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EDITORIAL

The word controversy originates from the Latin word “controversia”, whereas “contra” can be translated as against, and “vertere” (or versus) to turn. Consequently is the mythological meaning of controversy “to turn against”. For those of us that are interested in what happens when technology and society meet, controversies often get significant attention. The thing about controversies is that they show clearly the dynamic interactions between different social groups. It displays that scientific facts, cannot be directly transformed to technical solutions in society. The social and technological uncertainties of controversies lead to a situation where a dispute no longer can be resolved on the sole basis of scientific results.

At a first glance it could probably be hard to identify a recurring theme in the articles in this issue of Teknovatøren, but the first part of this editorial and the cover should provide the reader with some clues. This issue goes into the broad term of controversies, and there is a wide span between the different subjects. The objective is to show the diversity of science and innovation studies, as well as how essential it is to analyze controversies in society.

In Norway, right now, this is pertinent.



- Erlend Osland Simensen

The Controversy on Anders Behring Breivik's Mental Health

The question of jail or forced psychiatric care for Anders Behring Breivik has created disturbance in the Norwegian judicial system in a way that has brought some typical TIK-issues in the forefront.

The Controversy on Anders Behring Breivik's Delusions

What should the role of scientific expertise in court be? Should the court be ruled by its own laws or should it be ruled by scientific expertise? Three of the most relevant processes for us to study in this context are the following: 1) how conflicting views have contributed to the opening of the discussion on the role of forensic expertise in the judicial system, 2) how different groups of actors inside and outside the psychiatric profession have contributed with important knowledge to undermine the scientific results from the first court-appointed experts, and 3) how these processes may

have contributed to more reliable and reflexive points of view among the experts, and in the public discussion. The last point is of special importance since one aim of studying public intervention in science-based controversies is to build a more reliable science anchored in a more explicit normative and reflexive discourse.

Conflicting Expertise

Following his arrest on 22 July 2011, Breivik underwent examination by two court-appointed forensic psychiatrists who diagnosed him with paranoid schizophrenia. According to the report he was in a psychotic state during the attacks and also during the 13 interviews the two experts held with him. Mental health declarations made by court-appointed psychiatrist are routinely accepted by the judiciary, and this report was approved by the Norwegian Board of Forensic Medicine with no significant remarks. If upheld

in court, the diagnosis means that he cannot be sentenced to prison but will be detained in psychiatric care. This was difficult for the public to accept. "I am so angry I could weep," wrote one woman on a Facebook site. "A man who can plan his misdeed in such detail and carry it out in cold blood is answerable for what he has done."

Under normal circumstances, the 243 pages expert report filled with technicalities and complicated vocabulary would not have been questioned by the public. In this case, however, the report was leaked to the media and well informed journalists started to question not only the conclusion and the conduct of the two experts but even the scientific knowledge and methodology it was based on. After a while most of the report, withholding minor personal details was known to the public. What followed was that actors inside and outside the psychiatrist discipline intervened in the debate with the



Illustration:
Veronika Hansen

result that the legal system and the use of expertise which it is based on, was put under tremendous pressure.

Public Pressure

Despite the fiercely articulated critic of the report, prosecutor Svein Holden concluded in a letter to the court that he would not seek another evaluation. When public prosecutor as well as Breivik's

defense attorney, Geir Lippestad, declared their agreement with the report, many observers no longer believe the situation could change. However, after much public pressure, the Oslo district court gave up its resistance and ordered a second expert panel to evaluate Breivik's mental condition and to deliver a report before the trial started on April 16. The second report, submitted to the

district court in Oslo less than a week before the trial, contradicted the first. It concluded that Breivik was not psychotic when he carried out the attacks or afterwards, and that he was not suffering from paranoid schizophrenia. The new report gives the judges grounds to sentence him to prison, but before that, the court must determine whether he was sane or psychotic at the time, based on two contra-



“One of the weakest points in the first report was the lack of documentation on Breivik’s “bizarre delusions” in a clinical sense”

dicting reports and four expert witnesses.

**New Actors -
Alternative Knowledge**

Many mental health experts expressed surprise that Breivik was found to be paranoid schizophrenic without any evidence of hallucinations or other uncontrolled impulses. During a few weeks, the Norwegian population was educated in symptoms for this diagnosis. Even technicalities like the criteria in ICD-10 and DSM IV, and the working of the GAF score became household knowledge. With hallucinations lacking, the documentation of delusions became most important and words like “bizarre” and “grandiose” crept into the Norwegian language. However, the lack of diagnostic precision and cultural contextualization of the concept “delusion” became obvious and the case suggests strong limits to psychiatry in dealing with political crime.

According to one definition “a delusion” is a belief held with strong conviction despite superior evidence to the contrary, and that this conviction is so fixed that it is pathological (the result of an illness or illness process). As pathological, it is distinct from a belief based on false or incomplete information, dogma, poor memory, illusion, or other effects of perception. How to make this important distinction? In this case, the critic of the report’s failure to address Breivik’s online activity

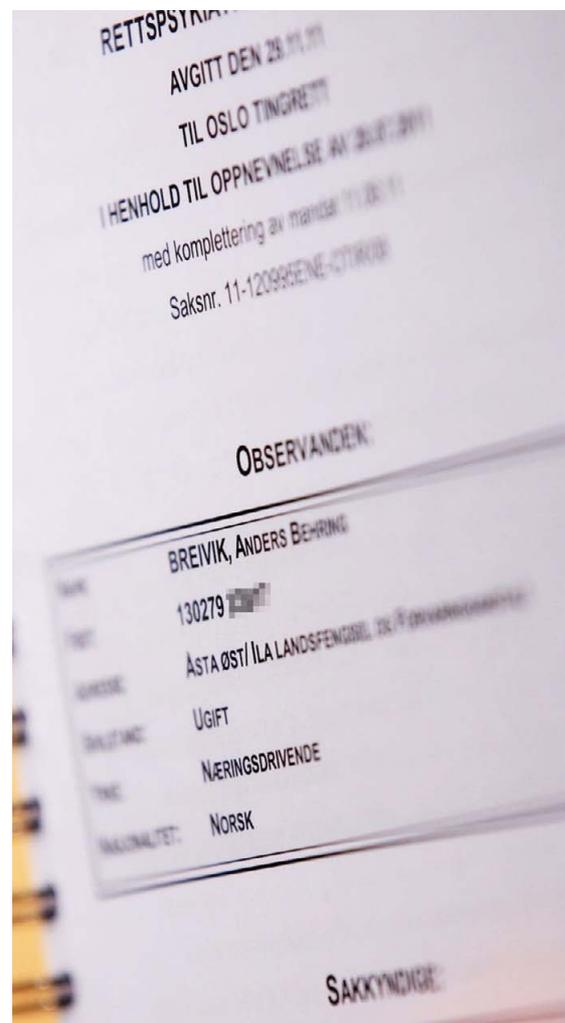
became of special importance. When the report for instance argues for the diagnosis by characterizing many of the concepts in his Manifesto as “neologism” (a criteria for the diagnosis) which are made-up words that typically have only meaning to the individual who uses them, people with online activity experience argued that these words were in frequent use.

It was important that the declaration by the first court-appointed psychiatrists was challenged by colleagues within the discipline and also by other mental health experts like psychologists. In addition, victims, and lawyers representing the victims, reported that Breivik had acted in a very controlled and strategic manner on the crime scene. However, comments from people with knowledge on Breivik’s online activities and his political universe seem to have been of special importance in the process of opening the controversy because they contributed with important information that was unknown to the first court-appointed psychiatrists. Journalist and others contributed in newspapers and on the Internet with experience and knowledge on different topics with relevance for the political universe and for the technical preparation of the criminal act.

**Quick Learning -
More Reflexive Points of View**

One of the weakest points in

the first report was the lack of documentation on Breivik’s “bizarre delusions” in a clinical sense. Many of the thoughts described as “bizarre delusions” did not fulfill the criteria according to other psychiatric experts because even if they were strange, they were fully possible. This is also the point which has the closest connection to Breivik’s political



1st Psychiatric Report

universe. Was the claim that we live in a condition of civil war, or the role he assigned for himself in world-history, exalted enough to fulfill the requirements of “delusion” in a clinical sense? Were there other signs of paranoia that had nothing to do with politics? The first report confirmed that this was the case while the second report denied it.

The second expert report is drawing on insight from the public discussion to an extent

2nd Report not Accepted

At the end of the 6th day of the trial, the court leader read before the court the statement from The Norwegian Board of Forensic Medicine on the second psychiatric report. Surprisingly, this report which has been much praised in media, was not accepted without clarifications and additional information from the responsible two experts. Probably, this is another example of quick learning in this case. After the first report had

to present himself as a rational political thinker and leader, and not to be declared insane. On his testimony which took the first six days of the trial, he confessed the crimes and described his killing of 77 people as a “sophisticated political act”. With the guilt established, the most important issue is how to handle the still open controversy on his mental health. As often underlined by journalists and expert-commentators following the trial, this is the reason why the prosecutors are focusing so heavily on questions concerning Breivik’s thoughts and feelings when he made his decisions to murder on the crime scenes and in the planning. One typical example was when Breivik told the court about his first killing at the youth camp that “I have never experienced anything so gruesome, but it was necessary”.

To gain insight into his thoughts and feelings connected to this claim, the prosecutors asked in many different ways about why he felt it necessary. The reason for this is to shed light on all aspects that can explain his actions to the court. In this context the controversy on the character of his “delusions” are of uttermost importance.

“The second expert report is drawing on insight from the public discussion to an extent which makes this sad case to an interesting example of a scientific based controversy”

which makes this sad case to an interesting example of a scientific based controversy. While the first report has the character of doing “in-talk” to the profession, the second report is doing “out-talk” to the public, in general but also on more technical matters. From this we can conclude that one result of this terrible and very sad story have been a quick learning-process with the result of better informed and more open minded experts, and a more knowledge based public discussion on the role of expertise in the Norwegian court-system. There are also signals from the Ministry of Justice that the role of forensic psychiatrists in court cases will be re-examined.

passed without critical remarks, The Board was described in the press as a typical rubber stamp institution. At the same time one of the critical point from some members of The Board was that the second appointed experts had not considered to what extent Breivik had changed his behavior as result of a deliberate strategy, based on his reading of the first report. This is particularly interesting in our context of analyzing this as a knowledge-producing controversy,.

After showing up in court, Breivik has been described by many commentators as a quick learner who is incorporating media reactions from one day to the other. His main concern is



Wine will Save the World Economy!

Christian Guttormsen
TIK MA Student
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Photos: Wikimedia Commons

Politicians are investing lots of money into the high-tech sector, praising it as the economy's lord and saviour. I would rather see them calm down, have a glass of high-end Bordeaux and re-evaluate their allocations.

During the last decades, politicians have been using the term knowledge economy. I don't really know what it means, but it is most commonly used to describe an economy driven by knowledge production along with the development of new technology. The logic goes: if we stimulate knowledge and technology production we get innovation, innovation results in increased competitiveness, which results in a stronger economy and a growing economy keeps us in office. The thought isn't really that dumb, but they missed out on a few crucial points.

In the 80s the OECD classified industries as low, medium or high-tech, based on the content

of technology in the respective industry. The content of technology is measured as the ratio between the expenditure on research and development (R&D) and production output. So if your company's ratio is above 5 per cent, you're high-tech.

As we all know, most people like things that are measurable. It gives us a sense of calmness, and if we screw up we can always blame it on the numbers: "Shit! This is so unlikely!" – nevertheless it happened. Politicians love hanging on to what statistics they have, and therefore uncritically use the OECD classification as an argument to allocate their country's resources in high-tech industries.

This is a less fortunate trend. The fact is that there is substantial innovation going on in low-tech industries that tends to be neglected. Industries have managed to stay competitive for hundreds of years without engaging in substantial R&D activities.

Innovation in such industries can rarely be measured through R&D at all, as this is not their internal base of knowledge and learning.

The Case of the Bordeaux Wine Industry

The high-end wine industry of Bordeaux has maintained the position as a market leader in fine wines for the past 400 years. The basics of their production are to process grapes into wine. Pretty straight forward really. They don't engage in much research, and certainly don't produce sophisticated technology! But that's the point – they don't have to.

The industry is supported by a strong and complex regional network of actors – a cluster – where the region's accumulated knowledge is structured and made available for the industry through coordinating institutions, people and various forms of collaboration. The government has laid down institutional infrastructure that today is very developed.

This helps the industry to access all knowledge in the region – also those knowledge bases originating from outside the industry.

The producers are frequent purchasers of advanced technology that helps them make wine in the best possible way. Some use GPS sensors to measure water content in the soil. Others fly over their vineyards with choppers, taking infra-red pictures of the vines, thus determining the maturity of the grapes. Not to mention the winemaking equipment, which has become very advanced in terms of pressing and sorting, resulting in higher quality grapes and better extraction of juices and tannins. If we regard knowledge as a resource, there is no doubt that this is embedded in such equipment that is now made available for the winemaker. Also, the suppliers of high-tech equipment are utterly dependent on innovatively low-tech industries, like Bordeaux, to buy their products. Without buyers of

winemaking equipment and expert feedbacks from the users of this equipment, the suppliers would not be able to be competitive in their own line of business.

Research Clusters

Perhaps more important, there is a large research cluster in Bordeaux, exclusively doing research for the wine industry. This cluster gathers and distributes research efforts from The University of Bordeaux, business schools, agricultural institutions and private research institutions. The cluster also has strong connections with universities all over the wine world, which enables them to deliver the best possible knowledge on wine to the estates of Bordeaux. This knowledge is usually implemented at the estates by experienced workers or by consultants, most of whom have an oenological background, and all operate extensively in the Bordeaux region.

The intensity of co-operation between the research institutions, producers, suppliers and merchants in Bordeaux is very high. Through the cluster's internal openness, the industry has a learning rate and a level of competitiveness that is comparable with any high-tech industry. Not all innovative activities can be measured in patents

“The suppliers of high-tech equipment are utterly dependent on innovative low-tech industries, like Bordeaux, to buy their products.”

and R&D. External knowledge bases can also result in new processes and new developments internally due to regional structures, and can be the key to a dynamic industry.

Let's Go Get Drunk

We see that subsidies to agriculture have been falling across Europe. Gross farm receipts are down from 35 per cent to 20 per cent over the last 15 years. An all-time low since the OECD began measuring this in 1986. But why then have up-and-coming countries like Brazil and China increased their subsidies from 6 to 17 per cent in the same time span? Even China, which is often associated with sophisticated technology production, does intelligently not marginalise the low-tech sector. Low and medium tech sector typically account for 60 per cent of employees in manufacturing and 97 per cent of countries' economies' value-added. In addition to this, low and medium tech industries are vital for the high-tech sector, as high-tech companies need somebody to sell their products to, products that the low-tech sector are more than happy to buy.

Politicians across the world; use some of the money that is marked for biotech to buy a bottle Château Mouton Rothschild, open it a late summer's night, and maybe, just maybe, it will all become clearer.



Going Green

Why Sometimes, Beauty is Only Skin Deep

Depending on which books you read and TV shows you watch, the world is in fact warming. In addition, the majority of science suggests that this warming is due to the presence of man-generated greenhouse gases, which reduce the amount of incoming solar radiation that is allowed to leave the earth's atmosphere via re-radiation from the earth's surface and convection, in simple terms.

Clearly, the heat transfer mechanisms and overall science is much more complex than the above, but for many people, the above paragraph is more than enough. Furthermore, for many people, the above paragraph simply isn't that relevant. The reason is quite simple: Why would an image-conscious person care about the intricacies of invisible chemistry, when there are many other- much more visible - ways to show one's allegiance to the environment? Or is that really an allegiance to the environment? Or is it an allegiance to the image of being green?

The Image of Going Green

Many famous and wealthy people are making meaningful contributions to the environment. However, many are also desperately trying to appear to be making meaningful contributions to the environment. Take leading climate change scientist Gisele Bundchen, who in her part time is also a fashion model. Now, Gisele purports to be an environmental activist, and was recently made a United Nations Environment Program Goodwill Ambassador. As Gisele herself puts it: "I have been working on environmental issues for a long time and agreed to become a Goodwill Ambassador to be part of a global and far-reaching organization. Now it's about action on a global scale to

"Gisele's idea of a healthy sustainable future is a 2000m² supermansion"

secure a healthy future for the next generation, wherever they live in the world."

Although it is unknown exactly what type of houses the people which Gisele is referring to live in, Gisele's idea of a healthy sustainable future is a 2000m² supermansion with an elevator. The size of the house means that it is definitely "action on a global scale". The building could house entire countries' populations, such is its sprawling size. Now, many building design (ESD) engineers would contend that a house of this

	Per Capita Electricity Consumption	Yearly Electricity Consumption
Standard Lift- 6 dwelling unit, residential-type.	1900kWh/year	1900kWh ¹
PassivHaus standard - Heating and Cooling for 160m ² house, 2 adults and 2 children. ²	15kWh/m ² /year ³	2400 kWh
PassivHaus Standard – Gisele Mansion	15kWh/m ² /year	30,000 kWh
Regular Cooling/Heating usage – Los Angeles.	150kWh/m ² /year	300,000 kWh



Gisele's Mansion in LA

size could never truly be green, as it breaks almost all green design rules.

Gisele, however, contends that it's green because "it has solar panels and rainwater recycling". Presumably, most of the electricity generated by the solar panels would need to be used to fuel the 4 storey lift which has been installed. But is the house still green? To put Gisele's green house to the test, the energy consumption of an elevator is calculated in the table (see previous page). In addition, projected heating and cooling energy use of the house is calculated and compared with the PassivHaus standard. The results appear to be contradictory to Gisele's claim of a Greenhouse:

The table illustrates that a Gisele's lift alone uses nearly as much energy as a Passivhaus'

entire cooling and heating energy bill for the year. What's more, even if Gisele's Mansion was designed to Passivhaus standard, it would be projected to use 30,000kWh per year in heating and cooling energy alone. However, it clearly isn't designed to this standard so the house can be assumed to use around 300,000 kWh per year in cooling/heating alone.

Compare this figure with a modest 160m² Passivhaus (enough for 4 people), which is projected use only 2400kWh. Hence, even with solar PV panels, the house is nowhere near "green" as any electricity generated would simply be used to supplement the lift and cooling systems, even before the rest of the mansion's massive energy use is even considered. How can houses such as this mansion be considered green, when

they can use close to 100 times the cooling/heating energy in a PassivHaus?

True Passive Design vs. "Bolt On" Systems

If we continue to look at the building sector as an example of hypocritical attempts at sustainability, we can note the following: Buildings make up approximately 40% of world energy use¹. Buildings are rated under green rating systems such as LEED (USA), BREEAM (UK) and Green Star (Australia). However, many of these ratings are given before the building is even built.

Companies who pay to attain green building ratings are loath to attain operational ratings,

¹ http://ec.europa.eu/energy/efficiency/buildings/buildings_en.htm



Passive house

The universal standard in very low energy buildings

1. Annual heat requirement $\leq 15 \text{ kWh/m}^2 \cdot \text{year}$
2. Annual active cooling needs* $\leq 15 \text{ kWh/m}^2 \cdot \text{year}$
3. Airtightness $n_{50} \leq 0.6/\text{hour}$ ($\leq 1/\text{hour}$ hot climates)
4. Total primary energy consumption $\leq 120 \text{ kWh/m}^2 \cdot \text{year}$

* hot climates

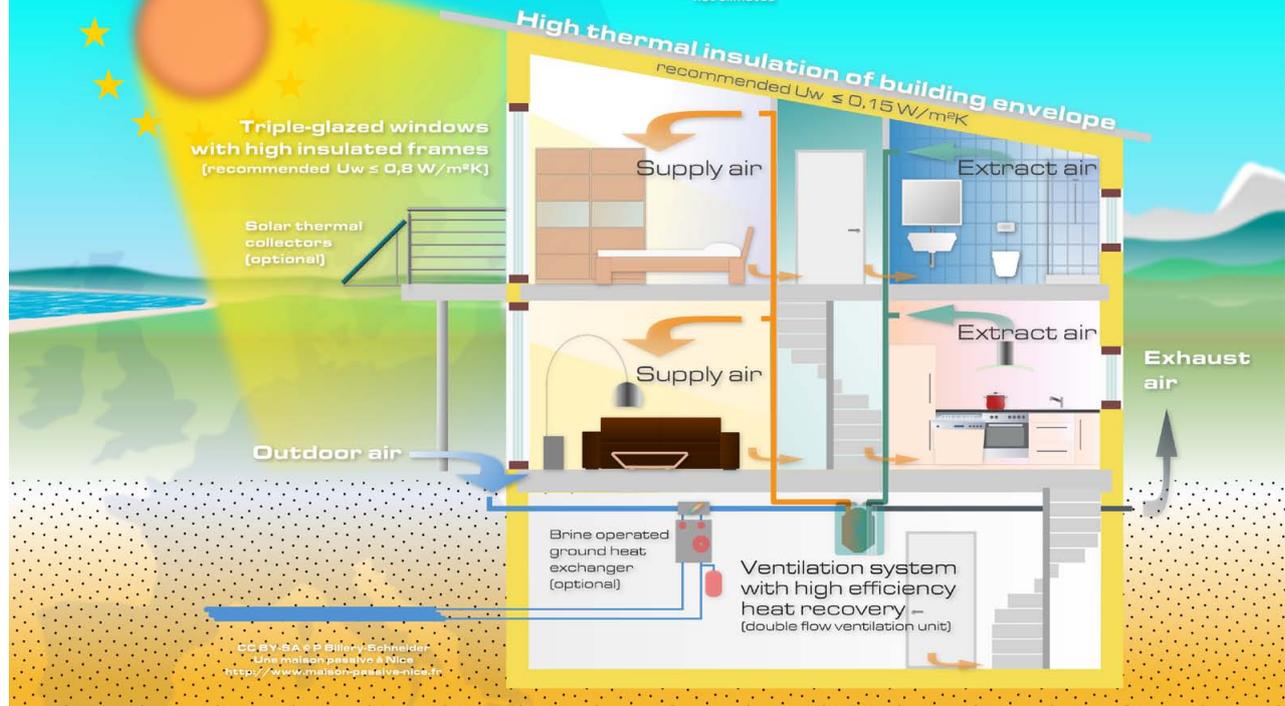


Photo: Wikimedia Commons

because they invariably are rarely as flattering. Currently, the mentality is more about image than true behavioural change: 5 Star 'design' ratings are splashed all over company websites and corporate social responsibility is spruiked. Meanwhile, employees leave computers on and lights and left on all night. Cooling systems and lifts run constantly.

The Future

The analysis is not intended to lambast Gisele; it is simply intended to highlight a misconception about sustainability. Being 'green' is not simply a matter of "bolt-on" solutions, such as solar panels and a rainwater harvest-

ing system. These systems, while beneficial in some ways, do not signify what is required from the consumer in order to qualify as being truly sustainable.

True sustainability requires behavioural change, rather than simply employing 'visible' sustainability trophies such as solar panels, hybrid vehicles, and UN ambassadorial titles. It is pointless to own a hybrid car if your driving style is such that you use more fuel than a regular driver, in the same way that it is pointless in attempting to 'green' a building if you are going to leave lights and computers on, employ massive cooling systems that run 24 hours a day. A holistic approach

is required, whereby solar cells, rainwater harvesting systems and hybrid cars are accompanied by associated behavioural changes.

It is very easy (particularly when one is extremely wealthy) to just buy expensive systems such as PV cells, and then pretend that you are an environmental activist. This requires little action on the consumer's part, as they are simply relying on the systems to do all the work.

Building a 2000m² mansion does not qualify as a behavioural change, and hence can never be classified as being a truly environmental sustainability; irrespective of how 'green' it appears.

Networking - A Necessary Evil?

An InterESST Event

While some tend to liken networking to scenarios found in *The Sopranos* or *The Godfather*, others are relentless in their praising of both business and personal networking. In reality, establishing contacts and promoting oneself should perhaps be placed somewhere in-between. As students we are often reminded that there will come a time after graduation, when it presumably isn't our grades that decide our success. Rather, who we know might very well prove more important than our qualifications. Or is this but a common saying? To find out, InterESST Oslo organised the panel debate "Networking – a necessary evil?"

Posed to four quite different actors – with an audience consisting of students, scholars, and other curious spectators – opposing views and voices were expected. As chair of the debate, Magnus Guldbrandsen (UiO) guided a smooth discussion between the four participants Tian Sørhaug (UiO), Bjørn Arild Wisth (Hartmark Consulting), Cecilie Staude (BI Norwegian Business School), and Ingrid W. Ytreland (KPMG). Whether it was the Norwegian reluctance to disagree or an indication that networking isn't all that controversial, our speakers seemed to reach a consensus on the matter: networks and networking are important but not necessarily decisive. Yet despite this general

agreement the discussion was characterised by certain nuances. Staude's stance echoed a well-known idea, where the act of networking involves increasing your own market value. Through branding and promoting yourself, particularly in social media, Staude held that network and career opportunities will expand. While the common conception of networking involves approaching contacts to your own advantage, our own ESST graduate, Ytreland, turned this upside down: successful networking also involves asking what you might do for others. This view resonated with Sørhaug's more academic take on the matter. Highlighting the history of networks, their bittersweet associations and connotations, Sørhaug also emphasised the fact that networking relies on interdependency and reciprocity. Despite the commercial jargon evoked by 'networking', we were reminded that networks entail interpersonal relations not uncommon to those in our day-to-day lives.

As to the importance of a 'selling personality', Wisth indicated that promoting competencies and skills should measure up to the actual performance. Contacts can only get you so far: while the people you know may provide you with the first interview, the quality of the work you actually do will decide the road ahead.

Academic Spring?

The Elsevier Boycott

Amsterdam based academic publishing giant Elsevier has found itself in a quandary this spring: How to deal with a boycott by thousands of academics who deem their business practices and political lobbying unethical and unfair?

Controversy Brews

The boycott was ignited with a blog entry posted on January 21st 2012 by Cambridge University math professor Timothy Gowers. He criticized the Dutch publisher for overcharging customers as well as forcing libraries and institutions to buy «bundles» rather than selected journals. This resulted in the creation of The Cost of Knowledge website where academics would begin adding their names to a public list of boycotters. As of April 18th, the list holds nearly 10,000 signatures of academics who pledge not to edit, peer-review or publish for Elsevier. In a blog post titled A message to the research community, Elsevier cite a variety of ways in which they feel they have been misrepresented by the protesters, and point to that the cost of downloading an article is about a fifth of what it was 10 years ago. This could be due to a number of reasons of course, not least of all that the infrastructure supporting digital distribution has evolved considerably in that 10 year span.

As the controversy has broadened, not only Elsevier, but the academic publishing industry as such has come to face the same criticism. The points made by the protesting academics are not new, but have gained new traction with the popularity of the campaign. The reason for choosing Elsevier as the main target of the campaign is explained by Gowers

ELSEVIER

Founded in 1880, Elsevier now publishes approximately 250,000 academic articles a year, has 7000 employees and claims to have 600,000 authors on its roster.

Estimates show that in 2010, they made \$1.6 billion for an operating profit margin of 36%.

ers in a statement of purpose to not only be a tactical choice, but because Elsevier has a history of lobbying for restriction of distribution. In addition, Gowers describes how the publisher is charging the highest price per page of some journals, despite these being outranked by cheaper ones published by others.

The Cost of Distribution

When Elsevier and its likes haven't reduced prices in accordance with the lowered cost of modern typesetting practises and distribution, the general sentiment among members of the Cost of Knowledge campaign is that that this cannot be justified. Some, like Gowers, call for a total revamping of the academic publishing industry, citing a paradigmatic shift in the works.



Illustration: Michael Eisen (an active participant in the Elsevier boycott)

“As of April 18th, the list holds nearly 10,000 signatures of academics who pledge not to edit, peer-review or publish for Elsevier”

Publicly Funded Research, Private Property?

Another concern over Elsevier and their professed mission to work for the accessibility of published research is their support of the Research Work Act bill which was laid dead in the US House of Representatives on January 27th 2012, only hours after Elsevier withdrew their support. The bill would have severely restricted accessibility to publicly funded research, and effectively reverted the National Institute of Health's Public Access Policy. The question of publicly accessible research has as a result been lifted to the fore, with open-access initiatives such as the Public Library of Science gaining more recognition. Although Elsevier denies their discontinued support of the bill is due to the widespread boycott, this is exactly what many involved in the protest believes to be the case. Something to be noted is that Elsevier also supported the highly controversial Stop Online Piracy Act (SOPA) and Protect IP Act (PIPA), two bills also aimed at restricting online sharing of information. Put together with their support for the RWA bill, a widespread sentiment in the boycott

movement is that the publishing houses are working to restrict accessibility in accordance to enhance profit margins.

Going back to Elsevier's blog post directed at the academic community, they write that “It is our sincere wish to de-escalate from the constant cycle of legislation and lobbying that has marked the scholarly communication landscape for many years[.]” The discrepancy between this statement and their active involvement in sponsoring the aforementioned bills is something which hasn't gone unnoticed by the community they hope to address. With their withdrawal of support for the RWA, the boycotters seem to be making some headway. While it remains to be seen in what way the academic publishing industry will change in light of this preliminary success for the protesters, the massive mobilization seen since the end of January might point to some radical changes in the works. Some are now talking of an Academic Spring, and with the boycott movement growing day by day and new initiatives being launched, the publishing industry should take note.

OPINIONS:

The Nuclear Renaissance

The problem of global warming has disappeared from the political debate. The reason for this is the current economic crisis which once again proves the economy as the supreme concern for politicians.

The emission of green house gases goes on at an ever increasing rate, and scientists are now discussing how much the temperature will rise.

The debates about cutting carbon emissions always end up in a debate about cost and uncertainty. The most important obstacle is the anarchic character of international relations. States will do whatever they think will benefit themselves (and hurt their opponents), and the international negotiations break down for this particular reason. The consensus is that reduction of greenhouse gases has potential to be harmful for economic growth. The economy is the most important factor for wielding power on the international arena, and no state wants to gamble with that asset.

The only solution to this problem is to let states learn that it is possible to cut carbon emissions and accomplish three strategic-goals at the same time:

- *Decreased dependence on foreign fossile fuels*
- *Prove that it is possible to fight global warming and keep present consumption of electricity*
- *And that projects for reducing global warming are not necessarily uncertain, in the sense that you give other states strategic advantages if you fail*

People fear nuclear power more than any other energy source. This is mostly due to the accidents at Three Mile Island, Chernobyl and now Fukushima. The problem is that nuclear power is safe in the sense that it causes a very low number of deaths each year compared to all other credible energy sources. People fear radiation sickness, but they do not fear coal fires and dams bursting.

The jury is still out about the

consequences of Fukushima. Chernobyl was the result of a flawed reactor design, and there is considerable debate if someone actually died as the result of the accident at Three Mile Island. All in all, there has been only been one nuclear accident with disastrous consequences.

Modern nuclear reactors are much safer than the old ones. The graphite moderated Chernobyl design is a thing of the past, and the modern reactors are safe. The new generation of reactors has potential for even better safety. Nuclear power is by most standards a very safe way to produce electricity.

Why is nuclear power so important for reducing global warming when other energy sources show potential? The reason is quite simple. The fight against global warming needs to produce results, and the results must come fast. There is a need for an immediate reduction of greenhouse gas emissions, and more importantly, states must learn that environmental policy is not inherently harmful for their position in the struggle for power and resources. Other renewable energy sources such as wind power show potential for producing electricity on a large scale, but nothing more. No state wants to risk their standing in the modern equivalent of "Game of Thrones" by gambling on uncertain projects. If they succeed all other states can reap the benefits, if they fail, they alone will face the consequences.

Cured and Disease Free?

Photo: Kieran Darcy

Would you be willing to take a test that indicates you may be at risk for developing 48 different diseases and conditions? When armed with the right information, can future ills be prevented?

We face many risks in our everyday lives. Amongst them, is the concern of being “genetically at risk”. Research has shown that many illnesses and conditions have a basis in genetics. Genetic experts claim they can indicate a certain condition at the molecular level by identifying the genetic markers that cause it, and furthermore experts claim that through diagnostic testing they can identify a person who is genetically susceptible to a certain disease even before that person shows any visible signs or symptoms. If you know your genetic risks, you also

have a “genetic responsibility”¹ to take an active role in your health. This is what 23andMe, Navigenics, and deCode would like us to think. Direct-to-consumer genetic tests have been available from these companies since 2007.

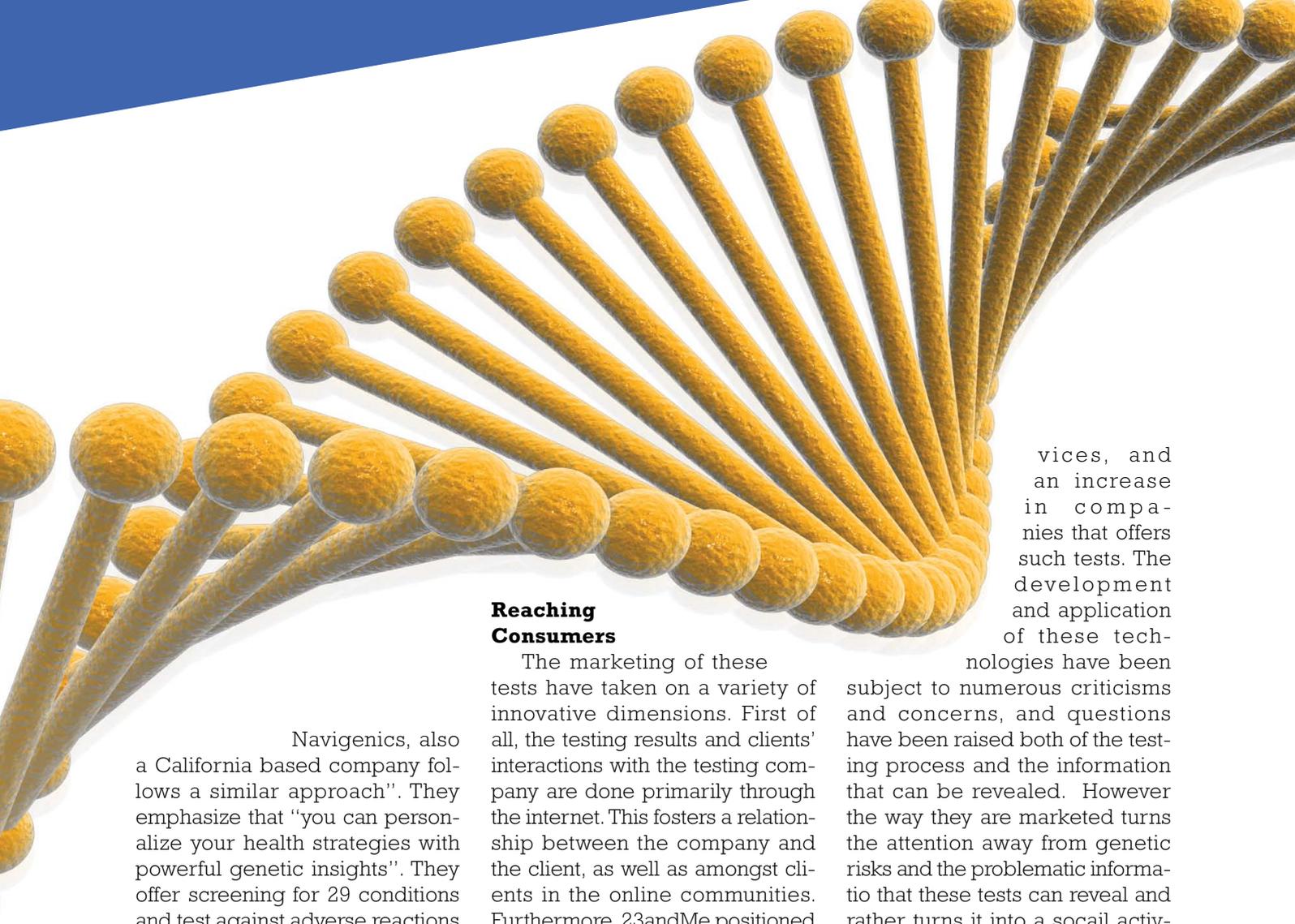
The Companies

23andMe is a California-based company that offers a host of services connecting you to the “genetic world”. Their mission is to be the world’s most trusted source of personal genetic information. 23andMe’s focus is on how much fun you can have discov-

ering and understanding your own DNA. Through engaging with other individuals in the 23andMe online community, participants also play an important role in enhancing DNA knowledge.

More than just having “fun” with genes, you can also take a more active role in your health and plan for the future. 23andMe allows you to find out if you stand at risk for developing 44 inherited conditions, and with that you can undertake the necessary precautions. Preventing what your genes have already determined may be a challenge, but they would like you to think that it’s worth a try.

1. Rose, Nikolas 2007



Navigenics, also a California based company follows a similar approach". They emphasize that "you can personalize your health strategies with powerful genetic insights". They offer screening for 29 conditions and test against adverse reactions to 12 common prescription medications.

Iceland-based deCode Genetics offers a comprehensive screen of 48 different conditions (deCodeMe). They also offer six other specialized screens. These companies allow for and create novel ways of understanding medical information and the body at risk.

How does it work?

It is really quite simple. You order a kit online for \$99 USD along with a \$9/month subscription to 23andMe's personal genome service. Once you have received your kit in the mail, you register it online, spit in a tube, send the spit to the lab and wait 6-8 weeks for your results. After which you can log on to explore your genome at your leisure.

Reaching Consumers

The marketing of these tests have taken on a variety of innovative dimensions. First of all, the testing results and clients' interactions with the testing company are done primarily through the internet. This fosters a relationship between the company and the client, as well as amongst clients in the online communities. Furthermore, 23andMe positioned

vices, and an increase in companies that offers such tests. The development and application of these tech-

nologies have been subject to numerous criticisms and concerns, and questions have been raised both of the testing process and the information that can be revealed. However the way they are marketed turns the attention away from genetic risks and the problematic information that these tests can reveal and rather turns it into a social activ-

"Critics question the validity of the information gleaned from these tests and the effects that they may have on individuals"

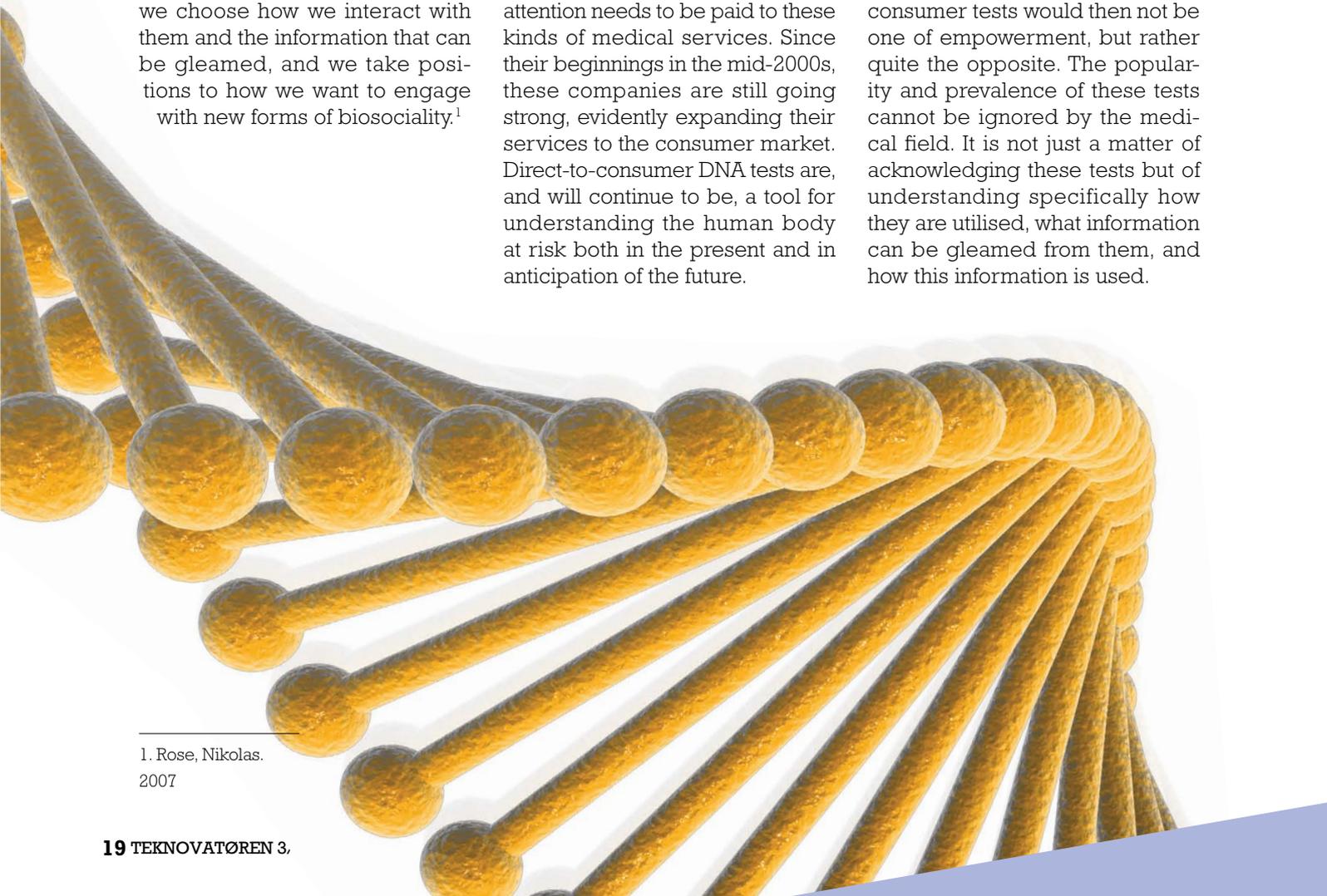
their product at New York Fashion Week (2008) where guests could submit saliva samples.

While the techniques used by companies like 23andMe, Navigenics and deCode Genetics may not be problematic in and of themselves, they could have a broad range of consequences, which extend far beyond fun genetic exploration. Commercial DNA testing is becoming readily available through the expansion of services, more affordable ser-

vice, far removed from the medical sphere

Criticism

Critics question the validity of the information gleaned from these tests and the effects that they may have on individuals. Furthermore they question the regulation of such services. While DNA testing has been a part of diagnostics and care for some medical conditions, it is cautioned that this type of technology is still in its infancy.



At present, these tests cannot replace all other medical services; rather they are one more tool within the extended realm of health care.

These companies probably deliver what they say they are going to deliver to their customers. Troubling is what people's perceptions and expectations are of what they will get out of having such a test done. DNA testing, while framed as a technology for ultimate risk aversion, opens up the possibility for a variety of other relations to be expressed. Thus it is not a matter of escaping risk, but rather a matter of living with risk in a different way. The converse of this is not that we can live in complete ignorance of such technologies. We encounter them, we choose how we interact with them and the information that can be gleamed, and we take positions to how we want to engage with new forms of biosociality.¹

Global Genetics

Direct-to-consumer genetic tests are available to customers all over the world from online stores. As a consumer of this service you can take control of your own health from the comfort of your own home. Establishing policies regarding these technologies as they are available today may be difficult due to the ambiguity of the risks involved and the nature of the service, considering its position on the Internet. Health information is available in new ways, transcending the issues of time and space, concerns more closely associated with traditional health care models. Although these tests are far from mainstream, they are becoming increasingly popular and more attention needs to be paid to these kinds of medical services. Since their beginnings in the mid-2000s, these companies are still going strong, evidently expanding their services to the consumer market. Direct-to-consumer DNA tests are, and will continue to be, a tool for understanding the human body at risk both in the present and in anticipation of the future.

“Does knowing our genetic makeup allow us to be risk averse?”

What does the future hold?

If we can take matters into our own hands, and engage in our health online, will this replace clinic visits? Does knowing our genetic makeup allow us to be risk averse? These kinds of services can become more commonplace. The effects it will have on the individual and the broader health care system cannot be overlooked. More information may lead to more uncertainty and an even greater reliance on medical information. The effect of direct-to-consumer tests would then not be one of empowerment, but rather quite the opposite. The popularity and prevalence of these tests cannot be ignored by the medical field. It is not just a matter of acknowledging these tests but of understanding specifically how they are utilised, what information can be gleamed from them, and how this information is used.

1. Rose, Nikolas.
2007

When to Stop Saving a Life?

When is it right to stop saving a life? And, where should one draw the line between not saving a life and passive euthanasia? These are but a few questions care-givers have to take into account when dealing with people in what may be the last days of their lives.

Due to radical innovations and new knowledge gained throughout the past few decades, we now

PASSIVE EUTHANASIA

The active withholding of treatments necessary for the continuance of life.

manage to postpone and prolong the process of dying. From my own years working in different care facilities, I've been forced to reflect on several controversial questions regarding the ethics on how to care for dying individuals.

Keeping Alive

I've experienced a woman in



“Is life always the better choice?”

her nineties dying multiple times, only to be brought back to life, during two summer months working at a nursing home. She was brought back to life. But I was left thinking: To what life? From my point of view her life between these episodes of heart failure, consisted of pain and forced

feeding. She was surrounded by exhausted and mourning family members, and by the last time she died she was all alone. We all thought this was just another false alarm. We were sure the doctors could bring her back once more, like they had done so many times before. From my point of view she was kept alive, but at this point in time she was no longer living her life.

Pull the Switch?

Most of us hope for a peaceful and calm point of departure. That's why some argue that we should be allowed to die in our own home, in safe and familiar surroundings, together with close family. We picture ourselves, fading away like it was the easiest and most natural thing in the world. But for many it becomes a struggle. A struggle not only for the person close to the end, but also for the caregivers responsible for them, and the family who holds them close. It may become a controversial situation where one is left to decide on whether or not to: pull the switch, force the person to eat, drink and take their prescribed medications, or whether or not to perform CPR.

According to the Norwegian Health Personnel regulations every patient is to receive lifesaving treatment, even in situations where this will conflict with the

patients voiced wishes. The only exception to this regulation is in situations when the patient is defined as dying (cf. §7). But there is still no clear definition of what this state implies.

Definition of Dying

While working at a home for people suffering from progressive Multiple Sclerosis (MS), one of the many things I had to learn by heart was which patients who had signed a No CPR form. A form that states that in the event of a respiratory and/or cardiac arrest, no cardio-pulmonary resuscitation is to be undertaken. This form reinforces what is stated in the legislations regarding patients' rights: “a patient who is dying can oppose life prolonging treatment” (cf. § 4-9)¹. Patients diagnosed with MS were in this case defined as dying. People suffering from illnesses such as non-curable cancer and long-term lung illnesses, is according to professor Petter Andres Steen from the paramedic unit at the University of Oslo, defined as not dying (Interview with NRK). The law does not allow them to restrain treatment.

In either case, if the health personnel are not a hundred percent sure, they will have to treat the patient. If they choose not to perform lifesaving treatment, they will, according to Director

1. Based on my own translation



of department in the Ministry of Health Hans Petter Aarseth (Interview with NRK), get close to what might be seen as passive euthanasia. But how can one be sure that not saving a life is the right thing to do in any give situation?

Ongoing Debate

Healthcare should always be about helping the person to grow, rather than helping them to decline – even in the case of care for dying individuals. This is a point made by Dr. William H. Thomas in a presentation held at the Healthcare conference in Stjørdal in the fall of 2011. What he meant by this statement is that one should always help the person to make the most out of the time he or she has left in life. But still there are questions to be asked: What if there is no more room for growth? Or is there ever? This is a point reflected upon in a editorial written for the newspaper Aftenposten by Torgeir W. Skancke: "Is

life always the better choice?" As a parent he had to decide whether or not to make his multi handicapped son go though yet another liver transplantation - a son that throughout a process of continuous liver failure had become severely brain damaged. He had an estimated three years left to live. But as Skancke points out "the future always will be uncertain (...) Whatever we choose to do, we will be left with a terrible feeling. In this merciless reality we'll lose either way."

Back to my starting question...

When is it right to stop saving a life? I believe there is no answer or argument that can settle this debate, and it remains what Sckanke describes as "the hidden tsunamis of our time". What is clear however is that we are in desperate need for clear definitions, guidelines and a better support system for the person

close to the end, as well as his or her care-givers. There is a need for support and guidance, not only in the process of caring for a dying person, but also in the years preceding this stage.

After being forced to make such a controversial decision on whether or not to takes action and save a life, the decision makers – might it be family, a doctor or a healthcare worker – has to live with the consequences of those actions or non-actions for the rest of their lives.

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Illustration: Veronika Hansen

The Junk Food Generation

Characterized by the World Health Organization as one of today's most blatantly visible – yet most neglected – public health problems, the global rise in overweight and obesity has become a much discussed topic in recent years. While some call for more government intervention or argue inactivity is to blame, this article discusses an actor that may not have gotten quite the attention it deserves.



Illustration: Kristine Czynski



OBESITY

Worldwide, obesity rates have more than doubled since 1980, now representing the fifth leading risk for death globally. Additionally, 44% of the diabetes burden, 23% of the ischemic heart disease burden and between 7% and 41% of certain cancer burdens are attributable to overweight and obesity.

Recent estimates predict that 1.5 billion adults are overweight or obese. For school-aged children, the number is set to 200 million, and for children under five, to 43 million. 65% of the world's population now live in countries where overweight and obesity kills more people than underweight.

» While the WHO estimates that one in four children in Europe are either overweight or obese, policy makers, industry representatives, and health promoters engage in heated debates on how to cope with children's booming BMIs and growing appetites. Though they may disagree on where to place the blame, they have agreed on declaring childhood obesity one of Europe's most pressing public health challenges.

Three Important Factors

The underlying reasons for the obesity epidemic are many and complex, but public health nutritionists are increasingly pointing to the aggressive marketing of unhealthy foods that children are exposed to. Upon further investigation, they have found that three well-established factors give just cause for concern: commercial marketing to children is dominated by unhealthy products; advertising influences children's food preferences, requests and consumption patterns; and early eating habits are likely to persist in later life. And in this case as in many others, the apple doesn't fall far from the tree: dietary habits are often passed on from parents to children, leav-

ing children of overweight parents prone to follow in the heavy footsteps of their caregivers. To add insult to injury they are bombarded with advertisements for unhealthy foods.

Aggressive Marketing

As the food industry has advanced their expertise in persuasive marketing techniques, the target group has grown from mainly concentrating on adults, to also including children. Advertising is no longer restricted to TV, radio and print media. It now extends to advergames, packaging, toy premiums, promotions, sponsorship, product placements, pester power, internet ads and different types of viral marketing – you can help the Oreo get dunked before time runs out, surprise your friends with e-cards starring Quicky the Nesquik bunny, drink Pepsi like the hottest celebs, or collect the latest range of Happy Meal or Kinder

Surprise toys, often accompanying the newest and coolest animated movie on screen! I don't know about you, but I sure remember pestering my parents to buy me that specific Kellogg's product that came with a toy. Rest assured; I had no concern for the nutritional

value of the product, or whether it gave me some extra puppy fat...

So this is what it has come to: The children of today are super-consumers. With their smartphones, blogs and social networking, they are surrounded by marketing left, right, and centre, and their purchasing power is rapidly growing. In 2009, it was estimated that the child-oriented market in the UK had increased by 33% in only five years, leaving it at a staggering £99.12 billion a year! In addition, Danish research shows that the number of TV ads we are exposed to has increased by more than 150% in ten years, and one can only imagine the growth in viral marketing...

But when is it enough? As of now, babies learn to identify logos at the age of 18 months – before

“So this is what it has come to: The children of today are super-consumers.”

they even learn to say 'mum' or 'dad', and by the age of three, they can list an average of 100 brands. It has already been years since the golden arches of McDonald's surpassed the Christian cross in terms of recognisability. Is it time we try to halt the on-going commercialisation of childhood?

So How are We Coping?

Well, in spite of the precedence of food marketing on the policy agenda in Europe, few countries have statutory regulations dealing with the issue. Instead, it is left to the food industry to restrain itself through self-regulation – voluntary codes of conduct in which participating companies pledge to change their marketing to children. While industry and supporting stakeholders deem self-regulation the

least resource-demanding and most flexible approach to changing policy, critics disregard it due to industry's vested interests, and argue it is a case of foxes guarding the henhouse. However, due to the rapidly changing media landscape, policy makers and health promoters are almost dependent on the food industry to collaborate, as judicial processes are too slow to keep up with the level of innovation and ubiquity of marketing.

The most prominent self-regulatory initiative in Europe is the EU Pledge, where current signatories account for more than 80% of the entire food and beverage advertising spend in the



“As of now, babies learn to identify logos at the age of 18 months before they even learn to say ‘mum’ or ‘dad’”

EU. According to the initiative, the pledge is a way for “food industry to use commercial communications to support parents in making the right diet and lifestyle choices for their children” demonstrating how “self-regulation continues to respond in a timely and proactive way to societal concerns”. And the monitoring shows impressive results, reporting virtually 100% compliance!

However, in spite of the growing number of signatories to the Pledge, and despite the commitments having been made stricter, children are getting fatter and fatter, and the social and financial burden continues to grow. As previously mentioned, the reasons for

this are many and complex, but the somewhat vague and ambiguous language of the current EU Pledge allows for lenient criteria and for the companies to make products exempt from the marketing restrictions through creatively exploring certain loopholes. Hence, in order to protect children from persuasive marketing,

we need not just to see that the companies comply with the marketing restrictions, but that it has an effect on what it set out to

change: childhood obesity.

So when we read that Americans categorize pizza as a vegetable, we, as Norwegians, might roll our eyes and shrug. But this concerns us, too, now more than ever. As the latest numbers indicate that 20% of school-aged children in Norway are either overweight or obese, it is time we put our foot down and reverse the alarming obesity trends that we are witnessing. In the end it all comes down to this: your energy output must exceed your energy intake, but that does not mean it is ok to exploit the credulity of the vulnerable. Let children be children, instead of a target group for junk food.



Photos: Wikimedia Commons

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Five Blades to Rule them All?

Over a decade after King C. Gillette invented the first disposable blade safety razor, his company still reigns supreme in the shaving market. However, Gillette's innovations have not only created enormous piles of cash, but also mountains of trash and disgruntled customers complaining about astronomic prices. Has the company pushed innovation too far?

Millions of men do it every day. Few of them enjoy it, but they still pay a high price to do it. We are talking about shaving. In 1901, King C. Gillette revolutionized the way men remove facial hair by inventing a

safety razor with disposable blades made from thin metal strips. Gone were the days when men needed to strop and sharpen their straight razor. If the blade became dull, you threw it away and bought a new one. The age of mass consumption had arrived, and it was to grow at an unbelievable rate. In its first year of production, Gillette sold 51 razors and 168 blades. By 1915, annual sales had increased to 450 000 razors and 70 million blades.

As in most cases, the party didn't last forever. Schick released its Injector razor in 1920, where blades stored in an injector device were directly inserted into the razor. A perhaps even bigger threat

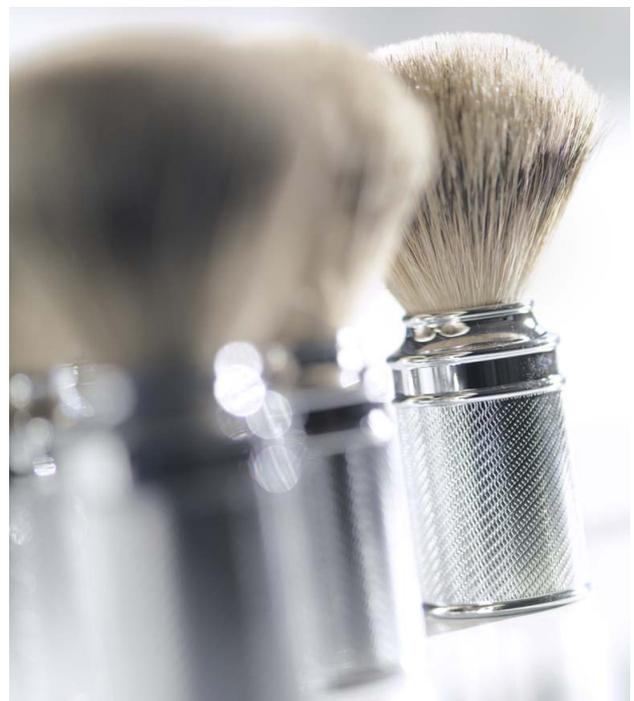
*“While costs have risen,
surely all of this innovation
must have at least done some-
thing positive for the
environment?”*

to Gillette surfaced in 1965, when the British company Wilkinson Sword introduced stainless steel razor blades. While Gillette had successfully manufactured stainless steel blades for decades, they still continued to sell rust-prone blades made of carbon steel in order to reap greater profits. A major problem for razor blade manufacturers at that time was that most of the blades were the same design. In order to separate itself from the competition, Wilkinson Sword released the Bonded Shaving System in 1970. This innovation fused a single blade onto a plastic cartridge that was only compatible with Wilkinson Sword's razor. The following year Gillette responded with the twin-blade Trac II, claiming that two blades would give a better shave than one. The shaving tech race was on!

In 1975, the year after Gillette had launched its twin-blade razor, the debut episode of Saturday Night Live included a parody advertisement for a triple-blade razor. It would take Gillette over 20 years, but in 1998 they finally introduced the triple-blade Mach3. In the subsequent years after its release, blade sales increased by 50 per cent and profits soared. Schick, which at that point shared the same parent company as Wilkinson Sword, released the four-blade Quattro in 2003. Gillette's response to the Quattro was humorously predicted by entertainment newspaper and website The Onion, which in 2004 wrote a satirical article called “Fuck Everything, We're Doing Five Blades”. The Fusion, a five-blade razor was released by Gillette in 2006. Subsequent color changes on models dubbed the Phantom, Phenom and Stealth followed before the Fusion ProGlide featuring thinner blades with low-resistance coating was launched in 2010. It represents the pinnacle of shaving technology, and nobody knows what exciting innovation will come next. Or?

Stepping out of the roller-coaster history of shaving technology, some problems are nevertheless evident. While Gillette and its competitors have tried to convince customers about buying their

new products for over a century, not everyone shares the view that innovation necessarily has been a good thing. According to the MIT, razor blade prices have tripled since 1971, even after adjusting for inflation. When the Daily Mail in 2009 confronted Gillette with why there is a rumored 4750 per cent markup on razor blade prices from production to the final point of sale, Gillette referred to R&D as one of the main cost factors. In 2005, a federal judge in Connecticut issued an injunction prohibiting Gillette from certain





types of advertising, stating Gillette's claims to be "greatly exaggerated" and "literally false". Critics are also pointing out that the only advantage Gillette's battery-powered models offer are increased sales for Duracell, a company owned by Procter & Gamble, who also happen to own Gillette. And who supplies the batteries for Schick's battery-powered razors? Parent company Energizer Holdings.

While costs have risen, surely all of this innovation must have at least done something positive for the environment? Guess what: it hasn't. The first major impact of shaving on the environment probably occurred in 1949, when Carter-Wallace released the first can of aerosol shaving cream. The cans originally contained chlorofluorocarbons (CFCs), which we now know is detrimental to the Earth's ozone layer. CFCs were banned in the late 1970s, and albeit today's aerosol shaving creams contain other types of gases, their environmental impact is still enormous compared to the traditional shaving soap or cream. Having already mentioned the unnecessary batteries, and let's not forget the disposable razors, today's top shaving gear not only requires customers to change their razor and blades at an increasing speed, but the packaging itself is also becoming an environmental offender. In 2007, the Australian environmental agency Sustainability Victoria awarded Gillette the Golden DUMP Award (dangerous and

useless materials in packaging) for the "gratuitous use of packaging" enclosing the Fusion razor. King C. Gillette, known to have been an utopian socialist who advocated that all industry should be taken over by a single corporation owned by the public, and that everyone in the US should live in a giant city called Metropolis powered by Niagara Falls, must have turned in his grave.

Have all the shaving tech innovations pushed men back to the original safety razor? It is beginning to look so as German manufacturers are struggling to meet increasing demand, and even producers of straight razors have waiting lists ranging from months to over a year for their products. Small, newly-established firms in the US and Europe are producing shaving products based on traditional recipes and organic ingredients, reaching out to a growing customer base.

Ok, that seems dandy and all, you might say, but aren't these razors with one blade dangerous, and doesn't five blades give a closer shave than one? Foam out of an aerosol can is surely the ultimate protection for my face? Innovation has to be good! Well, what do you think King C. Gillette would have said if he saw one of today's five-blade, bright orange, vibrating, battery-powered razors? Probably nothing suitable to write here.

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Confessions of a Lecturer



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Already as a master student when writing about the role of economics in environmental politics I was inspired by a tradition of research which is sometimes called the “controversy-tradition”. Very generally told, one of the crucial underlying assumptions of the approach is that in controversies norms, values and standpoints that are normally hidden may come to the surface and be made explicit. In controversies, the actors you study need to explicate and argue for their positions and standpoints. This makes controversies a rich source for social scientists and humanists alike: They simply provide you with a richer material than what you get when everyone seems to agree. Such controversies are not so easily found in printed white papers. They are more easily found in drafts and in comments in the margins while white papers are in the making.

When I learned how economists not only thought, but also acted, in environmental issues, I often learned this from comments in the margins reacting to suggestions from the Ministry of the Environment on expensive

and strict regulations in order to protect the environment. “Too naïve”, one of them once wrote to the Ministry’s suggestion to establish a budget system for natural resources. My understanding of environmental politics would have been different if I had not looked for controversies, or disagreements.

The tradition I was inspired by came from Sweden. I was particularly inspired by the sociologist Thomas Brante. I did not know at the time that one of his PhD-students was Göran Sundqvist who is now my colleague and professor at TIK. Later, I have also been involved in another approach to the study of controversies, namely a French-inspired tradition. A few years ago I took part in the EU-project Macospol (Mapping Scientific Controversies for Politics) headed by Bruno Latour. Both approaches to the study of controversies imply that controversies, for instance in science, is nothing special. They go on all the time and are essential parts of science. However, whereas the Swedish tradition would maybe be more attentive to particular instances when controversies

emerge, the French school might rather say that everything is, in principle, controversies. Thus, this speaks to actor-network theory as an approach that is attentive to translations; how the trajectory of a controversy is dependent upon a series of moves, or translations between the actors involved. Also, the French school is a material-semiotic approach which is interested in the means through which controversies are made or spelled out. This may alert us to the difference between an approach which is interested to study why controversies emerge and how to explain the positions the different actors take, in contrast to an approach which is more interested in exploring how controversies shape science and society.

But is everything controversial and are controversies all? Lately I have been more and more interested in what we could call non-controversies. Just as much as controversies are made in particular practices, so are non-controversies. So where are these and how to study them?



The New Munch Museum in Oslo - Lambda 'screams' back

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On December 14th, 2011 the Oslo City Council pulled the plug on Lambda. What was to become a safe haven for Edvard Munch's artistic legacy and the latest architectural attempt to "put Oslo on the map," turned into yet another shelved architectural project.

Was the Spanish-designed building that was to stand alongside the Norwegian Opera House a victim of its own vanity? After all, its aesthetics were not everyone's cup of tea. Or was the long-standing debate on its location to blame? Judging by the controversy unfolding on the pages of many Norwegian newspapers it could be both, and much more.

The debate on the new Munch Museum also deals with the question of how and to what degree the public influenced the developments around the new building. For an architect interested in STS, such as myself, this controversy offers an opportunity to study

how expertise boundaries are defined, and how power is negotiated internally in decision-making processes. It also sheds light on how the participation of the public is envisaged and implemented in these cases.

Lambda's Journey from 'Yay' to 'Nay'

In March 2009, the employees and fans of the Munch Museum rejoiced – the international jury had unanimously chosen Lambda. They would soon have a new place that would cater to the needs for conserving and displaying a collection of around 25 000 of Munch's works. Oslo would be getting one of the most modern art showcases in the world for its Munch: a glass-glazed, fourteen-storey high block with a 'dent' on the top. The building designed by Herreros Arquitectos was appropriately dubbed "Lambda" to highlight the building's significance as an important point in the area. It sought to balance the merging of city with the sea and the Åkerselva River, as well as provide a vertical counterpoint for the Opera House. Lambda was, in the

words of the jury, the only entry that had the potential of becoming a statement of its own time. Yet, the strengths of the project, such as the "light and communicative" external appearance and the volume that "presents itself as alive" soon became the very reasons for public criticism. The Directorate for Cultural Heritage (Riksantikvaren) thought Lambda was too high and that it isolated the Old Town, and some citizen groups did not want the museum to move to Bjørvika at all. In the meantime, architects continued to develop Lambda in close cooperation with the museum experts. It never occurred to anyone involved, that the Lambda project could be abandoned. Until the municipal elections came, that is. A few political moves later, the fragile balance of support for the Lambda was completely disturbed.

Munch's Controversial New Home: The Public Has a Say

The controversy highlights several practices an architectural building undergoes when 'translating' into an accepted social artefact. It hints on how notions

are negotiated and territories of influence are defined, as well as which of these concepts are taken for granted.

In the case of Lambda, expertise was treated as a rigid form of contribution, with each of the pre-defined expert groups giving its input in different stages of the decision-making process. It seemed that the project's proponents were complacent and convinced that Lambda would be realised despite the vocal opposition. After all, this was how these things were usually done. The role of the public appears to have been of minor importance or completely neglected.

While one can argue that it is impossible to get all to agree on one thing, it is absolutely crucial to recognise the power that public opinion holds in public projects that are dependent on politics. The public will be the end-user of the building. In this sense it represents an expert group in its own right that ought to be heard and reckoned with in a more serious manner than just through research polls or an occasional public hearing. In design practice

this is known as "participatory approach" - when all stakeholders and interested parties are actively involved in creating a usable product. The same approach could be applied in the decision-making processes through the recognition of groups and formations that could potentially play an important role in shaping the outcome of the project. Rather than trusting that decision-making mechanisms in place are sufficient to ensure successful representation of all parties concerned, the controversy around Lambda shows that measures should be taken early on to ensure that other voices of other type of "experts" - those with tacit end-user knowledge - are heard and taken on board.

The Importance of Early Mobilisation

It is not uncommon that large and important architectural projects, particularly art museums, stir controversy. The Guggenheim Museum in New York and the Pompidou Centre in Paris, are both well-known examples of projects followed by public and political tumult. Yet, once these buildings

were given the chance to come into the function and play the role they were meant to, they were embraced and often even fanatically protected by the very same public.

Lambda was never given that chance.

Controversies of this nature should be welcomed as opportunities to open up the famous "black boxes" in STS, namely that of architecture's function in society. They should be taken beyond the obvious discussion on the utilitarian role or the aesthetic aspect of architecture, and instead be encouraged as legitimate methods of finding out what we are as a society.

At the end of the day, public debate around architecture speaks volumes on what blueprints we follow to build our identity - be it national, local or personal - and what lies in the core of the processes we employ to achieve the former. In the case of Lambda, it may become clear what the public really wanted from Munch's legacy and how to get it.

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Travelogue: Maastricht



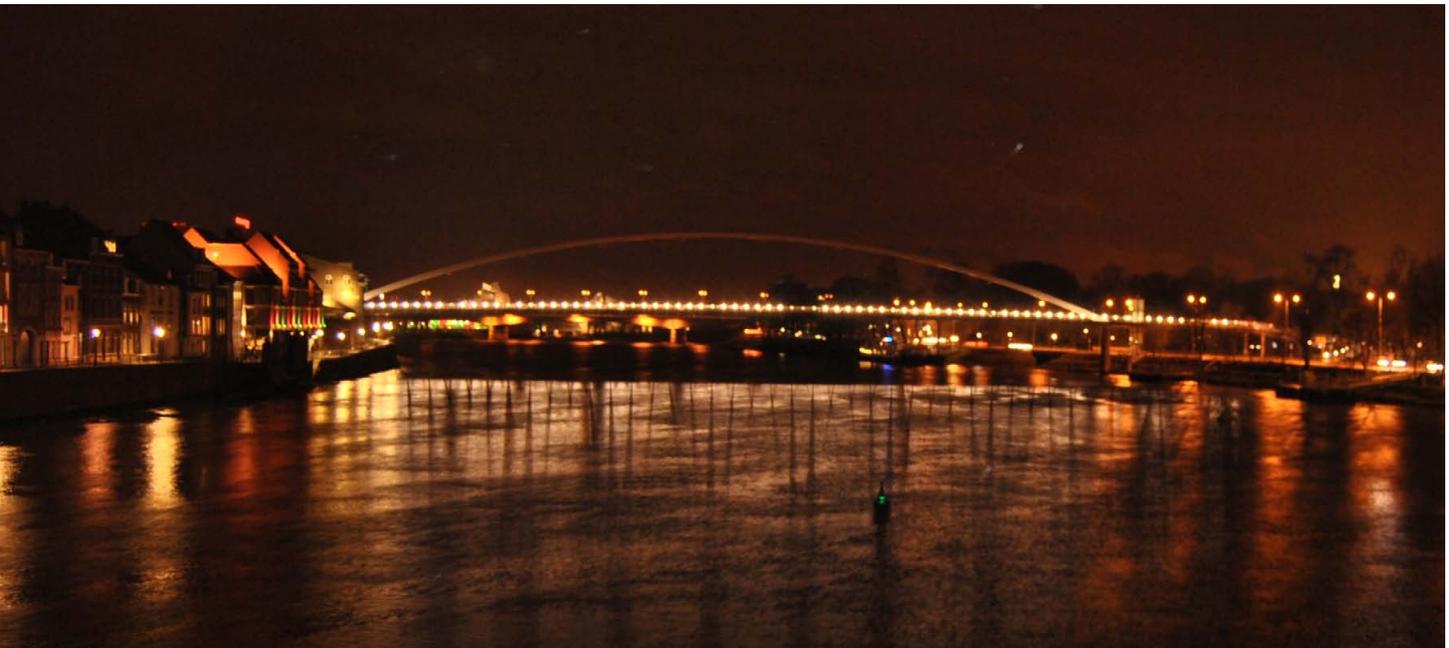
The Master of Arts program “European Studies of Science, Society and Technology” (ESST) at the University of Oslo (UiO) is part of a European network consisting of several universities spread across the continent. Seven of these offered the students the opportunity to attend their courses for the second semester specialization in 2012. As a Norwegian student, this is one way of being able to attend a highly rated university, at the price of the UiO semester fee.

Choosing Maastricht

Espen listened his heart and Edith to the voice of her father, and both ended up in The Netherlands and the southern city of Maastricht, in the region called Limburg. First things first; this is not Holland. Only the two westernmost regions of the country holds that name. There are few windmills and nobody wears clogs down here, but hopefully we’ll be able to spot a tulip or two. One of the typical Dutch things Edith enjoys is biking. Espen on the other hand is a big fan of the train, where he spends many hours going back and forth between Maastricht and his other hometown of Nijmegen. Being almost local, he is able to teach Edith some useful phrases.

The city is most known for the Maastricht Treaty, which established the European Union in 1992. If we go a little further back in history the Maastricht University was established in 1976, and even further back the Romans built the bridge over the river

From left to right: Espen “Proosting” with the Greeks in our class, Edith on her beloved bike, and the The Hoge Brug and River Maas at night.



Maas, which gave the city its name (Crossing at the Maas). 'Universiteit Maastricht' (UM) is said to have the most international campus in The Netherlands, and they are proud of their ranking as number 109 on the QS World University Rankings. The University of Oslo actually ranked right above in 2011, as number 108.

The Course

The Science and Technology Studies (STS) specialization course here is called Public Science Policy, and this is the second time it is given by the UM as part of the ESST specializations. This affects the teaching in certain ways, but other than that the overall level is high and the class of nine people gives room for great discussions. Half of the people who started ESST at UM in August last year went abroad for the second semester.

Over the past three weeks of this five week course, we have covered topics like governing, institutions, epistemic communities, boundary management and off course methodology. UM uses a method of learning called Problem Based Learning (PBL), which is described as being student-centered, self-directed and where the “tutor” act as facilitator or guide. It is interesting to see how the STS-approach is being taught differently here than in Oslo.

End of Term

Soon the course ends and we are left alone to write our thesis. Luckily those days will also include visits from family and fellow ESST'ers from Oslo. Hopefully we'll be able to do a bit of travelling as well, as Maastricht is very conveniently situated right in the heart of Europe. With this experience at hand we might be better equipped to take on future challenges, having made the most of our ESST-education.

3 from TIK

Marianne Austheim
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Name:
Lars Øystein
Eriksen
Program: ESST
Graduation
Year: 2006

1. What did you study before you started at TIK/ESST?

I had a bachelor's degree in sociology with a minor in economics.

2. What was your thesis about?

I looked at the farmed fish industry in Norway. I interviewed commercial and other actors such as NFR and Innovation Norway that are involved in the production of farmed cod.

3. What is your current occupation?

I currently work in the socio-political department of NITO. Most of my work deals with the politics of innovation and research.

4. How relevant is TIK/ESST in your current position?

At UiO I was told that students with a social sciences background are able to see the big picture. After a few years in the workforce, I can see that this is a marked advantage. Apart from that, innovation theory is the most important thing that I have taken away.



Name:
Benjamin
Myklebust
Programme:
ESST
Graduation
Year: 2006

1. What did you study before you started at TIK/ESST?

I studied engineering at Sør-Trøndelag University College.

2. What was your thesis about?

I wrote about ferries in Norway that run on natural gas. Specifically, I looked at how these are evaluated as a green initiative, and what factors may promote or inhibit that more natural gas-run ferries are introduced.

3. What is your current occupation?

I work for ZERO as a technology advisor, focusing on electrical cars and infrastructure that supports the running of these types of cars.

4. How relevant is TIK/ESST in your current position?

In my current and previous occupations it has been my engineering background that has been in demand. However, in my job it is very beneficial to have a broad background and the ESST master provided me with that.



Name:
Fahimeh
Pourbayat
Programme:
ESST
Graduation
Year: 2005

1. What did you study before you started at TIK/ESST?

Bachelor in Computer Engineering at Oslo University College.

2. What was your thesis about?

My thesis was about linking three separate theories; innovation diffusion, social network analysis and disruptive technologies together to provide a better understanding of how innovation is spread in a social system.

3. What is your current occupation?

I work as a manager in the Capital Markets department at Tieto. I have the responsibility for all incoming customer related issues.

4. How relevant is TIK/ESST in your current position?

ESST studies have given me a better understanding of modern technological development and social patterns that are important basics when working with clients in a market that is in constant change.

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