I have never thought that a friend of mine would betray, but he did. Yes, Michael told me during dinner that Tom does not participate, because he is expelled from all research activities and that he probably will lose his Ph.D. position.

One found out that he did not acquire his data in a proper way. He changed experimental results in a favorable way and he also created graphs using mathematical functions. One still needs to investigate the case in more detail before final decisions will be made, but at the moment all evidence is against him. They became aware of it by chance around a week ago. Michael confirmed that also he was shocked when his professor told him and the other group members about Tom's betrayal the first time about a week before the conference. His professor discovered it when he wanted to ask Tom something about the poster presentation he wanted to show at the conference. Tom was not at his desk for a short moment when his professor entered the office and could have a look onto Tom's computer screen. He immediately realized what the content found meant. Tom was just producing a graph representing a measurement using a mathematical program. There was no doubt about Tom's method left. Of course his professor asked Tom immediately into his office and took him to task. At first he tried to find excuses, but at the end he started to admit his attempt to cheat. From this time Tom was asked to take free, before the whole case has been investigated in detail. This then also meant that he was not allowed to come to the conference. When I heard all this I started to be very upset and still I am. I was and I am shocked.

Even though I had not been eating much the whole day I did not feel hungry any more. Swallowing what Michael told me was more than I could bare. Michael knows Tom for a long time and so he also explained me more since one of the last days Michael talked to Tom. When they talked Tom explained why he started to fake his data about a year ago. He was afraid to fail. His experiments did not give the results as they were originally expected from his professor and himself. It basically did not work and he started to doubt that it will ever work. At this time he also felt a big pressure from his professor and so he started to believe that the only possibility for him was to help a bit. He thought that he anyways did not have the ambition to stay in science and what should it matter for him to change some of the results. He only wanted to get enough data to write his thesis, to receive his Ph.D. and to work in a company. Now he has to pay the bill. He did not behave properly as everybody will admit at once and at the end it is him who has to pay the bill. In the end he will not earn his Ph.D. degree. On the one side I can understand his reaction a little bit, but I cannot justify and agree on it. Doing science means entering paths no one has entered before and so the outcome is not clear and often one goes home frustrated. If things do not work out as they were one starts to question oneself. If then there is also a lot of pressure from ones' professor who repeats that things should work one might become insecure. It is frustrating, but one has to stay true and honest. Not only obtaining gorgeous results lead to increasing knowledge, but also bad results teach us something. The quality of one's Ph.D. research cannot always be measured in the amount of publications one gets out, but also on factors of how carefully one has performed experiments, which problems were encountered throughout the Ph.D., which strategies did the student apply to solve the problems and so on. He felt pressured to produce results. Important is, however, to be able to look up and to say that that what one has produced is honest work. Now he has lost everything.

Michael and I continued to discuss the whole issue for a long time and we also considered that in science often betrayal is not as obvious as in this case. It is a bad example and I hope that I will never ever again get into the situation to know that one of my friends or colleagues has faked his data. I am still shocked.