

Sweden and Me



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■ 2008-2009 ISI Language School in Tokyo, 2009-2012 Bachelor of Science in Product Design and Realization at The Royal Institute of Technology in Sweden, 2012 Bachelor Thesis and Summer Internship at Atlas Copco in Sweden, 2012-2014 Current education: Master of Science in Production Engineering, 2013-2014 Exchange Studies at Tokyo Institute of Technology, Saito-Tanaka lab in Mechanical and Control Engineering.

■ Research Field

- Automatic Feature Recognition
- A General Classification of Machining Features

■ Attending-School

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Fig.1 Stockholm

1 Introduction to Sweden and Me

The home of the Nobel prize and IKEA. The country of ABBA, northern lights, vast forests and beautiful waters. Whatever you know about Sweden, maybe something sounds familiar? The Swedish Alfred Nobel who invented dynamite thought that the mere knowledge of how its power could annihilate entire armies would make people refrain from using it. Other Swedish inventions include tetra pak, the 100-point thermometer scale Celsius, the implementable pacemaker, the safety match, the self-aligning ball bearing and the zipper^{#1}.

My name is Anna Hägg (アンナ・ヘッグ). I was born in the northern part of Sweden and moved to Stockholm (Fig.1) to enrol in a master of engineering program in

product development. In 2008, I went to Japan and stayed here for a year studying Japanese. I always wanted to return, and so now I am here as an exchange student at Tokyo Institute of Technology. I hope that in some way by being here, I might contribute to bringing Japan and Sweden closer together, and spread some knowledge of my home country. I will try to tell you about some of the things I find valuable to know, and I hope it might inspire you to get to know Sweden better (Table 1).

2 General Facts

The area of Sweden is actually about 20% larger than that of Japan's, but the population is a mere 9.5 million compared to Japan's 127-something millions. The uninhabited areas consist mostly of deciduous forest in the south and coniferous forest and mountain areas in the north. The main language is of course Swedish, but most people are fluent in English. This is not only because we study

^{#1)} The Local — Swedens News in English,
<http://www.thelocal.se/15578/> (retrieved 2013-10-29)

Table 1 Five Must-do's during a visit in Sweden:

Visit Stockholm and the archipelago (Fig. 1)
See the northern lights
Try a nice Swedish Christmas buffet (julbord) or a smorgasbord (smorgasbord) (Fig. 2)
Drink snaps (a flavoursome, strong alcoholic beverage)
Hiking, swimming in a lake (Fig. 3), biking - enjoy Swedish nature in some way.



Fig.2 Gravad Lax



Fig.4 A Winter Scene



Fig.5 Student Event



Fig.3 Swimming in Lake

English since third grade, but also because a lot of TV-time is made up of foreign programs, series and movies in English with subtitles. Many people read books, as well as play computer- and video games in English. Sweden has not taken main part in a war since around 1814, and has been able to develop quite well in peace ever since. We have a developed welfare system to take care of most inhabitants, which seems to be well-known around the world despite its flaws.

3 People and Social Conventions

This land of peace has attracted people from many other countries, and in 2012, 15% of the inhabitants were born abroad. School and university in Sweden are free of charge and open to all Swedish citizens. It is believed that knowledge and education should be available to any person. As a woman I am also able to say it has become relatively equal where gender matters less than the individual, and many career opportunities exist. International companies have seen the advantages and try to attract more women to leading positions.

When it comes to social conventions, we do not particularly care for hierarchies. In general, there is no polite portion of the Swedish language still in use ; we simply try to be respectful to everyone, treating each other as equals, using similar words. Of

course you cannot completely escape disrespectful people no matter where you are in the world, but talking in general terms this is true. No matter if you are talking to your teacher, your boss or your friend, you address them by first name and keep a general polite tone of voice.

Now I'm sure your thinking: "That all sounds nice... But isn't it really cold?"

4 Weather

You are actually quite right. It is a cold country during the long winter period (sometime between November-March) , usually covered in snow (Fig. 4) . In the first period of winter, it can be tiresome to wake up early in the morning and find that it is pitch-black outside with no sunshine. Since it becomes dark in the afternoon again, you have the same experience when returning home from work or school. Once February-March and spring closes in though, it becomes almost painfully bright with the sun shining down on the crystal white snow. During summer it is a very bright and medium warm country. Even late at night it is still bright outside and easy to forget about sleeping time.

5 Student Life in Sweden

Student life for a person studying technical sciences in Sweden is very hectic. We have a lot of classes, especially during the first couple of years. The first years of algebra and geometry, variable analysis, differential equations, solid mechanics, numerical analysis, electronics and everything else was demanding, and many failed first-time exams. Luckily you may take as many re-exams as you need. It is relatively easy to get in to the university programs ; you only need

grades from high school that are good enough to be eligible. It is more difficult to actually pass the courses and graduate. The first period as a newcomer, a first year student, is very exciting. The older students form groups for this welcoming period and prepare huge dinner parties, competitions, tours around campus and Stockholm and various events for the new students (Fig. 5). All faculties have their own costumes and role-playing groups to scare, fascinate, teach and befriend all new students, known as "nollan" (in English "the zer0").

6 My Studies

I went through all of this and am now a master student in my last year. After a bachelor in product development from the mechanical engineering department at The Royal Institute of Technology in Stockholm, my master focus is on production engineering. During the last year I finished courses in CAD, CAM, Product data management, production planning and other related subjects. At Tokyo Institute of Technology I am an exchange student for 6 months, mostly taking courses and doing a smaller research project. The research project has just started, but is going to focus on classifying general machining features for future research in feature recognition ; trying to create a clear, general connection between automatic feature recognition from CAD models and the actual process planning of machining. After these six months, I have been offered to do my master thesis at Atlas Copco in Yokohama, originally a Swedish company which in this particular factory develops and assembles equipment for surface drilling. I am enjoying my life here in Japan and looking forward to a hectic year with plenty of new knowledge to acquire.